

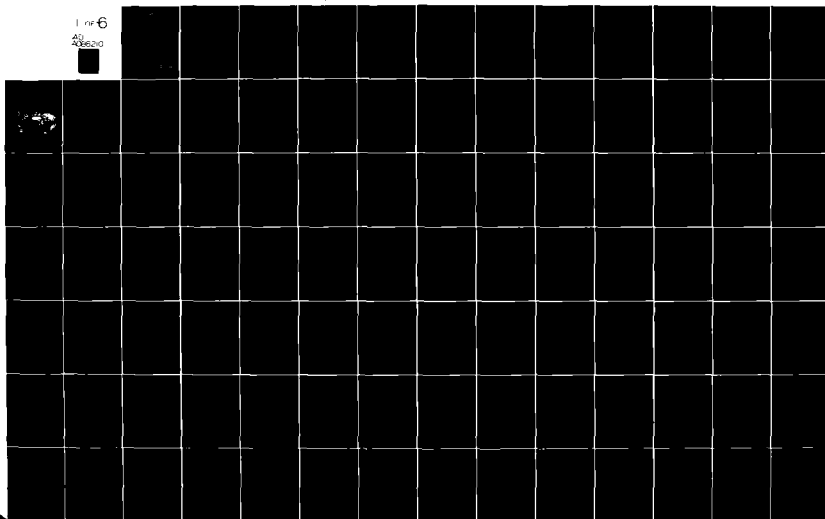
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MERRITT CASES INC REDLANDS CA
CONTINUATION OF STATIC TESTS OF SEGMENTS OF TUNNEL LININGS. VOL--ETC(U)
JUN 79 H C DAVIS, K B MORRILL, J L MERRITT
78-004-T2-VOL-2 DNA001-78-C-0037
DNA-5000F-2 NL

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1 of 6

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CONTINUATION OF STATIC TESTS OF SEGMENTS OF TUNNEL LININGS

Volume II — Data

Merritt CASES, Inc.

P.O. Box 1206

Redlands, California 92373

30 June 1979

Final Report for Period 21 November 1977—30 June 1979

CONTRACT No. DNA 001-78-C-0037

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Volume II presents the complete set of laboratory data obtained from a con- tinuation series of 19 quasi-static tests of segments of cylindrical tunnel linings. Test specimens included scale models of a composite-integral struc- ture and a steel structure with backpacking fielded in the MIGHT EPIC/DIABLO HAWK structures experiments and a corrugated structure with backpacking field- ed in the PILE DRIVER Event. Also included were two additional structural		

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20. ABSTRACT (Continued)

2 concepts: a steel fiber reinforced concrete model and a composite-integral model with backpacking. ↑

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PREFACE

The work reported herein was accomplished under Contract No. DNA001-78-C-0037 with Headquarters, Defense Nuclear Agency. The Contracting Officers Representative was LTC John C. Galloway, USAF. The interest and assistance of LTC Galloway throughout the work is gratefully acknowledged. Also acknowledged is the assistance of Dr. E. Sevin, Director of Strategic Structures Division of the Shock Physics Directorate.

Fabrication of the steel components of the segments was performed by Rettig Machine Shop, Redlands, California, under the direction of D. F. Rettig. Design and casting of the polyurethane foam backpacking was performed by American Polytherm Company, Sacramento, California, under the direction of Al Yeatts.

Actively working on the program at CASES, in addition to the writers, were: Gilbert W. Lo, Michael F. Mullins and several student interns from the Department of Engineering, University of Redlands, Redlands, California. The late Frank W. Galbraith of CASES completed the original conceptual design of the loading and reaction system.

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DDC	Buff Section	☐
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CONVERSION FACTORS FOR U. S. CUSTOMARY TO METRIC (SI) UNITS OF MEASUREMENT

To Convert From	To	Multiply By
angstrom	meters (m)	1.000 000 X E -10
atmosphere (normal)	kilo pascal (kPa)	1.013 25 X E +2
bar	kilo pascal (kPa)	1.000 000 X E +2
barn	meter ² (m ²)	1.000 000 X E -28
British thermal unit (thermochemical)	joule (J)	1.054 350 X E +3
calorie (thermochemical)	joule (J)	4.184 000
cal (thermochemical)/cm ²	mega joule/m ² (MJ/m ²)	4.184 000 X E -2
curie	giga becquerel (GBq)*	3.700 000 X E +1
degree (angle)	radian (rad)	1.745 329 X E -2
degree Fahrenheit	degree kelvin (K)	$t_K = (t_F + 549.67)/1.8$
electron volt	joule (J)	1.602 19 X E -19
erg	joule (J)	1.000 000 X E -7
erg/second	watt (W)	1.000 000 X E -7
foot	meter (m)	3.048 000 X E -1
foot-pound-force	joule (J)	1.355 818
gallon (U.S. liquid)	meter ³ (m ³)	3.785 412 X E -3
inch	meter (m)	2.540 000 X E -2
jerk	joule (J)	1.000 000 X E +9
joule/kilogram (J/kg) (radiation dose absorbed)	Gray (Gy)	1.000 000
kilotons	terajoules	4.183
kip (1000 lbf)	newton (N)	4.448 222 X E +3
kip/inch ² (ksi)	kilo pascal (kPa)	6.894 757 X E +3
ktap	newton-second/m ² (N-s/m ²)	1.000 000 X E +2
micron	meter (m)	1.000 000 X E -6
mil	meter (m)	2.540 000 X E -5
mile (international)	meter (m)	1.609 344 X E +3
ounce	kilogram (kg)	2.834 952 X E -2
pound-force (lbf avoirdupois)	newton (N)	4.448 222
pound-force inch	newton-meter (N·m)	1.129 848 X E -1
pound-force/inch	newton/meter (N/m)	1.751 268 X E +2
pound-force/foot ²	kilo pascal (kPa)	4.788 026 X E -2
pound-force/inch ² (psi)	kilo pascal (kPa)	6.894 757
pound-mass (lbm avoirdupois)	kilogram (kg)	4.535 924 X E -1
pound-mass-foot ² (moment of inertia)	kilogram-meter ² (kg·m ²)	4.214 011 X E -2
pound-mass/foot ³	kilogram/meter ³ (kg/m ³)	1.601 846 X E +1
rad (radiation dose absorbed)	Gray (Gy)**	1.000 000 X E -2
roentgen	coulomb/kilogram (C/kg)	2.579 760 X E -4
shake	second (s)	1.000 000 X E -8
slug	kilogram (kg)	1.459 390 X E +1
torr (mm Hg, 0 C)	kilo pascal (kPa)	1.333 22 X E -1

*The becquerel (Bq) is the SI unit of radioactivity; 1 Bq = 1 event/s.

**The Gray (Gy) is the SI unit of absorbed radiation.

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SECTION 1

INTRODUCTION

Volume II presents the complete set of reduced data obtained from a series of 19 quasi-static tests of segments of cylindrical tunnel linings. This series was a continuation of an earlier test program consisting of 16 similar tests on other model configurations. These linings represent several advanced rock opening reinforcement concepts proposed for use in deep-based protective facilities in rock. Test specimens included scale models of several types of protective structures fielded by Merritt CASES, Inc. (CASES) and SRI International in underground structures experiments conducted at the Department of Energy's Nevada Test Site (NTS). In addition, a steel fiber reinforced concrete liner was also tested.

This volume is organized into three main sections. The first section is the introduction. The second section provides a brief summary of the testing program, including descriptions of the testing apparatus, the data acquisition system and the various test articles. The final section furnishes the actual data obtained during the tests. The data are presented in the form of Cal-Comp plots of applied load distribution, applied load versus strain and applied load versus diametral displacements. A brief description of each test specimen and instrumentation location is given for each test. Also, a computer printout of the actual data points used in generating the plots is included for completeness.

The data are grouped into sub-sections based on the five different types of models tested. These models are discussed in Section 2.

SECTION 2

TEST PROGRAM

2.1 TEST PROCEDURE

The principle objective of the tests of segments program was to determine the detailed behavior of several different types of sophisticated lining segments subjected to carefully controlled loading histories. A test procedure was devised in which a radial load distribution, consisting of a superposition of a uniform component and a sinusoidally varying component, was applied to the outer surface of the test specimen in an incremental fashion. A loading ratio was used to specify the particular load distribution used during a test. This loading ratio was defined as the quotient of the minimum and maximum amplitudes of the total applied load as shown in Figure 2.1.

2.2 TEST APPARATUS

The loading system consisted of 16 hydraulic jacks, eight of 100-ton (890 kN) and eight of 150-ton (1330 kN) nominal capacity, resulting in a total load capacity of four million pounds (17.8 MN). For the test specimen dimensions used in this program, this load capacity translated into an equivalent hydrostatic pressure capability of approximately 2000 psi (13.8 MPa). The jacks were supported at their base by a reaction system consisting of a heavy steel ring, weighing approximately 18,000 pounds (80 kN), capable of withstanding at any point a diametrically opposed force of 300 tons (2660 kN) with a "factor of safety" of approximately four (stiffness was considered at least as important as strength in the original design). Figure 2.2 is a detailed drawing of the reaction system showing several jacks in place in the support ring as well as details of the ring cross-section. The 16 jacks were equally spaced around the circumference of the support ring. They, in turn, loaded the exterior surface of the cylindrical test specimen as shown in Figure 2.3. The 16 jacks were controlled through a 10-channel Edison

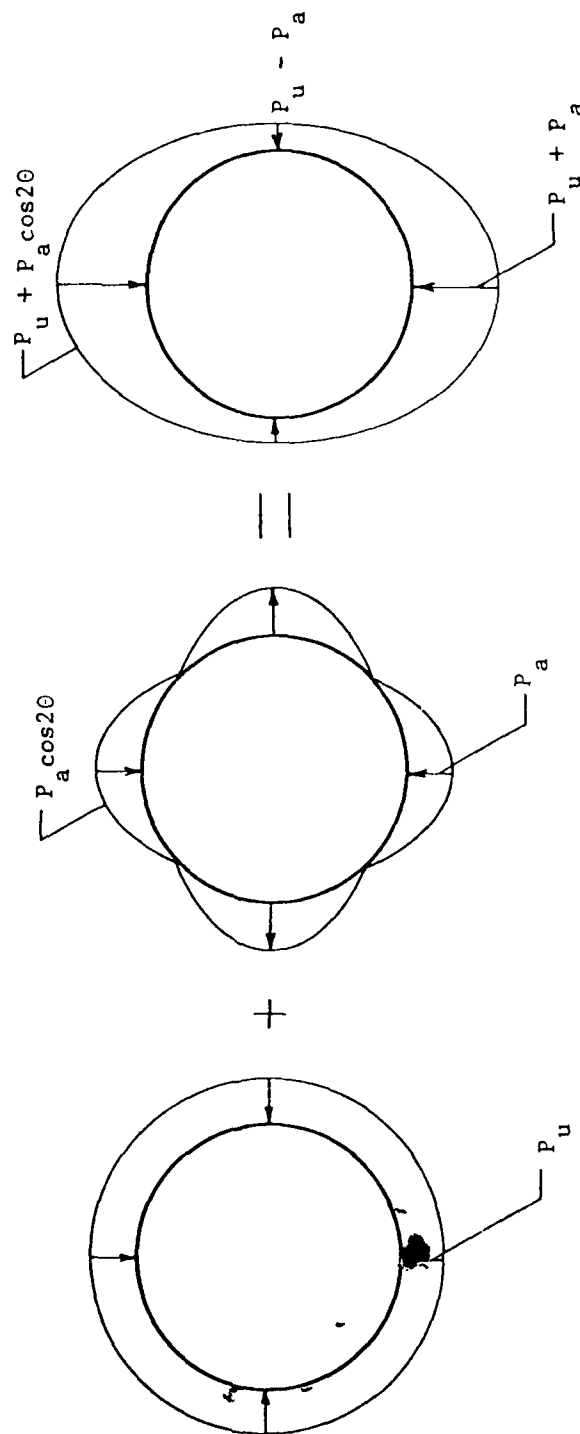


Figure 2.1 Schematic of Loading Distribution
Used in Tests of Segments.

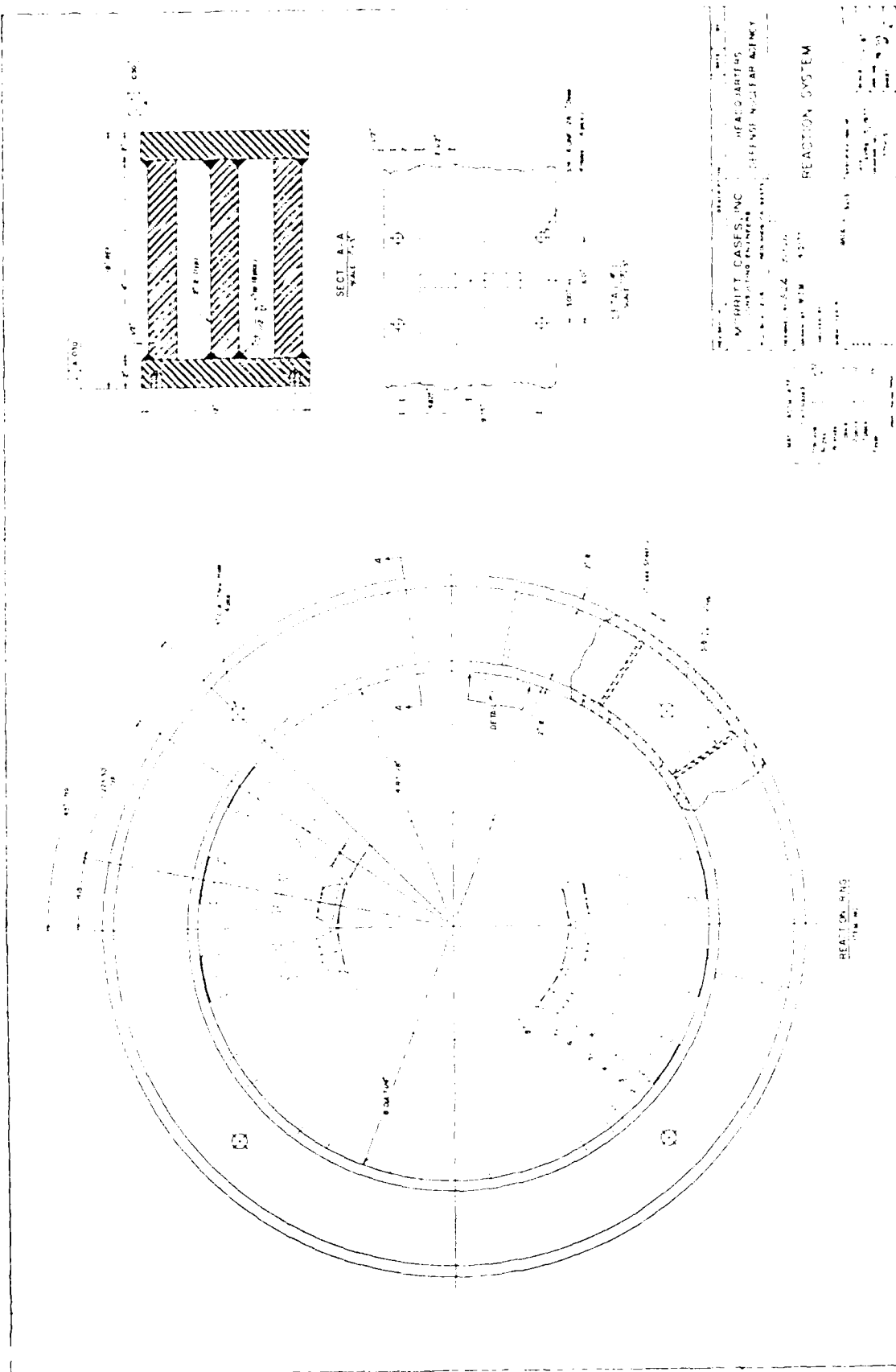


Figure 2.2 Reaction System for Test of Segments.

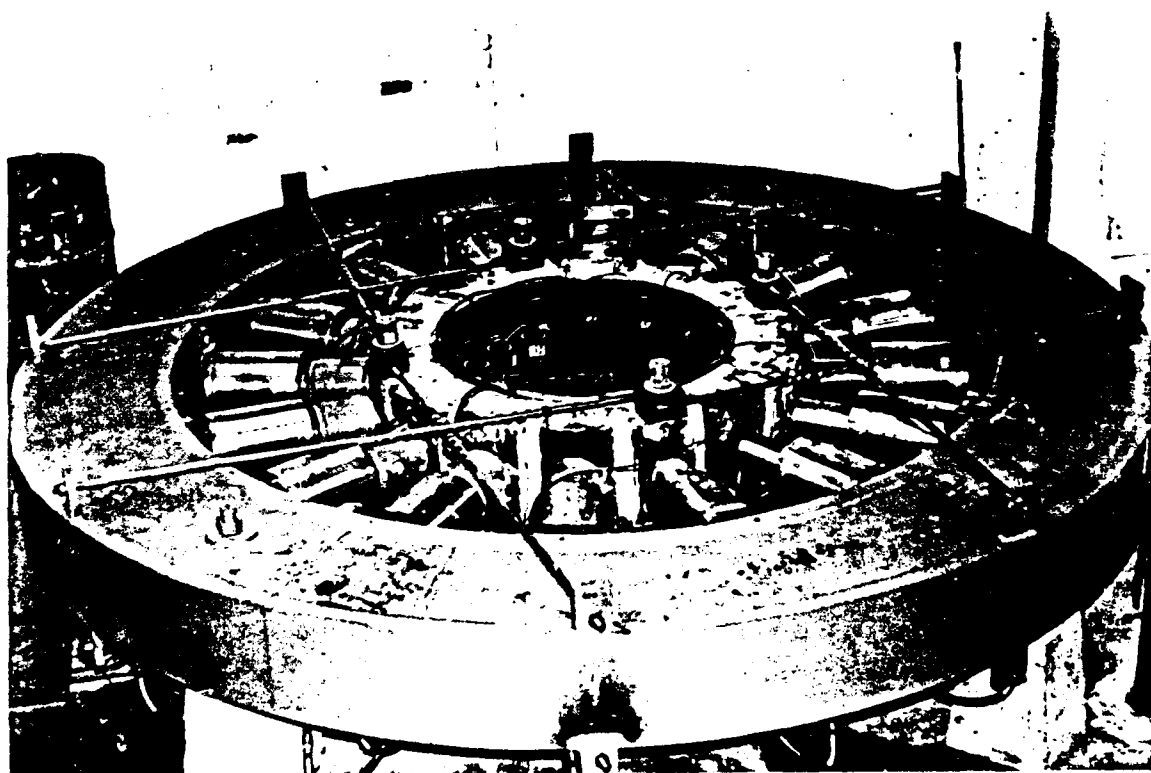


Figure 2.3 Reaction System with Test Specimen in Place.

hydraulic controller, but only five channels were used because of symmetry of the load distributions used in the test program.

2.3 DATA ACQUISITION

Instrumentation typically consisted of eight displacement gages to measure changes in diameter between each of the points at which the load is applied; 12 strain gages to measure strain at selected points on the test specimen; eight cells to measure load under one of the matching pairs of jacks and 16 measurements of torque and drift of the specimen being tested within the support ring.

The data acquisition system is shown in Figure 2.4. This block diagram presents the typical configuration used during the segment testing. Different specimen designs resulted in changes in both the number and location of strain gages. A schematic showing typical gage locations is shown in Figure 2.5.

The primary recording was accomplished with the Fluke Data Logger which produced a printed paper tape output. Approximately 40 channels were recorded on each test. These were sampled sequentially and printed and displayed at $2\frac{1}{2}$ samples per second. An X-Y plot of applied load versus deflection (or strain) was also generated for monitoring and control during each test.

The eight 300k load cells remained in the same positions throughout the test program with each cell measuring axial load in a pair of opposing rams. Since these 180° pairs were connected together hydraulically, the loads imposed on opposite sides of the test items were continuously equalized. Dummy load cells were installed on the opposing rams to act as permanent spacers.

Retention rods were attached to the specimen loading blocks at the major and minor axes to restrict lateral or rotational movement of the test item. These 16 rods, mounted top and bottom, were strain gaged to monitor

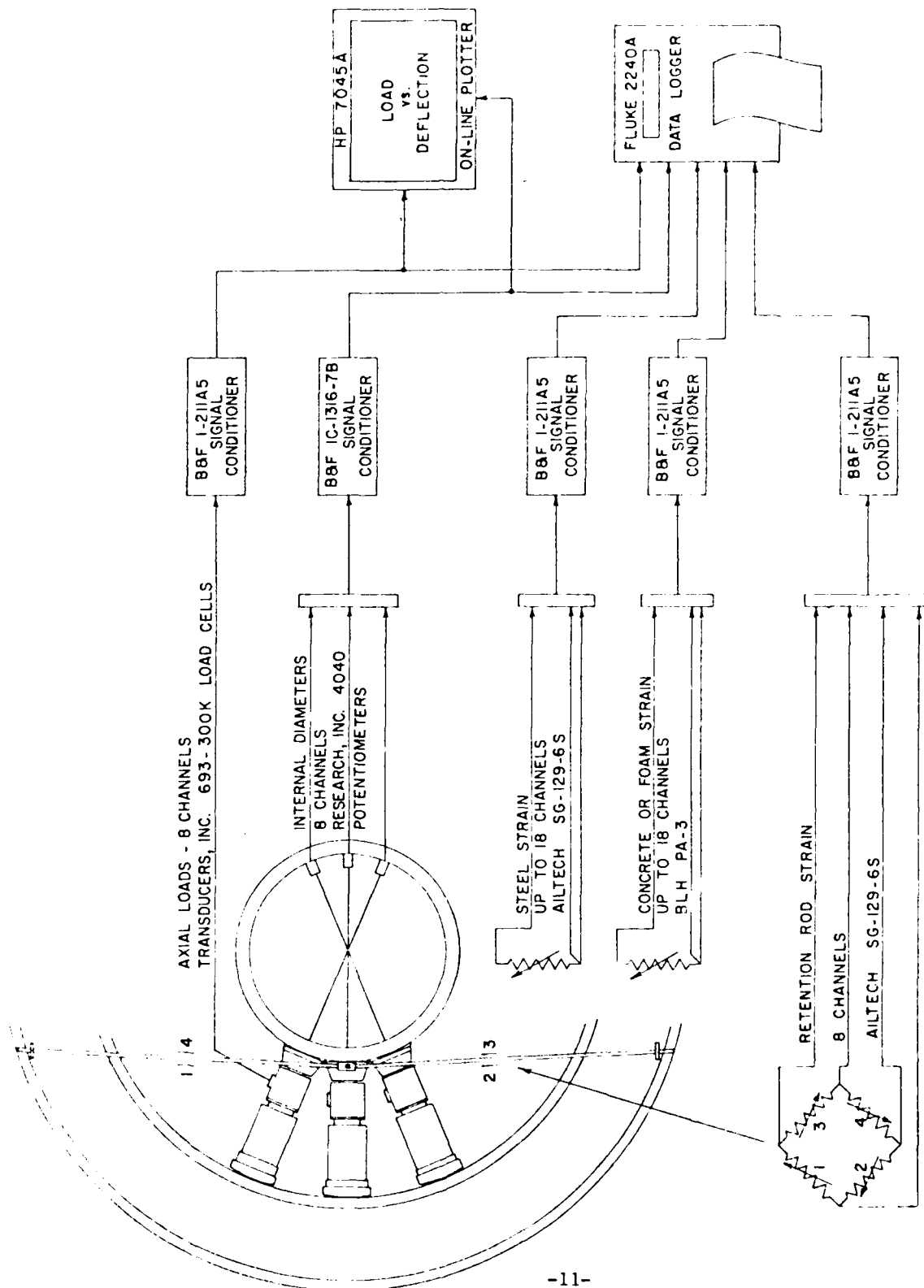
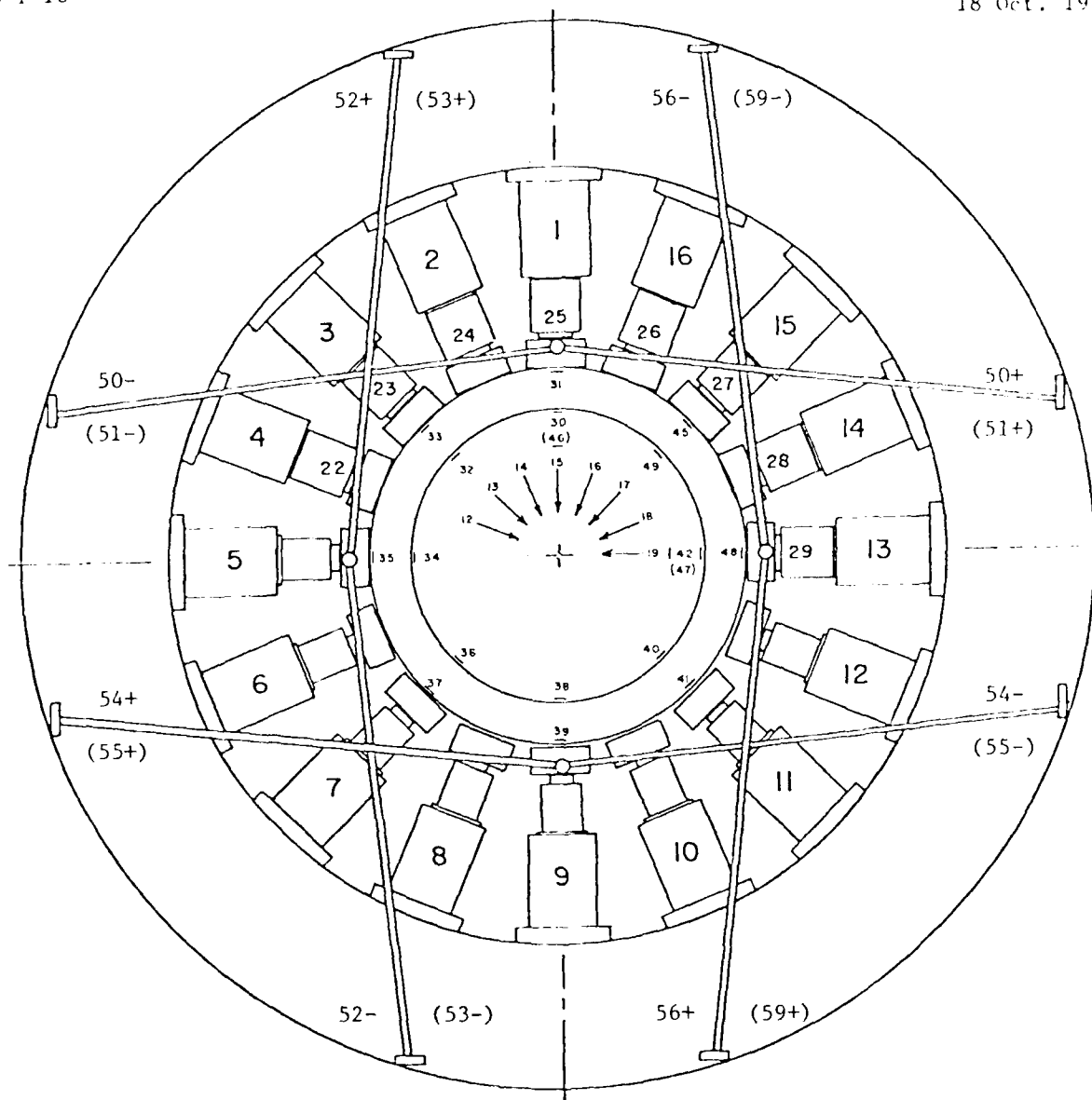


Figure 2.4 Data Acquisition System.

REACTION FRAME TEST SET-UP

Specimen #1
C-Y-16

Test #13
1:3 Load
18 Oct. 1977



CH 12-19 Load axis I.D. (Research, Inc. Model 4040).
CH 22-29 Axial load (Transducers, Inc. Model 693-300K).
CH 30-42, 45-49 (Ailtech SG 129-6S) Radial pairs 2" from top, except 46-47 2" from bottom. Odd gages 31-45 and 48 on rebar.
CH 50-56, and 59 (Ailtech SG 129-6S) Polarity indicates rod under tension.
Lower rod shown (XX).

Figure 2.5 Typical Instrumentation Layout for Tests of Segments.

and record the tension forces imposed during the test. The strain gages on each two opposing rod assemblies were connected into a single four-arm bridge such that tension could be measured in either rod with the output polarity indicating the direction of force. The strain level in each rod was also monitored automatically by the data logger and an alarm was triggered if the load exceeded a pre-set limit. This safety feature prevented excessive buildup of unbalanced forces as the specimens yielded which could have produced a dangerous, catastrophic failure.

The eight specimen diameters at each load axis were continuously monitored with cable-type potentiometers. These were mounted inside each specimen or on top depending on the configuration of the model. Steel strains were measured using Ailtech weldable strain gages. Strain measurements on the concrete or foam surfaces were obtained using BLH PA-3 strain gages and post-yield cement.

After each test was completed, data from the logger was transferred to punched cards for processing in the IBM 360 computer at the University of California, Riverside, Computer Center. A special data reduction software package developed specifically for the CASES data acquisition system de-commutated the data and automatically plotted results using an off-line Cal-Comp drum plotter. Programs provided for plotting any function versus another function; that is, load versus strain, load versus displacement, strain versus displacement, etc. Typical generated plots from the tests of segments program included a polar plot of incremented load distribution, load versus strain and load versus displacement. Overall data reduction turn-around for a typical segment test was generally accomplished with a 24 hour period once the system was automated.

2.4 TEST ARTICLES

The test program was composed of five different structural types of lining segments: a composite integral lining, a steel lining with 2000 psi backpacking, a corrugated lining with 500 psi backpacking, a composite integral liner with 1000 psi backpacking and a steel fiber reinforced concrete liner.

Polyurethane foam of appropriate densities was utilized as the backpacking material. The composite integral specimen was a scale model of a MIGHTY EPIC/DIABLO HAWK structure designated C-X-9 as shown in Figure 2.6. The steel liner with backpacking shown in Figure 2.7 was also a scale model of a structure S-X-11 (SRI built-up liner) used in MIGHTY EPIC/DIABLO HAWK. The corrugated liner with backpacking, shown in Figure 2.8, was scaled from structure AL-10 in the PILE DRIVER Event. The fiber reinforced concrete liner and the composite integral liner with backpacking were conceptual models as shown in Figures 2.7 and 2.9, respectively.

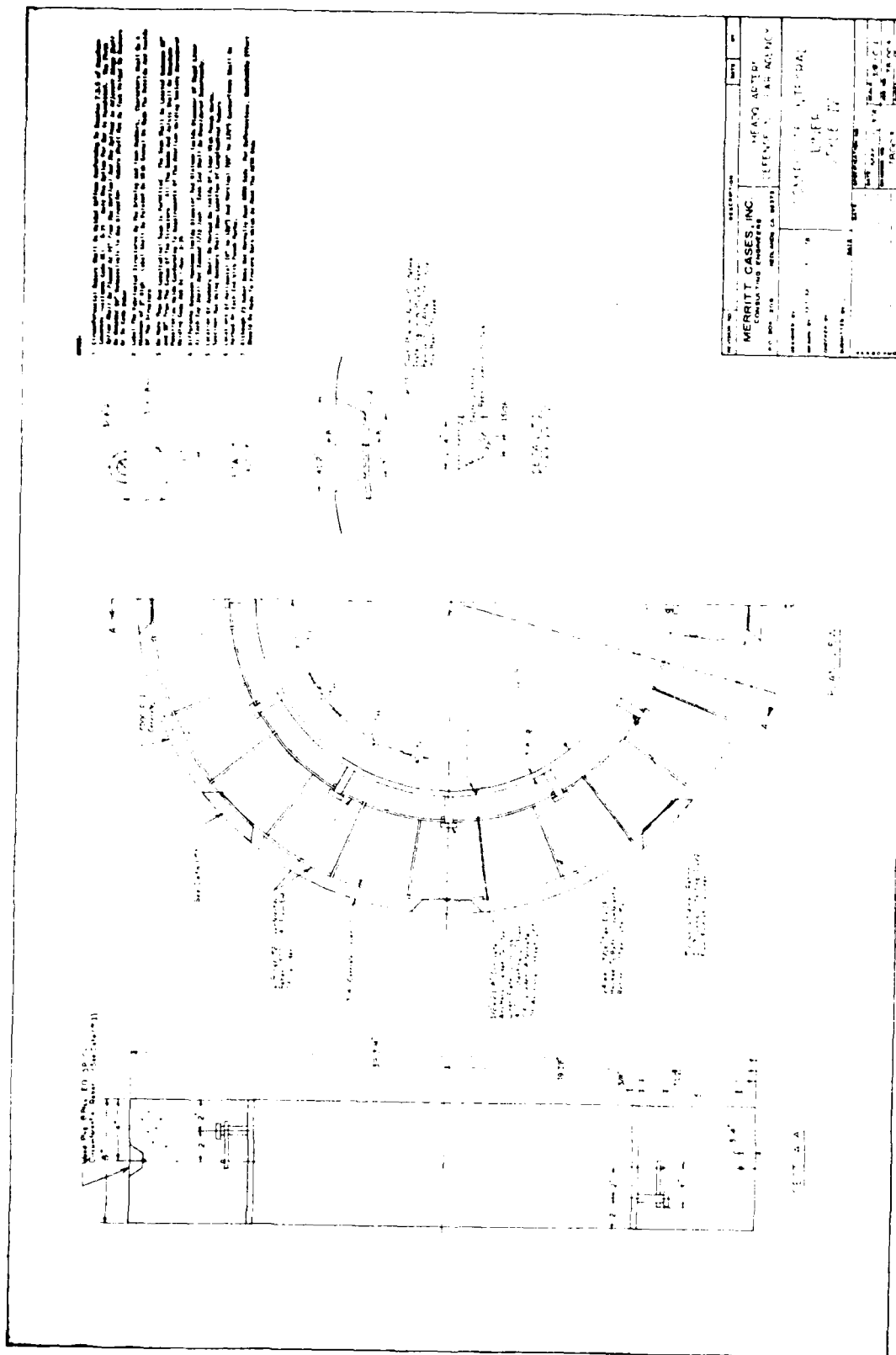


Figure 2.6 Details of MIGHTY EPIC/DIABLO HAWK
C-X-9 Test Specimen.

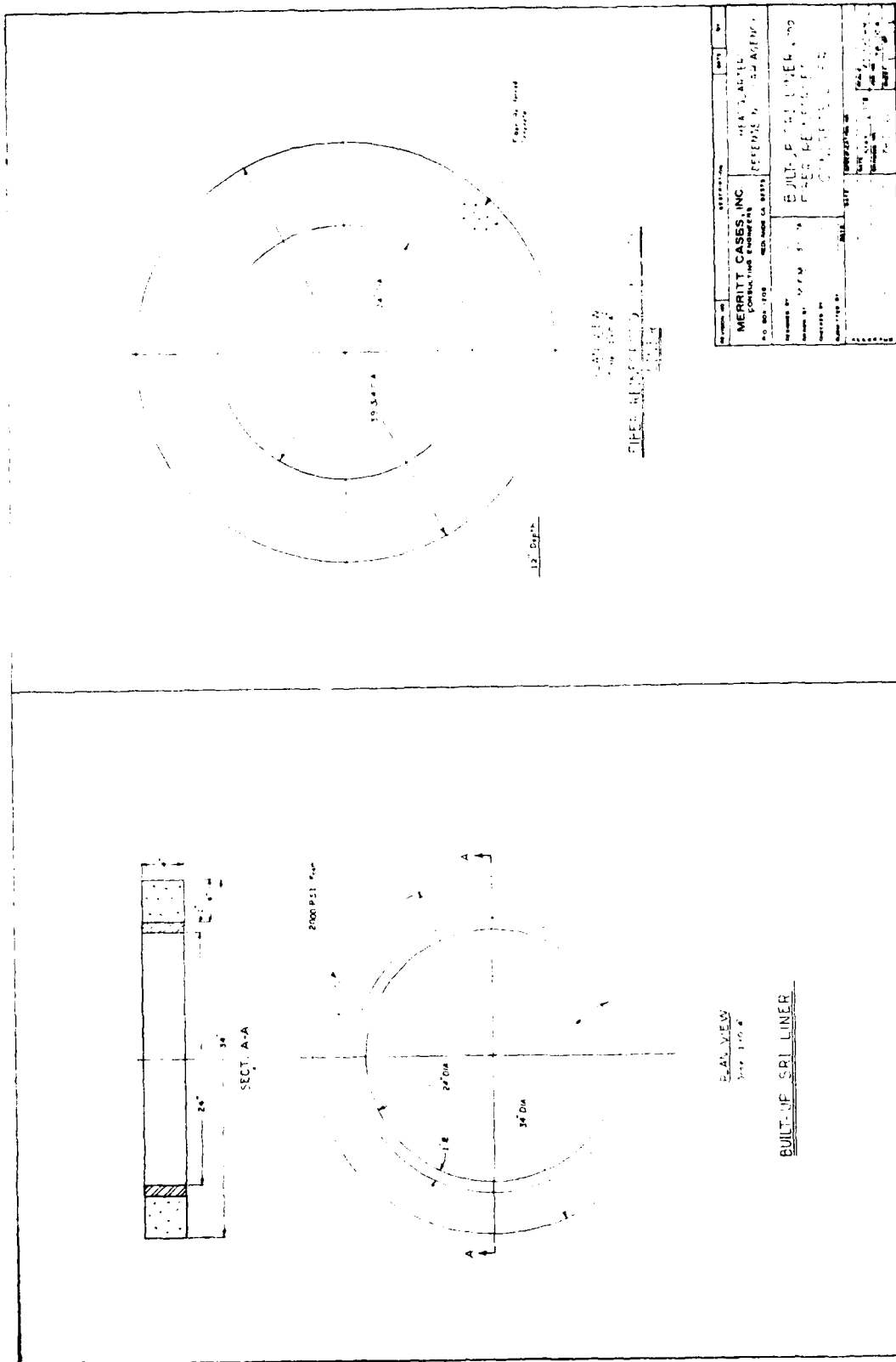


Figure 2.7 Details of MIGHTY EPIC/DIABLO HAWK S-X-11 (SRI built-up liner) Test Specimen and the Fiber Reinforced Concrete Test Specimen.

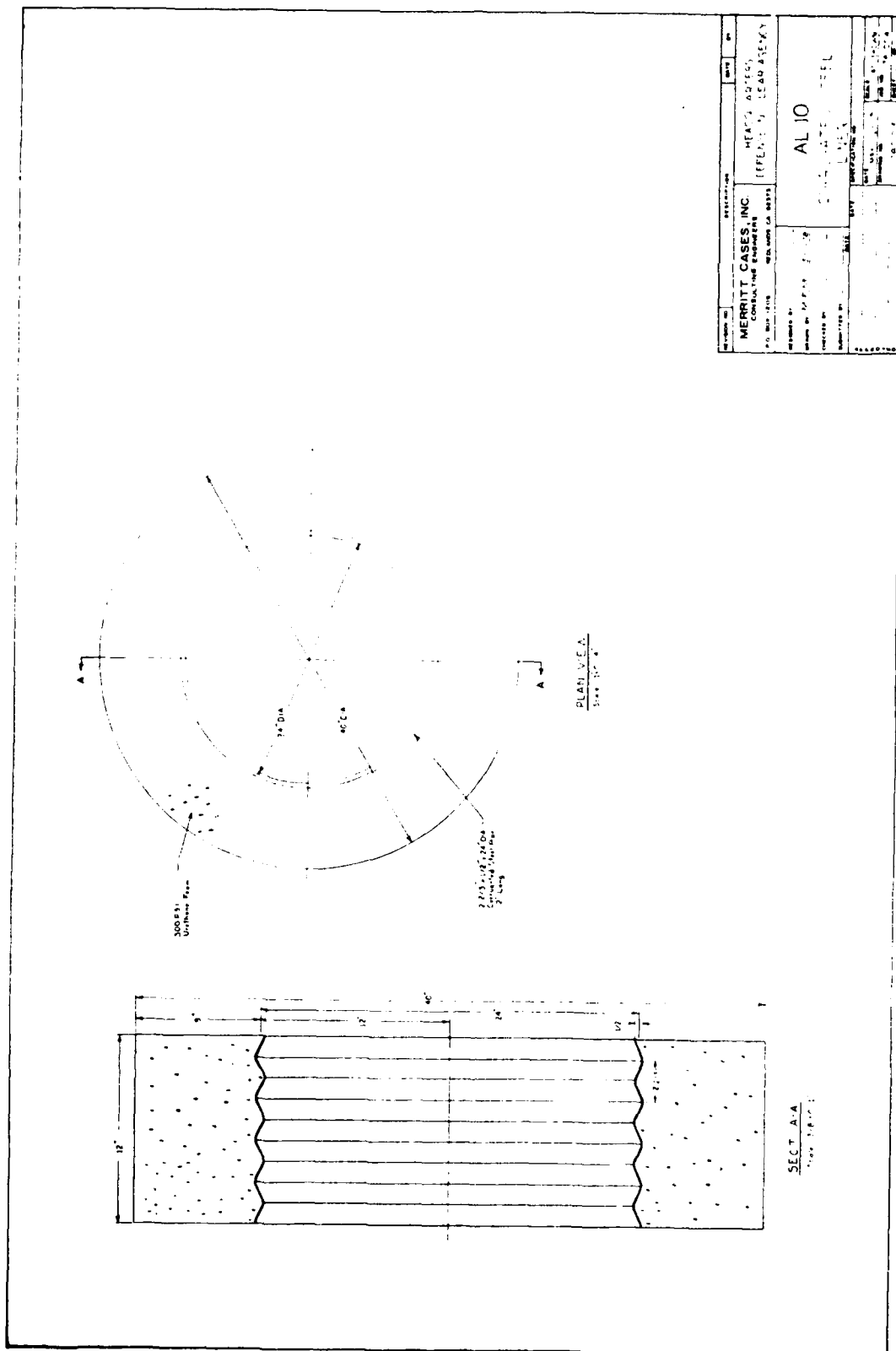


Figure 2.8 Details of PILE DRIVER AL-10 Test Specimen.

SECTION 3

TEST DATA

The complete set of data for the test program is presented in this section. The data is arranged into groups determined by structural type. A summary of the test program is given by the test matrix shown in Table 1.

2

Table 1 Test Matrix

3.1 C-X-9 MODELS

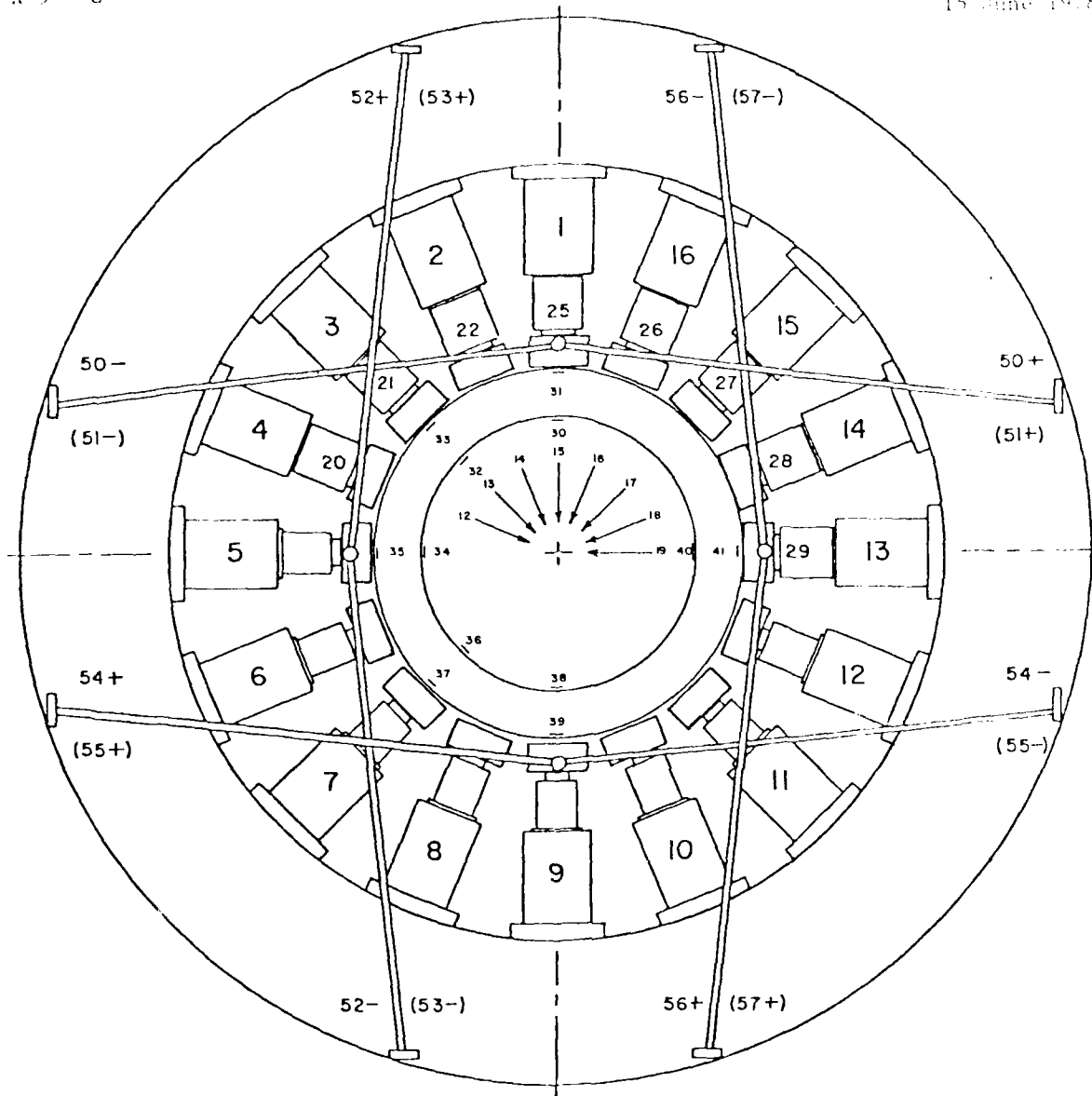
3.1.1 SPECIMEN #11

TEST NO. 39
COMPOSITE INTEGRAL LINER
1:4 LOADING RATIO
TESTED 15 JUNE 1978

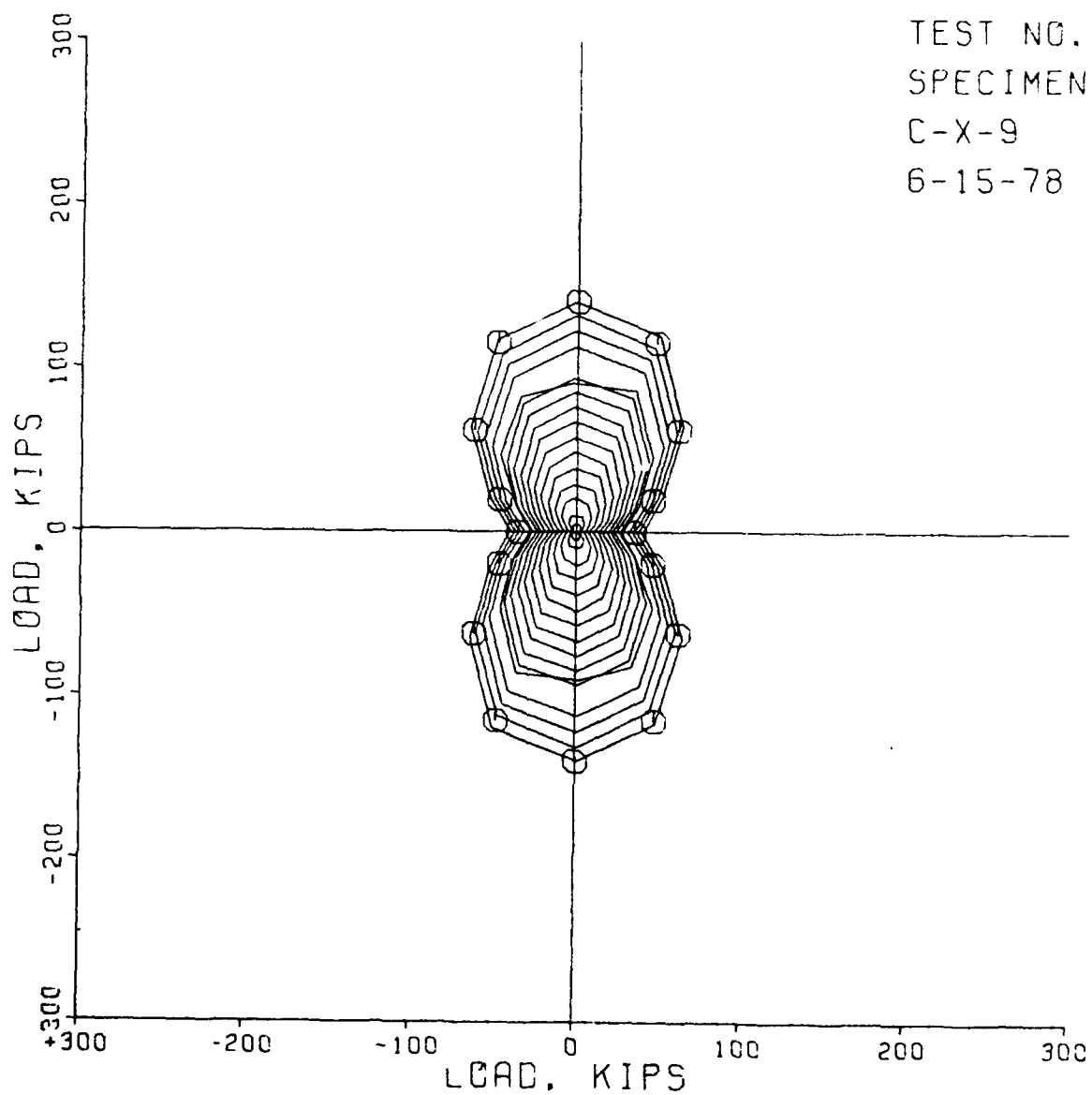
REACTION FRAME TEST SET-UP

Specimen #11
C-X-9 8"

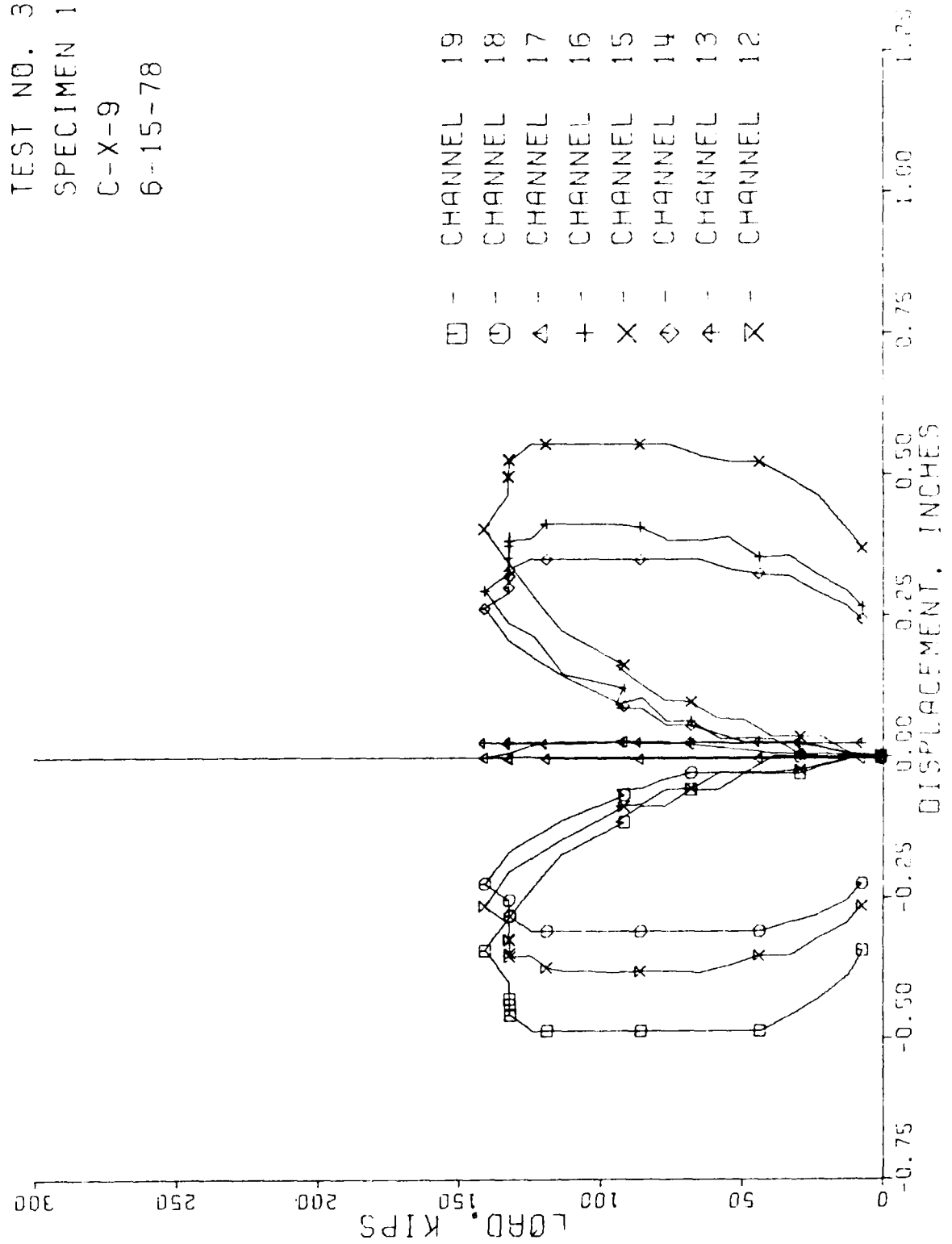
Test #39
1:4 Load
15 June 1978



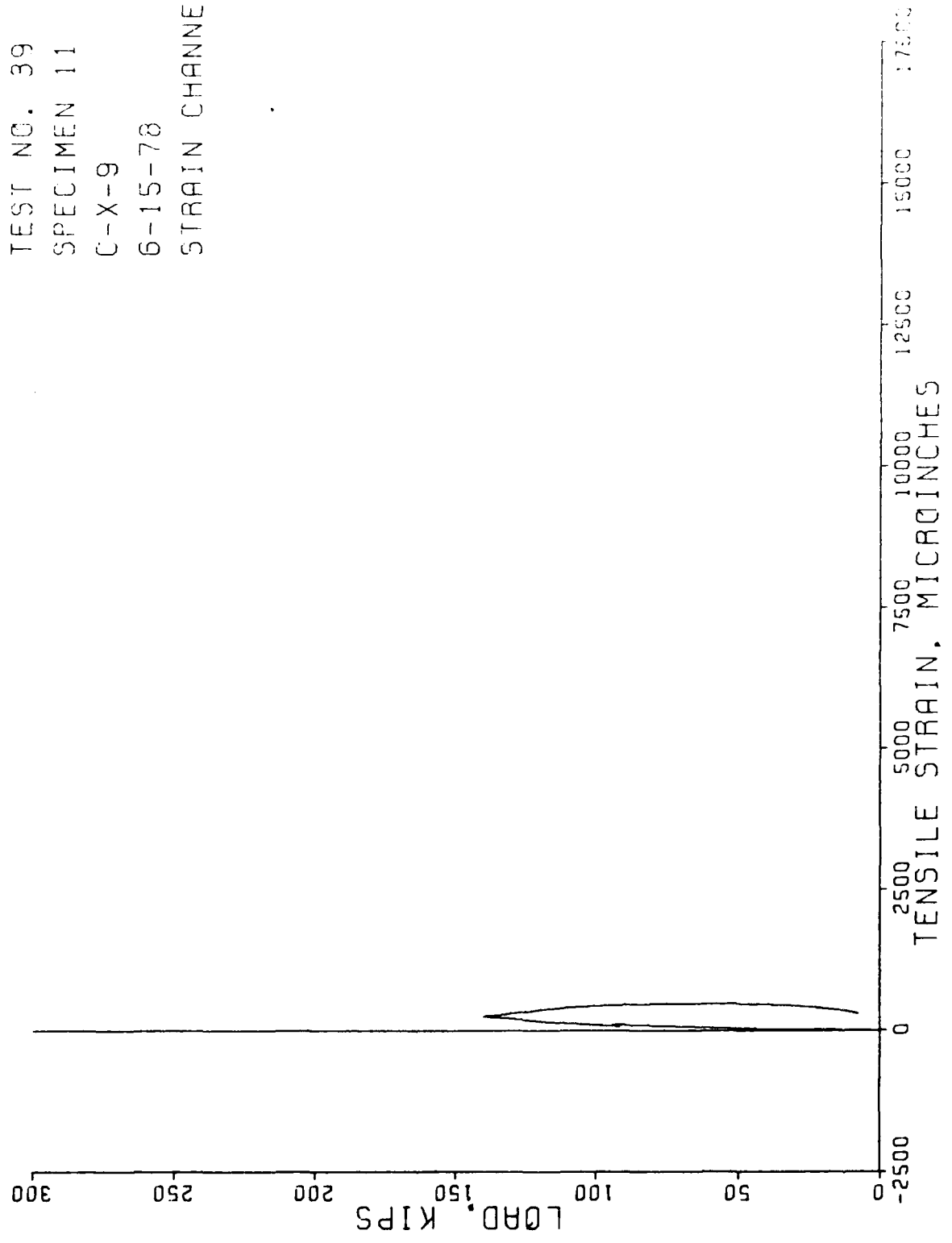
CH 12-19 Load axis I.D. (Research, Inc. Model 4040).
CH 20-22, 25-29 Axial load (Transducers, Inc. Model 693-300K).
CH 30-41 (Ailtech SG 129-6S) Radial pairs at center. Odd gages on Rebar.
CH 50-57 (Ailtech SG 129-6S) Polarity indicates rod under tension.
Lower rod shown (XX).



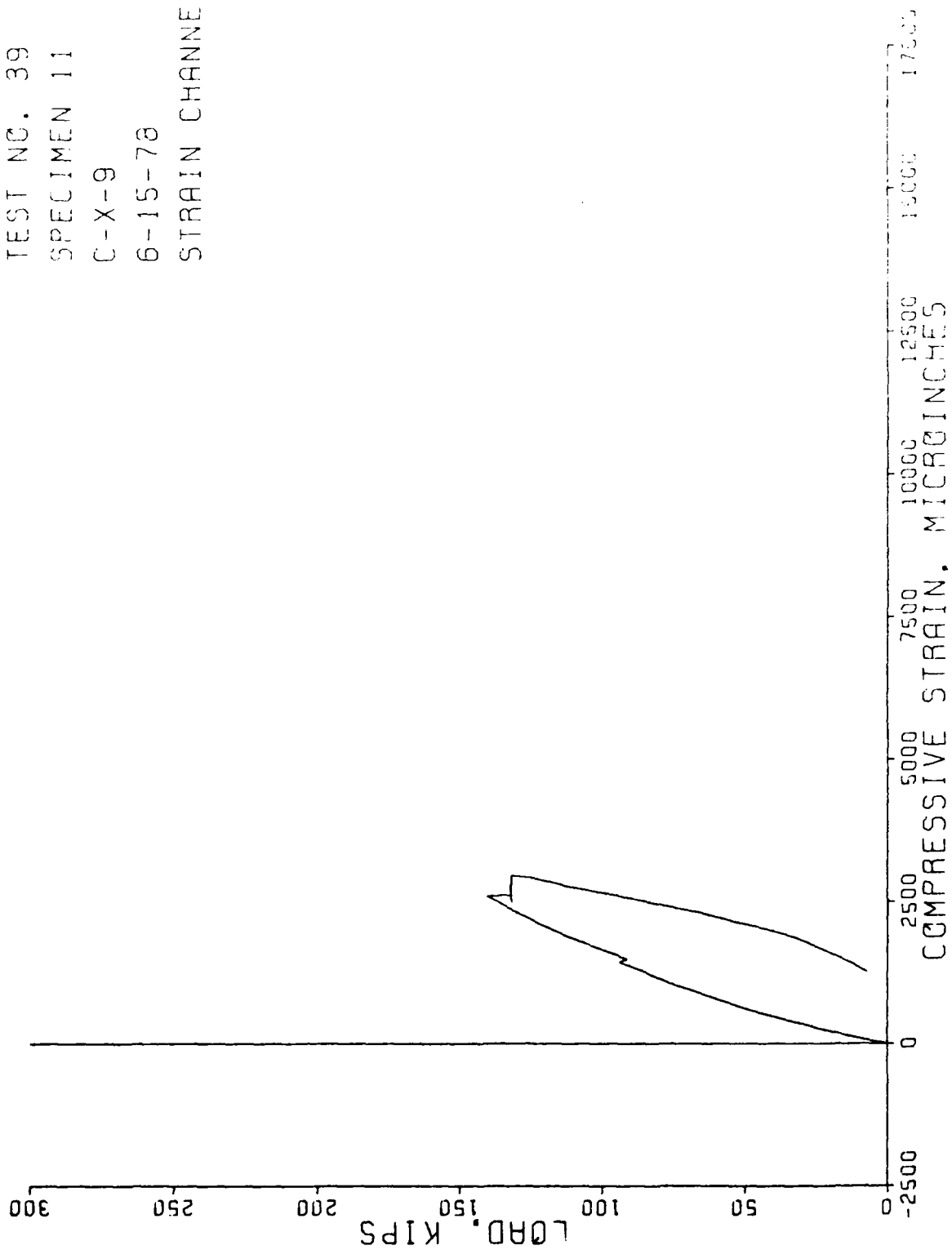
TEST NO. 39
 SPECIMEN 11
 C-X-9
 6-15-78



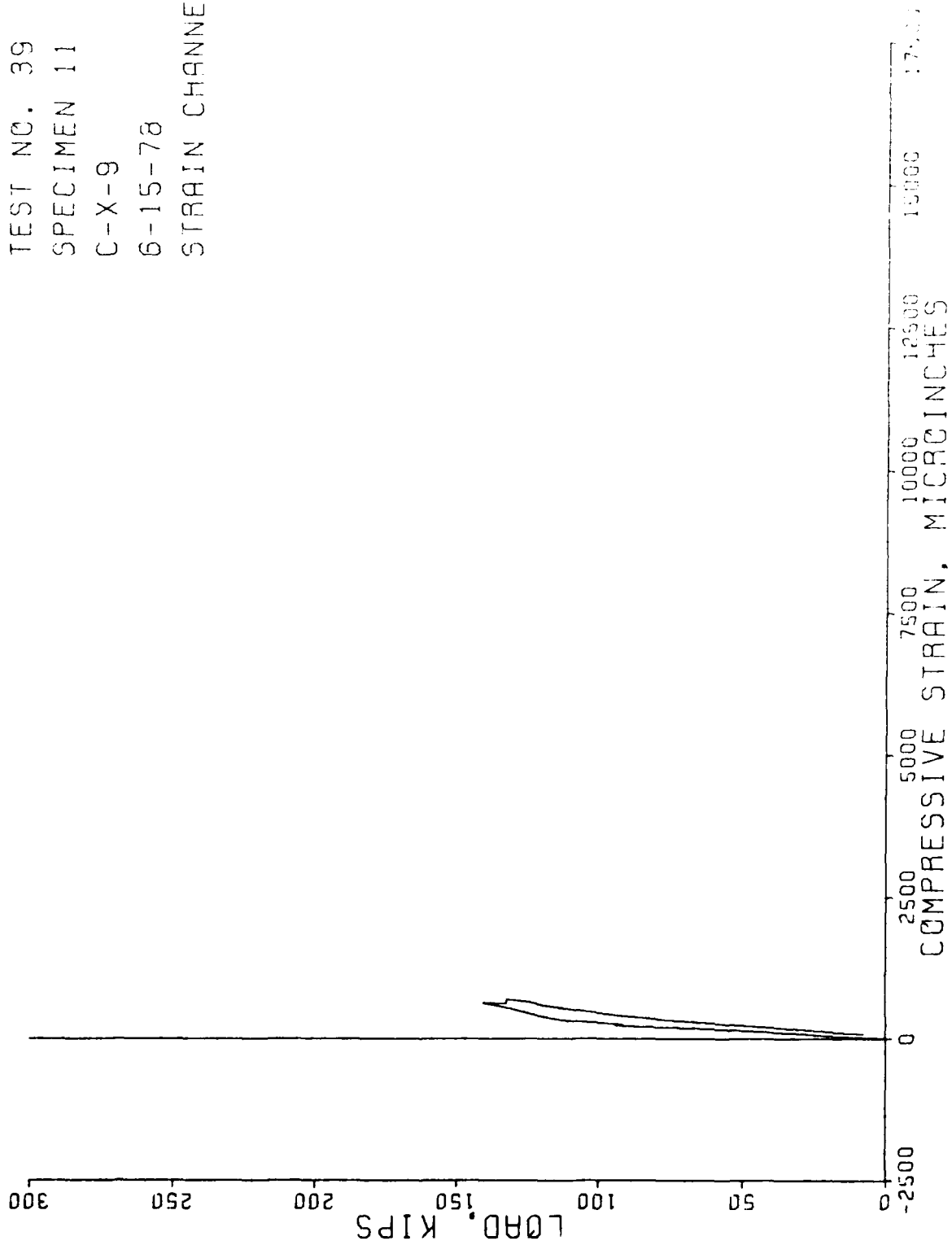
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SPECIMEN 11
C-X-9
6-15-78
STRAIN CHANNEL 30



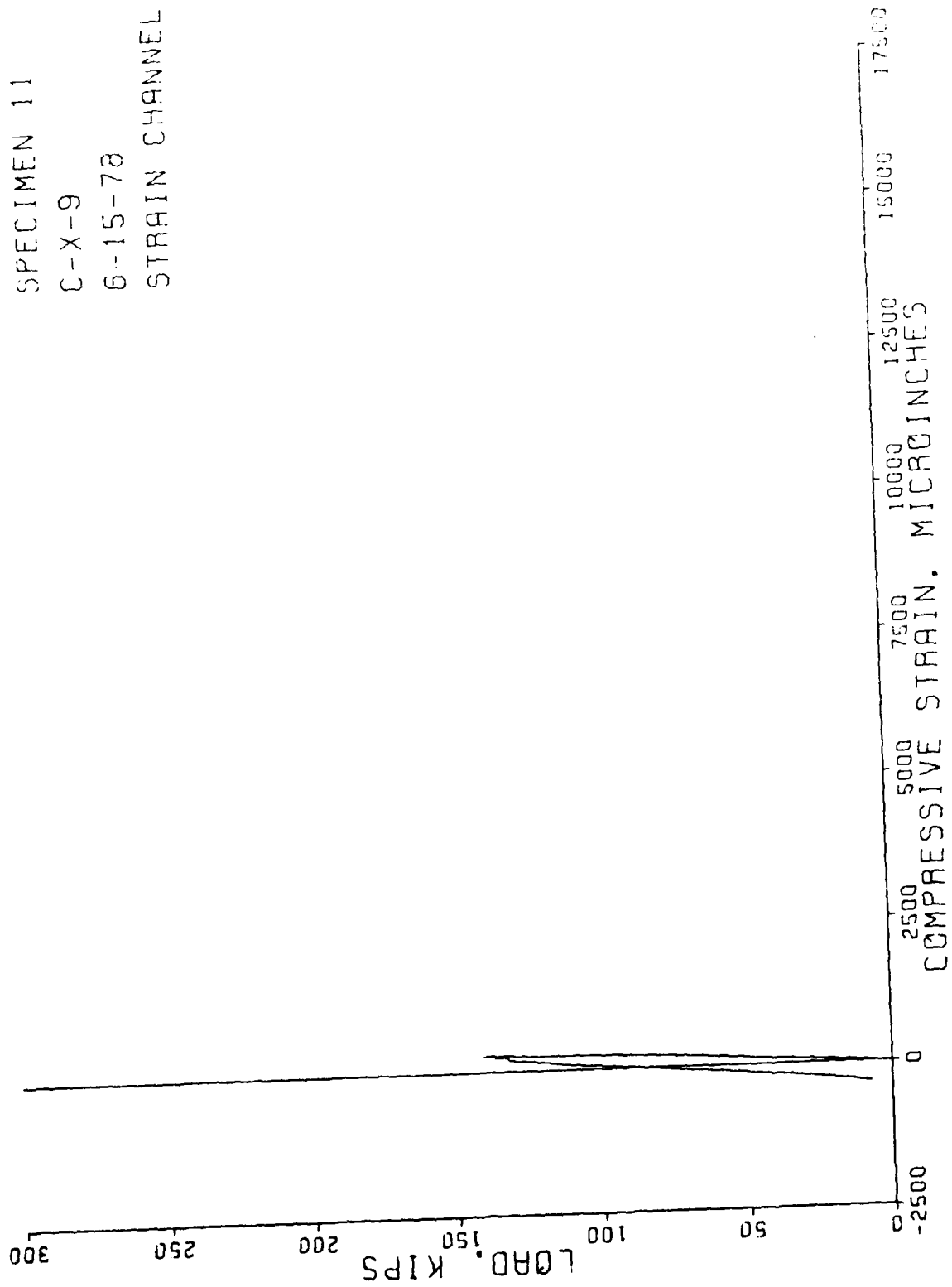
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SPECIMEN 11
C-X-9
6-15-78
STRAIN CHANNEL 31



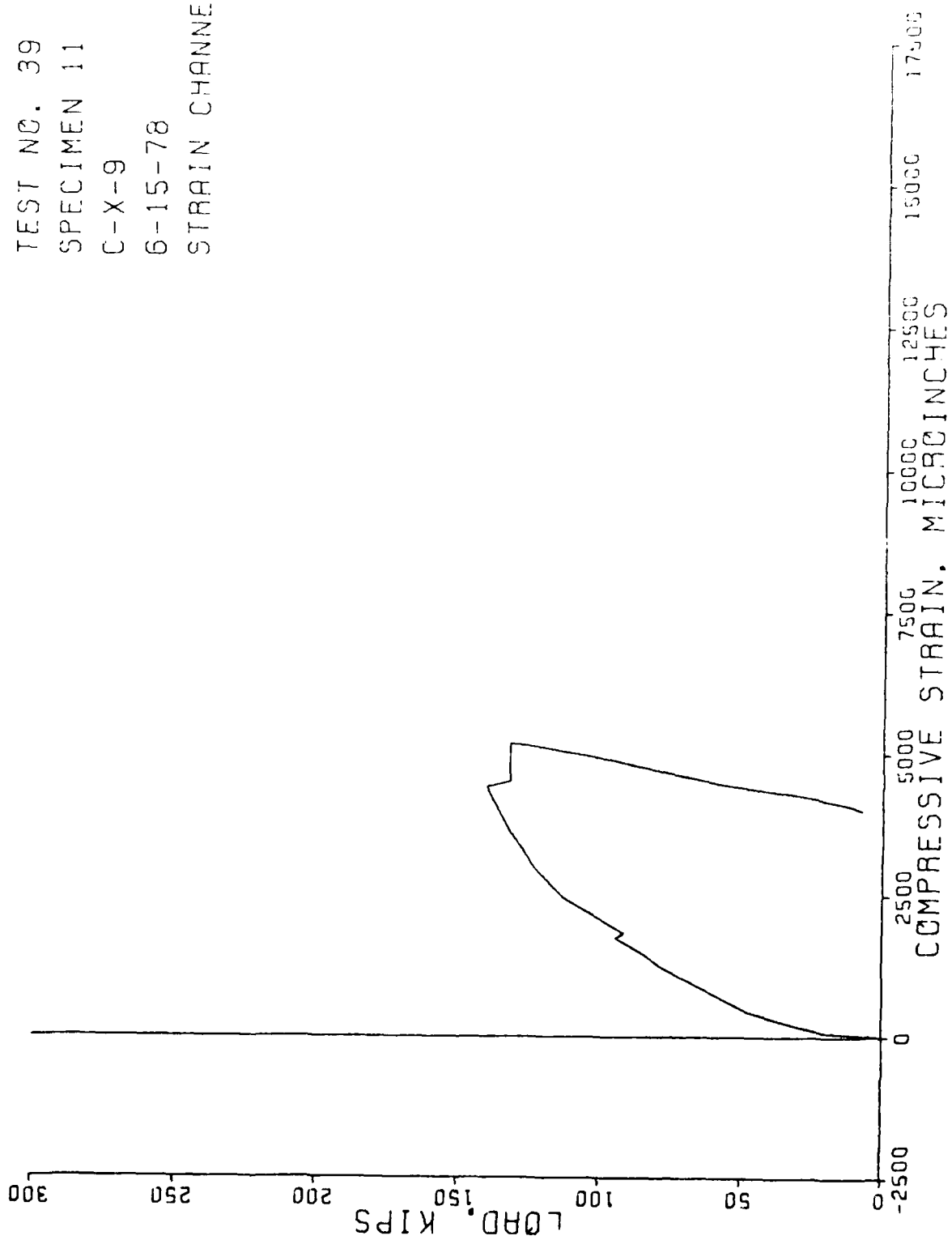
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C-X-9
6-15-78
STRAIN CHANNEL 32



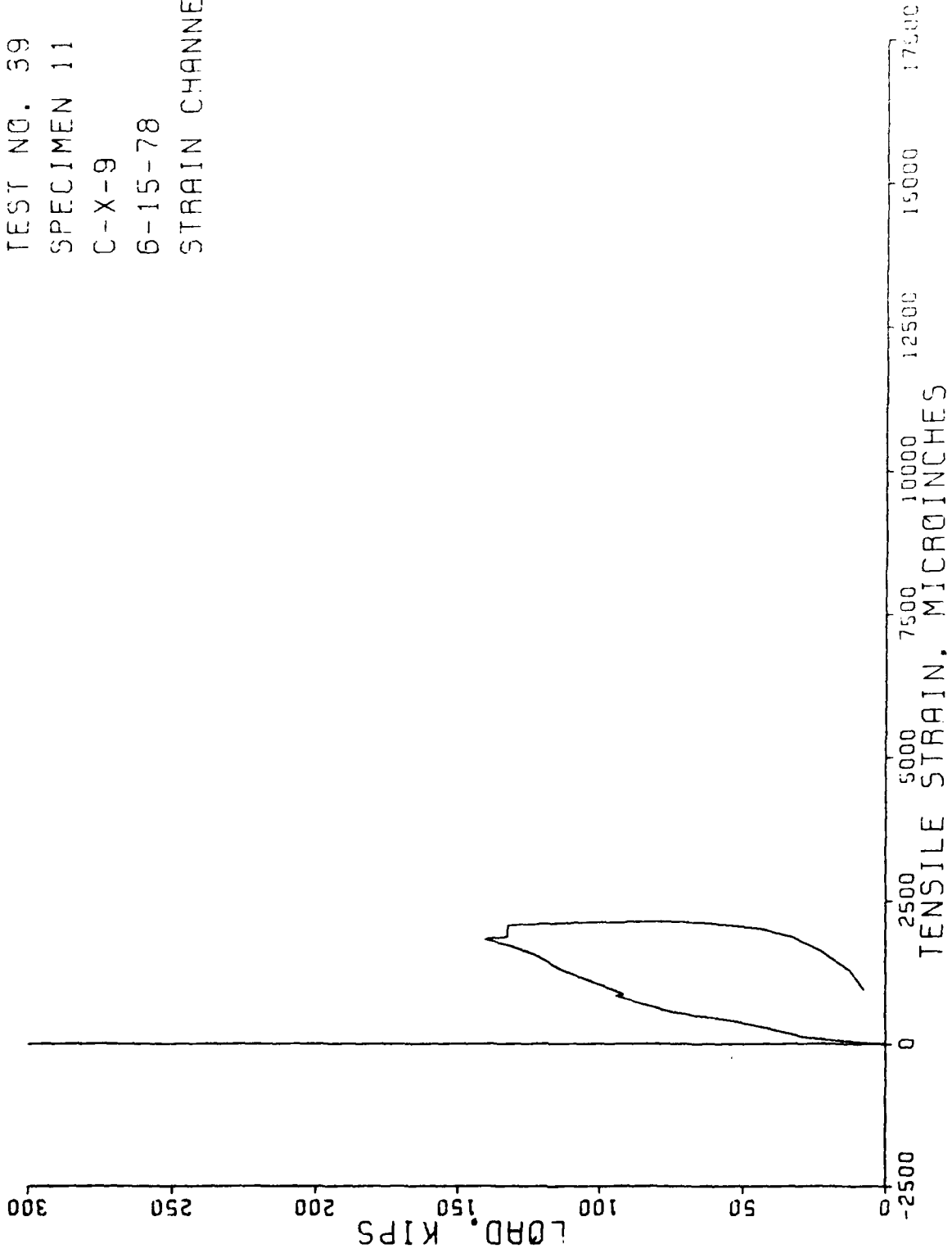
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SPECIMEN 11
C-X-9
6-15-78
STRAIN CHANNEL 33



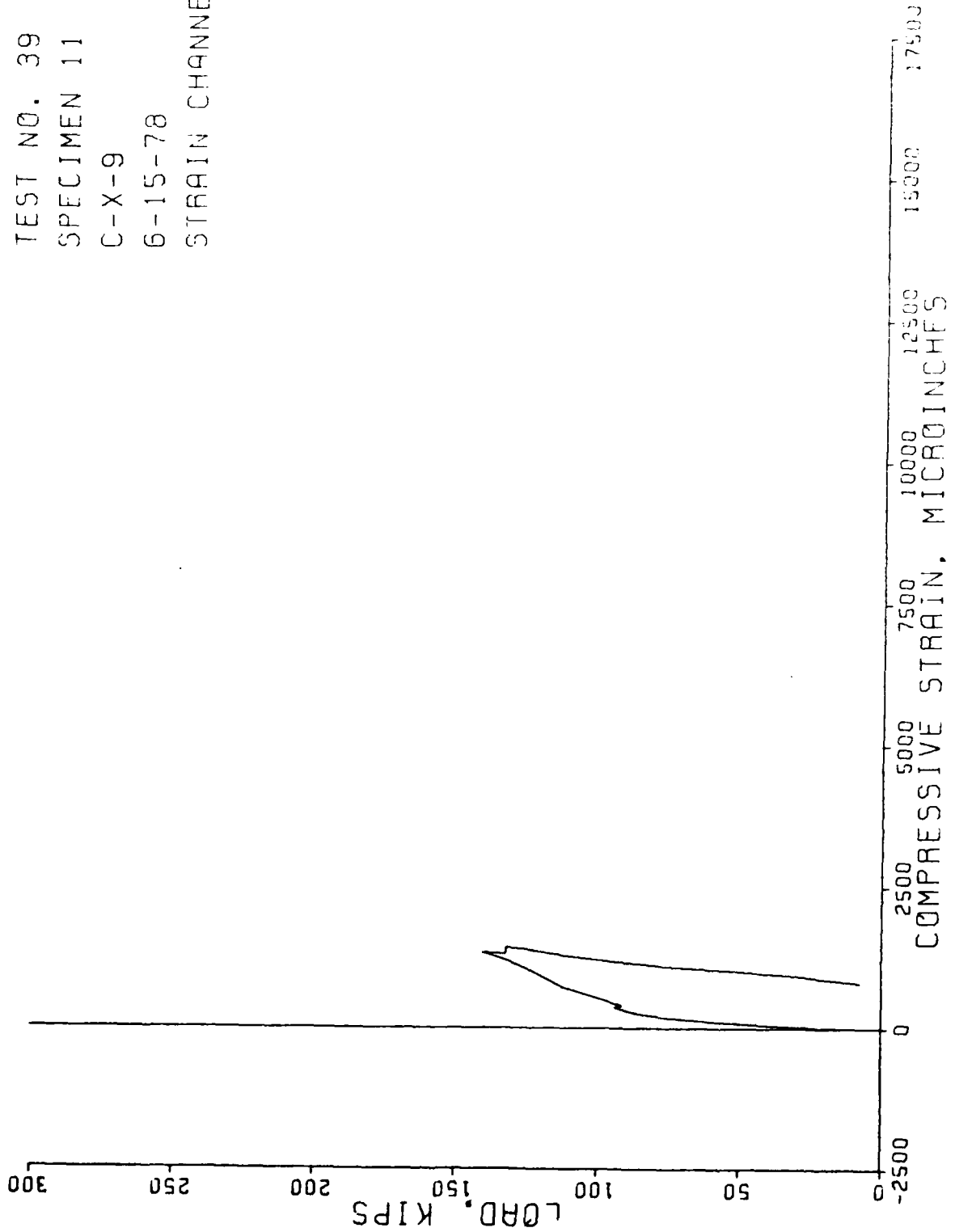
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 SPECIMEN 11
 C-X-9
 6-15-78
 STRAIN CHANNEL 34



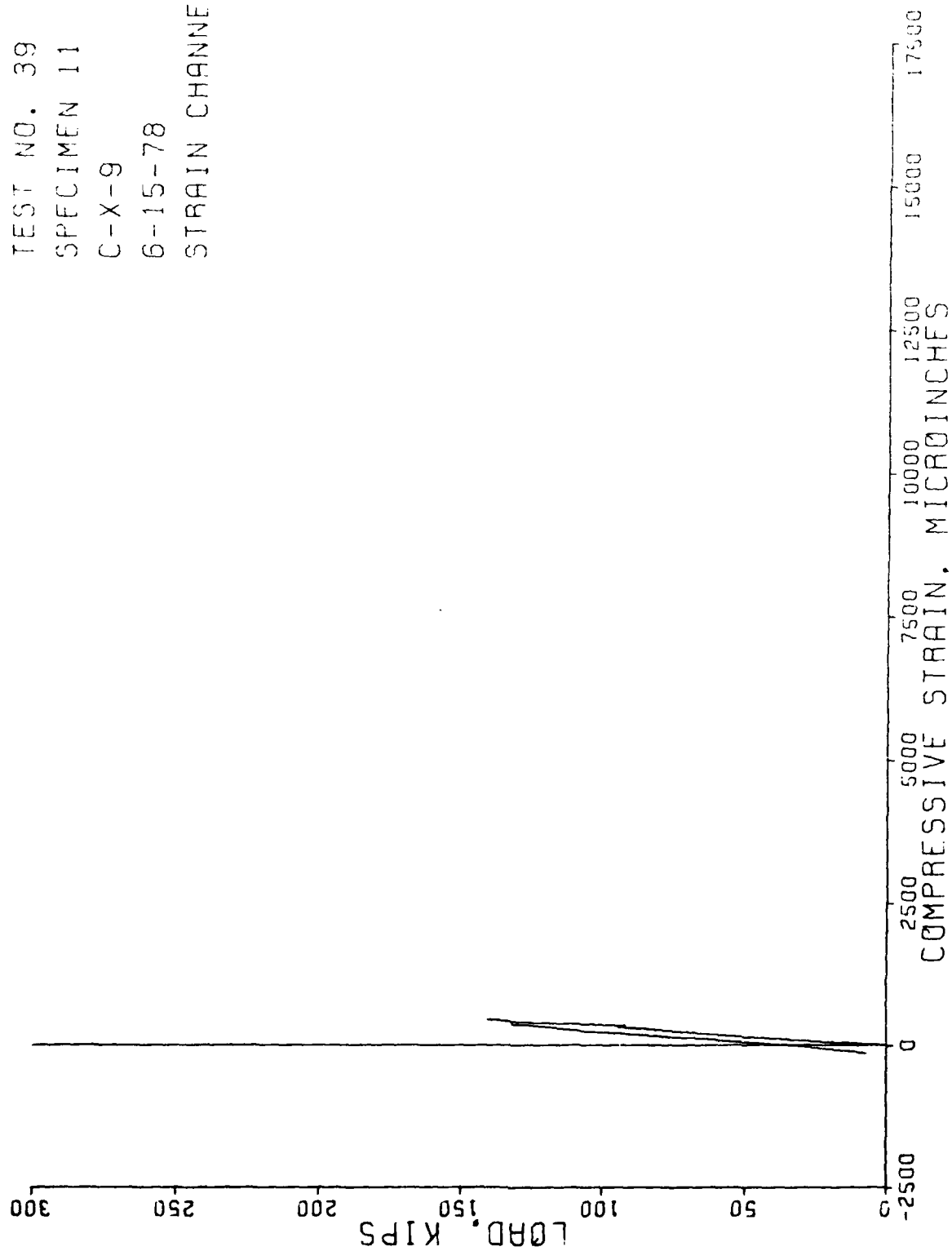
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SPECIMEN 11
C-X-9
6-15-78
STRAIN CHANNEL 35



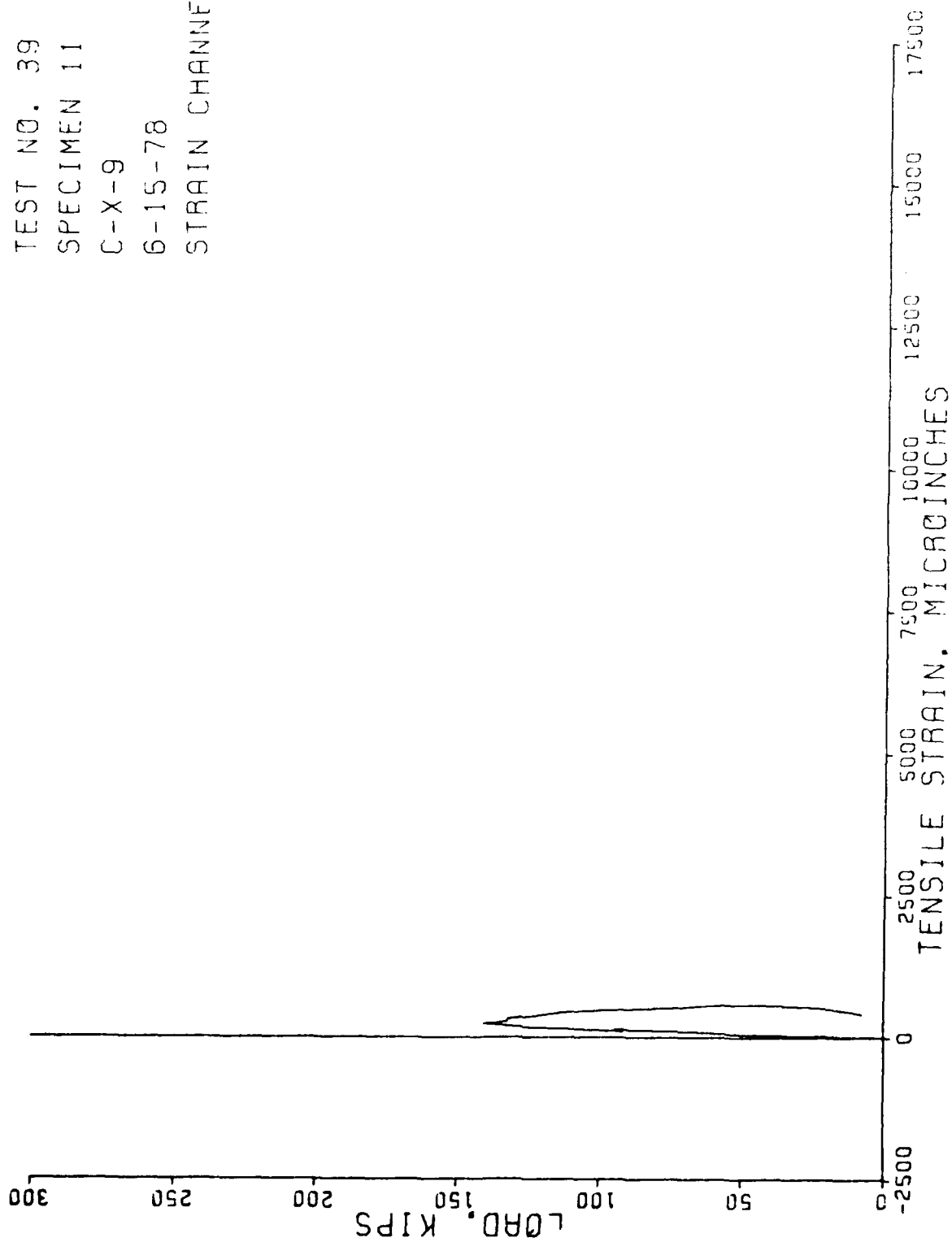
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SPECIMEN 11
C-X-9
6-15-78
STRAIN CHANNEL 36



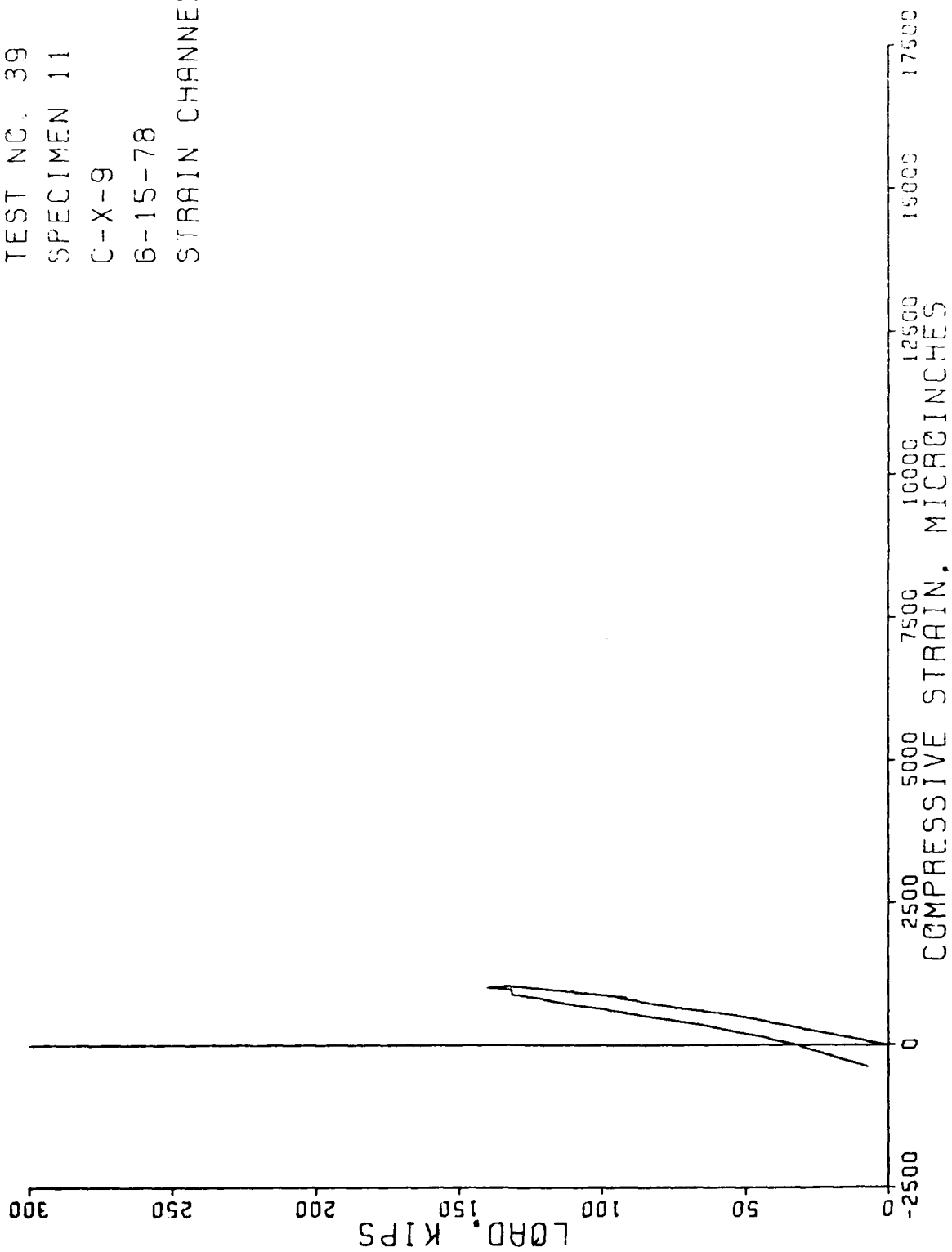
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SPECIMEN 11
C-X-9
6-15-78
STRAIN CHANNEL 37



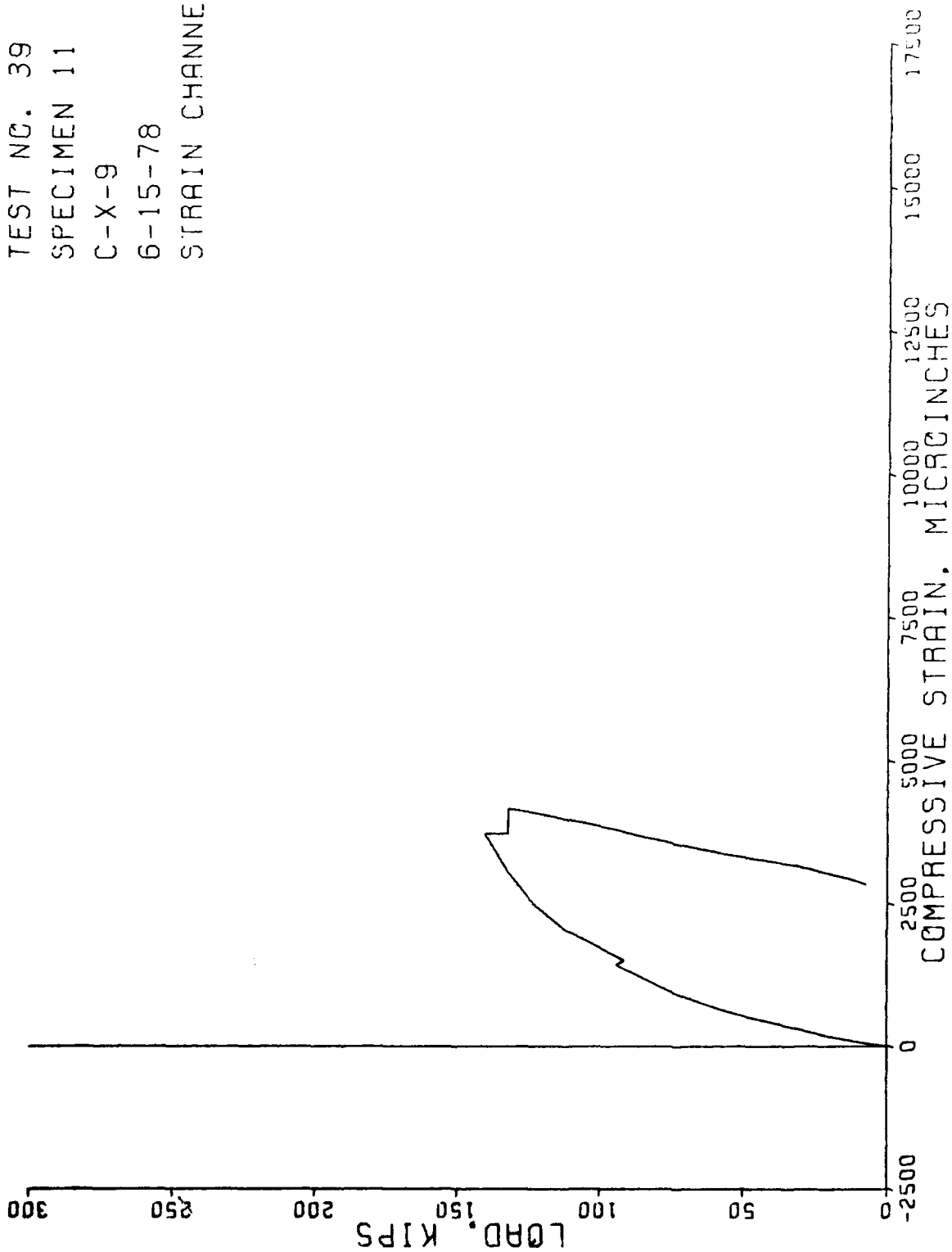
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SPECIMEN 11
C-X-9
6-15-78
STRAIN CHANNEL 38

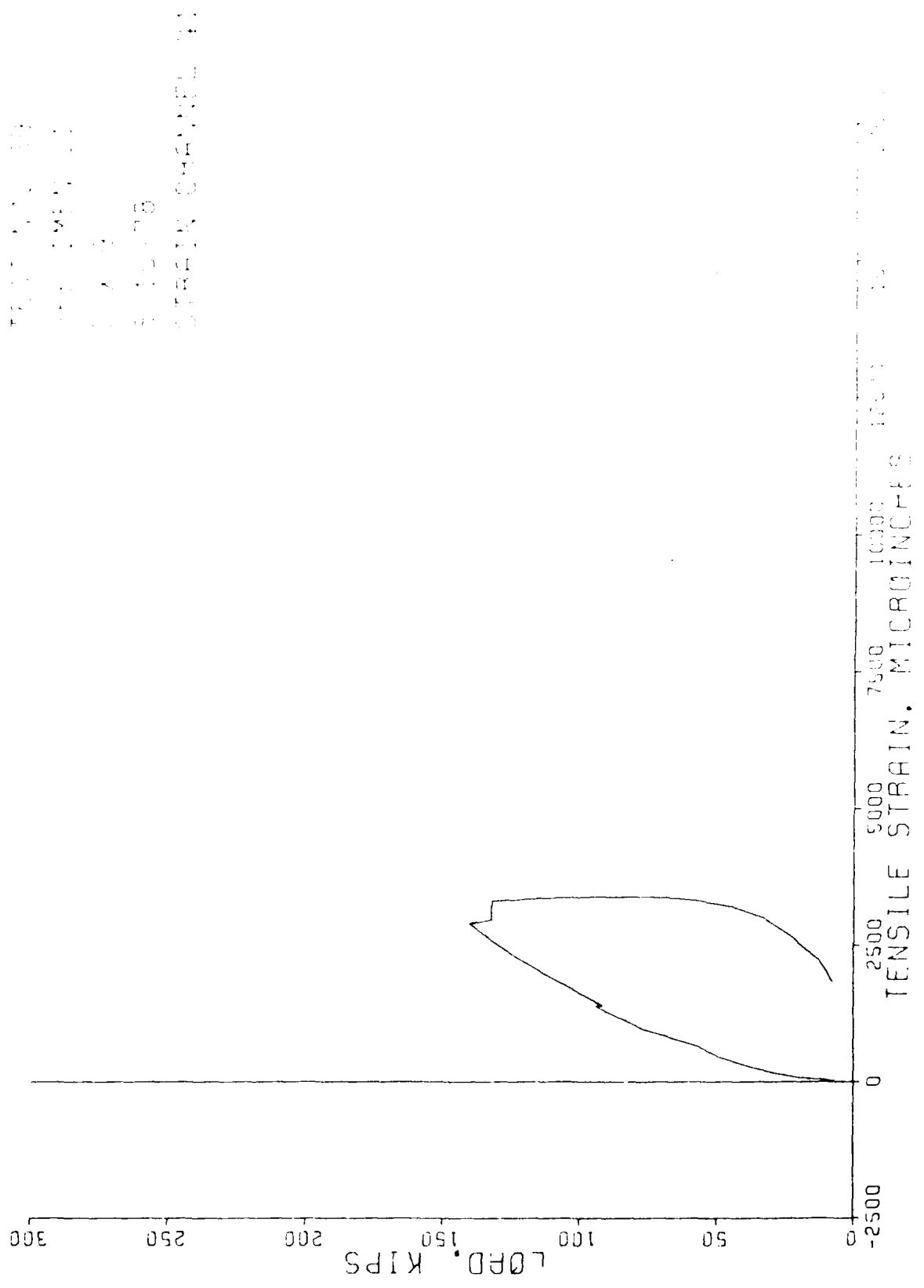


TEST NO. 39
SPECIMEN 11
C-X-9
6-15-78
STRAIN CHANNEL 39



TEST NO. 39
SPECIMEN 11
C-X-9
6-15-78
STRAIN CHANNEL 40





TEST NO. 39 SPECIMEN 11 C-X-9 6-15-78

NUMBER OF INCREMENTS= 49
 NUMBER OF CHANNELS= 36
 NUMBER OF STRAIN CHANNELS= 12
 NUMBER OF DISPLACEMENT CHANNELS= 8
 NUMBER OF LOAD CHANNELS= 8
 NUMBER OF PRESSURE CHANNELS= 0
 NUMBER OF RODS= 8

CHANNEL ZEROSHIFT

57	0.0
56	0.0
55	0.0
54	0.0
53	0.0
52	0.0
51	0.0
50	0.0
41	0.0
40	0.0
39	0.0
38	0.0
37	0.0
36	0.0
35	0.0
34	0.0
33	0.0
32	0.0
31	0.0
30	0.0
29	0.0
28	0.0
27	0.0
26	0.0
25	0.0
22	0.0
21	0.0
20	0.0
19	0.0
18	0.0
17	0.0
16	0.0
15	0.0
14	0.0
13	0.0
12	0.0

STRAIN CHANNEL	CALIBRATION
41	1.000
40	1.000
39	1.000
38	1.000
37	1.000
36	1.000

1.000
1.000
1.000
1.000
1.000
1.000

CALIBRATION

0.001
0.001
0.002
0.002
0.002
0.002
0.002
0.002

35
34
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DISPLACEMENT CHANNEL

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LOAD CHANNEL

10.000
10.000
10.000
10.000
10.000
10.000
10.000
10.000

CALIBRATION

29
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ROD CHANNEL

1.000
1.000
1.000
1.000
1.000
1.000
1.000
1.000

57
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53
52
51
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CALIBRATION

STRAIN CHANNELS

	TIME	CH.41	CH.40	CH.39	CH.38	CH.37	CH.36	CH.35	CH.34
1.	15:13:16:19	-1.000	0.0	0.0	1.000	0.0	-1.000	-1.000	-2.000
2.	15:13:44:21	17.000	-39.000	-50.000	10.000	-16.000	1.000	17.000	-19.000
3.	15:13:45:4	40.000	-79.000	-98.000	16.000	-29.000	-1.000	35.000	-36.000
4.	15:13:45:58	91.000	-179.000	-195.000	24.000	-55.000	-10.000	72.000	-91.000
5.	15:13:46:43	158.000	-279.000	-279.000	27.000	-78.000	-28.000	112.000	-181.000
6.	15:13:47:31	289.000	-394.000	-381.000	38.000	-108.000	-54.000	242.000	-313.000
7.	15:13:48:17	453.000	-515.000	-476.000	55.000	-140.000	-83.000	349.000	-467.000
8.	15:13:48:59	657.000	-643.000	-553.000	77.000	-180.000	-113.000	439.000	-686.000
9.	15:13:49:54	824.000	-815.000	-616.000	103.000	-217.000	-149.000	502.000	-954.000
10.	15:13:50:45	964.000	-985.000	-672.000	112.000	-252.000	-183.000	570.000	-1189.000
11.	15:13:51:54	1172.000	-1207.000	-753.000	129.000	-287.000	-248.000	697.000	-1492.000
12.	15:13:52:46	1384.000	-1422.000	-823.000	133.000	-312.000	-360.000	842.000	-1744.000
13.	15:13:53:37	1384.000	-1501.000	-832.000	99.000	-334.000	-391.000	860.000	-1826.000
14.	15:13:54:26	1983.000	-2070.000	-947.000	145.000	-369.000	-742.000	1292.000	-2479.000
15.	15:13:55:15	2272.000	-2481.000	-1000.000	161.000	-385.000	-994.000	1561.000	-2969.000
16.	15:13:55:58	2589.000	-3048.000	-1038.000	194.000	-416.000	-1202.000	1721.000	-3624.000
17.	15:13:56:20	2896.000	-3722.000	-1015.000	243.000	-448.000	-1340.000	1826.000	-4411.000
18.	15:13:56:42	2958.000	-3720.000	-975.000	277.000	-414.000	-1313.000	1875.000	-4510.000
19.	15:13:57:13	3013.000	-3776.000	-968.000	282.000	-404.000	-1339.000	1904.000	-4580.000
20.	15:13:57:45	3058.000	-3817.000	-960.000	282.000	-400.000	-1353.000	1928.000	-4636.000
21.	15:14:0:16	3094.000	-3852.000	-953.000	287.000	-397.000	-1363.000	1951.000	-4684.000
22.	15:14:0:48	3122.000	-3882.000	-947.000	291.000	-394.000	-1371.000	1968.000	-4728.000
23.	15:14:1:19	3147.000	-3911.000	-942.000	295.000	-391.000	-1379.000	1983.000	-4771.000
24.	15:14:1:50	3168.000	-3937.000	-935.000	298.000	-388.000	-1385.000	1995.000	-4814.000
25.	15:14:2:22	3188.000	-3963.000	-931.000	301.000	-386.000	-1391.000	2008.000	-4855.000
26.	15:14:2:53	3204.000	-3988.000	-926.000	302.000	-383.000	-1398.000	2017.000	-4895.000
27.	15:14:3:25	3222.000	-4010.000	-920.000	306.000	-380.000	-1402.000	2027.000	-4930.000
28.	15:14:3:57	3237.000	-4034.000	-915.000	309.000	-378.000	-1406.000	2037.000	-4967.000
29.	15:14:4:28	3251.000	-4054.000	-910.000	311.000	-376.000	-1410.000	2045.000	-5003.000
30.	15:14:5:0	3263.000	-4075.000	-905.000	313.000	-374.000	-1414.000	2052.000	-5036.000
31.	15:14:5:31	3276.000	-4094.000	-901.000	315.000	-372.000	-1418.000	2059.000	-5068.000
32.	15:14:6:3	3287.000	-4112.000	-896.000	318.000	-370.000	-1421.000	2065.000	-5097.000
33.	15:14:6:34	3298.000	-4130.000	-892.000	319.000	-368.000	-1424.000	2071.000	-5125.000
34.	15:14:7:6	3307.000	-4148.000	-888.000	320.000	-367.000	-1429.000	2075.000	-5153.000
35.	15:14:7:37	3318.000	-4163.000	-883.000	322.000	-365.000	-1431.000	2081.000	-5178.000
36.	15:14:8:27	3331.000	-4183.000	-877.000	322.000	-364.000	-1434.000	2092.000	-5141.000
37.	15:14:9:15	3348.000	-4051.000	-791.000	326.000	-367.000	-1429.000	2101.000	-5097.000
38.	15:14:10:11	3360.000	-3992.000	-731.000	434.000	-269.000	-1334.000	2108.000	-5042.000
39.	15:14:10:59	3375.000	-3911.000	-669.000	461.000	-236.000	-1236.000	2120.000	-4977.000
40.	15:14:11:41	3385.000	-3803.000	-597.000	480.000	-207.000	-1179.000	2130.000	-4884.000
41.	15:14:12:26	3389.000	-3691.000	-516.000	494.000	-173.000	-1134.000	2134.000	-4769.000
42.	15:14:13:24	3391.000	-3576.000	-438.000	509.000	-141.000	-1092.000	2136.000	-4657.000
43.	15:14:14:7	3368.000	-3455.000	-346.000	551.000	-107.000	-1051.000	2121.000	-4539.000
44.	15:14:14:52	3304.000	-3351.000	-241.000	573.000	-68.000	-1019.000	2078.000	-4439.000
45.	15:14:15:34	3204.000	-3266.000	-137.000	571.000	-31.000	-979.000	2009.000	-4366.000
46.	15:14:16:20	2997.000	-3172.000	5.000	553.000	11.000	-933.000	1862.000	-4297.000
47.	15:14:17:14	2688.000	-3062.000	145.000	519.000	58.000	-887.000	1532.000	-4216.000
48.	15:14:18:9	2233.000	-2930.000	309.000	458.000	115.000	-828.000	1286.000	-4100.000
49.	15:14:19:4	1840.000	-2836.000	393.000	407.000	148.000	-802.000	955.000	-4007.000

STRAIN CHANNELS

TIME	CH.33	CH.32	CH.31	CH.30	CH.
1. 15:13:16:19	-1.000	0.0	1.000	1.000	
2. 15:13:44:21	-11.000	-14.000	-52.000	8.000	
3. 15:13:45:4	-25.000	-56.000	-104.000	14.000	
4. 15:13:45:58	-51.000	-87.000	-122.000	22.000	
5. 15:13:46:43	-71.000	-115.000	-145.000	28.000	
6. 15:13:47:31	-91.000	-139.000	-182.000	37.000	
7. 15:13:48:17	-120.000	-162.000	-209.000	52.000	
8. 15:13:48:59	-147.000	-184.000	-237.000	70.000	
9. 15:13:49:54	-171.000	-201.000	-266.000	82.000	
10. 15:13:50:45	-198.000	-217.000	-295.000	93.000	
11. 15:13:51:54	-229.000	-237.000	-322.000	112.000	
12. 15:13:52:46	-254.000	-250.000	-348.000	141.000	
13. 15:13:53:37	-280.000	-269.000	-377.000	179.000	
14. 15:13:56:26	-253.000	-236.000	-348.000	221.000	
15. 15:13:57:15	-269.000	-260.000	-389.000	253.000	
16. 15:13:57:58	-280.000	-272.000	-411.000	290.000	
17. 15:13:58:20	-236.000	-209.000	-348.000	285.000	
18. 15:13:58:42	-224.000	-184.000	-308.000	286.000	
19. 15:13:59:13	-219.000	-166.000	-285.000	288.000	
20. 15:13:59:45	-215.000	-145.000	-261.000	289.000	
21. 15:14:0:16	-211.000	-122.000	-237.000	291.000	
22. 15:14:0:48	-207.000	-104.000	-213.000	293.000	
23. 15:14:1:19	-204.000	-87.000	-189.000	295.000	
24. 15:14:1:50	-202.000	-73.000	-166.000	296.000	
25. 15:14:2:22	-200.000	-61.000	-145.000	297.000	
26. 15:14:2:53	-196.000	-51.000	-126.000	298.000	
27. 15:14:3:25	-195.000	-43.000	-111.000	300.000	
28. 15:14:3:57	-193.000	-37.000	-100.000	300.000	
29. 15:14:4:28	-191.000	-31.000	-91.000	302.000	
30. 15:14:5:0	-189.000	-28.000	-84.000	302.000	
31. 15:14:5:31	-187.000	-25.000	-78.000	302.000	
32. 15:14:6:3	-185.000	-22.000	-73.000	302.000	
33. 15:14:6:34	-184.000	-20.000	-69.000	302.000	
34. 15:14:7:37	-182.000	-18.000	-66.000	302.000	
35. 15:14:8:27	-160.000	-16.000	-64.000	302.000	
36. 15:14:9:15	-136.000	-13.000	-61.000	302.000	
37. 15:14:10:11	-105.000	-10.000	-59.000	302.000	
38. 15:14:10:59	-74.000	-7.000	-53.000	302.000	
39. 15:14:11:41	-38.000	-3.000	-48.000	302.000	
40. 15:14:12:26	37.000	3.000	-43.000	302.000	
41. 15:14:13:24	74.000	7.000	-38.000	302.000	
42. 15:14:14:7	117.000	11.000	-33.000	302.000	
43. 15:14:14:52	157.000	15.000	-28.000	302.000	
44. 15:14:15:34	198.000	19.000	-23.000	302.000	
45. 15:14:16:20	246.000	24.000	-18.000	302.000	
46. 15:14:17:14	309.000	30.000	-13.000	302.000	
47. 15:14:18:9	346.000	34.000	-8.000	302.000	
48. 15:14:19:4				302.000	
49. 15:14:19:4				302.000	

DISPLACEMENT CHANNELS

	TIME	CH.19	CH.18	CH.17	CH.16	CH.15	CH.14	CH.13	CH.12
1.	15:13:16:19	-0.001	0.001	-0.002	0.004	0.002	-0.004	0.0	0.002
2.	15:13:44:21	-0.001	0.002	-0.002	0.004	0.004	0.002	0.004	0.002
3.	15:13:45:4	-0.001	0.002	0.0	0.004	0.004	0.004	0.006	0.0
4.	15:13:45:58	-0.015	0.001	0.0	0.006	0.036	0.018	0.016	-0.014
5.	15:13:46:43	-0.029	0.001	0.006	0.004	0.036	0.026	0.024	-0.022
6.	15:13:47:31	-0.029	0.002	0.008	0.032	0.036	0.026	0.024	-0.028
7.	15:13:48:17	-0.029	-0.027	0.014	0.034	0.066	0.026	0.024	-0.028
8.	15:13:48:59	-0.058	-0.027	0.018	0.032	0.068	0.040	0.026	-0.028
9.	15:13:49:54	-0.057	-0.027	0.024	0.064	0.098	0.056	0.026	-0.056
10.	15:13:50:45	-0.086	-0.037	0.028	0.064	0.100	0.056	0.024	-0.058
11.	15:13:51:54	-0.086	-0.055	0.028	0.106	0.130	0.086	0.024	-0.084
12.	15:13:52:46	-0.115	-0.057	0.030	0.092	0.162	0.086	0.026	-0.088
13.	15:13:53:37	-0.115	-0.067	0.028	0.122	0.162	0.090	0.026	-0.088
14.	15:13:56:26	-0.172	-0.111	0.028	0.148	0.224	0.144	0.024	-0.146
15.	15:13:57:15	-0.229	-0.140	0.022	0.212	0.284	0.174	0.026	-0.176
16.	15:13:57:58	-0.286	-0.168	0.008	0.238	0.346	0.206	0.024	-0.204
17.	15:13:58:20	-0.343	-0.224	0.0	0.294	0.404	0.262	0.026	-0.264
18.	15:13:58:42	-0.400	-0.252	-0.002	0.324	0.466	0.290	0.024	-0.294
19.	15:13:59:13	-0.400	-0.252	-0.002	0.348	0.466	0.292	0.026	-0.294
20.	15:13:59:45	-0.416	-0.253	-0.002	0.354	0.466	0.292	0.024	-0.316
21.	15:14:0:16	-0.429	-0.252	-0.002	0.352	0.496	0.300	0.024	-0.322
22.	15:14:0:48	-0.429	-0.260	0.0	0.354	0.496	0.306	0.024	-0.324
23.	15:14:1:19	-0.429	-0.281	-0.002	0.354	0.496	0.320	0.026	-0.324
24.	15:14:1:50	-0.429	-0.281	0.0	0.352	0.496	0.320	0.026	-0.324
25.	15:14:2:22	-0.439	-0.281	-0.002	0.374	0.496	0.320	0.024	-0.324
26.	15:14:2:53	-0.458	-0.281	0.0	0.374	0.496	0.322	0.024	-0.324
27.	15:14:3:25	-0.458	-0.281	0.0	0.400	0.526	0.322	0.024	-0.340
28.	15:14:3:57	-0.458	-0.280	-0.002	0.714	0.526	0.322	0.024	-0.340
29.	15:14:4:28	-0.458	-0.280	-0.002	0.384	0.526	0.322	0.026	-0.348
30.	15:14:5:0	-0.458	-0.280	-0.002	0.384	0.526	0.322	0.026	-0.354
31.	15:14:5:31	-0.458	-0.281	-0.002	0.384	0.526	0.326	0.026	-0.352
32.	15:14:6:3	-0.458	-0.281	0.0	0.384	0.524	0.328	0.024	-0.354
33.	15:14:6:34	-0.458	-0.280	-0.002	0.382	0.526	0.330	0.026	-0.354
34.	15:14:7:6	-0.458	-0.281	-0.002	0.382	0.526	0.332	0.024	-0.352
35.	15:14:7:37	-0.458	-0.281	0.0	0.384	0.524	0.332	0.024	-0.352
36.	15:14:8:27	-0.486	-0.309	0.0	0.386	0.554	0.350	0.024	-0.374
37.	15:14:9:15	-0.486	-0.309	-0.002	0.412	0.554	0.350	0.024	-0.374
38.	15:14:10:11	-0.486	-0.309	-0.002	0.412	0.554	0.350	0.024	-0.380
39.	15:14:10:59	-0.486	-0.309	-0.002	0.412	0.554	0.350	0.024	-0.380
40.	15:14:11:41	-0.486	-0.309	-0.002	0.412	0.554	0.350	0.026	-0.382
41.	15:14:12:26	-0.486	-0.309	-0.002	0.408	0.554	0.350	0.026	-0.380
42.	15:14:13:24	-0.486	-0.309	-0.002	0.384	0.554	0.350	0.024	-0.380
43.	15:14:14:7	-0.486	-0.309	-0.002	0.384	0.532	0.350	0.026	-0.382
44.	15:14:14:52	-0.486	-0.309	-0.002	0.390	0.522	0.350	0.024	-0.370
45.	15:14:15:34	-0.486	-0.309	-0.002	0.354	0.522	0.324	0.026	-0.352
46.	15:14:16:20	-0.458	-0.293	-0.002	0.356	0.492	0.320	0.024	-0.352
47.	15:14:17:14	-0.429	-0.280	-0.002	0.324	0.462	0.292	0.024	-0.324
48.	15:14:18:9	-0.386	-0.252	-0.002	0.294	0.400	0.268	0.024	-0.294
49.	15:14:19:4	-0.343	-0.224	-0.002	0.266	0.370	0.244	0.024	-0.264

LOAD CHANNELS

TIME	CH.29	CH.28	CH.27	CH.26	CH.25	CH.22	CH.21	CH.20
1. 15:13:16:19	320.000	700.000	710.000	350.000	510.000	620.000	730.000	700.000
2. 15:13:44:21	1220.000	2060.000	3650.000	4740.000	5720.000	4400.000	3530.000	1760.000
3. 15:13:45:4	2460.000	3820.000	6230.000	10030.000	10220.000	9510.000	6020.000	3490.000
4. 15:13:45:58	4800.000	7750.000	12890.000	18350.000	21140.000	18220.000	12680.000	7230.000
5. 15:13:46:43	7480.000	11770.000	18800.000	27610.000	29120.000	26080.000	18660.000	11030.000
6. 15:13:47:31	10690.000	16150.000	24600.000	36780.000	38770.000	34760.000	24320.000	15010.000
7. 15:13:48:17	13640.000	20350.000	31150.000	44860.000	48800.000	42470.000	30800.000	18990.000
8. 15:13:48:59	16000.000	24340.000	37670.000	54370.000	57570.000	51500.000	36810.000	23130.000
9. 15:13:49:54	19010.000	28140.000	43760.000	63360.000	67580.000	60110.000	42550.000	27220.000
10. 15:13:50:45	21430.000	31530.000	49650.000	70960.000	76480.000	67430.000	48350.000	30810.000
11. 15:13:51:54	23610.000	35190.000	56070.000	80440.000	85340.000	76570.000	54610.000	35840.000
12. 15:13:52:46	26260.000	38550.000	61270.000	88750.000	94240.000	84570.000	59790.000	38390.000
13. 15:13:53:37	27610.000	40350.000	65280.000	93460.000	91200.000	88960.000	65550.000	39150.000
14. 15:13:54:26	31380.000	45940.000	74070.000	106240.000	113180.000	101420.000	73090.000	46010.000
15. 15:13:55:15	34320.000	49650.000	79690.000	114810.000	122960.000	110060.000	79110.000	49940.000
16. 15:13:56:26	36880.000	53030.000	85920.000	122300.000	132330.000	118000.000	85610.000	53670.000
17. 15:13:57:58	39880.000	56230.000	91380.000	130220.000	140430.000	126460.000	91050.000	57190.000
18. 15:13:58:42	36220.000	52530.000	84670.000	121910.000	132020.000	118710.000	86090.000	52920.000
19. 15:13:59:13	36770.000	52730.000	84400.000	121180.000	131930.000	118300.000	85400.000	53620.000
20. 15:13:59:45	36740.000	52940.000	84500.000	121210.000	131950.000	118330.000	85380.000	53860.000
21. 15:14:0:16	36690.000	52970.000	84650.000	121200.000	131980.000	118370.000	85360.000	53920.000
22. 15:14:0:48	36700.000	52920.000	84680.000	121060.000	131880.000	118270.000	85280.000	53930.000
23. 15:14:1:19	36720.000	52990.000	84770.000	121100.000	131920.000	118330.000	85250.000	54050.000
24. 15:14:1:50	36780.000	52940.000	84750.000	120940.000	131880.000	118200.000	85270.000	53990.000
25. 15:14:2:22	36750.000	53020.000	84730.000	120970.000	131860.000	118250.000	85180.000	54130.000
26. 15:14:2:53	36670.000	53310.000	84740.000	121110.000	131890.000	118410.000	85170.000	54390.000
27. 15:14:3:25	36720.000	53140.000	84680.000	120900.000	131820.000	118210.000	85090.000	54240.000
28. 15:14:3:57	36810.000	53090.000	84780.000	120950.000	131820.000	118290.000	85160.000	54230.000
29. 15:14:4:28	36780.000	53210.000	84750.000	121040.000	131810.000	118380.000	85170.000	54400.000
30. 15:14:5:0	36710.000	53250.000	84720.000	120940.000	131780.000	118320.000	85110.000	54450.000
31. 15:14:5:31	36730.000	53220.000	84680.000	120880.000	131760.000	118360.000	85060.000	54510.000
32. 15:14:6:3	36790.000	53290.000	84690.000	120940.000	131760.000	118360.000	85050.000	54390.000
33. 15:14:6:34	36810.000	53170.000	84660.000	120800.000	131700.000	118210.000	85040.000	54620.000
34. 15:14:7:37	36780.000	53410.000	84630.000	120910.000	131740.000	118350.000	85020.000	54690.000
35. 15:14:8:27	33940.000	48910.000	78360.000	115040.000	124120.000	111230.000	81180.000	50130.000
36. 15:14:9:15	31150.000	45410.000	72690.000	107160.000	118660.000	104890.000	76740.000	46690.000
37. 15:14:10:11	28880.000	41730.000	66780.000	98170.000	112760.000	98650.000	70940.000	42900.000
38. 15:14:10:59	26660.000	38130.000	60860.000	90370.000	104920.000	93090.000	64870.000	39070.000
39. 15:14:11:41	23450.000	34260.000	54930.000	81460.000	95080.000	86770.000	59750.000	34000.000
40. 15:14:12:26	20520.000	30120.000	48780.000	72150.000	85430.000	77680.000	53180.000	29030.000
41. 15:14:13:24	17740.000	26290.000	42850.000	64260.000	75260.000	69550.000	46950.000	25300.000
42. 15:14:14:7	14710.000	22050.000	37030.000	55120.000	64120.000	59970.000	40750.000	21290.000
43. 15:14:14:52	12470.000	17910.000	30870.000	45700.000	54250.000	50160.000	34200.000	17340.000
44. 15:14:15:34	10000.000	14310.000	24750.000	37700.000	43510.000	41730.000	27790.000	13690.000
45. 15:14:16:20	7080.000	10540.000	18970.000	28190.000	32590.000	31500.000	21800.000	9930.000
46. 15:14:17:14	4930.000	7170.000	13180.000	19350.000	22920.000	21820.000	15500.000	6690.000
47. 15:14:18:9	2660.000	3850.000	6770.000	11270.000	12130.000	12640.000	8400.000	3470.000
48. 15:14:19:4	1410.000	2010.000	3760.000	5870.000	7210.000	6500.000	5130.000	1730.000

R O D C H A N N E L S

TIME	CH.57	CH.56	CH.55	CH.54	CH.53	CH.52	CH.51	CH.50
1. 15:13:16:19	0 0	12.812	0.0	-12.812	12.812	-12.812	-12.812	-12.812
2. 15:13:44:21	-140.930	64.059	-243.424	12.812	12.812	-12.812	166.553	140.930
3. 15:13:45:4	-217.801	-64.059	-243.424	-12.812	38.435	0.0	115.306	243.424
4. 15:13:45:58	-397.166	-243.424	-102.494	0.0	115.306	-12.812	115.306	307.483
5. 15:13:46:43	-499.660	-281.859	-25.624	-12.812	128.118	-38.435	89.683	384.354
6. 15:13:47:31	-550.907	-281.859	0.0	0.0	128.118	-76.871	51.247	435.601
7. 15:13:48:17	-550.907	-217.801	0.0	-12.812	115.306	-89.683	12.812	550.907
8. 15:13:48:59	-576.531	-153.742	-12.812	-12.812	102.494	-102.494	-12.812	755.896
9. 15:13:49:54	-563.719	-89.683	-12.812	0.0	115.306	-140.930	-12.812	1050.567
10. 15:13:50:45	-525.284	-25.624	-12.812	0.0	115.306	-179.365	-12.812	1345.239
11. 15:13:51:54	-512.472	64.059	-12.812	12.812	89.683	-204.989	-25.624	1729.593
12. 15:13:52:46	-563.719	140.930	-12.812	12.812	89.683	-243.424	-12.812	2037.076
13. 15:13:53:37	-486.848	76.871	-25.624	25.624	89.683	-345.918	-12.812	2178.006
14. 15:13:56:26	-435.601	307.483	-12.812	51.247	76.871	-409.978	-12.812	2613.607
15. 15:13:57:15	-294.671	461.225	-25.624	38.435	51.247	-499.660	-12.812	2933.902
16. 15:13:57:58	-204.989	794.331	-38.435	76.871	25.624	-679.025	-12.812	3177.326
17. 15:13:58:20	-179.365	768.708	-25.624	115.306	25.624	-627.778	-12.812	3523.244
18. 15:13:58:42	-153.742	781.520	-25.624	102.494	12.812	-627.778	-12.812	3907.598
19. 15:13:59:13	-140.930	781.520	-25.624	89.683	12.812	-627.778	-12.812	3881.975
20. 15:13:59:45	-128.118	781.520	-25.624	102.494	25.624	-640.590	-12.812	3269.163
21. 15:14:0:16	-115.306	781.520	-25.624	89.683	25.624	-640.590	-12.812	3856.351
22. 15:14:1:19	-102.494	794.331	-25.624	76.871	12.812	-653.402	0.0	3869.163
23. 15:14:2:22	-102.494	794.331	-25.624	76.871	12.812	-653.402	0.0	3881.975
24. 15:14:3:25	-89.683	794.331	-25.624	76.871	12.812	-666.213	0.0	3894.787
25. 15:14:4:28	-76.871	794.331	-25.624	89.683	25.624	-666.213	0.0	3894.787
26. 15:14:5:31	-64.059	794.331	-25.624	76.871	12.812	-666.213	0.0	3894.787
27. 15:14:6:34	-51.247	807.143	-38.435	76.871	12.812	-666.213	0.0	3907.598
28. 15:14:7:37	-38.435	807.143	-25.624	64.059	12.812	-666.213	-12.812	3920.410
29. 15:14:8:27	12.812	858.390	0.0	76.871	25.624	-679.025	0.0	3933.222
30. 15:14:9:15	64.059	884.014	64.059	179.365	25.624	-679.025	0.0	3933.222
31. 15:14:10:11	76.871	896.826	115.306	281.859	12.812	-576.531	0.0	4279.137
32. 15:14:10:59	25.624	781.520	179.365	486.848	25.624	-538.095	0.0	4561.000
33. 15:14:11:41	-76.871	576.531	217.801	563.719	25.624	-640.590	0.0	4868.480
34. 15:14:12:26	-115.306	474.036	243.424	627.778	25.624	-640.590	-12.812	5047.848
35. 15:14:13:24	-89.683	435.601	269.048	666.213	12.812	-653.402	-12.812	5163.152
36. 15:14:14:7	-51.247	422.789	294.671	691.837	25.624	-640.590	0.0	5124.719
37. 15:14:14:52	-12.812	422.789	320.295	743.084	12.812	-461.225	-12.812	5227.211
38. 15:14:15:34	-12.812	409.978	320.295	768.708	12.812	-397.166	0.0	5244.398
39. 15:14:16:20	-12.812	358.730	269.048	781.520	12.812	-307.483	0.0	4894.105
40. 15:14:17:14	-12.812	333.107	179.365	730.272	12.812	-243.424	0.0	4420.070
41. 15:14:18:9	0.0	281.859	64.059	602.154	12.812	-192.177	-12.812	3651.362
42. 15:14:19:4	0.0	192.177	12.812	525.284	12.812	-217.801	-12.812	2511.112
43. 15:14:19:4	0.0	192.177	12.812	525.284	12.812	-217.801	-12.812	1716.781

AVERAGE LOAD

1.	580.000
2.	3385.000
3.	6472.500
4.	12882.500
5.	18818.750
6.	25135.000
7.	31382.500
8.	37673.750
9.	43966.250
10.	49580.000
11.	55833.750
12.	61477.500
13.	63945.000
14.	73916.250
15.	80067.500
16.	85967.500
17.	91605.000
18.	85633.750
19.	85541.250
20.	85613.750
21.	85642.500
22.	85590.000
23.	85641.250
24.	85581.250
25.	85608.750
26.	85710.000
27.	85600.000
28.	85641.250
29.	85692.500
30.	85660.000
31.	85627.500
32.	85675.000
33.	85598.750
34.	85671.250
35.	85692.500
36.	80370.000
37.	75423.750
38.	70101.250
39.	64746.250
40.	58575.000
41.	52111.250
42.	48525.000
43.	39380.000
44.	32862.500
45.	26685.000
46.	20075.000
47.	13945.000
48.	7648.750
49.	4202.500

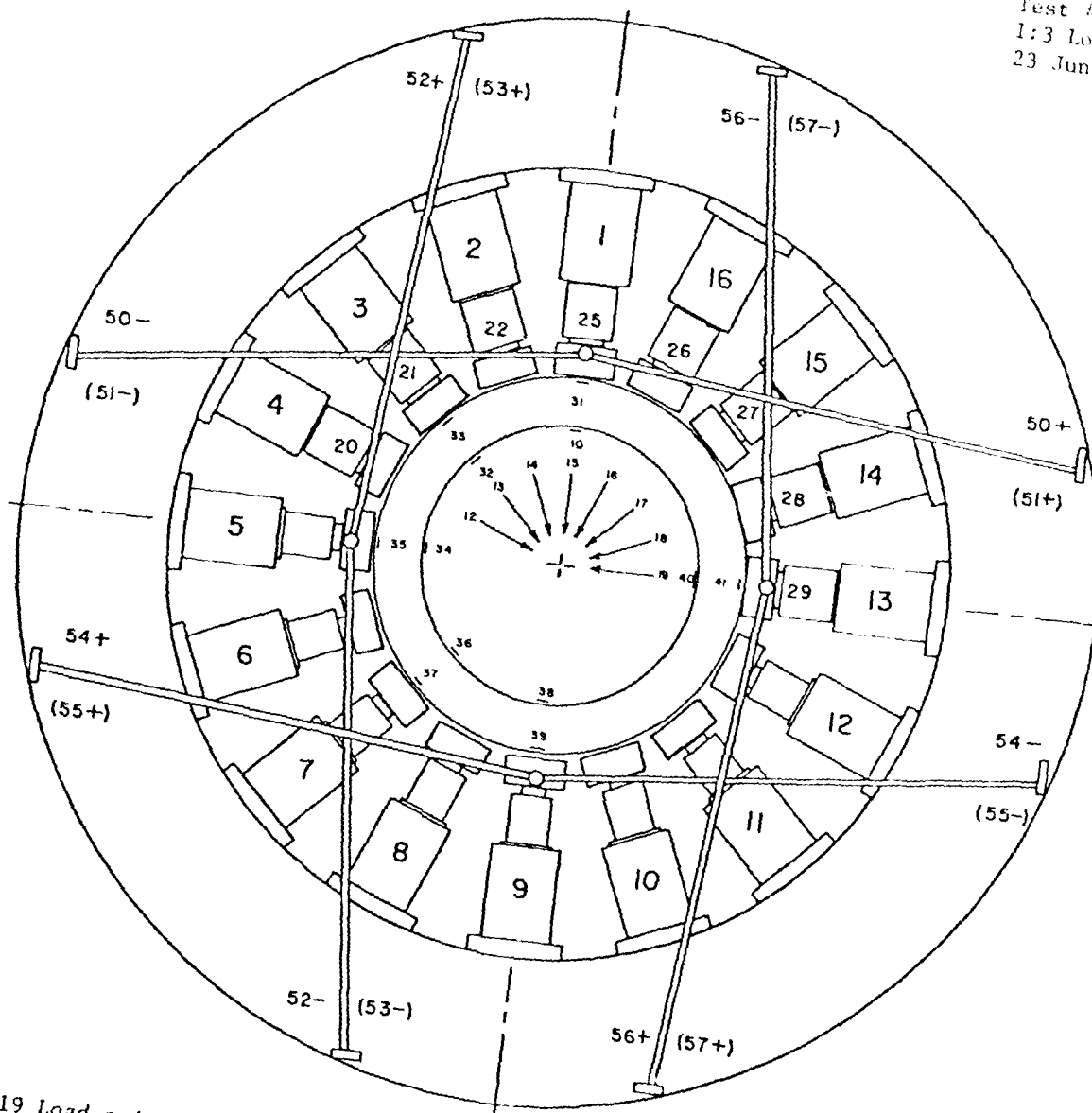
3.1.2 SPECIMEN #12

TEST NO. 40
COMPOSITE INTEGRAL LINER
1:3 LOADING RATIO
TESTED 23 JUNE 1978

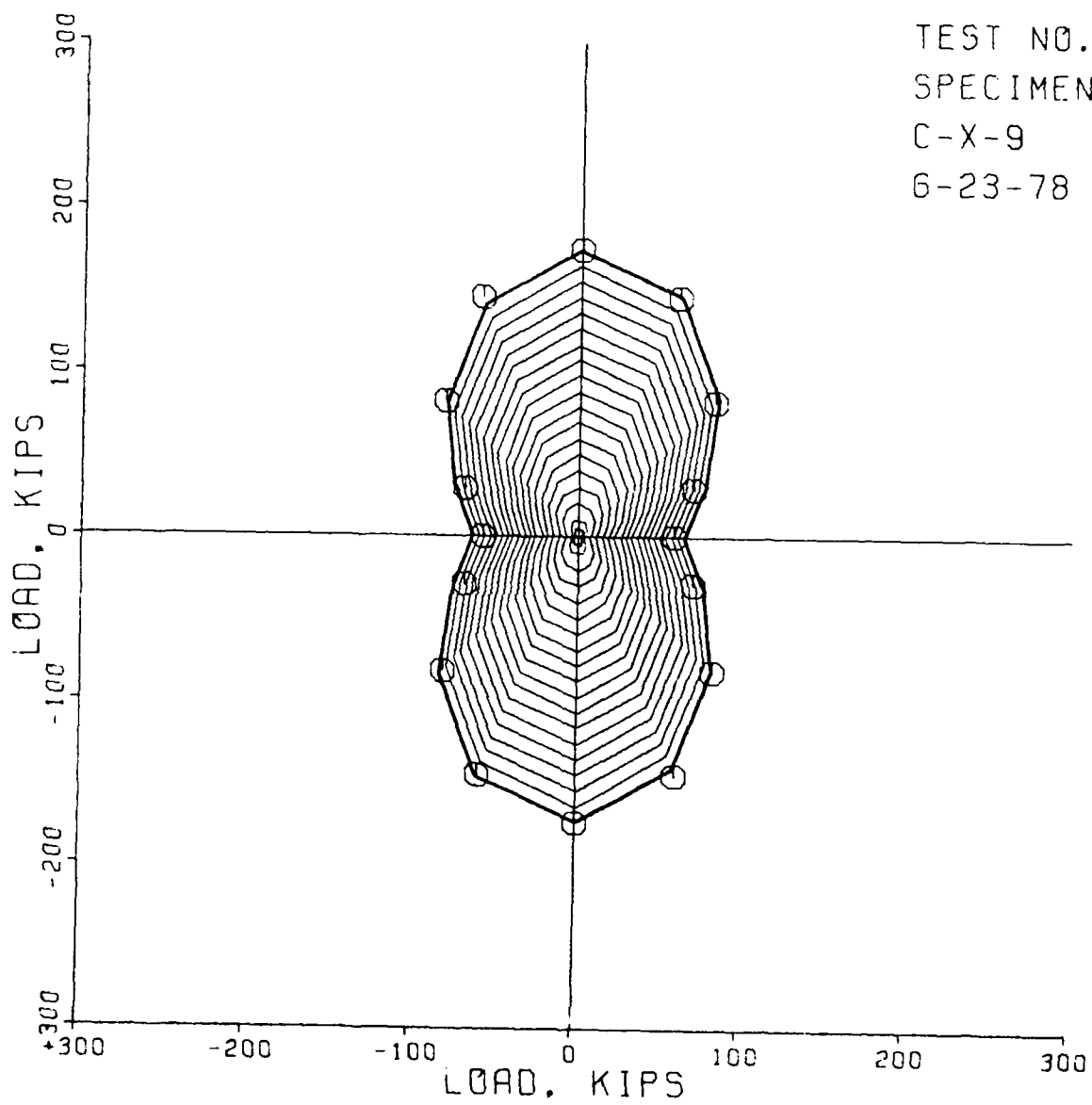
REACTION FRAME TEST SET-UP

Specimen #12
C-X-9 8"

Test #40
1:3 Load
23 June 1978

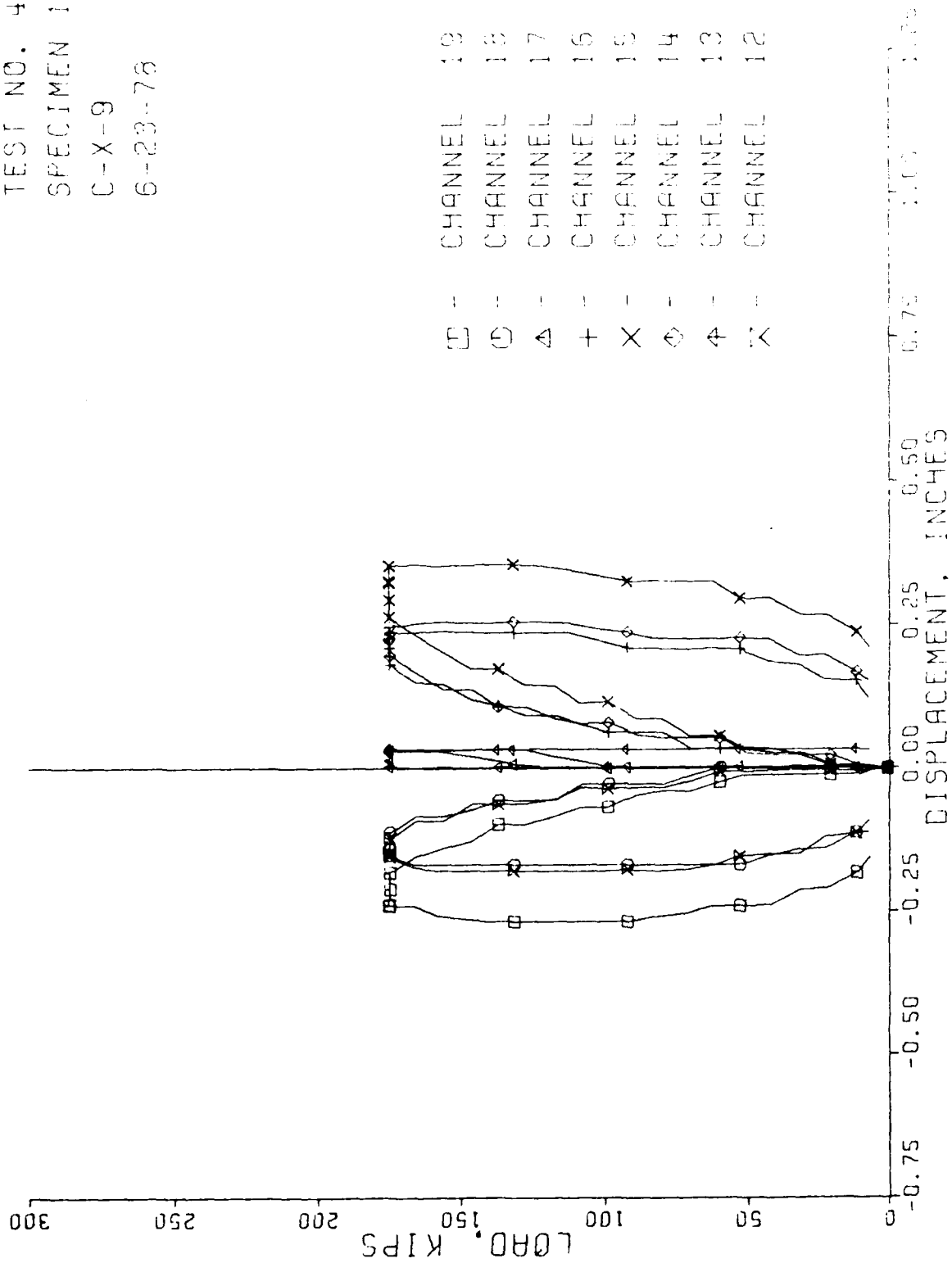


CH 12-19 Load axis I.D. (Research, Inc. Model 4040).
CH 20-22, 25-29 Axial load (Transducers, Inc. Model 693-300K).
CH 30-41 (Ailtech SG 129-6S) Radial pairs at center. Odd gages on Rebar.
CH 50-57 (Ailtech SG 129-6S) Polarity indicates rod under tension.
Lower rod shown (XX).

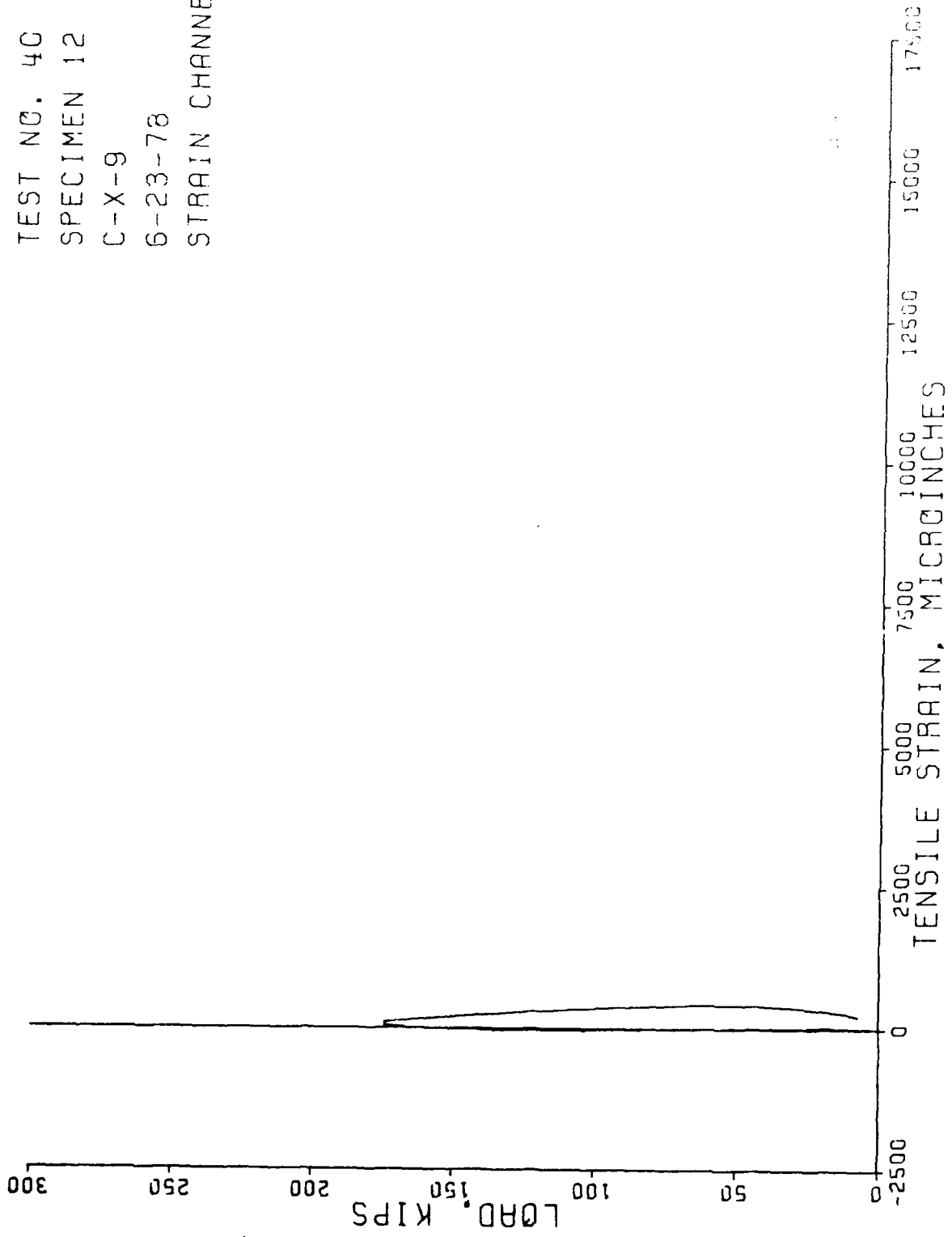


TEST NO. 40
SPECIMEN 12
C-X-9
6-23-78

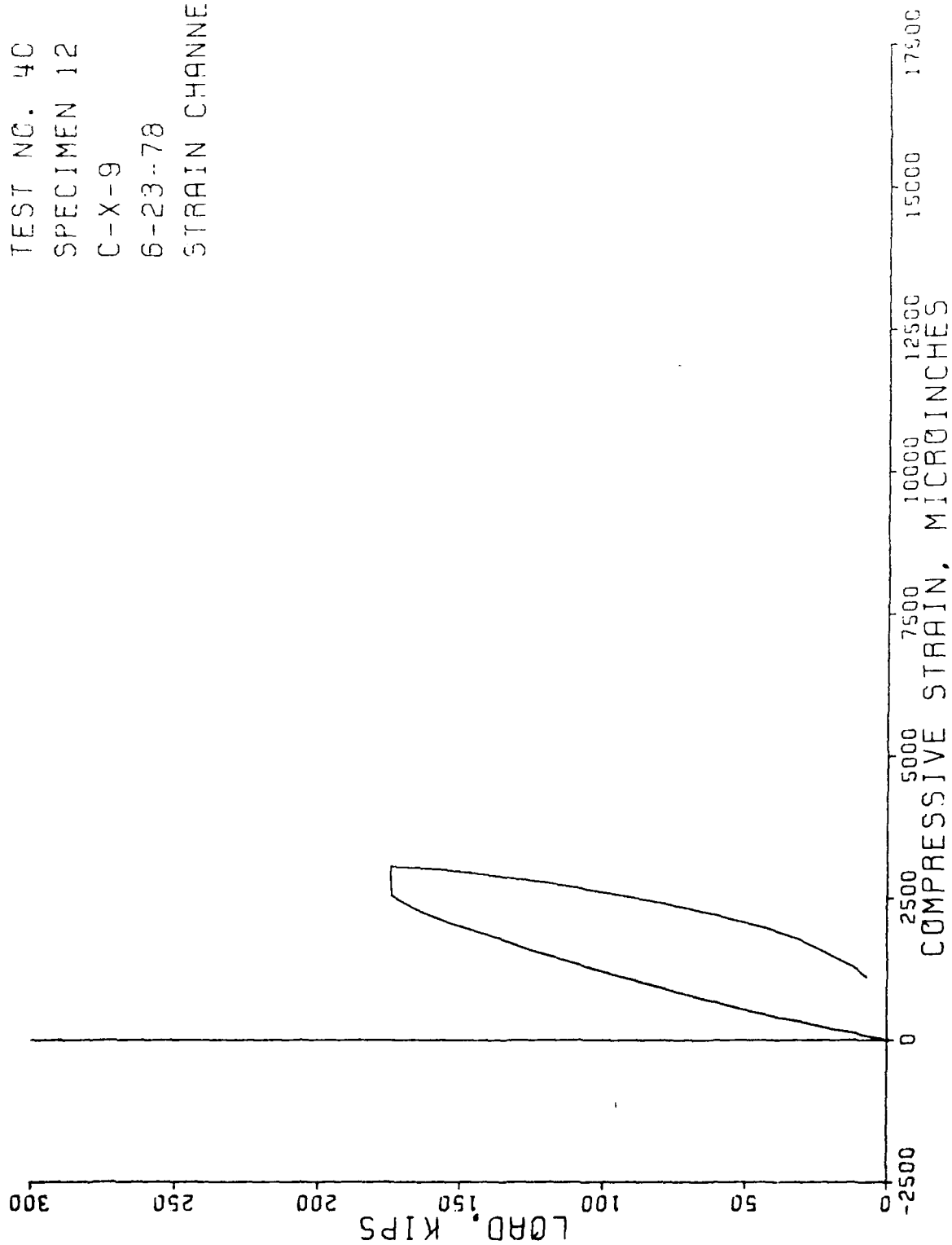
TEST NO. 40
SPECIMEN 12
C-X-9
6-23-78



TEST NO. 40
SPECIMEN 12
C-X-9
6-23-78
STRAIN CHANNEL 30



TEST NO. 40
SPECIMEN 12
C-X-9
6-23-78
STRAIN CHANNEL 31



TEST NO. 40
SPECIMEN 12
C-X-9
6-23-78
STRAIN CHANNEL 32

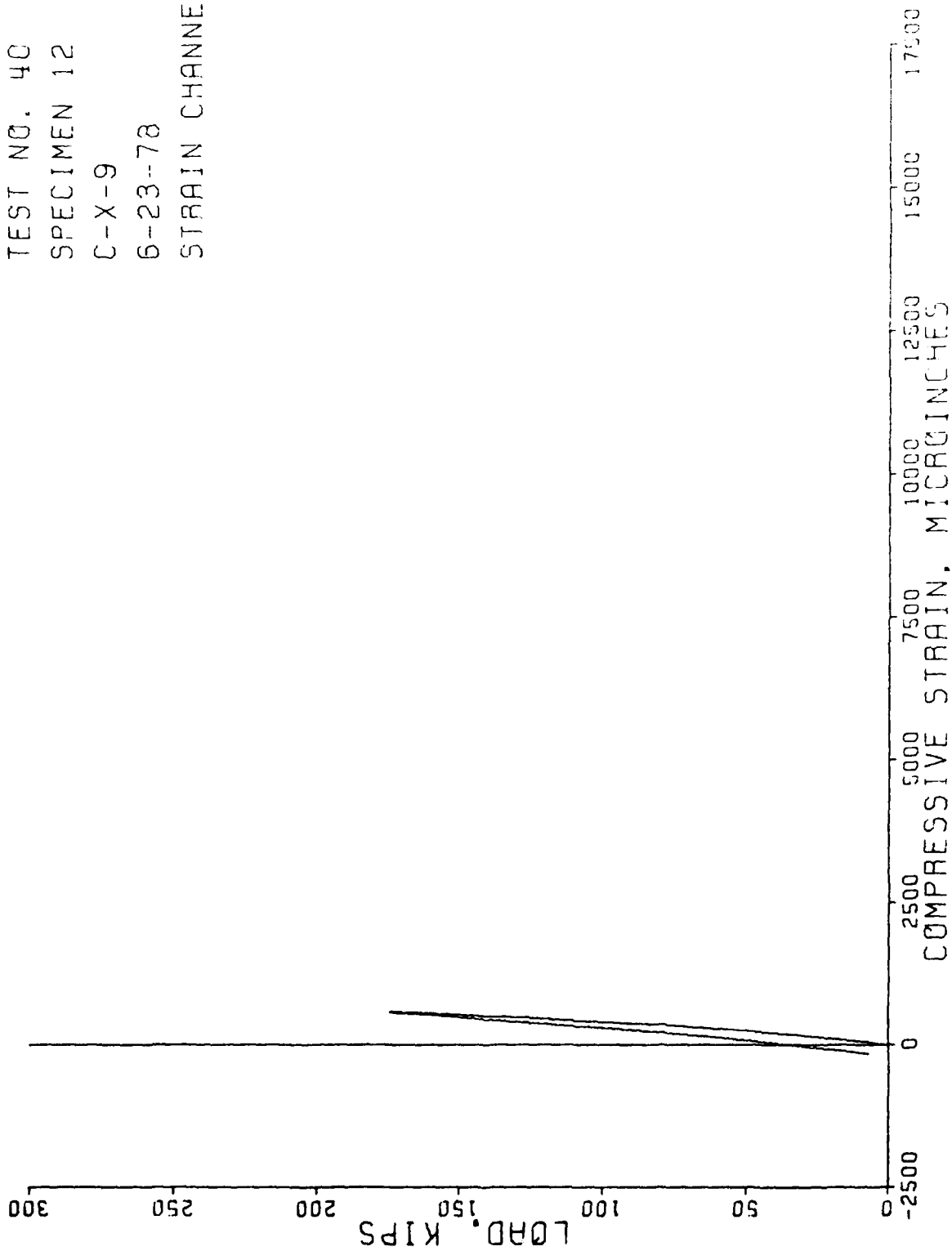
LOAD, KIPS

300
250
200
150
100
50
0
-2500

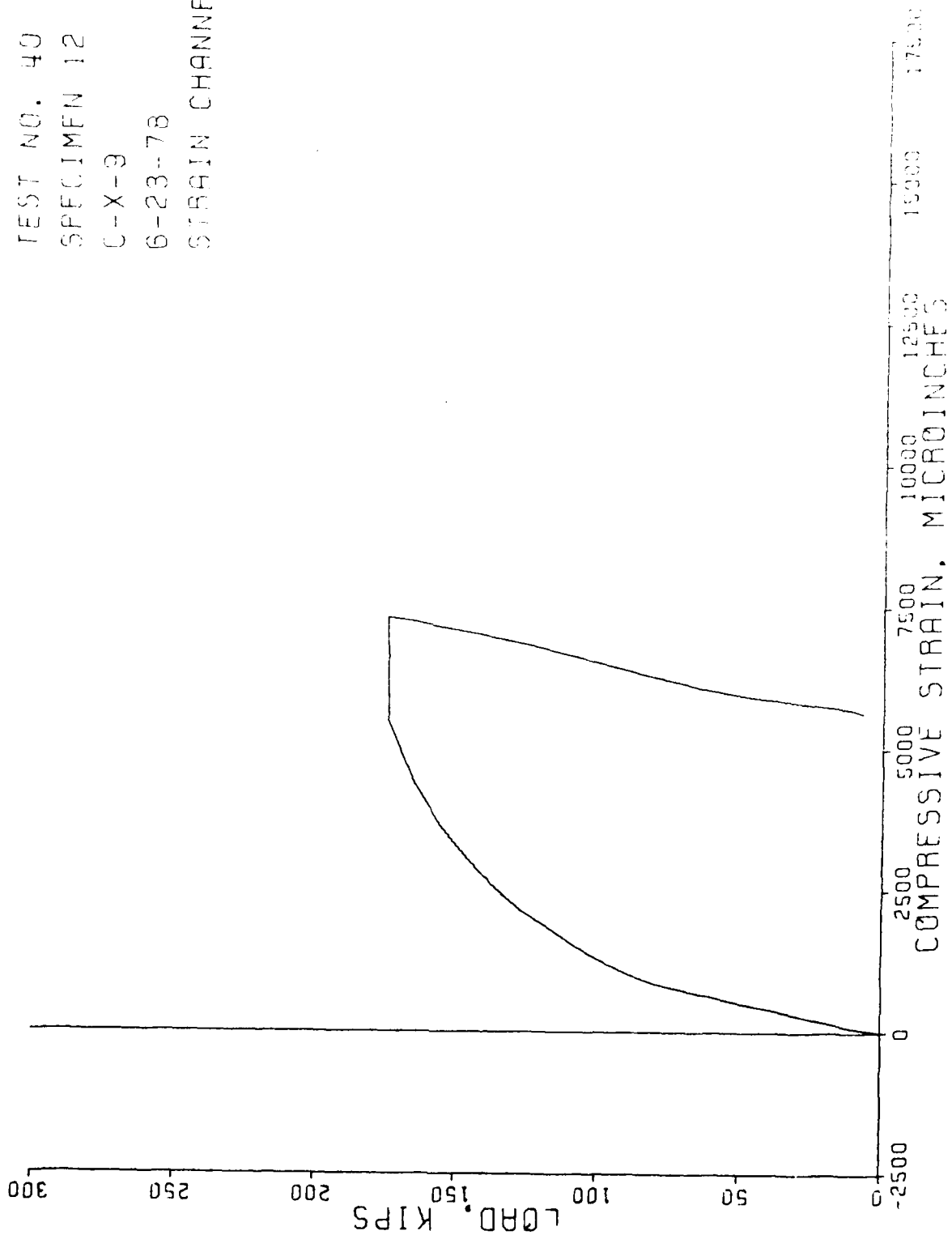
COMPRESSIVE STRAIN, MICROINCHES

2500 5000 7500 10000 15000

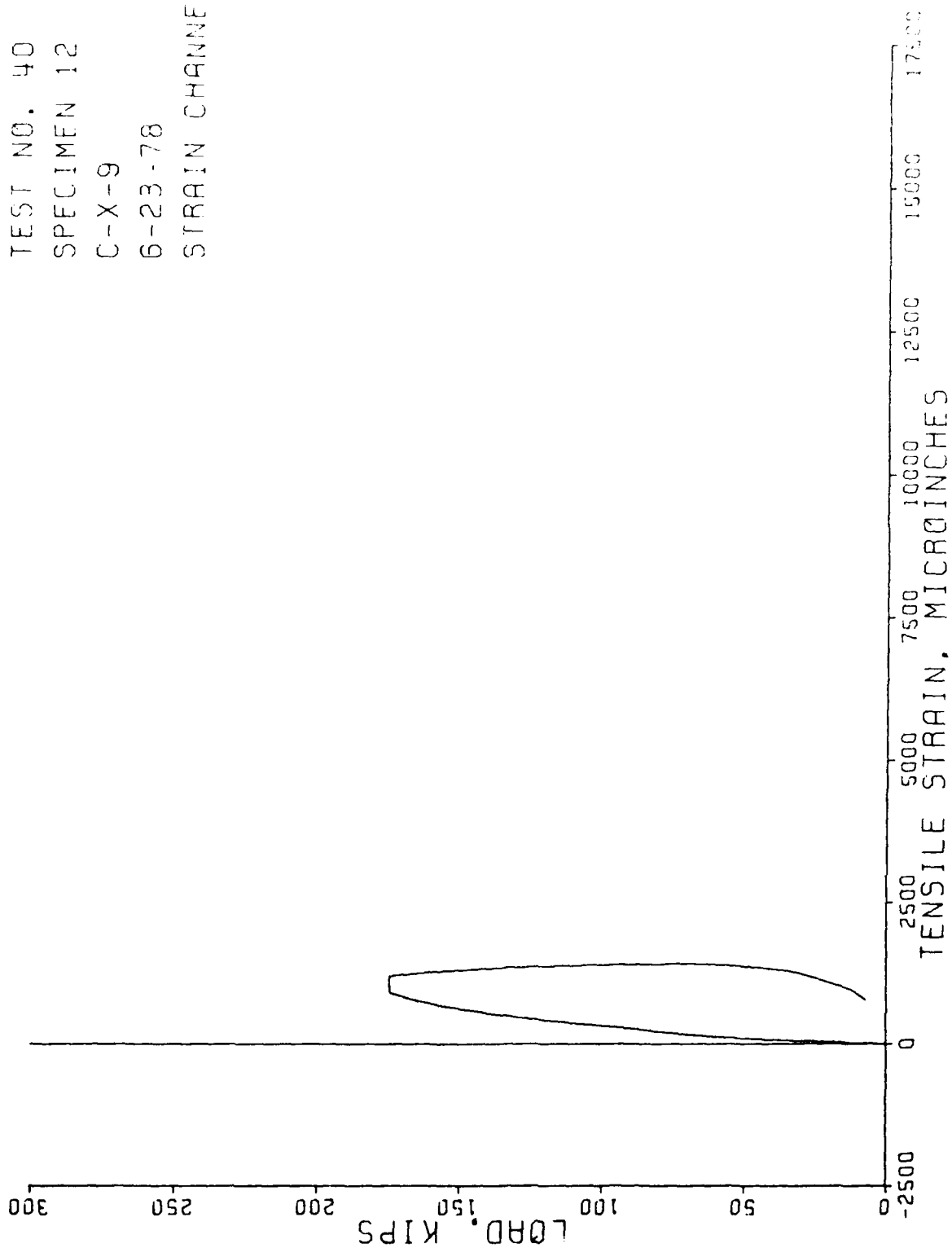
TEST NO. 40
SPECIMEN 12
C-X-9
6-23--78
STRAIN CHANNEL 33



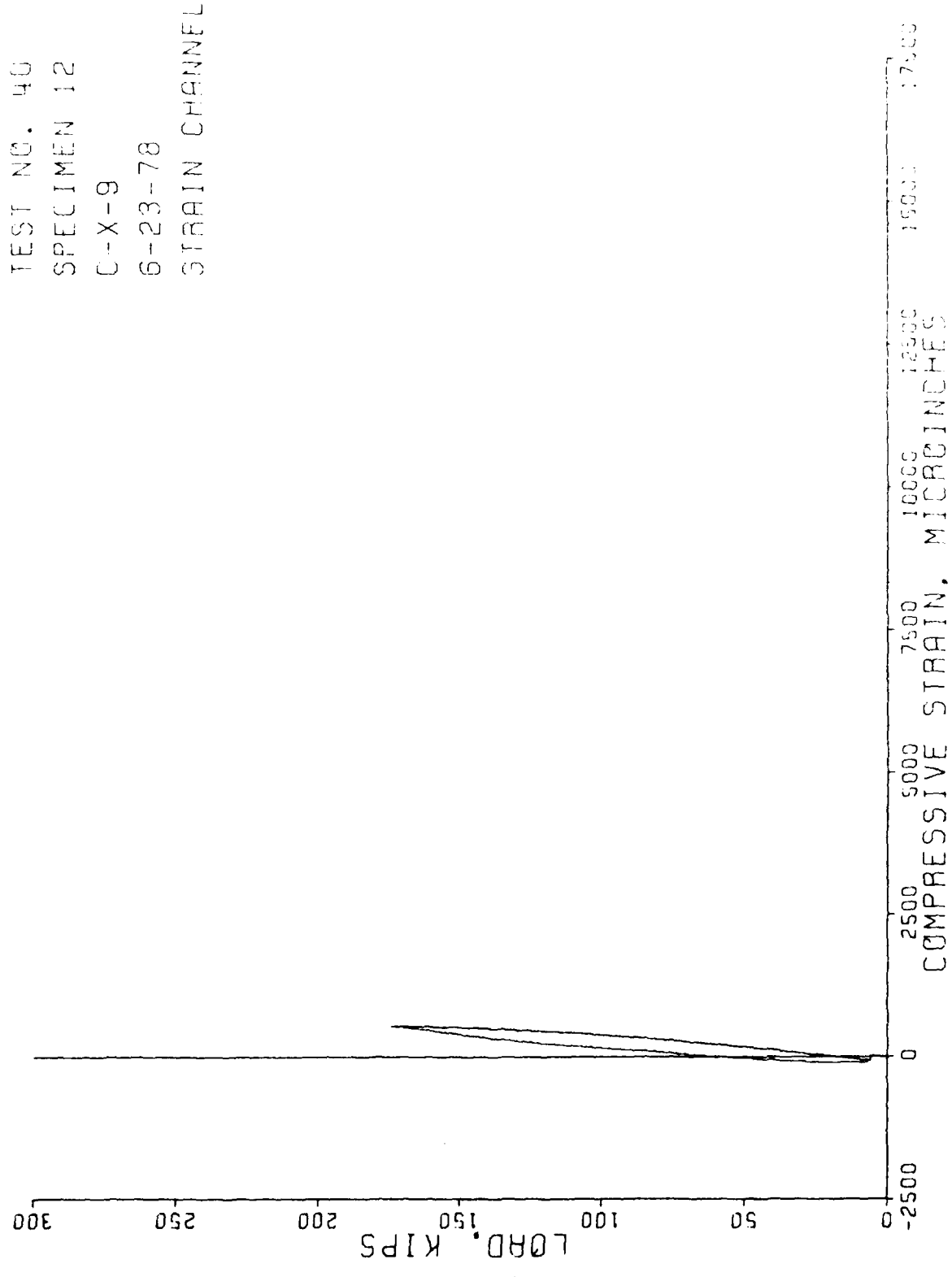
TEST NO. 40
SPECIMEN 12
C-X-3
6-23-78
STRAIN CHANNEL 34



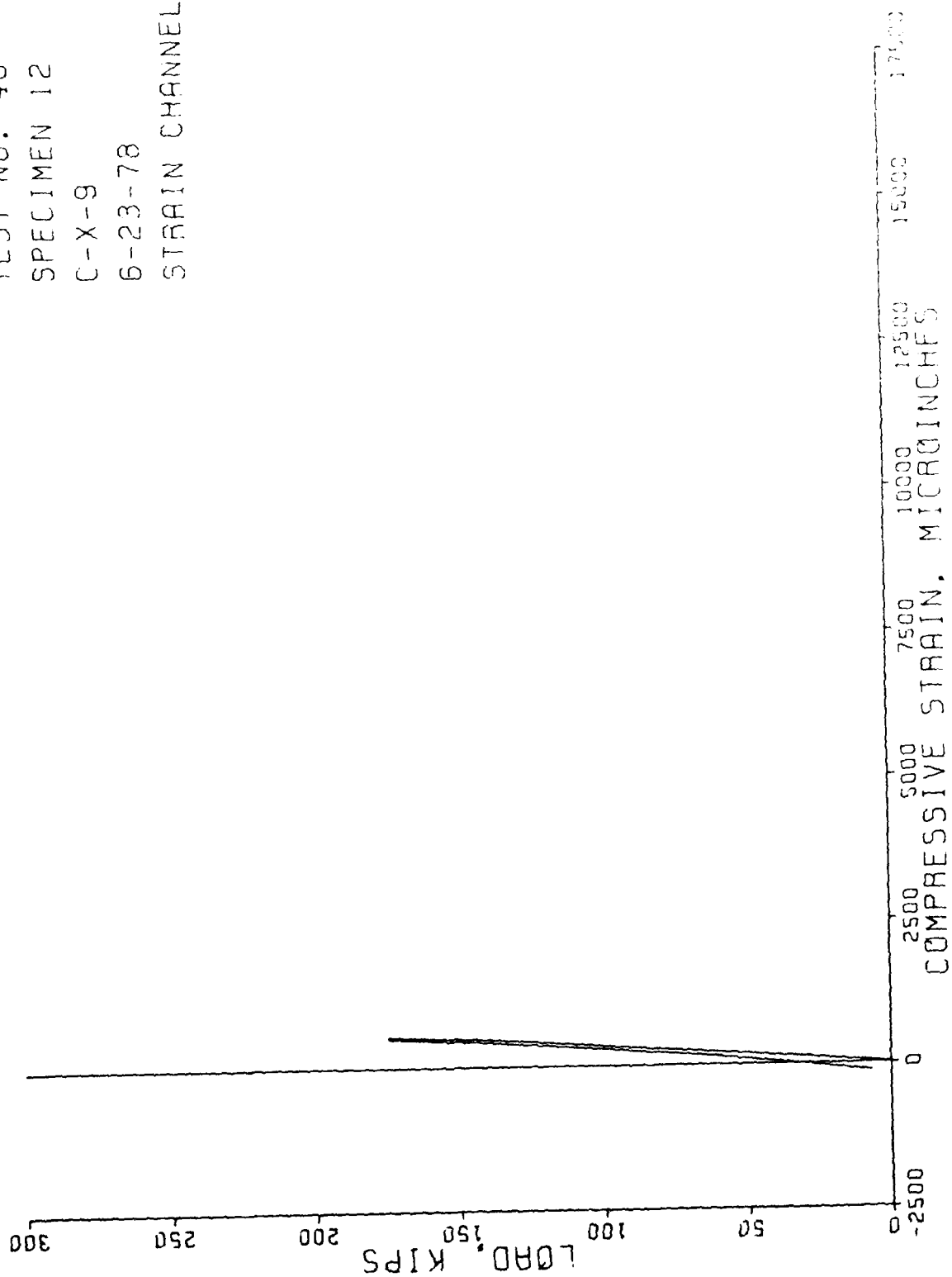
TEST NO. 40
SPECIMEN 12
C-X-9
6-23-78
STRAIN CHANNEL 35



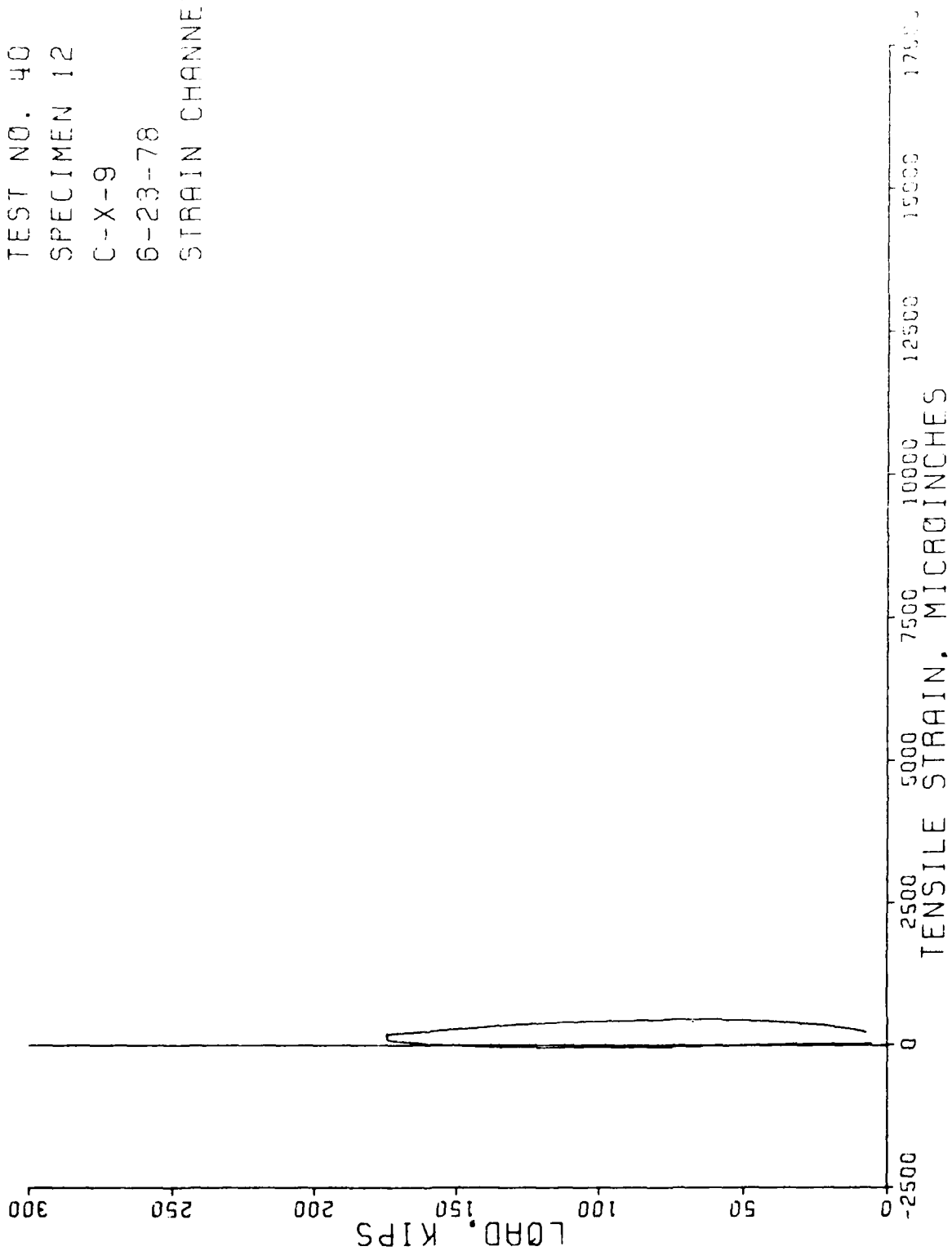
TEST NO. 40
SPECIMEN 12
C-X-9
6-23-78
STRAIN CHANNEL 30



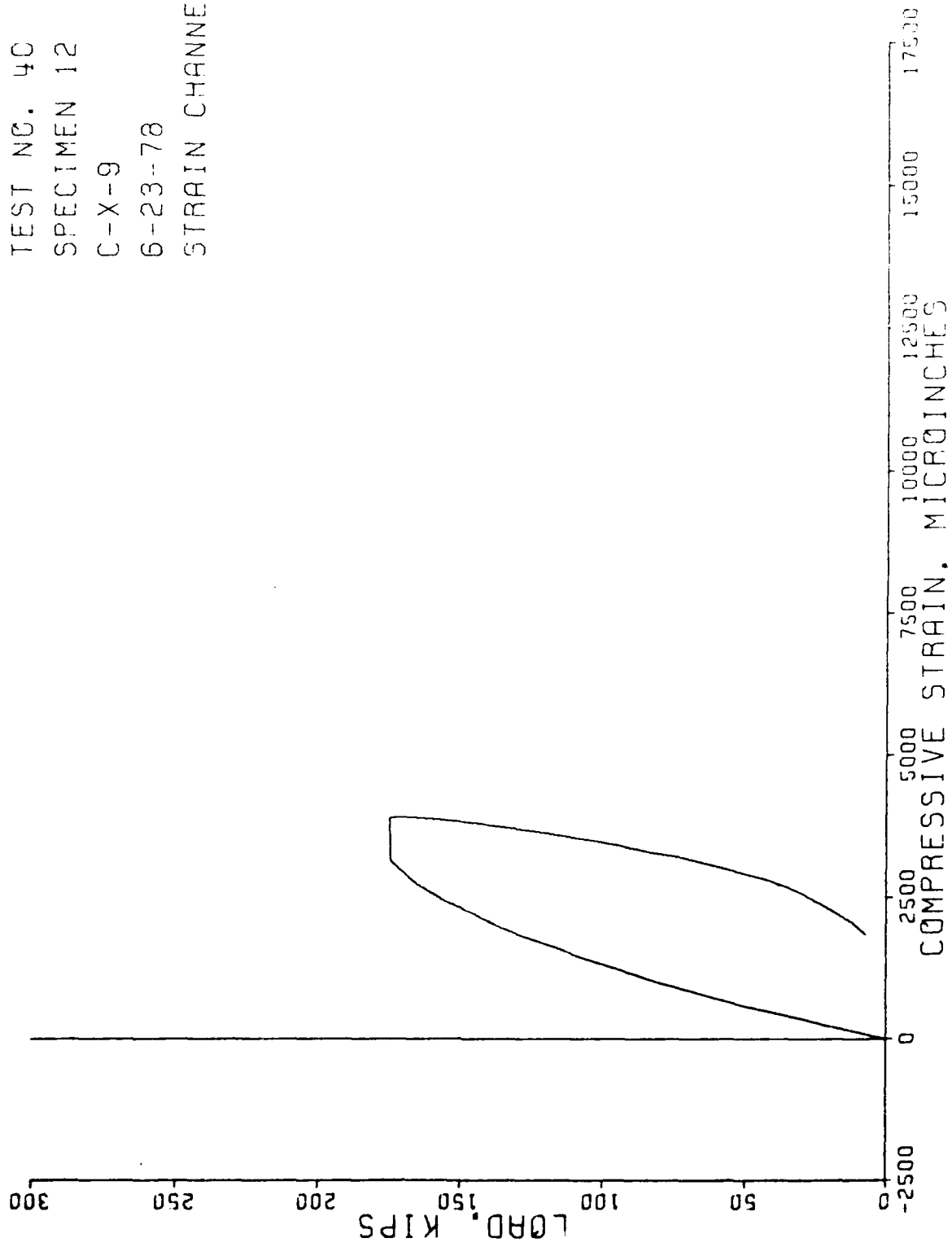
TEST NO. 40
SPECIMEN 12
C-X-9
6-23-78
STRAIN CHANNEL 37



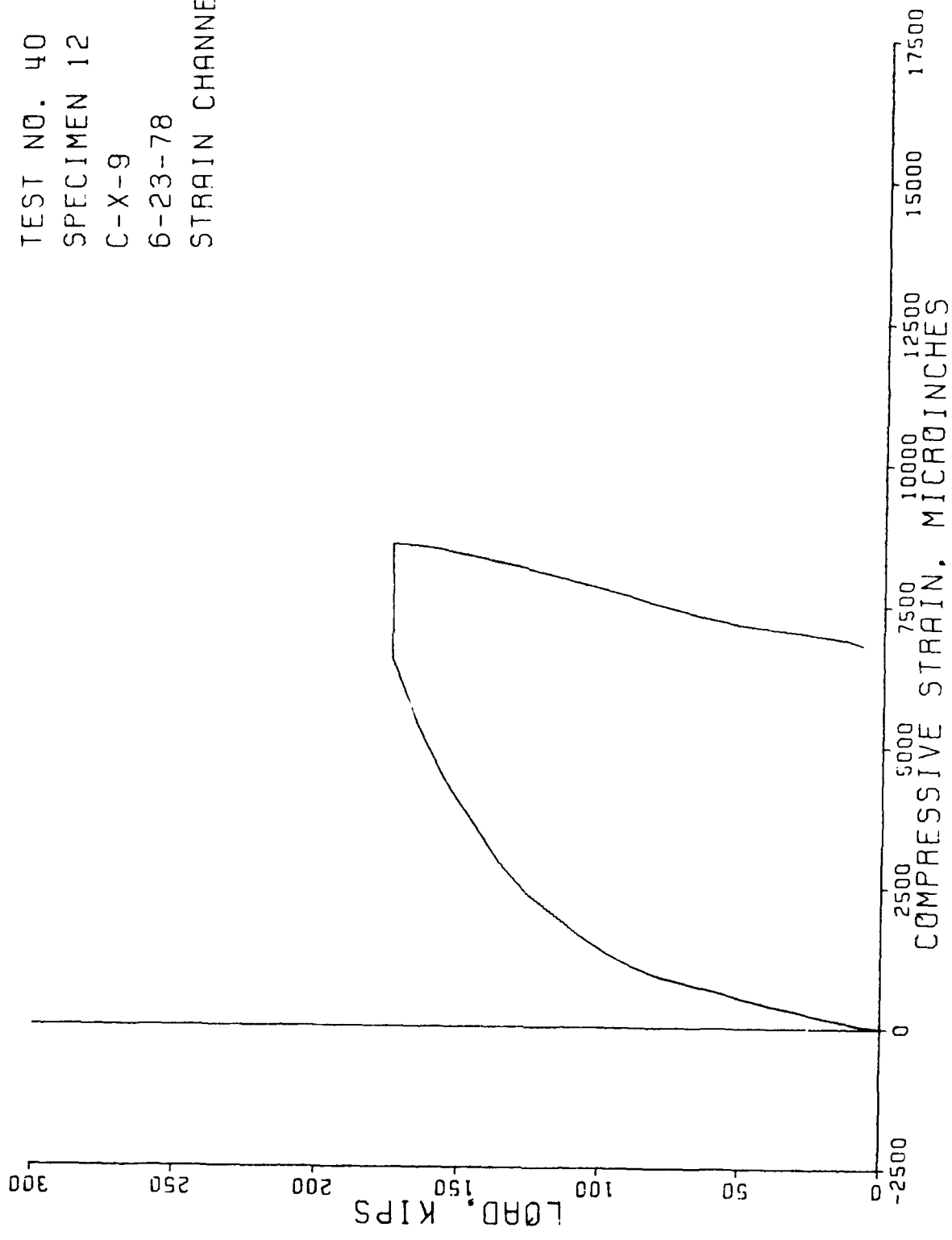
TEST NO. 40
SPECIMEN 12
C-X-9
6-23-78
STRAIN CHANNEL 38



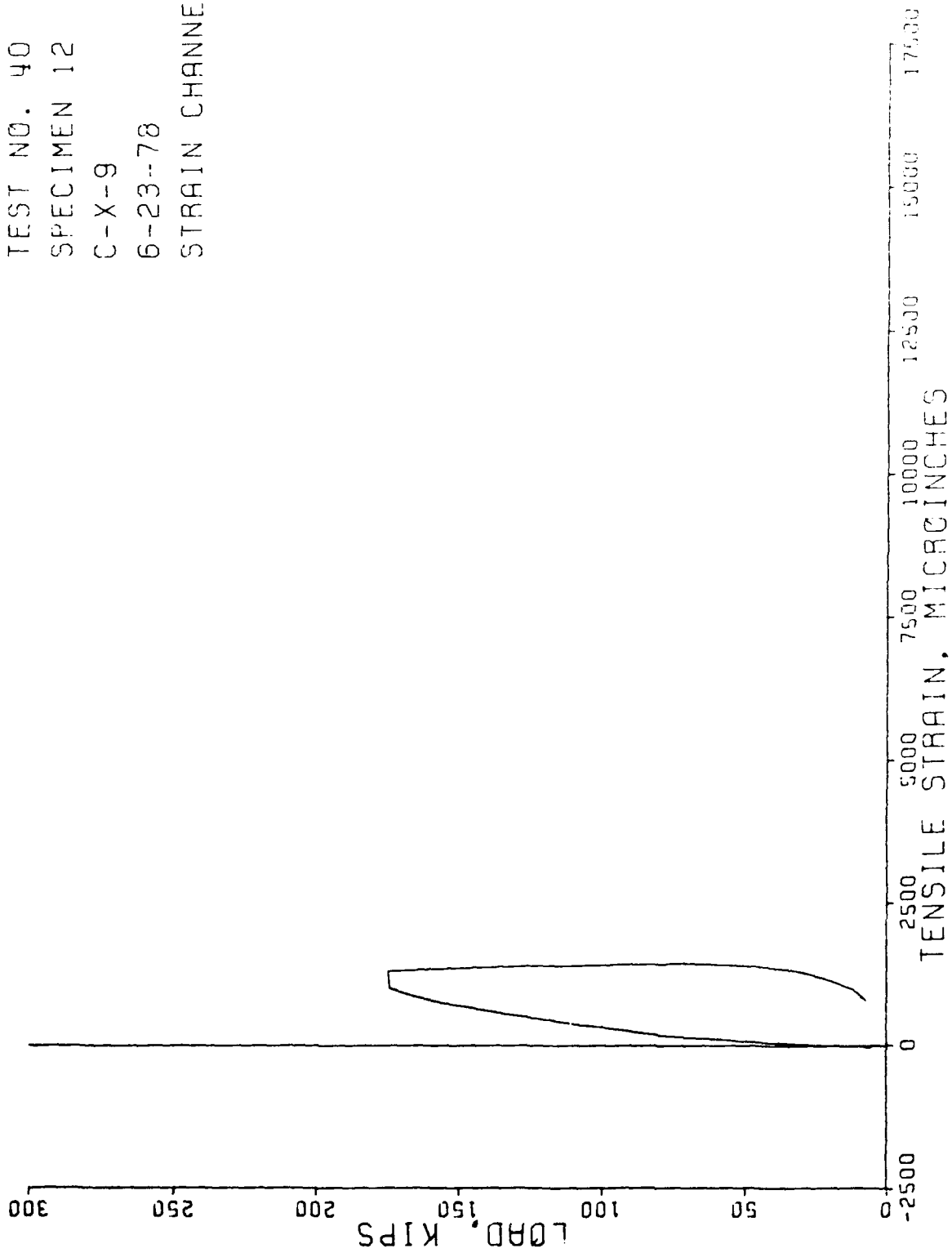
TEST NO. 40
SPECIMEN 12
C-X-9
6-23--78
STRAIN CHANNEL 39



TEST NO. 40
SPECIMEN 12
C-X-9
6-23-78
STRAIN CHANNEL 40



TEST NO. 40
SPECIMEN 12
C-X-9
6-23-78
STRAIN CHANNEL 41



TEST NO. 40 SPECIMEN 12 C-X-9 6-23-78

NUMBER OF INCREMENTS= 54
 NUMBER OF CHANNELS= 36
 NUMBER OF STRAIN CHANNELS= 12
 NUMBER OF DISPLACEMENT CHANNELS= 8
 NUMBER OF LOAD CHANNELS= 8
 NUMBER OF PRESSURE CHANNELS= 0
 NUMBER OF RODS= 8

CHANNEL ZEROSHIFT

57	0.0
56	0.0
55	0.0
54	0.0
53	0.0
52	0.0
51	0.0
50	0.0
49	0.0
48	0.0
47	0.0
46	0.0
45	0.0
44	0.0
43	0.0
42	0.0
41	0.0
40	0.0
39	0.0
38	0.0
37	0.0
36	0.0
35	0.0
34	0.0
33	0.0
32	0.0
31	0.0
30	0.0
29	0.0
28	0.0
27	0.0
26	0.0
25	0.0
24	0.0
23	0.0
22	0.0
21	0.0
20	0.0
19	0.0
18	0.0
17	0.0
16	0.0
15	0.0
14	0.0
13	0.0
12	0.0

STRAIN CHANNEL	CALIBRATION
41	1.000
40	1.000
39	1.000
38	1.000
37	1.000
36	1.000

1.000
1.000
1.000
1.000
1.000

CALIBRATION

0.001
0.001
0.002
0.002
0.002
0.002
0.002
0.002

CALIBRATION

10.000
10.000
10.000
10.000
10.000
10.000
10.000
10.000

CALIBRATION

1.000
1.000
1.000
1.000
1.000
1.000
1.000
1.000

35
34
33
32
31
30

DISPLACEMENT CHANNEL

19
18
17
16
15
14
13
12

LOAD CHANNEL

29
28
27
26
25
22
21
20

ROD CHANNEL

57
56
55
54
53
52
51
50

STRAIN CHANNELS

	CH. 41	CH. 40	CH. 39	CH. 38	CH. 37	CH. 36	CH. 35	CH. 34
1. 23:14:19: 6	-1.000	0.0	-1.000	-3.000	-1.000	-1.000	0.0	-1.000
2. 23:14:21:40	-8.000	-32.000	-55.000	4.000	-23.000	-14.000	7.000	-33.000
3. 23:14:33:17	-26.000	-55.000	-67.000	21.000	-24.000	74.000	8.000	-32.000
4. 23:14:33:22	-16.000	-82.000	-126.000	26.000	-45.000	46.000	17.000	-79.000
5. 23:14:33:58	0.0	-186.000	-231.000	28.000	-119.000	-9.000	32.000	-185.000
6. 23:14:34:44	19.000	-297.000	-344.000	13.000	-151.000	-68.000	53.000	-298.000
7. 23:14:35:29	48.000	-415.000	-563.000	13.000	-184.000	-124.000	75.000	-409.000
8. 23:14:35:12	80.000	-577.000	-777.000	3.000	-184.000	-170.000	96.000	-514.000
9. 23:14:37: 4	112.000	-659.000	-846.000	-15.000	-217.000	-213.000	126.000	-622.000
10. 23:14:37:50	139.000	-788.000	-975.000	-24.000	-248.000	-258.000	167.000	-735.000
11. 23:14:38:49	181.000	-918.000	-1123.000	-35.000	-279.000	-299.000	209.000	-853.000
12. 23:14:39:39	242.000	-1083.000	-1291.000	-37.000	-309.000	-336.000	259.000	-1013.000
13. 23:14:41:37	308.000	-1339.000	-1643.000	-37.000	-342.000	-377.000	312.000	-1251.000
14. 23:14:43:24	362.000	-1666.000	-1943.000	-42.000	-375.000	-415.000	350.000	-1517.000
15. 23:14:45:51	436.000	-2003.000	-2410.000	-49.000	-405.000	-441.000	404.000	-1809.000
16. 23:14:47: 7	501.000	-2410.000	-2833.000	-40.000	-433.000	-466.000	454.000	-2139.000
17. 23:14:47:57	580.000	-2920.000	-3406.000	-34.000	-461.000	-491.000	515.000	-2536.000
18. 23:14:48:44	667.000	-3614.000	-4209.000	-16.000	-484.000	-509.000	585.000	-3021.000
19. 23:14:49:26	755.000	-4389.000	-5035.000	3.000	-503.000	-525.000	660.000	-3623.000
20. 23:14:50: 9	864.000	-5324.000	-6230.000	32.000	-522.000	-539.000	758.000	-4394.000
21. 23:14:50:57	1017.000	-6518.000	-7730.000	82.000	-538.000	-540.000	895.000	-5191.000
22. 23:14:51:17	1057.000	-6778.000	-8009.000	96.000	-534.000	-536.000	930.000	-5755.000
23. 23:14:51:48	1094.000	-7047.000	-8303.000	108.000	-530.000	-535.000	965.000	-5999.000
24. 23:14:52:35	1136.000	-7343.000	-8505.000	121.000	-527.000	-535.000	1007.000	-6241.000
25. 23:14:53:23	1161.000	-7543.000	-8719.000	127.000	-524.000	-537.000	1034.000	-6409.000
26. 23:14:54:10	1184.000	-7710.000	-8855.000	137.000	-521.000	-536.000	1059.000	-6541.000
27. 23:14:54:57	1202.000	-7846.000	-8980.000	141.000	-520.000	-538.000	1080.000	-6652.000
28. 23:14:55:44	1217.000	-7960.000	-9064.000	145.000	-517.000	-540.000	1098.000	-6748.000
29. 23:14:56:32	1230.000	-8060.000	-9162.000	150.000	-515.000	-541.000	1113.000	-6833.000
30. 23:14:57:19	1245.000	-8150.000	-9271.000	156.000	-513.000	-541.000	1131.000	-6912.000
31. 23:14:58: 6	1257.000	-8239.000	-9378.000	159.000	-511.000	-542.000	1146.000	-6981.000
32. 23:14:58:54	1267.000	-8330.000	-9472.000	163.000	-510.000	-542.000	1160.000	-7046.000
33. 23:14:59:41	1274.000	-8419.000	-9560.000	166.000	-509.000	-547.000	1167.000	-7102.000
34. 23:15: 1:16	1286.000	-8496.000	-9640.000	165.000	-507.000	-547.000	1176.000	-7154.000
35. 23:15: 2:50	1292.000	-8516.000	-9688.000	168.000	-507.000	-551.000	1190.000	-7249.000
36. 23:15: 3: 6	1308.000	-8561.000	-9730.000	184.000	-501.000	-542.000	1203.000	-7294.000
37. 23:15: 3:51	1331.000	-8591.000	-9795.000	213.000	-490.000	-496.000	1242.000	-7336.000
38. 23:15: 5:43	1353.000	-8674.000	-9867.000	246.000	-466.000	-466.000	1276.000	-7156.000
39. 23:15: 6:13	1377.000	-8792.000	-9967.000	314.000	-422.000	-336.000	1329.000	-6990.000
40. 23:15: 6:50	1396.000	-8804.000	-9999.000	345.000	-393.000	-386.000	1348.000	-6891.000
41. 23:15: 7:25	1405.000	-7940.000	-9348.000	369.000	-362.000	-239.000	1364.000	-6779.000
42. 23:15: 8: 1	1415.000	-7688.000	-9069.000	394.000	-328.000	-201.000	1378.000	-6660.000
43. 23:15: 8:47	1427.000	-7418.000	-8781.000	413.000	-295.000	-168.000	1388.000	-6542.000
44. 23:15: 9:25	1431.000	-7170.000	-8464.000	428.000	-260.000	-130.000	1399.000	-6417.000
45. 23:15: 10: 6	1432.000	-6975.000	-8260.000	440.000	-221.000	-94.000	1405.000	-6288.000
46. 23:15: 10:52	1439.000	-6710.000	-8064.000	446.000	-184.000	-55.000	1409.000	-6172.000
47. 23:15: 11:23	1441.000	-6518.000	-7878.000	466.000	-144.000	-17.000	1400.000	-6055.000
48. 23:15: 12: 4	1442.000	-6343.000	-7703.000	436.000	-99.000	17.000	1371.000	-5958.000
49. 23:15: 12:41	1443.000	-6191.000	-7543.000	423.000	-56.000	50.000	1337.000	-5892.000
50. 23:15: 13:29	1444.000	-6060.000	-7403.000	393.000	-6.000	81.000	1260.000	-5819.000
51. 23:15: 14:39	1445.000	-5975.000	-7298.000	345.000	46.000	94.000	1131.000	-5765.000
52. 23:15: 15: 6	1446.000	-5888.000	-7200.000	272.000	109.000	102.000	951.000	-5695.000
53. 23:15: 15:54	1447.000	-5808.000	-7101.000	224.000	141.000	104.000	773.000	-5625.000

STRAIN CHANNELS

	TIME	CH. 33	CH. 32	CH. 31	CH. 30	CH.
1.	23:14:19: 6	-2.000	0.0	-1.000	1.000	
2.	23:14:21:40	-22.000	-7.000	-50.000	9.000	
3.	23:14:33:17	-36.000	-1.000	-53.000	8.000	
4.	23:14:33: 2	-60.000	-16.000	-107.000	15.000	
5.	23:14:33:58	-109.000	-47.000	-205.000	19.000	
6.	23:14:34:44	-157.000	-85.000	-308.000	18.000	
7.	23:14:35:29	-201.000	-124.000	-418.000	16.000	
8.	23:14:36:12	-244.000	-157.000	-526.000	11.000	
9.	23:14:37: 4	-280.000	-191.000	-655.000	2.000	
10.	23:14:37:50	-312.000	-233.000	-784.000	-7.000	
11.	23:14:38:49	-348.000	-252.000	-917.000	-13.000	
12.	23:14:39:39	-365.000	-278.000	-1036.000	-19.000	
13.	23:14:41:37	-387.000	-309.000	-1180.000	-23.000	
14.	23:14:44:24	-417.000	-338.000	-1310.000	-32.000	
15.	23:14:45:51	-439.000	-361.000	-1450.000	-35.000	
16.	23:14:47: 7	-470.000	-402.000	-1603.000	-34.000	
17.	23:14:47:57	-491.000	-420.000	-1736.000	-32.000	
18.	23:14:48:44	-515.000	-415.000	-1921.000	-25.000	
19.	23:14:49:26	-539.000	-430.000	-2089.000	-14.000	
20.	23:14:50: 9	-563.000	-443.000	-2283.000	2.000	
21.	23:14:50:57	-580.000	-469.000	-2536.000	38.000	
22.	23:14:51:17	-576.000	-481.000	-2596.000	46.000	
23.	23:14:51:48	-570.000	-492.000	-2652.000	53.000	
24.	23:14:52:35	-568.000	-507.000	-2712.000	62.000	
25.	23:14:53:23	-566.000	-517.000	-2755.000	67.000	
26.	23:14:54:10	-564.000	-524.000	-2796.000	72.000	
27.	23:14:54:57	-564.000	-531.000	-2830.000	76.000	
28.	23:14:55:44	-562.000	-537.000	-2860.000	80.000	
29.	23:14:56:32	-561.000	-541.000	-2880.000	82.000	
30.	23:14:57: 19	-561.000	-545.000	-2915.000	88.000	
31.	23:14:58: 6	-560.000	-549.000	-2939.000	90.000	
32.	23:14:58:54	-559.000	-554.000	-2964.000	93.000	
33.	23:14:59:41	-558.000	-560.000	-2984.000	91.000	
34.	23:15: 0:28	-558.000	-562.000	-3003.000	94.000	
35.	23:15: 1:16	-559.000	-566.000	-3021.000	93.000	
36.	23:15: 2: 3	-558.000	-568.000	-3037.000	94.000	
37.	23:15: 2:50	-557.000	-568.000	-3055.000	100.000	
38.	23:15: 3: 6	-541.000	-534.000	-3030.000	143.000	
39.	23:15: 3:51	-511.000	-514.000	-2998.000	180.000	
40.	23:15: 5: 7	-443.000	-450.000	-2901.000	242.000	
41.	23:15: 5:43	-404.000	-409.000	-2843.000	272.000	
42.	23:15: 6:13	-366.000	-363.000	-2774.000	297.000	
43.	23:15: 6:50	-329.000	-319.000	-2697.000	321.000	
44.	23:15: 7:25	-294.000	-273.000	-2618.000	345.000	
45.	23:15: 8: 1	-259.000	-223.000	-2530.000	369.000	
46.	23:15: 8:47	-220.000	-173.000	-2433.000	391.000	
47.	23:15: 9:25	-181.000	-127.000	-2337.000	410.000	
48.	23:15:10: 6	-137.000	-84.000	-2220.000	420.000	
49.	23:15:10:52	-86.000	-53.000	-2092.000	420.000	
50.	23:15:11:23	-36.000	-25.000	-1962.000	414.000	
51.	23:15:12: 4	19.000	0.0	-1773.000	388.000	
52.	23:15:12:41	77.000	35.000	-1554.000	343.000	
53.	23:15:13:29	137.000	135.000	-1280.000	274.000	
54.	23:15:14:39	188.000	37.000	-1104.000	227.000	

DISPLACEMENT CHANNELS

TIME	CH.19	CH.18	CH.17	CH.16	CH.15	CH.14	CH.13	CH.12
1. 23:14:19: 6	-0.001	0.001	0.002	0.0	-0.002	-0.002	0.0	0.0
2. 23:14:21:40	-0.002	0.001	0.0	0.002	-0.002	-0.002	-0.002	-0.002
3. 23:14:22:17	-0.002	0.001	0.0	0.004	-0.004	0.0	-0.002	-0.004
4. 23:14:33: 2	-0.011	0.001	0.002	0.006	-0.006	0.004	0.002	-0.006
5. 23:14:33:58	-0.011	0.001	0.002	0.020	0.026	0.022	0.004	-0.004
6. 23:14:34:44	-0.011	0.001	0.002	0.034	0.033	0.022	0.002	-0.004
7. 23:14:35:29	-0.011	0.001	0.002	0.036	0.032	0.022	0.002	-0.006
8. 23:14:36:12	-0.011	0.001	0.002	0.034	0.056	0.052	0.002	-0.006
9. 23:14:37: 4	-0.024	0.001	0.002	0.034	0.056	0.052	0.002	-0.022
10. 23:14:37:50	-0.040	-0.013	0.002	0.062	0.086	0.052	0.002	-0.034
11. 23:14:38:49	-0.039	-0.027	0.002	0.062	0.086	0.052	0.002	-0.034
12. 23:14:39:39	-0.046	-0.027	0.0	0.062	0.116	0.080	0.002	-0.036
13. 23:14:41:37	-0.068	-0.027	0.002	0.076	0.114	0.078	0.012	-0.034
14. 23:14:44:24	-0.068	-0.027	0.002	0.092	0.144	0.086	0.020	-0.054
15. 23:14:45:51	-0.083	-0.056	0.002	0.092	0.146	0.103	0.032	-0.062
16. 23:14:47: 7	-0.097	-0.056	0.002	0.110	0.174	0.108	0.032	-0.064
17. 23:14:47:57	-0.126	-0.073	0.0	0.120	0.174	0.138	0.032	-0.062
18. 23:14:48:44	-0.139	-0.084	0.002	0.148	0.204	0.138	0.032	-0.092
19. 23:14:49:26	-0.154	-0.084	0.0	0.150	0.234	0.168	0.032	-0.092
20. 23:14:50: 9	-0.182	-0.112	0.002	0.180	0.264	0.196	0.030	-0.122
21. 23:14:50:57	-0.182	-0.112	0.004	0.180	0.264	0.196	0.030	-0.122
22. 23:14:51:17	-0.193	-0.112	0.004	0.192	0.294	0.196	0.030	-0.124
23. 23:14:51:48	-0.211	-0.141	0.010	0.210	0.294	0.204	0.030	-0.144
24. 23:14:52:35	-0.211	-0.141	0.014	0.210	0.294	0.204	0.032	-0.150
25. 23:14:53:23	-0.211	-0.141	0.014	0.210	0.322	0.228	0.032	-0.152
26. 23:14:54:10	-0.221	-0.141	0.034	0.210	0.324	0.228	0.032	-0.150
27. 23:14:54:57	-0.221	-0.141	0.032	0.208	0.324	0.226	0.032	-0.152
28. 23:14:55:44	-0.239	-0.141	0.032	0.210	0.326	0.226	0.030	-0.150
29. 23:14:56:32	-0.239	-0.141	0.030	0.210	0.324	0.226	0.032	-0.152
30. 23:14:57:19	-0.240	-0.141	0.032	0.210	0.326	0.226	0.030	-0.154
31. 23:14:58: 6	-0.240	-0.141	0.032	0.210	0.324	0.226	0.032	-0.152
32. 23:14:58:54	-0.240	-0.141	0.032	0.210	0.324	0.226	0.032	-0.152
33. 23:14:59:41	-0.240	-0.141	0.030	0.238	0.324	0.234	0.032	-0.152
34. 23:15: 0:28	-0.240	-0.141	0.030	0.234	0.330	0.238	0.032	-0.152
35. 23:15: 1:16	-0.240	-0.141	0.030	0.238	0.338	0.244	0.032	-0.152
36. 23:15: 2: 3	-0.240	-0.141	0.030	0.238	0.354	0.248	0.032	-0.152
37. 23:15: 2:50	-0.240	-0.153	0.030	0.238	0.354	0.246	0.032	-0.156
38. 23:15: 3: 6	-0.258	-0.169	0.030	0.238	0.356	0.252	0.030	-0.174
39. 23:15: 3:51	-0.258	-0.169	0.030	0.238	0.356	0.256	0.030	-0.180
40. 23:15: 5: 7	-0.268	-0.169	0.066	0.238	0.356	0.254	0.032	-0.180
41. 23:15: 5:43	-0.268	-0.169	0.066	0.238	0.356	0.254	0.032	-0.180
42. 23:15: 6:13	-0.268	-0.169	0.066	0.238	0.356	0.254	0.032	-0.180
43. 23:15: 6:50	-0.268	-0.169	0.066	0.238	0.356	0.254	0.032	-0.180
44. 23:15: 7:25	-0.268	-0.169	0.066	0.224	0.356	0.244	0.032	-0.180
45. 23:15: 8: 1	-0.268	-0.169	0.066	0.210	0.356	0.238	0.032	-0.174
46. 23:15: 8:47	-0.254	-0.169	0.066	0.210	0.356	0.238	0.032	-0.180
47. 23:15: 9:25	-0.240	-0.169	0.066	0.208	0.356	0.226	0.032	-0.180
48. 23:15:10: 6	-0.240	-0.169	0.066	0.210	0.356	0.226	0.032	-0.180
49. 23:15:10:52	-0.240	-0.169	0.066	0.208	0.356	0.226	0.032	-0.180
50. 23:15:11:23	-0.239	-0.152	0.066	0.186	0.356	0.226	0.032	-0.180
51. 23:15:12: 4	-0.210	-0.141	0.066	0.154	0.356	0.196	0.032	-0.180
52. 23:15:12:41	-0.210	-0.141	0.066	0.154	0.356	0.196	0.032	-0.180
53. 23:15:13:29	-0.182	-0.113	0.066	0.122	0.356	0.168	0.032	-0.180
54. 23:15:14:39	-0.154	-0.111	0.002	0.122	0.210	0.154	0.032	-0.180

LOAD CHANNELS

	CH. 29	CH. 28	CH. 27	CH. 26	CH. 25	CH. 22	CH. 21	CH. 20
1.	23:14:19: 6	710.000	720.000	500.000	530.000	640.000	680.000	720.000
2.	23:14:21:40	2730.000	4170.000	4860.000	5580.000	4680.000	3640.000	2530.000
3.	23:14:33:17	2700.000	4190.000	4360.000	5570.000	4640.000	3690.000	2410.000
4.	23:14:33: 2	4810.000	7350.000	10320.000	10580.000	9930.000	6670.000	4480.000
5.	23:14:33:58	920.000	14310.000	18630.000	20760.000	17760.000	13540.000	8730.000
6.	23:14:33:44	14050.000	20800.000	28310.000	30540.000	26690.000	20000.000	13120.000
7.	23:14:33:29	15080.000	22220.000	30200.000	40530.000	35140.000	26270.000	17650.000
8.	23:14:33:12	18250.000	34250.000	45200.000	50390.000	43000.000	32860.000	22310.000
9.	23:14:33: 4	21700.000	40840.000	54550.000	59430.000	51950.000	39180.000	26800.000
10.	23:14:33:50	25760.000	47330.000	63770.000	69850.000	60780.000	45370.000	31330.000
11.	23:14:33:49	29100.000	53910.000	71860.000	79190.000	68560.000	51960.000	35530.000
12.	23:14:33:39	32230.000	60500.000	81340.000	85180.000	77660.000	59050.000	39820.000
13.	23:14:43:37	36220.000	66460.000	83870.000	88420.000	85770.000	63990.000	44270.000
14.	23:14:44:24	39530.000	71180.000	98180.000	107990.000	93810.000	71130.000	48920.000
15.	23:14:45:51	42510.000	80560.000	107360.000	116720.000	102470.000	77270.000	53280.000
16.	23:14:47: 7	46210.000	87010.000	115980.000	127190.000	110710.000	83500.000	57950.000
17.	23:14:47:57	49580.000	93590.000	124420.000	136570.000	118760.000	90380.000	62660.000
18.	23:14:48:44	53110.000	100350.000	134740.000	15690.000	127440.000	96480.000	67400.000
19.	23:14:49:26	57040.000	108410.000	141640.000	15650.000	135300.000	102390.000	72010.000
20.	23:14:50: 9	60390.000	113320.000	15010.000	165250.000	143310.000	109160.000	76890.000
21.	23:14:50:57	64060.000	119290.000	159150.000	174220.000	152630.000	115010.000	81580.000
22.	23:14:51:17	64110.000	119300.000	159200.000	174210.000	152530.000	115000.000	81960.000
23.	23:14:51:48	64190.000	119210.000	159070.000	174220.000	152570.000	114990.000	82290.000
24.	23:14:53:35	64200.000	119200.000	159130.000	174250.000	152590.000	114880.000	82160.000
25.	23:14:53:23	64510.000	119180.000	159000.000	174270.000	152440.000	114900.000	82800.000
26.	23:14:54:10	64360.000	11870.000	158940.000	174310.000	152480.000	114790.000	82420.000
27.	23:14:54:57	64370.000	118970.000	158940.000	174320.000	152490.000	114730.000	82540.000
28.	23:14:55:44	64690.000	118590.000	158950.000	174260.000	152490.000	114720.000	82560.000
29.	23:14:56:32	64610.000	118830.000	158810.000	174390.000	152360.000	114660.000	82560.000
30.	23:14:57:19	64610.000	118820.000	158840.000	174360.000	152380.000	114610.000	82550.000
31.	23:14:58: 6	64490.000	118730.000	158790.000	174350.000	152380.000	114530.000	82730.000
32.	23:14:58:54	64530.000	118750.000	158770.000	174310.000	152340.000	114530.000	82570.000
33.	23:14:59:41	64680.000	118670.000	158500.000	174260.000	152370.000	114550.000	82860.000
34.	23:15: 0:28	64780.000	118620.000	158710.000	174260.000	152260.000	114500.000	82820.000
35.	23:15: 1:16	64580.000	118490.000	158740.000	174170.000	152290.000	114500.000	83170.000
36.	23:15: 2: 3	64630.000	118520.000	158660.000	174140.000	152220.000	114520.000	83030.000
37.	23:15: 3: 6	64810.000	118600.000	158550.000	174210.000	152160.000	114450.000	82840.000
38.	23:15: 4:53	64660.000	118600.000	158550.000	174210.000	152160.000	114450.000	82840.000
39.	23:15: 5:51	64910.000	118580.000	158430.000	174210.000	152160.000	114450.000	82840.000
40.	23:15: 6:50	64980.000	118580.000	158430.000	174210.000	152160.000	114450.000	82840.000
41.	23:15: 7:25	64660.000	118580.000	158430.000	174210.000	152160.000	114450.000	82840.000
42.	23:15: 8:47	64660.000	118580.000	158430.000	174210.000	152160.000	114450.000	82840.000
43.	23:15: 9:25	64660.000	118580.000	158430.000	174210.000	152160.000	114450.000	82840.000
44.	23:15: 10: 6	64660.000	118580.000	158430.000	174210.000	152160.000	114450.000	82840.000
45.	23:15: 11:23	64660.000	118580.000	158430.000	174210.000	152160.000	114450.000	82840.000
46.	23:15: 12: 4	64660.000	118580.000	158430.000	174210.000	152160.000	114450.000	82840.000
47.	23:15: 13:41	64660.000	118580.000	158430.000	174210.000	152160.000	114450.000	82840.000
48.	23:15: 14:29	64660.000	118580.000	158430.000	174210.000	152160.000	114450.000	82840.000
49.	23:15: 15:16	64660.000	118580.000	158430.000	174210.000	152160.000	114450.000	82840.000
50.	23:15: 16:39	64660.000	118580.000	158430.000	174210.000	152160.000	114450.000	82840.000
51.	23:15: 17:29	64660.000	118580.000	158430.000	174210.000	152160.000	114450.000	82840.000
52.	23:15: 18:29	64660.000	118580.000	158430.000	174210.000	152160.000	114450.000	82840.000
53.	23:15: 19:29	64660.000	118580.000	158430.000	174210.000	152160.000	114450.000	82840.000
54.	23:15: 20:39	64660.000	118580.000	158430.000	174210.000	152160.000	114450.000	82840.000

R O D C H A N N E L S

	TIME	CH.57	CH.56	CH.55	CH.54	CH.53	CH.52	CH.51	CH.50
1.	23:14:19:6	0.0	12.312	-12.812	12.812	12.812	-12.812	0.0	0.0
2.	23:14:21:40	204.982	0.0	-102.494	-12.812	51.247	-12.812	166.553	-12.812
3.	23:14:32:17	-230.612	0.0	-102.494	12.812	38.435	-12.812	153.742	-12.812
4.	23:14:33:2	-294.671	12.812	-115.306	38.435	38.435	25.624	64.059	-61.059
5.	23:14:33:58	-294.671	12.812	-76.871	38.435	12.812	25.624	-12.812	-76.871
6.	23:14:34:44	-204.989	12.812	-38.435	12.812	-89.683	38.435	-51.247	-51.247
7.	23:14:35:29	-115.306	12.812	12.812	38.435	-204.989	0.0	-51.247	25.624
8.	23:14:36:12	0.0	12.812	12.812	64.059	-345.918	12.812	-51.247	51.247
9.	23:14:37:4	128.118	12.812	25.624	140.930	-448.413	0.0	-51.247	89.683
10.	23:14:37:50	281.859	12.312	25.624	192.177	-602.154	25.624	-51.247	140.930
11.	23:14:38:49	422.739	12.812	12.812	255.236	-730.272	25.624	-64.059	192.177
12.	23:14:39:39	563.719	12.812	12.812	307.483	-819.955	38.435	-64.059	268.048
13.	23:14:41:37	691.837	0.0	25.624	307.483	-896.826	38.435	-64.059	358.730
14.	23:14:44:24	781.520	12.312	25.624	320.295	-999.320	0.0	-76.871	435.601
15.	23:14:45:51	948.073	0.0	64.059	320.295	-1127.438	-25.624	-128.118	538.095
16.	23:14:47:7	1101.814	0.0	89.683	294.671	-1242.744	-64.059	-13.742	627.778
17.	23:14:47:57	1242.744	0.0	128.118	320.295	-1370.862	-64.059	-13.742	730.272
18.	23:14:48:44	1422.109	0.0	179.365	307.483	-1511.792	-102.494	-21.801	845.579
19.	23:14:49:26	1575.851	0.0	230.612	307.483	-1627.098	-89.683	-30.295	948.073
20.	23:14:50:9	1716.781	0.0	307.483	320.295	-1742.405	-76.871	-34.354	1063.379
21.	23:14:50:57	1908.958	0.0	384.354	384.354	-1742.405	-51.247	-435.601	1165.874
22.	23:14:51:17	1883.334	12.812	384.354	384.354	-1691.157	-25.624	-435.601	1153.062
23.	23:14:51:48	1870.522	12.812	409.978	384.354	-1639.910	-12.812	-48.413	1153.062
24.	23:14:52:35	1357.711	12.812	435.601	397.166	-1614.286	-12.812	-435.601	1140.250
25.	23:14:53:23	1844.899	0.0	435.601	397.166	-1575.851	0.0	-48.413	1140.250
26.	23:14:54:10	1819.275	12.812	435.601	384.354	-1563.039	0.0	-48.413	1127.438
27.	23:14:54:57	1819.275	12.812	435.601	384.354	-1563.039	0.0	-48.413	1127.438
28.	23:14:55:44	1819.275	12.812	448.413	397.166	-1550.228	25.624	-48.413	1127.438
29.	23:14:56:32	1832.087	12.812	448.413	397.166	-1550.228	25.624	-48.413	1127.438
30.	23:14:57:19	1832.087	12.812	448.413	409.978	-1537.416	38.435	-48.413	1127.438
31.	23:14:58:6	1844.899	12.812	461.225	409.978	-1537.416	38.435	-48.413	114.626
32.	23:14:58:54	1844.899	12.812	461.225	422.789	-1550.228	38.435	-48.413	114.626
33.	23:14:59:41	1857.711	25.624	461.225	397.166	-1537.416	38.435	-48.413	1127.438
34.	23:14:59:0:28	1857.711	25.624	461.225	397.166	-1537.416	38.435	-48.413	1127.438
35.	23:14:59:1:16	1857.711	25.624	474.036	409.978	-1550.228	51.247	-48.413	114.626
36.	23:14:59:2:3	1870.522	25.624	474.036	409.978	-1550.228	51.247	-48.413	114.626
37.	23:14:59:3:6	1870.522	25.624	525.284	384.354	-1537.416	153.742	-48.413	114.626
38.	23:14:59:4:3	1806.463	25.624	525.284	371.542	-1498.980	153.742	-525.284	1063.379
39.	23:14:59:5:7	1780.840	25.624	614.966	307.483	-1422.109	243.424	-602.154	999.320
40.	23:14:59:6:13	1409.228	25.624	768.708	166.553	-999.320	486.868	-743.084	909.637
41.	23:14:59:7:4	1127.438	25.624	807.143	115.306	-691.837	56.531	-74.331	832.767
42.	23:14:59:8:13	832.767	25.624	858.390	115.306	-691.837	56.531	-74.331	832.767
43.	23:14:59:9:50	640.590	25.624	909.637	51.247	-435.601	679.025	-845.579	730.272
44.	23:14:59:10:25	525.284	25.624	909.637	-12.812	-281.859	755.896	-836.826	602.154
45.	23:14:59:11:8	409.978	25.624	973.697	-102.494	-179.365	832.767	-98.073	486.868
46.	23:14:59:12:47	294.671	25.624	1037.756	-230.612	-89.683	922.449	-99.320	358.730
47.	23:14:59:13:25	230.612	25.624	1101.814	-333.107	-12.812	999.320	-1063.379	281.859
48.	23:14:59:14:6	192.177	38.435	1165.874	-358.730	25.624	1050.567	-1114.626	230.612
49.	23:14:59:15:52	166.553	38.435	1217.121	-358.730	51.247	106.191	-113.062	179.363
50.	23:14:59:16:23	128.118	25.624	1229.533	-333.107	64.059	1063.379	-1178.085	153.742
51.	23:14:59:17:4	1089.003	25.624	1204.309	-281.859	51.247	1037.756	-1153.062	102.494
52.	23:14:59:18:41	76.871	38.435	909.637	-230.612	51.247	935.261	-1089.003	76.871
53.	23:14:59:19:29	64.059	25.624	640.590	-204.989	51.247	768.708	-960.895	25.624
54.	23:14:59:20:39	38.435	25.624	461.225	-166.553	51.247	563.719	-794.331	0.0
					-153.742	64.059	533.107	-666.213	-12.812

AVERAGE LOAD

1.	648.750
2.	3761.250
3.	3763.750
4.	7256.250
5.	13740.000
6.	20481.250
7.	27243.750
8.	33770.000
9.	40371.250
10.	47172.500
11.	57206.250
12.	59973.750
13.	66480.000
14.	73088.750
15.	79462.500
16.	86092.500
17.	92547.500
18.	99152.500
19.	105500.000
20.	112075.000
21.	118567.500
22.	118665.000
23.	118716.250
24.	118723.750
25.	118793.750
26.	118721.250
27.	118740.000
28.	118751.250
29.	118720.000
30.	118691.250
31.	118702.500
32.	118665.000
33.	118755.000
34.	118710.000
35.	118760.000
36.	118735.000
37.	118648.750
38.	113515.000
39.	108008.750
40.	95971.250
41.	89613.750
42.	82777.500
43.	76110.000
44.	69548.750
45.	62557.500
46.	55706.250
47.	49081.250
48.	42127.500
49.	35350.000
50.	28703.750
51.	21705.000
52.	15012.500
53.	8257.500
54.	4756.250

3.1.3 SPECIMEN #14

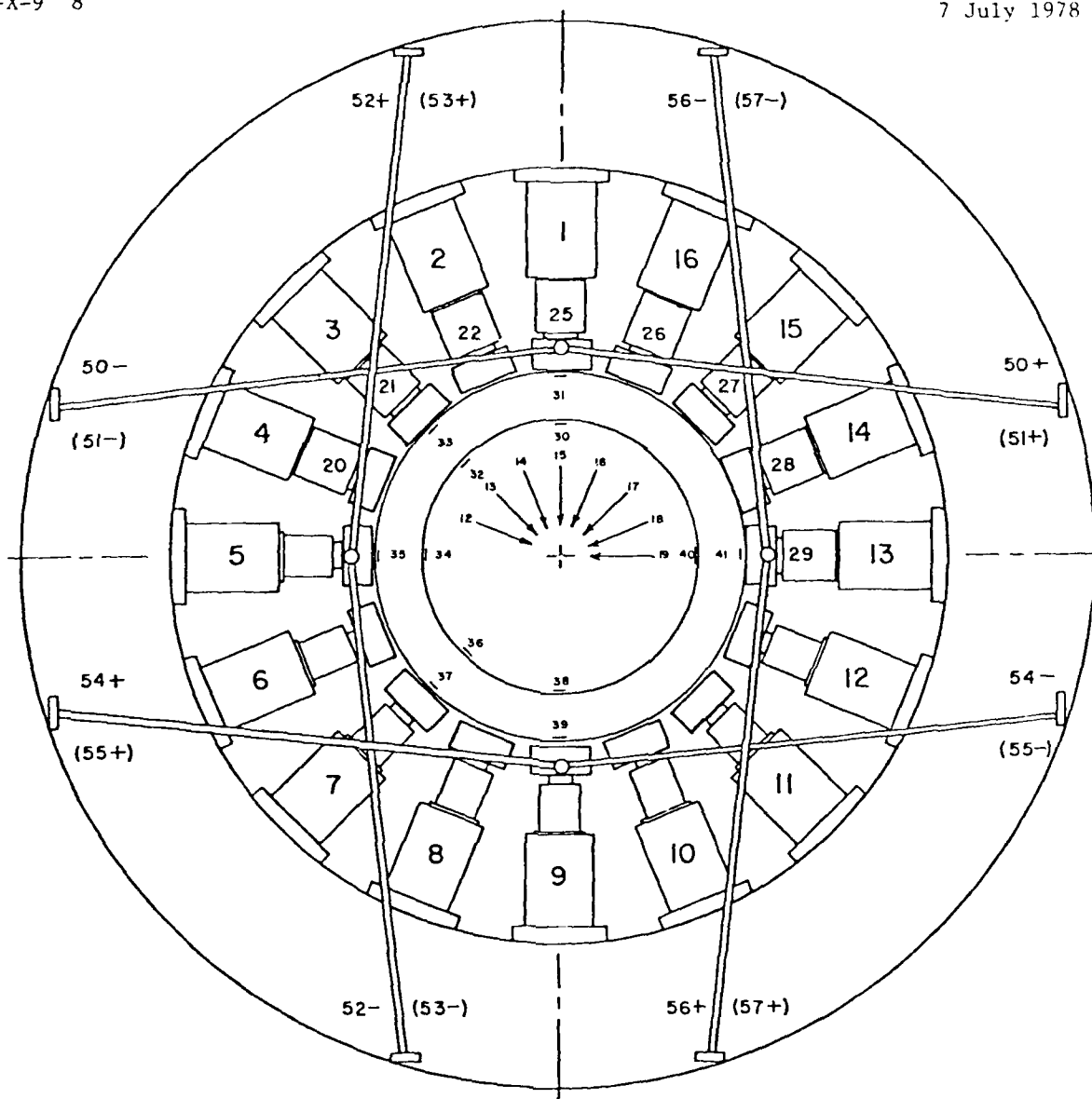
2

TEST NO. 44
COMPOSITE INTEGRAL LINER
1:2 LOADING RATIO
TESTED 7 JULY 1978

REACTION FRAME TEST SET-UP

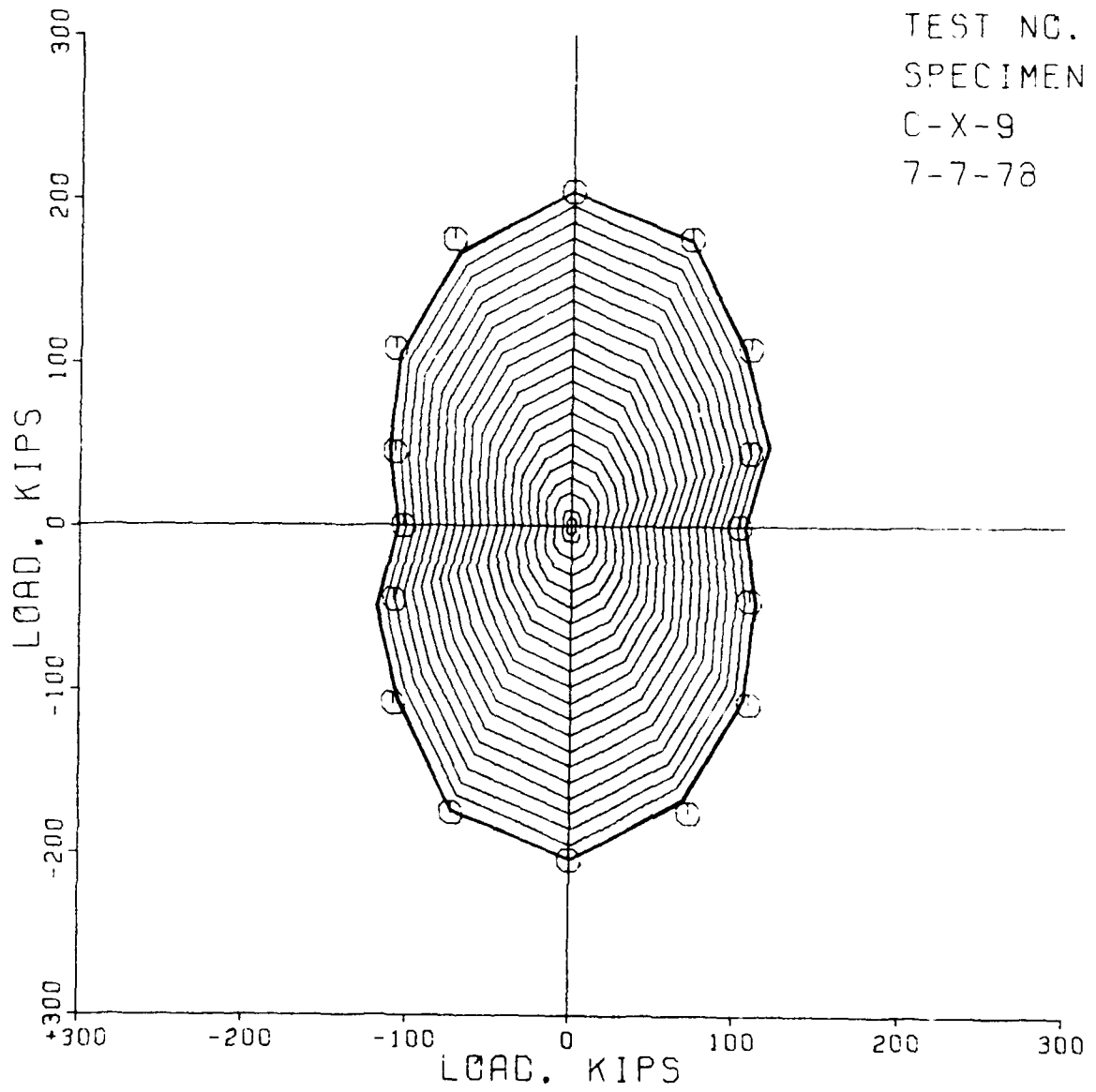
Specimen #14
C-X-9 8"

Test #44
1:2 Load
7 July 1978

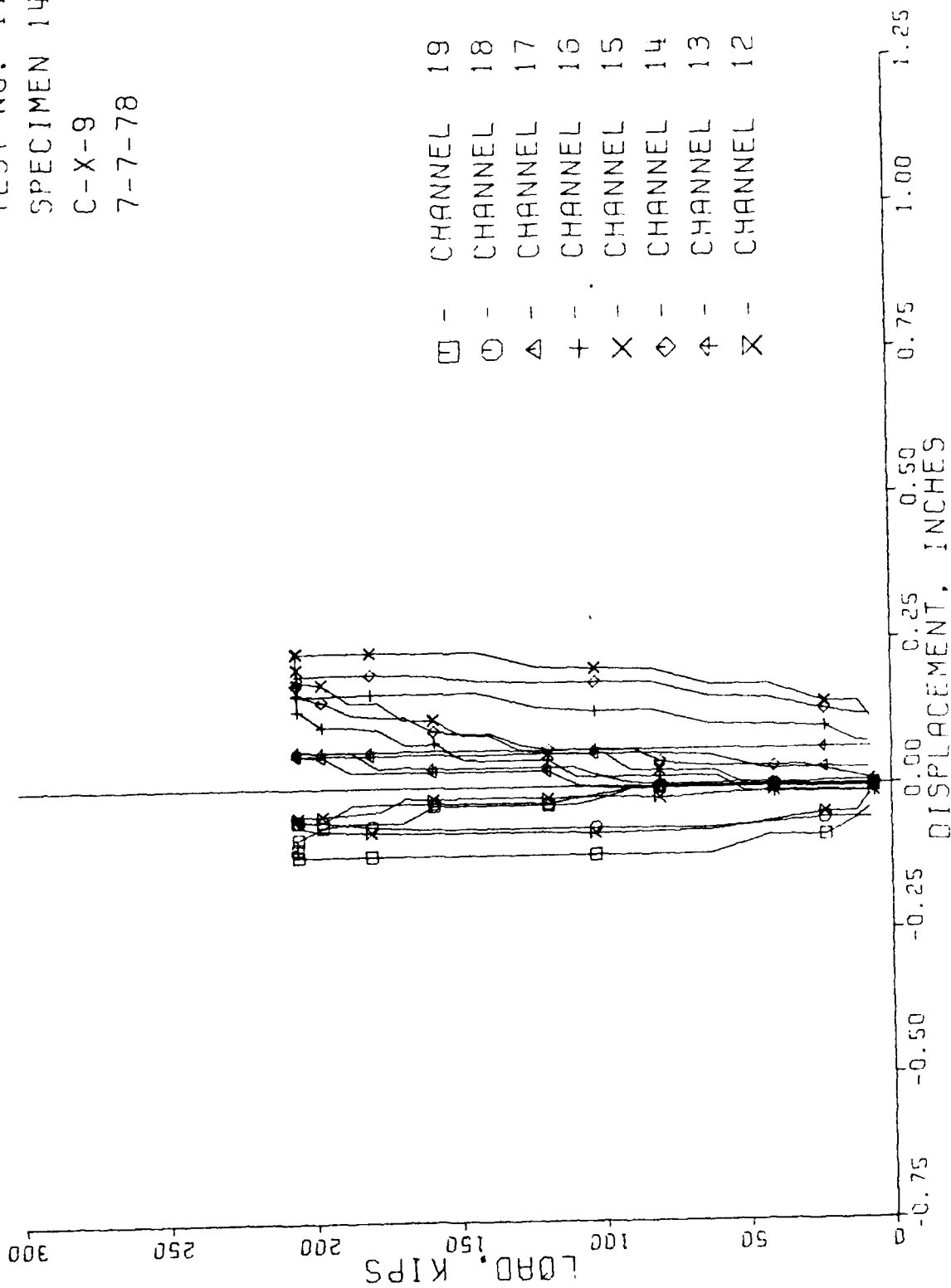


CH 12-19 Load axis I.D. (Research, Inc. Model 4040).
CH 20-22, 25-29 Axial load (Transducers, Inc. Model 693-300K).
CH 30-41 (Ailtech SG 129-6S) Radial pairs at center. Odd gages on Rebar.
CH 50-57 (Ailtech SG 129-6S) Polarity indicates rod under tension.
Lower rod shown (XX).

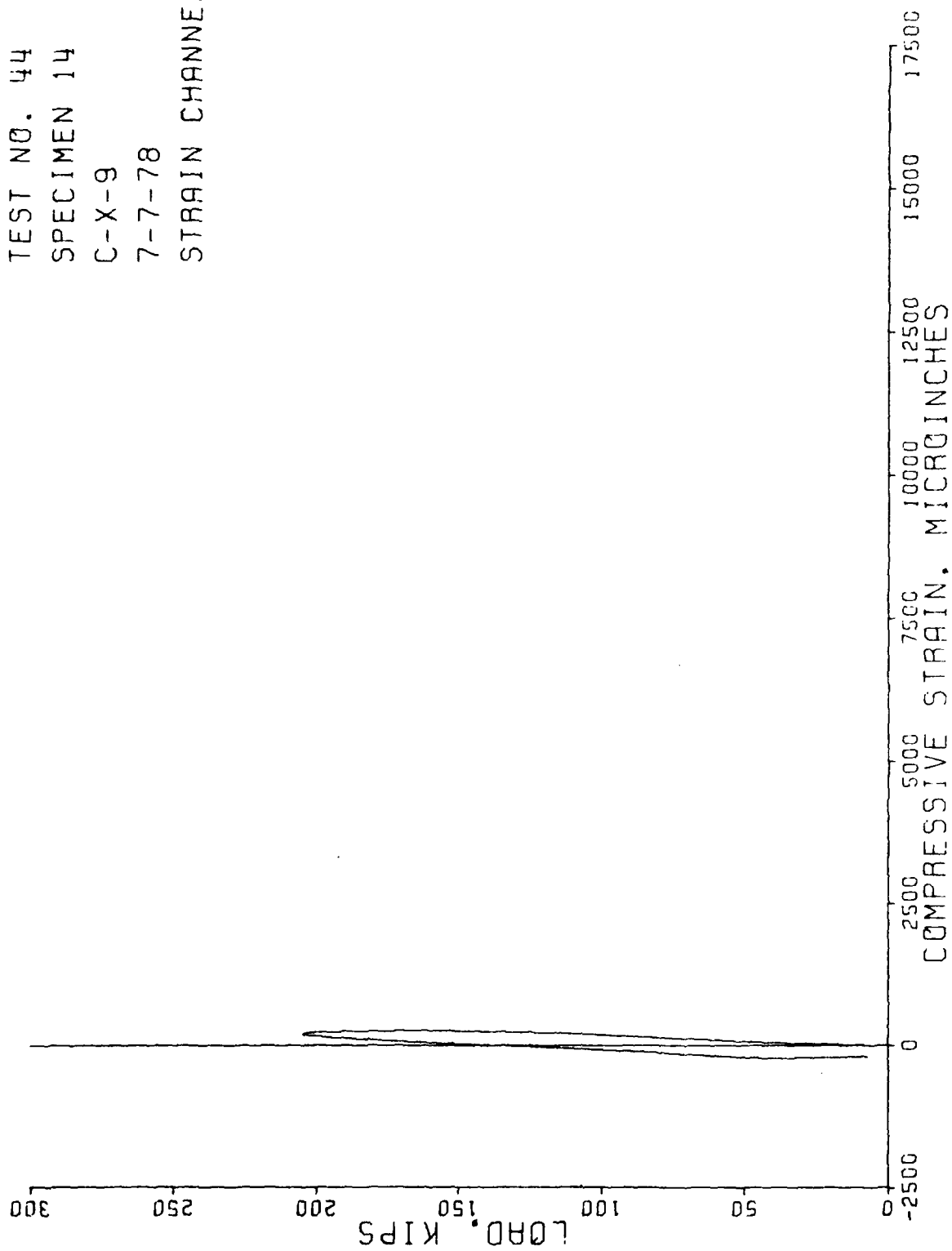
TEST NO. 44
SPECIMEN 14
C-X-9
7-7-78



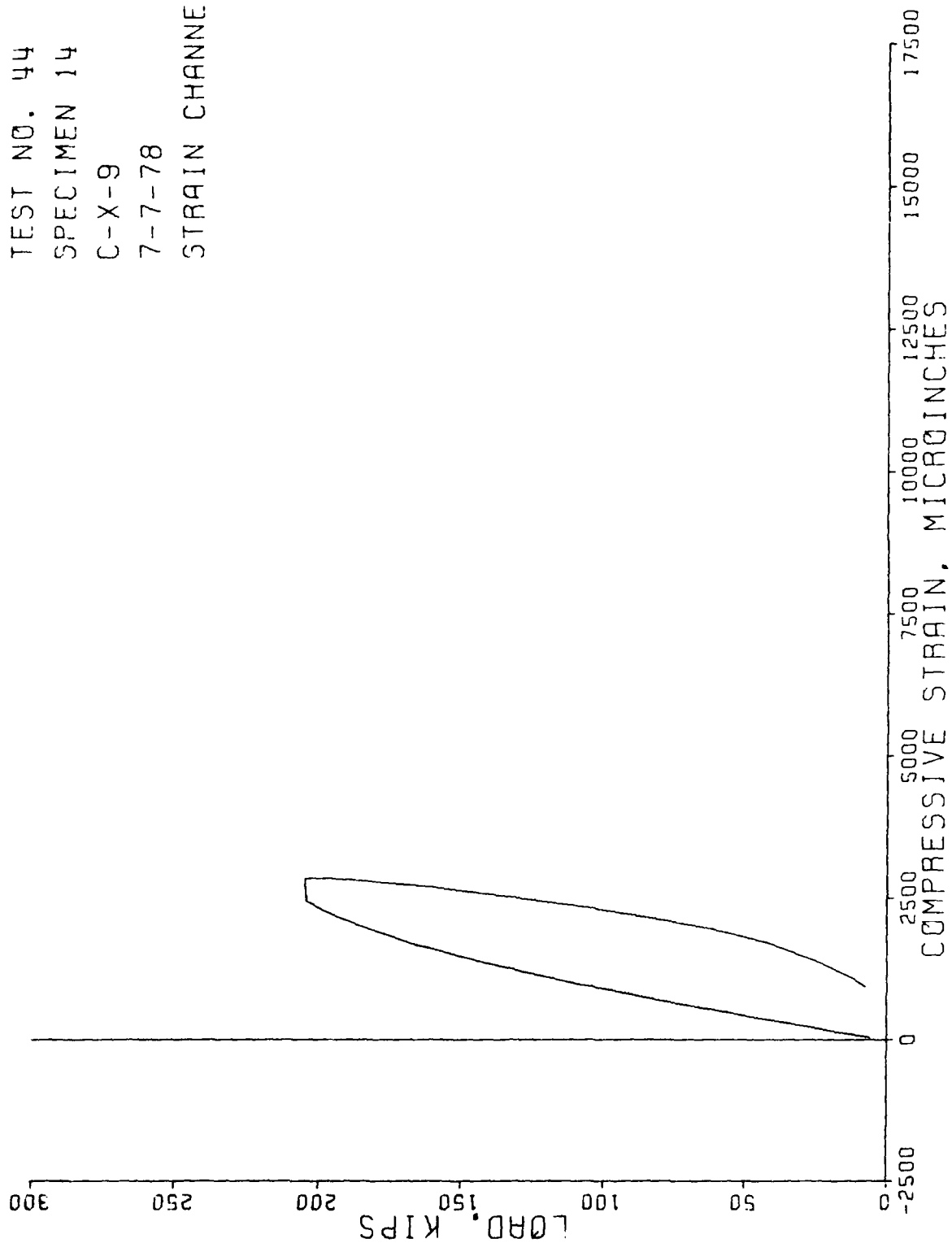
TEST NO. 44
 SPECIMEN 14
 C-X-9
 7-7-78



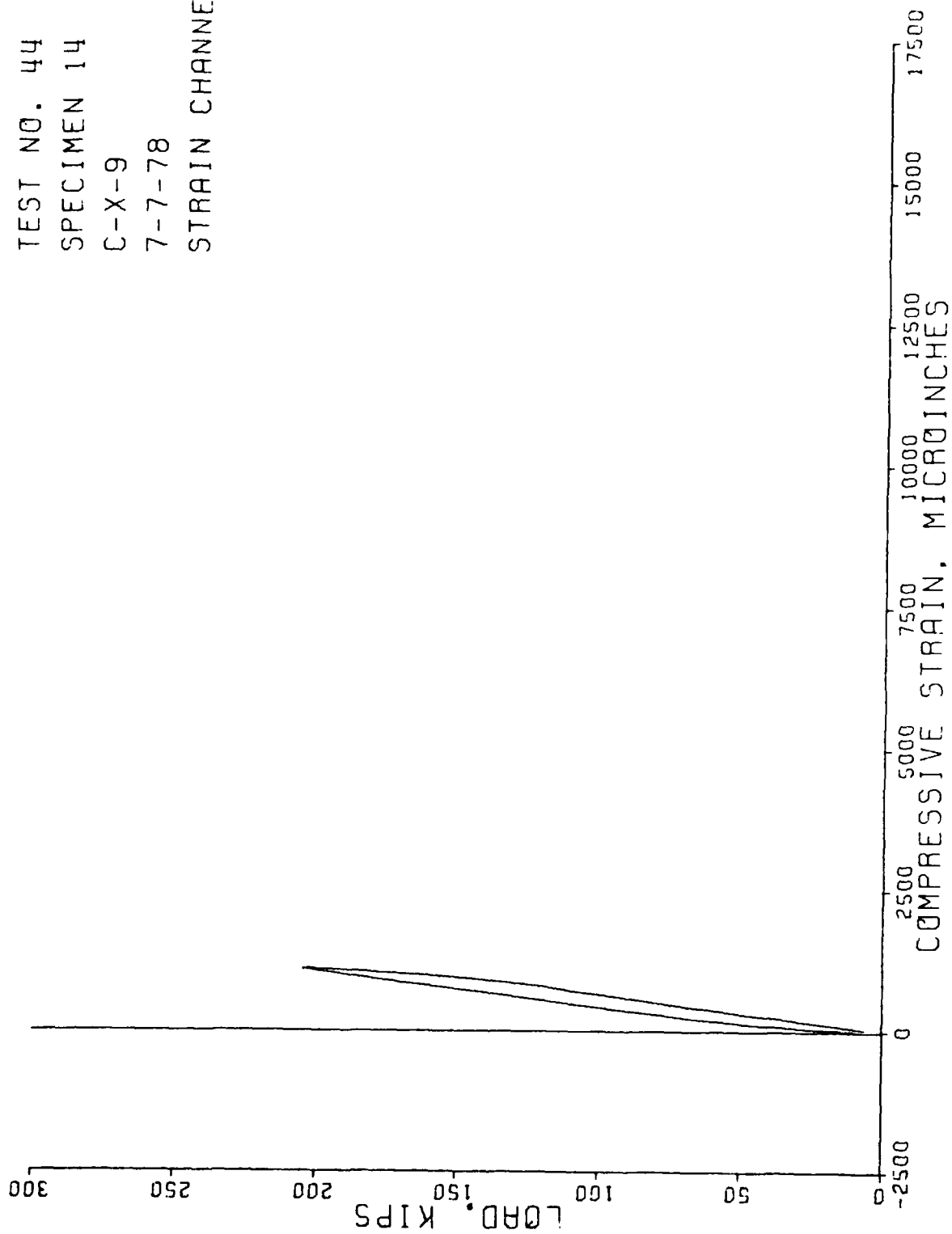
TEST NO. 44
SPECIMEN 14
C-X-9
7-7-78
STRAIN CHANNEL 30



TEST NO. 44
SPECIMEN 14
C-X-9
7-7-78
STRAIN CHANNEL 31



TEST NO. 44
SPECIMEN 14
C-X-9
7-7-78
STRAIN CHANNEL 32



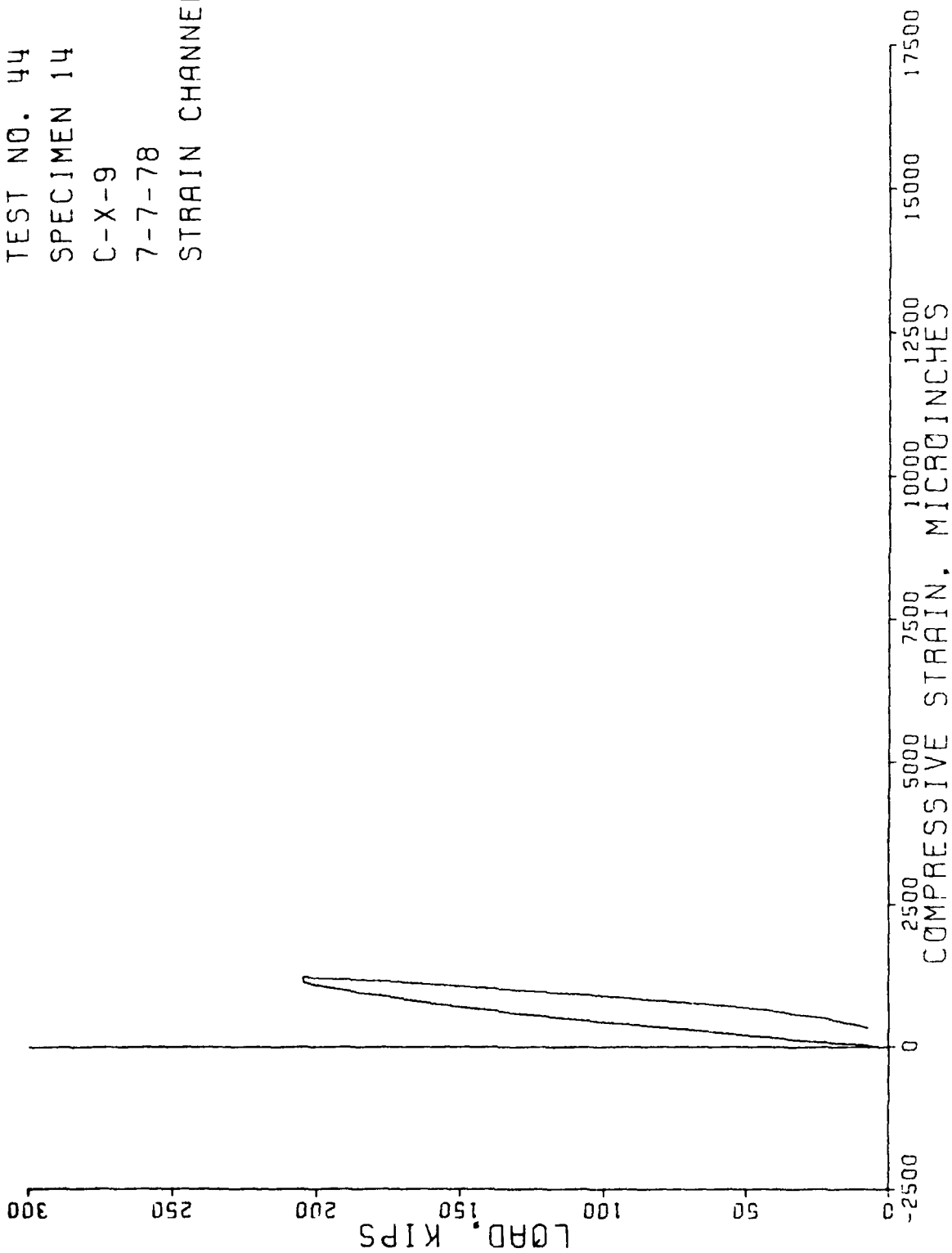
TEST NO. 44

SPECIMEN 14

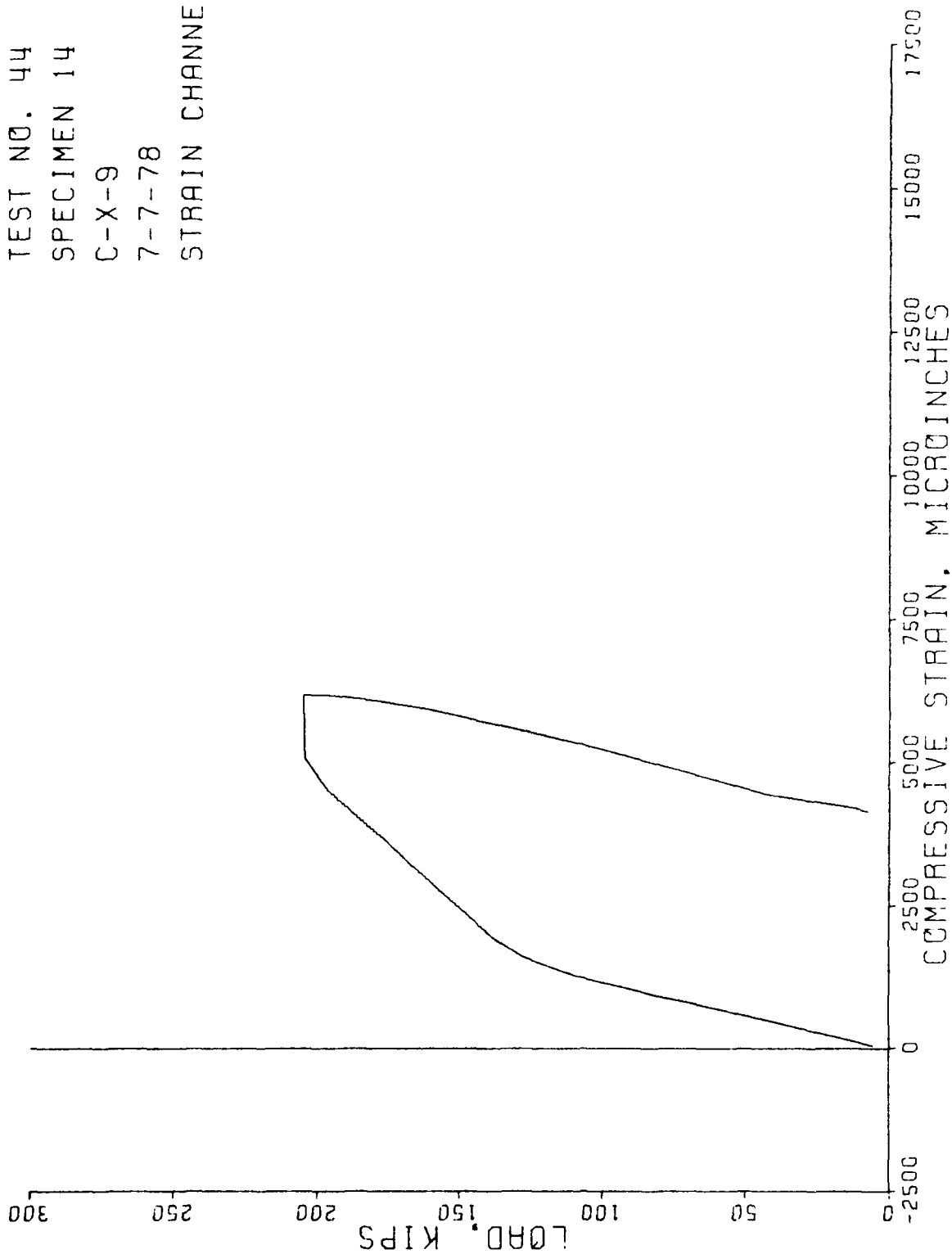
C-X-9

7-7-78

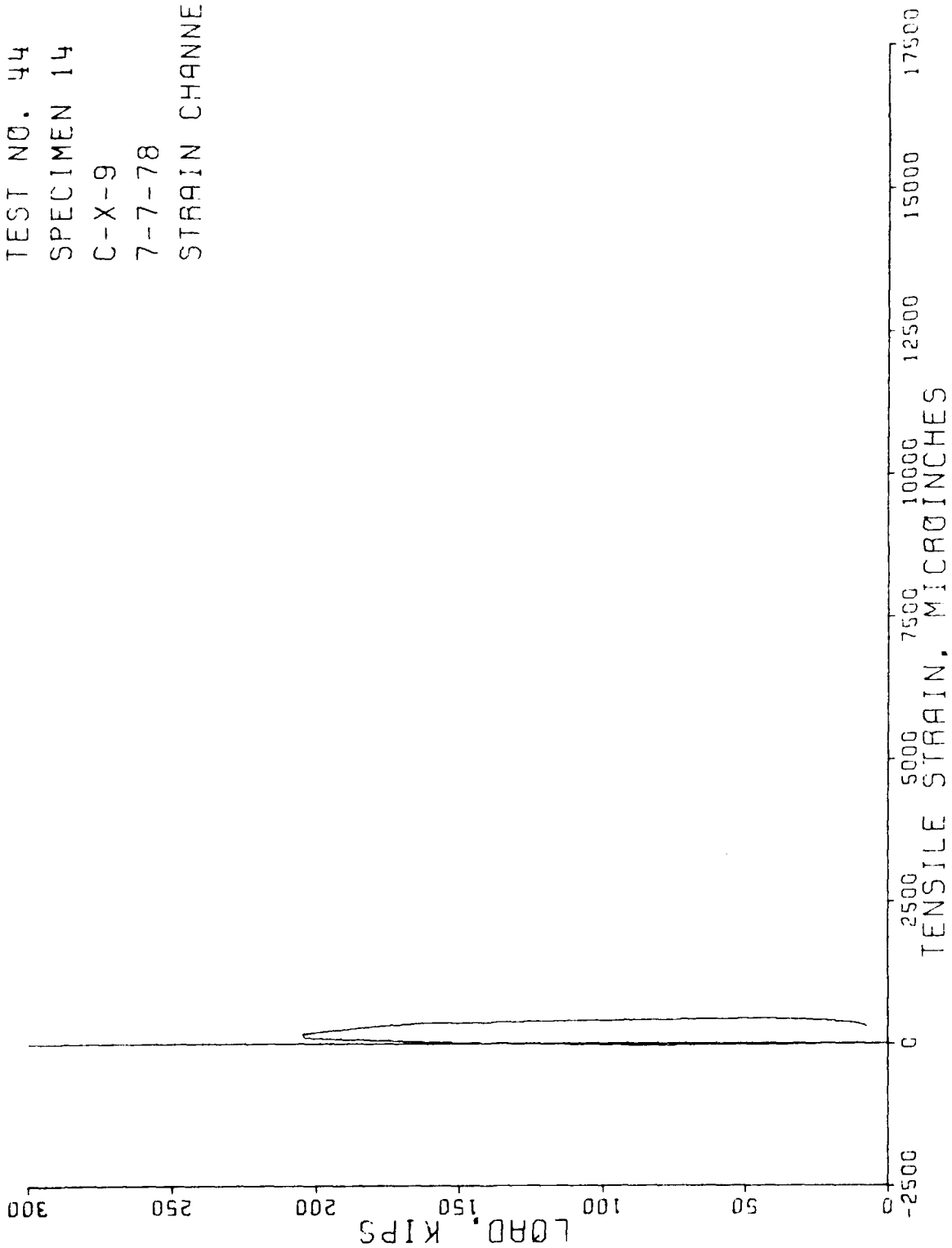
STRAIN CHANNEL 33



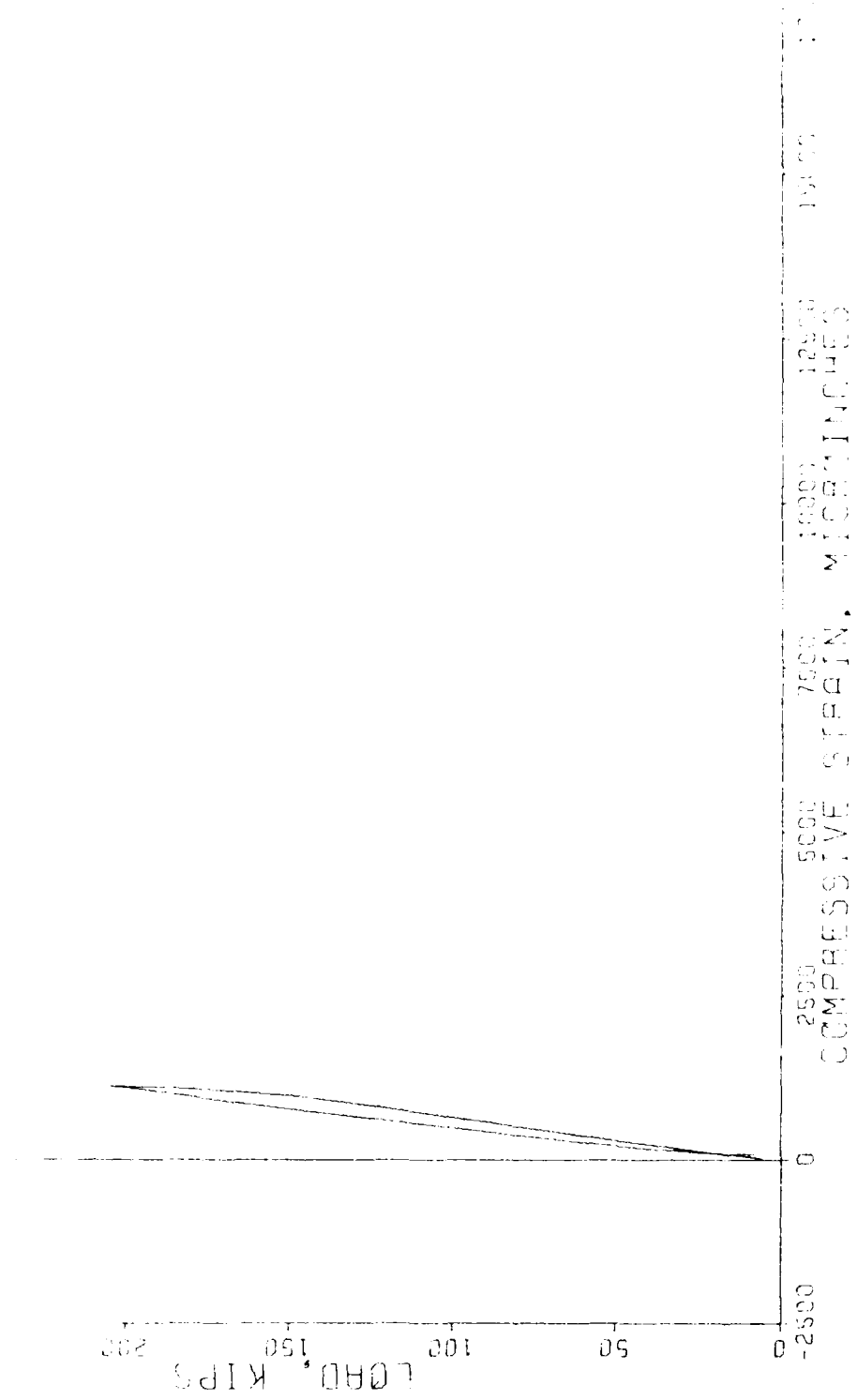
TEST NO. 44
SPECIMEN 14
C-X-9
7-7-78
STRAIN CHANNEL 34



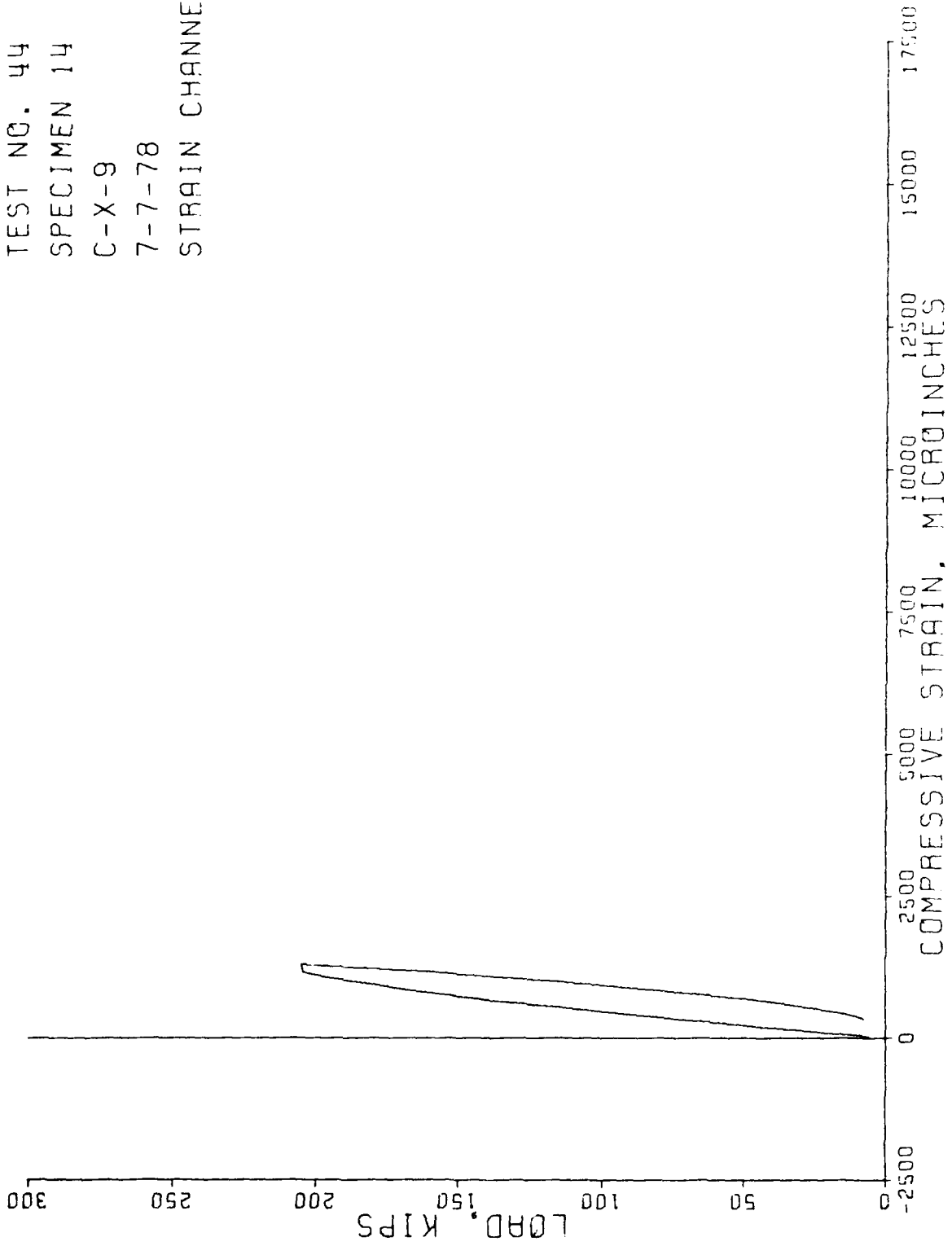
TEST NO. 44
SPECIMEN 14
C-X-9
7-7-78
STRAIN CHANNEL 35



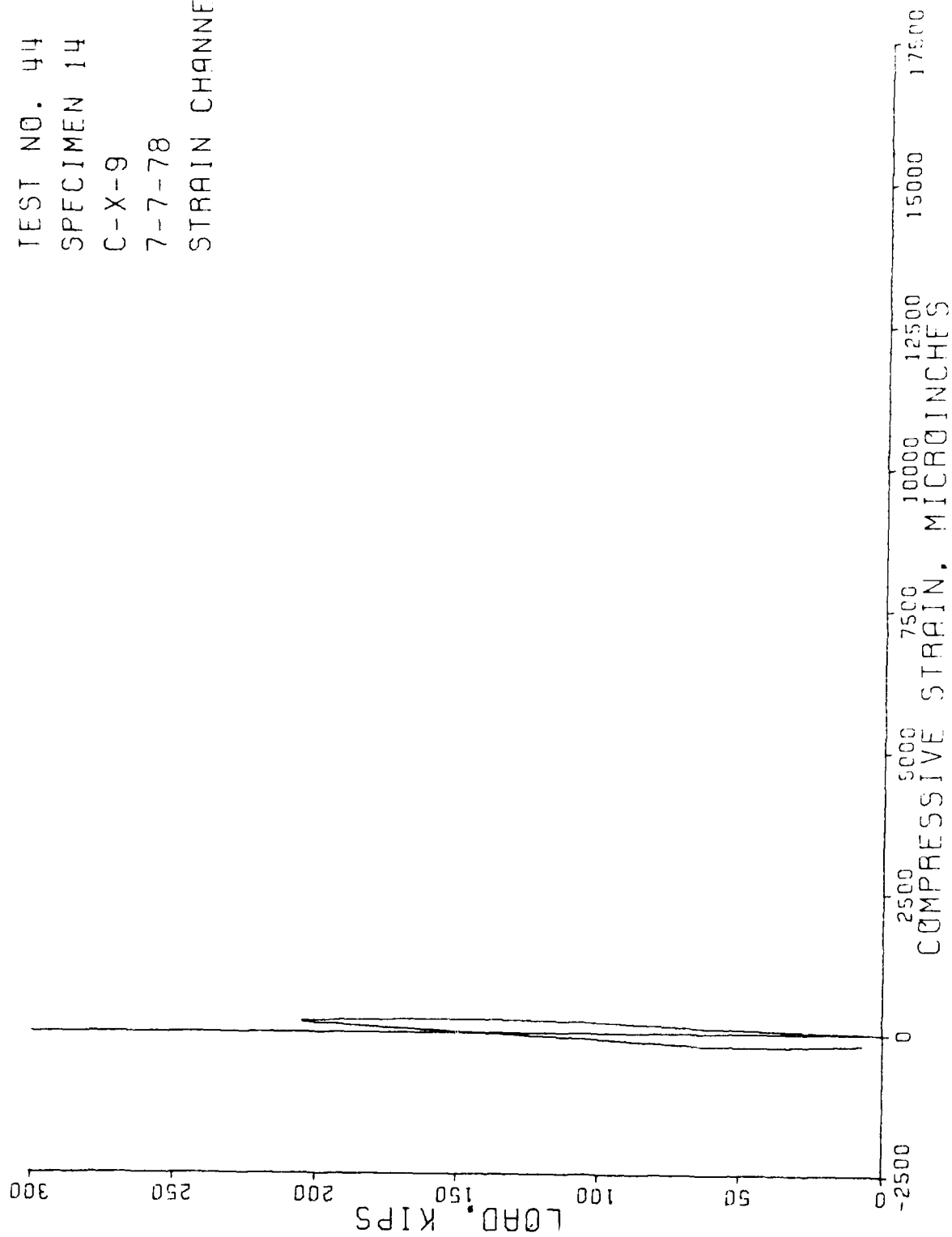
TEST NO. 44
 SPECIMEN 14
 C-X-9
 7-7-78
 STRAIN CHANNEL 20



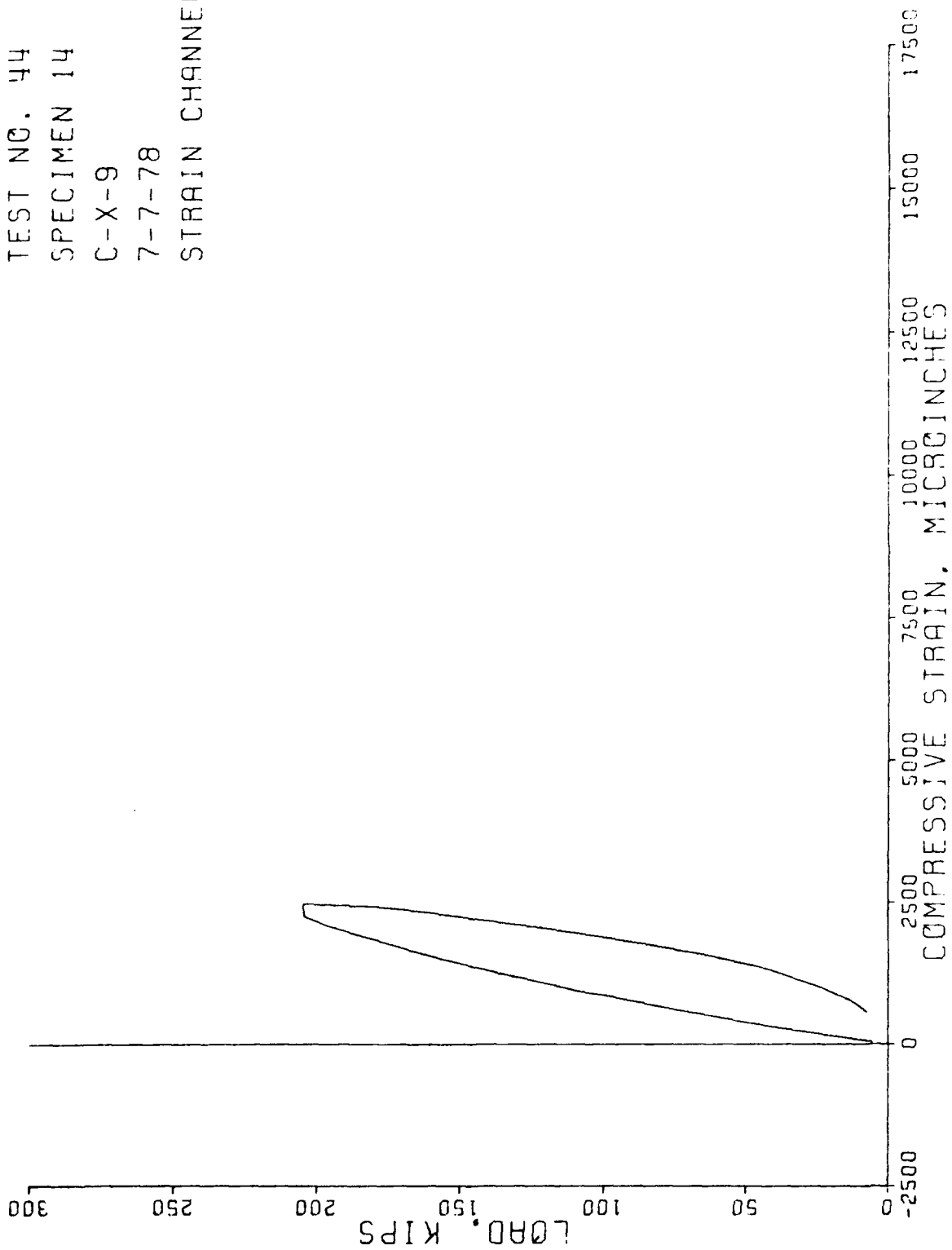
TEST NO. 44
SPECIMEN 14
C-X-9
7-7-78
STRAIN CHANNEL 37



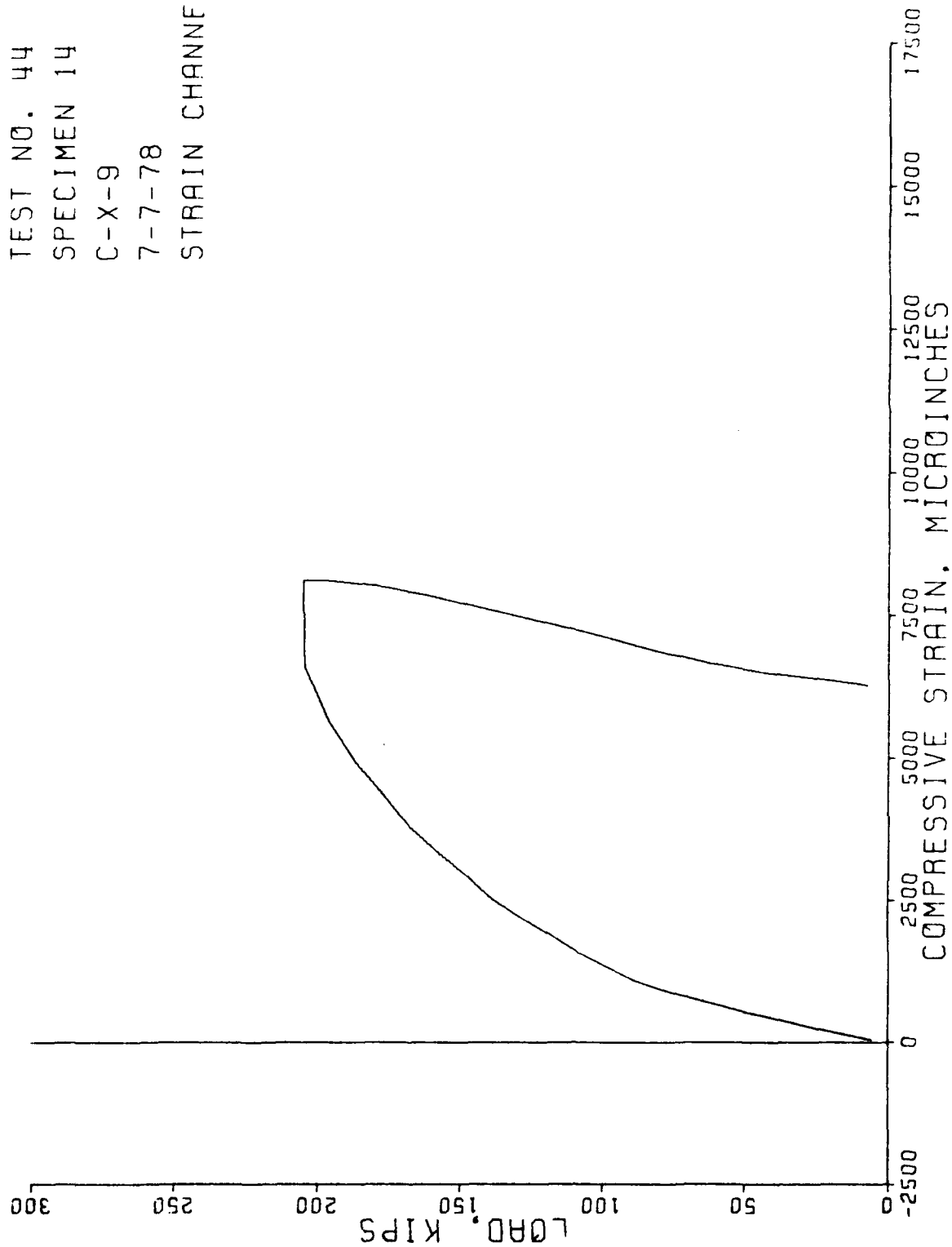
TEST NO. 44
SPECIMEN 14
C-X-9
7-7-78
STRAIN CHANNEL 33



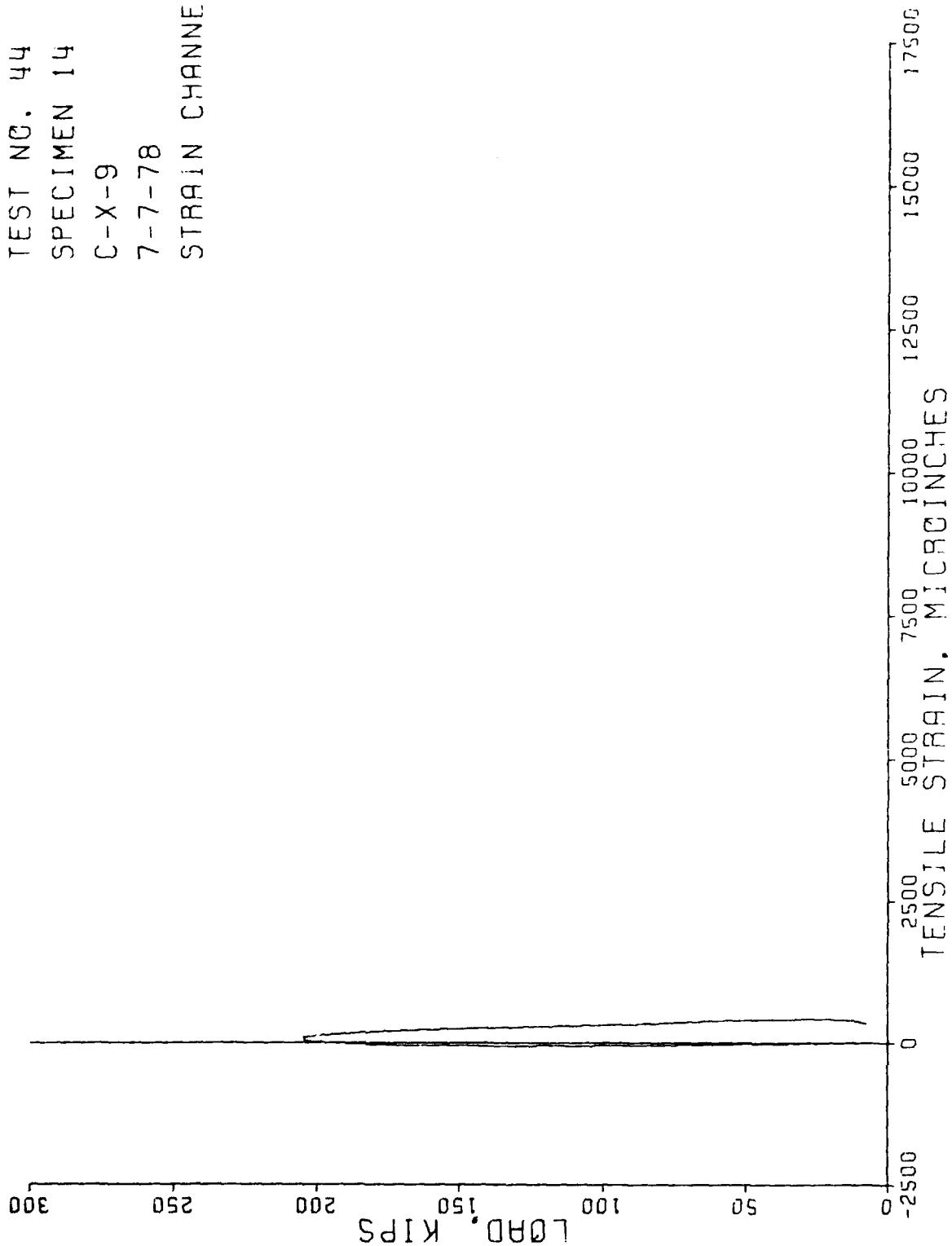
TEST NO. 44
SPECIMEN 14
C-X-9
7-7-78
STRAIN CHANNEL 39



TEST NO. 44
SPECIMEN 14
C-X-9
7-7-78
STRAIN CHANNEL 40



TEST NO. 44
SPECIMEN 14
C-X-9
7-7-78
STRAIN CHANNEL 41



TEST NO. 44 SPECIMEN 14 C-X-9 7-7-78

NUMBER OF INCREMENTS= 47
 NUMBER OF CHANNELS= 36
 NUMBER OF STRAIN CHANNELS= 12
 NUMBER OF DISPLACEMENT CHANNELS= 8
 NUMBER OF LOAD CHANNELS= 8
 NUMBER OF PRESSURE CHANNELS= 0
 NUMBER OF RODS= 8

CHANNEL	ZEROSHIFT
57	0.0
56	0.0
55	0.0
54	0.0
53	0.0
52	0.0
51	0.0
50	0.0
41	0.0
40	0.0
39	0.0
38	0.0
37	0.0
36	0.0
35	0.0
34	0.0
33	0.0
32	0.0
31	0.0
30	0.0
29	0.0
28	0.0
27	0.0
26	0.0
25	0.0
22	0.0
21	0.0
20	0.0
19	0.0
18	0.0
17	0.0
16	0.0
15	0.0
14	0.0
13	0.0
12	0.0

STRAIN CHANNEL	CALIBRATION
41	1.000
40	1.000
39	1.000
38	1.000
37	1.000
36	1.000

35	1.000
34	1.000
33	1.000
32	1.000
31	1.000
30	1.000

DISPLACEMENT CHANNEL	CALIBRATION
19	0.001
18	0.001
17	0.002
16	0.002
15	0.002
14	0.002
13	0.002
12	0.002

LOAD CHANNEL	CALIBRATION
29	10.000
28	10.000
27	10.000
26	10.000
25	10.000
22	10.000
21	10.000
20	10.000

ROD CHANNEL	CALIBRATION
57	1.000
56	1.000
55	1.000
54	1.000
53	1.000
52	1.000
51	1.000
50	1.000

STRAIN CHANNELS

	CH. 41	CH. 40	CH. 39	CH. 38	CH. 37	CH. 36	CH. 35	CH. 34
1. 7:15: 9:16	-1.000	-42.000	-40.000	-3.000	-28.000	-16.000	-4.000	-49.000
2. 7:15:10:57	-3.000	-90.000	-78.000	-7.000	-46.000	-44.000	-5.000	-105.000
3. 7:15:11:44	-7.000	-199.000	-148.000	-18.000	-91.000	-104.000	-6.000	-224.000
4. 7:15:12:30	-15.000	-309.000	-222.000	-32.000	-135.000	-167.000	-11.000	-338.000
5. 7:15:13: 9	-21.000	-432.000	-303.000	-48.000	-180.000	-234.000	-19.000	-458.000
6. 7:15:13:59	-28.000	-553.000	-386.000	-70.000	-227.000	-299.000	-26.000	-572.000
7. 7:15:14:53	-32.000	-678.000	-470.000	-92.000	-272.000	-365.000	-30.000	-683.000
8. 7:15:15:40	-38.000	-806.000	-567.000	-116.000	-316.000	-435.000	-31.000	-801.000
9. 7:15:16:25	-44.000	-932.000	-651.000	-141.000	-361.000	-501.000	-35.000	-906.000
10. 7:15:17:39	-46.000	-1106.000	-750.000	-162.000	-410.000	-570.000	-32.000	-1025.000
11. 7:15:18:43	-51.000	-1336.000	-847.000	-184.000	-460.000	-640.000	-31.000	-1141.000
12. 7:15:19:31	-55.000	-1603.000	-942.000	-202.000	-507.000	-707.000	-29.000	-1262.000
13. 7:15:20:21	-55.000	-1903.000	-1052.000	-216.000	-560.000	-778.000	-18.000	-1424.000
14. 7:15:21: 6	-60.000	-2187.000	-1158.000	-228.000	-612.000	-848.000	-12.000	-1617.000
15. 7:15:21:52	-60.000	-2523.000	-1272.000	-234.000	-667.000	-916.000	-1.000	-1939.000
16. 7:15:22:42	-56.000	-2923.000	-1399.000	-235.000	-725.000	-974.000	14.000	-2350.000
17. 7:15:23:23	-56.000	-3332.000	-1525.000	-238.000	-786.000	-1018.000	23.000	-2800.000
18. 7:15:24: 7	-49.000	-3790.000	-1657.000	-230.000	-853.000	-1053.000	37.000	-3248.000
19. 7:15:24:48	-34.000	-4334.000	-1803.000	-235.000	-925.000	-1079.000	57.000	-3679.000
20. 7:15:25:29	-25.000	-4908.000	-1939.000	-225.000	-995.000	-1103.000	70.000	-4063.000
21. 7:15:26:14	-5.000	-5651.000	-2088.000	-216.000	-1076.000	-1118.000	83.000	-4503.000
22. 7:15:27: 4	27.000	-6600.000	-2244.000	-206.000	-1164.000	-1125.000	112.000	-5060.000
23. 7:15:27:50	45.000	-6987.000	-2294.000	-199.000	-1194.000	-1122.000	130.000	-5317.000
24. 7:15:28:37	55.000	-7214.000	-2324.000	-196.000	-1210.000	-1122.000	140.000	-5484.000
25. 7:15:29:24	65.000	-7383.000	-2348.000	-193.000	-1226.000	-1122.000	149.000	-5604.000
26. 7:15:30:12	70.000	-7514.000	-2368.000	-190.000	-1238.000	-1123.000	154.000	-5706.000
27. 7:15:30:59	76.000	-7622.000	-2384.000	-188.000	-1247.000	-1123.000	161.000	-5791.000
28. 7:15:31:46	81.000	-7720.000	-2401.000	-186.000	-1258.000	-1124.000	165.000	-5866.000
29. 7:15:32:33	84.000	-7803.000	-2415.000	-184.000	-1266.000	-1124.000	169.000	-5932.000
30. 7:15:33:21	87.000	-7876.000	-2428.000	-183.000	-1274.000	-1125.000	171.000	-5990.000
31. 7:15:34: 8	89.000	-7838.000	-2441.000	-183.000	-1280.000	-1127.000	174.000	-6042.000
32. 7:15:34:55	92.000	-8001.000	-2453.000	-181.000	-1287.000	-1127.000	177.000	-6094.000
33. 7:15:35:43	92.000	-8050.000	-2463.000	-181.000	-1292.000	-1129.000	178.000	-6135.000
34. 7:15:36:30	93.000	-8098.000	-2472.000	-181.000	-1298.000	-1130.000	179.000	-6174.000
35. 7:15:36:46	94.000	-8110.000	-2475.000	-181.000	-1300.000	-1130.000	180.000	-6184.000
36. 7:15:37:17	133.000	-8118.000	-2468.000	-157.000	-1280.000	-1083.000	224.000	-6182.000
37. 7:15:38:14	202.000	-8028.000	-2419.000	-105.000	-1230.000	-962.000	317.000	-6090.000
38. 7:15:39: 1	237.000	-7548.000	-2319.000	-51.000	-1174.000	-840.000	369.000	-5936.000
39. 7:15:39:48	262.000	-7633.000	-2191.000	-5.000	-1101.000	-725.000	381.000	-5729.000
40. 7:15:40:36	287.000	-7399.000	-2049.000	48.000	-1019.000	-608.000	396.000	-5498.000
41. 7:15:41:23	312.000	-7163.000	-1903.000	103.000	-936.000	-495.000	411.000	-5261.000
42. 7:15:42: 6	341.000	-6905.000	-1740.000	161.000	-847.000	-382.000	424.000	-4998.000
43. 7:15:42:55	382.000	-6667.000	-1555.000	221.000	-755.000	-278.000	437.000	-4721.000
44. 7:15:43:34	416.000	-6486.000	-1320.000	241.000	-649.000	-177.000	446.000	-4437.000
45. 7:15:44:18	423.000	-6373.000	-976.000	228.000	-499.000	-100.000	409.000	-4286.000
46. 7:15:45: 3	400.000	-6305.000	-724.000	212.000	-395.000	-83.000	368.000	-4197.000
47. 7:15:45:43	339.000	-6264.000	-564.000	195.000	-336.000	-85.000	302.000	-4139.000

STRAIN CHANNELS

TIME	CH. 33	CH. 32	CH. 31	CH. 30	CH.
1. 7:15: 9:16	-17.000	-23.000	-42.000	1.000	
2. 7:15:10:57	-37.000	-49.000	-81.000	-1.000	
3. 7:15:11:44	-77.000	-109.000	-162.000	-9.000	
4. 7:15:12:30	-118.000	-170.000	-250.000	-23.000	
5. 7:15:13: 9	-161.000	-236.000	-338.000	-43.000	
6. 7:15:13:59	-206.000	-300.000	-423.000	-65.000	
7. 7:15:14:53	-250.000	-364.000	-510.000	-88.000	
8. 7:15:15:40	-294.000	-428.000	-605.000	-107.000	
9. 7:15:16:25	-336.000	-493.000	-690.000	-131.000	
10. 7:15:17:39	-384.000	-557.000	-782.000	-151.000	
11. 7:15:18:43	-430.000	-629.000	-886.000	-173.000	
12. 7:15:19:31	-475.000	-693.000	-976.000	-194.000	
13. 7:15:20:21	-526.000	-760.000	-1091.000	-212.000	
14. 7:15:21: 6	-577.000	-821.000	-1200.000	-228.000	
15. 7:15:21:52	-633.000	-876.000	-1319.000	-241.000	
16. 7:15:22:42	-693.000	-923.000	-1440.000	-250.000	
17. 7:15:23:23	-754.000	-964.000	-1570.000	-257.000	
18. 7:15:24: 7	-823.000	-1000.000	-1703.000	-258.000	
19. 7:15:24:48	-896.000	-1030.000	-1868.000	-255.000	
20. 7:15:25:29	-967.000	-1060.000	-2029.000	-248.000	
21. 7:15:26:14	-1046.000	-1082.000	-2226.000	-234.000	
22. 7:15:27: 4	-1125.000	-1097.000	-2444.000	-214.000	
23. 7:15:27:50	-1150.000	-1092.000	-2537.000	-205.000	
24. 7:15:28:37	-1163.000	-1090.000	-2597.000	-200.000	
25. 7:15:29:24	-1174.000	-1091.000	-2641.000	-197.000	
26. 7:15:30:12	-1183.000	-1091.000	-2680.000	-194.000	
27. 7:15:30:59	-1190.000	-1091.000	-2710.000	-191.000	
28. 7:15:31:46	-1196.000	-1092.000	-2738.000	-189.000	
29. 7:15:32:33	-1202.000	-1093.000	-2763.000	-187.000	
30. 7:15:33:21	-1206.000	-1093.000	-2783.000	-186.000	
31. 7:15:34: 8	-1210.000	-1096.000	-2803.000	-185.000	
32. 7:15:34:55	-1215.000	-1096.000	-2822.000	-182.000	
33. 7:15:35:43	-1218.000	-1097.000	-2837.000	-183.000	
34. 7:15:36:30	-1221.000	-1099.000	-2851.000	-182.000	
35. 7:15:36:46	-1222.000	-1099.000	-2855.000	-182.000	
36. 7:15:37:17	-1205.000	-1054.000	-2847.000	-147.000	
37. 7:15:38:14	-1159.000	-922.000	-2793.000	-99.000	
38. 7:15:39: 1	-1101.000	-810.000	-2705.000	-43.000	
39. 7:15:39:48	-1037.000	-698.000	-2591.000	-10.000	
40. 7:15:40:36	-968.000	-566.000	-2453.000	26.000	
41. 7:15:41:23	-896.000	-437.000	-2310.000	71.000	
42. 7:15:42: 6	-816.000	-310.000	-2150.000	124.000	
43. 7:15:42:45	-733.000	-189.000	-1967.000	188.000	
44. 7:15:43:34	-636.000	-101.000	-1723.000	232.000	
45. 7:15:44:18	-494.000	-20.000	-1347.000	225.000	
46. 7:15:45: 3	-390.000	6.000	-1089.000	210.000	
47. 7:15:45:43	-322.000	8.000	-933.000	197.000	

DISPLACEMENT CHANNELS

	TIME	CH.19	CH.18	CH.17	CH.16	CH.15	CH.14	CH.13	CH.12
1.	7:15: 9:16	-0.003	0.0	-0.002	-0.014	-0.004	0.008	0.006	-0.012
2.	7:15:10:57	-0.002	0.0	0.0	-0.014	-0.004	0.012	0.006	-0.012
3.	7:15:11:44	-0.003	0.0	-0.002	-0.012	-0.004	0.024	0.006	-0.010
4.	7:15:12:30	-0.002	0.0	-0.002	-0.012	-0.004	0.034	0.004	-0.010
5.	7:15:13: 9	-0.002	0.0	0.002	-0.010	-0.002	0.032	0.004	-0.010
6.	7:15:13:59	-0.003	0.0	0.0	0.016	0.002	0.034	0.006	-0.012
7.	7:15:14:53	-0.002	0.0	-0.002	0.018	0.026	0.036	0.004	-0.014
8.	7:15:15:40	-0.003	0.0	0.0	0.018	0.026	0.036	0.004	-0.018
9.	7:15:16:25	-0.002	0.0	-0.002	0.016	0.028	0.042	0.004	-0.020
10.	7:15:17:39	-0.004	-0.002	-0.002	0.018	0.028	0.042	0.006	-0.018
11.	7:15:18:43	-0.020	-0.012	-0.002	0.016	0.058	0.062	0.016	-0.018
12.	7:15:19:31	-0.031	-0.020	0.004	0.018	0.058	0.064	0.034	-0.018
13.	7:15:20:21	-0.031	-0.029	0.028	0.046	0.058	0.064	0.034	-0.020
14.	7:15:21: 6	-0.031	-0.028	0.028	0.046	0.064	0.072	0.034	-0.018
15.	7:15:21:52	-0.031	-0.028	0.028	0.046	0.090	0.072	0.034	-0.018
16.	7:15:22:42	-0.031	-0.028	0.028	0.046	0.090	0.072	0.034	-0.018
17.	7:15:23:23	-0.031	-0.028	0.028	0.076	0.118	0.098	0.034	-0.020
18.	7:15:24: 7	-0.060	-0.028	0.028	0.074	0.118	0.122	0.036	-0.012
19.	7:15:24:48	-0.060	-0.028	0.028	0.100	0.148	0.122	0.034	-0.040
20.	7:15:25:29	-0.060	-0.029	0.028	0.106	0.148	0.126	0.064	-0.044
21.	7:15:26:14	-0.066	-0.057	0.054	0.106	0.180	0.150	0.062	-0.048
22.	7:15:27: 4	-0.088	-0.057	0.056	0.134	0.184	0.160	0.064	-0.048
23.	7:15:27:50	-0.088	-0.057	0.058	0.132	0.208	0.180	0.064	-0.048
24.	7:15:28:37	-0.088	-0.057	0.056	0.134	0.206	0.180	0.062	-0.050
25.	7:15:29:24	-0.088	-0.057	0.056	0.150	0.206	0.178	0.062	-0.050
26.	7:15:30:12	-0.088	-0.057	0.056	0.154	0.206	0.178	0.062	-0.050
27.	7:15:30:59	-0.088	-0.057	0.056	0.162	0.206	0.178	0.062	-0.052
28.	7:15:31:46	-0.104	-0.057	0.056	0.162	0.234	0.180	0.062	-0.054
29.	7:15:32:33	-0.108	-0.057	0.058	0.162	0.234	0.182	0.062	-0.050
30.	7:15:33:21	-0.117	-0.057	0.056	0.162	0.234	0.186	0.062	-0.062
31.	7:15:34: 8	-0.117	-0.057	0.056	0.160	0.234	0.186	0.064	-0.064
32.	7:15:34:55	-0.117	-0.057	0.056	0.162	0.234	0.192	0.062	-0.066
33.	7:15:35:43	-0.117	-0.057	0.056	0.160	0.234	0.194	0.064	-0.066
34.	7:15:36:30	-0.117	-0.057	0.056	0.160	0.234	0.196	0.062	-0.072
35.	7:15:36:46	-0.117	-0.057	0.056	0.160	0.234	0.196	0.062	-0.076
36.	7:15:37:17	-0.117	-0.057	0.056	0.162	0.234	0.194	0.064	-0.078
37.	7:15:38:14	-0.117	-0.071	0.058	0.162	0.234	0.184	0.064	-0.078
38.	7:15:39: 1	-0.117	-0.071	0.056	0.164	0.234	0.184	0.062	-0.080
39.	7:15:39:48	-0.117	-0.071	0.056	0.138	0.206	0.180	0.062	-0.078
40.	7:15:40:36	-0.117	-0.071	0.056	0.130	0.204	0.180	0.064	-0.080
41.	7:15:41:23	-0.117	-0.071	0.056	0.132	0.202	0.180	0.064	-0.078
42.	7:15:42: 6	-0.117	-0.071	0.052	0.106	0.174	0.154	0.064	-0.076
43.	7:15:42:45	-0.088	-0.066	0.028	0.104	0.174	0.150	0.052	-0.064
44.	7:15:43:34	-0.088	-0.066	0.028	0.100	0.142	0.130	0.064	-0.064
45.	7:15:44:18	-0.059	-0.057	0.028	0.074	0.142	0.120	0.064	-0.064
46.	7:15:45: 3	-0.059	-0.057	0.028	0.072	0.114	0.120	0.064	-0.064
47.	7:15:45:43	-0.059	-0.043	0.028	0.072	0.114	0.120	0.064	-0.064

LOAD CHANNELS

	TIME	CH. 29	CH. 28	CH. 27	CH. 26	CH. 25	CH. 22	CH. 21	CH. 20
1.	7:15: 9:16	2710.000	2850.000	4460.000	4690.000	5770.000	4550.000	3940.000	2690.000
2.	7:15:10:57	5200.000	5690.000	8050.000	9900.000	9940.000	9980.000	7240.000	5510.000
3.	7:15:11:44	9790.000	11240.000	15630.000	18330.000	20470.000	18340.000	14800.000	10880.000
4.	7:15:12:30	14300.000	17470.000	22660.000	26990.000	29900.000	26610.000	22010.000	16600.000
5.	7:15:13: 9	19460.000	24200.000	29700.000	36190.000	40060.000	35730.000	29130.000	22650.000
6.	7:15:13:59	24700.000	30630.000	36960.000	44410.000	50530.000	42710.000	36290.000	28570.000
7.	7:15:14:53	29890.000	37010.000	43760.000	53630.000	59640.000	52720.000	43370.000	34240.000
8.	7:15:15:40	34990.000	43920.000	50020.000	62950.000	69690.000	61830.000	50040.000	40250.000
9.	7:15:16:25	39950.000	49990.000	56970.000	70960.000	79600.000	69580.000	57100.000	45580.000
10.	7:15:17:39	45210.000	56010.000	63880.000	80520.000	89040.000	78780.000	64370.000	50910.000
11.	7:15:18:43	50250.000	62730.000	70840.000	89650.000	98710.000	87680.000	71330.000	56450.000
12.	7:15:19:31	55330.000	69020.000	77860.000	97790.000	109000.000	95560.000	78490.000	61920.000
13.	7:15:20:21	60510.000	75160.000	85600.000	107640.000	118350.000	105080.000	86100.000	67610.000
14.	7:15:21: 6	65390.000	81720.000	92470.000	116770.000	128250.000	113850.000	92950.000	73700.000
15.	7:15:21:52	70960.000	87180.000	100180.000	125030.000	138530.000	121740.000	100470.000	79240.000
16.	7:15:22:42	75810.000	93200.000	107170.000	134580.000	147540.000	130740.000	107330.000	84930.000
17.	7:15:23:23	81090.000	99660.000	113860.000	143690.000	157700.000	139370.000	114010.000	91610.000
18.	7:15:24: 7	86200.000	105330.000	121560.000	152160.000	167650.000	147240.000	121530.000	96660.000
19.	7:15:24:48	90940.000	111350.000	128690.000	161940.000	176590.000	156290.000	12850.000	102500.000
20.	7:15:25:29	96060.000	117490.000	135150.000	170910.000	186220.000	164550.000	134960.000	108620.000
21.	7:15:26:14	101110.000	123160.000	142670.000	179380.000	196070.000	172090.000	142220.000	114340.000
22.	7:15:26: 4	105570.000	128540.000	150500.000	189730.000	204370.000	182050.000	145070.000	120690.000
23.	7:15:27:50	105830.000	128950.000	149670.000	188990.000	204620.000	180580.000	148890.000	120970.000
24.	7:15:28:37	105870.000	129100.000	149380.000	188990.000	204600.000	180470.000	148800.000	121250.000
25.	7:15:29:24	105940.000	129270.000	149210.000	189180.000	204590.000	180390.000	148760.000	121420.000
26.	7:15:30:12	105940.000	129400.000	149150.000	189290.000	204620.000	180360.000	148730.000	121610.000
27.	7:15:31:46	105860.000	129460.000	149000.000	189220.000	204600.000	180180.000	148600.000	121690.000
28.	7:15:32:59	105890.000	129620.000	149030.000	189430.000	204720.000	180220.000	148630.000	121800.000
29.	7:15:33:33	105870.000	129700.000	148960.000	189510.000	204690.000	180190.000	148590.000	121870.000
30.	7:15:33:21	105830.000	129700.000	148830.000	189530.000	204570.000	180010.000	148430.000	121870.000
31.	7:15:34: 8	105880.000	129810.000	148810.000	189290.000	204610.000	179830.000	148420.000	121940.000
32.	7:15:34:55	105860.000	129880.000	148910.000	189460.000	204530.000	180040.000	148440.000	122050.000
33.	7:15:35:43	105810.000	129830.000	148790.000	188940.000	204590.000	179330.000	148400.000	122000.000
34.	7:15:36:30	105880.000	129900.000	148810.000	188810.000	204620.000	179220.000	148390.000	122020.000
35.	7:15:36:46	105830.000	129900.000	148770.000	188680.000	204580.000	179030.000	148380.000	122030.000
36.	7:15:37:17	99560.000	123250.000	148590.000	183710.000	196860.000	174460.000	145370.000	117250.000
37.	7:15:38:14	89400.000	110700.000	136300.000	168710.000	179190.000	166120.000	134250.000	103960.000
38.	7:15:38: 1	79930.000	99550.000	123040.000	151150.000	160730.000	155330.000	120960.000	89810.000
39.	7:15:38:48	70420.000	87050.000	108940.000	133200.000	142250.000	141290.000	107240.000	77720.000
40.	7:15:40:36	59760.000	74830.000	94090.000	113780.000	121880.000	121520.000	92960.000	66030.000
41.	7:15:41:23	49500.000	62920.000	79100.000	95850.000	102040.000	102830.000	79580.000	55110.000
42.	7:15:42: 6	39450.000	50430.000	64270.000	76730.000	82840.000	82340.000	65030.000	44520.000
43.	7:15:42:45	29440.000	37350.000	49570.000	58240.000	62320.000	63440.000	49940.000	34110.000
44.	7:15:43:34	19510.000	24070.000	34160.000	39860.000	42170.000	42720.000	34720.000	23400.000
45.	7:15:44:18	9790.000	10950.000	18840.000	20250.000	22590.000	22590.000	10950.000	12230.000
46.	7:15:45: 3	4420.000	5320.000	9990.000	11260.000	11440.000	11440.000	10370.000	6490.000
47.	7:15:45:43	2600.000	3020.000	5640.000	5920.000	7230.000	7230.000	6390.000	3800.000

ROD CHANNELS

	TIME	CH. 57	CH. 56	CH. 55	CH. 54	CH. 53	CH. 52	CH. 51	CH. 50
1.	7:15: 9:16	102.494	281.859	-12.812	-102.494	38.435	0.0	243.424	307.483
2.	7:15:10:57	140.930	281.859	51.247	-166.553	64.059	-25.624	281.859	358.730
3.	7:15:11:44	230.612	294.671	140.930	-256.236	89.683	-115.306	294.671	435.601
4.	7:15:12:30	409.978	281.859	192.177	-499.660	51.247	-153.742	320.295	397.166
5.	7:15:13: 9	576.531	294.671	204.989	-794.331	25.624	-166.553	320.295	345.918
6.	7:15:13:59	755.896	320.295	192.177	-1101.214	-64.059	-166.553	320.295	307.483
7.	7:15:14:53	858.390	269.048	179.365	-1409.298	-140.930	-179.365	307.483	269.048
8.	7:15:15:40	1037.756	281.859	179.365	-1703.969	-243.424	-140.930	281.859	269.048
9.	7:15:16:25	1191.497	281.859	179.365	-1934.581	-371.542	-153.742	256.236	269.048
10.	7:15:17:59	1345.239	281.859	179.365	-2165.194	-550.907	-128.118	230.612	294.671
11.	7:15:18:43	1447.733	294.671	179.365	-2318.935	-704.649	-115.306	204.989	294.671
12.	7:15:19:31	1524.604	294.671	179.365	-2408.618	-832.767	-115.306	192.177	307.483
13.	7:15:20:21	1601.475	294.671	192.177	-2459.865	-935.261	-102.494	166.553	320.295
14.	7:15:21: 6	1665.534	307.483	204.989	-2459.865	-1037.756	-102.494	166.553	345.918
15.	7:15:21:52	1703.969	320.295	230.612	-2434.241	-1140.250	-102.494	140.930	384.354
16.	7:15:22:42	1755.214	345.918	256.236	-2434.241	-1255.556	-89.683	128.118	422.789
17.	7:15:23:23	1793.652	333.107	307.483	-2395.806	-1358.051	-102.494	115.306	461.225
18.	7:15:24: 7	1819.275	333.107	358.730	-2357.371	-1486.168	-115.306	102.494	499.660
19.	7:15:24:48	1857.711	333.107	422.789	-2331.747	-1601.475	-140.930	102.494	538.075
20.	7:15:25:29	1870.522	333.107	512.472	-2293.312	-1729.593	-166.553	102.494	563.719
21.	7:15:26:14	1883.334	333.107	627.778	-2267.683	-1864.899	-192.177	102.494	614.966
22.	7:15:27: 4	1844.899	333.107	743.084	-2280.500	-1921.770	-256.236	102.494	679.025
23.	7:15:28:37	1819.275	320.295	807.143	-2267.683	-1921.770	-307.483	89.683	679.025
24.	7:15:29:12	1806.463	333.107	768.708	-2254.876	-1934.581	-320.295	89.683	666.213
25.	7:15:29:24	1806.463	333.107	819.955	-2254.876	-1947.393	-333.107	89.683	666.213
26.	7:15:30:12	1793.652	333.107	845.579	-2242.064	-1973.017	-333.107	89.683	666.213
27.	7:15:30:59	1793.652	333.107	845.579	-2242.064	-1985.829	-345.918	89.683	666.213
28.	7:15:31:46	1780.840	345.918	871.202	-2229.253	-1985.829	-345.918	89.683	653.602
29.	7:15:32:33	1793.652	333.107	858.390	-2229.253	-1985.829	-333.107	89.683	666.213
30.	7:15:33:21	1793.652	333.107	871.202	-2229.253	-1993.640	-345.918	89.683	666.213
31.	7:15:34: 6	1780.840	345.918	884.014	-2229.253	-1993.640	-345.918	102.494	666.213
32.	7:15:35:43	1780.840	345.918	884.014	-2229.253	-1998.640	-345.918	89.683	666.213
33.	7:15:36:30	1768.028	345.918	935.261	-2190.817	-1998.640	-345.918	89.683	653.602
34.	7:15:37:17	1742.405	333.107	1153.062	-2165.194	-1973.017	-371.542	102.494	640.590
35.	7:15:38:14	1652.722	333.107	1319.615	-2203.629	-1883.334	-371.542	102.494	589.543
36.	7:15:39: 1	1332.427	345.918	1396.686	-2190.817	-1283.674	-294.671	64.059	602.154
37.	7:15:39:48	922.449	345.918	1473.357	-1921.770	-653.402	-179.365	64.059	602.154
38.	7:15:40:36	627.778	345.918	1550.228	-1550.228	-281.859	-39.635	51.247	448.413
39.	7:15:41:23	358.730	345.918	1538.663	-1178.685	-115.306	0.0	25.624	371.542
40.	7:15:42: 6	192.177	345.918	1538.663	-832.767	-25.624	102.494	0.0	358.730
41.	7:15:42:45	128.118	345.918	1550.228	-832.767	12.812	217.801	-38.435	307.483
42.	7:15:43:34	89.683	345.918	1396.686	-576.531	51.247	307.483	-76.871	245.424
43.	7:15:44:18	51.247	358.730	1376.486	-371.542	25.624	486.848	-153.742	230.612
44.	7:15:45: 3	25.624	384.354	1178.686	-256.236	12.812	486.848	-166.553	230.612
45.	7:15:45:43	38.435	371.542	935.261	-192.177	-12.812	397.166	-128.118	230.612

AVERAGE LOAD

1.	3957.500
2.	7688.750
3.	14935.000
4.	22067.500
5.	29640.000
6.	36975.000
7.	44282.500
8.	51711.250
9.	58716.250
10.	66090.000
11.	73455.000
12.	80621.250
13.	88255.000
14.	95637.500
15.	102916.250
16.	110162.500
17.	117568.750
18.	124791.250
19.	132093.750
20.	139247.500
21.	146102.500
22.	153815.000
23.	153562.500
24.	123245.000
25.	153586.250
26.	153637.500
27.	153581.250
28.	153667.500
29.	153672.500
30.	153571.250
31.	153573.750
32.	153646.250
33.	153461.250
34.	153456.250
35.	153400.000
36.	148631.250
37.	136322.500
38.	122512.500
39.	108153.750
40.	93106.250
41.	78366.250
42.	63276.250
43.	48076.250
44.	32707.500
45.	14051.250
46.	9120.000
47.	5292.500

AD-A086 210

MERRITT CASES INC REDLANDS CA F/0 13/13
CONTINUATION OF STATIC TESTS OF SEGMENTS OF TUNNEL LININGS. VOL--ETC(1)
JUN 79 H C DAVIS, K B MORRILL, J L MERRITT DNA001-78-C-0037
78-004-T2-VOL-2 DNA-5000F-2 ML

UNCLASSIFIED

276

42
0086210

3.1.4 SPECIMEN #15

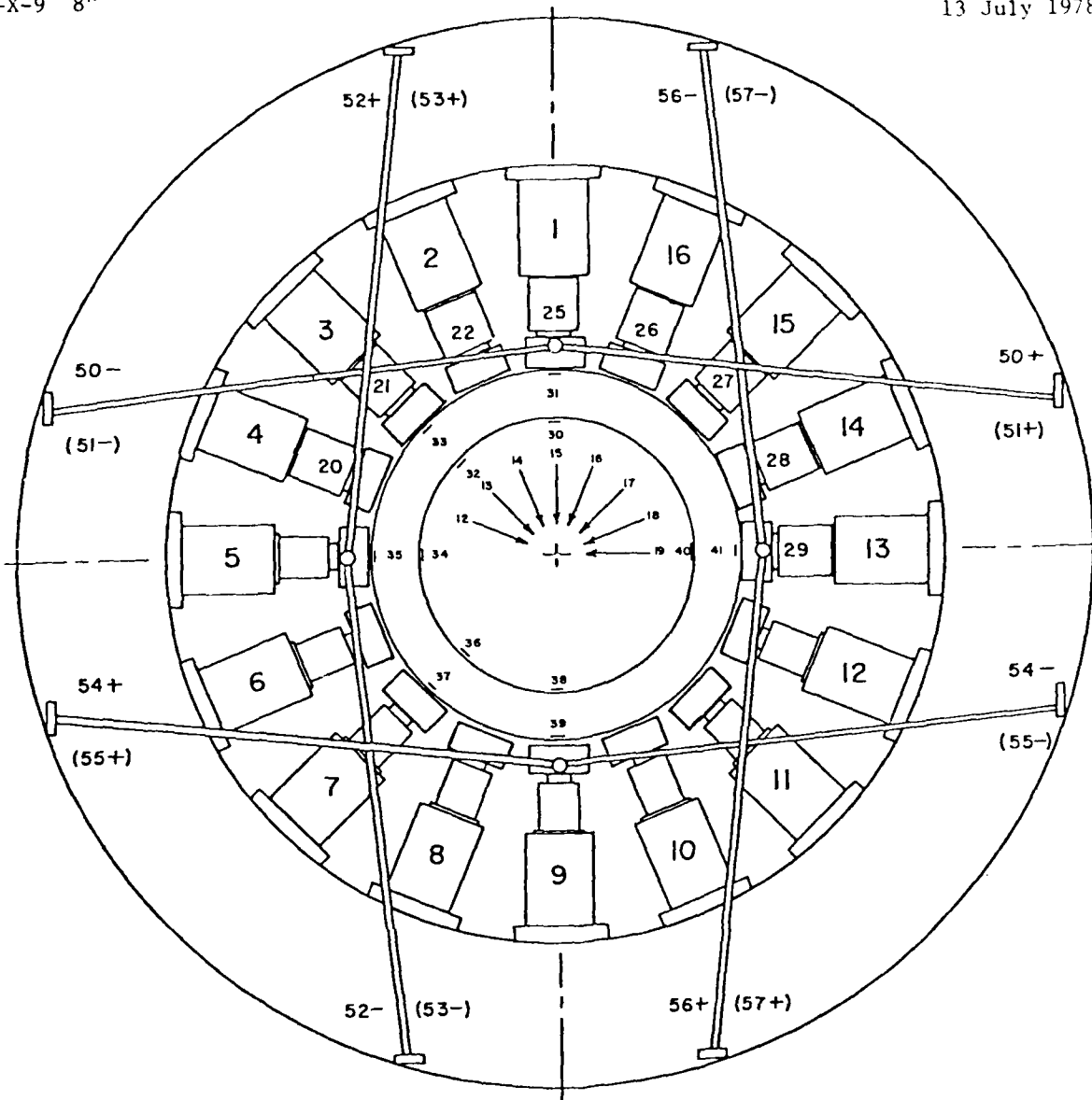
8

TEST NO. 45
COMPOSITE INTEGRAL LINER
1:1.5 LOADING RATIO
TESTED 13 JULY 1978

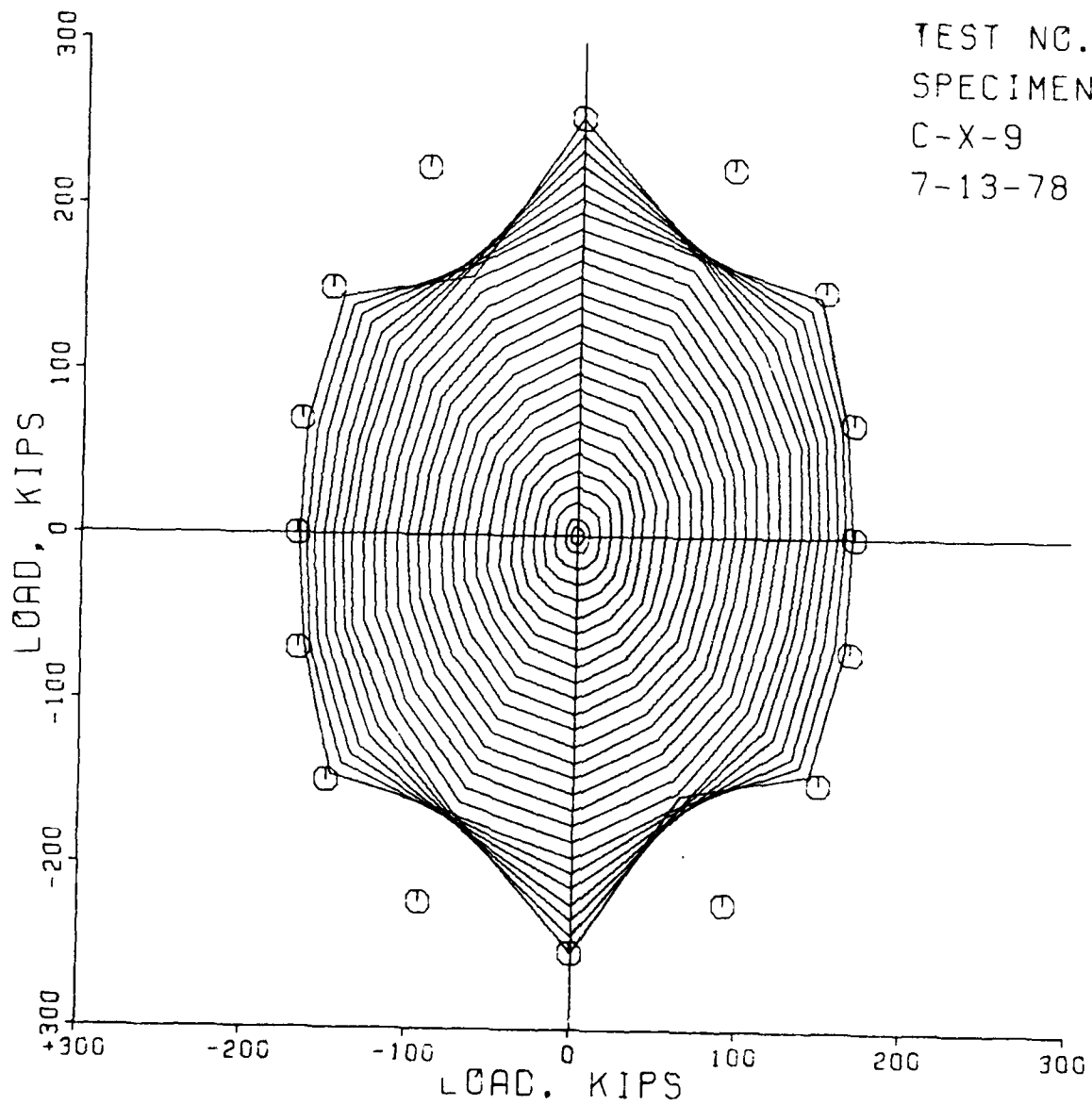
REACTION FRAME TEST SET-UP

Specimen #15
C-X-9 8"

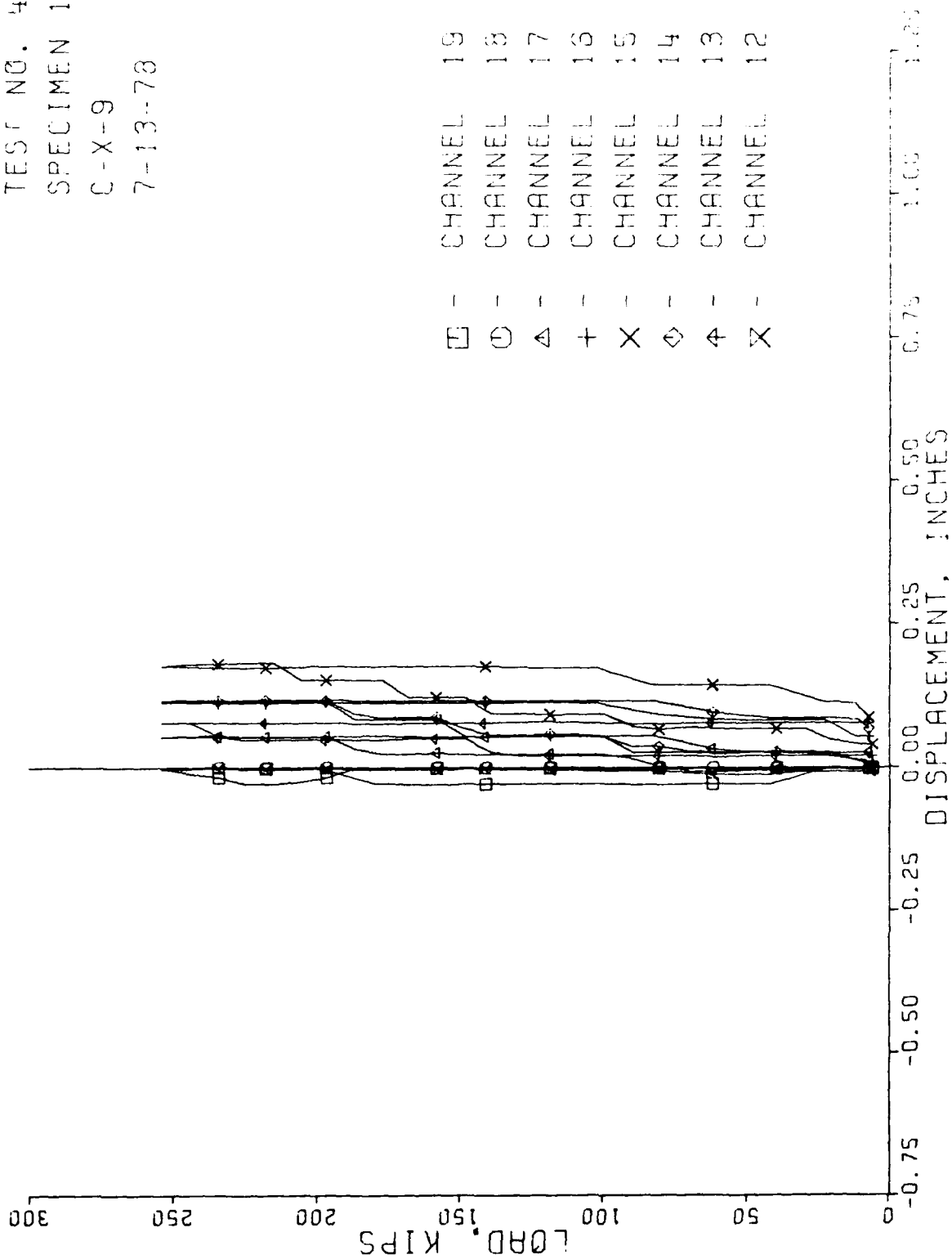
Test #45
1:1.5 Load
13 July 1978



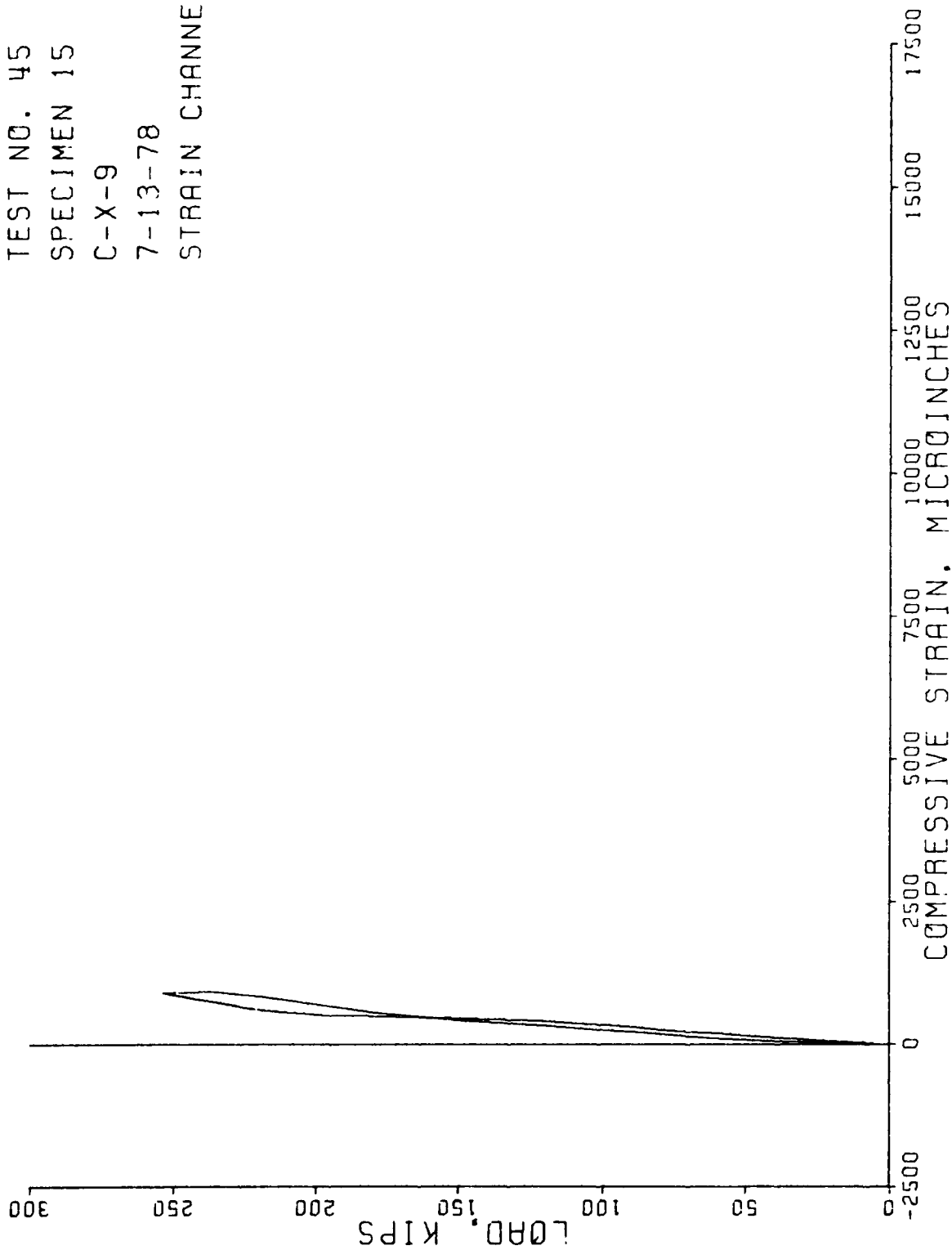
CH 12-19 Load axis I.D. (Research, Inc. Model 4040).
CH 20-22, 25-29 Axial load (Transducers, Inc. Model 693-300K).
CH 30-41 (Ailtech SG 129-6S) Radial pairs at center. Odd gages on Rebar.
CH 50-57 (Ailtech SG 129-6S) Polarity indicates rod under tension.
Lower rod shown (XX).



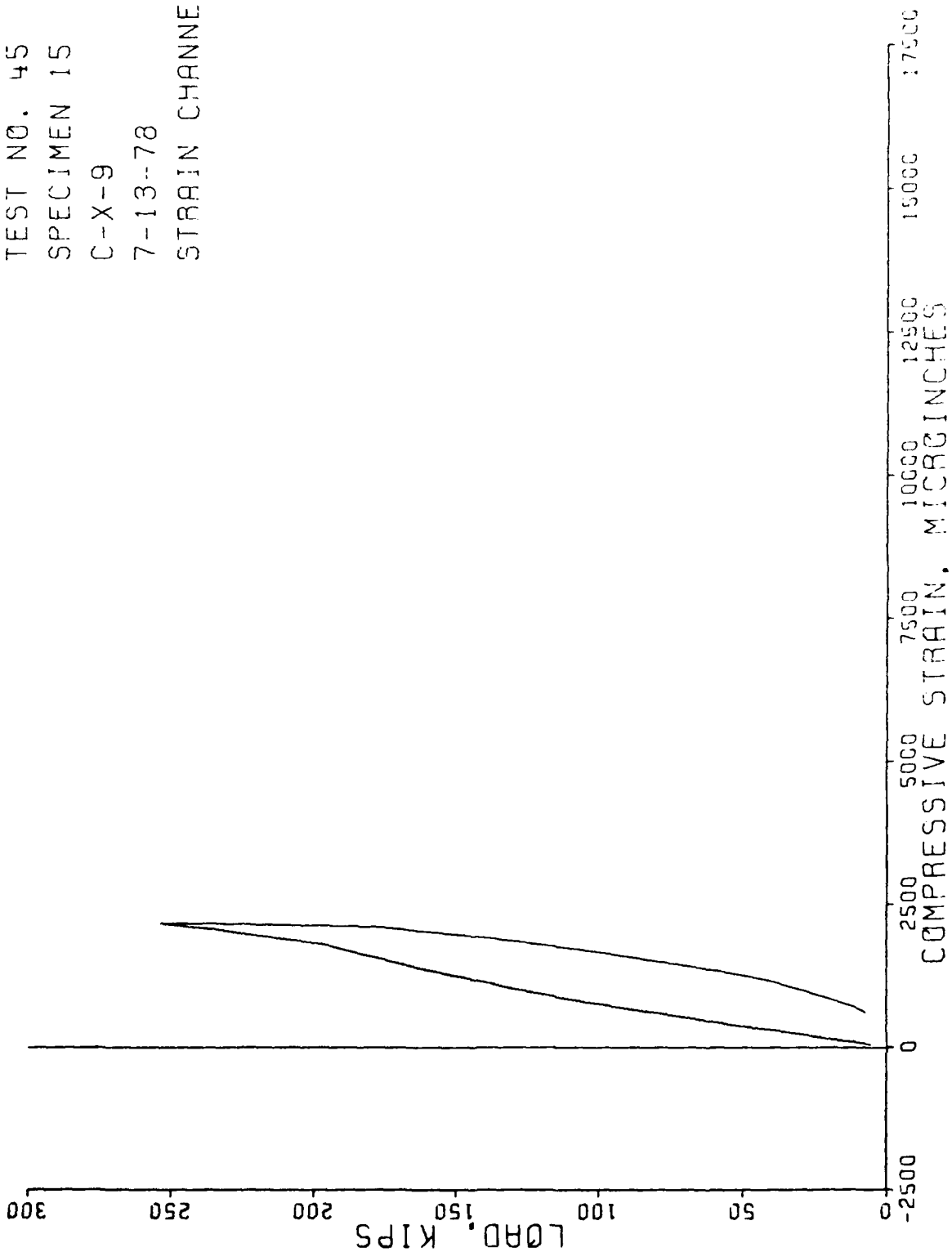
TEST NO. 45
 SPECIMEN 15
 C-X-9
 7-13-78



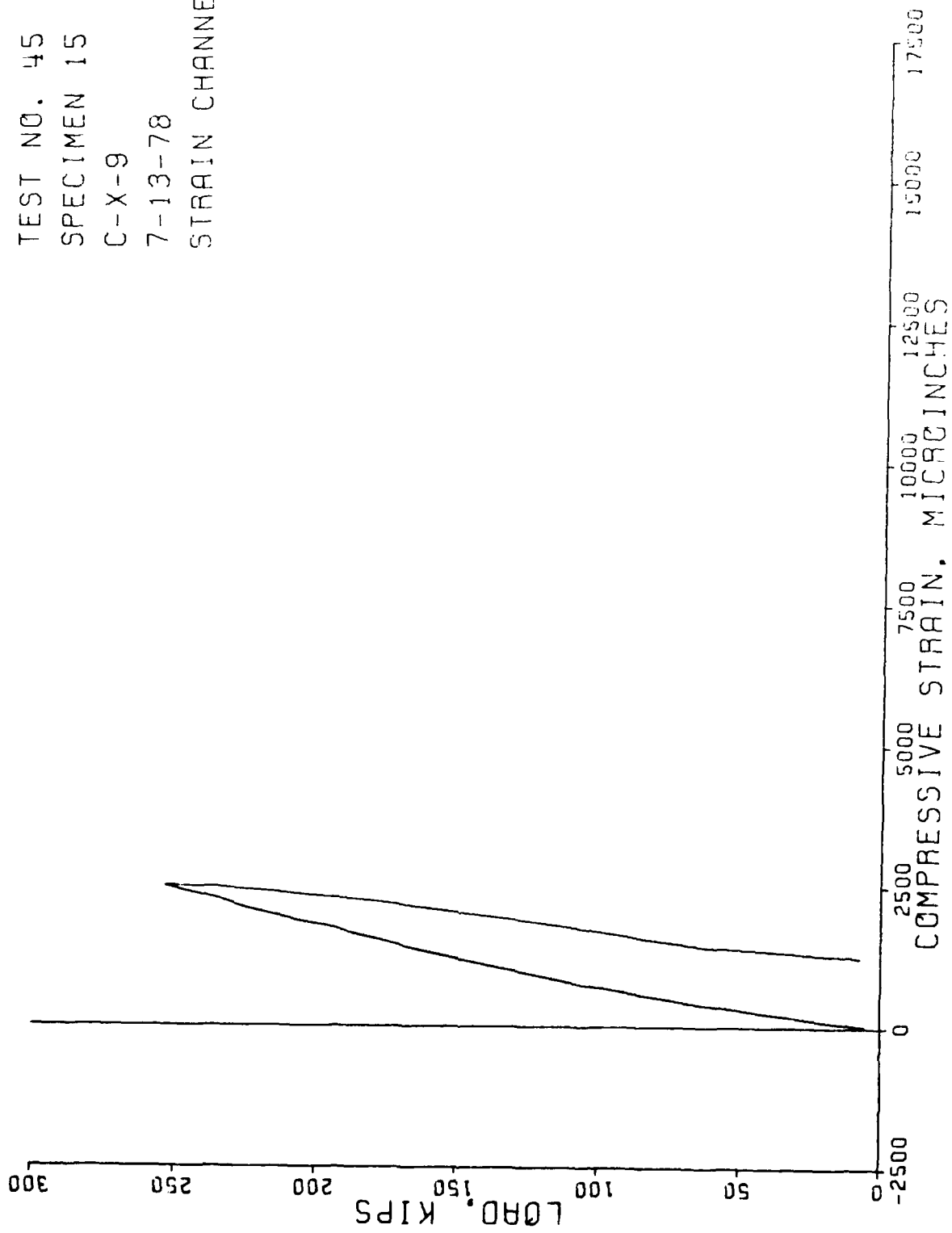
TEST NO. 45
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 30



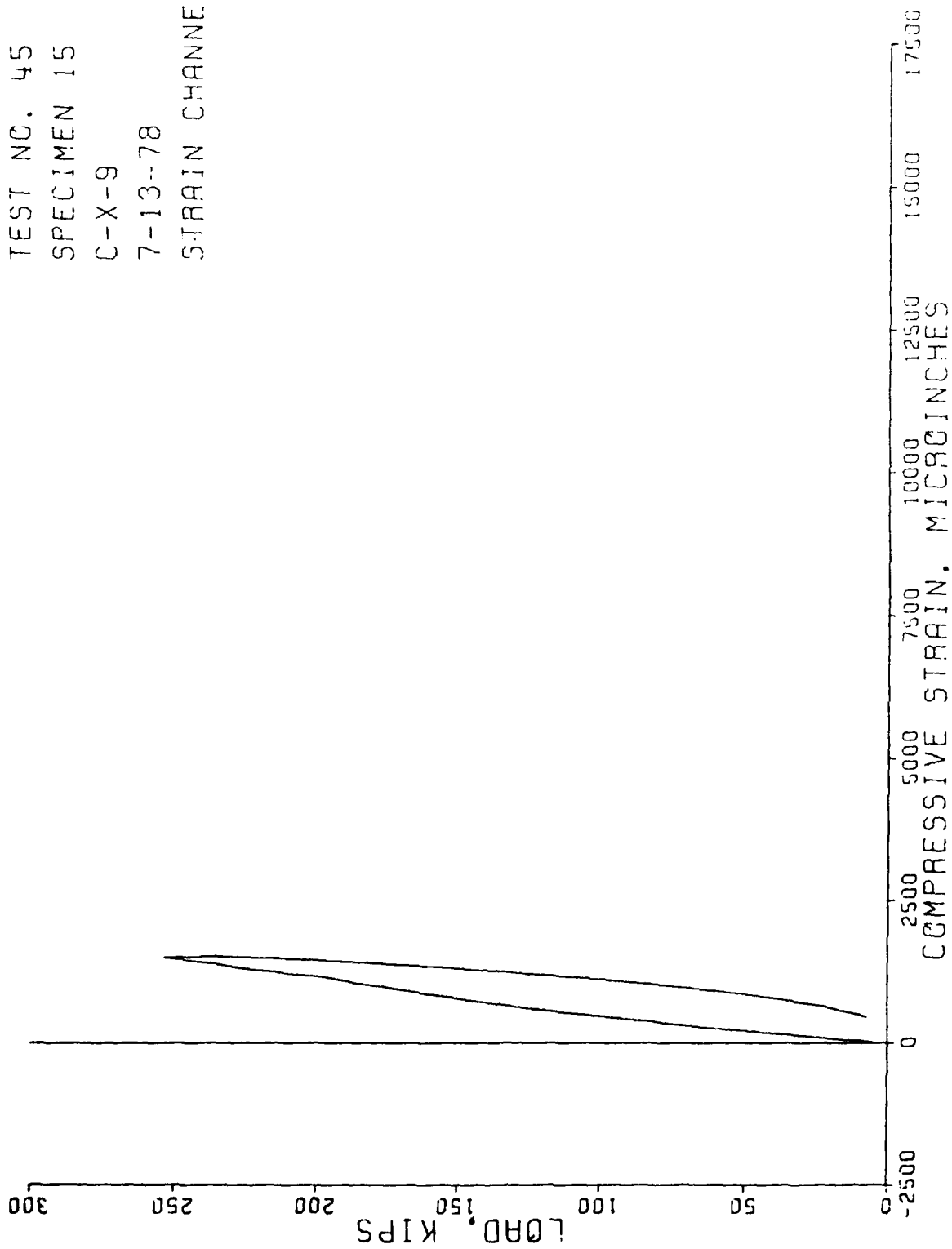
TEST NO. 45
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 31



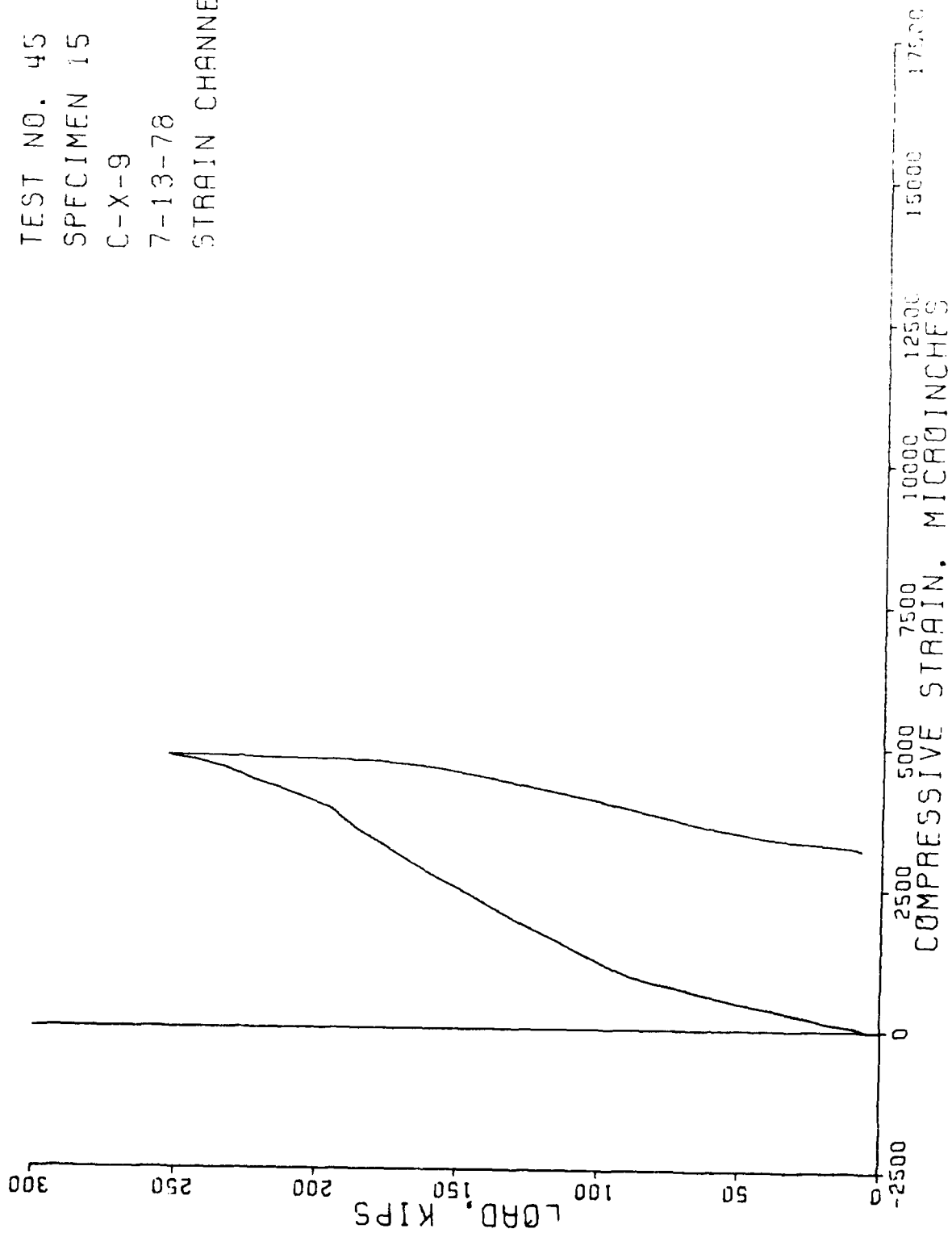
TEST NO. 45
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 32



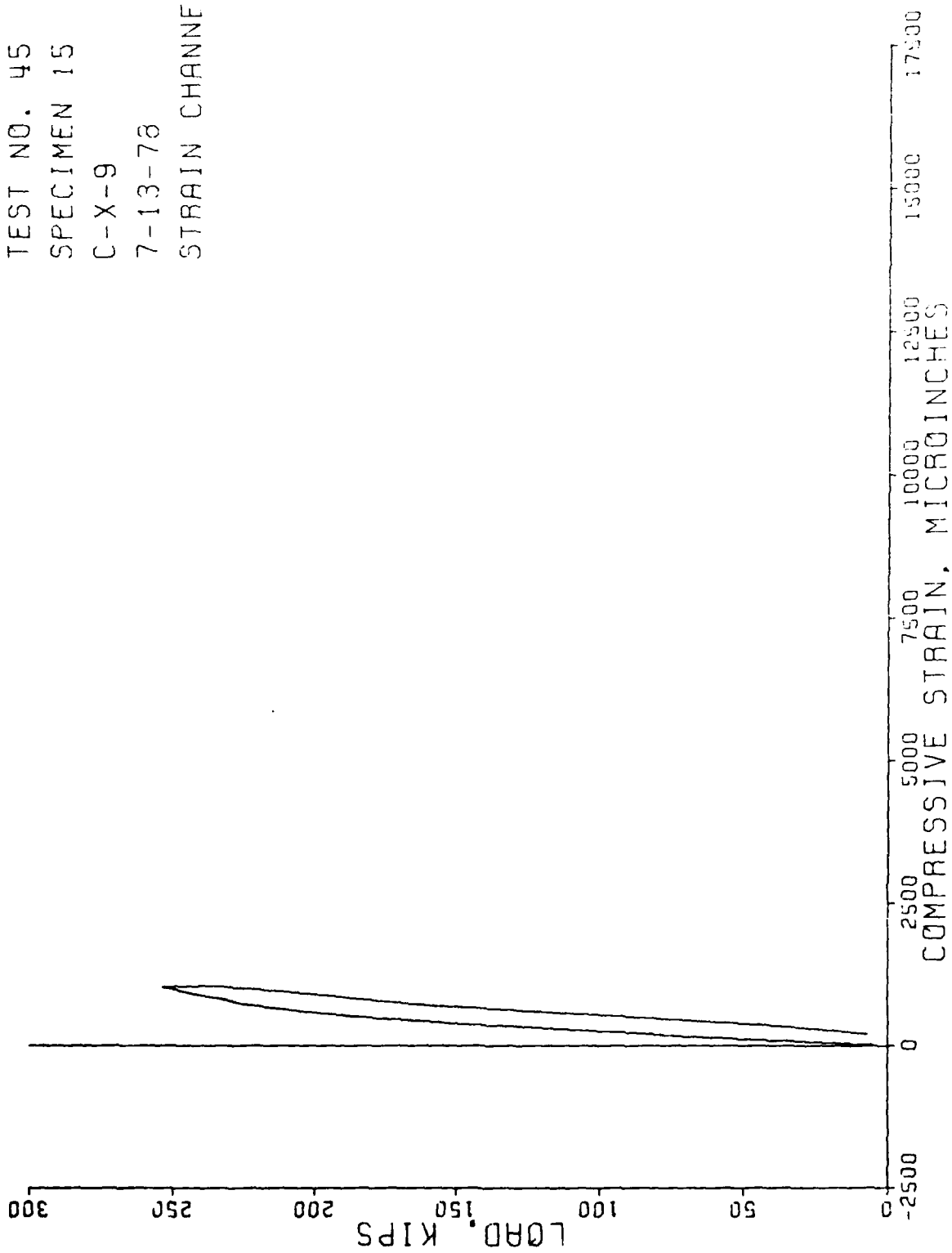
TEST NO. 45
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 33



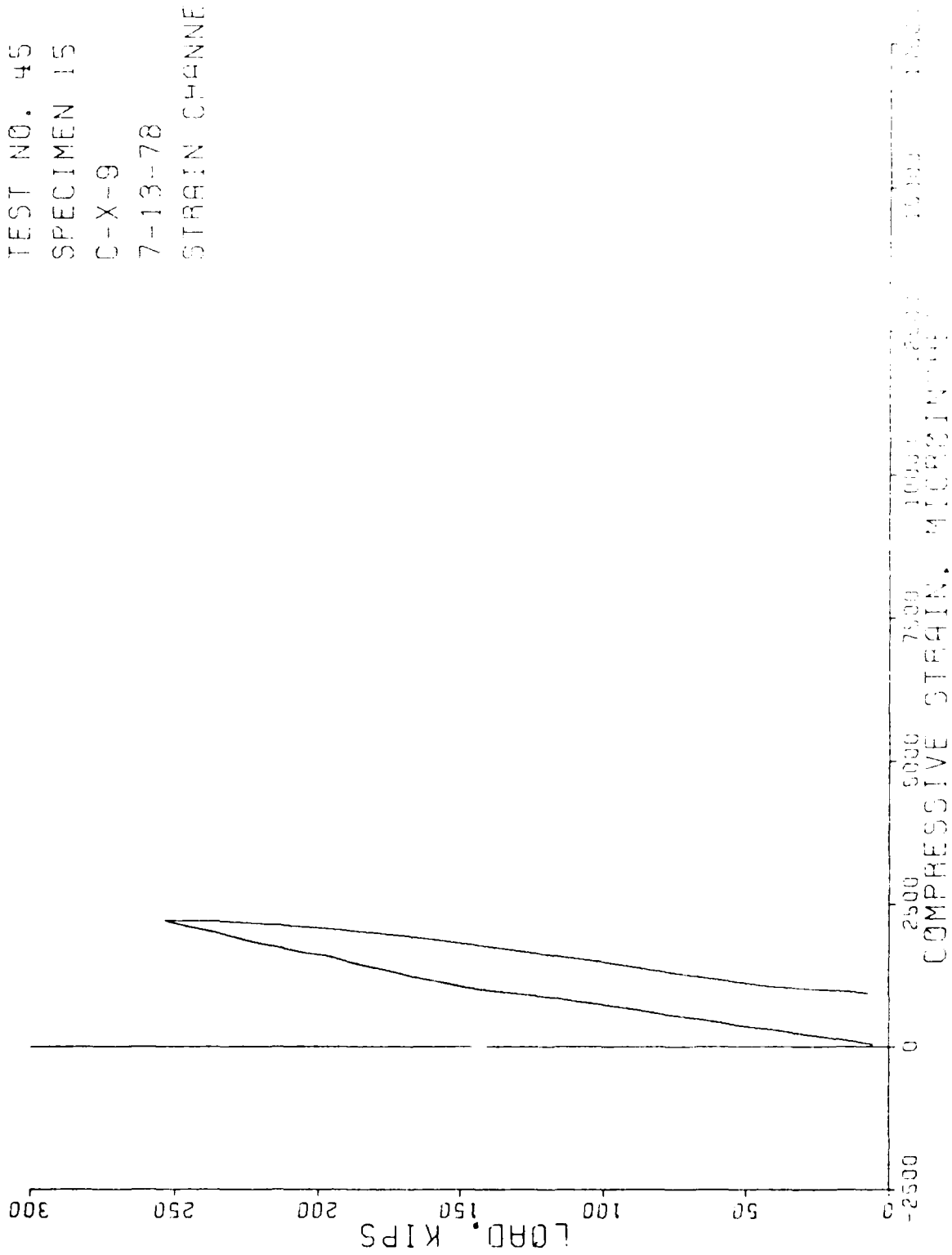
TEST NO. 45
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 34



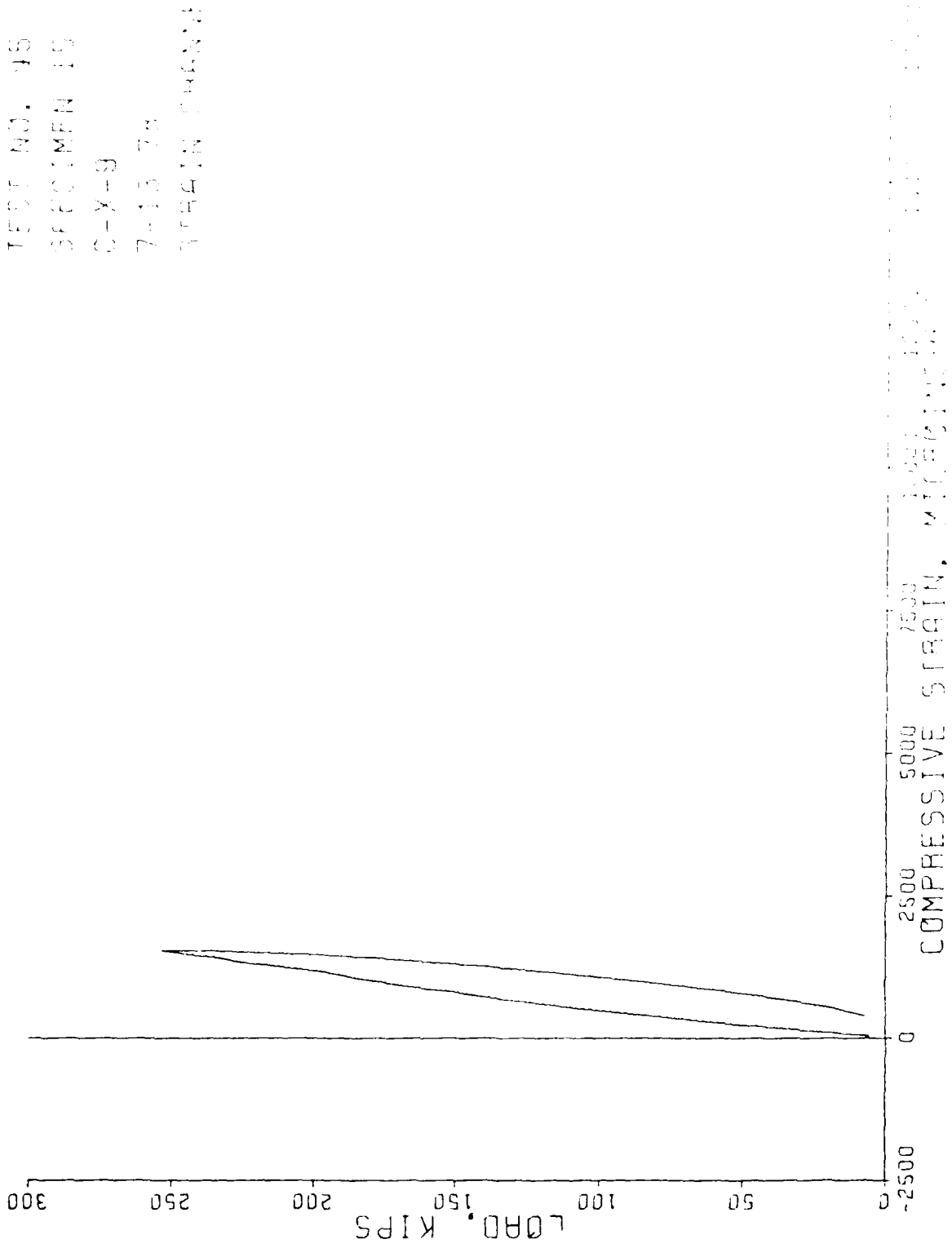
TEST NO. 45
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 35



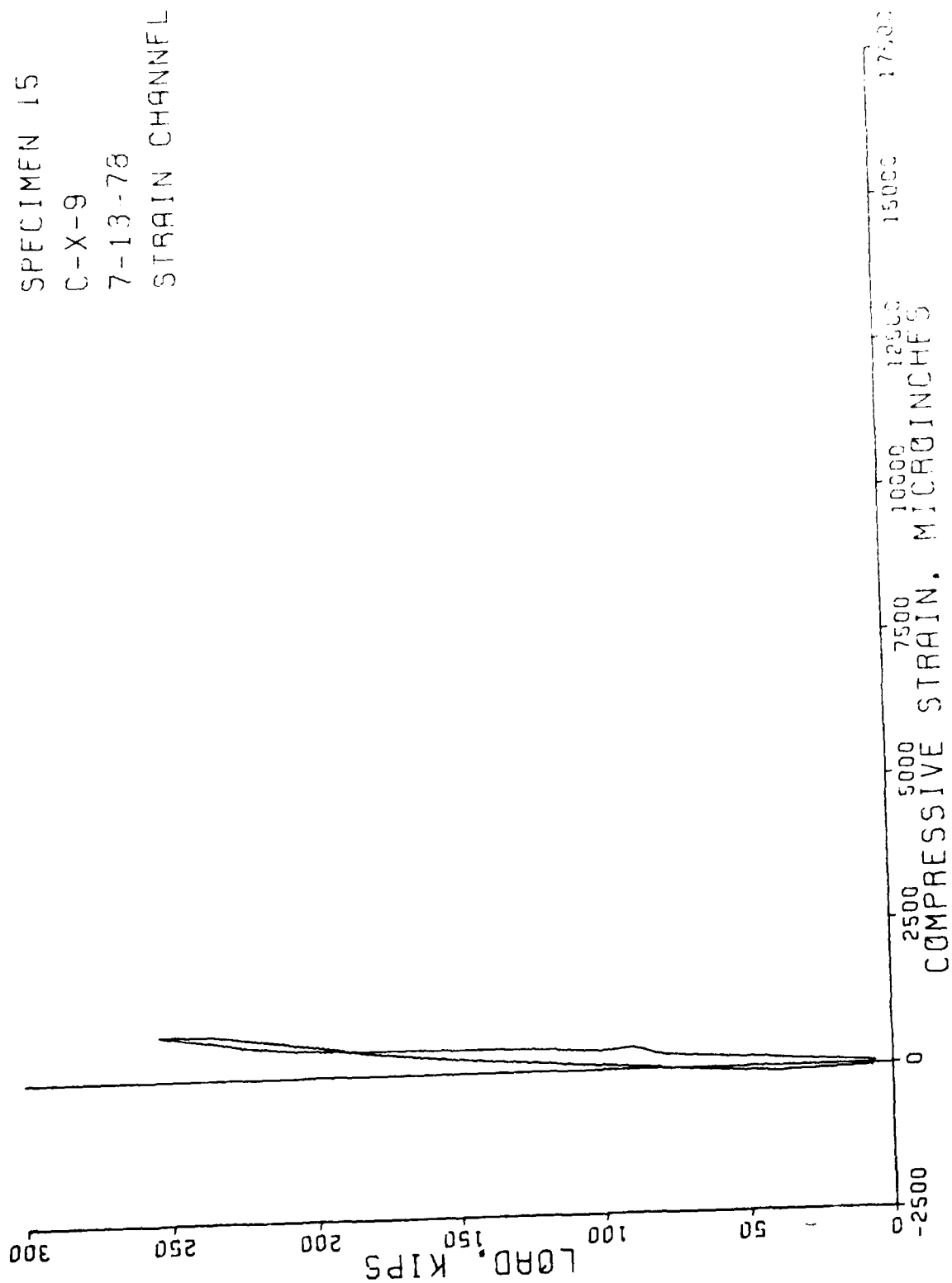
TEST NO. 45
SPECIMEN IS
C-X-9
7-13-78
STRAIN CHANNEL 30



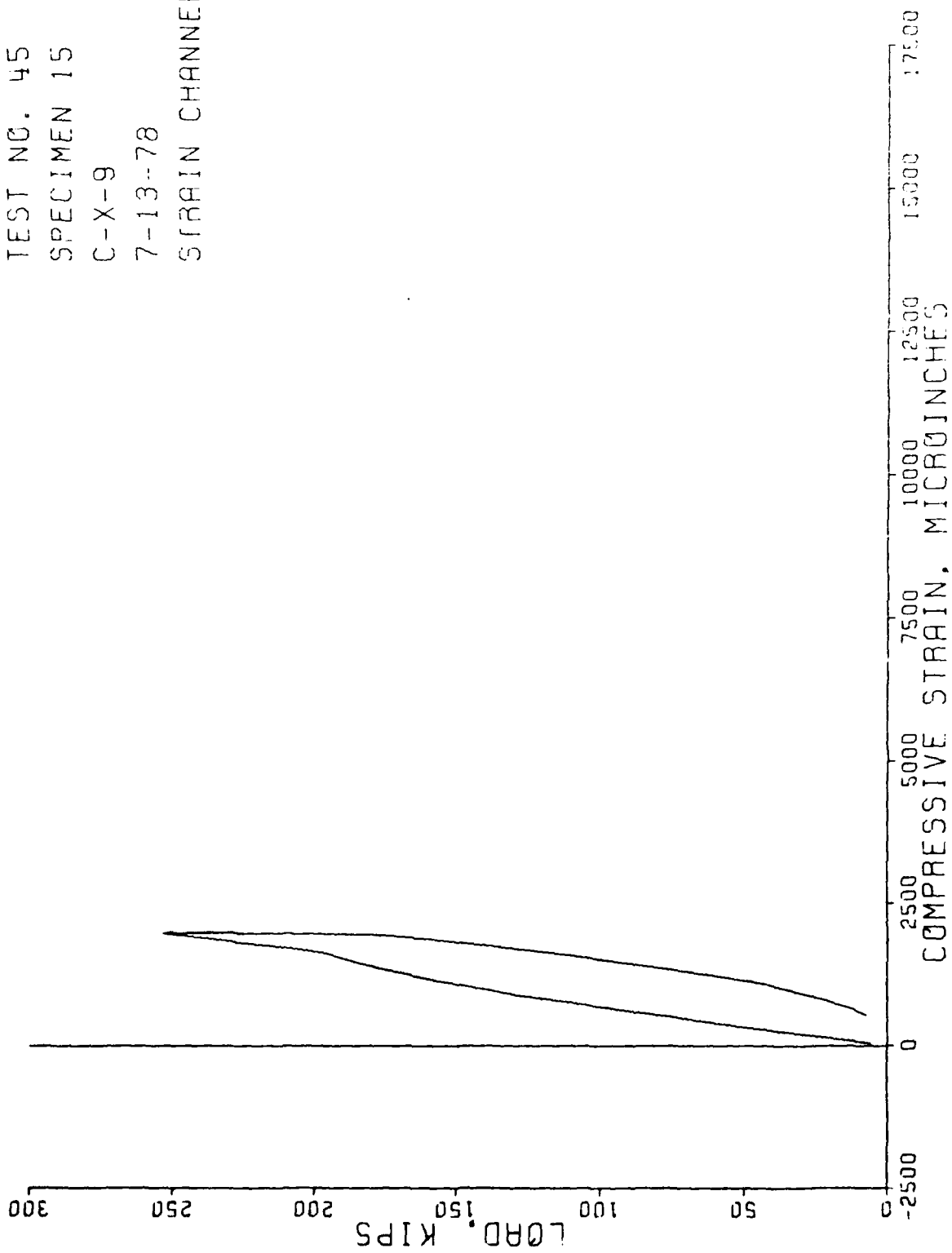
TEST NO. 45
SPECIMEN IS
C-X-9
7-13-78
STEEL PLATE, 3/4"



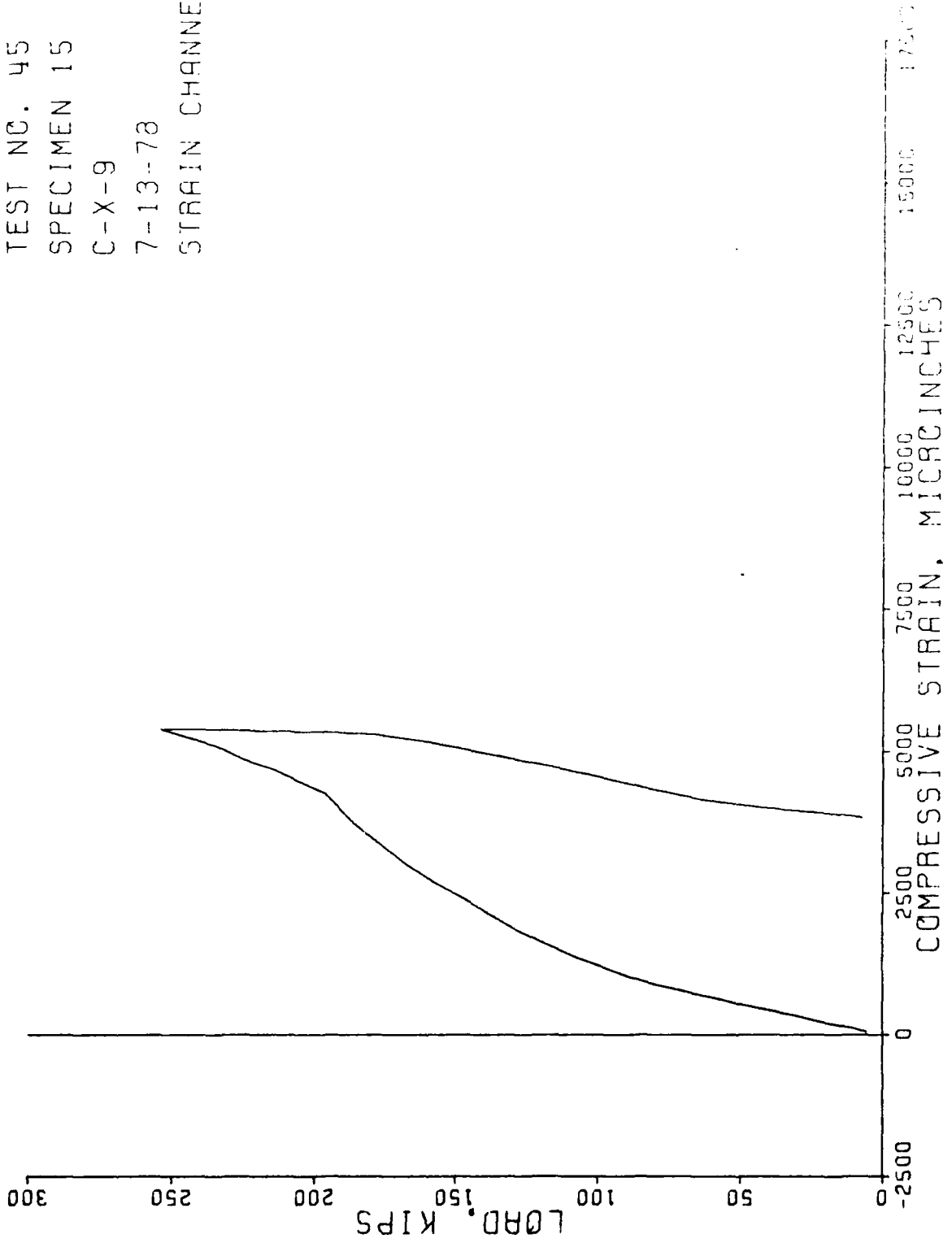
TEST NO. 45
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 38



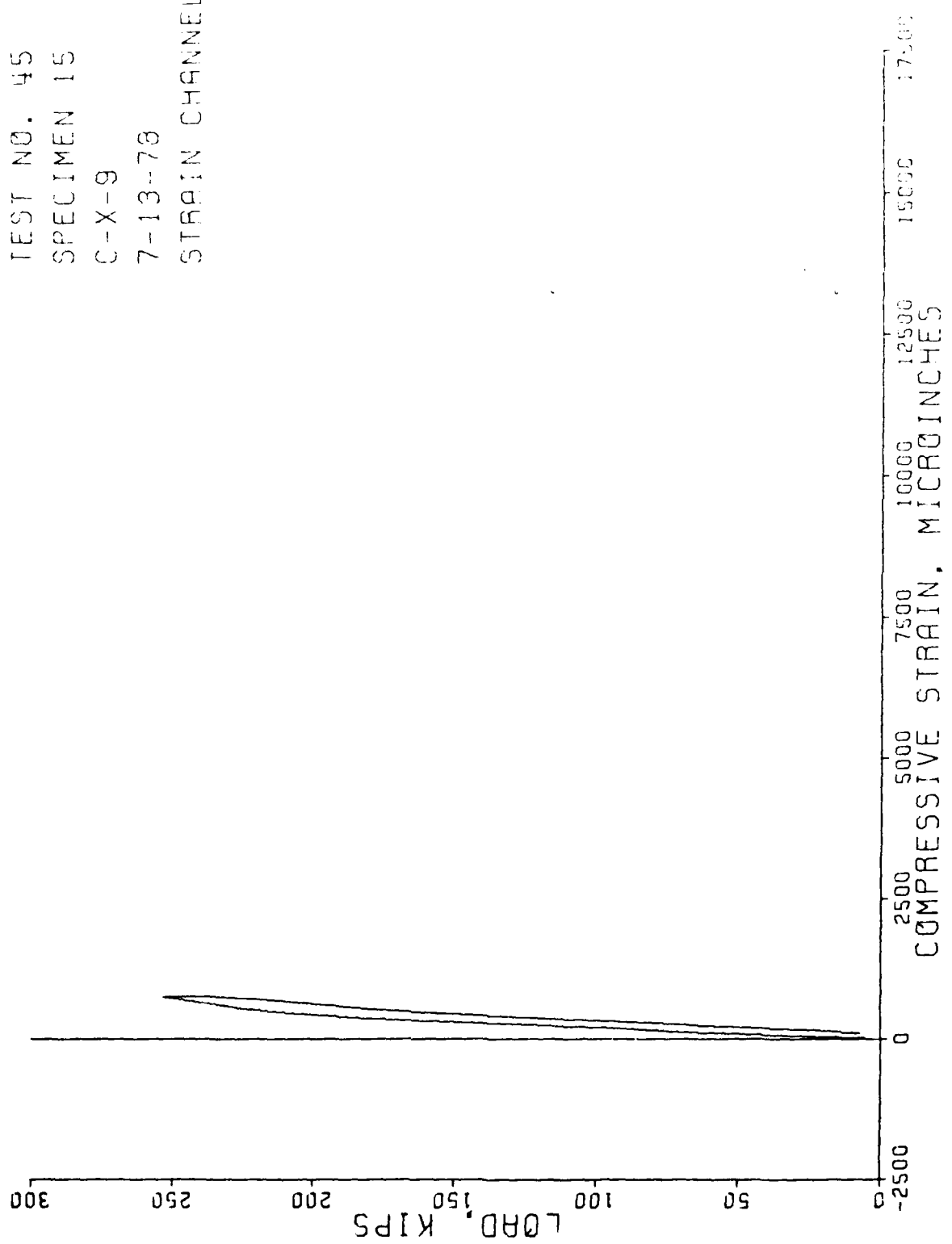
TEST NO. 45
 SPECIMEN 15
 C-X-9
 7-13-78
 STRAIN CHANNEL 39



TEST NO. 45
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 40



TEST NO. 45
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 41



TEST NO. 45 SPECIMEN 15 C-X-9 7-13-78

NUMBER OF INCREMENTS= 41
 NUMBER OF CHANNELS= 36
 NUMBER OF STRAIN CHANNELS= 12
 NUMBER OF DISPLACEMENT CHANNELS= 8
 NUMBER OF LOAD CHANNELS= 8
 NUMBER OF PRESSURE CHANNELS= 0
 NUMBER OF RODS= 8

CHANNEL ZEROSHIFT

57	0.0
56	0.0
55	0.0
54	0.0
53	0.0
52	0.0
51	0.0
50	0.0
41	0.0
40	0.0
39	0.0
38	0.0
37	0.0
36	0.0
35	0.0
34	0.0
33	0.0
32	0.0
31	0.0
30	0.0
29	0.0
28	0.0
27	0.0
26	0.0
25	0.0
22	0.0
21	0.0
20	0.0
19	0.0
18	0.0
17	0.0
16	0.0
15	0.0
14	0.0
13	0.0
12	0.0

CALIBRATION

1.000
 1.000
 1.000
 1.000
 1.000
 1.000

STRAIN CHANNEL

41
 40
 39
 38
 37
 36

35	1.000
34	1.000
33	1.000
32	1.000
31	1.000
30	1.000
DISPLACEMENT CHANNEL	
19	0.001
18	0.001
17	0.002
16	0.002
15	0.002
14	0.002
13	0.002
12	0.002
LOAD CHANNEL	
29	10.000
28	10.000
27	10.000
26	10.000
25	10.000
22	10.000
21	10.000
20	10.000
ROD CHANNEL	
57	1.000
56	1.000
55	1.000
54	1.000
53	1.000
52	1.000
51	1.000
50	1.000

STRAIN CHANNELS

	CH.41	CH.40	CH.39	CH.38	CH.37	CH.36	CH.35	CH.34
1. 13:13:56:13	-19.000	-54.000	-42.000	-29.000	-39.000	-43.000	-21.000	-10.000
2. 13:13:57:16	-27.000	-108.000	-77.000	-40.000	-59.000	-80.000	-31.000	-59.000
3. 13:13:57:52	-43.000	-211.000	-135.000	-66.000	-100.000	-145.000	-52.000	-155.000
4. 13:13:58:35	-57.000	-320.000	-198.000	-92.000	-142.000	-214.000	-71.000	-258.000
5. 13:13:59:13	-76.000	-429.000	-261.000	-120.000	-185.000	-285.000	-91.000	-363.000
6. 13:13:59:55	-95.000	-540.000	-324.000	-151.000	-231.000	-356.000	-115.000	-468.000
7. 13:14: 0:27	-112.000	-651.000	-389.000	-177.000	-276.000	-423.000	-133.000	-575.000
8. 13:14: 1:17	-131.000	-768.000	-462.000	-203.000	-324.000	-495.000	-154.000	-696.000
9. 13:14: 4:15	-157.000	-891.000	-538.000	-237.000	-378.000	-572.000	-184.000	-818.000
10. 13:14: 6: 0	-187.000	-1022.000	-605.000	-377.000	-426.000	-651.000	-219.000	-943.000
11. 13:14: 7:57	-210.000	-1210.000	-677.000	-307.000	-478.000	-726.000	-267.000	-1147.000
12. 13:14: 9:34	-230.000	-1395.000	-744.000	-334.000	-530.000	-791.000	-272.000	-1382.000
13. 13:14:10:31	-250.000	-1601.000	-815.000	-358.000	-583.000	-857.000	-300.000	-1631.000
14. 13:14:11:43	-273.000	-1857.000	-882.000	-379.000	-650.000	-928.000	-335.000	-1886.000
15. 13:14:12:38	-282.000	-2152.000	-975.000	-384.000	-716.000	-1034.000	-354.000	-2154.000
16. 13:14:13:24	-297.000	-2425.000	-1064.000	-389.000	-783.000	-1132.000	-378.000	-2408.000
17. 13:14:14:11	-320.000	-2689.000	-1156.000	-401.000	-868.000	-1132.000	-413.000	-2651.000
18. 13:14:15: 2	-341.000	-3008.000	-1260.000	-408.000	-917.000	-1237.000	-445.000	-2933.000
19. 13:14:15:44	-364.000	-3366.000	-1368.000	-414.000	-988.000	-1364.000	-479.000	-3225.000
20. 13:14:16:24	-387.000	-3734.000	-1481.000	-417.000	-1060.000	-1448.000	-513.000	-3518.000
21. 13:14:17:36	-421.000	-4250.000	-1625.000	-420.000	-1158.000	-1583.000	-561.000	-3906.000
22. 13:14:18:14	-447.000	-4453.000	-1684.000	-445.000	-1208.000	-1645.000	-596.000	-4071.000
23. 13:14:19: 3	-491.000	-4674.000	-1766.000	-484.000	-1269.000	-1750.000	-657.000	-4252.000
24. 13:14:19:50	-542.000	-4856.000	-1799.000	-536.000	-1329.000	-1852.000	-728.000	-4410.000
25. 13:14:21:35	-613.000	-5076.000	-1864.000	-610.000	-1408.000	-1939.000	-825.000	-4604.000
26. 13:14:23:39	-671.000	-5224.000	-1914.000	-673.000	-1464.000	-2088.000	-912.000	-4721.000
27. 13:14:28: 8	-744.000	-5371.000	-1970.000	-769.000	-1532.000	-2207.000	-1028.000	-4818.000
28. 13:14:32:27	-759.000	-5371.000	-1983.000	-764.000	-1540.000	-2218.000	-1049.000	-4811.000
29. 13:14:33:11	-694.000	-5341.000	-1970.000	-649.000	-1499.000	-2156.000	-975.000	-4780.000
30. 13:14:34: 8	-610.000	-5324.000	-1962.000	-518.000	-1459.000	-2073.000	-882.000	-4763.000
31. 13:14:34:54	-520.000	-5285.000	-1945.000	-378.000	-1409.000	-1987.000	-783.000	-4730.000
32. 13:14:35:28	-462.000	-5165.000	-1873.000	-283.000	-1343.000	-1876.000	-704.000	-4622.000
33. 13:14:36:25	-413.000	-4957.000	-1762.000	-217.000	-1261.000	-1744.000	-644.000	-4448.000
34. 13:14:36:59	-366.000	-4761.000	-1644.000	-149.000	-1171.000	-1613.000	-586.000	-4253.000
35. 13:14:37:34	-323.000	-4556.000	-1521.000	-85.000	-1077.000	-1483.000	-533.000	-4048.000
36. 13:14:38:10	-282.000	-4330.000	-1385.000	-22.000	-975.000	-1341.000	-480.000	-3820.000
37. 13:14:39:12	-231.000	-4112.000	-1240.000	50.000	-861.000	-1184.000	-411.000	-3583.000
38. 13:14:40:14	-193.000	-3988.000	-1069.000	107.000	-731.000	-1050.000	-350.000	-3404.000
39. 13:14:41: 3	-148.000	-3803.000	-807.000	84.000	-561.000	-926.000	-270.000	-3306.000
40. 13:14:41:55	-115.000	-3647.000	-640.000	67.000	-456.000	-951.000	-224.000	-3244.000
41. 13:14:43: 4	-104.000	-3809.000	-533.000	52.000	-391.000	-929.000	-203.000	-3201.000

STRAIN CHANNELS

TIME	CH. 33	CH. 32	CH. 31	CH. 30	CH.
1. 13:13:56:13	-15.000	-30.000	-49.000	-15.000	
2. 13:13:57:16	-37.000	-53.000	-85.000	-25.000	
3. 13:13:57:52	-76.000	-110.000	-152.000	-54.000	
4. 13:13:58:35	-120.000	-172.000	-224.000	-86.000	
5. 13:13:59:13	-164.000	-238.000	-294.000	-117.000	
6. 13:13:59:55	-209.000	-303.000	-366.000	-152.000	
7. 13:14: 0:27	-252.000	-373.000	-434.000	-182.000	
8. 13:14: 1:17	-306.000	-443.000	-518.000	-215.000	
9. 13:14: 4:15	-358.000	-522.000	-598.000	-250.000	
10. 13:14: 6: 0	-409.000	-598.000	-668.000	-298.000	
11. 13:14: 7:57	-462.000	-683.000	-747.000	-335.000	
12. 13:14: 9:34	-512.000	-765.000	-823.000	-367.000	
13. 13:14:10:31	-563.000	-863.000	-913.000	-396.000	
14. 13:14:11:43	-630.000	-977.000	-1010.000	-426.000	
15. 13:14:12:38	-699.000	-1078.000	-1119.000	-435.000	
16. 13:14:13:24	-766.000	-1174.000	-1226.000	-445.000	
17. 13:14:14:11	-836.000	-1290.000	-1330.000	-464.000	
18. 13:14:15: 2	-910.000	-1406.000	-1441.000	-477.000	
19. 13:14:15:44	-983.000	-1522.000	-1552.000	-489.000	
20. 13:14:16:24	-1054.000	-1630.000	-1659.000	-496.000	
21. 13:14:17:36	-1146.000	-1775.000	-1800.000	-505.000	
22. 13:14:18:14	-1192.000	-1848.000	-1859.000	-533.000	
23. 13:14:19: 3	-1249.000	-1964.000	-1929.000	-577.000	
24. 13:14:19:50	-1304.000	-2085.000	-1986.000	-636.000	
25. 13:14:21:35	-1376.000	-2233.000	-2058.000	-721.000	
26. 13:14:23:39	-1435.000	-2347.000	-2112.000	-799.000	
27. 13:14:28: 8	-1505.000	-2479.000	-2174.000	-900.000	
28. 13:14:32:27	-1523.000	-2457.000	-2172.000	-931.000	
29. 13:14:33:11	-1486.000	-2384.000	-2150.000	-829.000	
30. 13:14:34: 8	-1439.000	-2304.000	-2134.000	-693.000	
31. 13:14:34:54	-1389.000	-2209.000	-2108.000	-554.000	
32. 13:14:35:28	-1334.000	-2084.000	-2029.000	-457.000	
33. 13:14:36:25	-1262.000	-1961.000	-1921.000	-390.000	
34. 13:14:36:59	-1187.000	-1832.000	-1803.000	-321.000	
35. 13:14:37:34	-1109.000	-1688.000	-1672.000	-256.000	
36. 13:14:39:12	-1020.000	-1556.000	-1521.000	-189.000	
37. 13:14:39:12	-913.000	-1409.000	-1358.000	-101.000	
38. 13:14:40:14	-790.000	-1359.000	-1169.000	-49.000	
39. 13:14:41: 3	-620.000	-1293.000	-888.000	-26.000	
40. 13:14:41:55	-506.000	-1261.000	-710.000	-17.000	
41. 13:14:43: 4	-438.000	-1241.000	-602.000	-15.000	

DISPLACEMENT CHANNELS

TIME	CH.19	CH.18	CH.17	CH.16	CH.15	CH.14	CH.13	CH.12
1. 13:13:56:13	-0.001	0.0	-0.006	0.010	0.040	0.004	0.020	-0.004
2. 13:13:57:16	-0.001	0.0	-0.006	0.014	0.040	0.010	0.020	-0.004
3. 13:13:57:52	-0.001	0.0	-0.006	0.020	0.048	0.026	0.020	-0.002
4. 13:13:58:35	-0.001	0.0	-0.004	0.026	0.068	0.028	0.020	-0.004
5. 13:13:59:13	-0.001	0.0	-0.004	0.028	0.068	0.028	0.020	-0.004
6. 13:13:59:55	-0.001	0.0	-0.004	0.026	0.068	0.028	0.020	-0.002
7. 13:14:0:27	-0.001	0.0	-0.006	0.024	0.068	0.026	0.018	-0.004
8. 13:14:1:17	-0.001	0.0	-0.006	0.026	0.070	0.028	0.020	-0.002
9. 13:14:4:15	-0.001	0.0	0.002	0.026	0.066	0.036	0.020	-0.004
10. 13:14:6:0	-0.001	0.0	0.016	0.026	0.072	0.036	0.020	-0.004
11. 13:14:7:57	-0.001	0.0	0.024	0.052	0.094	0.054	0.020	-0.004
12. 13:14:9:34	-0.001	0.0	0.024	0.054	0.094	0.052	0.020	-0.004
13. 13:14:10:31	-0.001	0.0	0.024	0.054	0.094	0.052	0.020	-0.004
14. 13:14:11:43	-0.001	0.0	0.024	0.054	0.094	0.056	0.020	-0.004
15. 13:14:12:38	-0.001	0.0	0.024	0.054	0.094	0.056	0.026	-0.004
16. 13:14:13:24	-0.001	0.0	0.026	0.084	0.122	0.068	0.050	-0.002
17. 13:14:14:11	-0.001	0.0	0.024	0.084	0.122	0.088	0.050	-0.004
18. 13:14:15:2	-0.001	0.0	0.032	0.084	0.152	0.086	0.050	-0.004
19. 13:14:15:44	-0.001	0.0	0.032	0.084	0.152	0.094	0.048	-0.004
20. 13:14:16:24	-0.001	0.0	0.054	0.114	0.152	0.116	0.048	-0.002
21. 13:14:17:36	-0.017	0.0	0.054	0.114	0.152	0.116	0.048	-0.004
22. 13:14:18:14	-0.025	0.0	0.054	0.114	0.152	0.118	0.048	-0.004
23. 13:14:19:3	-0.029	0.0	0.054	0.114	0.182	0.118	0.048	-0.004
24. 13:14:19:50	-0.029	0.0	0.054	0.114	0.182	0.116	0.048	-0.002
25. 13:14:21:35	-0.017	0.0	0.054	0.112	0.180	0.116	0.052	-0.002
26. 13:14:23:39	-0.011	0.0	0.054	0.114	0.180	0.113	0.078	-0.002
27. 13:14:28:8	-0.001	0.0	0.054	0.114	0.176	0.116	0.078	-0.004
28. 13:14:32:27	-0.001	0.0	0.056	0.112	0.174	0.116	0.078	-0.002
29. 13:14:33:11	-0.001	0.0	0.054	0.112	0.174	0.118	0.078	-0.004
30. 13:14:34:54	-0.003	0.0	0.054	0.112	0.176	0.118	0.078	-0.002
31. 13:14:35:28	-0.029	0.0	0.056	0.112	0.176	0.116	0.076	-0.004
32. 13:14:35:28	-0.030	0.0	0.054	0.112	0.176	0.116	0.078	-0.004
33. 13:14:36:25	-0.029	0.0	0.054	0.112	0.176	0.116	0.078	-0.002
34. 13:14:36:59	-0.029	0.0	0.056	0.114	0.174	0.116	0.080	-0.004
35. 13:14:37:34	-0.029	0.0	0.056	0.112	0.174	0.116	0.078	-0.006
36. 13:14:38:16	-0.030	0.0	0.056	0.094	0.144	0.116	0.076	-0.006
37. 13:14:39:12	-0.029	0.0	0.032	0.084	0.144	0.096	0.078	-0.012
38. 13:14:40:14	-0.029	0.0	0.026	0.082	0.144	0.086	0.078	-0.012
39. 13:14:41:3	-0.001	0.0	0.024	0.032	0.114	0.086	0.078	-0.002
40. 13:14:41:55	-0.001	0.0	0.026	0.054	0.112	0.084	0.078	-0.002
41. 13:14:43:4	-0.001	0.0	0.026	0.054	0.088	0.068	0.078	-0.004

LOAD CHANNELS

TIME	CH.29	CH.28	CH.27	CH.26	CH.25	CH.22	CH.21	CH.20
1. 13:13:56:13	3790.000	3660.000	4850.000	4790.000	5810.000	4650.000	4270.000	3630.000
2. 13:13:57:16	7080.000	7670.000	8870.000	10250.000	10360.000	10190.000	8420.000	7330.000
3. 13:13:57:52	13660.000	14570.000	17700.000	18740.000	20640.000	18260.000	16700.000	14050.000
4. 13:13:58:35	20060.000	21440.000	26060.000	28130.000	29860.000	27240.000	24490.000	20820.000
5. 13:13:59:13	32900.000	28710.000	34060.000	37190.000	39570.000	35970.000	31900.000	2780.000
6. 13:13:59:55	32900.000	36150.000	42300.000	45870.000	50340.000	44230.000	39990.000	34610.000
7. 13:14:0:27	39240.000	43270.000	49660.000	55370.000	59420.000	53200.000	47630.000	40740.000
8. 13:14:1:17	45990.000	50880.000	56640.000	64890.000	69370.000	62160.000	55650.000	47410.000
9. 13:14:4:15	53590.000	58380.000	63380.000	73630.000	80070.000	70110.000	63070.000	54520.000
10. 13:14:6:0	61630.000	66280.000	71270.000	83470.000	92880.000	79640.000	70920.000	62340.000
11. 13:14:7:57	68470.000	73720.000	78750.000	92740.000	108980.000	88460.000	78040.000	69560.000
12. 13:14:9:34	75500.000	80500.000	87690.000	101570.000	109080.000	96940.000	87040.000	76110.000
13. 13:14:10:31	82100.000	87570.000	95620.000	110150.000	117900.000	105700.000	94830.000	82910.000
14. 13:14:11:43	89300.000	95860.000	103850.000	120790.000	129060.000	115040.000	102820.000	91090.000
15. 13:14:12:38	96060.000	102100.000	111860.000	129650.000	138760.000	123350.000	110670.000	97260.000
16. 13:14:13:24	102720.000	108780.000	119820.000	139450.000	147730.000	132670.000	118400.000	103780.000
17. 13:14:14:11	109240.000	116840.000	127360.000	148690.000	157610.000	141320.000	125380.000	111400.000
18. 13:14:15:2	116370.000	123840.000	135870.000	157500.000	167510.000	149590.000	134300.000	118200.000
19. 13:14:15:44	123190.000	131420.000	143660.000	167420.000	176680.000	158960.000	141800.000	125190.000
20. 13:14:16:24	129720.000	138830.000	150960.000	176490.000	186270.000	167580.000	149070.000	132360.000
21. 13:14:17:36	136480.000	146630.000	159070.000	184960.000	196370.000	175470.000	157040.000	139660.000
22. 13:14:18:14	141850.000	150980.000	167110.000	186450.000	205250.000	176860.000	164990.000	144640.000
23. 13:14:19:3	147650.000	156900.000	174400.000	188520.000	214710.000	179010.000	172060.000	151160.000
24. 13:14:19:50	153230.000	162800.000	182950.000	188930.000	224990.000	179250.000	180460.000	157570.000
25. 13:14:21:35	159020.000	168410.000	190450.000	188320.000	233820.000	178090.000	188000.000	164160.000
26. 13:14:23:39	163550.000	173630.000	197880.000	187730.000	243420.000	175450.000	195020.000	171090.000
27. 13:14:28:8	167920.000	177180.000	206910.000	183790.000	253600.000	169430.000	202860.000	177620.000
28. 13:14:32:27	161060.000	173820.000	199370.000	178510.000	236000.000	170290.000	195940.000	171700.000
29. 13:14:33:11	148790.000	163870.000	183570.000	178320.000	217160.000	167280.000	184200.000	160280.000
30. 13:14:34:8	135720.000	149530.000	169190.000	177750.000	198180.000	165450.000	198660.000	146830.000
31. 13:14:34:54	122250.000	134450.000	153230.000	173150.000	178790.000	163490.000	154030.000	132170.000
32. 13:14:35:28	108960.000	120440.000	136580.000	155230.000	159530.000	156340.000	137590.000	117060.000
33. 13:14:36:25	95940.000	105530.000	120750.000	135970.000	140600.000	142040.000	121390.000	101650.000
34. 13:14:36:59	82500.000	90590.000	103920.000	117050.000	120600.000	125610.000	104500.000	86780.000
35. 13:14:37:34	69450.000	76210.000	87550.000	98700.000	101180.000	107310.000	88340.000	74190.000
36. 13:14:38:10	55790.000	61610.000	71310.000	78930.000	81970.000	86220.000	71890.000	62080.000
37. 13:14:39:12	41530.000	46200.000	54650.000	60140.000	61380.000	66460.000	54930.000	47120.000
38. 13:14:40:14	27510.000	31130.000	37590.000	41170.000	41580.000	46310.000	37680.000	32790.000
39. 13:14:41:3	14420.000	15230.000	21010.000	21180.000	22240.000	24680.000	21190.000	17690.000
40. 13:14:41:55	7270.000	7920.000	11570.000	11990.000	11510.000	14550.000	11720.000	9980.000
41. 13:14:43:4	3750.000	4180.000	6960.000	6100.000	6960.000	8030.000	7100.000	6040.000

ROD CHANNELS

TIME	CH. 57	CH. 56	CH. 55	CH. 54	CH. 53	CH. 52	CH. 51	CH. 50
1. 13:13:56:13	0.0	307.483	-89.683	-12.812	550.907	12.812	179.365	12.812
2. 13:13:57:16	0.0	627.778	-25.624	-166.553	614.966	25.624	281.859	-38.935
3. 13:13:58:35	165.553	1268.568	102.494	-307.483	589.343	12.812	345.918	-115.306
4. 13:13:58:35	384.354	1908.958	217.801	-409.978	512.472	-25.624	409.978	-179.365
5. 13:13:59:13	589.343	2498.301	320.295	-499.660	371.542	-89.683	435.601	-204.989
6. 13:13:59:55	755.896	2997.961	422.789	-563.719	217.801	-140.930	435.601	-217.801
7. 13:14:0:27	948.073	3420.750	512.472	-602.154	76.871	-217.801	422.789	-217.801
8. 13:14:1:17	1089.003	3741.045	614.966	-679.025	0.0	-307.483	384.354	-166.553
9. 13:14:4:15	1229.933	4048.528	730.272	-717.461	-102.494	-422.789	358.730	-115.306
10. 13:14:6:0	1345.259	4291.949	858.390	-807.143	-179.365	-525.284	307.483	-64.059
11. 13:14:7:57	1447.733	4496.938	948.073	-871.202	-243.424	-627.778	269.048	-25.624
12. 13:14:9:34	1537.416	4675.305	1037.756	-922.449	-294.671	-704.649	230.612	-25.624
13. 13:14:10:31	1614.286	4830.947	1127.438	-983.508	-358.730	-781.520	179.365	0.0
14. 13:14:11:43	1716.781	4996.598	1229.933	-1037.756	-422.789	-845.579	140.930	0.0
15. 13:14:12:38	1780.840	5124.719	1268.368	-1050.567	-474.036	-909.637	128.118	0.0
16. 13:14:13:24	1857.711	5252.836	1332.427	-1050.567	-512.472	-973.697	115.306	25.624
17. 13:14:14:11	1921.770	5368.141	1447.733	-1114.626	-589.343	-1012.132	102.494	0.0
18. 13:14:15:1	1985.829	5496.253	1511.792	-1127.438	-679.025	-1063.379	102.494	0.0
19. 13:14:15:44	2062.699	5637.188	1601.475	-1165.874	-743.084	-1114.626	89.683	0.0
20. 13:14:16:24	2152.382	5752.496	1691.157	-1217.121	-832.767	-1153.062	89.683	12.812
21. 13:14:17:36	2203.629	5880.613	1806.463	-1242.744	-909.637	-1165.874	76.871	12.812
22. 13:14:18:14	2229.253	5906.238	1908.958	-1293.991	-973.697	-1191.497	89.683	25.624
23. 13:14:19:3	2242.064	5944.672	2075.511	-1376.486	-1024.944	-1204.309	89.683	89.683
24. 13:14:19:50	2242.064	5957.484	2306.124	-1563.039	-1089.003	-1217.121	89.683	230.612
25. 13:14:21:35	2216.441	5931.859	2613.607	-1780.840	-1127.438	-1191.497	76.871	422.789
26. 13:14:23:39	2178.006	5830.613	2895.466	-1936.640	-1114.626	-1153.062	76.871	717.461
27. 13:14:28:3	2128.758	5829.367	3190.138	-2203.629	-1127.438	-1114.626	76.871	1153.062
28. 13:14:32:27	2139.570	5829.367	3292.632	-2280.500	-1165.874	-1101.814	76.871	1306.803
29. 13:14:33:11	2178.006	5854.988	3228.573	-2242.064	-1178.685	-1050.567	76.871	1229.933
30. 13:14:34:8	2280.500	5931.859	3202.949	-2229.253	-1293.991	-1127.438	89.683	1153.062
31. 13:14:34:54	2357.371	5983.109	3267.008	-2293.312	-1396.486	-1191.497	76.871	1255.556
32. 13:14:35:28	2267.688	5842.180	3523.244	-2549.548	-1396.486	-1178.685	76.871	1703.969
33. 13:14:36:25	1755.216	5188.777	3574.491	-2639.230	-743.084	-525.284	76.871	2024.264
34. 13:14:36:59	1268.368	4407.258	3587.303	-2690.478	-102.494	-166.553	76.871	2342.064
35. 13:14:37:34	884.014	3689.798	3536.056	-2716.101	243.424	-25.624	76.871	2357.371
36. 13:14:38:10	627.778	3113.267	3420.750	-2677.666	422.789	38.435	76.871	2447.053
37. 13:14:39:12	435.601	2639.230	3074.832	-2447.053	486.548	64.059	76.871	2267.688
38. 13:14:40:14	243.424	2062.699	2652.042	-2165.194	563.719	38.435	76.871	2178.006
39. 13:14:41:3	38.435	1358.051	2011.452	-1703.969	499.660	25.624	76.871	2024.264
40. 13:14:41:55	-25.624	973.697	1524.604	-1306.803	384.354	25.624	89.683	1921.770
41. 13:14:43:4	-12.812	653.402	1191.497	-999.320	281.859	38.435	76.871	1793.652

AVERAGE LOAD

1.	4431.250
2.	8771.250
3.	16790.000
4.	24762.500
5.	32687.500
6.	40798.750
7.	48566.250
8.	56615.000
9.	64593.750
10.	73103.750
11.	81128.750
12.	89303.750
13.	97205.000
14.	105975.000
15.	113716.250
16.	121668.750
17.	129792.500
18.	137897.500
19.	146032.500
20.	153910.000
21.	161960.000
22.	167266.250
23.	173051.250
24.	178771.250
25.	183783.750
26.	188471.250
27.	192413.750
28.	195836.250
29.	199433.750
30.	203063.750
31.	206451.250
32.	209466.250
33.	212083.750
34.	214943.750
35.	217866.250
36.	220500.000
37.	223051.250
38.	225970.000
39.	228705.000
40.	231313.750
41.	234000.000

3.1.5 RELOAD OF SPECIMEN #15

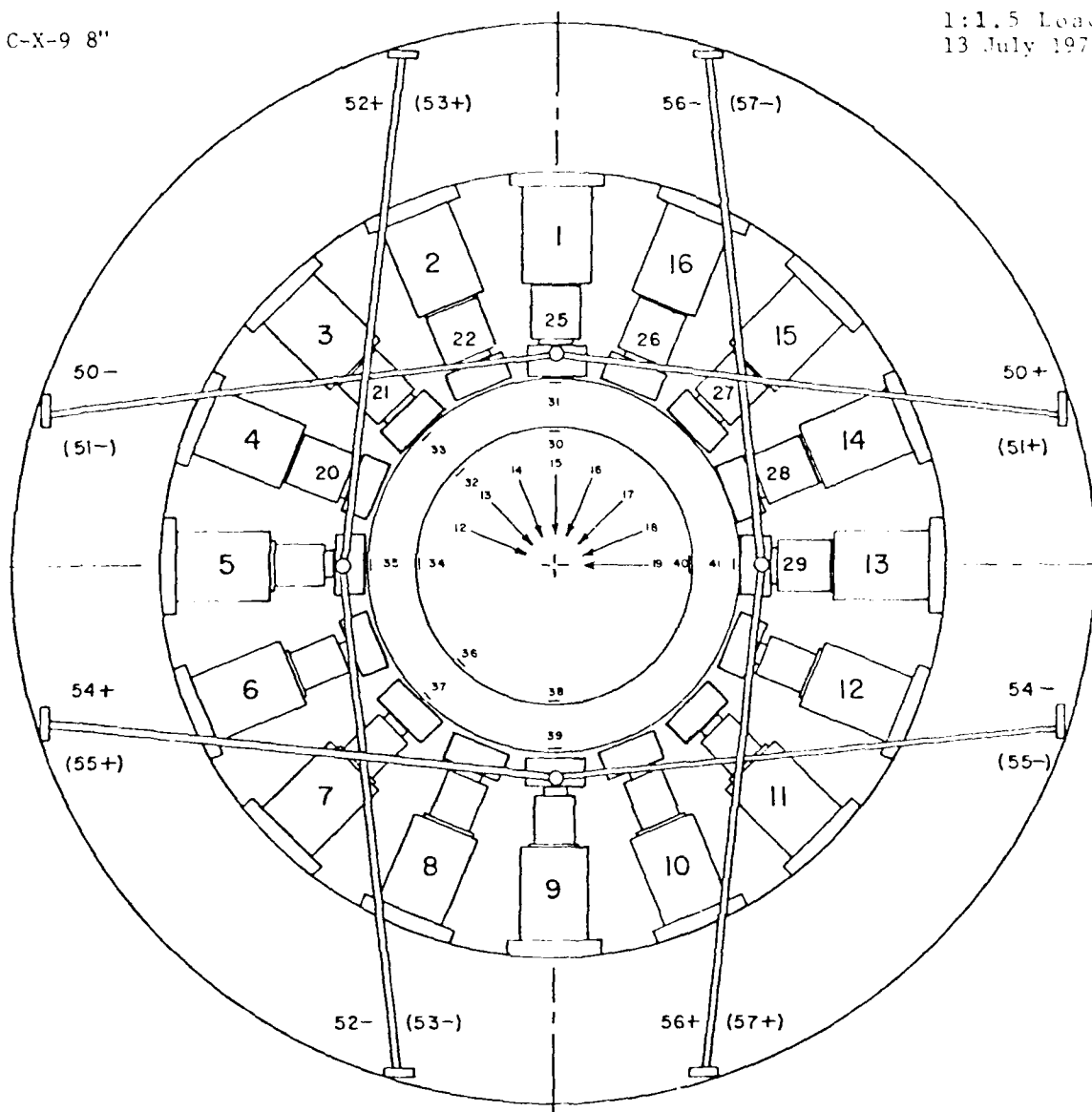
TEST NO. 46
COMPOSITE INTEGRAL LINER
1:1.5 LOADING RATIO
TESTED 13 JULY 1978

REACTION FRAME TEST SET-UP

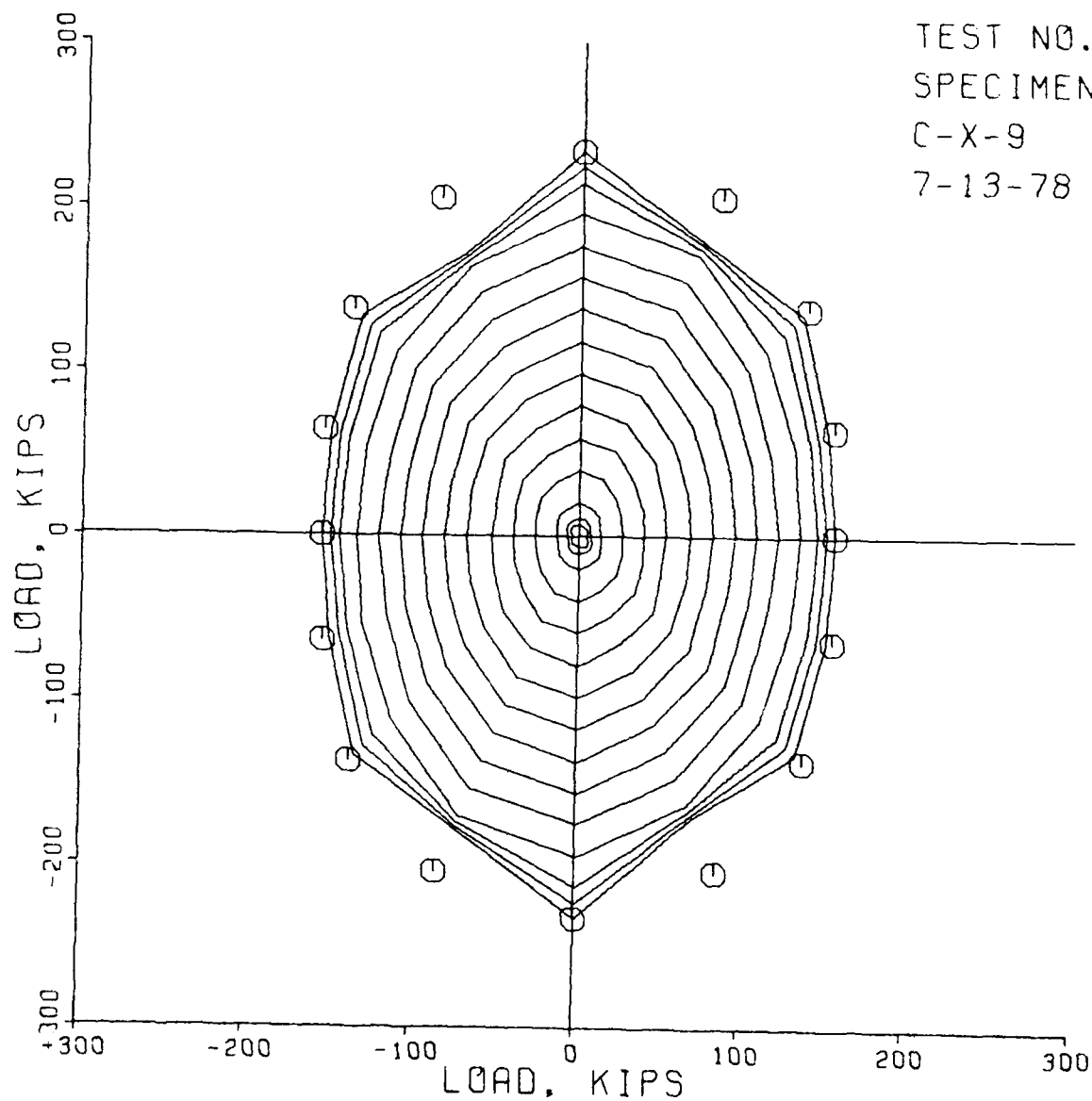
Specimen #15

C-X-9 8"

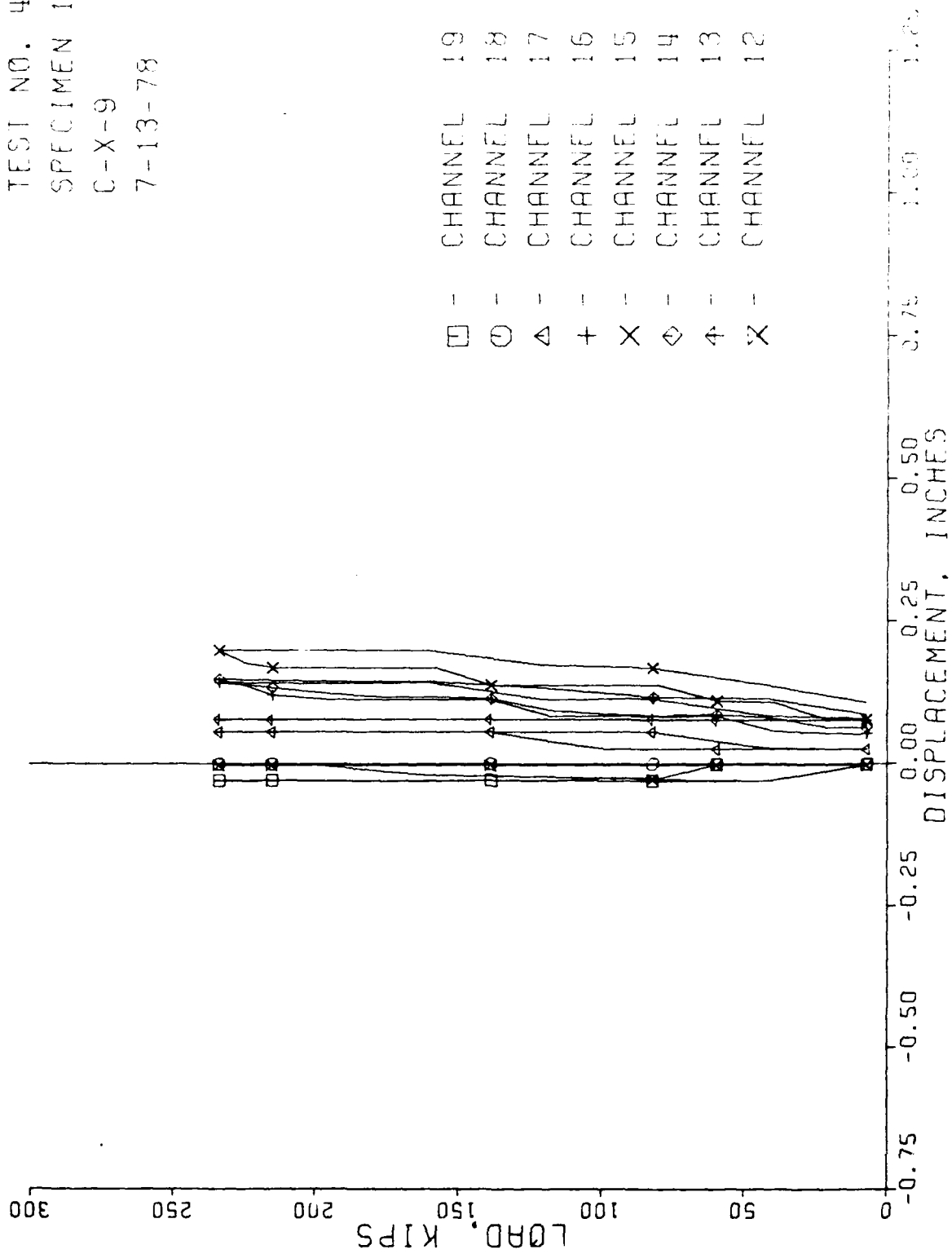
Test #46
1:1.5 Load
13 July 1978



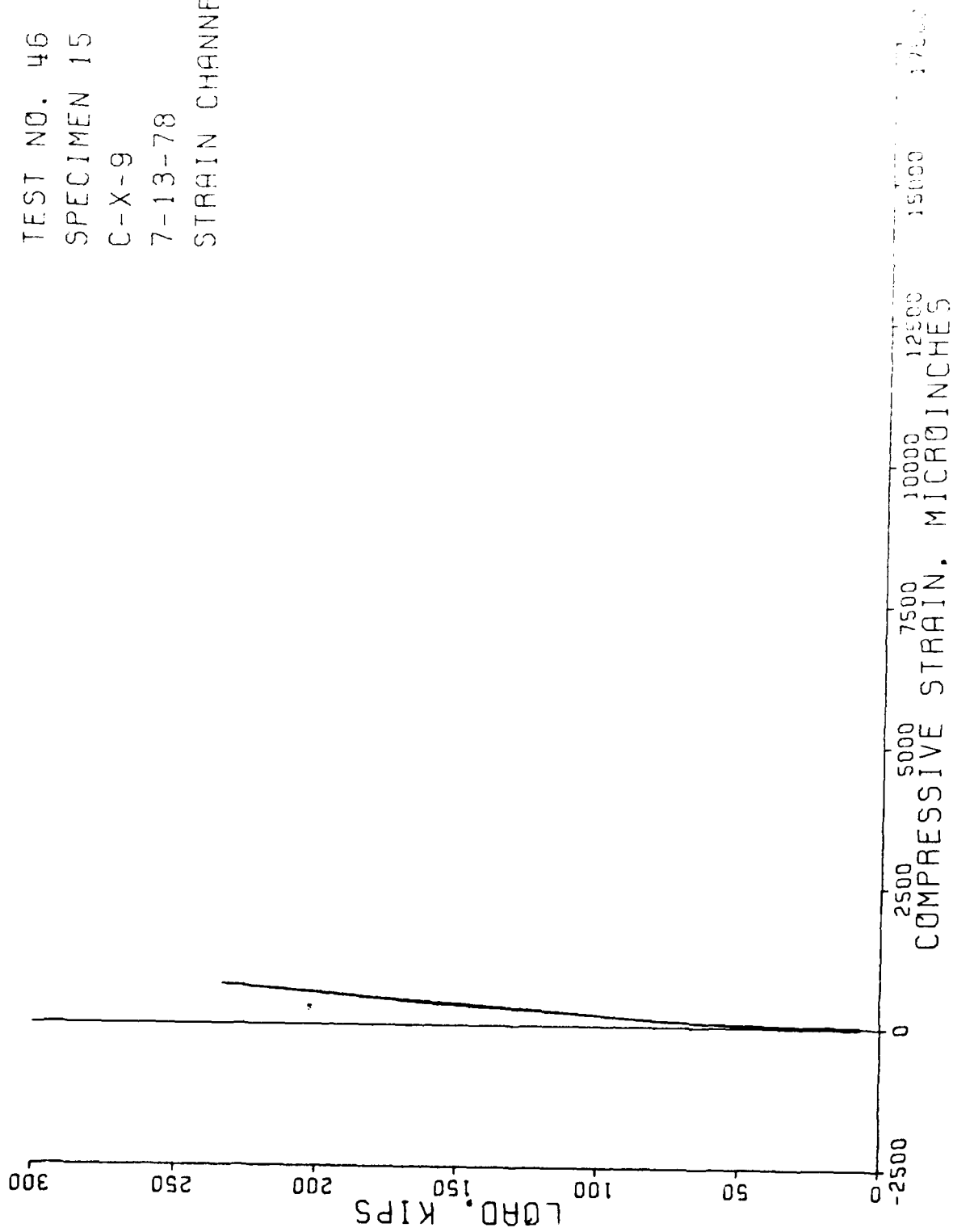
CH 12-19 Load axis I.D. (Research, Inc. Model 4040).
 CH 20-22, 25-29 Axial load (Transducers, Inc. Model 693-300K).
 CH 30-41 (Ailtech SG 129-6S) Radial pairs at center. Odd gages on Rebar.
 CH 50-57 (Ailtech SG 129-6S) Polarity indicates rod under tension.
 Lower rod shown (XX).



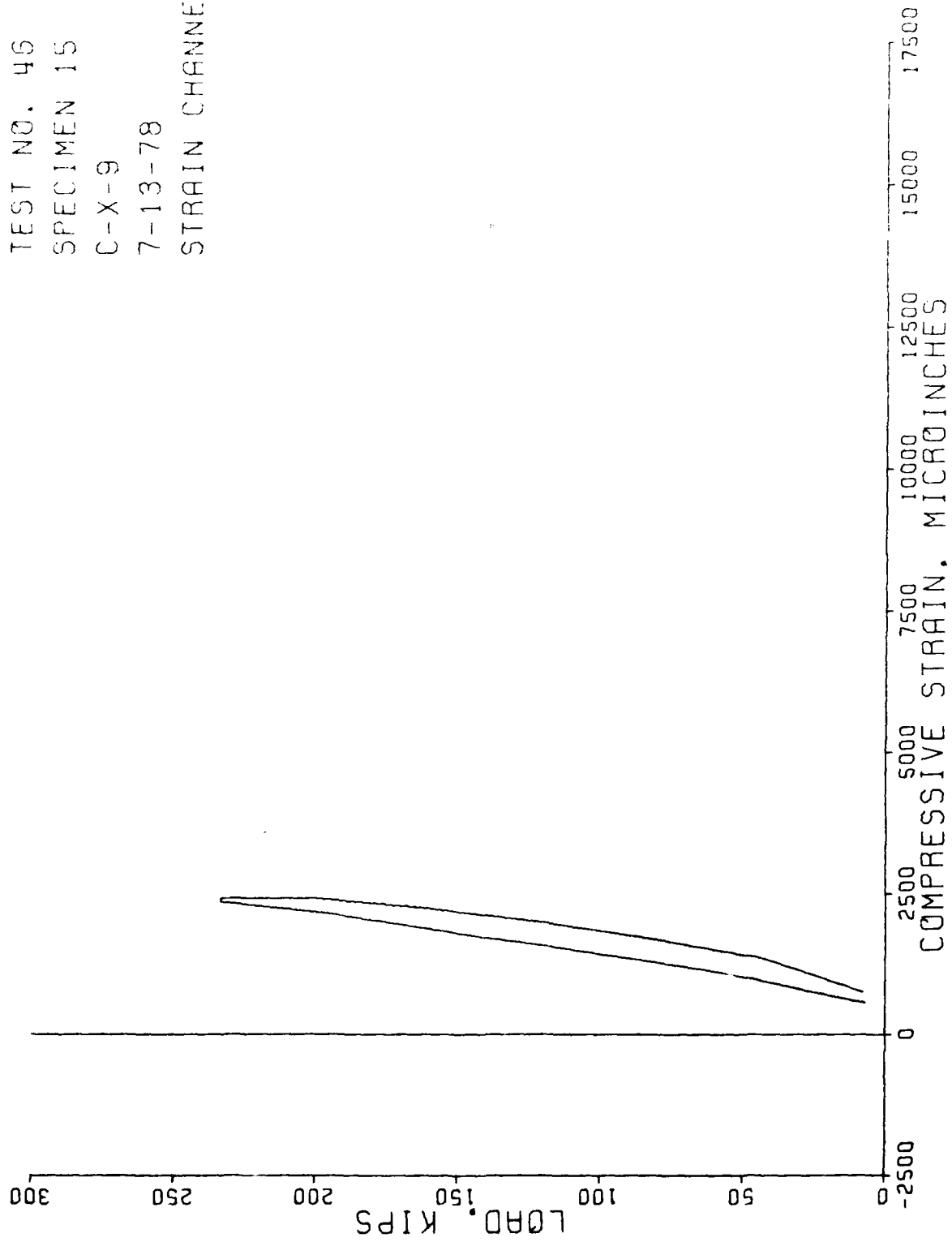
TEST NO. 46
SPECIMEN 15
C-X-9
7-13-78



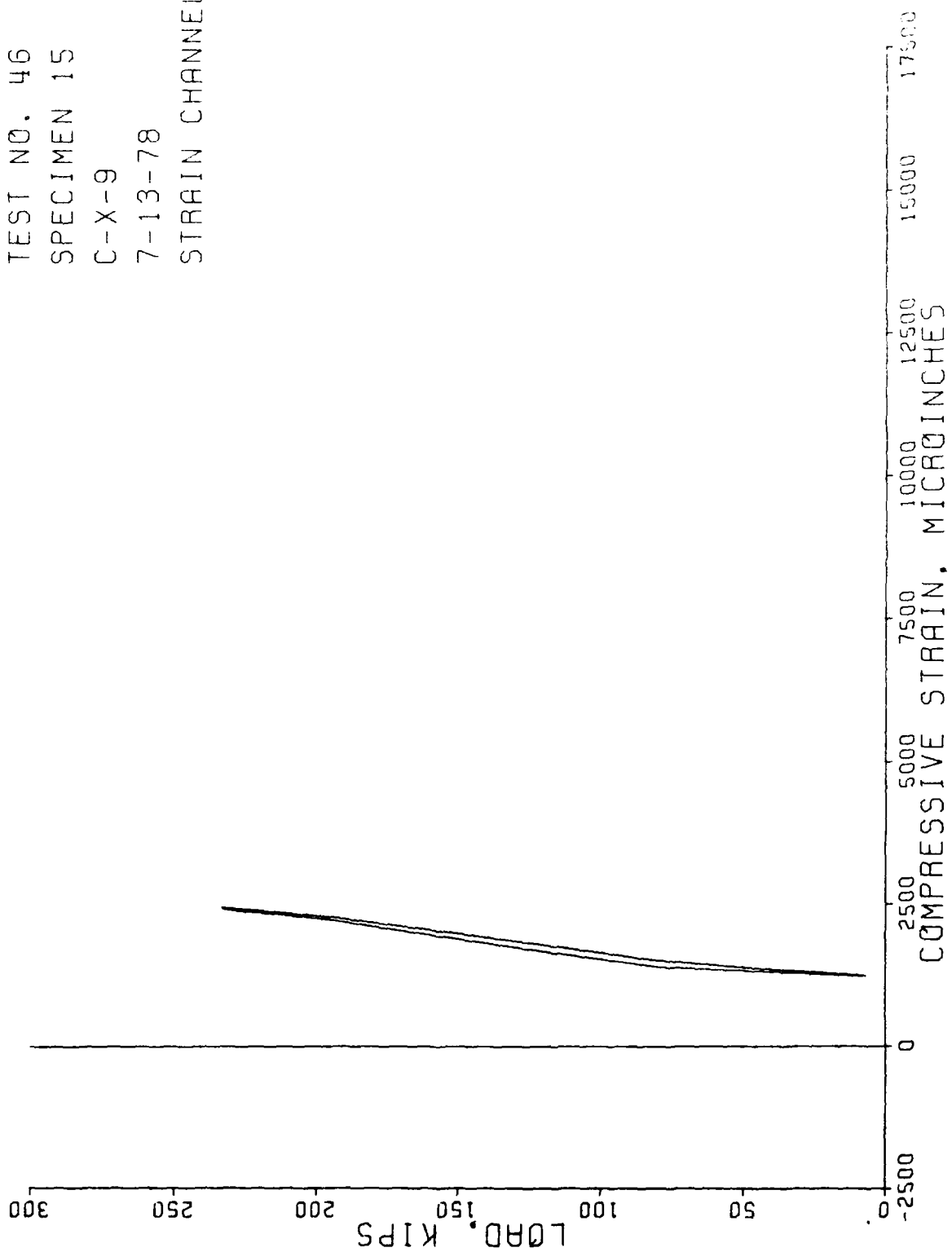
TEST NO. 46
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 30



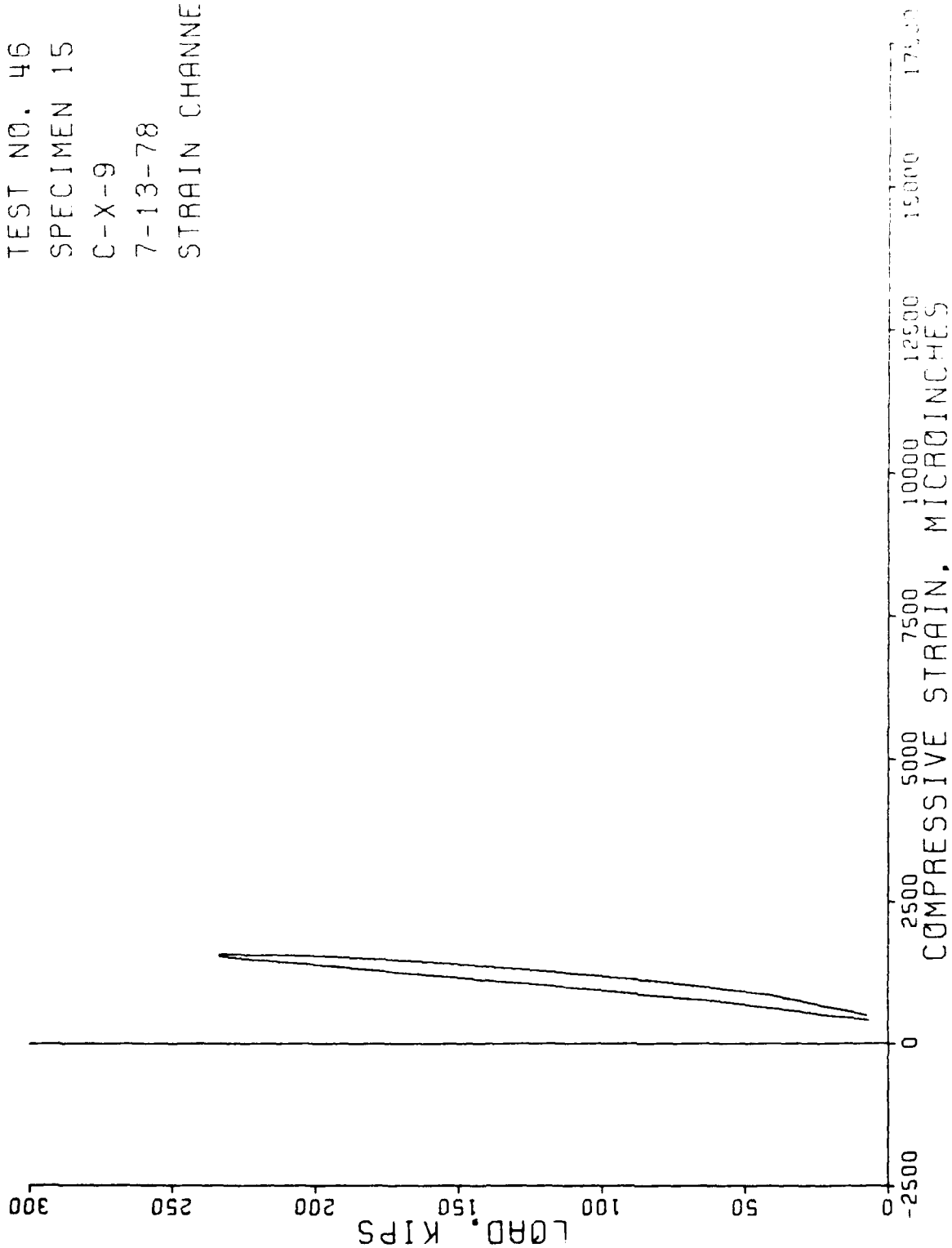
TEST NO. 46
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 31



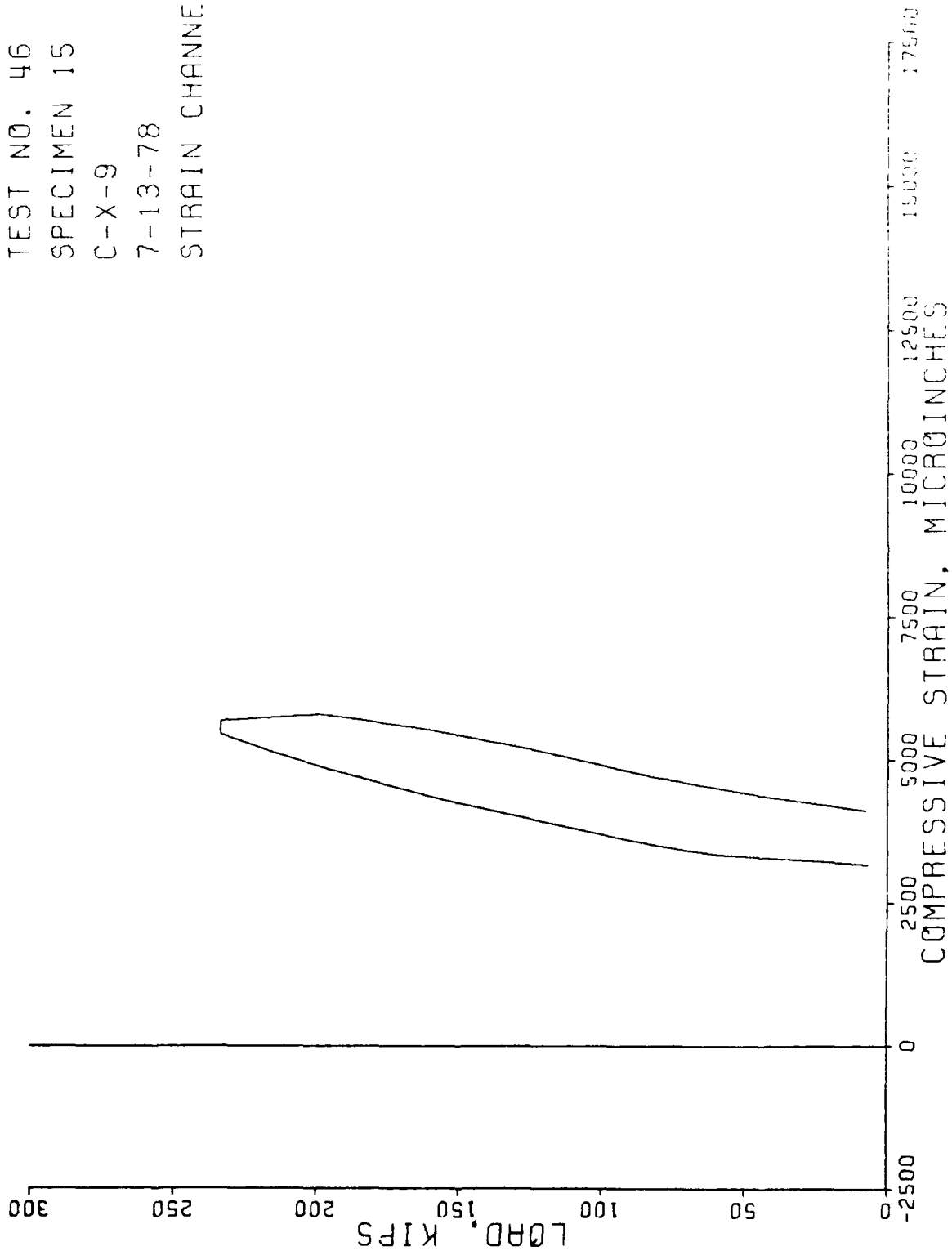
TEST NO. 46
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 32



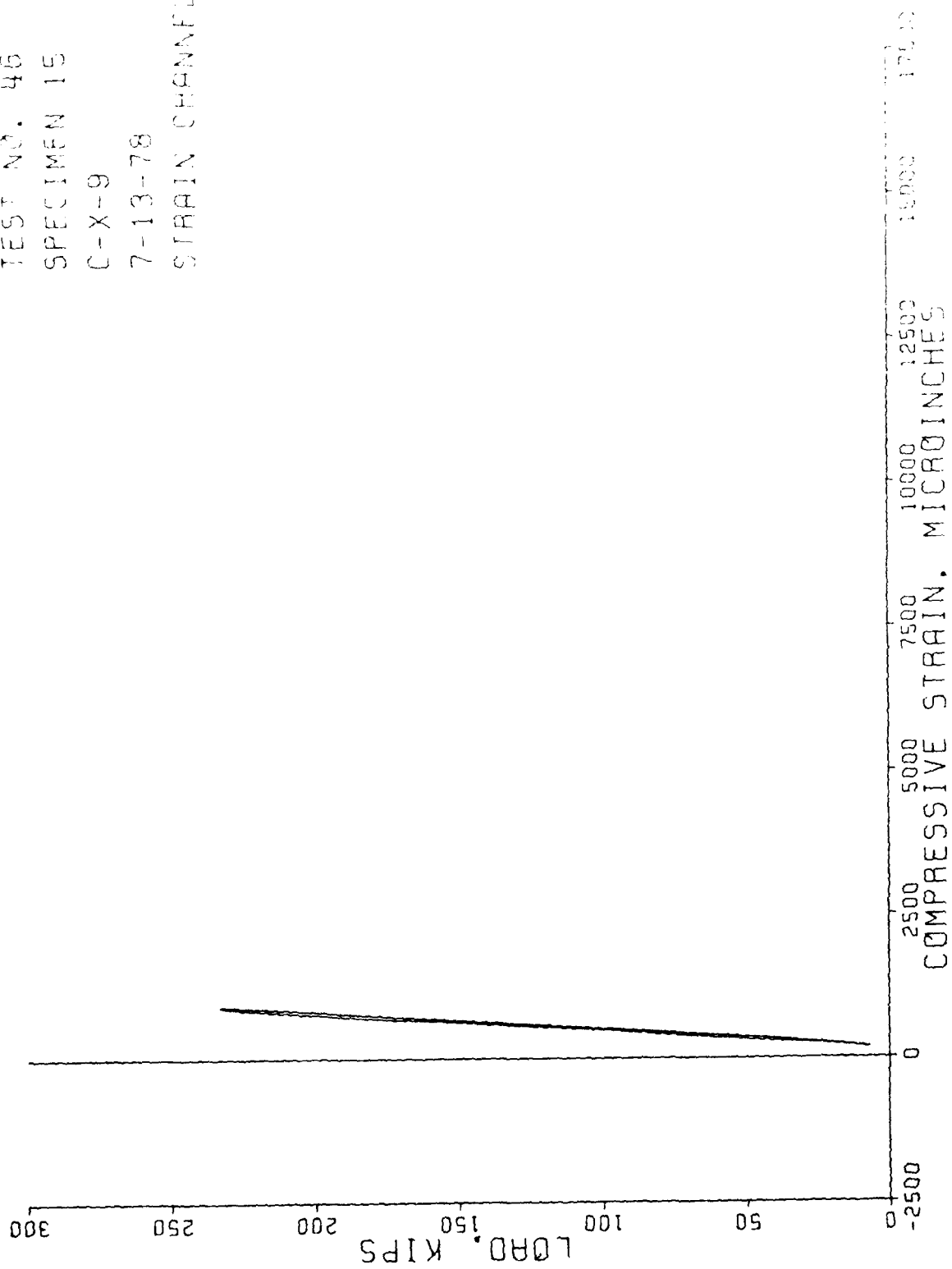
TEST NO. 46
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 33



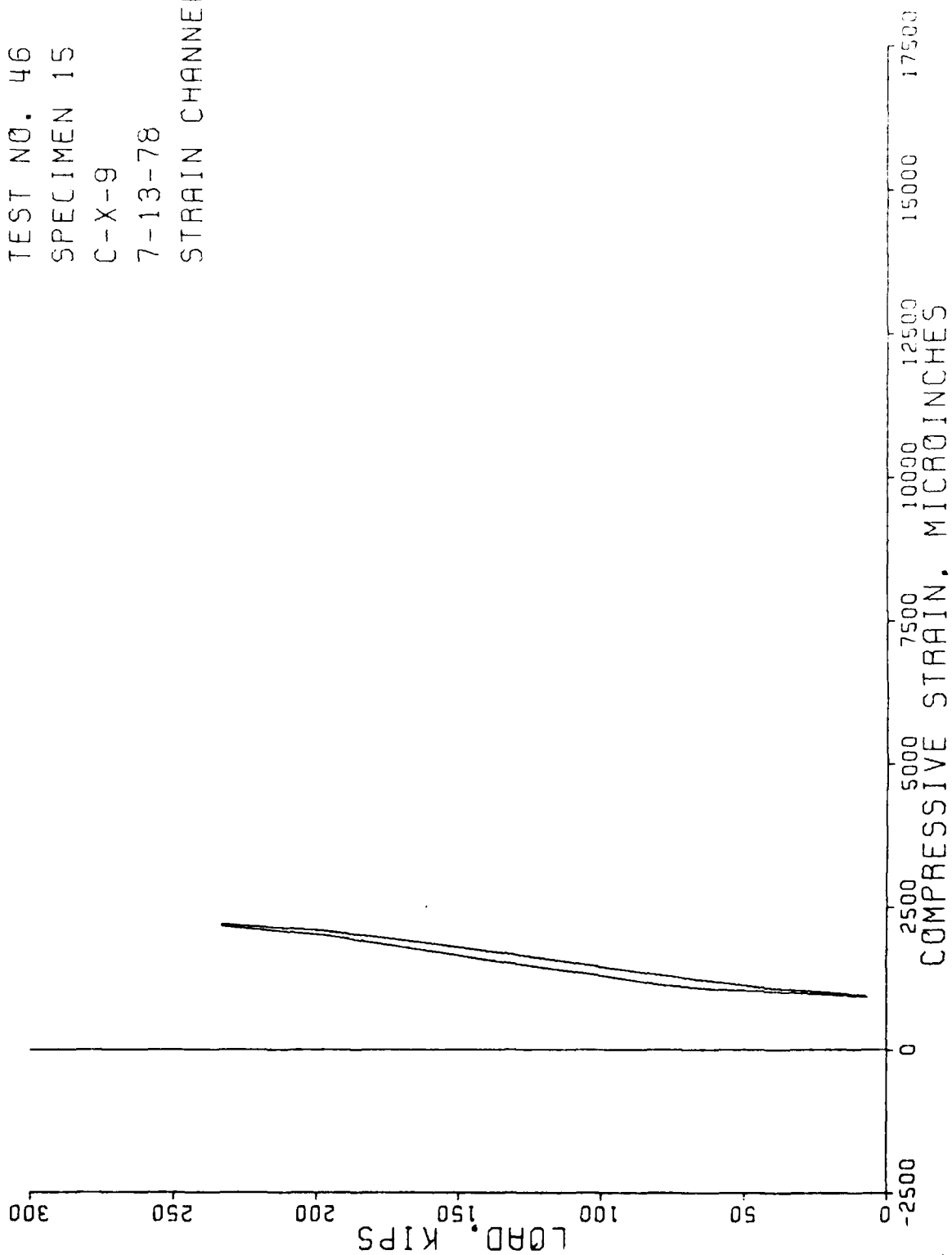
TEST NO. 46
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 34



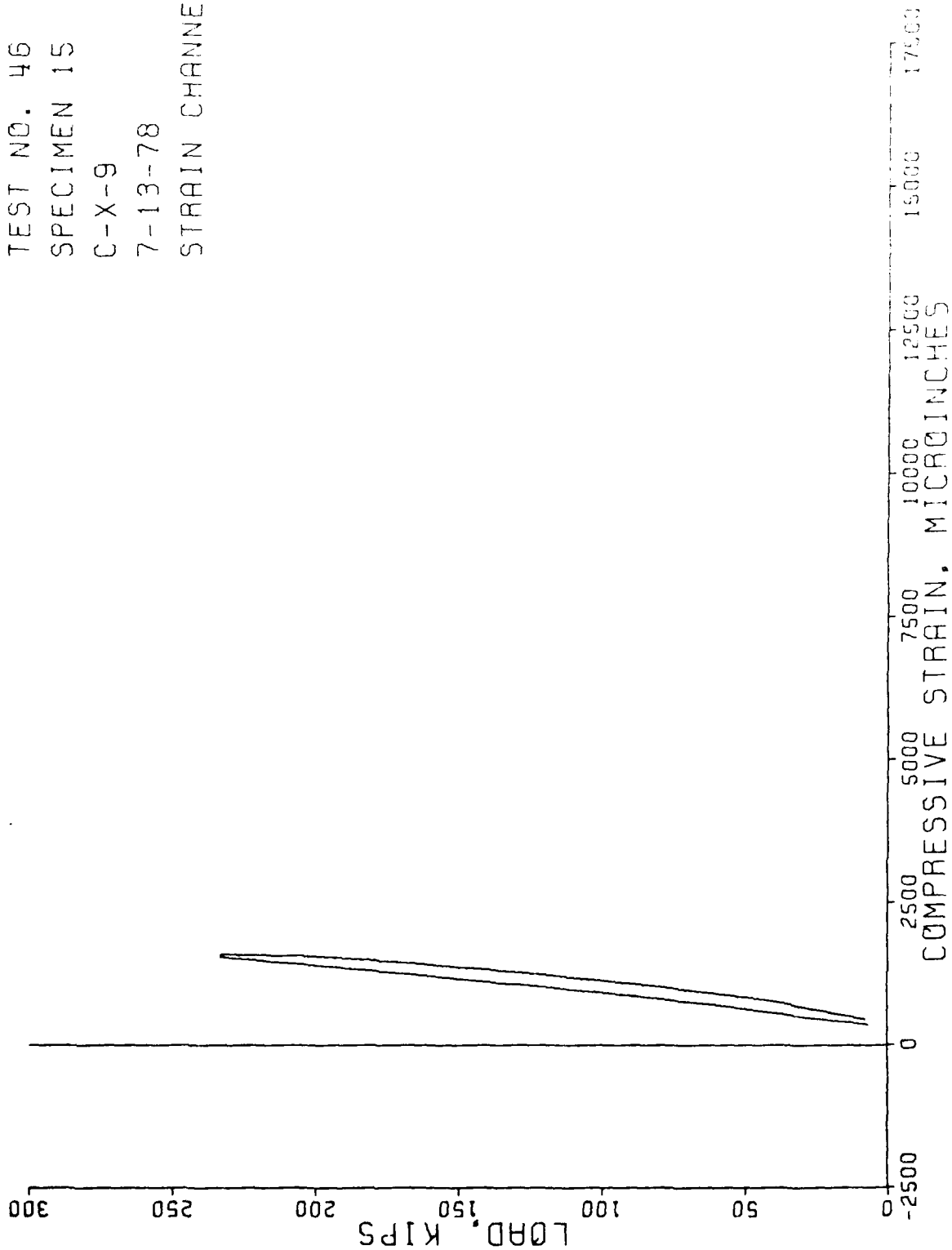
TEST NO. 46
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 95



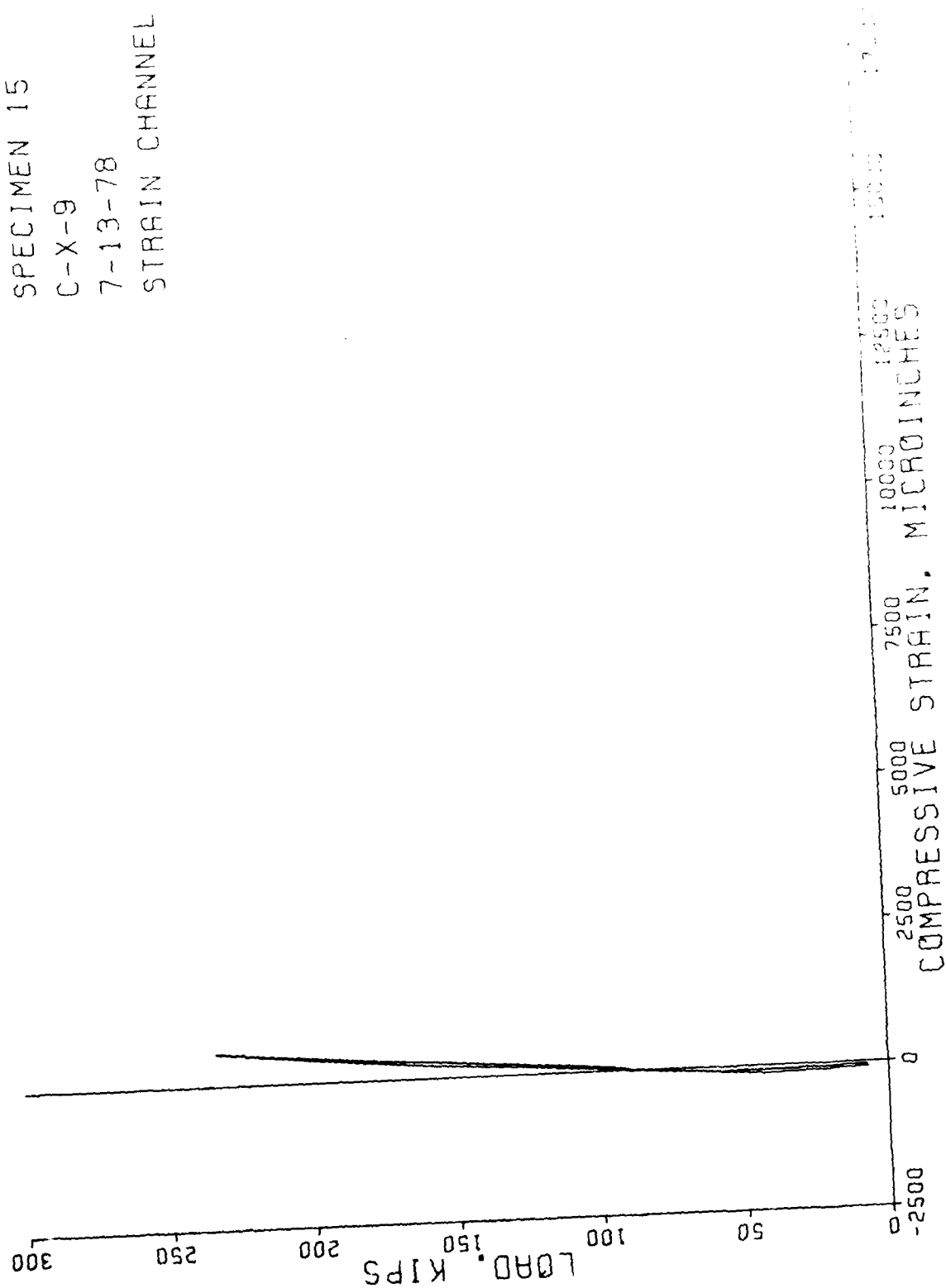
TEST NO. 46
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 36



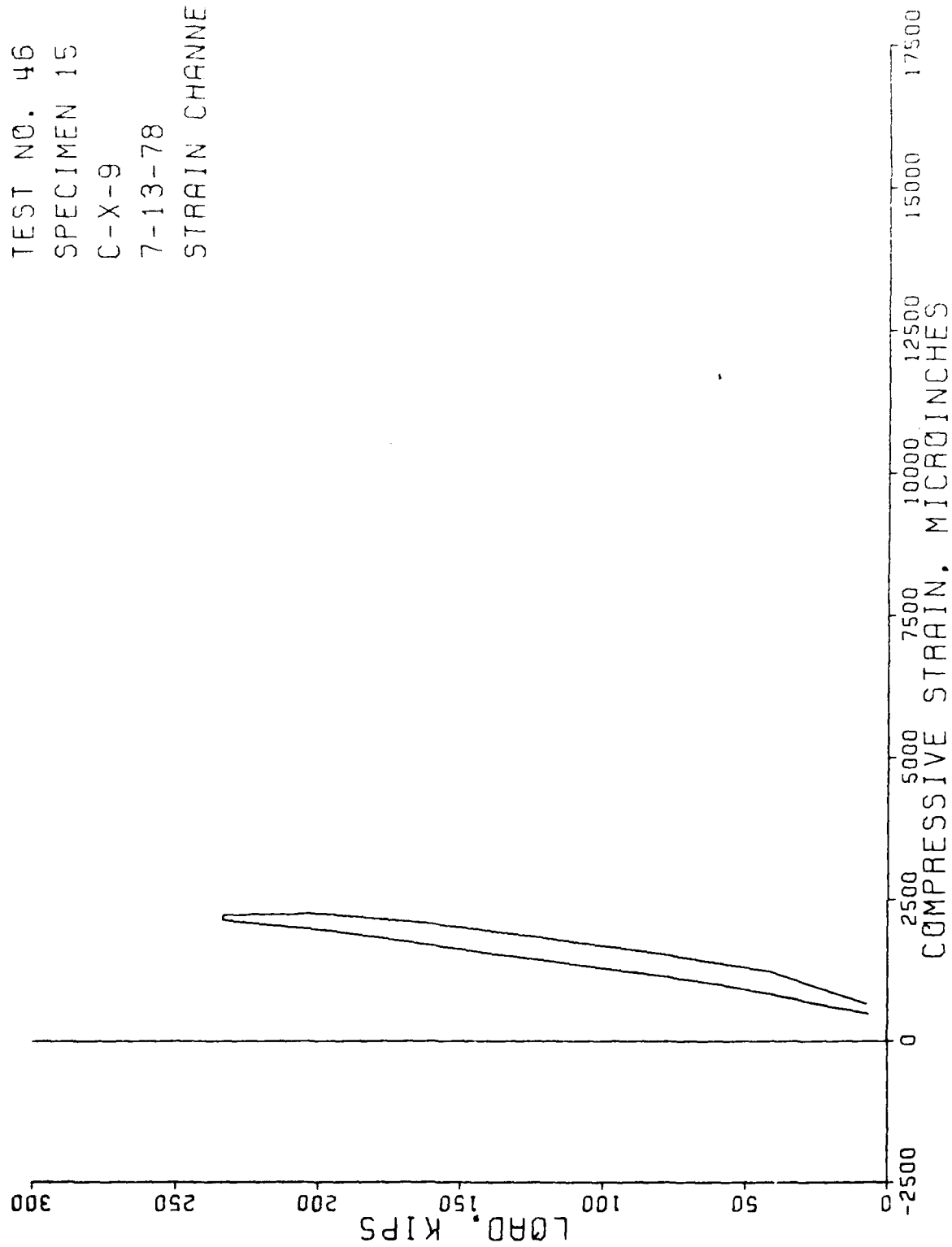
TEST NO. 46
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 37



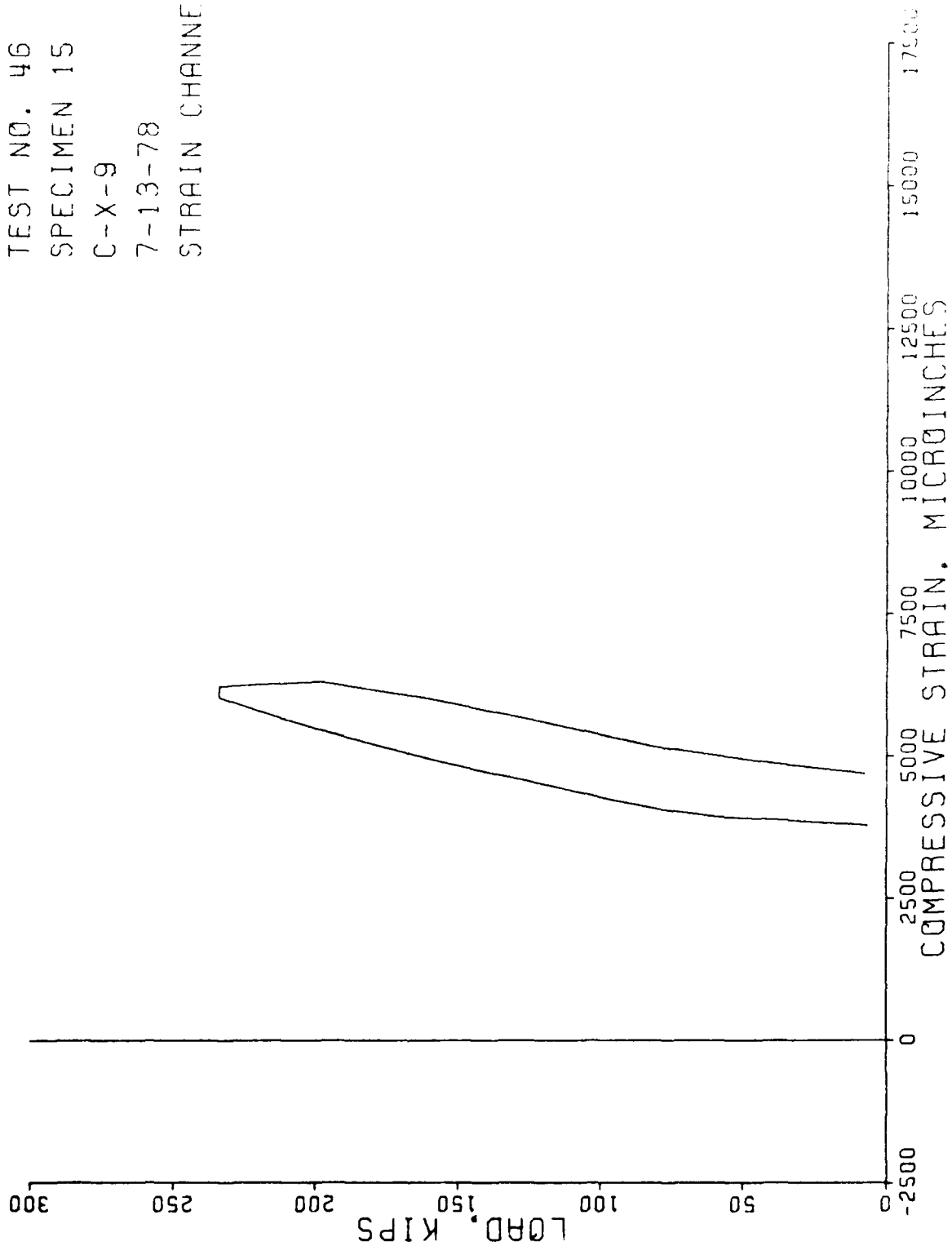
TEST NO. 46
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 38



TEST NO. 46
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 39



TEST NO. 46
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 40



TEST NO. 46 SPECIMEN 15 C-X-9 7-13-78

NUMBER OF INCREMENTS= 23
 NUMBER OF CHANNELS= 36
 NUMBER OF STRAIN CHANNELS= 12
 NUMBER OF DISPLACEMENT CHANNELS= 8
 NUMBER OF LOAD CHANNELS= 8
 NUMBER OF PRESSURE CHANNELS= 0
 NUMBER OF RODS= 8

CHANNEL ZEROSHIFT

57	0.0
56	0.0
55	0.0
54	0.0
53	0.0
52	0.0
51	0.0
50	0.0
41	0.0
40	0.0
39	0.0
38	0.0
37	0.0
36	0.0
35	0.0
34	0.0
33	0.0
32	0.0
31	0.0
30	0.0
29	0.0
28	0.0
27	0.0
26	0.0
25	0.0
22	0.0
21	0.0
20	0.0
19	0.0
18	0.0
17	0.0
16	0.0
15	0.0
14	0.0
13	0.0
12	0.0

CALIBRATION

STRAIN CHANNEL

41	1.000
40	1.000
39	1.000
38	1.000
37	1.000
36	1.000

35	1.000
34	1.000
33	1.000
32	1.000
31	1.000
30	1.000

DISPLACEMENT CHANNEL	CALIBRATION
19	0.001
18	0.001
17	0.002
16	0.002
15	0.002
14	0.002
13	0.002
12	0.002

LOAD CHANNEL	CALIBRATION
29	10.000
28	10.000
27	10.000
26	10.000
25	10.000
22	10.000
21	10.000
20	10.000

ROD CHANNEL	CALIBRATION
57	1.000
56	1.000
55	1.000
54	1.000
53	1.000
52	1.000
51	1.000
50	1.000

STRAIN CHANNELS

	TIME	CH.41	CH.40	CH.39	CH.38	CH.37	CH.36	CH.35	CH.34
1.	13:15:32:56	-105.000	-3783.000	-493.000	48.000	-363.000	-922.000	-193.000	-3179.000
2.	13:15:33:32	-113.000	-3793.000	-529.000	54.000	-384.000	-933.000	-206.000	-3191.000
3.	13:15:34:1	-113.000	-3823.000	-616.000	63.000	-439.000	-958.000	-236.000	-3222.000
4.	13:15:34:36	-175.000	-3886.000	-812.000	80.000	-562.000	-1007.000	-292.000	-3289.000
5.	13:15:35:9	-222.000	-3939.000	-997.000	76.000	-695.000	-1053.000	-354.000	-3356.000
6.	13:15:35:44	-262.000	-4073.000	-1145.000	19.000	-812.000	-1140.000	-609.000	-3499.000
7.	13:15:36:23	-323.000	-4264.000	-1271.000	-76.000	-912.000	-1286.000	-437.000	-3689.000
8.	13:15:37:11	-362.000	-4482.000	-1407.000	-149.000	-1010.000	-1427.000	-539.000	-3905.000
9.	13:15:37:49	-401.000	-4698.000	-1539.000	-215.000	-1105.000	-1568.000	-590.000	-4121.000
10.	13:15:38:30	-440.000	-4916.000	-1671.000	-282.000	-1197.000	-1710.000	-644.000	-4339.000
11.	13:15:39:24	-472.000	-5161.000	-1813.000	-336.000	-1239.000	-1848.000	-687.000	-4583.000
12.	13:15:40:34	-525.000	-5430.000	-1949.000	-416.000	-1388.000	-1996.000	-756.000	-4844.000
13.	13:15:41:10	-571.000	-5702.000	-2043.000	-488.000	-1466.000	-2036.000	-815.000	-5119.000
14.	13:15:42:17	-596.000	-5866.000	-2092.000	-526.000	-1508.000	-2127.000	-849.000	-5295.000
15.	13:15:43:26	-631.000	-6007.000	-2138.000	-575.000	-1551.000	-2171.000	-895.000	-5447.000
16.	13:15:44:7	-641.000	-6173.000	-2202.000	-568.000	-1586.000	-2192.000	-911.000	-5637.000
17.	13:15:45:14	-646.000	-6218.000	-2220.000	-567.000	-1596.000	-2197.000	-917.000	-5693.000
18.	13:15:46:30	-552.000	-6299.000	-2251.000	-384.000	-1562.000	-2028.000	-811.000	-5302.000
19.	13:15:47:14	-448.000	-5994.000	-2073.000	-231.000	-1417.000	-1862.000	-683.000	-5526.000
20.	13:15:48:53	-361.000	-5599.000	-1829.000	-108.000	-1237.000	-1601.000	-577.000	-5132.000
21.	13:15:50:28	-274.000	-5177.000	-1566.000	27.000	-1040.000	-1321.000	-663.000	-4695.000
22.	13:15:51:3	-186.000	-4889.000	-1232.000	143.000	-786.000	-1072.000	-335.000	-4344.000
23.	13:15:55:40	-92.000	-4685.000	-667.000	88.000	-445.000	-953.000	-190.000	-4117.000

STRAIN CHANNELS

TIME	CH. 33	CH. 32	CH. 31	CH. 30	CH.
1. 13:15:32:56	-416.000	-1232.000	-561.000	-14.000	
2. 13:15:33:32	-433.000	-1243.000	-604.000	-14.000	
3. 13:15:34:1	-489.000	-1265.000	-703.000	-23.000	
4. 13:15:34:36	-614.000	-1309.000	-917.000	-40.000	
5. 13:15:35:9	-732.000	-1356.000	-1112.000	-59.000	
6. 13:15:35:44	-828.000	-1394.000	-1276.000	-97.000	
7. 13:15:36:23	-924.000	-1523.000	-1413.000	-188.000	
8. 13:15:37:11	-1013.000	-1666.000	-1561.000	-262.000	
9. 13:15:37:49	-1099.000	-1808.000	-1703.000	-333.000	
10. 13:15:38:30	-1187.000	-1950.000	-1846.000	-405.000	
11. 13:15:39:24	-1276.000	-2089.000	-2000.000	-462.000	
12. 13:15:40:34	-1371.000	-2239.000	-2150.000	-546.000	
13. 13:15:43:10	-1448.000	-2332.000	-2252.000	-621.000	
14. 13:15:43:47	-1489.000	-2376.000	-2302.000	-658.000	
15. 13:15:44:26	-1532.000	-2421.000	-2344.000	-709.000	
16. 13:15:46:7	-1566.000	-2443.000	-2400.000	-705.000	
17. 13:15:47:14	-1577.000	-2446.000	-2416.000	-704.000	
18. 13:15:52:30	-1551.000	-2303.000	-2416.000	-555.000	
19. 13:15:53:14	-1432.000	-2057.000	-2237.000	-392.000	
20. 13:15:53:53	-1281.000	-1797.000	-1989.000	-268.000	
21. 13:15:54:28	-1105.000	-1525.000	-1704.000	-121.000	
22. 13:15:55:3	-368.000	-1362.000	-1335.000	-12.000	
23. 13:15:55:40	-502.000	-1251.000	-745.000	22.000	

DISPLACEMENT CHANNELS

TIME	CH.19	CH.18	CH.17	CH.16	CH.15	CH.14	CH.13	CH.12
1. 13:15:32:56	-0.001	0.0	0.026	0.054	0.076	0.064	0.076	-0.002
2. 13:15:33:32	-0.001	0.0	0.026	0.052	0.078	0.064	0.076	-0.002
3. 13:15:34:1	-0.001	0.0	0.026	0.054	0.078	0.064	0.076	-0.002
4. 13:15:34:36	-0.001	0.0	0.026	0.053	0.108	0.080	0.076	-0.002
5. 13:15:35:9	-0.001	0.0	0.026	0.084	0.110	0.086	0.076	-0.002
6. 13:15:35:44	-0.025	0.0	0.026	0.082	0.138	0.084	0.076	-0.002
7. 13:15:36:23	-0.025	0.0	0.026	0.084	0.136	0.086	0.078	-0.002
8. 13:15:37:11	-0.030	0.0	0.060	0.084	0.138	0.094	0.078	-0.002
9. 13:15:37:49	-0.029	0.0	0.056	0.112	0.132	0.114	0.078	-0.002
10. 13:15:38:30	-0.030	0.0	0.056	0.112	0.168	0.116	0.078	-0.002
11. 13:15:39:24	-0.030	0.0	0.056	0.112	0.168	0.116	0.078	-0.002
12. 13:15:40:34	-0.029	0.0	0.056	0.120	0.168	0.122	0.076	-0.002
13. 13:15:43:10	-0.029	0.0	0.056	0.138	0.176	0.132	0.078	-0.002
14. 13:15:43:47	-0.030	0.0	0.056	0.142	0.198	0.146	0.076	-0.002
15. 13:15:44:26	-0.029	0.0	0.056	0.138	0.200	0.148	0.076	-0.002
16. 13:15:46:7	-0.029	0.0	0.056	0.142	0.198	0.148	0.078	-0.002
17. 13:15:47:14	-0.029	0.0	0.056	0.140	0.198	0.144	0.078	-0.002
18. 13:15:52:30	-0.029	0.0	0.056	0.142	0.198	0.144	0.078	-0.002
19. 13:15:53:14	-0.029	0.0	0.056	0.112	0.172	0.132	0.078	-0.020
20. 13:15:53:53	-0.030	0.0	0.056	0.114	0.168	0.116	0.078	-0.022
21. 13:15:54:28	-0.030	0.0	0.056	0.084	0.138	0.114	0.076	-0.028
22. 13:15:55:3	-0.001	0.0	0.026	0.080	0.108	0.114	0.076	-0.030
23. 13:15:55:40	-0.001	0.0	0.026	0.080	0.108	0.1026	0.076	-0.002

LOAD CHANNELS

TIME	CH.29	CH.28	CH.27	CH.26	CH.25	CH.22	CH.21	CH.20
1. 13:15:32:56	3970.000	5050.000	6390.000	5970.000	7000.000	7540.000	7070.000	6160.000
2. 13:15:33:32	7140.000	7270.000	9080.000	10820.000	11020.000	10300.000	9860.000	8700.000
3. 13:15:34:11	13720.000	13650.000	16690.000	18800.000	20690.000	17790.000	17660.000	14600.000
4. 13:15:34:36	26570.000	27850.000	31520.000	37670.000	39870.000	35300.000	32670.000	28540.000
5. 13:15:35:09	39470.000	42400.000	47080.000	56190.000	59200.000	52740.000	46130.000	41990.000
6. 13:15:35:44	52920.000	55880.000	64460.000	74120.000	79380.000	69760.000	65050.000	54100.000
7. 13:15:36:23	68090.000	71660.000	80070.000	93670.000	98550.000	85450.000	80320.000	70740.000
8. 13:15:37:11	81370.000	85240.000	96240.000	113070.000	118030.000	105970.000	96210.000	84000.000
9. 13:15:37:49	94900.000	99000.000	112600.000	130420.000	138290.000	123540.000	112250.000	97470.000
10. 13:15:38:30	108040.000	113010.000	127740.000	149330.000	157320.000	141880.000	127010.000	111660.000
11. 13:15:39:24	121260.000	125550.000	143300.000	167600.000	176200.000	159660.000	142040.000	124500.000
12. 13:15:40:54	134610.000	141460.000	159010.000	185490.000	196040.000	177000.000	157390.000	140090.000
13. 13:15:43:10	147080.000	150740.000	174290.000	189440.000	214590.000	180600.000	172230.000	151320.000
14. 13:15:43:47	150440.000	156350.000	182670.000	193050.000	224390.000	183230.000	180340.000	157310.000
15. 13:15:44:26	157740.000	162830.000	190430.000	193380.000	233430.000	185060.000	188010.000	163690.000
16. 13:15:46:07	159410.000	164530.000	189980.000	198550.000	233220.000	189130.000	187610.000	165090.000
17. 13:15:47:14	158610.000	164520.000	190050.000	197610.000	233130.000	188940.000	187520.000	164860.000
18. 13:15:52:50	135050.000	148710.000	169460.000	190880.000	198320.000	183570.000	169710.000	146210.000
19. 13:15:53:14	108520.000	119650.000	136680.000	150040.000	159920.000	161530.000	137820.000	116010.000
20. 13:15:53:53	82060.000	90160.000	104350.000	116920.000	120200.000	125870.000	105210.000	88800.000
21. 13:15:54:28	54880.000	60930.000	71430.000	78980.000	81740.000	86890.000	71630.000	61800.000
22. 13:15:55:03	27210.000	30020.000	38060.000	41430.000	41630.000	46920.000	37870.000	32380.000
23. 13:15:55:40	3520.000	3910.000	6870.000	6170.000	7260.000	8140.000	7170.000	5720.000

R O D C H A N N E L S

TIME	CH.57	CH.56	CH.55	CH.54	CH.53	CH.52	CH.51	CH.50
1. 13:15:32:56	-25.624	730.272	1089.003	-948.073	294.671	12.812	76.871	1614.286
2. 13:15:33:32	-12.812	986.508	1165.874	-1012.132	333.107	12.812	76.871	1370.862
3. 13:15:34:1	102.494	1511.792	1293.991	-1140.250	307.483	-25.624	76.871	1063.379
4. 13:15:34:36	550.907	2664.854	1550.228	-1306.803	-25.624	-76.871	76.871	691.837
5. 13:15:35:9	986.508	3574.491	1729.593	-1345.239	-422.789	-294.671	89.683	550.907
6. 13:15:35:44	1332.427	4202.270	1896.146	-1409.298	-807.143	-614.966	76.871	461.225
7. 13:15:36:23	1524.604	4599.434	2242.064	-1639.910	-909.637	-730.272	76.871	640.590
8. 13:15:37:11	1716.781	4945.352	2459.865	-1755.216	-1050.567	-858.390	76.871	704.649
9. 13:15:37:49	1908.958	5252.836	2677.666	-1896.146	-1178.685	-973.697	76.871	794.331
10. 13:15:38:30	2088.323	5560.320	2895.466	-2037.076	-1217.121	-999.320	76.871	884.014
11. 13:15:39:24	2287.688	5829.367	3049.208	-2113.947	-1293.991	-1012.132	76.871	884.014
12. 13:15:40:34	2421.430	6085.602	3292.632	-2306.124	-1358.051	-1050.567	76.871	1037.756
13. 13:15:43:10	2472.677	6149.660	3510.433	-2459.865	-1409.293	-1076.191	76.871	1332.427
14. 13:15:43:47	2498.301	6188.098	3651.362	-2562.360	-1434.921	-1101.814	89.683	1511.792
15. 13:15:44:26	2498.301	6200.910	3792.292	-2690.478	-1434.921	-1101.814	76.871	1729.593
16. 13:15:46:7	2536.736	6239.344	3805.104	-2677.666	-1460.545	-1089.003	76.871	1691.157
17. 13:15:47:14	2559.548	6252.156	3805.104	-2677.666	-1447.733	-1063.379	76.871	1703.969
18. 13:15:52:30	2575.171	6252.156	3792.292	-2677.666	-1563.939	-1063.379	76.871	1806.462
19. 13:15:53:14	2024.264	5483.449	4074.152	-2997.961	-858.390	-550.907	76.871	2575.171
20. 13:15:53:53	1165.874	4125.398	4061.340	-3042.020	64.059	-128.118	89.683	2895.466
21. 13:15:54:28	730.272	3177.326	3625.739	-2805.784	320.295	38.435	76.871	2831.407
22. 13:15:55:3	333.107	2216.441	2818.595	-2242.064	409.978	51.247	76.871	2498.301
23. 13:15:55:40	-12.812	396.626	1332.427	-1063.379	128.118	25.624	76.871	2037.076

AVERAGE LOAD

1.	6143.750
2.	9273.750
3.	16706.250
4.	32498.750
5.	48400.000
6.	64487.500
7.	81443.750
8.	97391.250
9.	113558.750
10.	129498.750
11.	145025.000
12.	161386.250
13.	172286.250
14.	178347.500
15.	184133.750
16.	185815.000
17.	185655.000
18.	167738.750
19.	136896.250
20.	104196.250
21.	71035.000
22.	36940.000
23.	6095.000

3.1.6 RELOAD OF SPECIMEN #15

9

TEST NO. 47
COMPOSITE INTEGRAL LINER
1:1.5 LOADING RATIO
TESTED 13 JULY 1978

REACTION FRAME TEST SET-UP

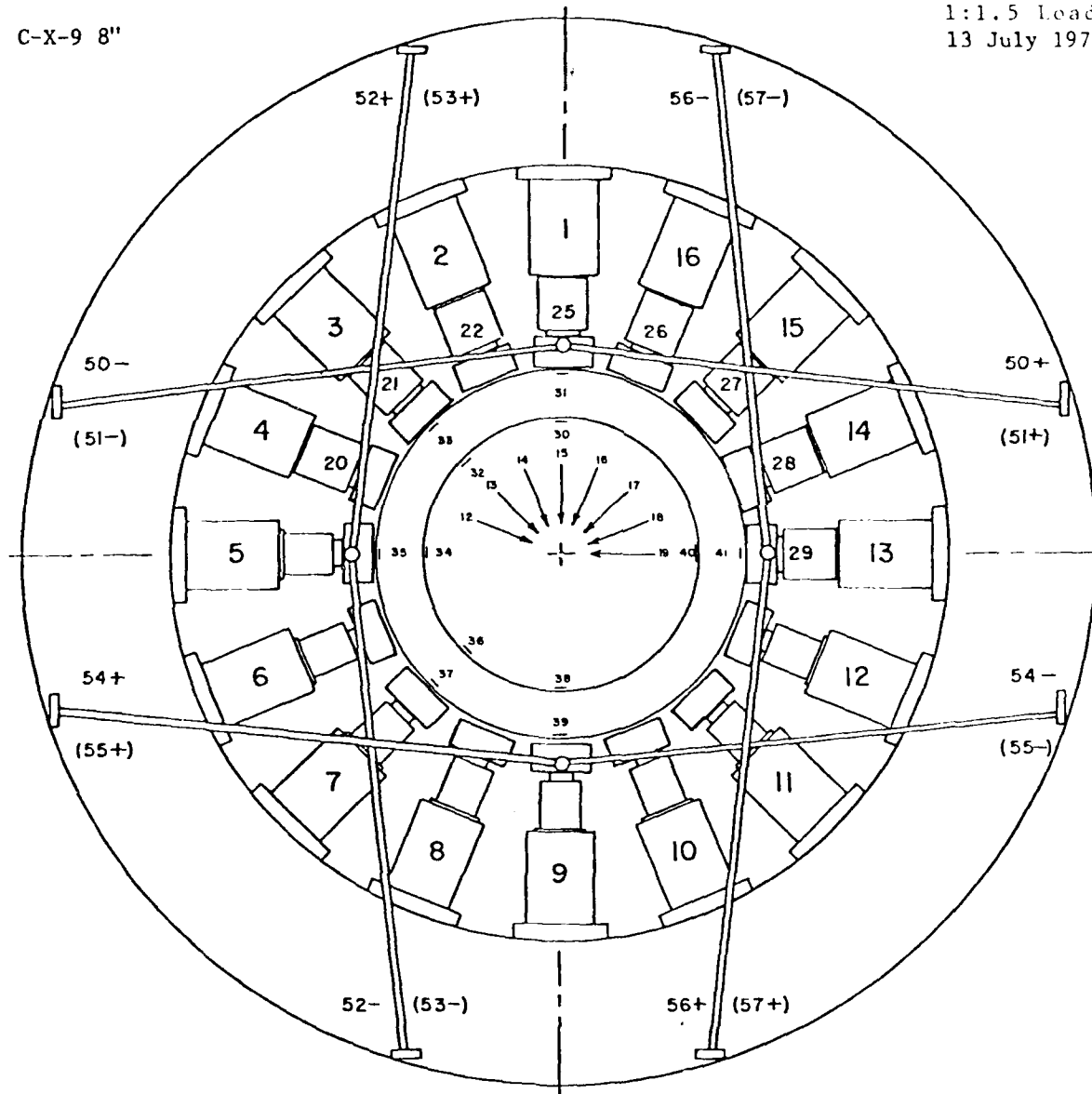
Specimen #15

C-X-9 8"

Test #47

1:1.5 Load

13 July 1978



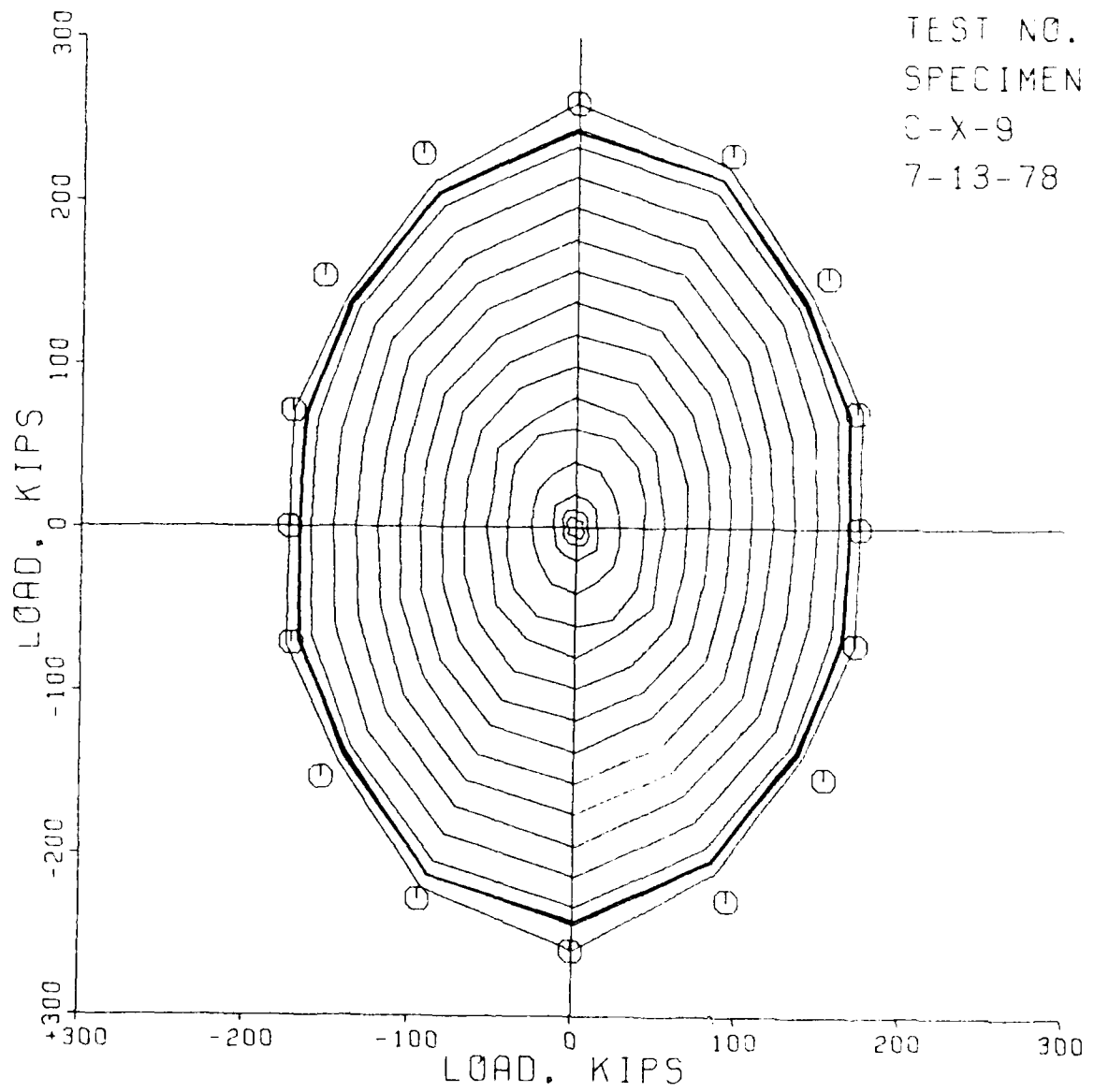
CH 12-19 Load axis I.D. (Research, Inc. Model 4040).

CH 20-22, 25-29 Axial load (Transducers, Inc. Model 693-300K).

CH 30-41 (Ailtech SG 129-6S) Radial pairs at center. Odd gages on Rebar.

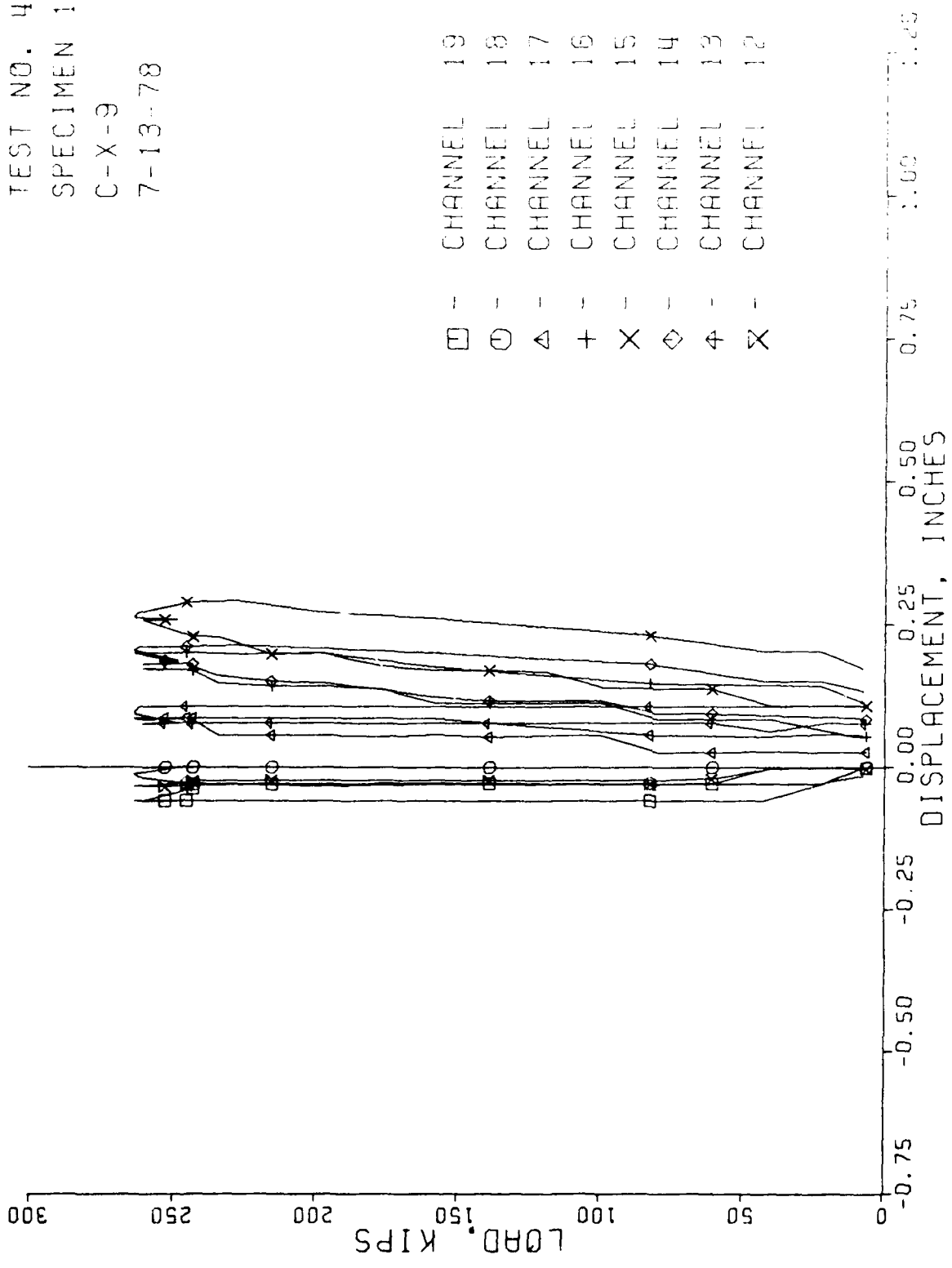
CH 50-57 (Ailtech SG 129-6S) Polarity indicates rod under tension.

Lower rod shown (XX).

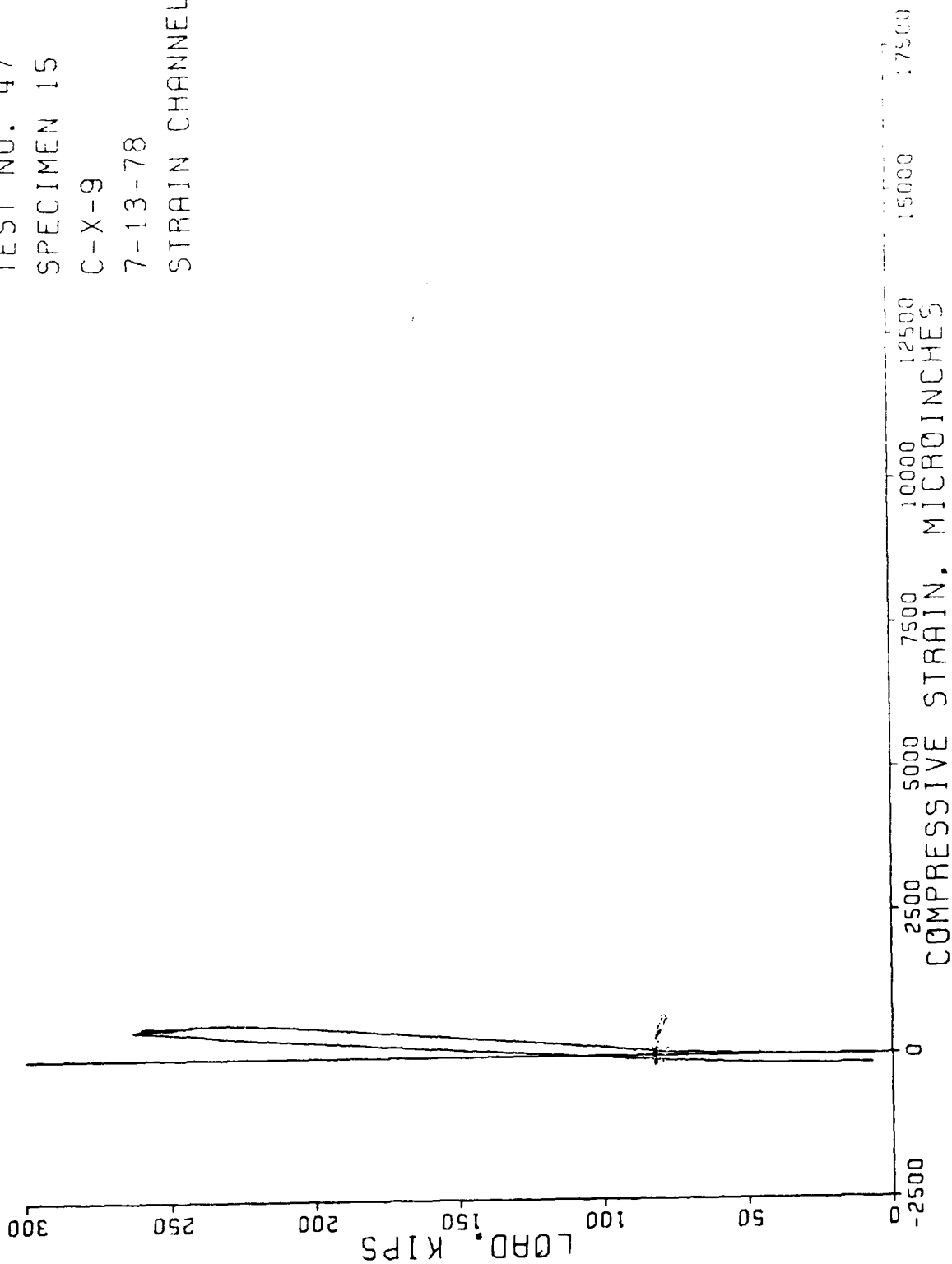


TEST NO. 47
SPECIMEN 15
C-X-9
7-13-78

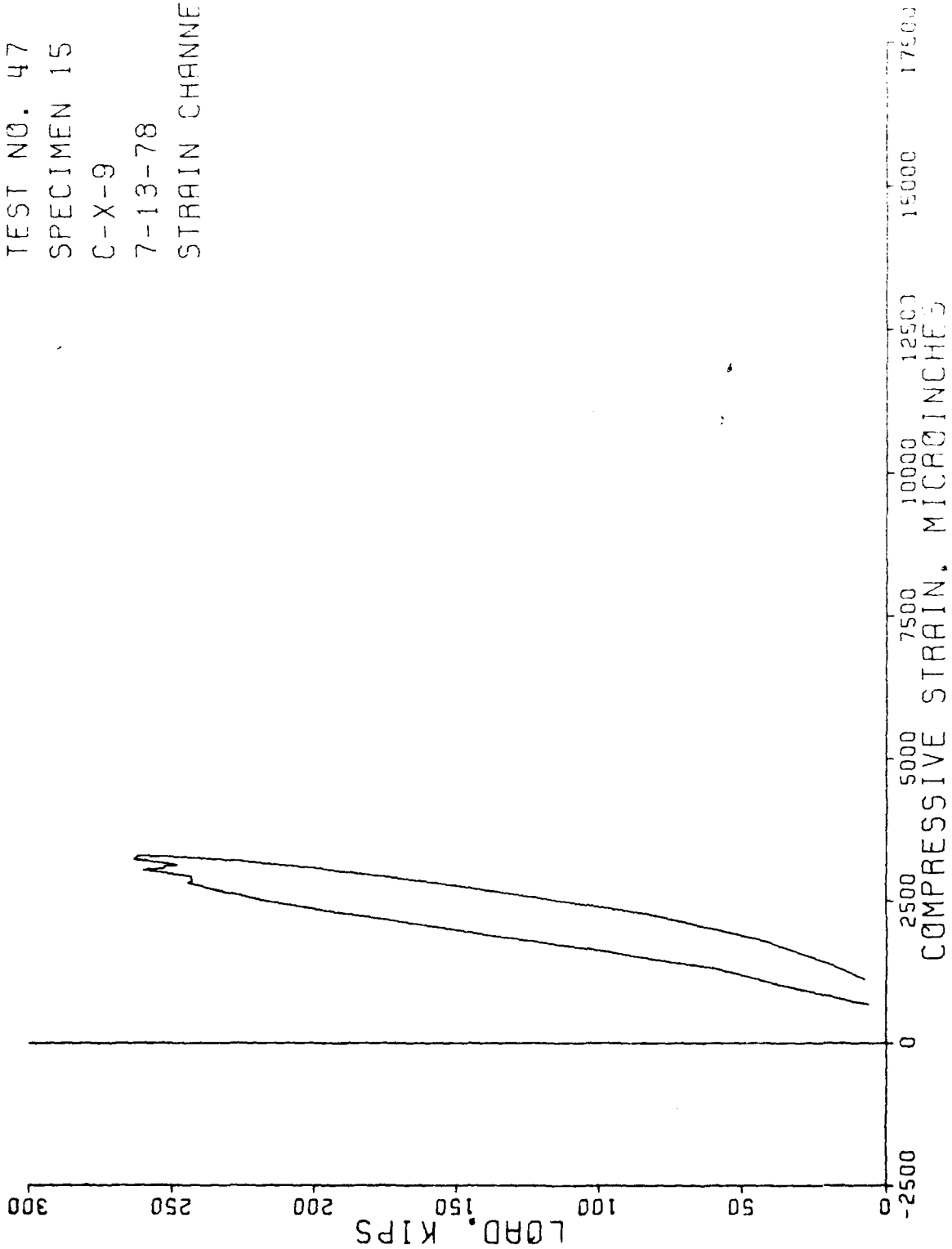
TEST NO. 47
 SPECIMEN 15
 C-X-9
 7-13-78



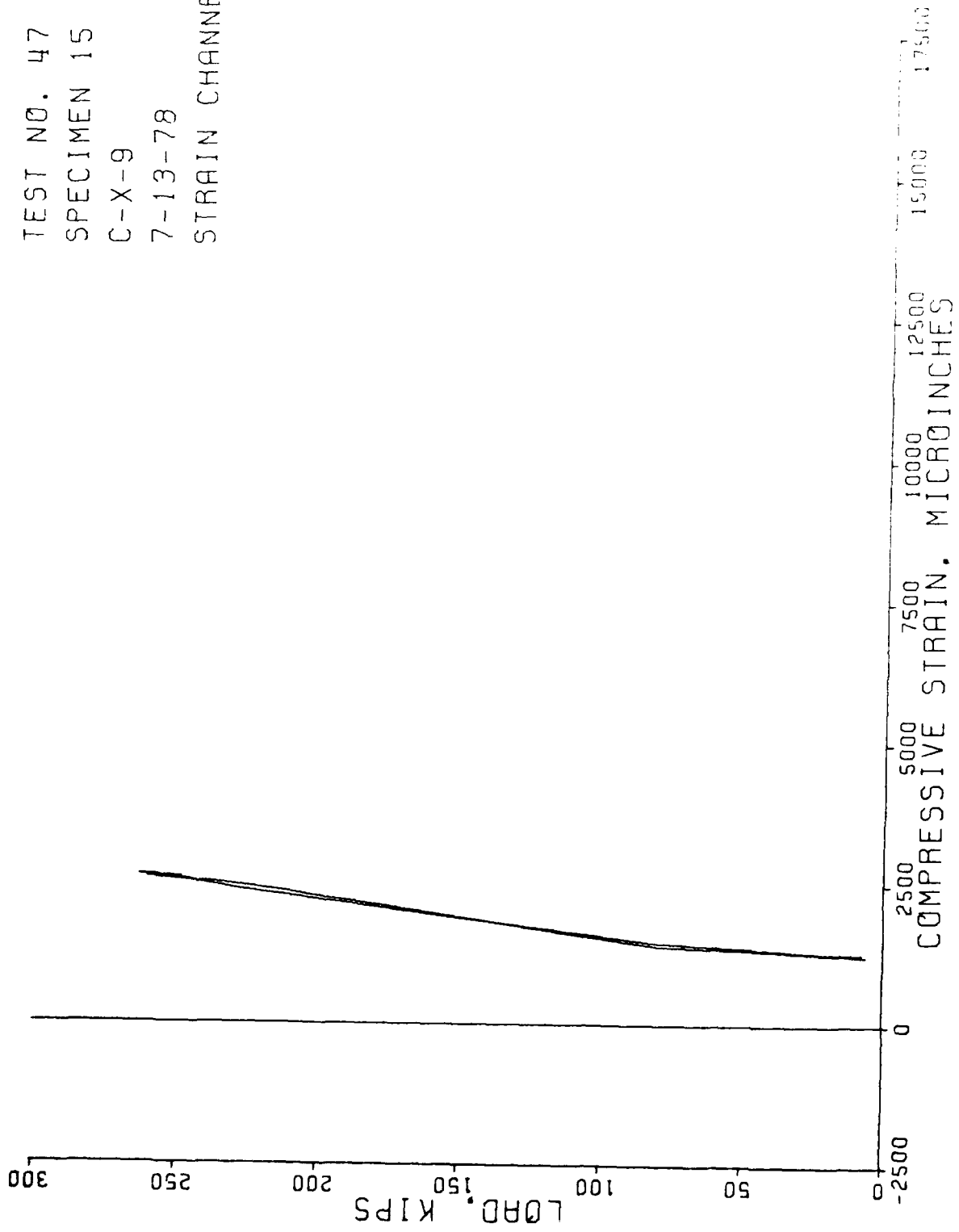
TEST NO. 47
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 30



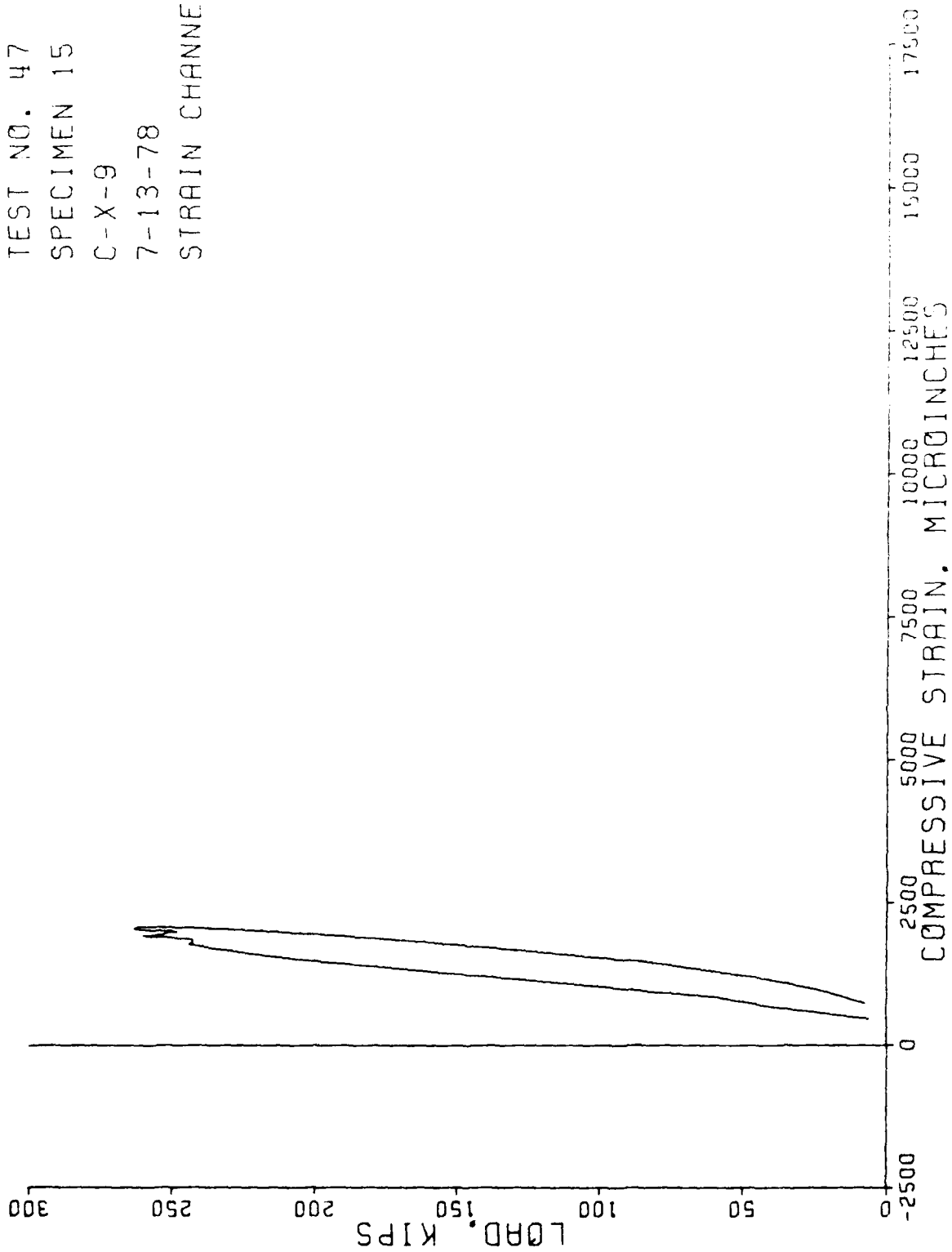
TEST NO. 47
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 31



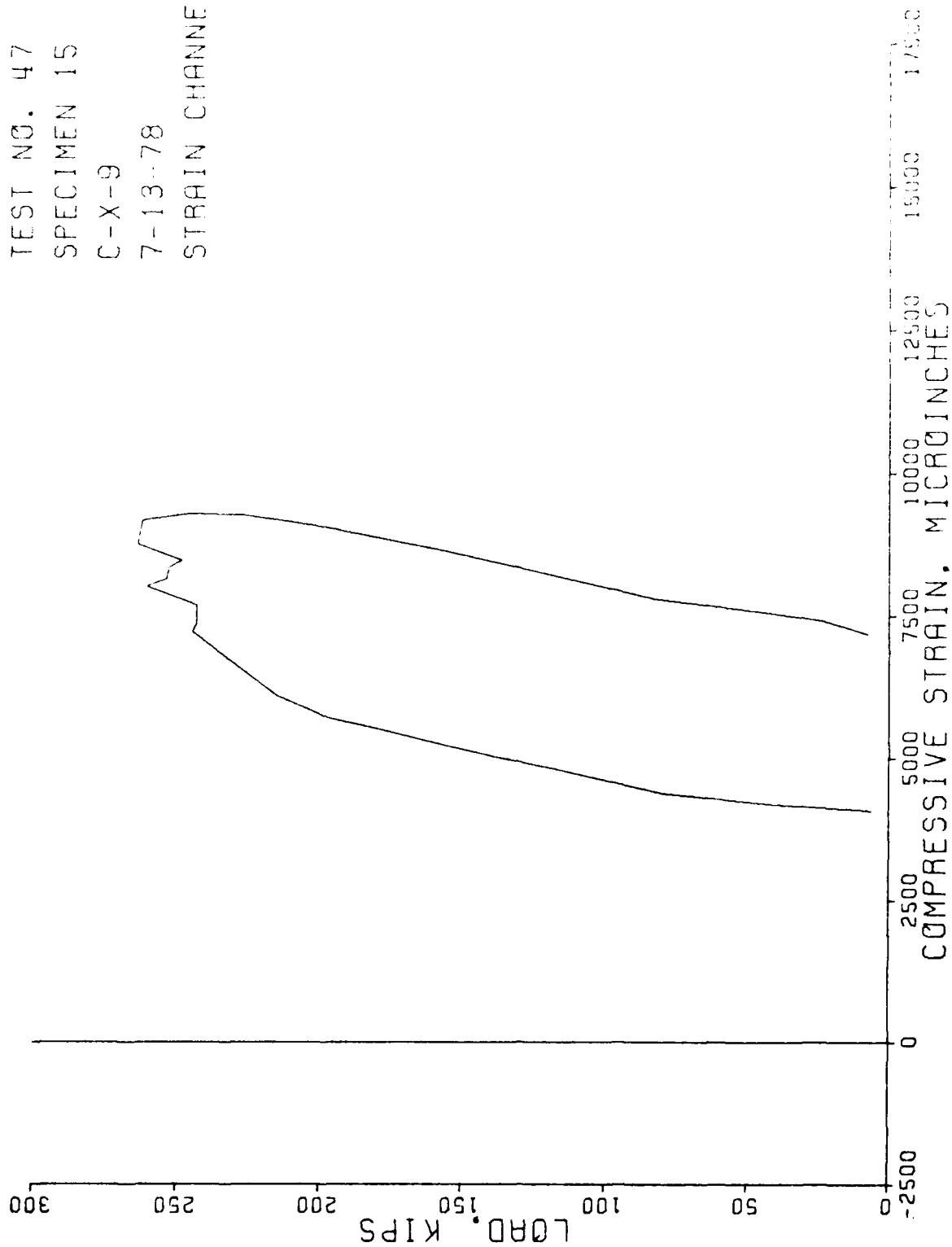
TEST NO. 47
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 32



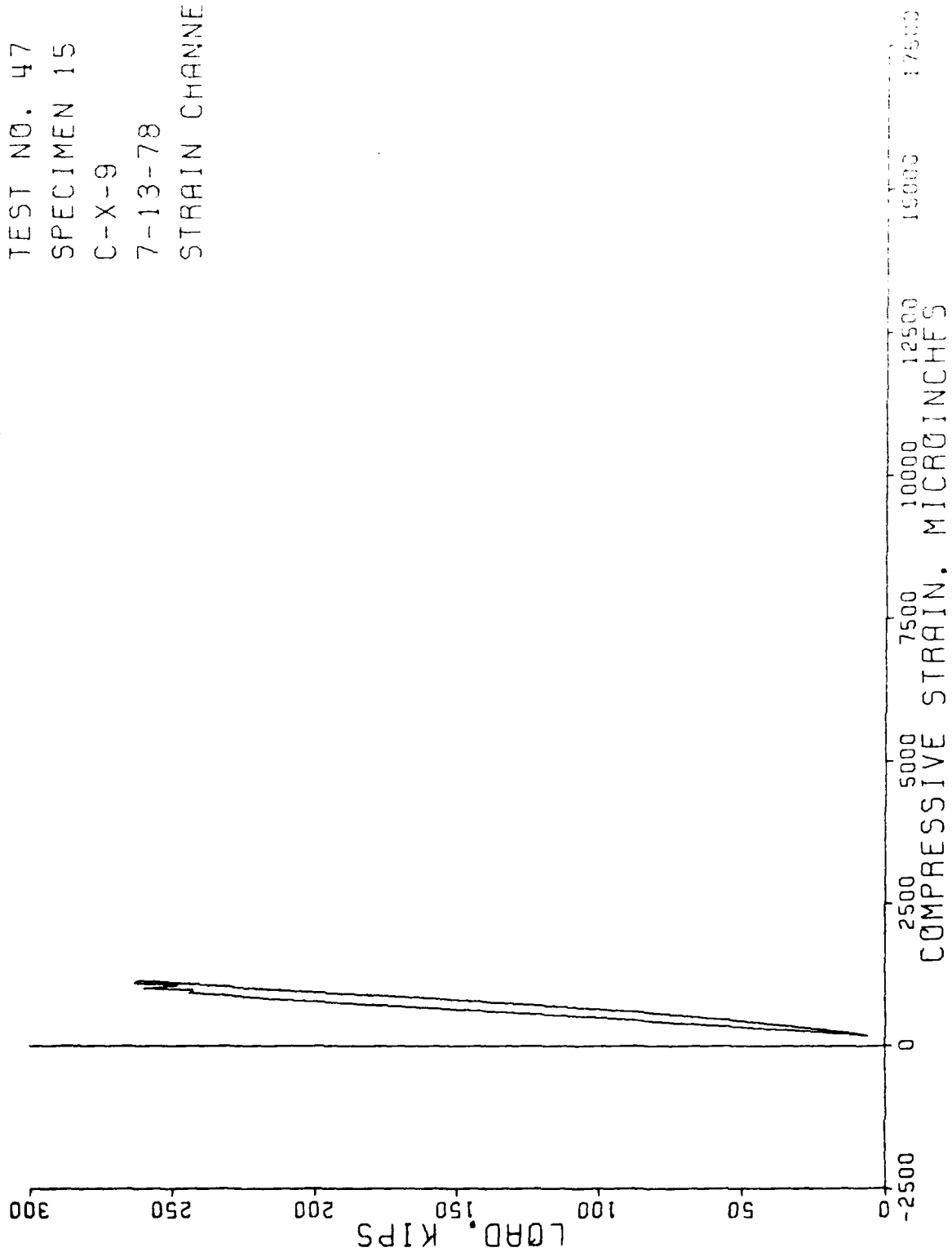
TEST NO. 47
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 33



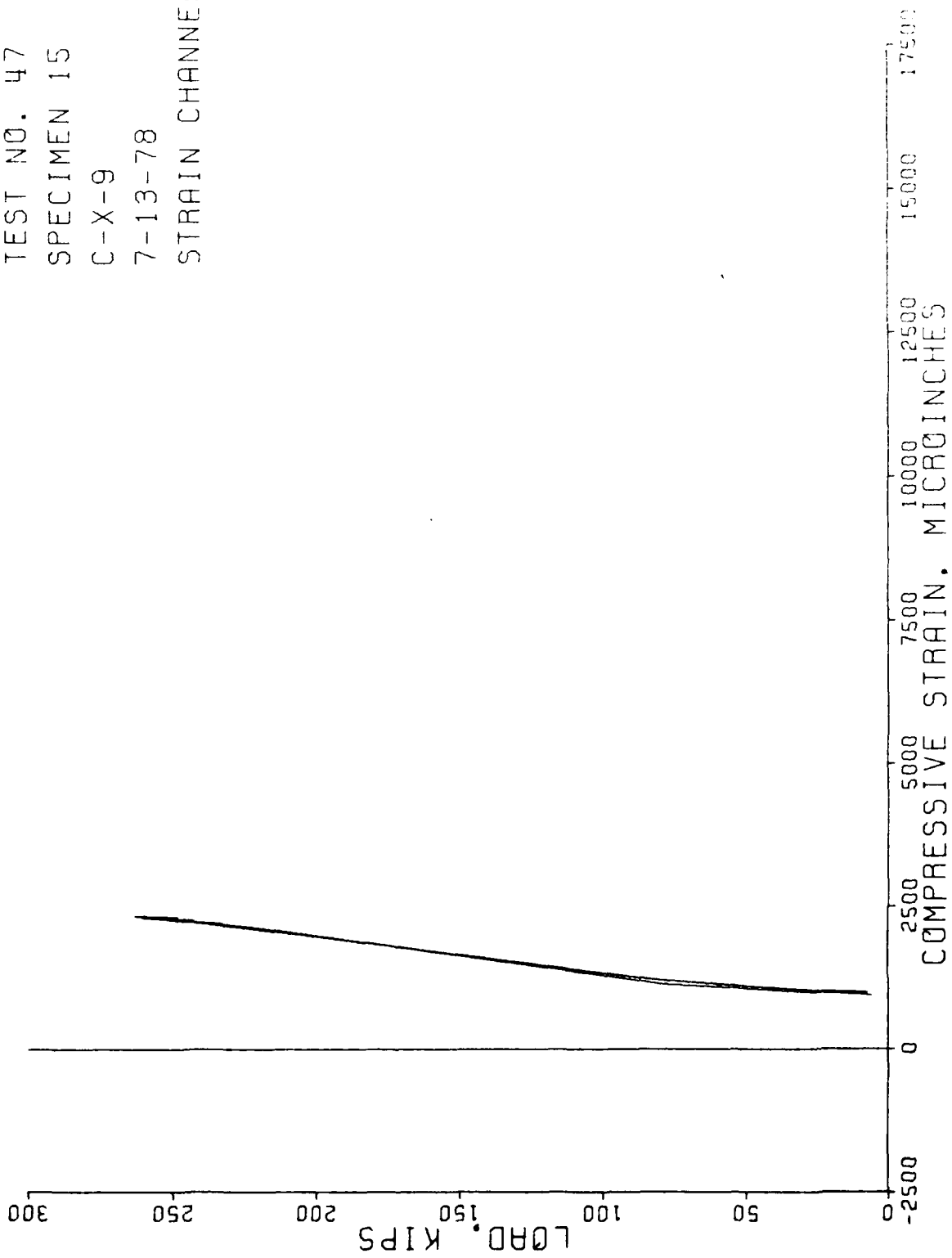
TEST NO. 47
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 34



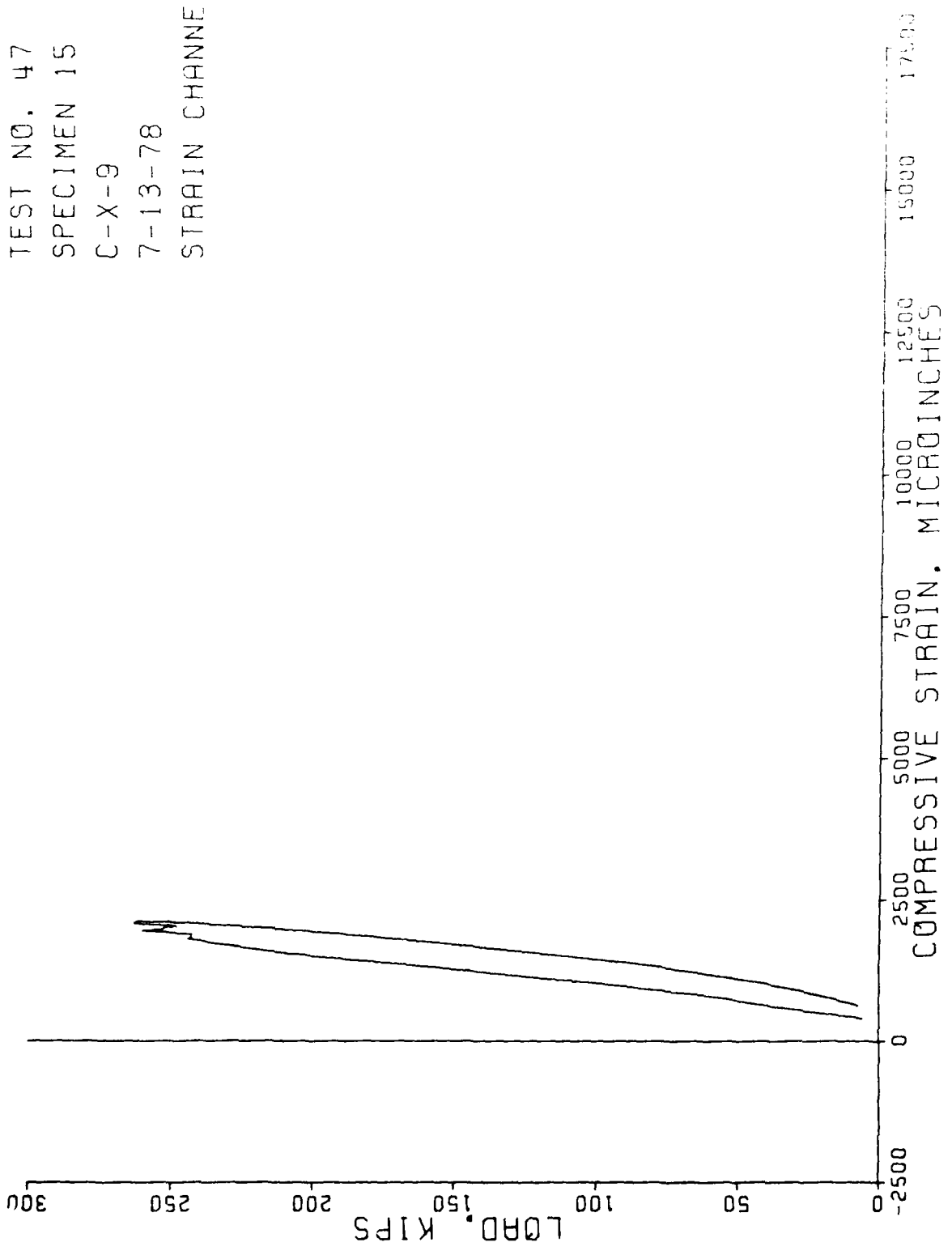
TEST NO. 47
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 35



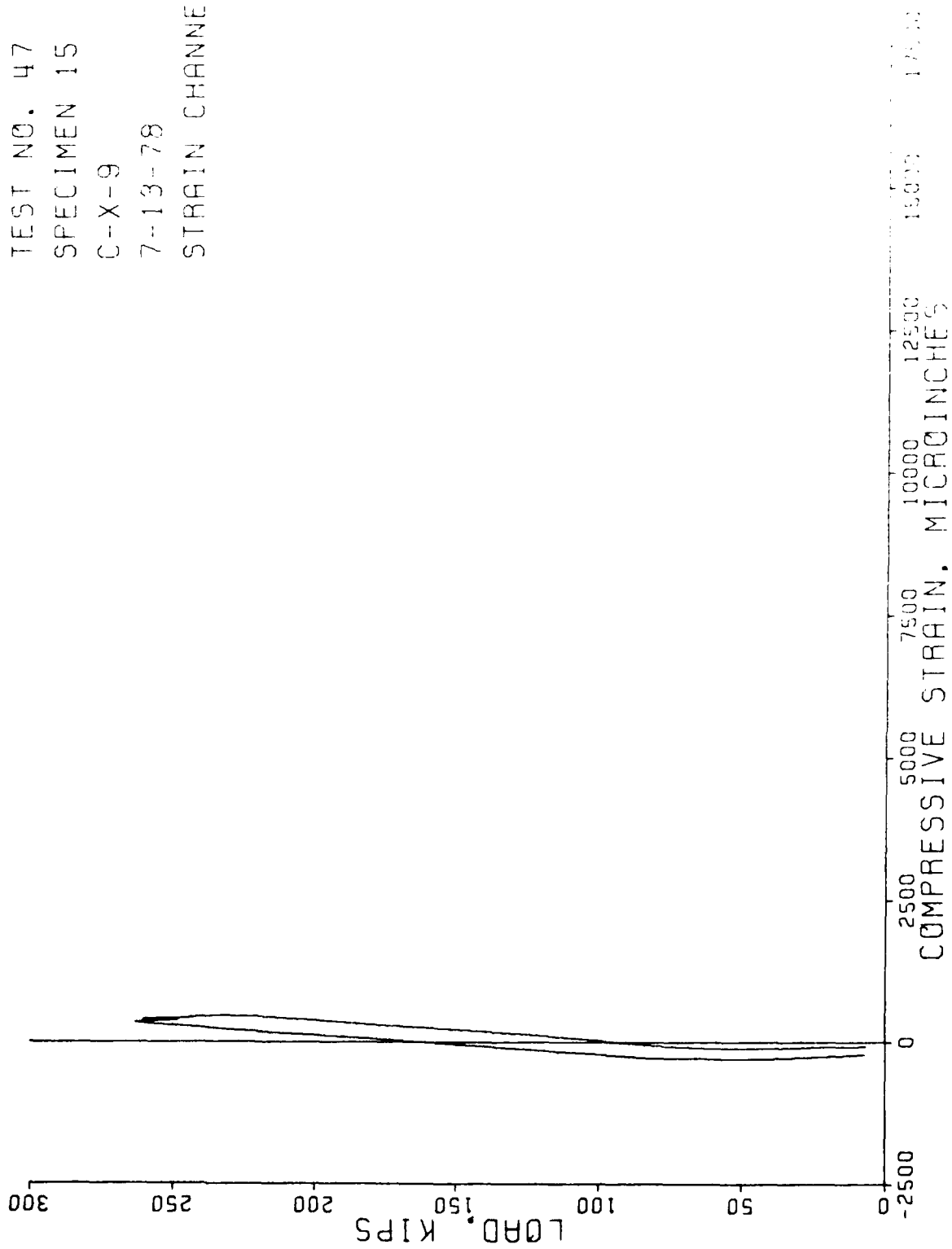
TEST NO. 47
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 36



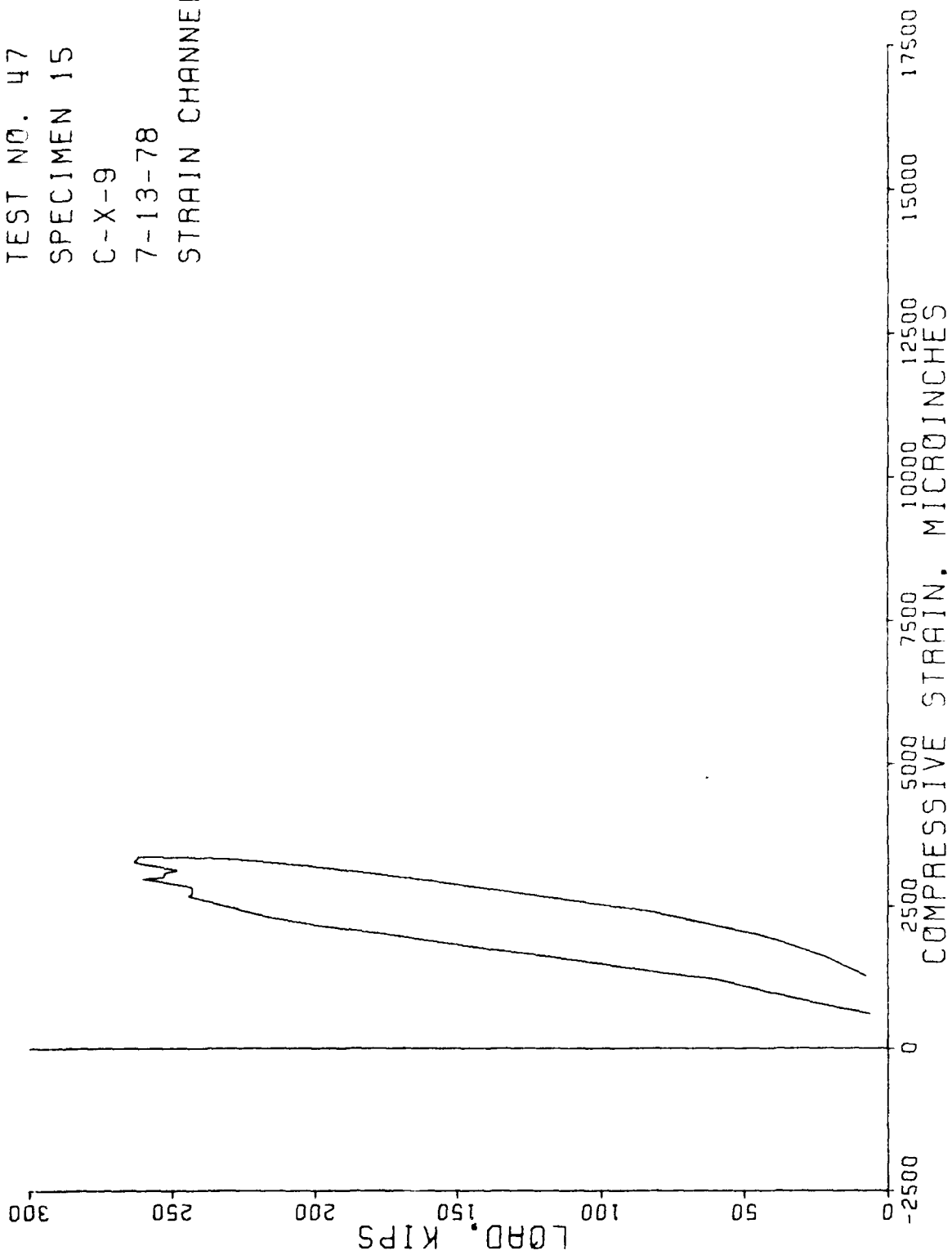
TEST NO. 47
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 37



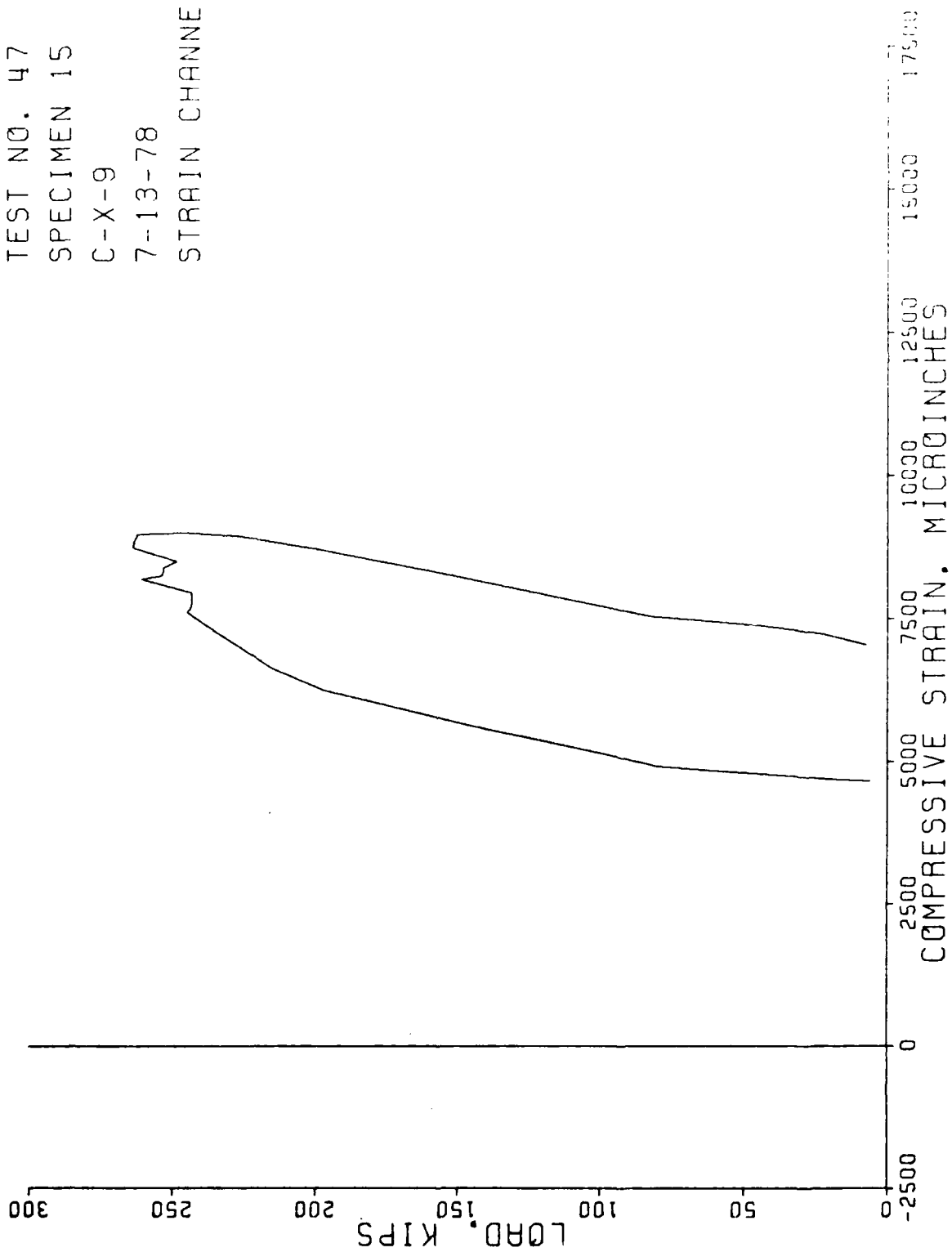
TEST NO. 47
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 38



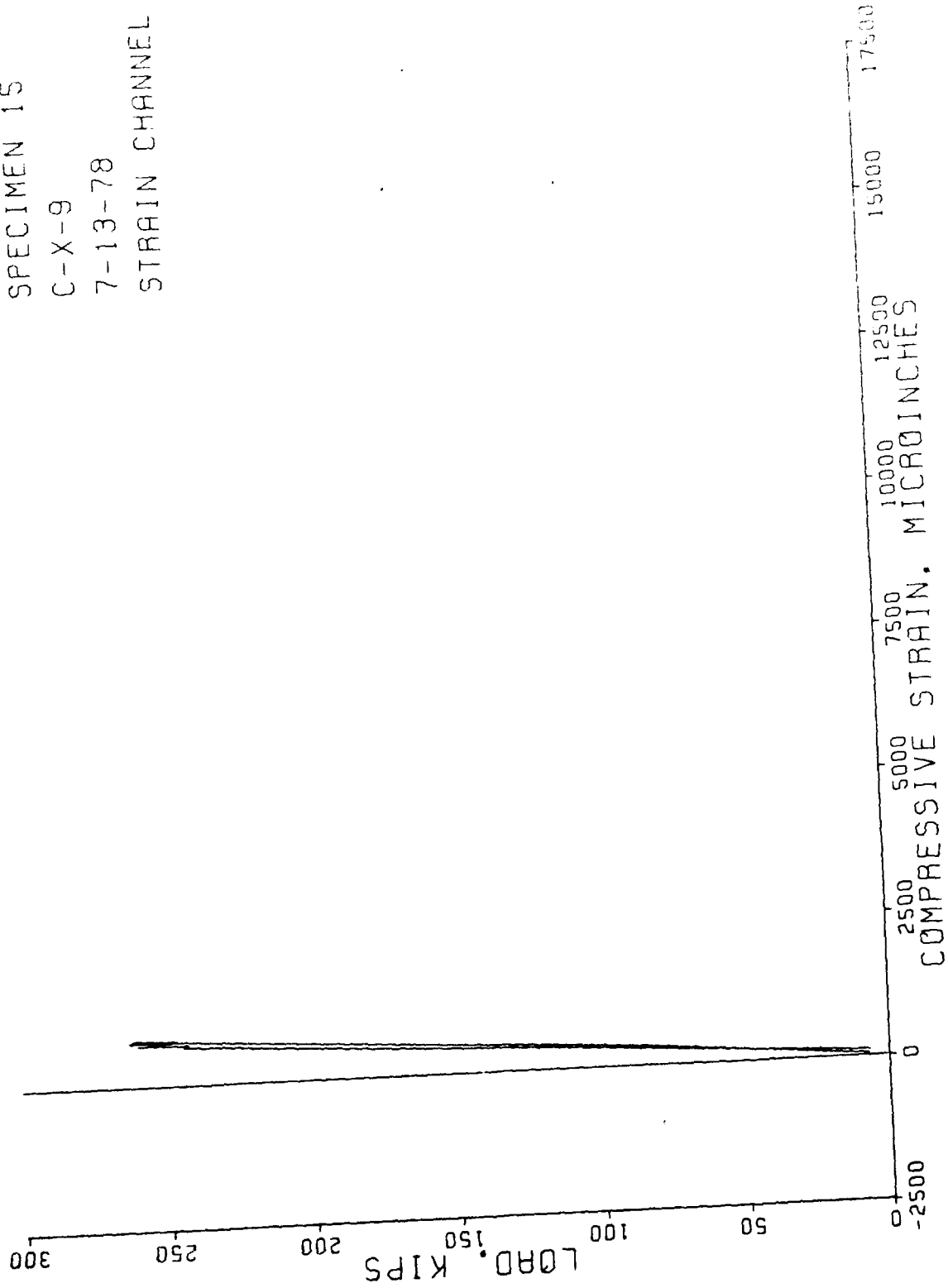
TEST NO. 47
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 39



TEST NO. 47
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 40



TEST NO. 47
SPECIMEN 15
C-X-9
7-13-78
STRAIN CHANNEL 41



TEST NO. 47 SPECIMEN 15 C-X-9 7-13-78

NUMBER OF INCREMENTS= 36
 NUMBER OF CHANNELS= 36
 NUMBER OF STRAIN CHANNELS= 12
 NUMBER OF DISPLACEMENT CHANNELS= 8
 NUMBER OF LOAD CHANNELS= 8
 NUMBER OF PRESSURE CHANNELS= 0
 NUMBER OF RODS= 8

CHANNEL ZEROSHIFT

57	0.0
56	0.0
55	0.0
54	0.0
53	0.0
52	0.0
51	0.0
50	0.0
41	0.0
40	0.0
39	0.0
38	0.0
37	0.0
36	0.0
35	0.0
34	0.0
33	0.0
32	0.0
31	0.0
30	0.0
29	0.0
28	0.0
27	0.0
26	0.0
25	0.0
22	0.0
21	0.0
20	0.0
19	0.0
18	0.0
17	0.0
16	0.0
15	0.0
14	0.0
13	0.0
12	0.0

STRAIN CHANNEL	CALIBRATION
41	1.000
40	1.000
39	1.000
38	1.000
37	1.000
36	1.000

1.000
1.000
1.000
1.000
1.000

CALIBRATION

0.001
0.001
0.002
0.002
0.002
0.002
0.002
0.002

DISPLACEMENT CHANNEL

35
34
33
32
31
30

19
18
17
16
15
14
13
12

CALIBRATION

10.000
10.000
10.000
10.000
10.000
10.000
10.000
10.000

LOAD CHANNEL

29
28
27
26
25
22
21
20

CALIBRATION

1.000
1.000
1.000
1.000
1.000
1.000
1.000
1.000

ROD CHANNEL

57
56
55
54
53
52
51
50

STRAIN CHANNELS

	TIME	CH.41	CH.40	CH.39	CH.38	CH.37	CH.36	CH.35	CH.34
1.	13:16: 8:59	-96.000	-4650.000	-600.000	78.000	-406.000	-942.000	-187.000	-4078.000
2.	13:16: 9:40	-105.000	-4665.000	-653.000	86.000	-435.000	-957.000	-200.000	-4095.000
3.	13:16:10:12	-130.000	-4692.000	-741.000	93.000	-492.000	-980.000	-234.000	-4125.000
4.	13:16:11: 0	-180.000	-4758.000	-957.000	111.000	-623.000	-1030.000	-299.000	-4193.000
5.	13:16:11:43	-231.000	-4832.000	-1216.000	110.000	-804.000	-1083.000	-367.000	-4282.000
6.	13:16:12:17	-271.000	-4918.000	-1330.000	62.000	-896.000	-1136.000	-424.000	-4392.000
7.	13:16:13: 8	-329.000	-5134.000	-1477.000	-31.000	-1007.000	-1232.000	-497.000	-4606.000
8.	13:16:13:52	-372.000	-5346.000	-1611.000	-108.000	-1105.000	-1424.000	-553.000	-4819.000
9.	13:16:14:41	-417.000	-5552.000	-1740.000	-183.000	-1200.000	-1554.000	-610.000	-5026.000
10.	13:16:15:33	-456.000	-5775.000	-1878.000	-246.000	-1295.000	-1706.000	-662.000	-5251.000
11.	13:16:16:23	-489.000	-6001.000	-2012.000	-304.000	-1384.000	-1836.000	-707.000	-5482.000
12.	13:16:17:20	-537.000	-6233.000	-2141.000	-379.000	-1477.000	-1975.000	-770.000	-5714.000
13.	13:16:18:23	-580.000	-6620.000	-2286.000	-438.000	-1575.000	-2106.000	-826.000	-6106.000
14.	13:16:19:50	-633.000	-7230.000	-2523.000	-464.000	-1714.000	-2215.000	-900.000	-6811.000
15.	13:16:20:34	-655.000	-7583.000	-2673.000	-437.000	-1794.000	-2256.000	-933.000	-7224.000
16.	13:16:21: 6	-665.000	-7686.000	-2709.000	-440.000	-1817.000	-2254.000	-947.000	-7366.000
17.	13:16:21:39	-672.000	-7747.000	-2738.000	-431.000	-1829.000	-2260.000	-956.000	-7449.000
18.	13:16:22:11	-676.000	-7799.000	-2764.000	-426.000	-1839.000	-2264.000	-964.000	-7517.000
19.	13:16:22:44	-681.000	-7847.000	-2787.000	-426.000	-1851.000	-2266.000	-971.000	-7580.000
20.	13:16:23:16	-684.000	-7894.000	-2809.000	-427.003	-1863.000	-2268.000	-977.000	-7647.000
21.	13:16:23:48	-689.000	-7932.000	-2828.000	-424.000	-1873.000	-2270.000	-982.000	-7700.000
22.	13:16:24:21	-705.000	-8173.000	-2970.000	-395.000	-1940.000	-2307.000	-1008.000	-8026.000
23.	13:16:24:53	-716.000	-8236.000	-3005.000	-390.000	-1953.000	-2302.000	-1027.000	-8157.000
24.	13:16:25:26	-724.000	-8306.000	-3038.000	-386.000	-1969.000	-2304.000	-1042.000	-8261.000
25.	13:16:25:58	-731.000	-8372.000	-3071.000	-383.000	-1982.000	-2308.000	-1055.000	-8354.000
26.	13:16:26:31	-749.000	-8482.000	-3130.000	-393.000	-2010.000	-2330.000	-1075.000	-8472.000
27.	13:16:26:47	-764.000	-8729.000	-3262.000	-350.000	-2060.000	-2349.000	-1096.000	-8764.000
28.	13:16:27:20	-805.000	-8958.000	-3358.000	-337.000	-2104.000	-2338.000	-1148.000	-9193.000
29.	13:16:27:52	-760.000	-8986.000	-3353.000	-273.000	-2079.000	-2249.000	-1099.000	-9301.000
30.	13:16:28:38	-696.000	-8919.000	-3316.000	-202.000	-2018.000	-2144.000	-1028.000	-9274.000
31.	13:16:29:28	-519.000	-8688.000	-3174.000	-107.000	-1912.000	-1969.000	-940.000	-9057.000
32.	13:16:30:11	-530.000	-8312.000	-2941.000	11.000	-1742.000	-1730.000	-836.000	-8676.000
33.	13:16:31:34	-324.000	-7529.000	-2391.000	287.000	-1332.000	-1224.000	-590.000	-7803.000
34.	13:16:32:22	-171.000	-7349.000	-1952.000	306.000	-1020.000	-1071.000	-400.000	-7547.000
35.	13:16:33:10	-91.000	-7212.000	-1609.000	263.000	-817.000	-1017.000	-291.000	-7396.000
36.	13:16:33:54	-43.000	-7030.000	-1263.000	231.000	-620.000	-987.000	-204.000	-7172.000

STRAIN CHANNELS

TIME	CH. 33	CH. 32	CH. 31	CH. 30	CH.
1. 13:16: 8:59	-467.000	-1240.000	-669.000	18.000	
2. 13:16: 9:40	-492.000	-1253.000	-729.000	17.000	
3. 13:16:10:12	-546.000	-1274.000	-832.000	7.000	
4. 13:16:11: 0	-679.000	-1321.000	-1066.000	-9.000	
5. 13:16:11:43	-849.000	-1368.000	-1331.000	-38.000	
6. 13:16:12:17	-923.000	-1396.000	-1459.000	-67.000	
7. 13:16:13: 8	-1024.000	-1521.000	-1619.000	-148.000	
8. 13:16:13:52	-1111.000	-1666.000	-1762.000	-228.000	
9. 13:16:14:41	-1197.000	-1809.000	-1900.000	-306.000	
10. 13:16:15:33	-1285.000	-1952.000	-2050.000	-373.000	
11. 13:16:16:23	-1370.000	-2085.000	-2191.000	-434.000	
12. 13:16:17:20	-1458.000	-2227.000	-2332.000	-509.000	
13. 13:16:18:23	-1557.000	-2352.000	-2490.000	-570.000	
14. 13:16:19:50	-1690.000	-2475.000	-2692.000	-597.000	
15. 13:16:20:34	-1773.000	-2515.000	-2817.000	-576.000	
16. 13:16:21: 6	-1798.000	-2514.000	-2850.000	-580.000	
17. 13:16:21:39	-1812.000	-2518.000	-2872.000	-570.000	
18. 13:16:22:11	-1824.000	-2522.000	-2891.000	-565.000	
19. 13:16:22:44	-1836.000	-2524.000	-2909.000	-565.000	
20. 13:16:23:16	-1850.000	-2526.000	-2926.000	-567.000	
21. 13:16:23:48	-1859.000	-2527.000	-2940.000	-565.000	
22. 13:16:24:21	-1922.000	-2565.000	-3052.000	-545.000	
23. 13:16:24:53	-1937.000	-2561.000	-3072.000	-536.000	
24. 13:16:25:26	-1951.000	-2564.000	-3093.000	-532.000	
25. 13:16:25:58	-1965.000	-2567.000	-3113.000	-529.000	
26. 13:16:26:31	-1991.000	-2580.000	-3143.000	-548.000	
27. 13:16:26:47	-2034.000	-2615.000	-3232.000	-506.000	
28. 13:16:27:20	-2081.000	-2600.000	-3296.000	-493.000	
29. 13:16:27:52	-2065.000	-2495.000	-3270.000	-436.000	
30. 13:16:28:38	-2027.000	-2350.000	-3217.000	-353.000	
31. 13:16:29:28	-1936.000	-2172.000	-3077.000	-258.000	
32. 13:16:30:11	-1798.000	-1921.000	-2838.000	-150.000	
33. 13:16:31:34	-1451.000	-1458.000	-2264.000	73.000	
34. 13:16:32:22	-1162.000	-1346.000	-1805.000	143.000	
35. 13:16:33:10	-948.000	-1232.000	-1455.000	159.000	
36. 13:16:33:54	-730.000	-1278.000	-1126.000	157.000	

DISPLACEMENT CHANNELS

TIME	CH.19	CH.18	CH.17	CH.16	CH.15	CH.14	CH.13	CH.12
1. 13:16: 8:59	-0.001	0.0	0.028	0.054	0.108	0.084	0.076	-0.002
2. 13:16: 9:40	-0.001	0.0	0.026	0.054	0.108	0.086	0.076	-0.002
3. 13:16:10:12	-0.001	0.0	0.026	0.064	0.108	0.088	0.078	0.0
4. 13:16:11: 0	-0.001	0.0	0.028	0.084	0.108	0.090	0.062	-0.002
5. 13:16:11:43	-0.029	0.0	0.026	0.084	0.138	0.094	0.078	-0.020
6. 13:16:12:17	-0.030	0.0	0.026	0.084	0.138	0.094	0.078	-0.022
7. 13:16:13: 8	-0.030	0.0	0.056	0.112	0.140	0.116	0.078	-0.022
8. 13:16:13:52	-0.030	0.0	0.054	0.112	0.168	0.116	0.078	-0.022
9. 13:16:14:41	-0.029	0.0	0.054	0.112	0.170	0.116	0.078	-0.022
10. 13:16:15:33	-0.029	0.0	0.056	0.112	0.170	0.122	0.078	-0.022
11. 13:16:16:23	-0.030	0.0	0.054	0.138	0.178	0.136	0.076	-0.022
12. 13:16:17:20	-0.030	0.0	0.056	0.142	0.200	0.148	0.078	-0.022
13. 13:16:18:23	-0.030	0.0	0.056	0.142	0.198	0.150	0.078	-0.022
14. 13:16:19:50	-0.030	0.0	0.086	0.148	0.228	0.160	0.078	-0.022
15. 13:16:20:34	-0.029	0.0	0.086	0.172	0.230	0.178	0.076	-0.022
16. 13:16:21: 6	-0.030	0.0	0.084	0.170	0.228	0.180	0.076	-0.022
17. 13:16:21:39	-0.030	0.0	0.086	0.170	0.238	0.180	0.078	-0.024
18. 13:16:22:11	-0.030	0.0	0.086	0.170	0.238	0.180	0.076	-0.024
19. 13:16:22:44	-0.030	0.0	0.086	0.170	0.230	0.180	0.076	-0.026
20. 13:16:23:16	-0.034	0.0	0.086	0.172	0.228	0.180	0.076	-0.026
21. 13:16:23:48	-0.037	0.0	0.086	0.170	0.228	0.180	0.078	-0.026
22. 13:16:24:21	-0.059	0.0	0.084	0.172	0.258	0.180	0.076	-0.032
23. 13:16:24:53	-0.059	0.0	0.084	0.170	0.258	0.180	0.078	-0.030
24. 13:16:25:26	-0.059	0.0	0.084	0.174	0.258	0.180	0.078	-0.030
25. 13:16:25:58	-0.059	0.0	0.086	0.184	0.258	0.186	0.078	-0.034
26. 13:16:26:31	-0.059	0.0	0.086	0.184	0.258	0.186	0.078	-0.032
27. 13:16:26:47	-0.059	-0.011	0.086	0.200	0.260	0.204	0.094	-0.032
28. 13:16:27:20	-0.059	-0.017	0.084	0.200	0.270	0.210	0.106	-0.032
29. 13:16:27:52	-0.059	-0.029	0.086	0.200	0.258	0.210	0.106	-0.032
30. 13:16:28:38	-0.059	-0.029	0.086	0.198	0.250	0.212	0.106	-0.030
31. 13:16:29:28	-0.059	-0.029	0.086	0.200	0.270	0.208	0.106	-0.032
32. 13:16:30:11	-0.059	-0.028	0.086	0.176	0.260	0.200	0.106	-0.030
33. 13:16:31:34	-0.059	-0.029	0.056	0.146	0.230	0.180	0.106	-0.030
34. 13:16:32:22	-0.059	-0.029	0.054	0.144	0.202	0.150	0.106	-0.030
35. 13:16:33:10	-0.030	-0.029	0.058	0.142	0.202	0.150	0.108	-0.030
36. 13:16:33:54	-0.001	-0.015	0.056	0.112	0.172	0.132	0.106	0.0

LOAD CHANNELS

TIME	CH.29	CH.28	CH.27	CH.26	CH.25	CH.22	CH.21	CH.20
1. 13:16: 8:59	3870.000	4180.000	6430.000	5380.000	6210.000	7430.000	6540.000	5730.000
2. 13:16: 9:40	7160.000	8030.000	9900.000	11040.000	11020.000	11510.000	10460.000	8910.000
3. 13:16:10:12	13720.000	13550.000	17230.000	18870.000	20530.000	20530.000	17600.000	14490.000
4. 13:16:11: 0	26900.000	27800.000	31450.000	37810.000	40320.000	35110.000	32640.000	28550.000
5. 13:16:11:43	41560.000	45660.000	53200.000	59430.000	60510.000	60470.000	52720.000	43770.000
6. 13:16:12:17	54270.000	55600.000	67720.000	74750.000	79840.000	70210.000	67780.000	54820.000
7. 13:16:13: 8	67790.000	73350.000	82790.000	96010.000	98940.000	91390.000	82650.000	71560.000
8. 13:16:13:52	81400.000	87710.000	99270.000	115020.000	118700.000	109020.000	98990.000	85560.000
9. 13:16:14:41	94750.000	101620.000	115110.000	132320.000	138600.000	125240.000	114570.000	99220.000
10. 13:16:15:33	107710.000	115730.000	130370.000	151400.000	157720.000	143850.000	129510.000	112980.000
11. 13:16:16:23	120800.000	128180.000	146760.000	169090.000	176540.000	161030.000	145550.000	125220.000
12. 13:16:17:20	134040.000	143120.000	161940.000	185990.000	196670.000	177530.000	160200.000	140020.000
13. 13:16:18:23	147290.000	157850.000	177170.000	204330.000	214990.000	195560.000	174940.000	154710.000
14. 13:16:19:50	161210.000	173440.000	191350.000	222680.000	233700.000	212890.000	188260.000	170470.000
15. 13:16:20:34	167500.000	181020.000	197390.000	231760.000	244290.000	221930.000	193940.000	177360.000
16. 13:16:21: 6	167900.000	180490.000	198680.000	231470.000	242740.000	221280.000	195490.000	177060.000
17. 13:16:21:39	167860.000	180950.000	198560.000	231440.000	242710.000	221020.000	193300.000	177360.000
18. 13:16:22:11	167880.000	181290.000	198870.000	231460.000	242740.000	220870.000	192620.000	177930.000
19. 13:16:22:44	167940.000	181480.000	198230.000	231470.000	242770.000	220780.000	192780.000	178180.000
20. 13:16:23:16	167940.000	181620.000	197450.000	231460.000	242640.000	220750.000	194080.000	178290.000
21. 13:16:23:48	167910.000	181830.000	197580.000	231470.000	242630.000	220640.000	194270.000	178320.000
22. 13:16:24:21	174050.000	189450.000	203290.000	240320.000	260180.000	228880.000	198140.000	185350.000
23. 13:16:24:53	174310.000	188750.000	201000.000	239800.000	253090.000	228920.000	197620.000	184750.000
24. 13:16:25:26	174450.000	188730.000	200850.000	239780.000	252580.000	228690.000	197400.000	184690.000
25. 13:16:25:58	174450.000	189080.000	200870.000	239750.000	252550.000	228540.000	197250.000	185110.000
26. 13:16:26:31	176670.000	190650.000	201850.000	244750.000	248070.000	233130.000	198240.000	185790.000
27. 13:16:26:47	181380.000	196550.000	204200.000	249790.000	263260.000	239810.000	198770.000	191930.000
28. 13:16:27:20	181000.000	196510.000	206610.000	249830.000	261570.000	238450.000	202920.000	192220.000
29. 13:16:27:52	168100.000	184020.000	205910.000	236700.000	245000.000	230480.000	201490.000	180480.000
30. 13:16:28:38	153980.000	169530.000	192260.000	218400.000	226770.000	222210.000	168810.000	165280.000
31. 13:16:29:28	134070.000	147240.000	169280.000	191170.000	197930.000	201240.000	166770.000	142380.000
32. 13:16:30:11	108460.000	119470.000	136510.000	155090.000	158670.000	165090.000	137930.000	114990.000
33. 13:16:31:34	54620.000	61060.000	71820.000	79360.000	82010.000	88090.000	72090.000	61680.000
34. 13:16:32:22	26930.000	30010.000	38310.000	41620.000	42130.000	47890.000	37930.000	32190.000
35. 13:16:33:10	13610.000	14320.000	21070.000	21290.000	22340.000	25730.000	20770.000	17170.000
36. 13:16:33:54	3560.000	3770.000	7430.000	6500.000	7340.000	9180.000	7470.000	5470.000

R O D C H A N N E L S

	TIME	CH. 57	CH. 56	CH. 55	CH. 54	CH. 53	CH. 52	CH. 51	CH. 50
1.	13:16: 8:59	-12.812	858.390	1217.121	-1012.132	166.553	25.624	89.683	1819.275
2.	13:16: 9:40	51.247	1191.497	1268.368	-1076.191	192.177	0.0	76.371	1498.980
3.	13:16:10:12	179.365	1614.286	1396.466	-1178.685	204.989	0.0	89.683	1204.309
4.	13:16:11: 0	653.402	2754.536	1639.910	-1332.427	-128.118	-89.683	76.871	858.390
5.	13:16:11:43	1153.062	3779.480	1908.958	-1434.921	-602.154	-320.295	76.871	768.708
6.	13:16:12:17	1319.615	4112.586	2075.511	-1473.357	-755.896	-486.848	717.461	717.461
7.	13:16:13: 8	1537.416	4548.188	2306.124	-1614.286	-884.014	-602.154	76.871	717.461
8.	13:16:13:52	1716.781	4881.293	2511.112	-1729.593	-1024.944	-743.084	89.683	807.143
9.	13:16:14:41	1883.334	5163.152	2703.289	-1844.899	-1114.626	-832.767	884.014	884.014
10.	13:16:15:33	2062.699	5470.637	2895.466	-1960.205	-1204.309	-871.202	76.871	922.449
11.	13:16:16:23	2229.253	5726.871	3074.892	-2049.888	-1242.744	-884.014	76.871	960.885
12.	13:16:17:20	2382.994	5957.484	3241.385	-2190.817	-1281.180	-896.826	89.683	1050.567
13.	13:16:18:23	2536.736	6162.473	3420.750	-2306.124	-1319.615	-909.637	76.871	1127.438
14.	13:16:19:50	2677.666	6341.840	3600.115	-2408.618	-1345.239	-884.014	76.871	1229.933
15.	13:16:20:34	2754.536	6469.957	3625.739	-2370.183	-1396.486	-922.449	76.871	1191.497
16.	13:16:21: 6	2741.725	6431.520	3651.362	-2370.183	-1370.862	-871.202	76.871	1217.121
17.	13:16:21:39	2741.725	6431.520	3651.362	-2370.183	-1370.862	-858.390	76.871	1229.933
18.	13:16:22:11	2741.725	6444.332	3664.174	-2357.371	-1383.674	-845.579	76.871	1242.744
19.	13:16:22:44	2741.725	6444.332	3651.362	-2357.371	-1409.298	-845.579	76.871	1255.556
20.	13:16:23:16	2754.536	6444.332	3664.174	-2344.559	-1409.298	-845.579	89.683	1268.368
21.	13:16:23:48	2767.348	6469.957	3049.208	-2357.371	-1422.109	-832.767	76.871	1281.180
22.	13:16:24:21	2831.407	6559.641	3664.174	-2306.124	-1434.921	-871.202	76.871	1217.121
23.	13:16:24:53	2792.972	6521.203	3715.421	-2306.124	-1409.298	-807.143	76.871	1242.744
24.	13:16:25:26	2805.784	6508.391	3728.233	-2306.124	-1409.298	-807.143	76.871	1255.556
25.	13:16:25:58	2818.595	6508.391	3715.421	-2306.124	-1460.545	-794.331	76.871	1281.180
26.	13:16:26:31	2808.278	6598.074	3766.668	-2331.747	-1396.486	-794.331	89.683	1217.121
27.	13:16:26:47	2833.902	6585.262	3766.668	-2203.629	-1486.168	-807.143	76.871	1204.309
28.	13:16:27:13	2846.713	6457.145	3856.351	-2190.817	-1498.980	-730.272	76.871	1281.180
29.	13:16:27:52	2959.525	6418.707	3869.163	-2178.006	-1639.910	-781.520	76.871	1434.921
30.	13:16:28:38	3023.584	6457.145	4035.716	-2344.559	-1832.087	-871.202	76.871	1832.087
31.	13:16:29:28	2998.301	5765.309	4240.703	-2613.607	-1140.250	-525.284	76.871	2370.183
32.	13:16:30:11	1742.405	4740.363	4343.199	-2792.972	-217.801	-102.494	89.683	2857.031
33.	13:16:31:34	781.520	2933.902	3933.222	-2652.042	345.918	307.483	76.871	3126.079
34.	13:16:32:22	409.978	2062.699	3126.079	-2126.758	409.918	140.930	89.683	2728.913
35.	13:16:33:10	192.177	1486.168	2447.053	-1703.969	345.918	51.247	89.683	2536.736
36.	13:16:33:54	12.812	845.579	1537.416	-1050.567	166.553	38.435	76.871	2152.382

AVERAGE LOAD

1.	5721.250
2.	9753.750
3.	16768.750
4.	32572.500
5.	52165.000
6.	65623.750
7.	83060.000
8.	99458.750
9.	115178.750
10.	131158.750
11.	146646.250
12.	162438.750
13.	178355.000
14.	194250.000
15.	201923.750
16.	201888.750
17.	201425.000
18.	201332.500
19.	201453.750
20.	201778.750
21.	201856.250
22.	210020.000
23.	208530.000
24.	208396.250
25.	203450.000
26.	209893.750
27.	215711.250
28.	216138.750
29.	206522.500
30.	192155.000
31.	168747.500
32.	137026.250
33.	71341.250
34.	37126.250
35.	19537.500
36.	6340.000

3.1.7 SPECIMEN #20
(RETEST OF SPECIMEN #14)

TEST NO. 49
COMPOSITE INTEGRAL LINER
1:2 LOADING RATIO
TESTED 4 AUGUST 1978

REACTION FRAME TEST SET-UP

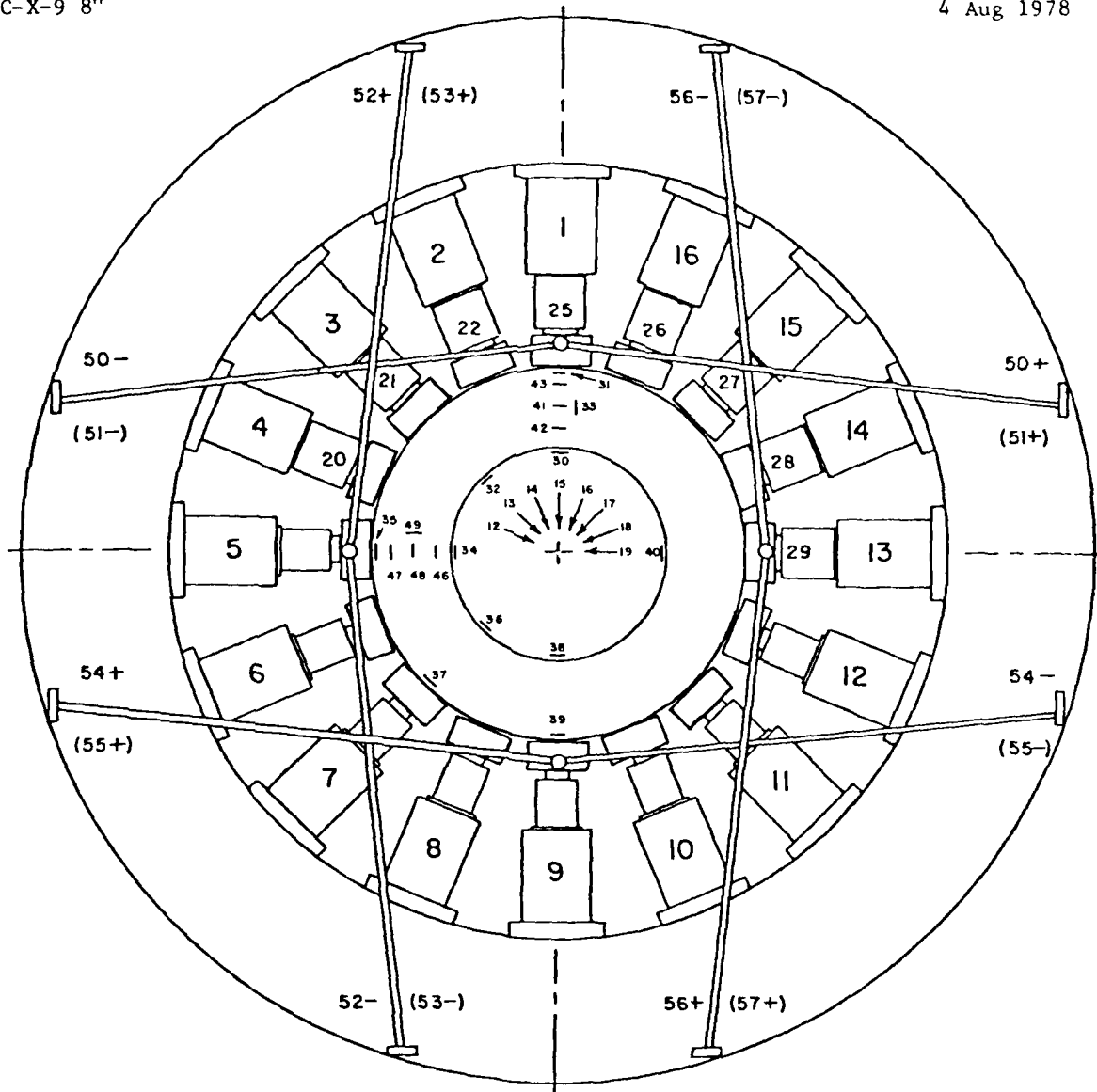
Specimen #20

C-X-9 8"

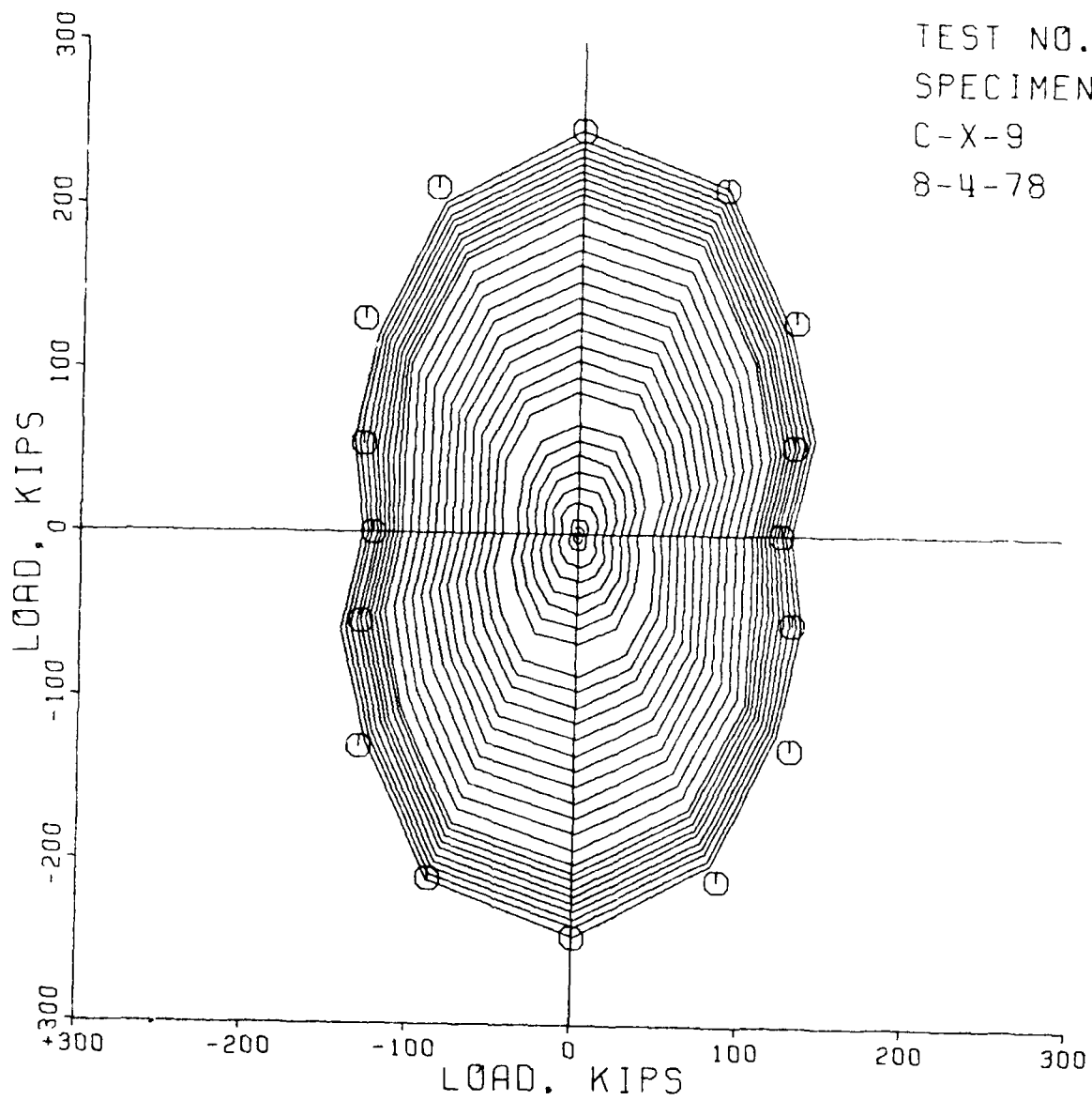
Test #49

1:2 Load

4 Aug 1978

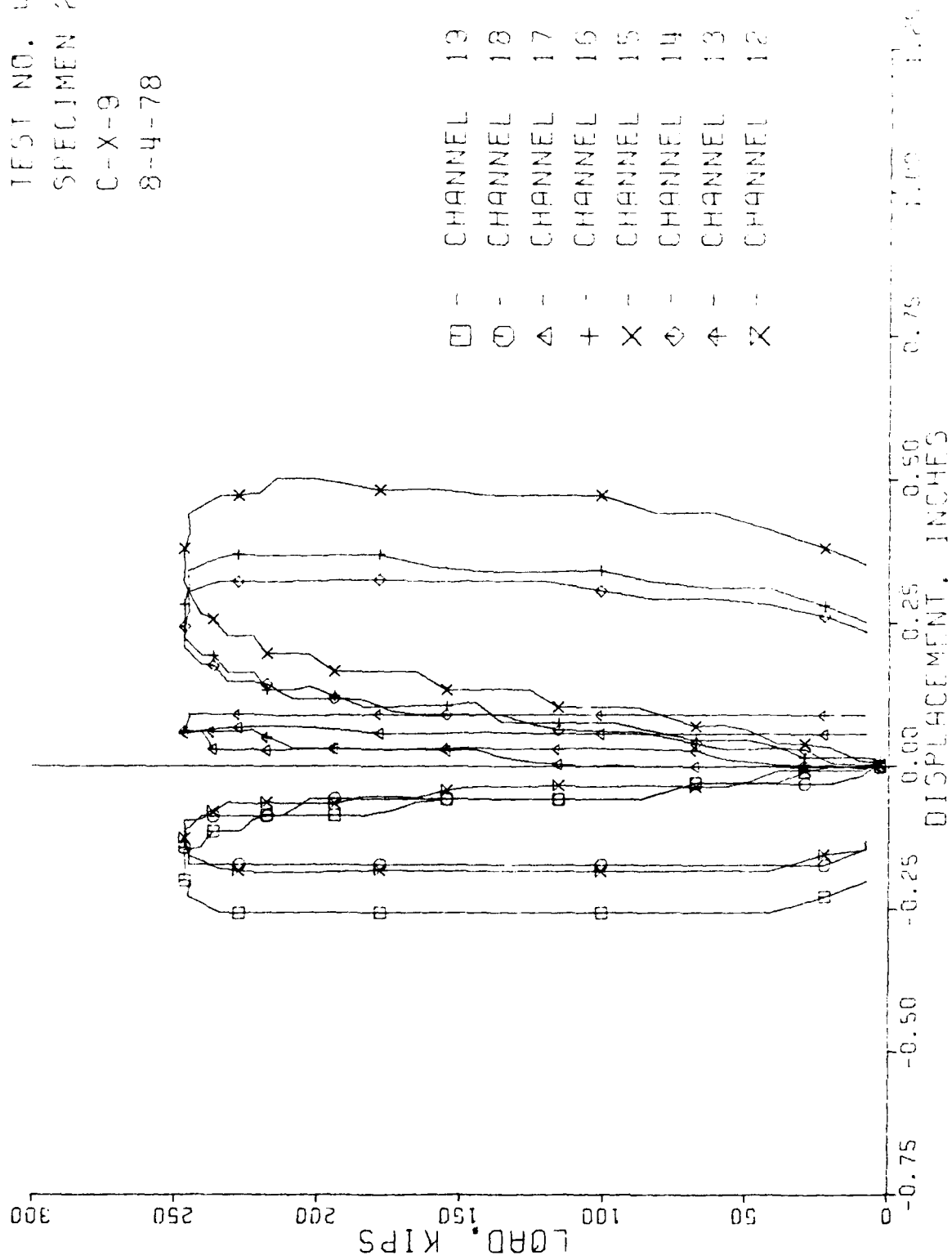


CH 12-19 Load axis I.D. (Research, Inc. Model 4040).
 CH 20-22, 25-29 Axial load (Transducers, Inc. Model 693-300K).
 CH 30-40 Even-inside at center. CH 31, 35, 37 and 39 on rebar (Ailtech SG 129-6S)
 CH 41-43, 46-48 (BLH PA3) On bottom surface. 2 3/4 inch spacing.
 CH 33 and 49 (BLH PA3) Radial strain on bottom surface.
 CH 50-57 (Ailtech SG 129-6S) Polarity indicates rod under tension.
 Lower rod shown (XX).

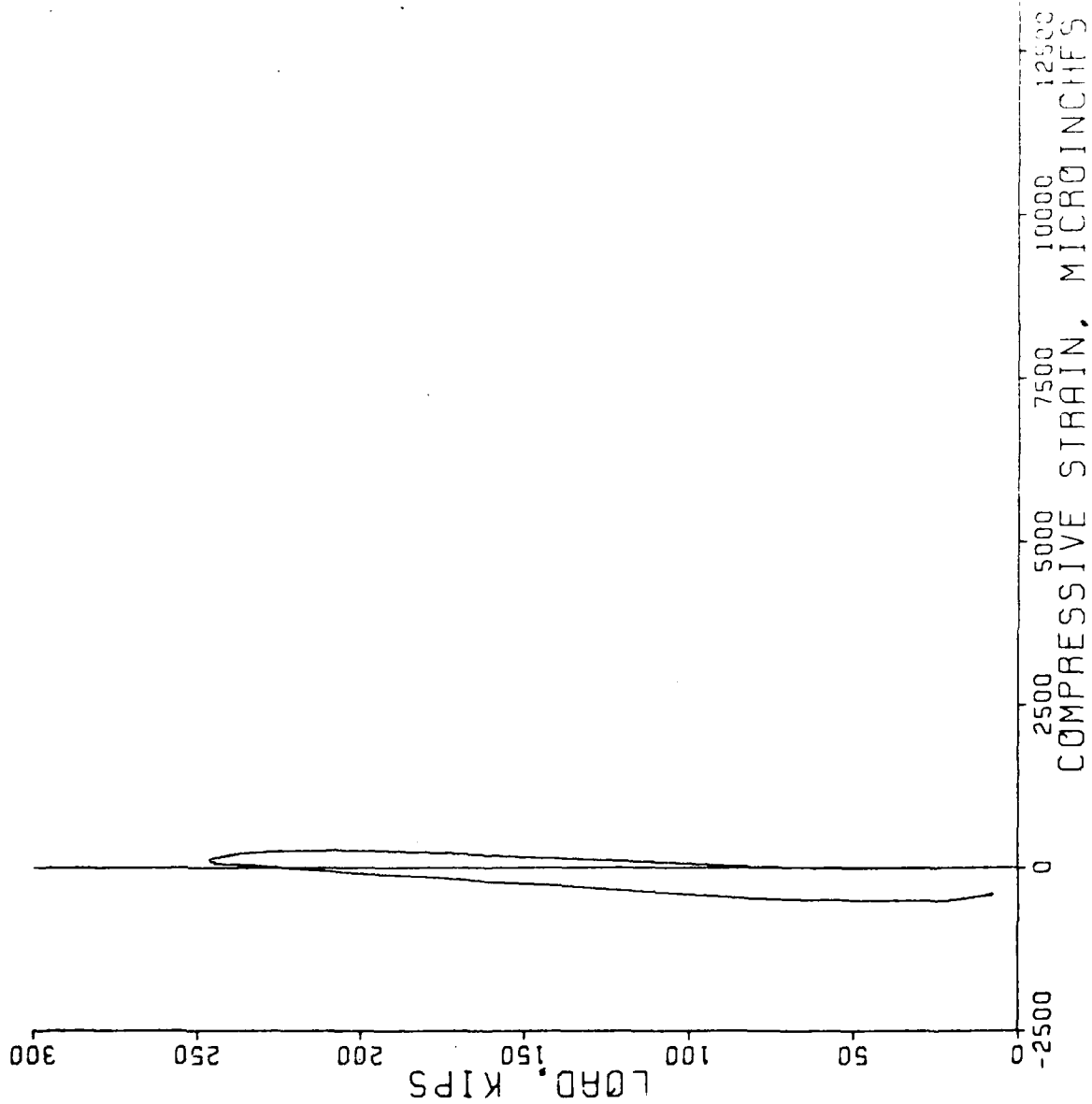


TEST NO. 49
SPECIMEN 20
C-X-9
8-4-78

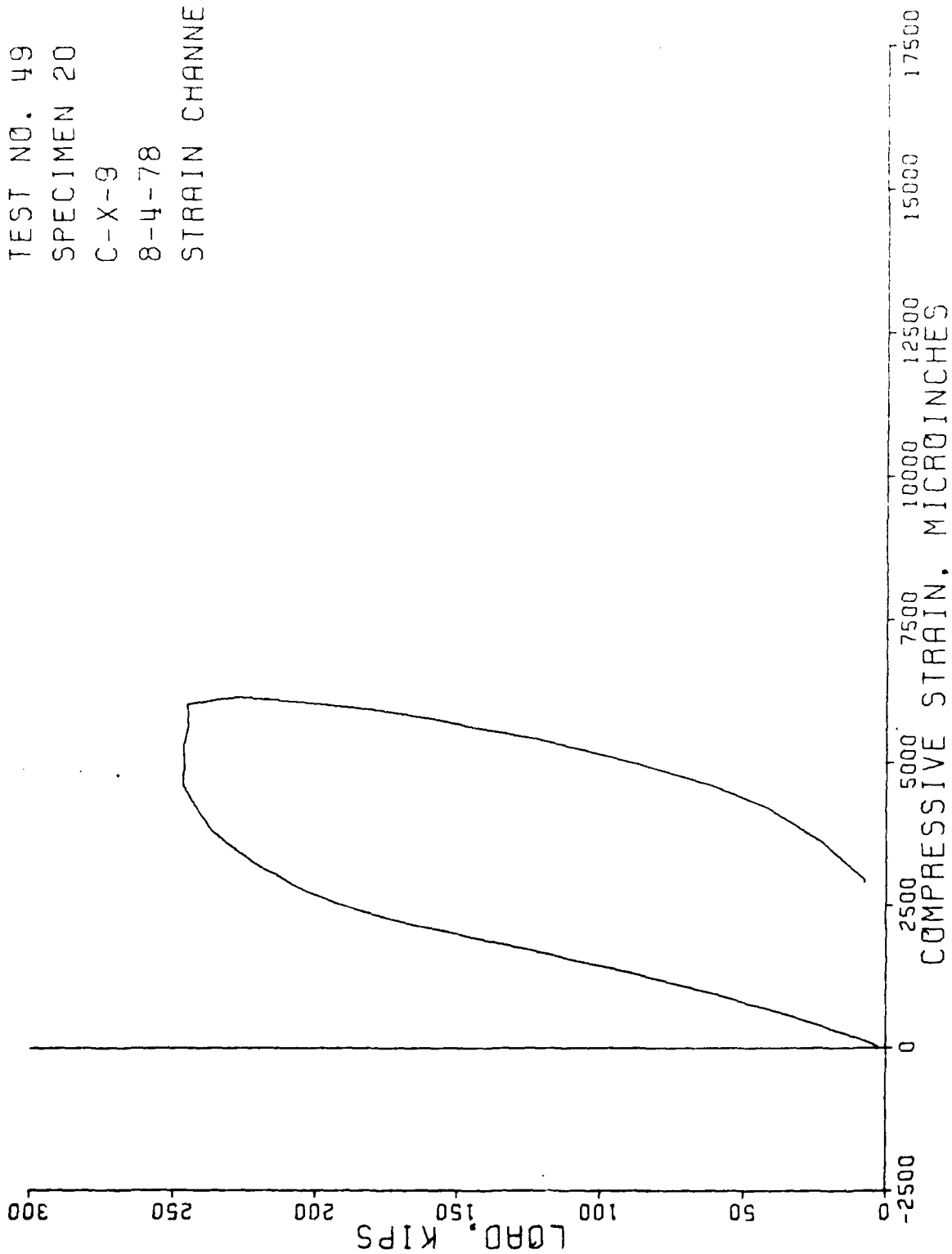
TEST NO. 42
 SPECIMEN 20
 C-X-9
 8-4-78



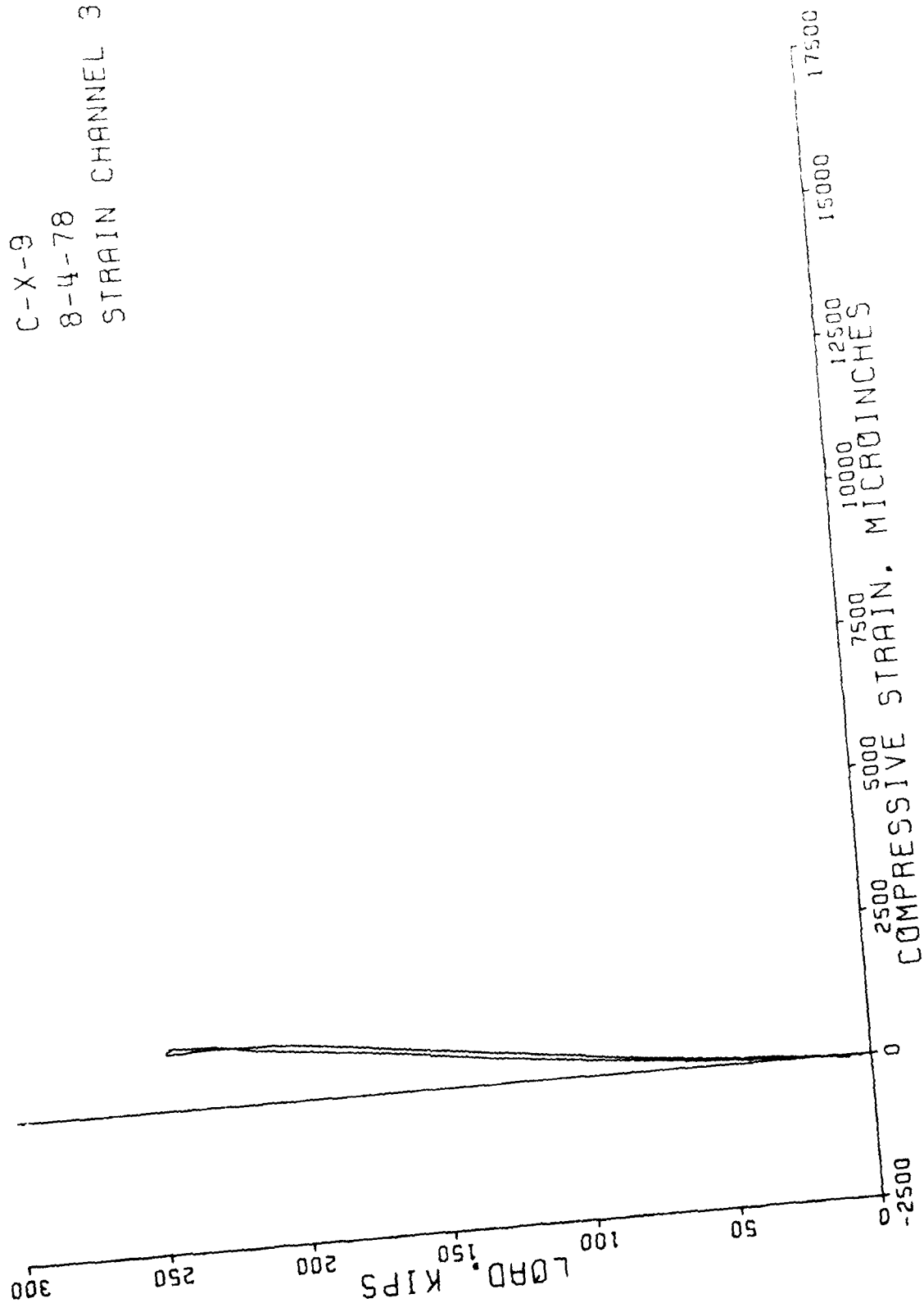
TEST NO. 49
SPECIMEN 20
C-X-9
8-4-78
STRAIN CHANNEL 30



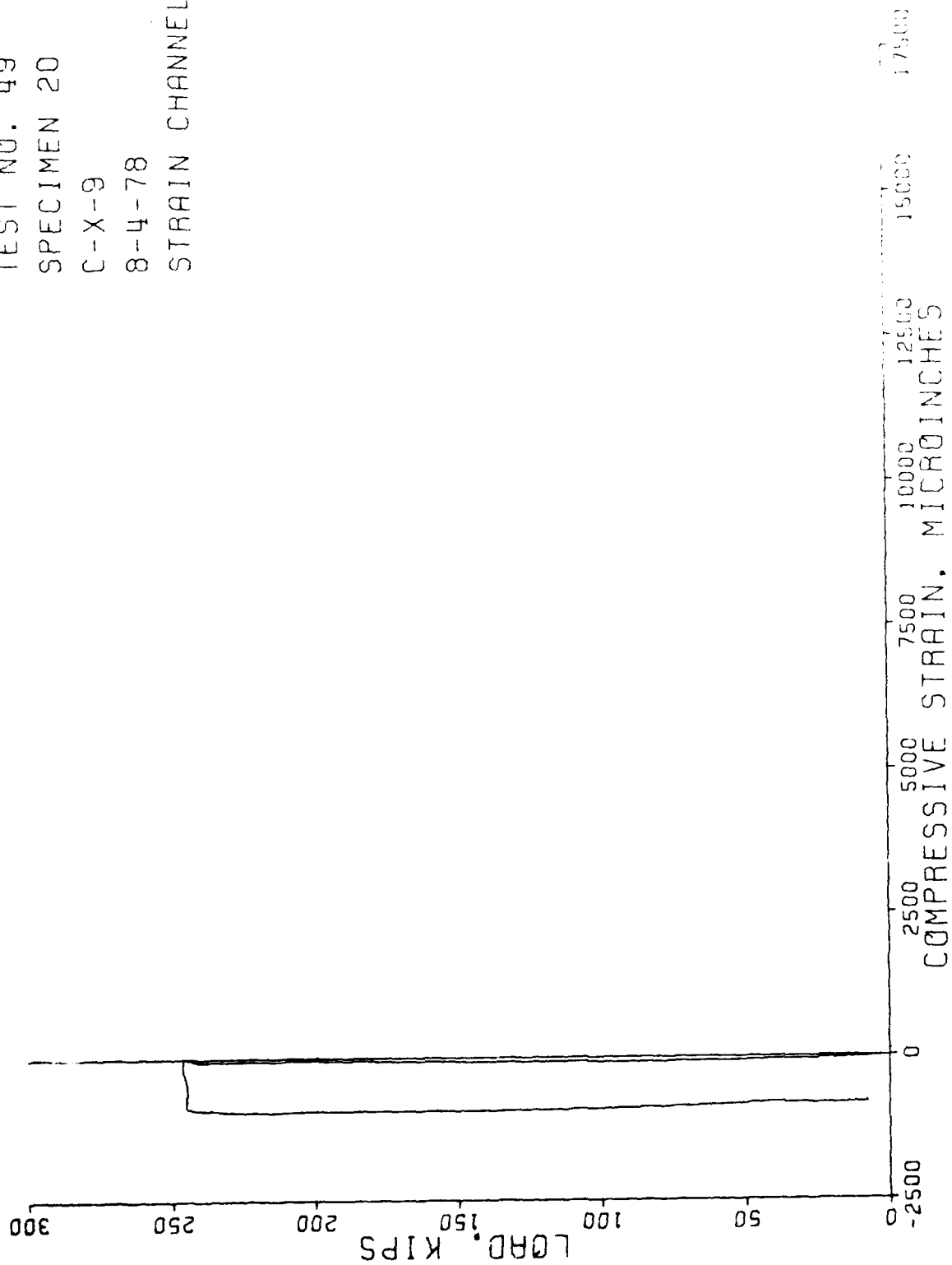
TEST NO. 49
SPECIMEN 20
C-X-9
8-4-78
STRAIN CHANNEL 31

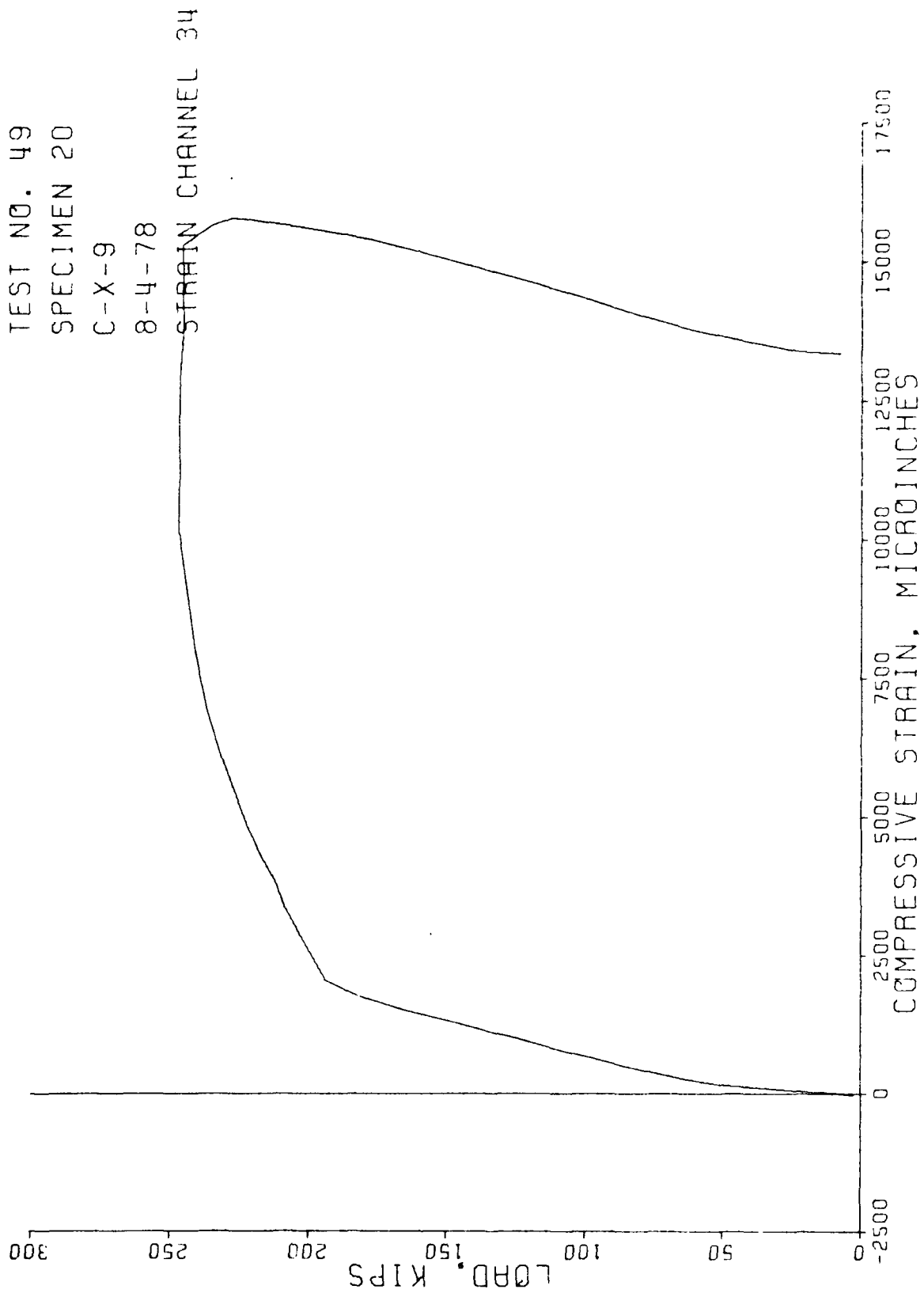


TEST NO. 49
SPECIMEN 20
C-X-9
8-4-78
STRAIN CHANNEL 32

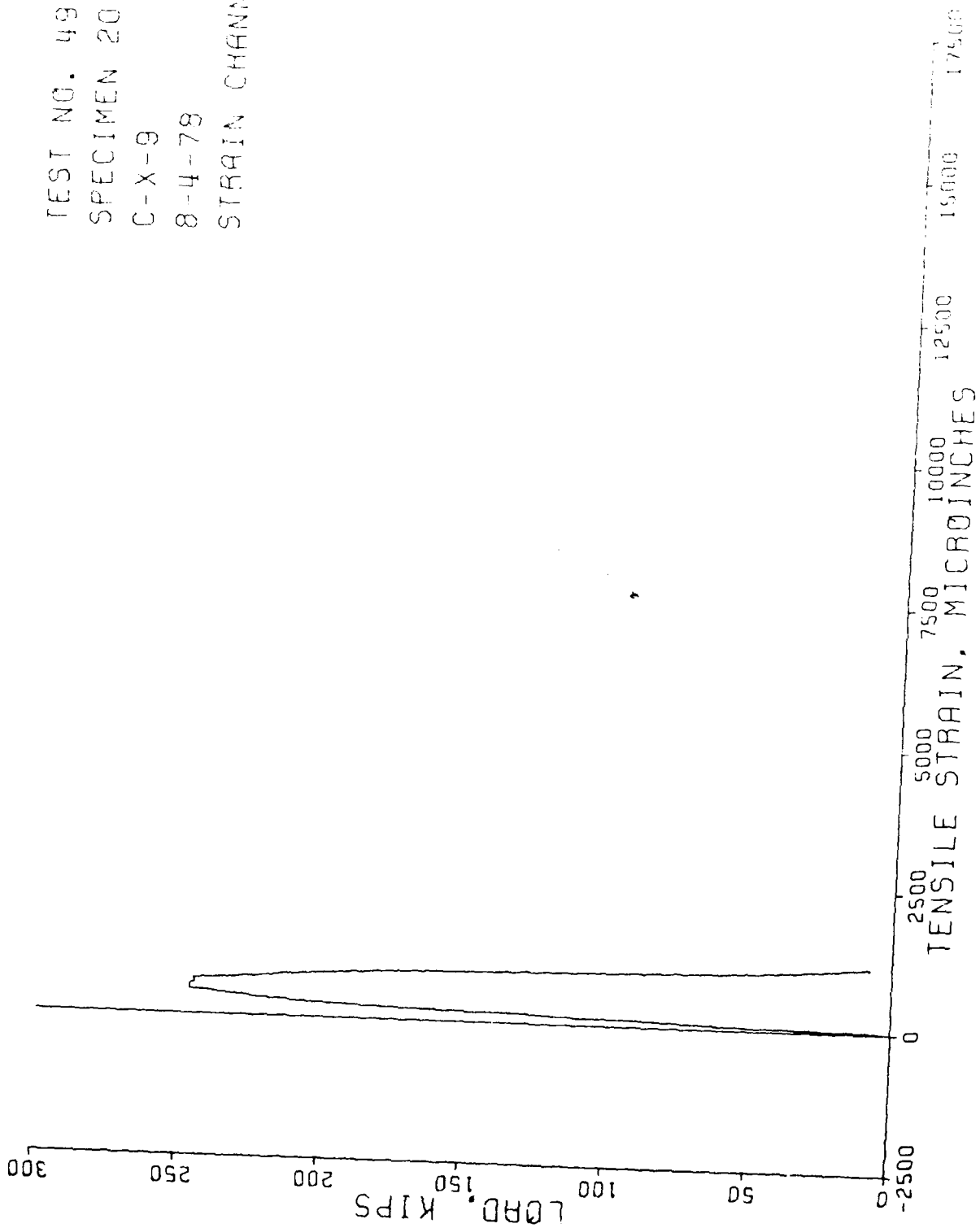


TEST NO. 49
SPECIMEN 20
C-X-9
8-4-78
STRAIN CHANNEL 33

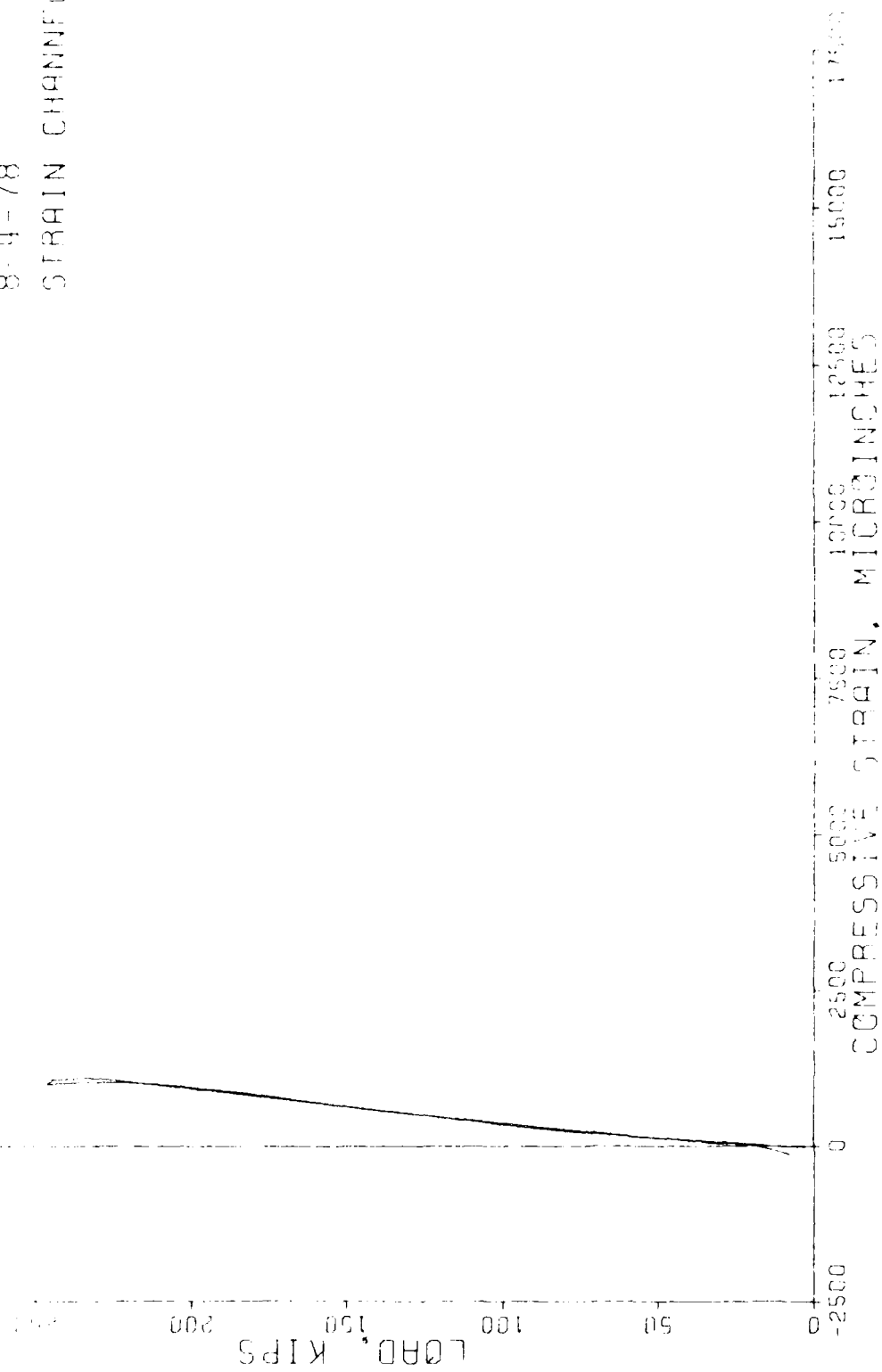




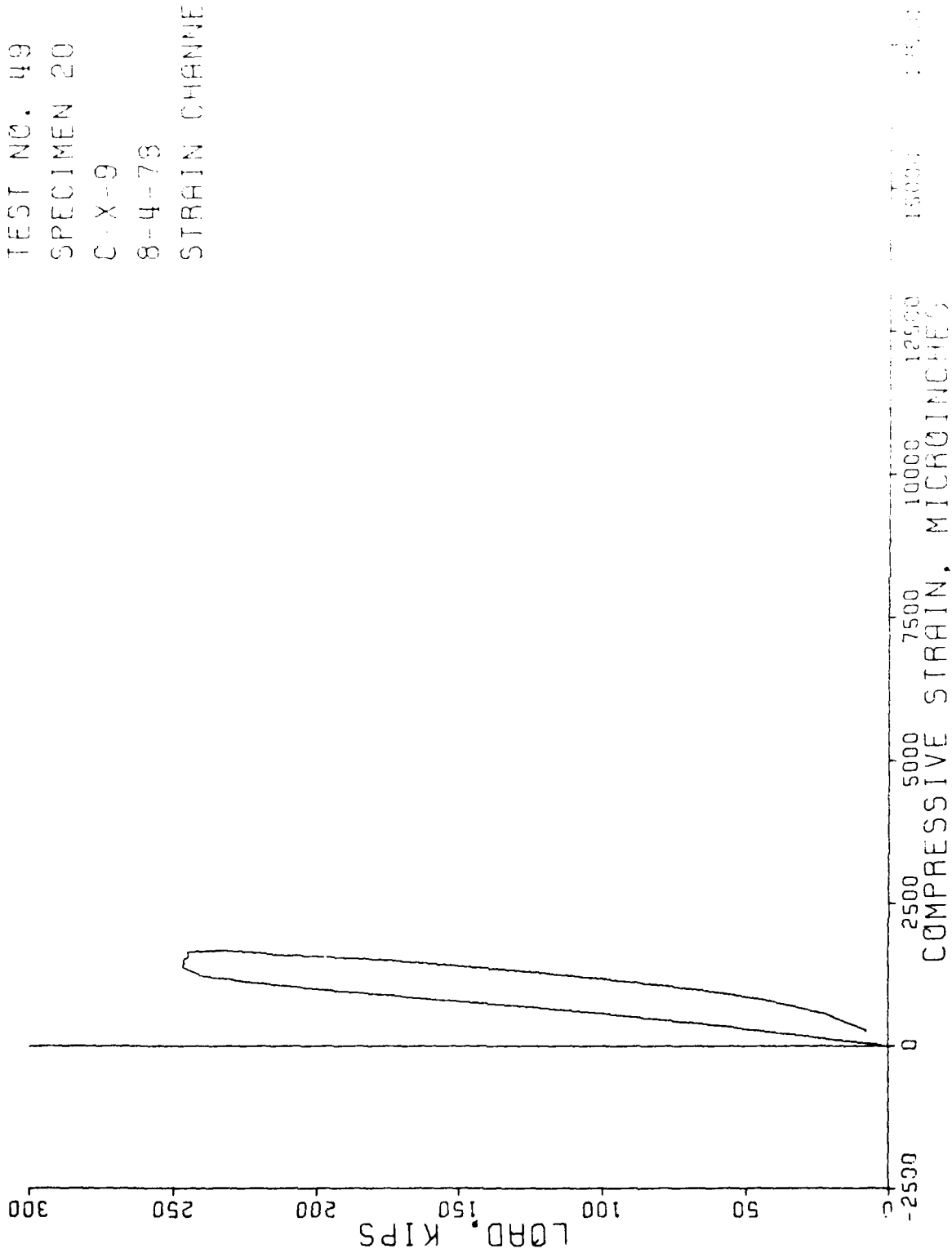
TEST NO. 49
SPECIMEN 20
C-X-9
8-4-78
STRAIN CHANNEL 35



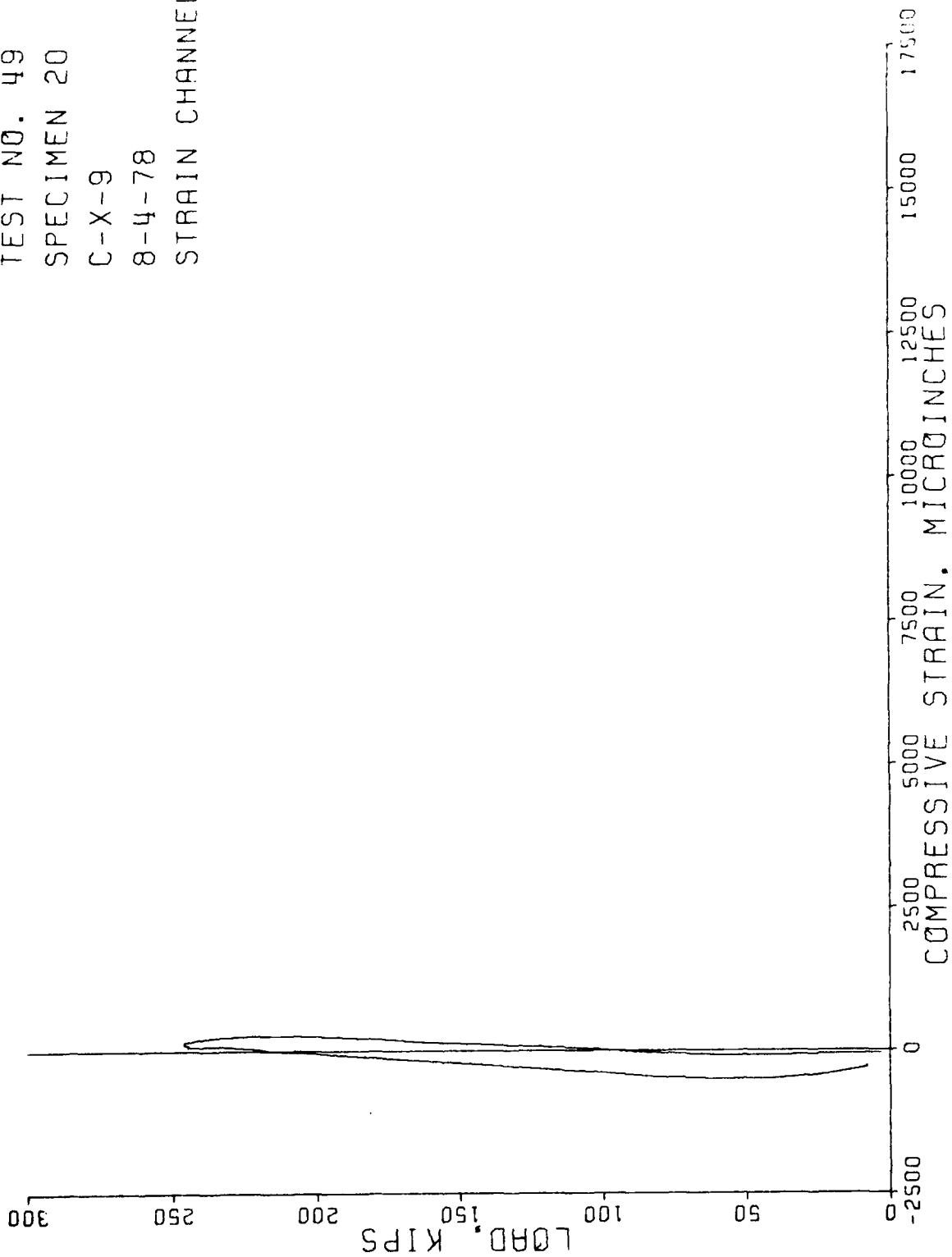
TEST NO. 49
 SPECIMEN 20
 C-X-9
 8-4-78
 STRAIN CHANNEL 20



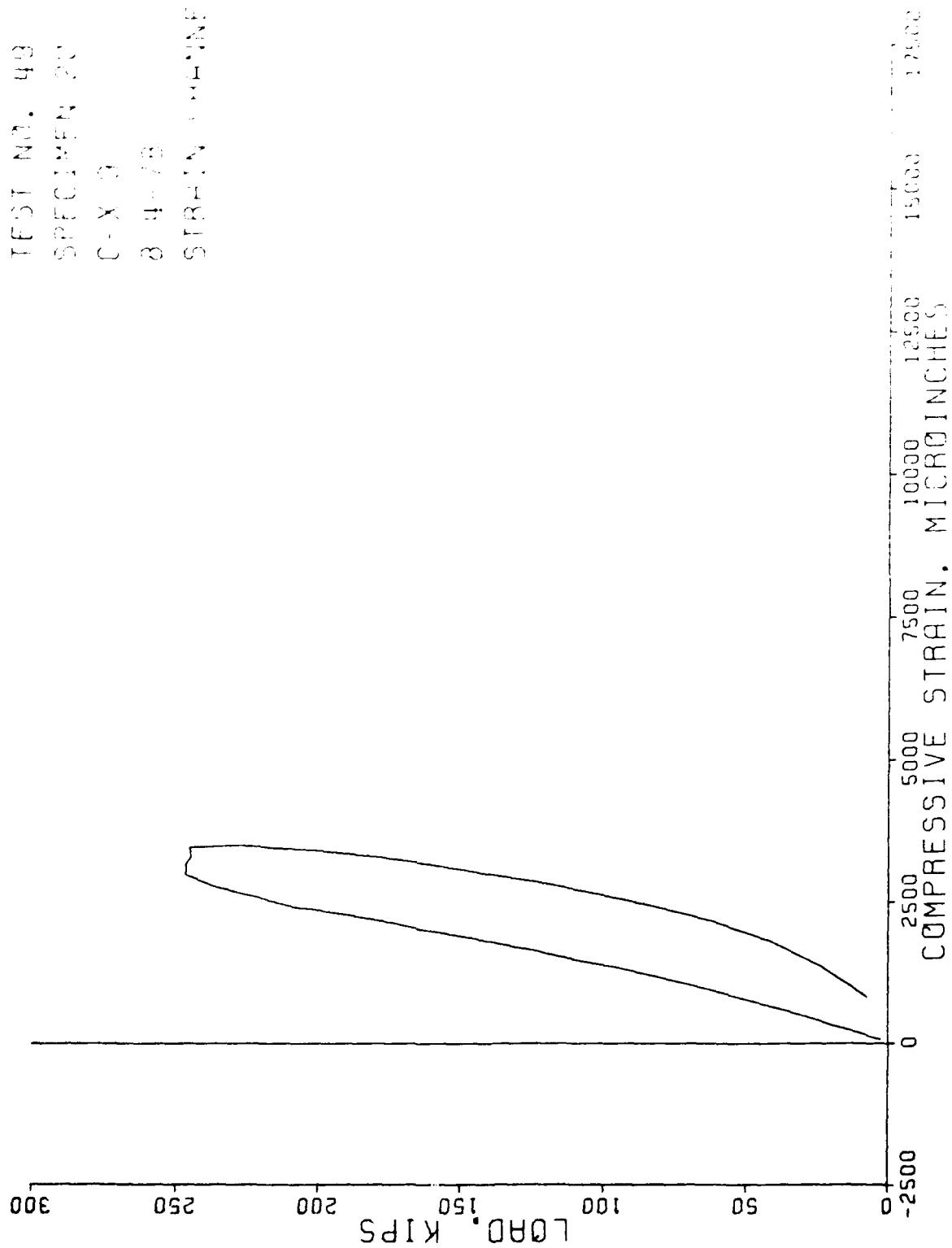
TEST NO. 49
SPECIMEN 20
C-X-9
8-4-78
STRAIN CHANNEL 37



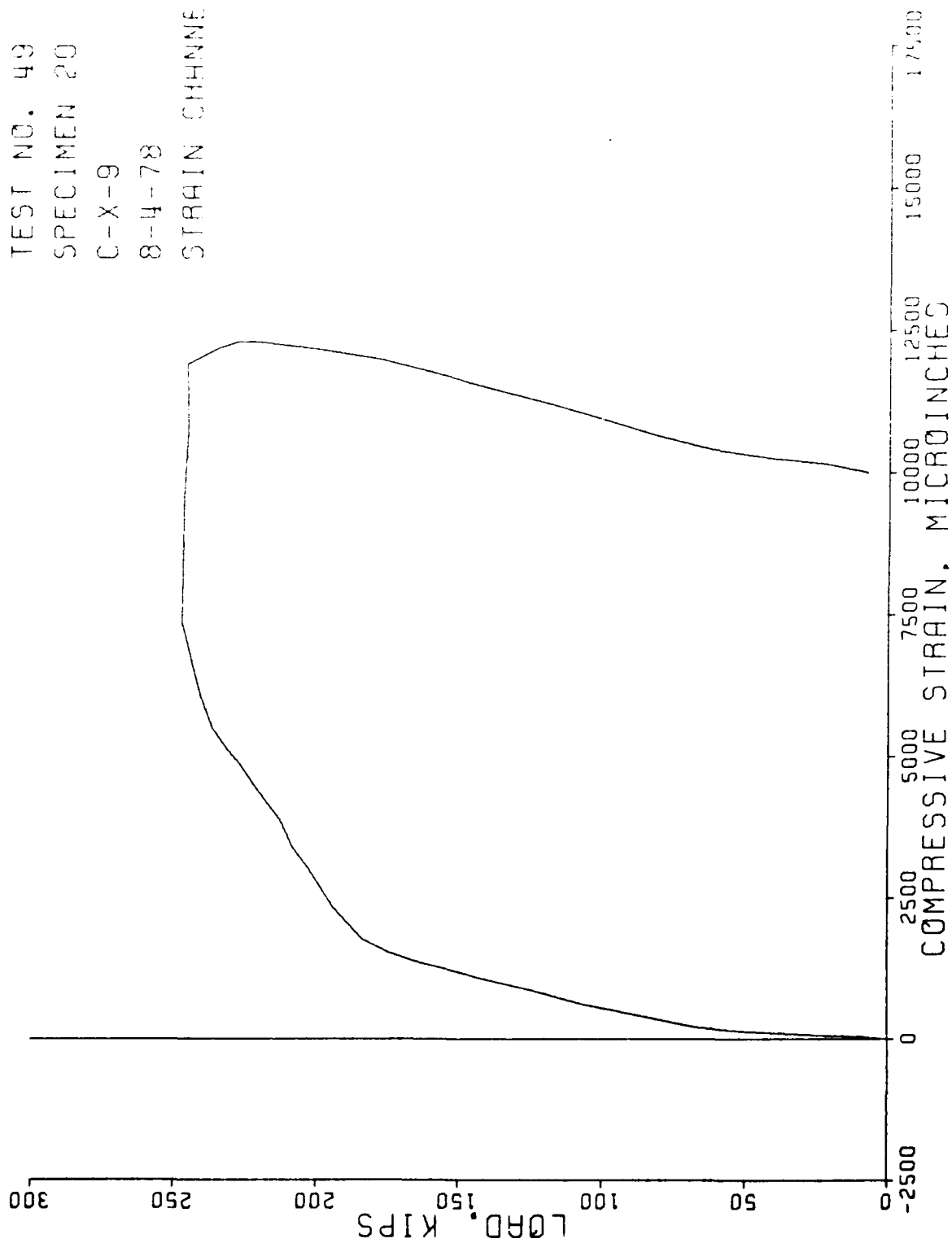
TEST NO. 49
SPECIMEN 20
C-X-9
8-4-78
STRAIN CHANNEL 38



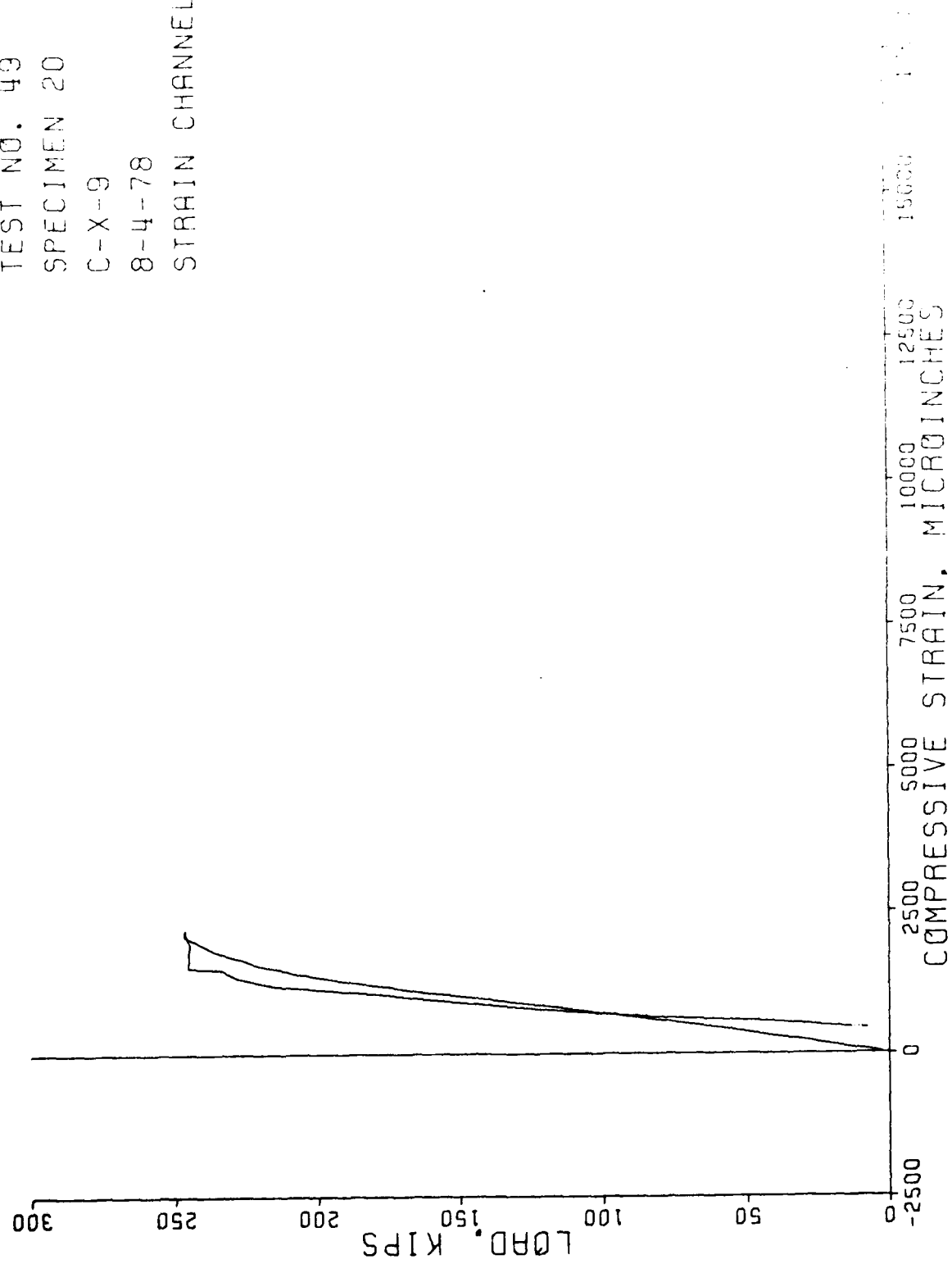
TEST NO. 48
SPECIMEN PC
C-X 9
8 4-18
STRAIN GAINED 39



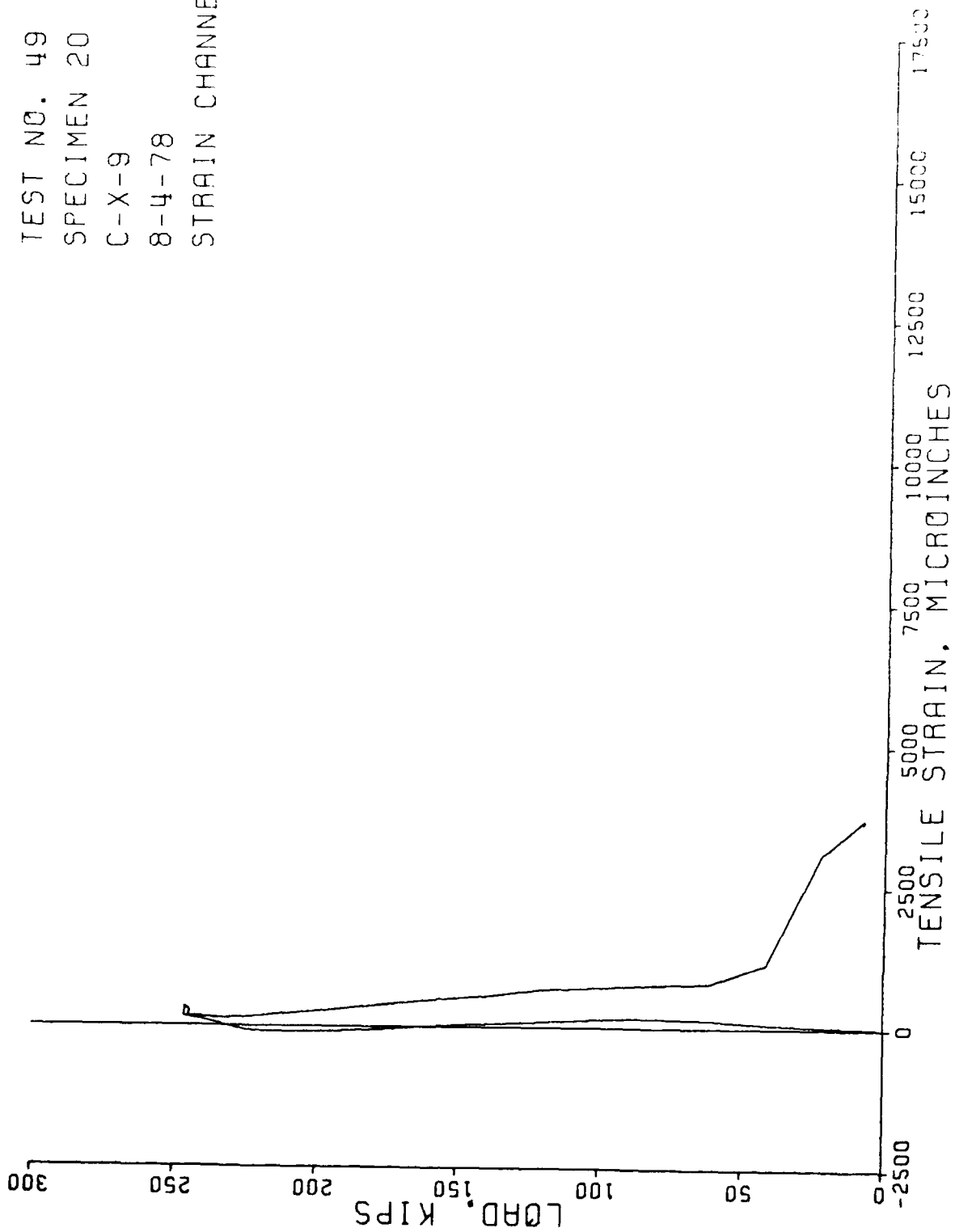
TEST NO. 49
SPECIMEN 20
C-X-9
8-4-78
STRAIN CHANNEL 40



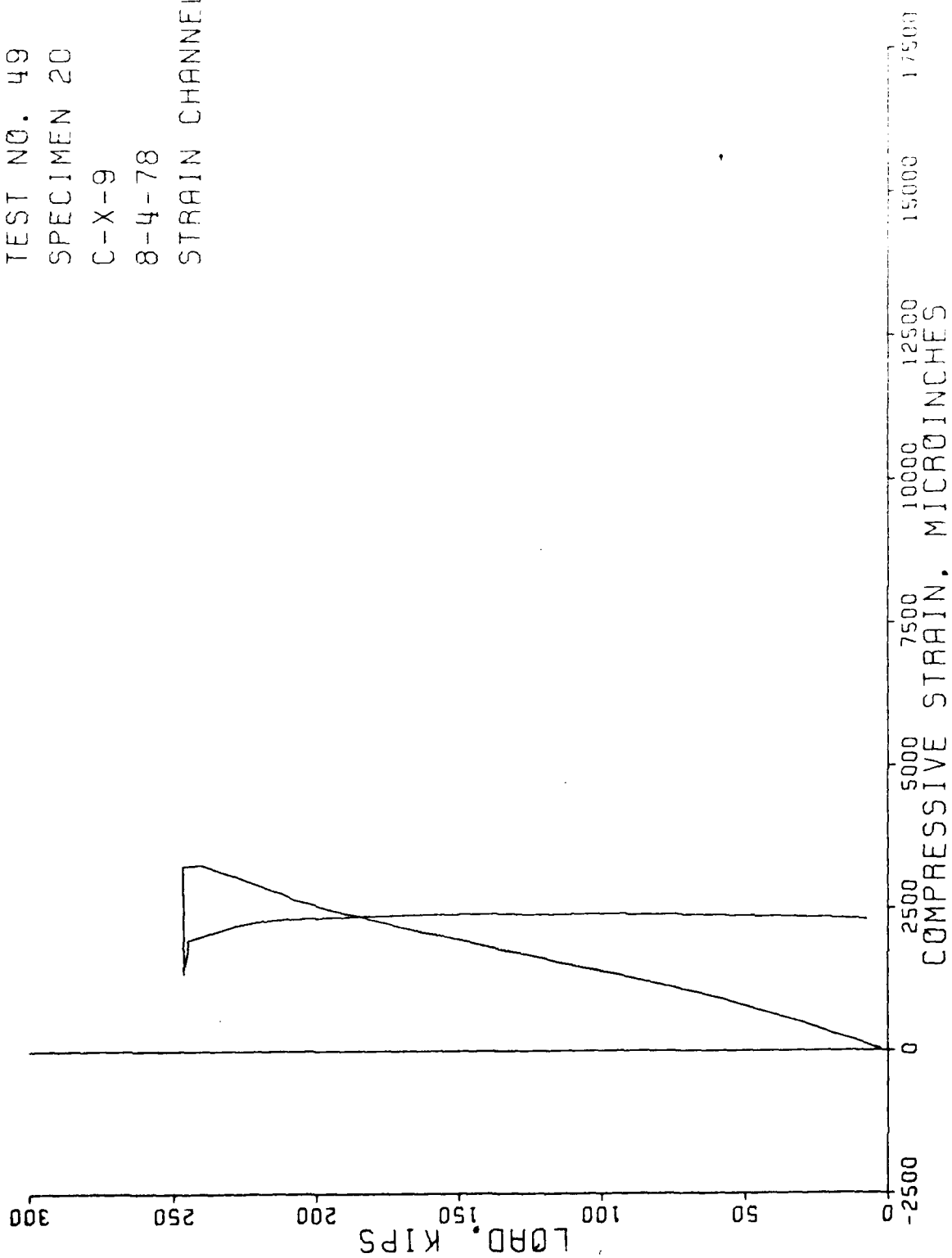
TEST NO. 43
SPECIMEN 20
C-X-9
8-4-78
STRAIN CHANNEL 41



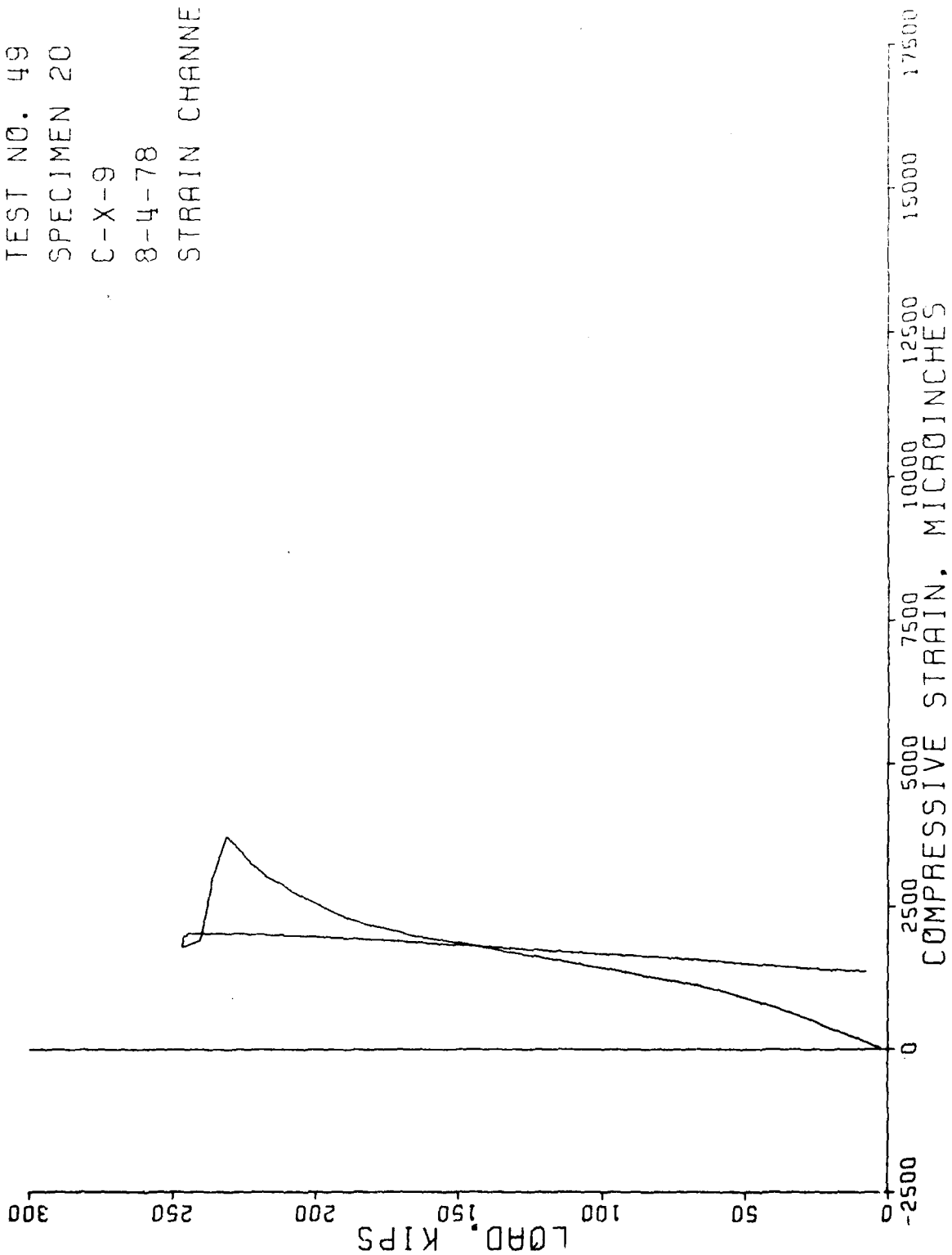
TEST NO. 49
SPECIMEN 20
C-X-9
8-4-78
STRAIN CHANNEL 42



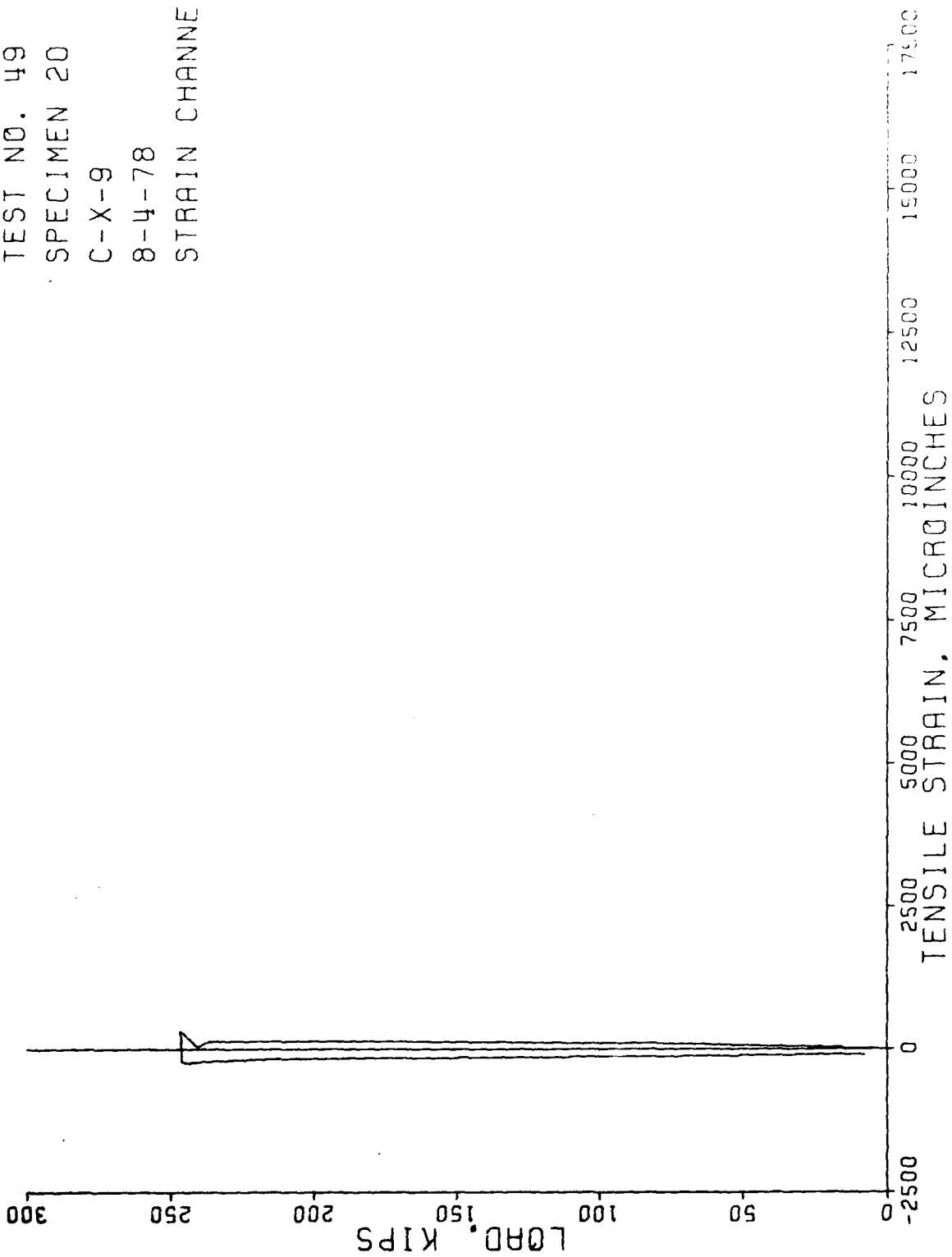
TEST NO. 49
SPECIMEN 20
C-X-9
8-4-78
STRAIN CHANNEL 43



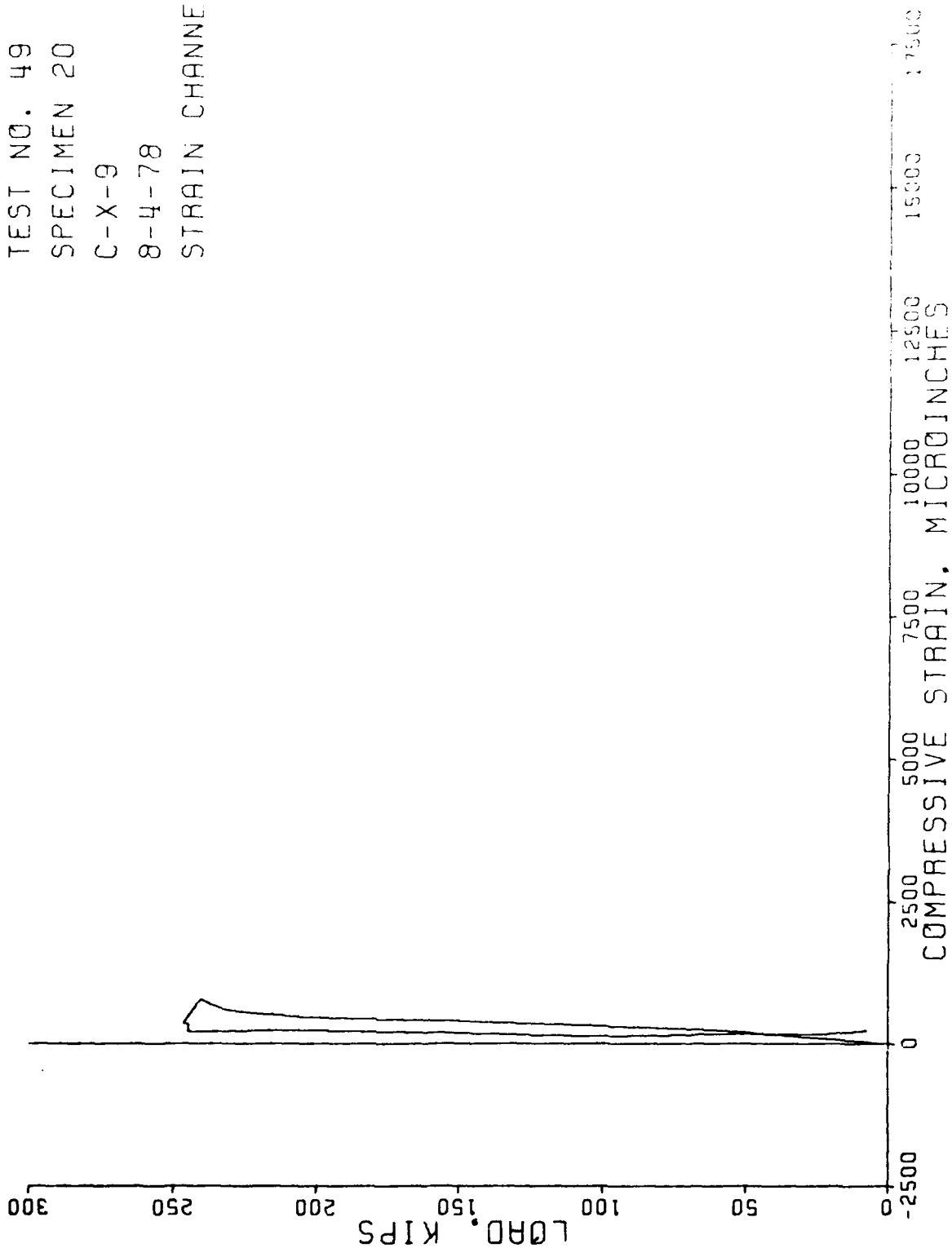
TEST NO. 49
SPECIMEN 20
C-X-9
8-4-78
STRAIN CHANNEL 40



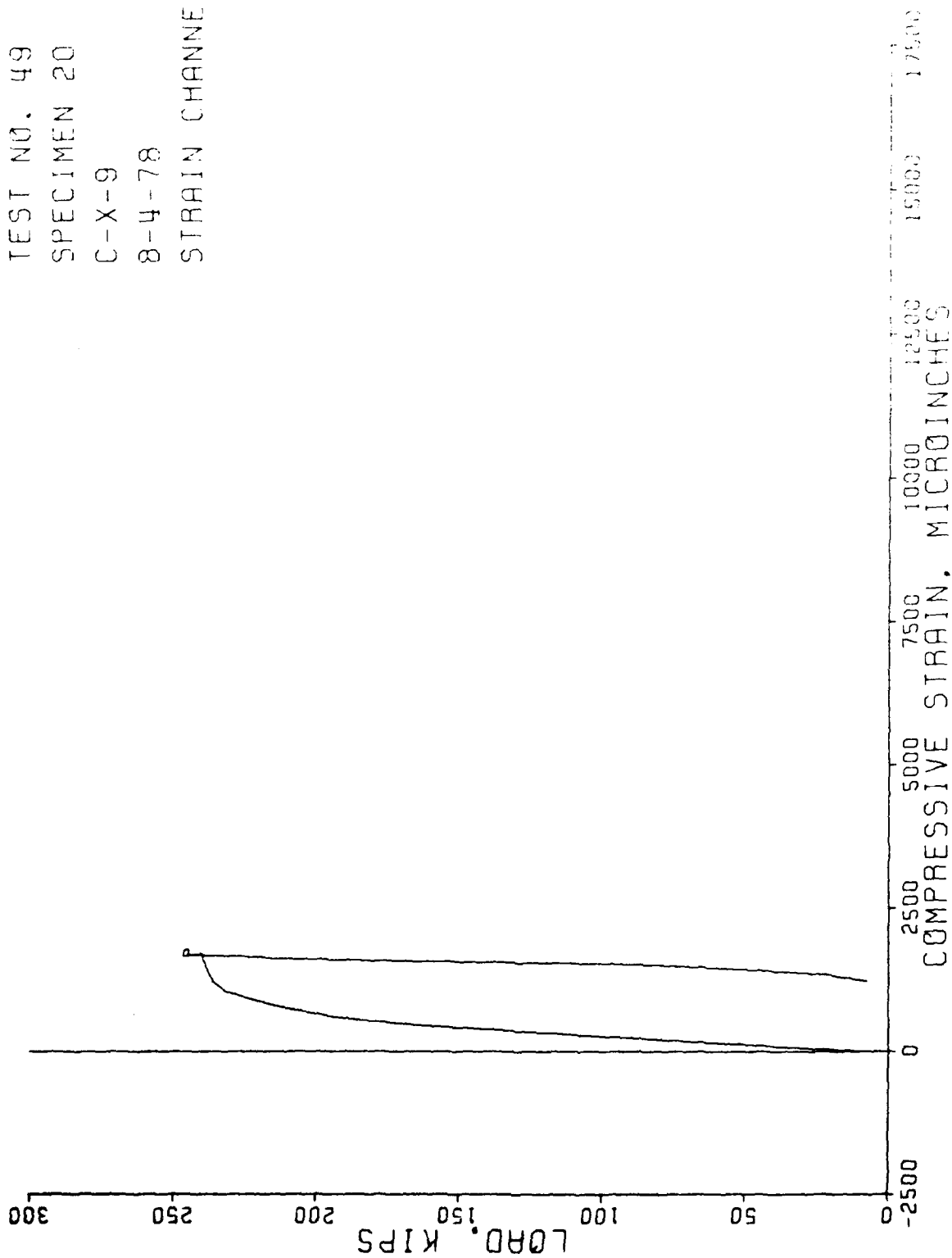
TEST NO. 49
SPECIMEN 20
C-X-9
8-4-78
STRAIN CHANNEL 47



TEST NO. 49
SPECIMEN 20
C-X-9
8-4-78
STRAIN CHANNEL 48



TEST NO. 49
SPECIMEN 20
C-X-9
8-4-78
STRAIN CHANNEL 49



TEST NO. 49 SPECIMEN 20 C-X-9 8-4-78

NUMBER OF INCREMENTS= 51
 NUMBER OF CHANNELS= 42
 NUMBER OF STRAIN CHANNELS= 18
 NUMBER OF DISPLACEMENT CHANNELS= 8
 NUMBER OF LOAD CHANNELS= 8
 NUMBER OF PRESSURE CHANNELS= 0
 NUMBER OF RODS= 8

CHANNEL	ZERO SHIFT
57	0.0
56	0.0
55	0.0
54	0.0
53	0.0
52	0.0
51	0.0
50	0.0
49	0.0
48	0.0
47	0.0
46	0.0
45	0.0
44	0.0
43	0.0
42	0.0
41	0.0
40	0.0
39	0.0
38	0.0
37	0.0
36	0.0
35	0.0
34	0.0
33	0.0
32	0.0
31	0.0
30	0.0
29	0.0
28	0.0
27	0.0
26	0.0
25	0.0
24	0.0
23	0.0
22	0.0
21	0.0
20	0.0
19	0.0
18	0.0
17	0.0
16	0.0
15	0.0
14	0.0
13	0.0
12	0.0

STRAIN CHANNEL CALIBRATION

49	1.000
48	1.000
47	1.000
46	1.000
43	1.000
42	1.000
41	1.000
40	1.000
39	1.000
38	1.000
37	1.000
36	1.000
35	1.000
34	1.000
33	1.000
32	1.000
31	1.000
30	1.000

DISPLACEMENT CHANNEL	CALIBRATION
19	0.001
18	0.001
17	0.002
16	0.002
15	0.002
14	0.002
13	0.002
12	0.002

LOAD CHANNEL	CALIBRATION
29	10.000
28	10.000
27	10.000
26	10.000
25	10.000
22	10.000
21	10.000
20	10.000

ROD CHANNEL	CALIBRATION
57	1.000
56	1.000
55	1.000
54	1.000
53	1.000
52	1.000
51	1.000
50	1.000

AD-A086 210

MERRITT CASES INC REDLANDS CA F/B 13/13
CONTINUATION OF STATIC TESTS OF SEGMENTS OF TUNNEL LININGS. VOL--ETC(1)
JUN 79 H C DAVIS, K B MORRILL, J L MERRITT DNA001-78-C-0037
78-004-T2-VOL-2 DNA-9800F-2 ML

UNCLASSIFIED

3-6

AC
200210

STRAIN CHANNELS

	TIME	CH.49	CH.48	CH.47	CH.46	CH.43	CH.42	CH.41	CH.40
1.	4:13:40:55	1.000	-6.000	4.000	-25.000	-26.000	9.000	-16.000	-7.000
2.	4:14:8:56	-3.000	-16.000	9.000	-67.000	-150.000	27.000	-33.000	-18.000
3.	4:14:10:17	-5.000	-35.000	17.000	-165.000	-317.000	40.000	-65.000	-33.000
4.	4:14:11:35	-29.000	-79.000	31.000	-365.000	-469.000	52.000	-145.000	-55.000
5.	4:14:12:21	-52.000	-115.000	44.000	-549.000	-618.000	76.000	-220.000	-79.000
6.	4:14:13:0	-80.000	-153.000	55.000	-718.000	-761.000	105.000	-293.000	-104.000
7.	4:14:13:38	-111.000	-187.000	66.000	-871.000	-894.000	136.000	-368.000	-130.000
8.	4:14:14:20	-135.000	-219.000	75.000	-1007.000	-1019.000	159.000	-440.000	-165.000
9.	4:14:14:56	-161.000	-246.000	83.000	-1128.000	-1255.000	179.000	-505.000	-212.000
10.	4:14:18:2	-220.000	-284.000	96.000	-1304.000	-1366.000	193.000	-631.000	-407.000
11.	4:14:19:2	-248.000	-304.000	101.000	-1401.000	-1459.000	167.000	-690.000	-510.000
12.	4:14:20:17	-281.000	-320.000	105.000	-1476.000	-1565.000	143.000	-752.000	-618.000
13.	4:14:21:21	-309.000	-335.000	110.000	-1566.000	-1689.000	117.000	-816.000	-741.000
14.	4:14:22:22	-339.000	-352.000	115.000	-1656.000	-1793.000	93.000	-875.000	-869.000
15.	4:14:23:15	-370.000	-367.000	119.000	-1742.000	-1898.000	67.000	-933.000	-994.000
16.	4:14:23:58	-397.000	-382.000	124.000	-1823.000	-2013.000	48.000	-987.000	-1116.000
17.	4:14:24:41	-427.000	-413.000	129.000	-1909.000	-2114.000	25.000	-1046.000	-1244.000
18.	4:14:25:22	-460.000	-438.000	132.000	-1993.000	-2230.000	1.000	-1105.000	-1369.000
19.	4:14:26:9	-494.000	-425.000	137.000	-2095.000	-2349.000	-33.000	-1176.000	-1528.000
20.	4:14:27:0	-536.000	-438.000	140.000	-2210.000	-2464.000	-59.000	-1243.000	-1757.000
21.	4:14:27:46	-595.000	-451.000	148.000	-2401.000	-2598.000	-83.000	-1309.000	-2324.000
22.	4:14:28:38	-676.000	-468.000	137.000	-2638.000	-2763.000	-99.000	-1388.000	-3040.000
23.	4:14:29:30	-726.000	-479.000	137.000	-2763.000	-2861.000	-102.000	-1430.000	-3406.000
24.	4:14:30:28	-781.000	-494.000	138.000	-2898.000	-3032.000	-103.000	-1483.000	-3842.000
25.	4:14:31:12	-833.000	-510.000	139.000	-3056.000	-3232.000	-99.000	-1535.000	-4198.000
26.	4:14:32:8	-898.000	-532.000	137.000	-3232.000	-3432.000	-88.000	-1593.000	-4517.000
27.	4:14:33:1	-966.000	-560.000	139.000	-3487.000	-3754.000	-57.000	-1669.000	-4848.000
28.	4:14:33:42	-1032.000	-588.000	142.000	-3754.000	-4013.000	6.000	-1739.000	-5140.000
29.	4:14:34:32	-1212.000	-672.000	133.000	-3988.000	-4319.000	68.000	-1830.000	-5497.000
30.	4:14:35:19	-1703.000	-778.000	43.000	-4379.000	-4679.000	110.000	-1939.000	-6105.000
31.	4:14:35:58	-1650.000	-345.000	329.000	-4679.000	-4984.000	167.000	-2071.000	-7320.000
32.	4:14:36:16	-1721.000	-354.000	-106.000	-4984.000	-5284.000	263.000	-2195.000	-8204.000
33.	4:14:36:34	-1768.000	-347.000	-215.000	-4984.000	-5584.000	339.000	-2147.000	-9292.000
34.	4:14:36:52	-1775.000	-340.000	-266.000	-5284.000	-5884.000	276.000	-1954.000	-10712.000
35.	4:14:37:11	-1680.000	-206.000	-246.000	-5584.000	-6184.000	159.000	-1528.000	-11871.000
36.	4:14:37:29	-1664.000	-199.000	-288.000	-5884.000	-6484.000	138.000	-1505.000	-12162.000
37.	4:14:37:47	-1647.000	-209.000	-198.000	-6184.000	-6784.000	155.000	-1337.000	-12279.000
38.	4:14:38:5	-1633.000	-222.000	-188.000	-6484.000	-7084.000	177.000	-1259.000	-12280.000
39.	4:14:38:23	-1617.000	-225.000	-179.000	-6784.000	-7384.000	214.000	-1201.000	-12237.000
40.	4:14:38:41	-1605.000	-221.000	-172.000	-7084.000	-7684.000	262.000	-1151.000	-12158.000
41.	4:14:39:32	-1579.000	-205.000	-163.000	-7384.000	-7984.000	385.000	-1049.000	-11969.000
42.	4:14:40:12	-1563.000	-182.000	-157.000	-7684.000	-8284.000	483.000	-955.000	-11740.000
43.	4:14:40:44	-1550.000	-157.000	-152.000	-7984.000	-8584.000	556.000	-866.000	-11488.000
44.	4:14:41:14	-1535.000	-135.000	-146.000	-8284.000	-8884.000	674.000	-774.000	-11230.000
45.	4:14:42:30	-1519.000	-130.000	-142.000	-8584.000	-9184.000	714.000	-701.000	-10942.000
46.	4:14:43:17	-1495.000	-141.000	-120.000	-8884.000	-9484.000	801.000	-642.000	-10647.000
47.	4:14:43:49	-1454.000	-158.000	-131.000	-9184.000	-9784.000	81.000	-603.000	-10395.000
48.	4:14:44:21	-1405.000	-163.000	-117.000	-9484.000	-10084.000	1148.000	-560.000	-10245.000
49.	4:14:45:2	-1334.000	-160.000	-99.000	-9784.000	-10384.000	3095.000	-491.000	-10144.000
50.	4:14:45:44	-1227.000	-230.000	-105.000	-10084.000	-10684.000	3728.000	-438.000	-10003.000
51.	4:14:46:46	-1229.000	-242.000	-105.000	-10384.000	-10984.000	3658.000	-435.000	-9981.000

STRAIN CHANNELS

	TIME	CH.39	CH.38	CH.37	CH.36	CH.35	CH.34	CH.33	CH.32
1.	4:13:40:55	-60.000	55.000	-19.000	13.000	5.000	27.000	8.000	19.000
2.	4:14:8:56	-105.000	56.000	-36.000	11.000	8.000	14.000	14.000	13.000
3.	4:14:10:17	-178.000	62.000	-59.000	-19.000	23.000	-9.000	22.000	7.000
4.	4:14:11:35	-326.000	66.000	-117.000	-38.000	29.000	-43.000	34.000	-17.000
5.	4:14:12:21	-470.000	73.000	-176.000	-138.000	41.000	-75.000	45.000	-40.000
6.	4:14:13:0	-609.000	83.000	-231.000	-123.000	49.000	-108.000	55.000	-69.000
7.	4:14:13:38	-746.000	90.000	-291.000	-150.000	53.000	-152.000	63.000	-102.000
8.	4:14:14:20	-872.000	90.000	-368.000	-182.000	68.000	-215.000	73.000	-138.000
9.	4:14:14:56	-998.000	77.000	-396.000	-182.000	79.000	-294.000	78.000	-177.000
10.	4:14:18:2	-1239.000	25.000	-501.000	-278.000	110.000	-518.000	85.000	-277.000
11.	4:14:19:2	-1349.000	-1.000	-568.000	-328.000	125.000	-635.000	84.000	-333.000
12.	4:14:20:17	-1441.000	-32.000	-597.000	-384.000	128.000	-751.000	81.000	-397.000
13.	4:14:22:21	-1543.000	-57.000	-642.000	-439.000	142.000	-881.000	81.000	-456.000
14.	4:14:22:22	-1656.000	-79.000	-684.000	-499.000	158.000	-1013.000	77.000	-517.000
15.	4:14:23:15	-1754.000	-103.000	-727.000	-557.000	169.000	-1141.000	74.000	-576.000
16.	4:14:23:58	-1847.000	-120.000	-760.000	-617.000	181.000	-1261.000	72.000	-633.000
17.	4:14:24:41	-1943.000	-142.000	-797.000	-676.000	193.000	-1387.000	65.000	-692.000
18.	4:14:25:22	-2029.000	-167.000	-838.000	-735.000	202.000	-1507.000	59.000	-754.000
19.	4:14:26:9	-2129.000	-196.000	-885.000	-797.000	221.000	-1648.000	57.000	-817.000
20.	4:14:27:0	-2217.000	-222.000	-927.000	-857.000	231.000	-1795.000	50.000	-878.000
21.	4:14:27:46	-2296.000	-247.000	-967.000	-910.000	244.000	-2054.000	44.000	-930.000
22.	4:14:28:38	-2371.000	-265.000	-1012.000	-957.000	266.000	-2853.000	42.000	-969.000
23.	4:14:29:30	-2404.000	-272.000	-1034.000	-983.000	280.000	-3342.000	40.000	-983.000
24.	4:14:30:28	-2453.000	-273.000	-1060.000	-1001.000	298.000	-3865.000	44.000	-999.000
25.	4:14:31:12	-2523.000	-272.000	-1086.000	-1013.000	314.000	-4341.000	47.000	-1009.000
26.	4:14:32:8	-2585.000	-274.000	-1112.000	-1025.000	327.000	-4859.000	48.000	-1011.000
27.	4:14:33:1	-2642.000	-266.000	-1141.000	-1028.000	348.000	-5468.000	49.000	-1007.000
28.	4:14:33:42	-2696.000	-255.000	-1169.000	-1025.000	371.000	-6095.000	53.000	-1010.000
29.	4:14:34:32	-2757.000	-243.000	-1202.000	-1029.000	391.000	-6892.000	52.000	-992.000
30.	4:14:35:19	-2847.000	-208.000	-1241.000	-1016.000	423.000	-7966.000	47.000	-980.000
31.	4:14:35:58	-2974.000	-155.000	-1371.000	-999.000	439.000	-10139.000	-16.000	-1002.000
32.	4:14:36:16	-3041.000	-126.000	-1434.000	-996.000	475.000	-11218.000	17.000	-1019.000
33.	4:14:36:34	-3132.000	-107.000	-1501.000	-1016.000	523.000	-12461.000	200.000	-1064.000
34.	4:14:36:52	-3269.000	-101.000	-1579.000	-1051.000	562.000	-13896.000	600.000	-1079.000
35.	4:14:37:11	-3446.000	-79.000	-1647.000	-1076.000	634.000	-15316.000	879.000	-1063.000
36.	4:14:37:29	-3475.000	-88.000	-1669.000	-1099.000	657.000	-15677.000	913.000	-1034.000
37.	4:14:37:47	-3482.000	-61.000	-1660.000	-1072.000	684.000	-15801.000	933.000	-988.000
38.	4:14:38:5	-3464.000	-36.000	-1637.000	-1040.000	717.000	-15775.000	938.000	-931.000
39.	4:14:38:23	-3437.000	0.0	-1606.000	-994.000	753.000	-15719.000	937.000	-868.000
40.	4:14:38:41	-3394.000	37.000	-1580.000	-933.000	792.000	-15633.000	930.000	-751.000
41.	4:14:39:32	-3276.000	120.000	-1517.000	-805.000	850.000	-15421.000	929.000	-635.000
42.	4:14:40:12	-3137.000	187.000	-1443.000	-687.000	870.000	-15192.000	923.000	-516.000
43.	4:14:40:44	-2978.000	246.000	-1362.000	-577.000	885.000	-14935.000	920.000	-389.000
44.	4:14:41:14	-2810.000	323.000	-1272.000	-469.000	922.000	-14667.000	913.000	-285.000
45.	4:14:42:30	-2615.000	389.000	-1172.000	-374.000	939.000	-14371.000	897.000	-203.000
46.	4:14:43:17	-2402.000	461.000	-1071.000	-270.000	957.000	-14070.000	876.000	-177.000
47.	4:14:43:49	-2141.000	505.000	-952.000	-170.000	990.000	-13789.000	848.000	-145.000
48.	4:14:44:21	-1806.000	495.000	-793.000	-103.000	1023.000	-13571.000	801.000	-16.000
49.	4:14:45:2	-1318.000	431.000	-561.000	-38.000	1088.000	-13387.000	820.000	50.000
50.	4:14:45:44	-809.000	301.000	-275.000	137.000	1145.000	-13347.000	807.000	54.000
51.	4:14:46:46	-780.000	293.000	-254.000	141.000	1128.000	-13342.000	787.000	

STRAIN CHANNELS

	TIME	CH. 31	CH. 30	CH.
1.	4:13:40:55	-29.000	4.000	
2.	4:14: 8:56	-79.000	3.000	
3.	4:14:10:17	-164.000	5.000	
4.	4:14:11:35	-332.000	6.000	
5.	4:14:12:21	-486.000	11.000	
6.	4:14:13: 0	-635.000	17.000	
7.	4:14:13:38	-774.000	17.000	
8.	4:14:14:20	-909.000	16.000	
9.	4:14:14:56	-1035.000	6.000	
10.	4:14:18: 2	-1288.000	-28.000	
11.	4:14:19: 2	-1398.000	-48.000	
12.	4:14:20:17	-1498.000	-71.000	
13.	4:14:21:21	-1608.000	-92.000	
14.	4:14:22:22	-1726.000	-113.000	
15.	4:14:23:15	-1833.000	-138.000	
16.	4:14:23:58	-1937.000	-155.000	
17.	4:14:24:41	-2046.000	-175.000	
18.	4:14:25:22	-2146.000	-195.000	
19.	4:14:26: 9	-2260.000	-223.000	
20.	4:14:27: 0	-2394.000	-242.000	
21.	4:14:27:46	-2560.000	-259.000	
22.	4:14:28:38	-2743.000	-267.000	
23.	4:14:29:30	-2861.000	-271.000	
24.	4:14:30:28	-2989.000	-268.000	
25.	4:14:31:12	-3108.000	-264.000	
26.	4:14:32: 8	-3247.000	-261.000	
27.	4:14:33: 1	-3416.000	-250.000	
28.	4:14:33:42	-3582.000	-235.000	
29.	4:14:34:32	-3804.000	-220.000	
30.	4:14:35:19	-4055.000	-188.000	
31.	4:14:35:58	-4581.000	-141.000	
32.	4:14:36:16	-4902.000	-119.000	
33.	4:14:36:34	-5250.000	-95.000	
34.	4:14:36:52	-5598.000	-81.000	
35.	4:14:37:11	-6017.000	-61.000	
36.	4:14:37:29	-6102.000	-40.000	
37.	4:14:37:47	-6133.000	-14.000	
38.	4:14:38: 5	-6117.000	12.000	
39.	4:14:38:23	-6086.000	40.000	
40.	4:14:38:41	-6034.000	82.000	
41.	4:14:39:32	-5907.000	155.000	
42.	4:14:40:12	-5760.000	219.000	
43.	4:14:40:44	-5576.000	271.000	
44.	4:14:41:14	-5383.000	348.000	
45.	4:14:42:30	-5155.000	411.000	
46.	4:14:43:17	-4902.000	473.000	
47.	4:14:43:49	-4597.000	500.000	
48.	4:14:44:21	-4209.000	507.000	
49.	4:14:45: 2	-3604.000	513.000	
50.	4:14:45:44	-2953.000	415.000	
51.	4:14:46:46	-2898.000	403.000	

DISPLACEMENT CHANNELS

	TIME	CH.19	CH.18	CH.17	CH.16	CH.15	CH.14	CH.13	CH.12
1.	4:13:40:55	0.0	-0.001	0.0	0.010	0.004	0.002	0.0	0.004
2.	4:14:08:56	0.0	-0.001	0.0	0.014	0.008	0.002	-0.002	-0.002
3.	4:14:10:17	0.0	-0.016	-0.002	0.016	0.010	0.002	-0.002	-0.008
4.	4:14:11:35	0.0	-0.030	0.002	0.016	0.034	0.006	0.0	-0.008
5.	4:14:12:21	-0.009	-0.030	0.0	0.016	0.040	0.030	0.002	-0.006
6.	4:14:13:0	-0.029	-0.030	0.0	0.034	0.040	0.032	0.002	-0.008
7.	4:14:13:38	-0.029	-0.030	0.0	0.046	0.064	0.030	0.002	-0.028
8.	4:14:14:20	-0.029	-0.029	0.0	0.046	0.072	0.030	0.012	-0.036
9.	4:14:14:56	-0.057	-0.029	0.0	0.046	0.070	0.040	0.028	-0.036
10.	4:14:18:2	-0.058	-0.058	0.0	0.066	0.102	0.060	0.030	-0.034
11.	4:14:19:2	-0.058	-0.058	0.002	0.076	0.104	0.060	0.030	-0.036
12.	4:14:20:17	-0.057	-0.058	0.0	0.076	0.104	0.062	0.032	-0.036
13.	4:14:21:21	-0.058	-0.058	0.004	0.076	0.104	0.064	0.030	-0.034
14.	4:14:22:22	-0.058	-0.058	0.008	0.076	0.134	0.074	0.030	-0.036
15.	4:14:23:15	-0.058	-0.058	0.016	0.078	0.136	0.090	0.030	-0.036
16.	4:14:23:58	-0.058	-0.058	0.030	0.112	0.134	0.090	0.032	-0.036
17.	4:14:24:41	-0.057	-0.058	0.028	0.106	0.134	0.090	0.030	-0.042
18.	4:14:25:22	-0.062	-0.058	0.030	0.106	0.166	0.090	0.030	-0.056
19.	4:14:26:9	-0.078	-0.058	0.030	0.104	0.166	0.096	0.028	-0.054
20.	4:14:27:0	-0.086	-0.058	0.030	0.104	0.166	0.116	0.030	-0.054
21.	4:14:27:46	-0.086	-0.058	0.030	0.122	0.166	0.118	0.030	-0.066
22.	4:14:28:38	-0.086	-0.058	0.030	0.140	0.196	0.118	0.030	-0.066
23.	4:14:29:30	-0.086	-0.075	0.030	0.134	0.198	0.118	0.030	-0.066
24.	4:14:30:28	-0.086	-0.086	0.028	0.134	0.198	0.126	0.030	-0.066
25.	4:14:31:12	-0.085	-0.087	0.028	0.134	0.198	0.144	0.030	-0.064
26.	4:14:32:8	-0.092	-0.087	0.030	0.164	0.228	0.148	0.062	-0.066
27.	4:14:33:1	-0.114	-0.087	0.028	0.164	0.228	0.148	0.060	-0.066
28.	4:14:33:42	-0.114	-0.087	0.028	0.164	0.228	0.148	0.060	-0.064
29.	4:14:34:32	-0.114	-0.087	0.030	0.194	0.258	0.176	0.060	-0.080
30.	4:14:35:19	-0.143	-0.087	0.060	0.194	0.266	0.178	0.060	-0.094
31.	4:14:35:58	-0.146	-0.115	0.060	0.224	0.322	0.206	0.060	-0.096
32.	4:14:36:16	-0.172	-0.115	0.060	0.250	0.350	0.234	0.060	-0.112
33.	4:14:36:34	-0.200	-0.144	0.058	0.282	0.380	0.244	0.060	-0.126
34.	4:14:36:52	-0.200	-0.144	0.058	0.310	0.410	0.270	0.060	-0.154
35.	4:14:37:11	-0.228	-0.173	0.058	0.340	0.440	0.304	0.060	-0.156
36.	4:14:37:29	-0.256	-0.173	0.066	0.364	0.472	0.322	0.060	-0.180
37.	4:14:37:47	-0.257	-0.172	0.068	0.370	0.472	0.322	0.090	-0.184
38.	4:14:38:5	-0.256	-0.173	0.070	0.368	0.476	0.322	0.090	-0.186
39.	4:14:38:23	-0.256	-0.173	0.068	0.368	0.502	0.322	0.090	-0.186
40.	4:14:38:41	-0.256	-0.172	0.068	0.368	0.502	0.322	0.088	-0.186
41.	4:14:39:32	-0.256	-0.173	0.058	0.370	0.482	0.326	0.090	-0.182
42.	4:14:40:12	-0.256	-0.172	0.058	0.348	0.484	0.322	0.090	-0.184
43.	4:14:40:44	-0.256	-0.172	0.060	0.340	0.474	0.324	0.090	-0.184
44.	4:14:41:14	-0.256	-0.173	0.058	0.340	0.474	0.324	0.090	-0.184
45.	4:14:42:30	-0.256	-0.172	0.058	0.342	0.474	0.308	0.090	-0.184
46.	4:14:43:17	-0.256	-0.173	0.058	0.322	0.442	0.292	0.090	-0.184
47.	4:14:43:49	-0.256	-0.173	0.058	0.312	0.444	0.294	0.090	-0.182
48.	4:14:44:21	-0.256	-0.173	0.058	0.312	0.444	0.284	0.090	-0.184
49.	4:14:45:2	-0.228	-0.172	0.058	0.282	0.382	0.264	0.090	-0.154
50.	4:14:45:44	-0.200	-0.144	0.058	0.252	0.352	0.236	0.090	-0.146
51.	4:14:46:46	-0.200	-0.131	0.056	0.252	0.352	0.234	0.090	-0.130

LOAD CHANNELS

	TIME	CH.29	CH.28	CH.27	CH.26	CH.25	CH.22	CH.21	CH.20
1.	4:13:40:55	1140.000	1520.000	2010.000	1870.000	2670.000	1830.000	1570.000	1230.000
2.	4:14:08:56	2510.000	2980.000	4400.000	4710.000	5310.000	4340.000	3470.000	2560.000
3.	4:14:10:17	4440.000	5810.000	7480.000	9950.000	9400.000	9450.000	6680.000	4800.000
4.	4:14:11:35	10020.000	12330.000	15620.000	18880.000	20110.000	18010.000	14620.000	10650.000
5.	4:14:12:21	14920.000	18260.000	22920.000	28290.000	28920.000	26600.000	21790.000	16160.000
6.	4:14:13:00	19970.000	24730.000	29590.000	37780.000	38490.000	35070.000	28010.000	22230.000
7.	4:14:13:38	25450.000	31080.000	37170.000	46260.000	48830.000	43050.000	35190.000	28080.000
8.	4:14:14:20	30070.000	37130.000	44160.000	55760.000	57600.000	51820.000	41900.000	33580.000
9.	4:14:14:56	35780.000	43380.000	50860.000	65530.000	67150.000	61080.000	48030.000	39260.000
10.	4:14:15:22	45360.000	55070.000	65550.000	83510.000	86780.000	77990.000	62580.000	49980.000
11.	4:14:16:00	50410.000	61040.000	72630.000	92850.000	96140.000	86930.000	69590.000	55050.000
12.	4:14:16:40	56000.000	67160.000	79260.000	101170.000	106300.000	94520.000	76750.000	59660.000
13.	4:14:17:21	60510.000	72910.000	86820.000	110890.000	115400.000	103670.000	83950.000	65060.000
14.	4:14:18:00	65250.000	79190.000	93980.000	120430.000	125260.000	112970.000	91040.000	70600.000
15.	4:14:18:41	70550.000	84950.000	101370.000	128900.000	135870.000	121390.000	98500.000	75670.000
16.	4:14:19:22	75510.000	90590.000	106860.000	138670.000	146850.000	130590.000	103680.000	81420.000
17.	4:14:20:03	80660.000	96280.000	113470.000	148010.000	154500.000	139500.000	110150.000	86750.000
18.	4:14:20:44	85940.000	101690.000	120700.000	156090.000	165000.000	147210.000	117140.000	91530.000
19.	4:14:21:25	90480.000	107700.000	129400.000	165540.000	173820.000	156250.000	125490.000	97120.000
20.	4:14:22:06	95800.000	113730.000	135940.000	174570.000	183590.000	164770.000	132000.000	102570.000
21.	4:14:22:47	101050.000	119700.000	143030.000	182820.000	193820.000	172600.000	138920.000	108140.000
22.	4:14:23:28	105970.000	125570.000	149800.000	191860.000	202640.000	181010.000	145010.000	114410.000
23.	4:14:24:09	108950.000	128910.000	152130.000	195780.000	208160.000	184730.000	147440.000	118170.000
24.	4:14:24:50	111350.000	131870.000	155440.000	200880.000	211990.000	189420.000	150470.000	121730.000
25.	4:14:25:31	113760.000	135030.000	159460.000	205200.000	217440.000	197350.000	154310.000	125370.000
26.	4:14:26:12	116640.000	138140.000	162300.000	208850.000	22120.000	193700.000	156970.000	128650.000
27.	4:14:26:53	119110.000	141340.000	165800.000	213980.000	226100.000	202000.000	160270.000	132420.000
28.	4:14:27:34	120890.000	144120.000	169710.000	217920.000	231140.000	205900.000	163810.000	135870.000
29.	4:14:28:15	124320.000	147690.000	172960.000	221790.000	236220.000	209510.000	167020.000	139640.000
30.	4:14:28:56	126410.000	151200.000	175750.000	226490.000	240420.000	214220.000	169550.000	143740.000
31.	4:14:29:37	129320.000	154200.000	179660.000	229740.000	245330.000	217820.000	172820.000	147400.000
32.	4:14:30:18	129840.000	154290.000	179500.000	229360.000	246050.000	217870.000	172350.000	148000.000
33.	4:14:30:59	130020.000	154810.000	178320.000	228370.000	246490.000	218150.000	171040.000	149000.000
34.	4:14:31:40	130020.000	154810.000	178320.000	228370.000	246490.000	218150.000	171040.000	149000.000
35.	4:14:32:21	128410.000	152720.000	174510.000	223480.000	244920.000	214520.000	166600.000	147250.000
36.	4:14:33:02	126410.000	145520.000	170370.000	216320.000	234090.000	207190.000	161950.000	140820.000
37.	4:14:33:43	121720.000	140210.000	166970.000	212070.000	227270.000	203960.000	159060.000	138270.000
38.	4:14:34:24	116460.000	135090.000	163070.000	206190.000	220280.000	197920.000	156670.000	134630.000
39.	4:14:35:05	111890.000	130560.000	160050.000	201920.000	214270.000	193650.000	152680.000	129490.000
40.	4:14:35:46	105190.000	122890.000	148730.000	187520.000	201420.000	187820.000	145540.000	121440.000
41.	4:14:36:27	90280.000	111380.000	133840.000	167630.000	177860.000	172170.000	127360.000	99910.000
42.	4:14:37:08	80900.000	100370.000	119030.000	149930.000	158820.000	159690.000	113540.000	86870.000
43.	4:14:37:49	71150.000	88550.000	105820.000	131740.000	140130.000	140900.000	101930.000	75400.000
44.	4:14:38:30	60900.000	75530.000	90330.000	113740.000	120180.000	122810.000	88690.000	63760.000
45.	4:14:39:11	51270.000	63940.000	75730.000	95850.000	100620.000	105080.000	75150.000	53200.000
46.	4:14:40:52	41020.000	51570.000	61500.000	76680.000	81600.000	85390.000	61720.000	42370.000
47.	4:14:41:33	29760.000	38780.000	47300.000	58210.000	61230.000	65750.000	47690.000	31240.000
48.	4:14:42:14	19540.000	26020.000	32480.000	40280.000	41620.000	46380.000	32620.000	21140.000
49.	4:14:42:55	9770.000	12340.000	17650.000	20520.000	22080.000	24560.000	17740.000	10680.000
50.	4:14:43:36	2710.000	3320.000	5930.000	6440.000	7240.000	8620.000	6310.000	3220.000
51.	4:14:44:17	2760.000	3410.000	6310.000	6450.000	7990.000	8530.000	6590.000	3340.000

ROD CHANNELS

TIME	CH. 57	CH. 56	CH. 55	CH. 54	CH. 53	CH. 52	CH. 51	CH. 50
1. 4:13:40:55	12.812	12.812	12.812	0.0	0.0	0.0	12.812	12.812
2. 4:14:8:56	140.930	25.624	38.435	-51.247	38.435	0.0	-76.871	38.435
3. 4:14:10:17	153.742	51.247	76.871	-89.683	89.683	64.059	-64.059	38.435
4. 4:14:11:35	320.295	128.118	102.494	-115.306	102.494	140.930	-64.059	25.624
5. 4:14:12:21	499.660	307.488	128.118	-64.059	76.871	76.871	-64.059	12.812
6. 4:14:13:0	704.649	486.848	115.306	0.0	25.624	-12.812	-64.059	12.812
7. 4:14:13:38	922.449	653.402	76.871	12.812	-38.435	-51.247	-64.059	25.624
8. 4:14:14:20	1127.438	819.955	64.059	12.812	-230.612	-102.494	-64.059	38.435
9. 4:14:14:56	1332.427	999.320	76.871	12.812	-525.264	-204.989	-76.871	51.247
10. 4:14:15:2	1832.087	1422.109	76.871	12.812	-1319.615	-691.837	-76.871	38.435
11. 4:14:15:19	2037.076	1627.098	76.871	12.812	-1691.157	-1037.756	-76.871	51.247
12. 4:14:16:20	2216.441	1806.463	76.871	12.812	-2024.264	-1332.427	-76.871	38.435
13. 4:14:17:21	2344.559	1960.205	51.247	12.812	-2331.747	-1627.098	-89.683	38.435
14. 4:14:18:22	2459.865	2075.511	38.435	12.812	-2613.607	-1870.522	-89.683	38.435
15. 4:14:19:23	2549.548	2178.006	25.624	12.812	-2869.843	-2126.758	-76.871	38.435
16. 4:14:20:24	2639.230	2254.876	12.812	12.812	-3113.267	-2331.747	-89.683	38.435
17. 4:14:21:25	2703.289	2318.935	25.624	12.812	-3331.067	-2549.548	-76.871	51.247
18. 4:14:22:26	2780.160	2395.806	12.812	12.812	-3561.680	-2767.348	-89.683	38.435
19. 4:14:23:27	2857.031	2472.677	12.812	12.812	-3856.351	-3074.832	-89.683	38.435
20. 4:14:24:28	2933.902	2562.360	12.812	12.812	-4112.586	-3331.067	-89.683	38.435
21. 4:14:25:29	2997.961	2613.607	0.0	12.812	-4356.008	-3561.680	-89.683	51.247
22. 4:14:26:30	3036.396	2639.230	0.0	12.812	-4573.809	-3766.668	-76.871	38.435
23. 4:14:27:31	3023.584	2626.418	12.812	12.812	-4663.492	-3830.728	-89.683	51.247
24. 4:14:28:32	3010.772	2575.171	12.812	25.624	-4753.176	-3869.163	-89.683	38.435
25. 4:14:29:33	3010.772	2562.360	0.0	25.624	-4753.176	-3869.163	-89.683	38.435
26. 4:14:30:34	2985.149	2562.360	0.0	64.059	-4830.047	-3946.034	-89.683	51.247
27. 4:14:31:35	2997.961	2562.360	0.0	76.871	-4919.730	-4035.716	-89.683	38.435
28. 4:14:32:36	2997.961	2536.736	0.0	102.494	-4996.598	-4099.773	-89.683	38.435
29. 4:14:33:37	2985.149	2536.736	0.0	153.742	-5060.660	-4176.645	-89.683	51.247
30. 4:14:34:38	3010.772	2536.736	0.0	192.177	-5124.719	-4279.137	-89.683	51.247
31. 4:14:35:39	2805.784	2536.736	0.0	256.236	-5342.520	-4382.207	-89.683	51.247
32. 4:14:36:40	2549.548	2536.736	0.0	294.671	-5547.508	-4497.621	-89.683	51.247
33. 4:14:37:41	2229.253	2536.736	0.0	333.107	-5714.059	-4625.197	-89.683	51.247
34. 4:14:38:42	1844.899	3023.584	0.0	397.166	-5726.871	-4754.941	-89.683	38.435
35. 4:14:39:43	1639.910	3087.643	0.0	525.284	-5585.941	-4868.480	-59.683	38.435
36. 4:14:40:44	1614.286	3100.455	0.0	614.966	-5355.328	-4996.598	-51.247	38.435
37. 4:14:41:45	1575.851	3100.455	0.0	576.531	-5265.648	-5060.660	-51.247	51.247
38. 4:14:42:46	1614.286	3118.890	0.0	435.601	-5175.965	-5175.965	-64.059	64.059
39. 4:14:43:47	1691.157	3100.138	12.812	512.472	-5111.906	-5267.666	-76.871	89.683
40. 4:14:44:48	1627.098	3074.832	0.0	371.542	-5073.469	-5342.520	-89.683	217.801
41. 4:14:45:49	1268.368	2639.230	0.0	269.048	-4868.480	-5497.508	-76.871	422.789
42. 4:14:46:50	909.637	2165.194	0.0	192.177	-4125.398	-5625.648	-89.683	730.272
43. 4:14:47:51	666.213	1768.028	0.0	140.930	-3395.126	-5714.059	-76.871	1089.003
44. 4:14:48:52	435.601	1370.852	0.0	51.247	-2728.913	-5842.219	-89.683	1383.674
45. 4:14:49:53	166.553	922.449	0.0	25.624	-2049.888	-5996.598	-76.871	1716.781
46. 4:14:50:54	-12.812	550.907	0.0	12.812	-1306.803	-627.778	-89.683	1921.770
47. 4:14:51:55	-25.624	397.166	25.624	12.812	-307.483	-64.059	-76.871	2037.076
48. 4:14:52:56	64.059	307.483	128.118	-12.812	-102.494	-12.812	-89.683	2024.264
49. 4:14:53:57	115.306	230.612	243.424	-140.930	25.624	25.624	-115.306	1498.920
50. 4:14:54:58	140.930	333.107	333.107	-294.671	25.624	0.0	-192.177	1511.792
51. 4:14:55:59	128.118	192.177	320.295	-307.483	25.624	0.0	-177.365	

AVERAGE LOAD

1.	1730.000
2.	3785.000
3.	7251.250
4.	15005.000
5.	22227.500
6.	29483.750
7.	36888.750
8.	44002.500
9.	51383.750
10.	65852.500
11.	75080.000
12.	80102.500
13.	87401.250
14.	94840.000
15.	102150.000
16.	109021.250
17.	116165.000
18.	123162.500
19.	130725.000
20.	137871.250
21.	145010.000
22.	152008.750
23.	155533.750
24.	159141.250
25.	163040.000
26.	166237.500
27.	170165.000
28.	173670.000
29.	177393.750
30.	180977.500
31.	184686.250
32.	184650.000
33.	184631.250
34.	184311.250
35.	181551.250
36.	174945.000
37.	171191.250
38.	166288.750
39.	161813.750
40.	152568.750
41.	135053.750
42.	121143.750
43.	106886.250
44.	91992.500
45.	77605.000
46.	62731.250
47.	47495.000
48.	32510.000
49.	16917.500
50.	5440.000
51.	5672.500

3.2 FIBER-REINFORCED CONCRETE LINER

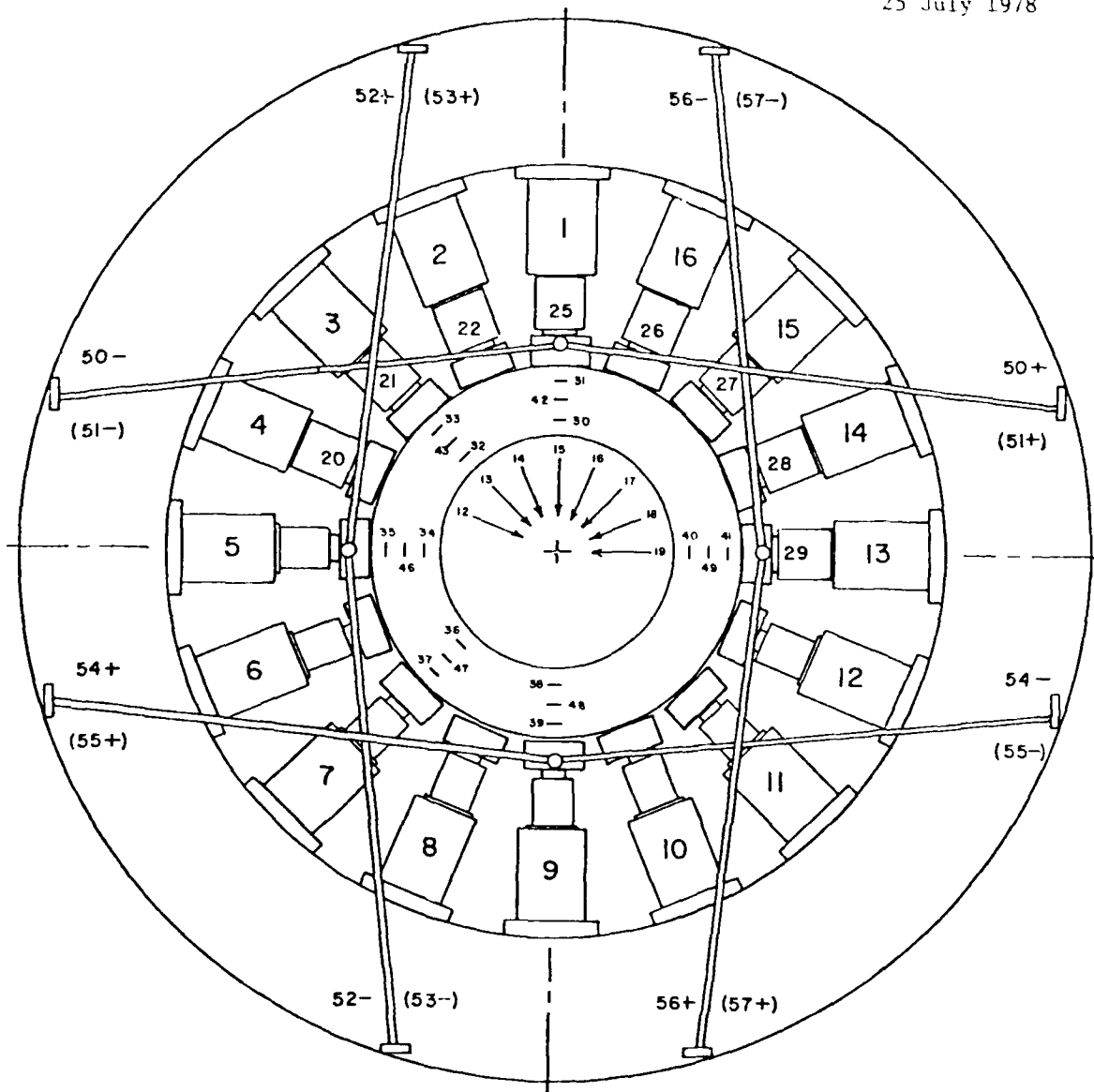
3.2.1 SPECIMEN #16

TEST NO. 48
FIBER-REINFORCED CONCRETE LINER
1:1.5 LOADING RATIO
TESTED 25 JULY 1978

REACTION FRAME TEST SET-UP

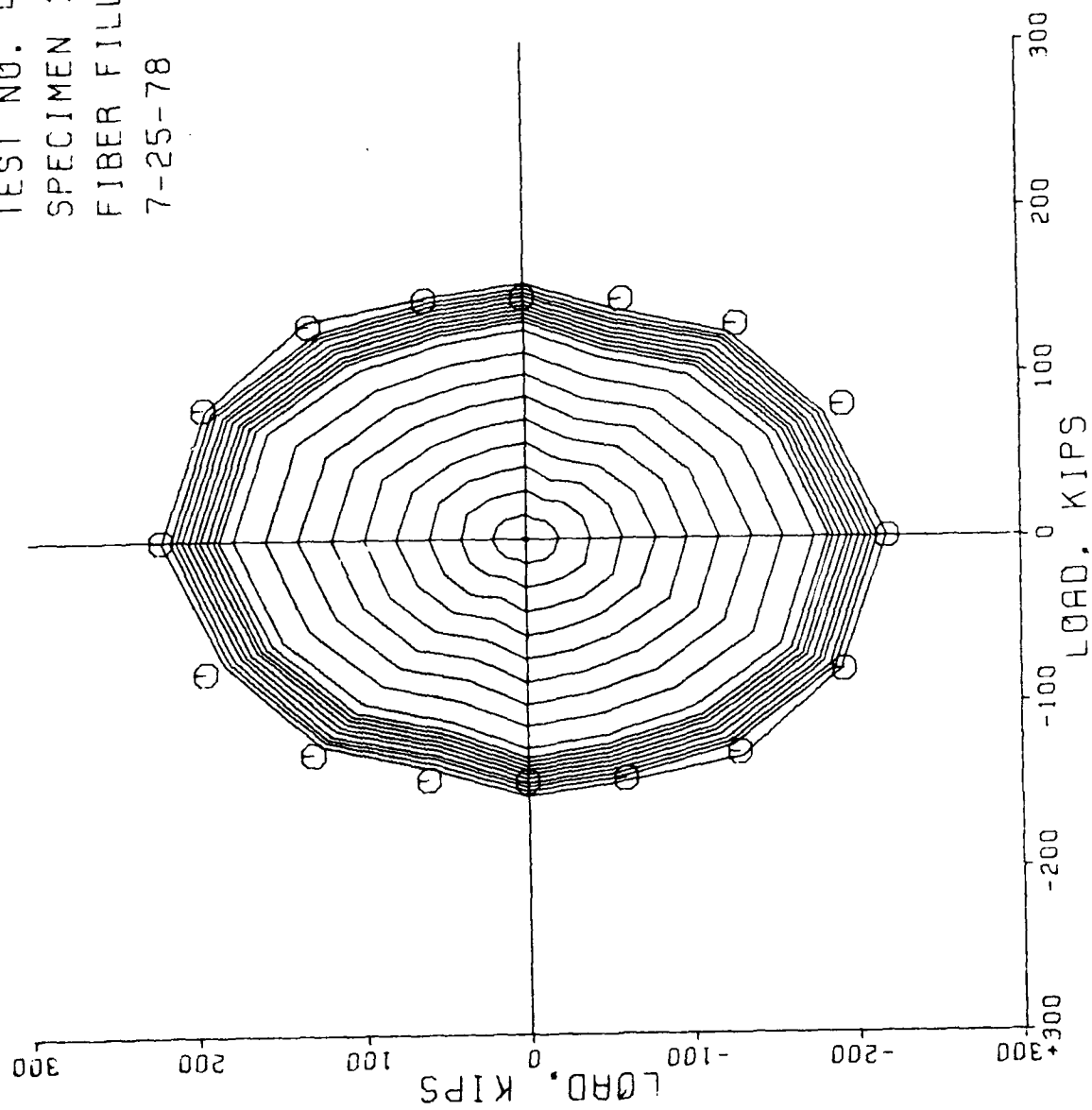
Specimen #16
Fiber Filled

Test #48
1:1.5 Load
25 July 1978

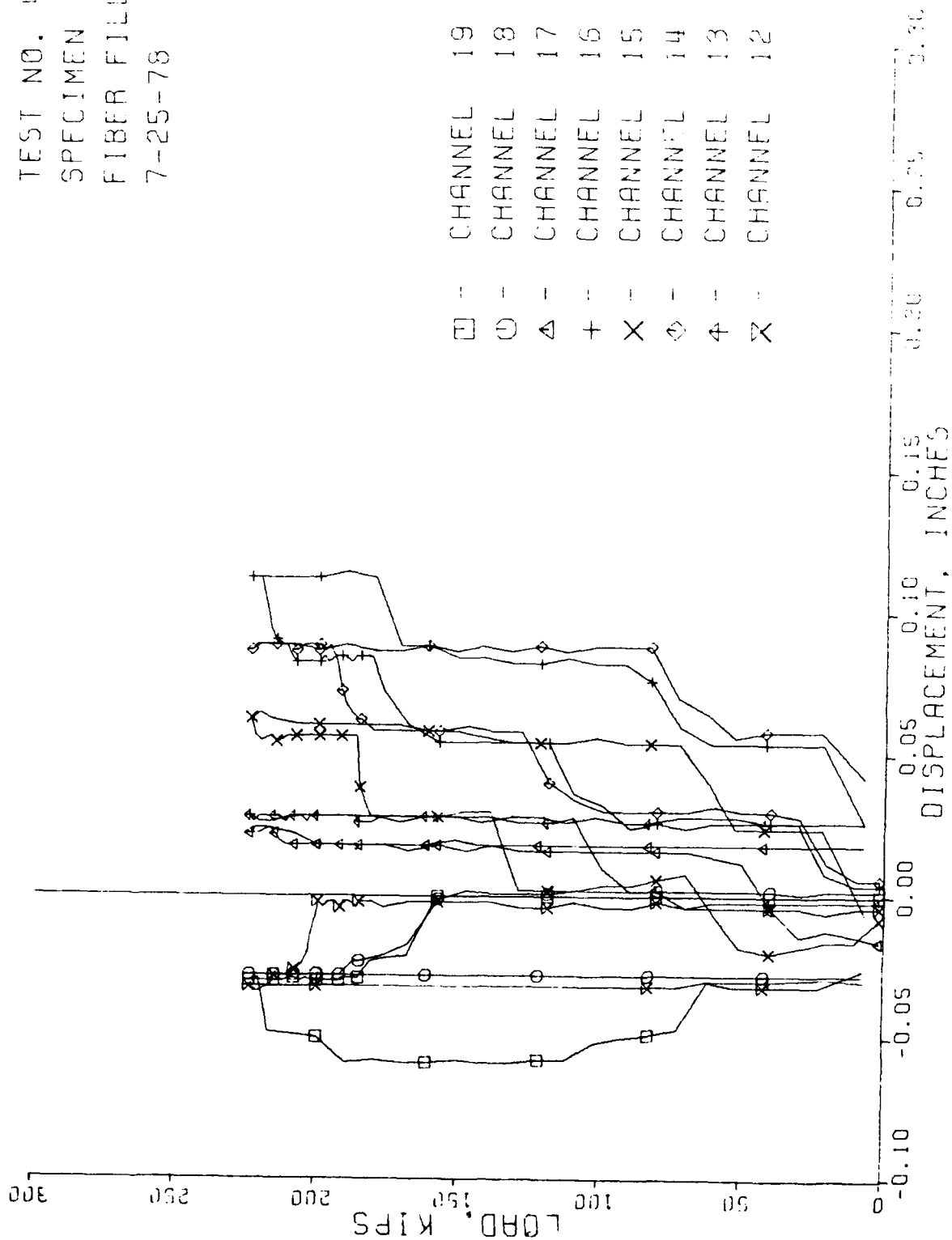


CH 12-19 Load axis I.D. (Research, Inc. Model 4040).
CH 20-22, 25-29, Axial load (Transducers, Inc. Model 693-300K).
CH 30-43, 46-49, (BLH PA-3) Strain measurements on bottom surface. 3" Nominal spacing.
CH 50-57 (Ailtech SG 129-6S) Polarity indicates rod under tensions.
Lower rod shown (XX).

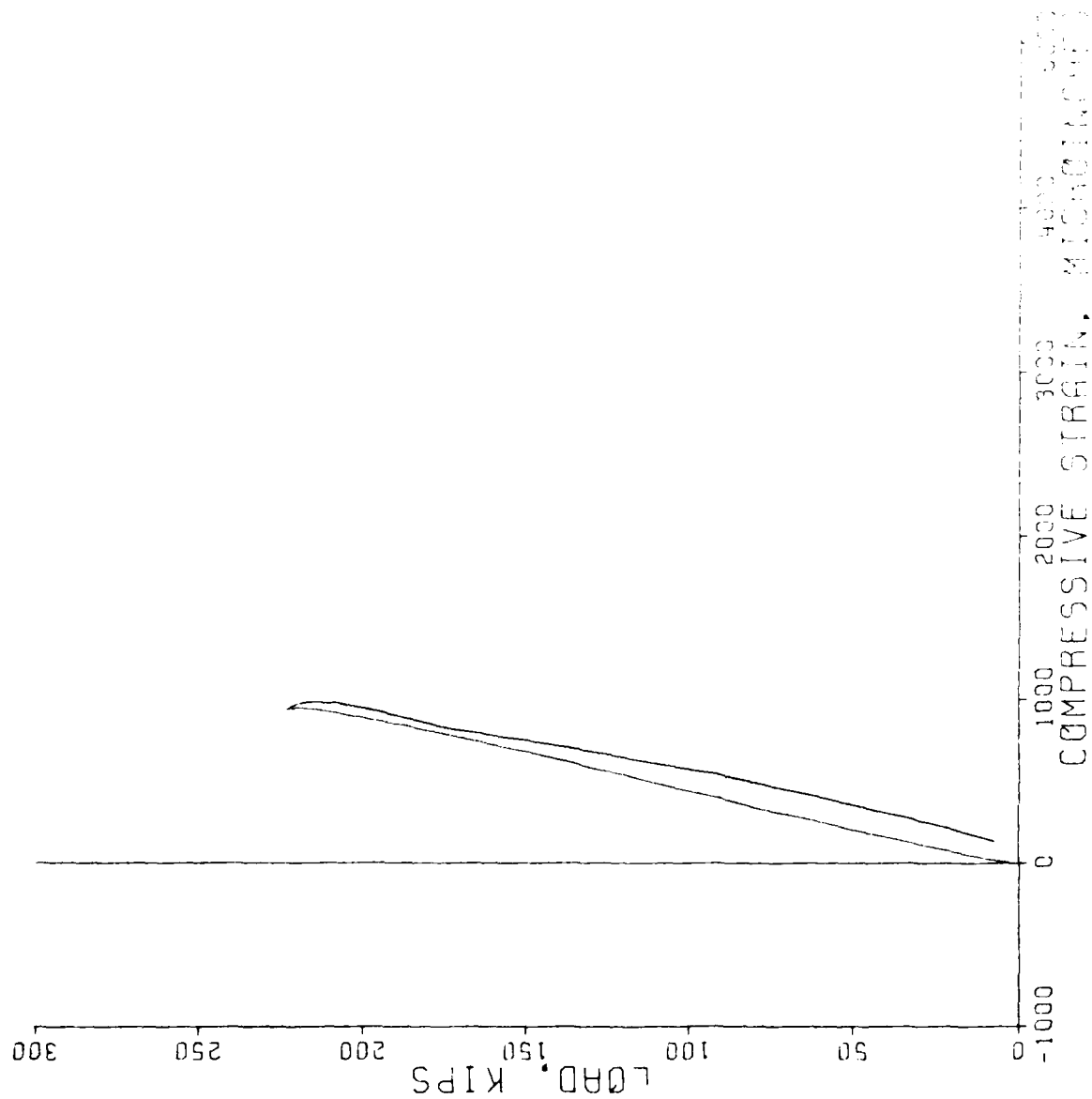
TEST NO. 48
SPECIMEN 16
FIBER FILLED
7-25-78



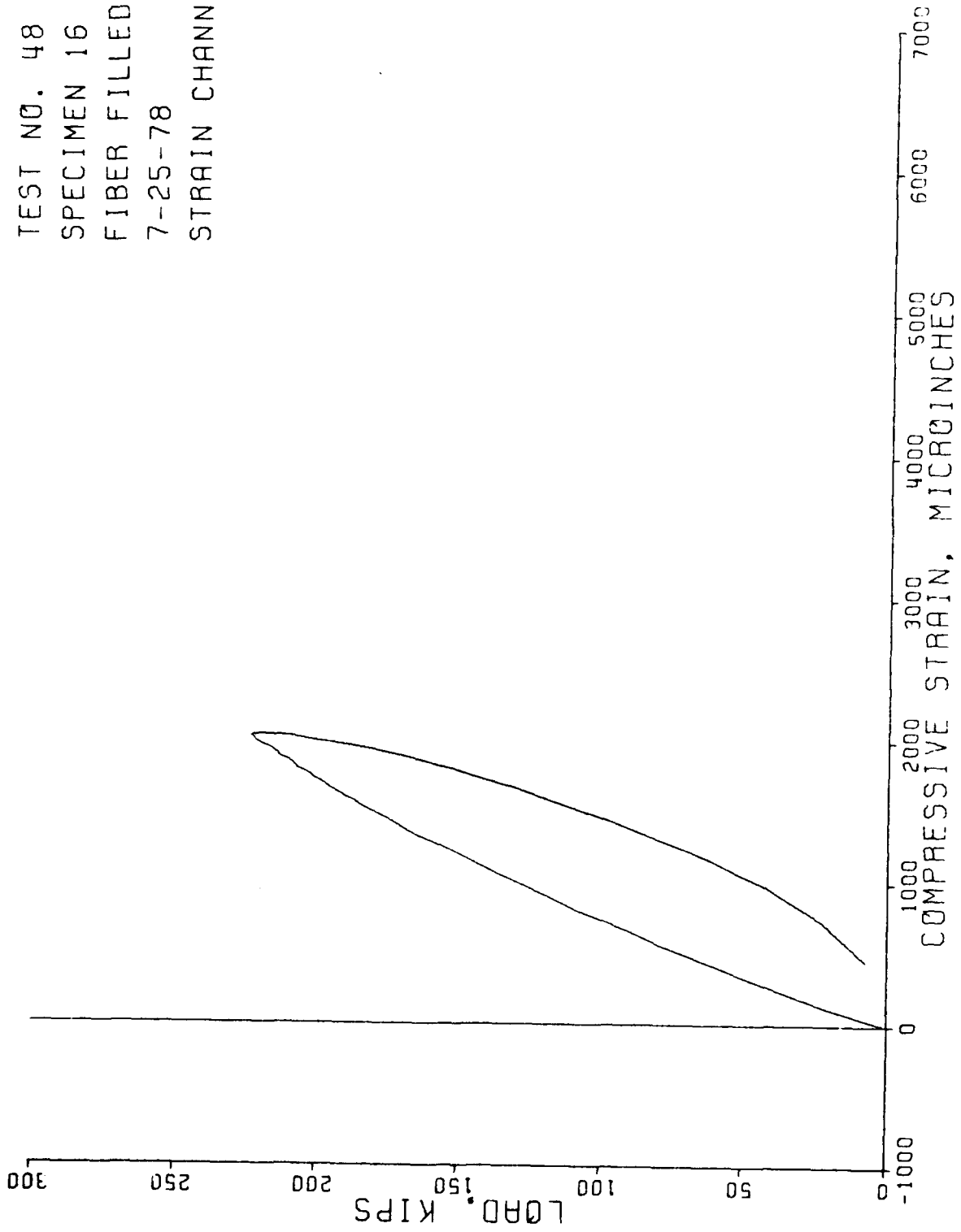
TEST NO. 48
SPECIMEN 16
FIBER FILLED
7-25-78



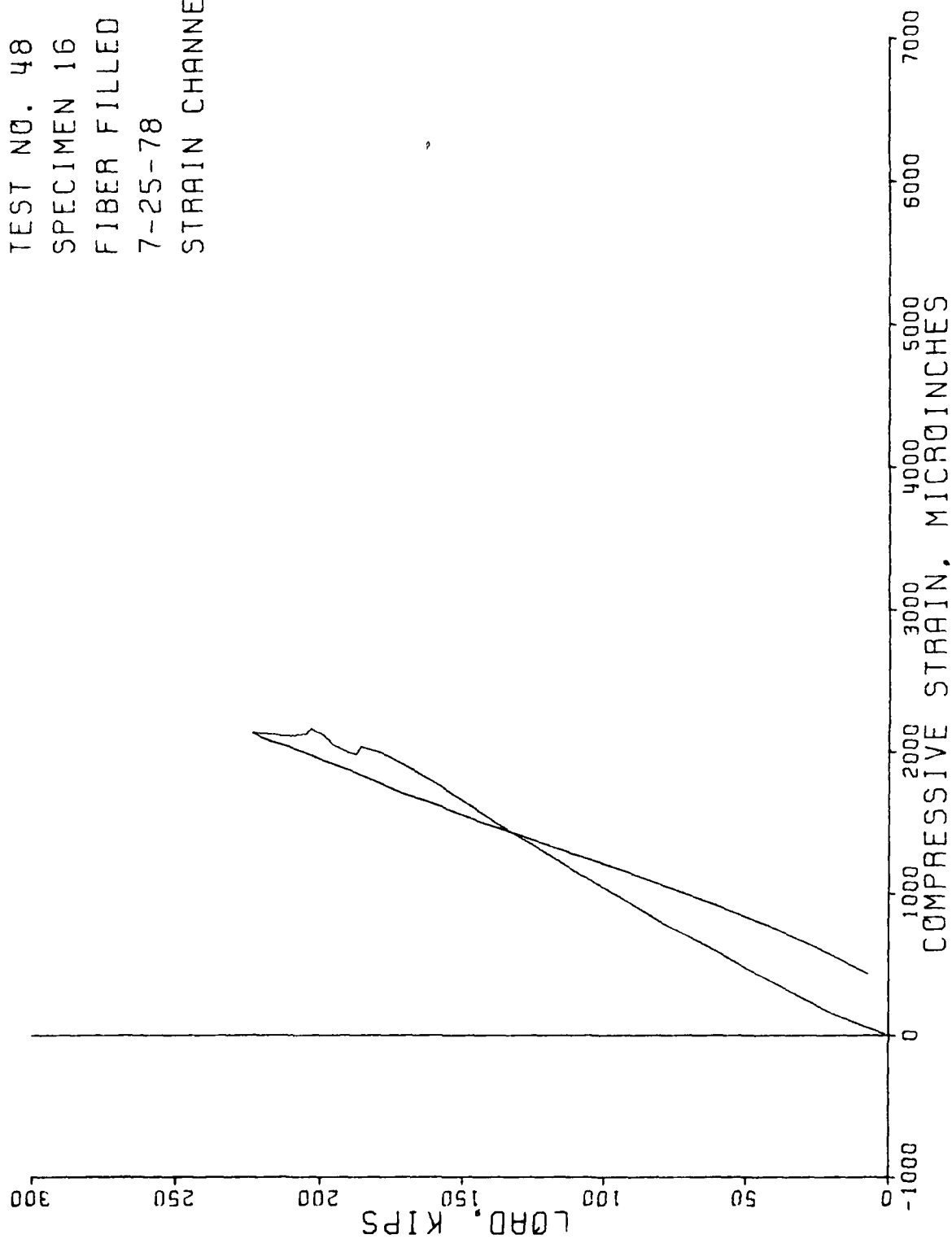
TEST NO. 48
 SPECIMEN NO.
 FIBER FILLED
 7-25-78
 STRAIN CHANNEL 30



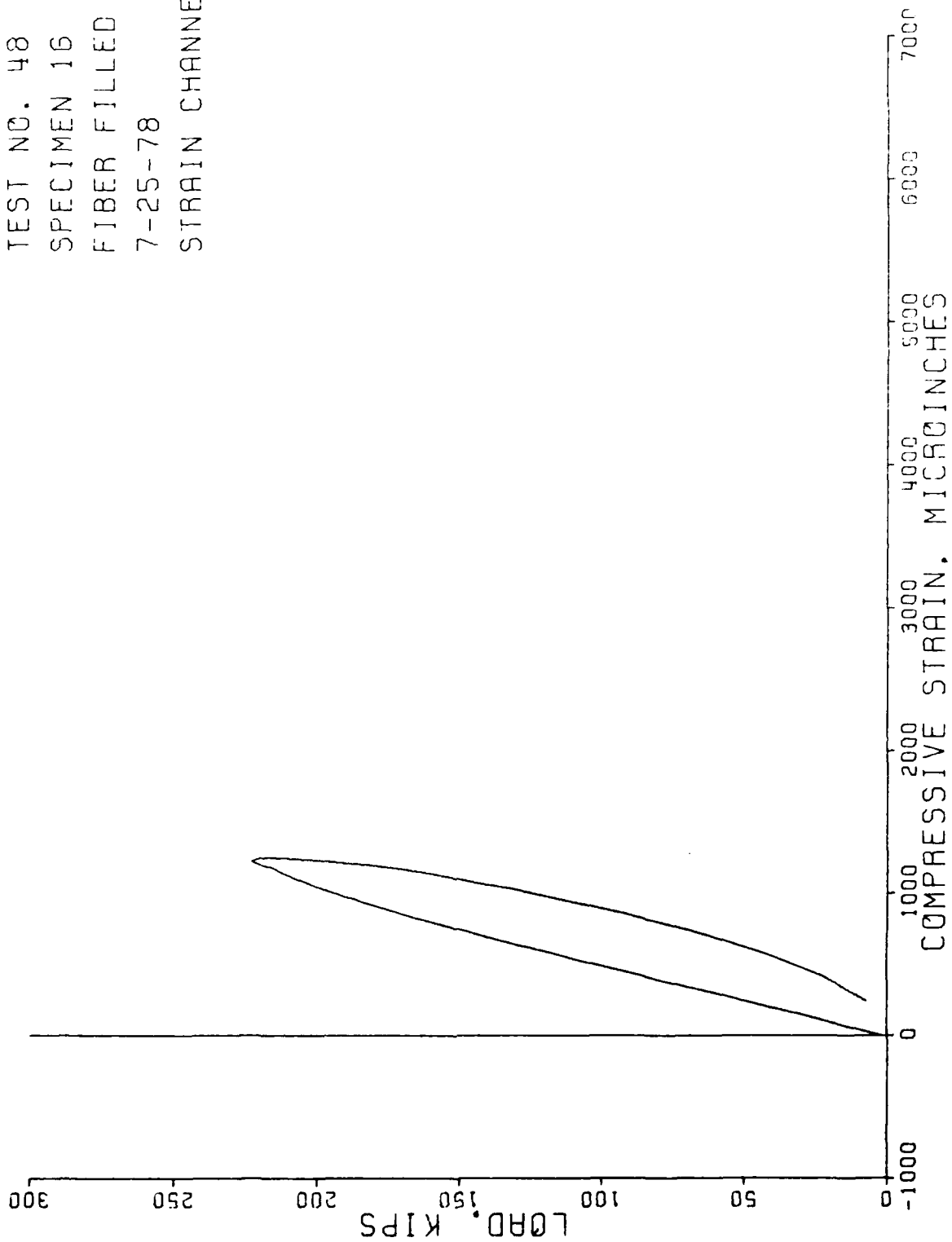
TEST NO. 48
SPECIMEN 16
FIBER FILLED
7-25-78
STRAIN CHANNEL 31



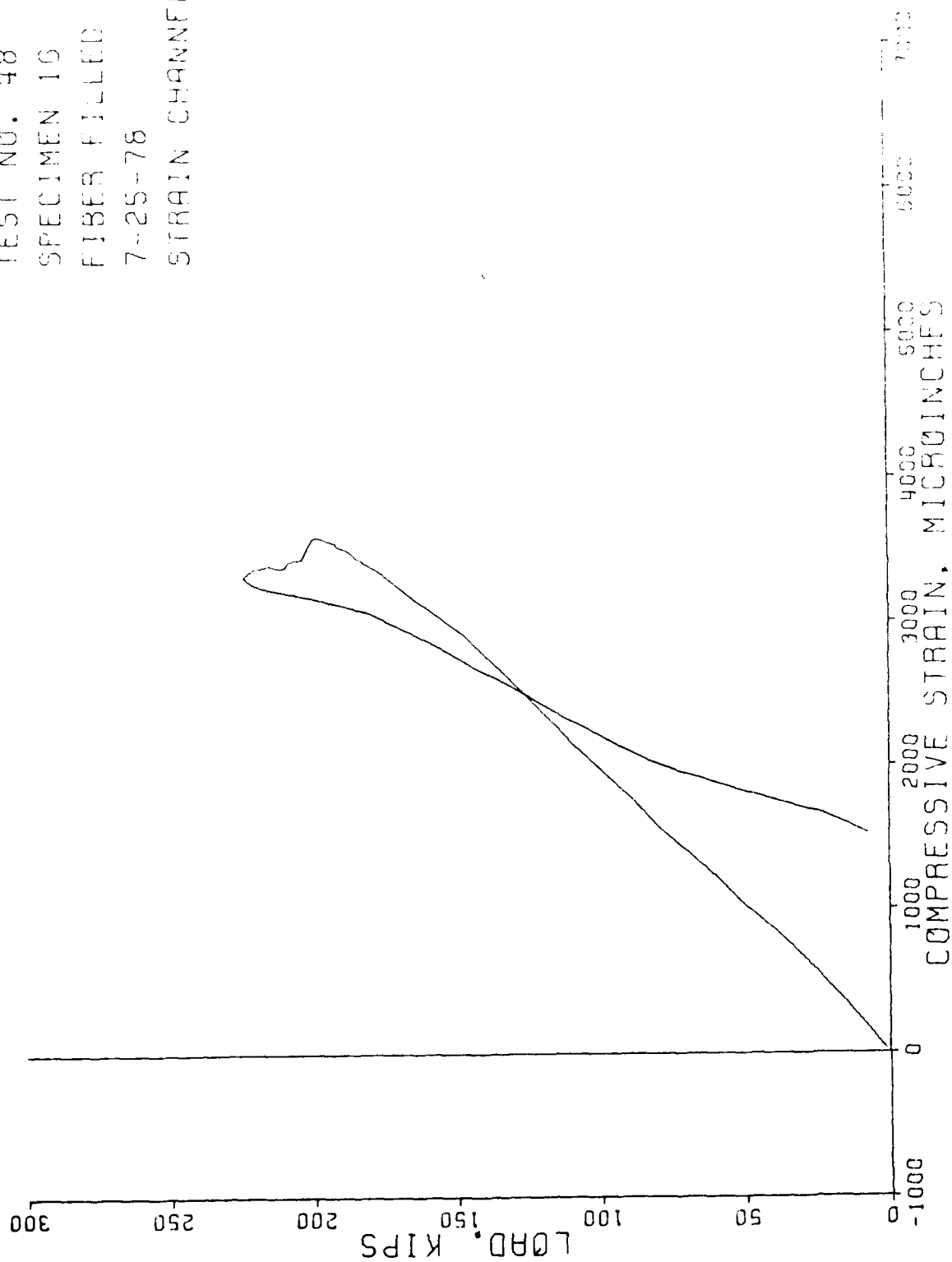
TEST NO. 48
SPECIMEN 16
FIBER FILLED
7-25-78
STRAIN CHANNEL 32



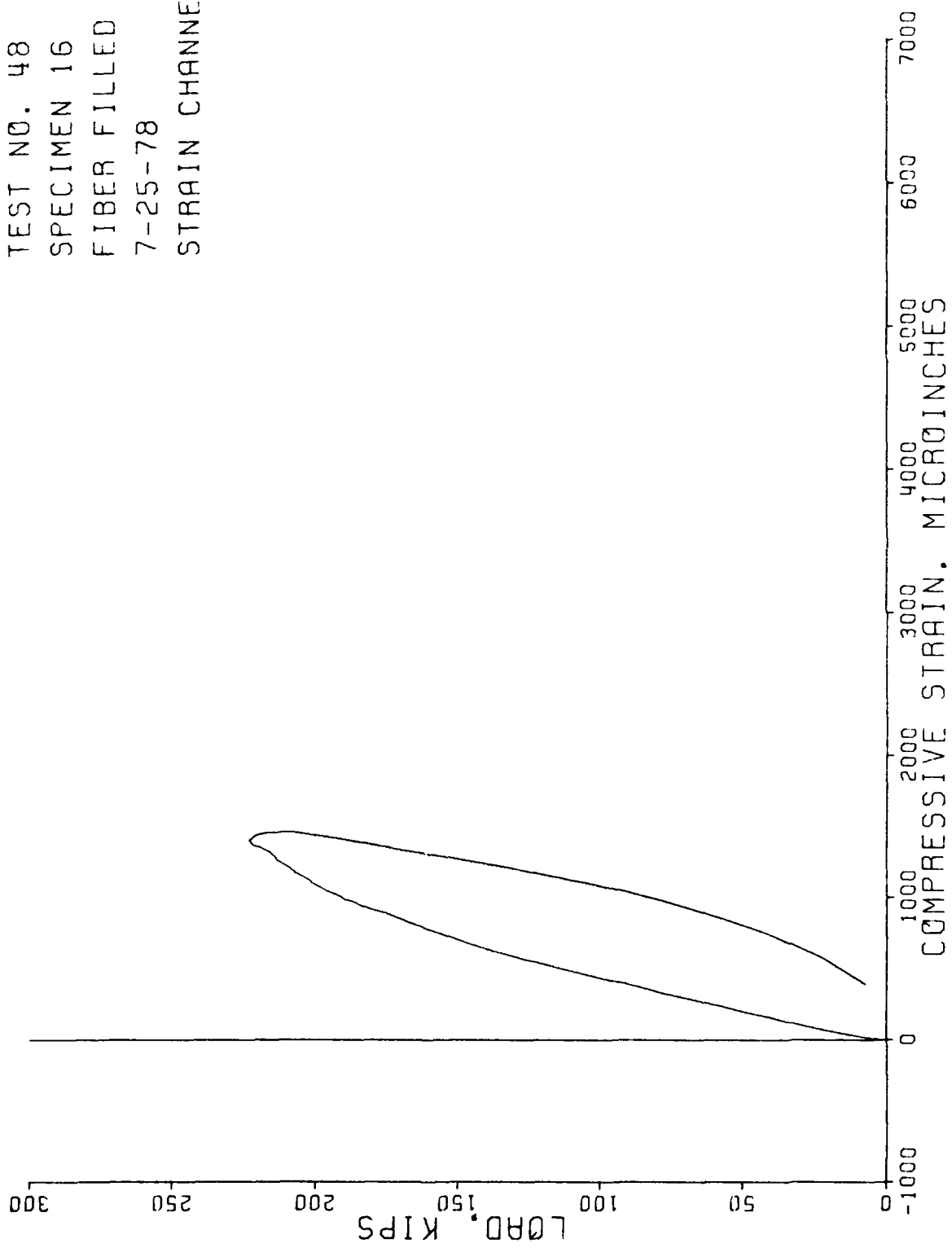
TEST NO. 48
SPECIMEN 16
FIBER FILLED
7-25-78
STRAIN CHANNEL 33



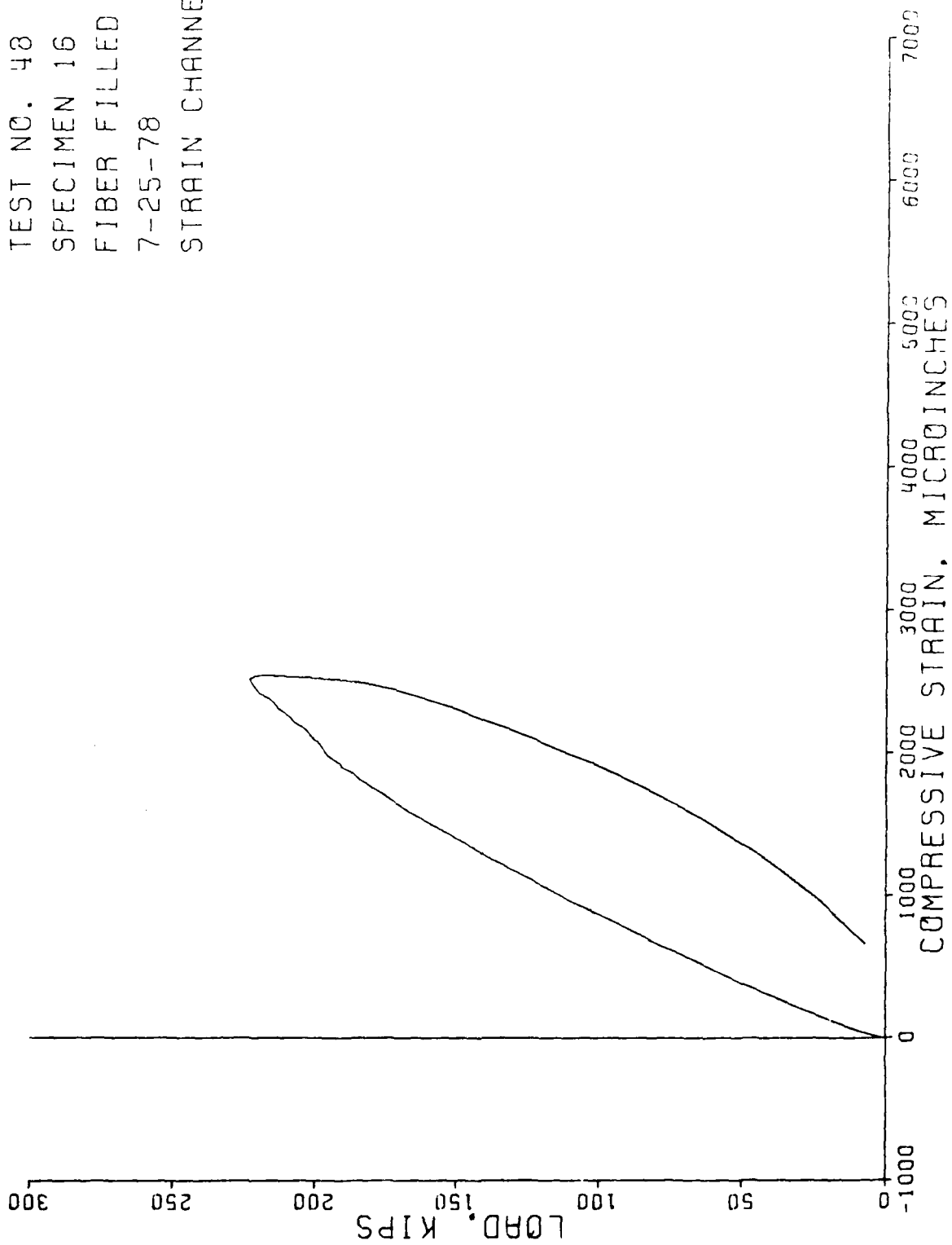
TEST NO. 48
SPECIMEN 16
FIBER FILLED
7-25-78
STRAIN CHANNEL 34



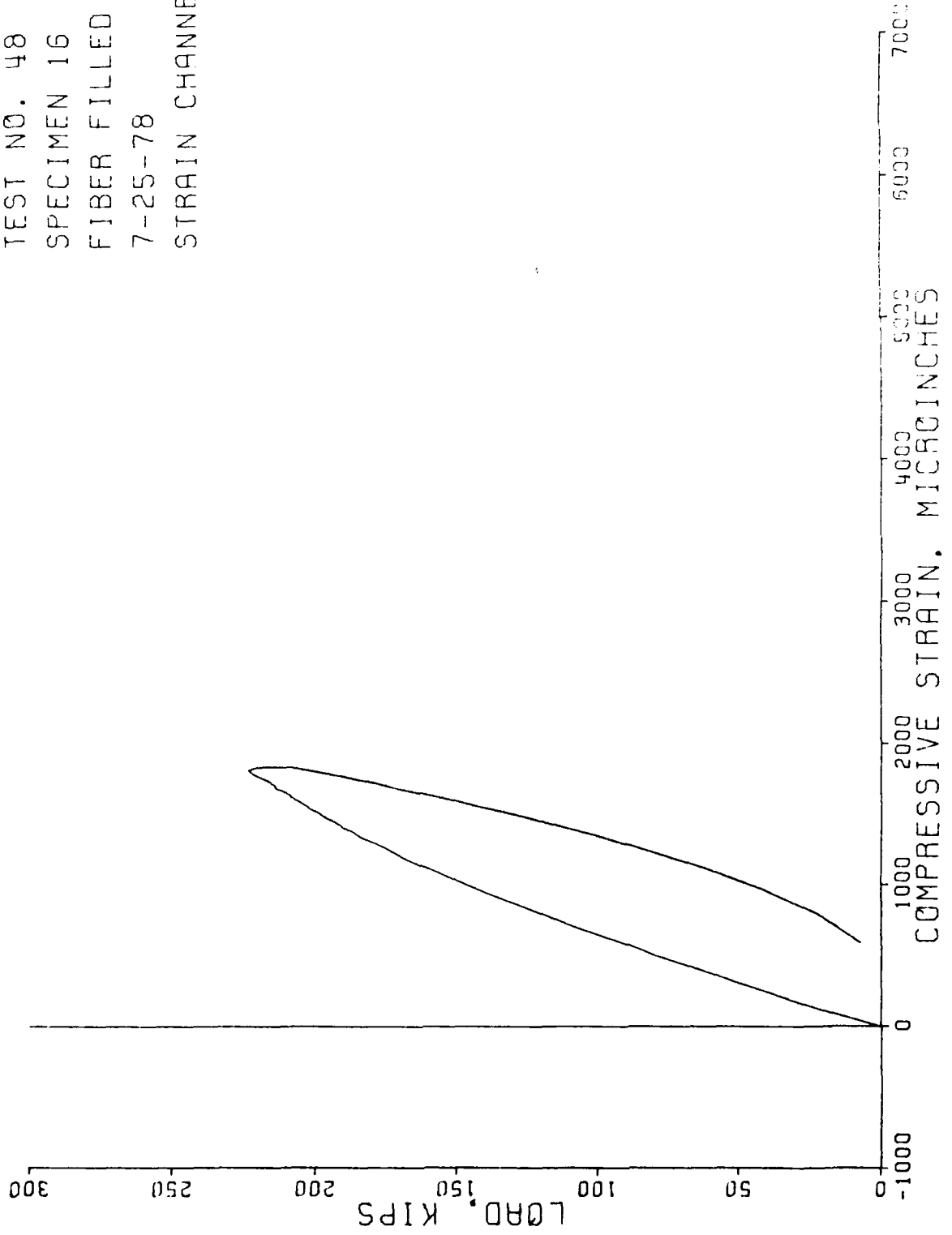
TEST NO. 48
SPECIMEN 16
FIBER FILLED
7-25-78
STRAIN CHANNEL 35



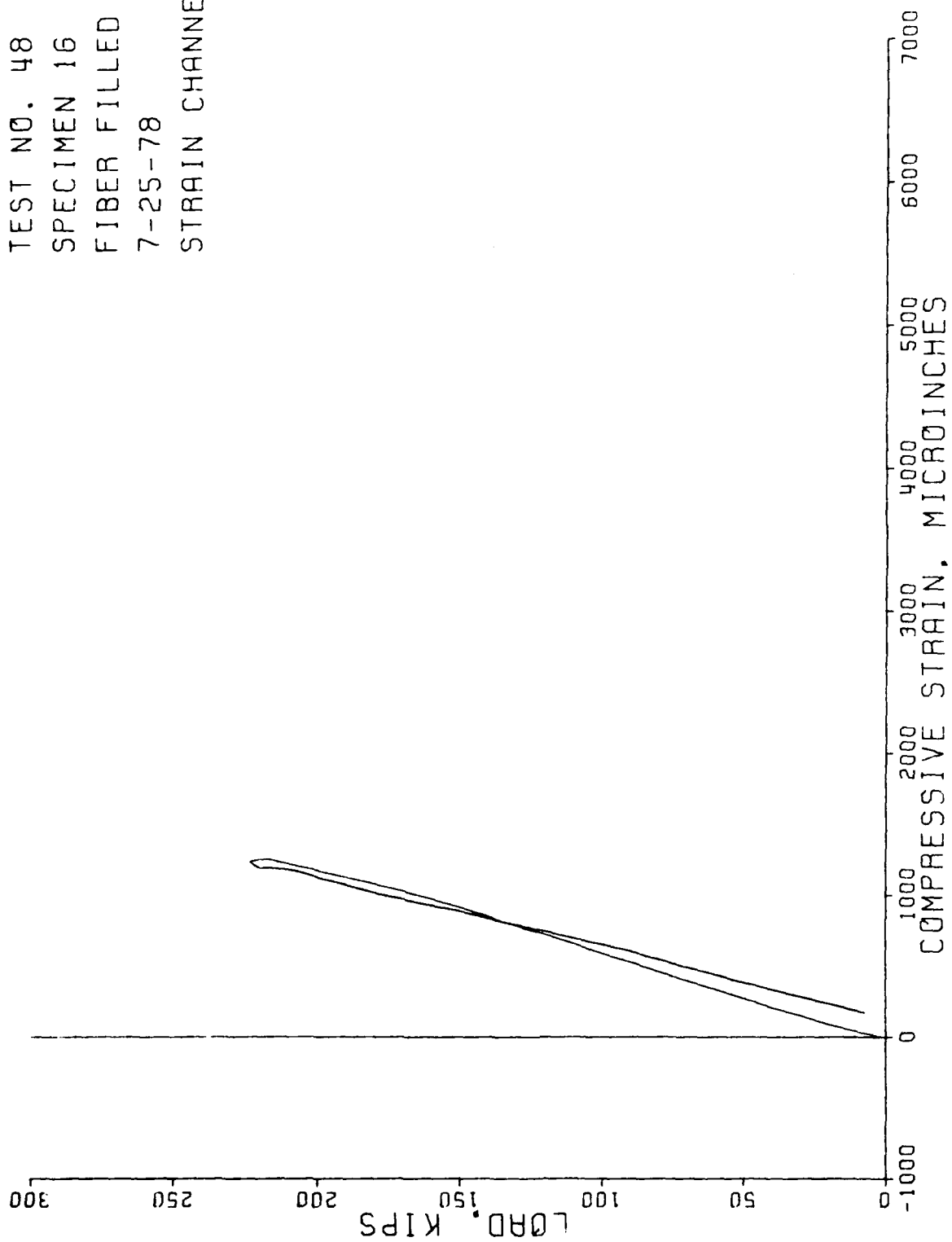
TEST NO. 48
SPECIMEN 16
FIBER FILLED
7-25-78
STRAIN CHANNEL 36



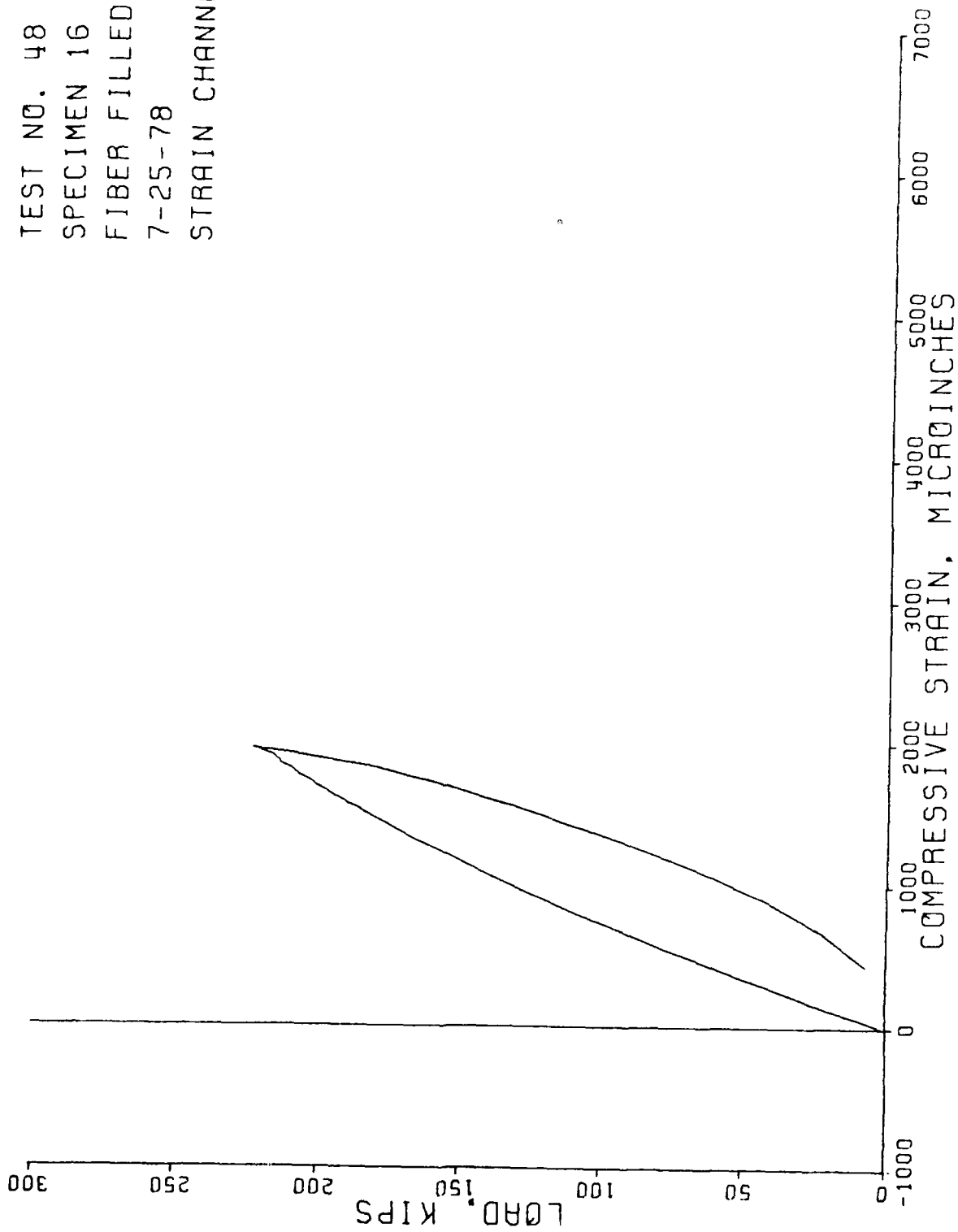
TEST NO. 48
SPECIMEN 16
FIBER FILLED
7-25-78
STRAIN CHANNEL 37



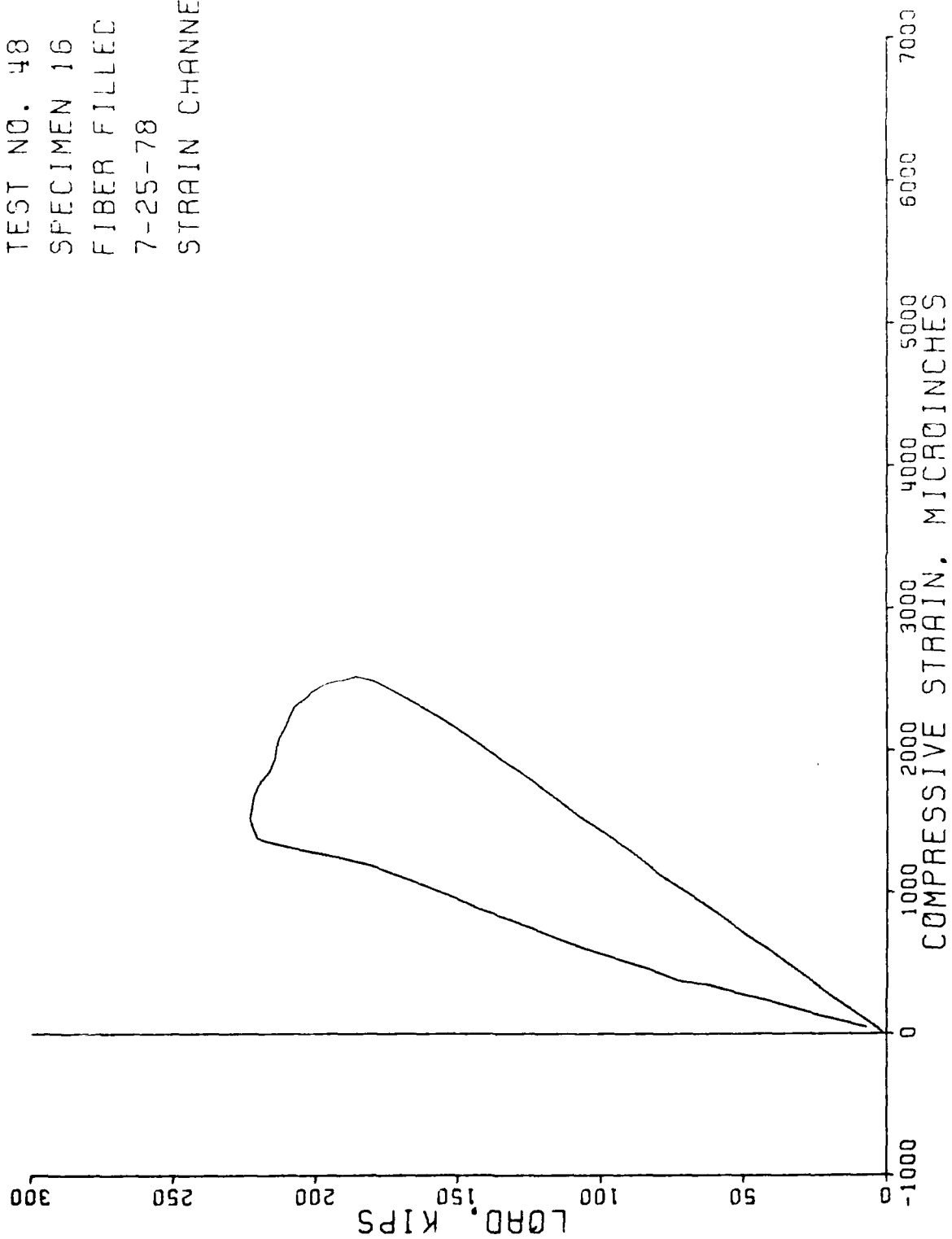
TEST NO. 48
SPECIMEN 16
FIBER FILLED
7-25-78
STRAIN CHANNEL 38



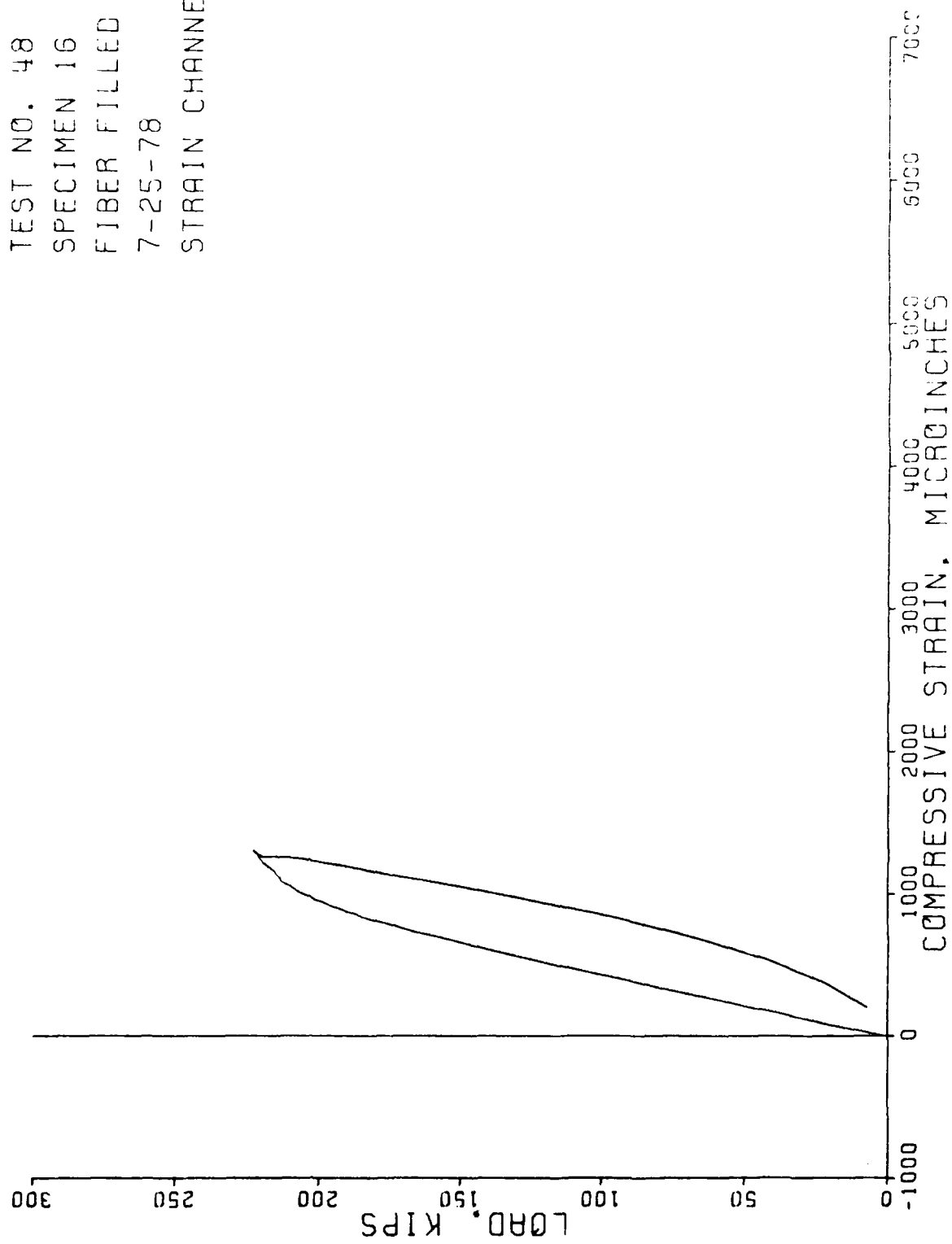
TEST NO. 48
SPECIMEN 16
FIBER FILLED
7-25-78
STRAIN CHANNEL 39



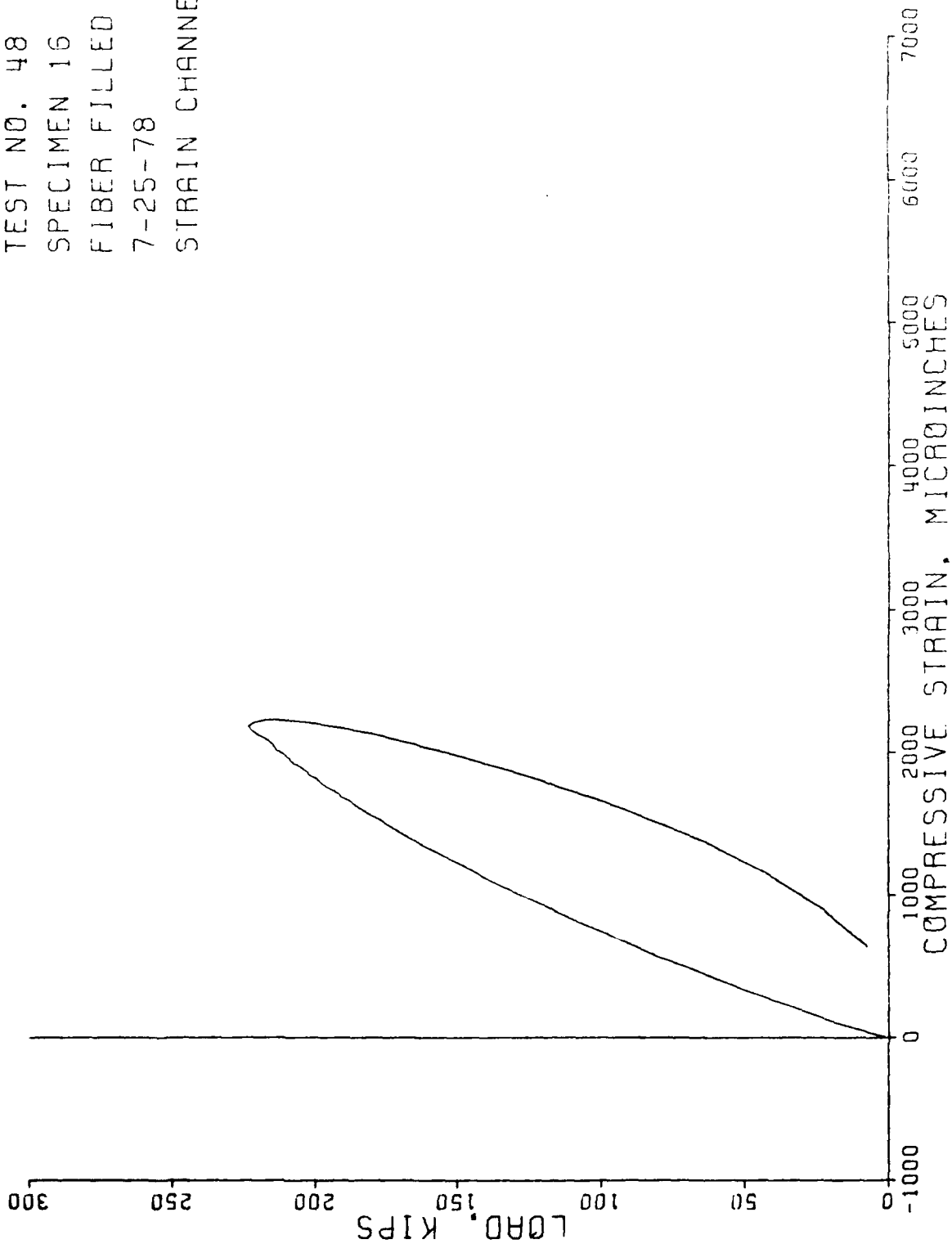
TEST NO. 48
SPECIMEN 16
FIBER FILLED
7-25-78
STRAIN CHANNEL 40



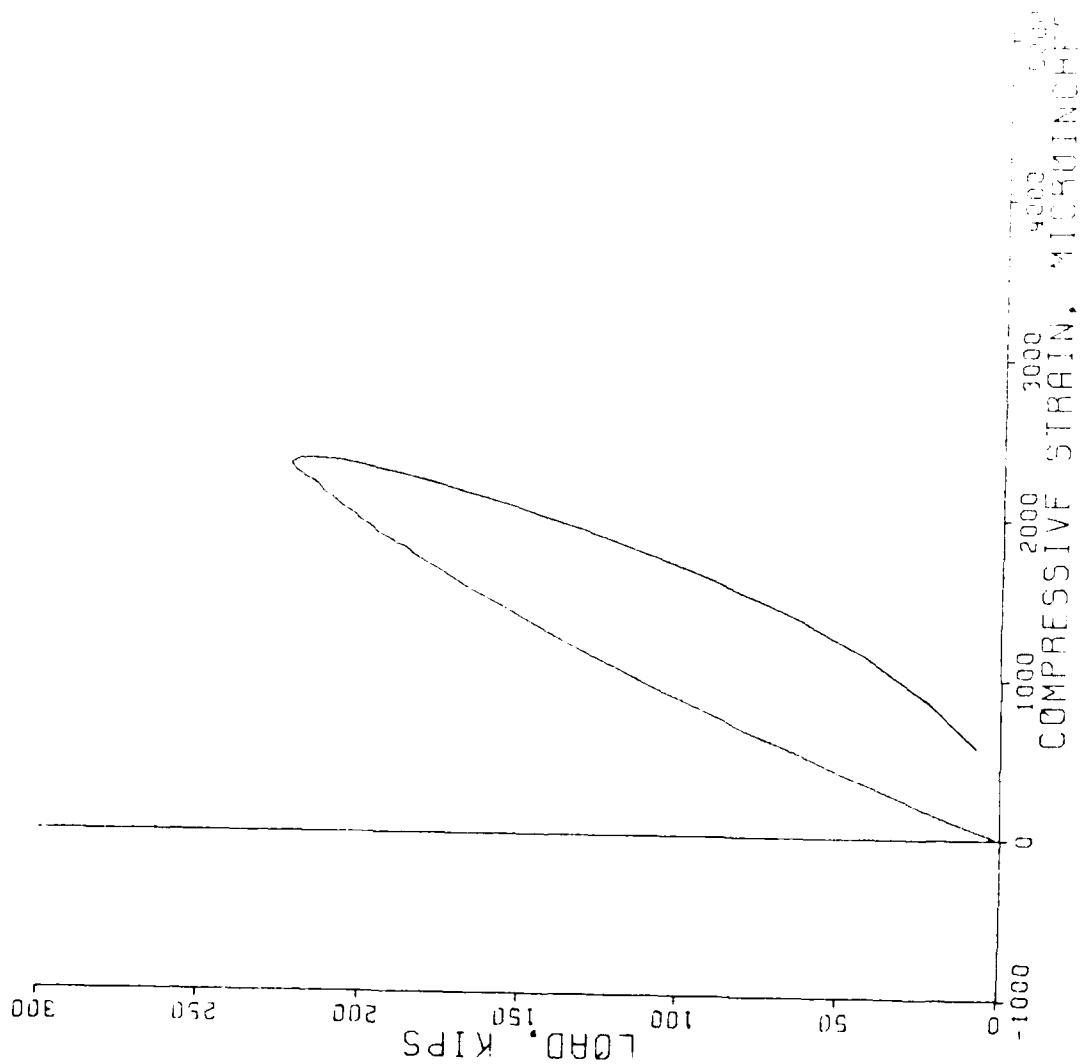
TEST NO. 48
SPECIMEN 16
FIBER FILLED
7-25-78
STRAIN CHANNEL 41



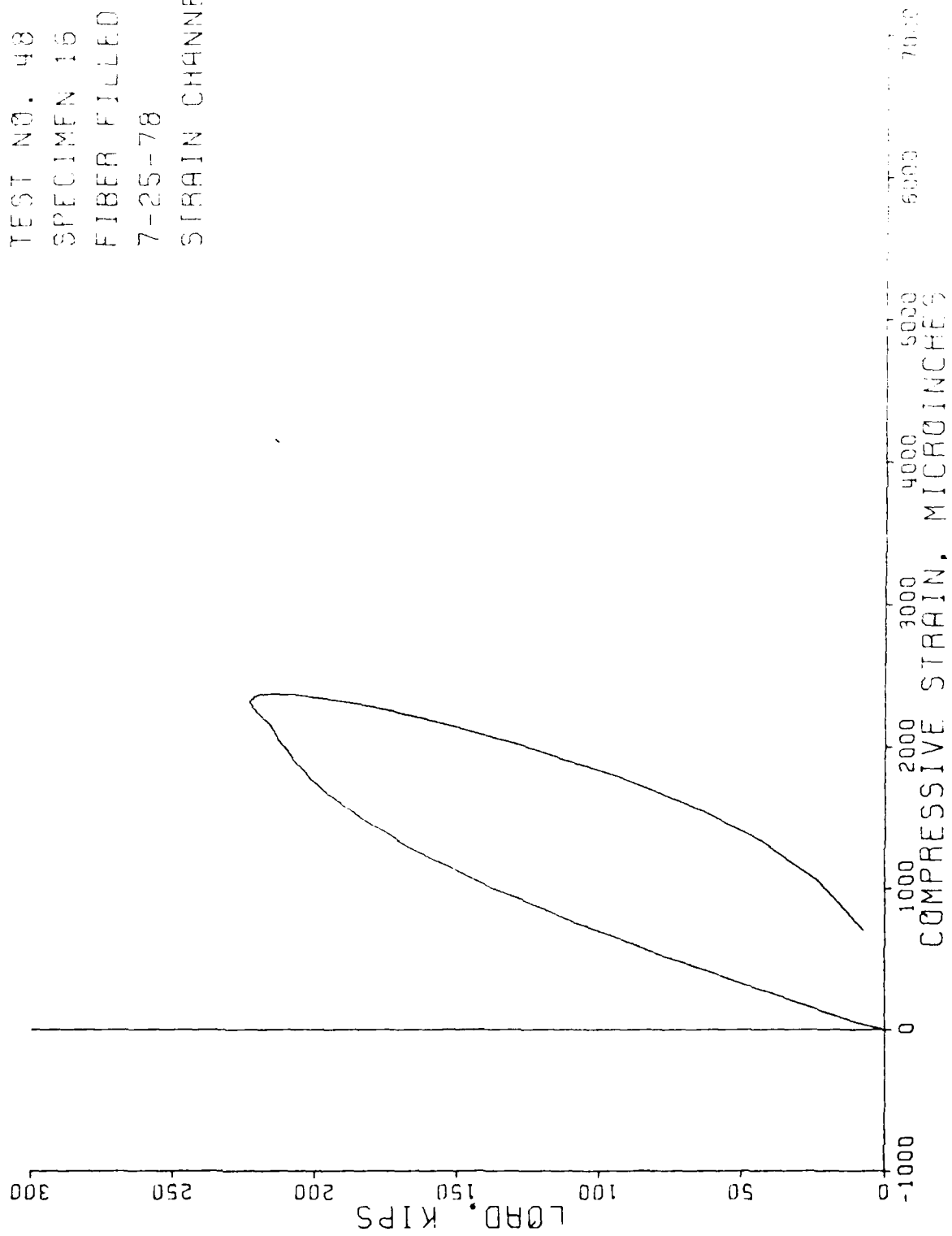
TEST NO. 48
SPECIMEN 16
FIBER FILLED
7-25-78
STRAIN CHANNEL 42



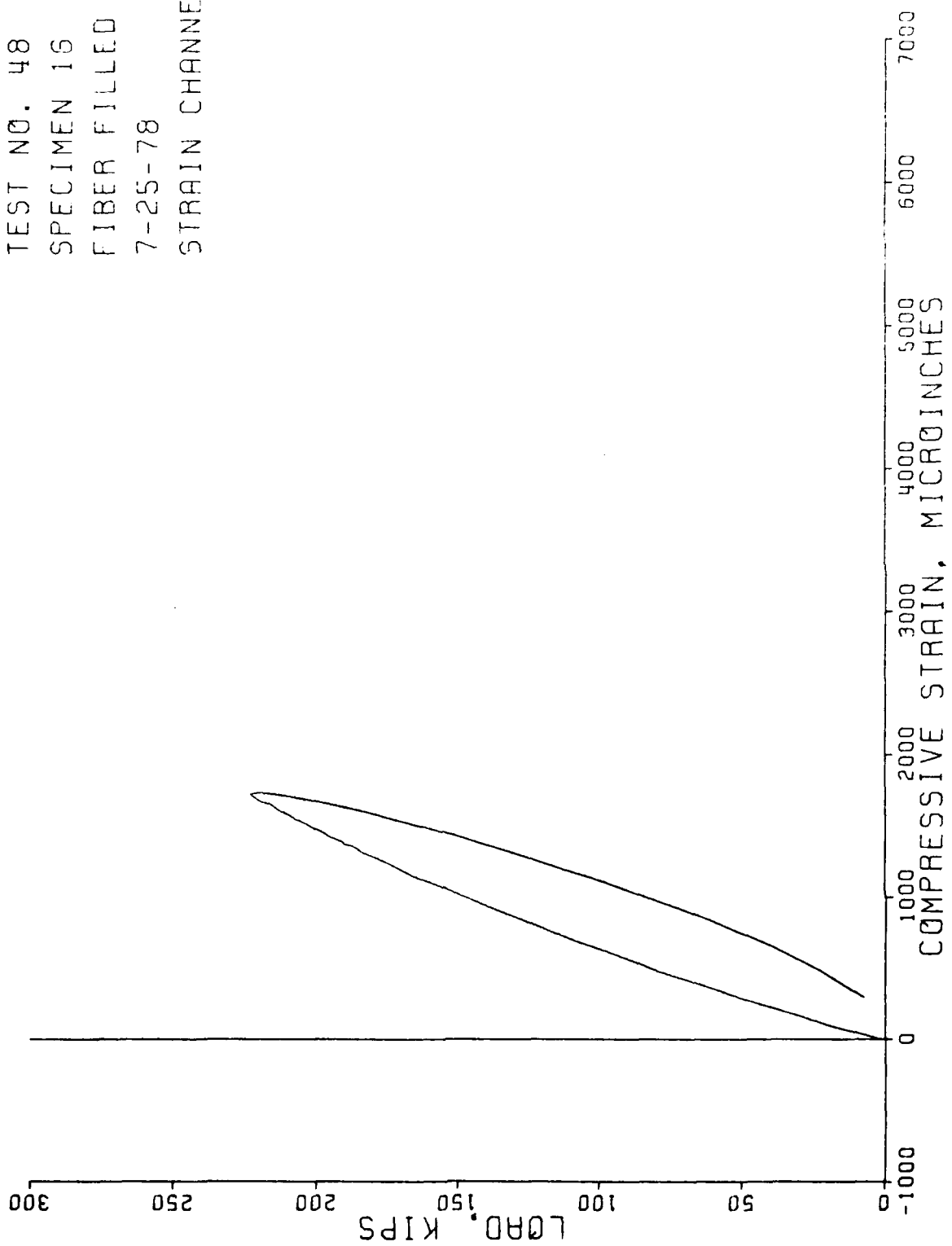
TEST NO. 40
 SPECIMEN NO.
 11814
 1-20-70
 3000 CHARGE 40



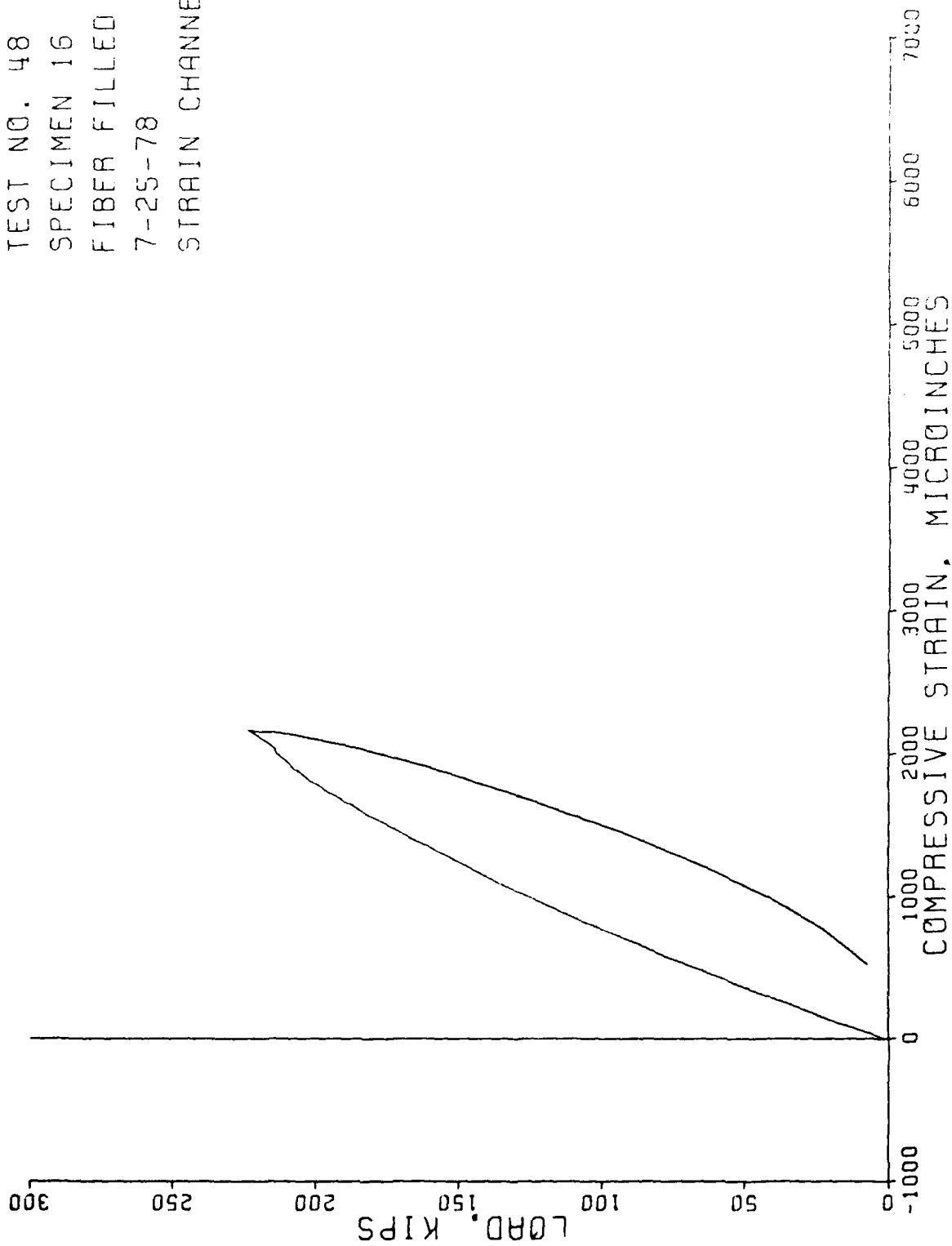
TEST NO. 48
SPECIMEN 16
FIBER FILLED
7-25-78
STRAIN CHANNEL 40



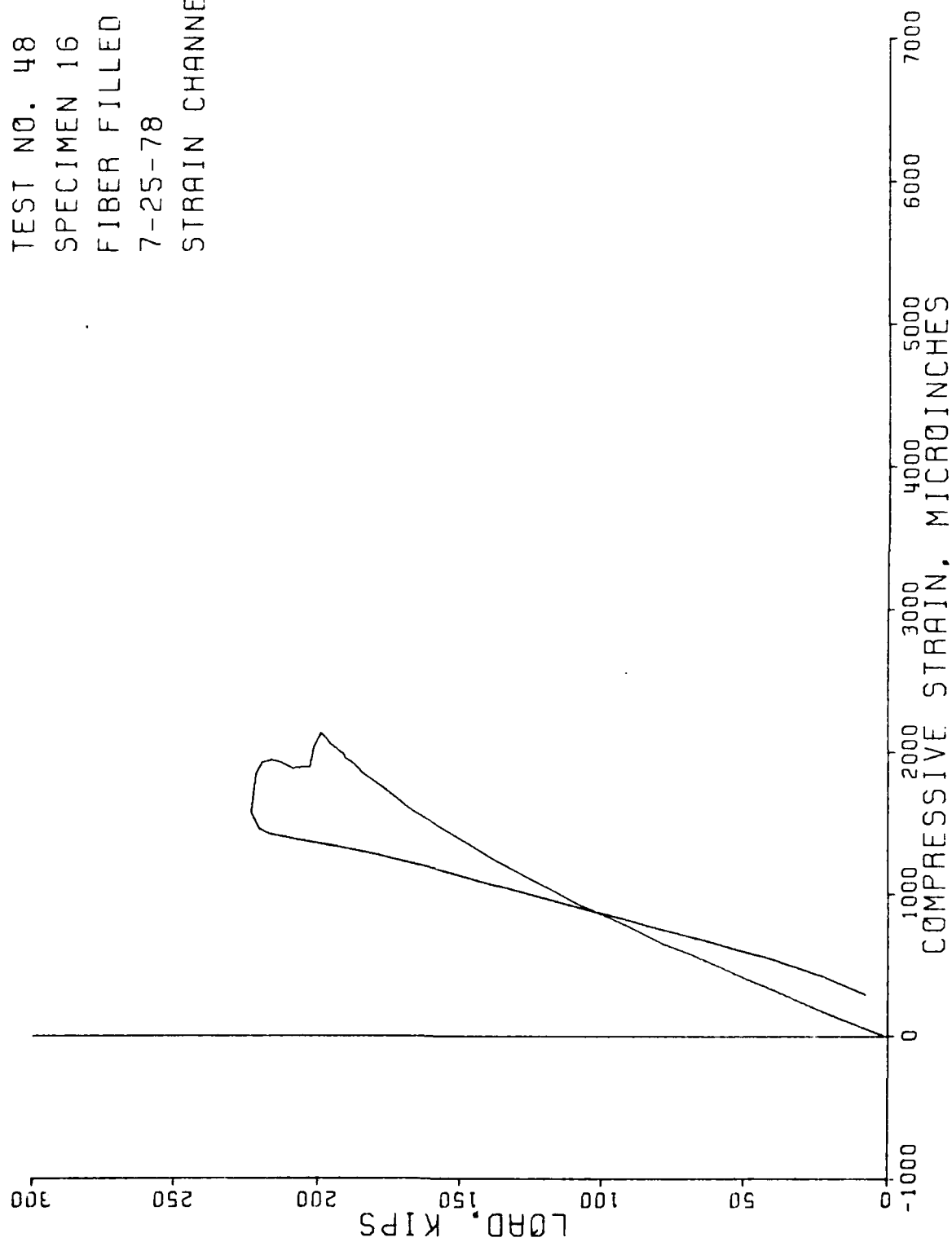
TEST NO. 48
SPECIMEN 1S
FIBER FILLED
7-25-78
STRAIN CHANNEL 47



TEST NO. 48
SPECIMEN 16
FIBER FILLED
7-25-78
STRAIN CHANNEL 48



TEST NO. 48
SPECIMEN 16
FIBER FILLED
7-25-78
STRAIN CHANNEL 49



TEST NO. 48 SPECIMEN 16 FIBER FILLED 7-25-78

NUMBER OF INCREMENTS= 63
NUMBER OF CHANNELS= 42
NUMBER OF STRAIN CHANNELS= 18
NUMBER OF DISPLACEMENT CHANNELS= 8
NUMBER OF LOAD CHANNELS= 8
NUMBER OF PRESSURE CHANNELS= 0
NUMBER OF RODS= 8

CHANNEL	ZEROSHIFT	STRAIN CHANNEL	CALIBRATION
57	0.0		
56	0.0		
55	0.0		
54	0.0		
53	0.0		
52	0.0		
51	0.0		
50	0.0		
49	0.0		
48	0.0		
47	0.0		
46	0.0		
43	0.0		
42	0.0		
41	0.0		
40	0.0		
39	0.0		
38	0.0		
37	0.0		
36	0.0		
35	0.0		
34	0.0		
33	0.0		
32	0.0		
31	0.0		
30	0.0		
29	0.0		
28	0.0		
27	0.0		
26	0.0		
25	0.0		
22	0.0		
21	0.0		
20	0.0		
19	0.0		
18	0.0		
17	0.0		
16	0.0		
15	0.0		
14	0.0		
13	0.0		
12	0.0		

49	1.000
48	1.000
47	1.000
46	1.000
45	1.000
42	1.000
41	1.000
40	1.000
39	1.000
38	1.000
37	1.000
36	1.000
35	1.000
34	1.000
33	1.000
32	1.000
31	1.000
30	1.000

DISPLACEMENT CHANNEL	CALIBRATION
19	0.000
18	0.000
17	0.002
16	0.002
15	0.002
14	0.002
13	0.002
12	0.002

LOAD CHANNEL	CALIBRATION
29	10.000
28	10.000
27	10.000
26	10.000
25	10.000
22	10.000
21	10.000
20	10.000

ROD CHANNEL	CALIBRATION
57	1.000
56	1.000
55	1.000
54	1.000
53	1.000
52	1.000
51	1.000
50	1.000

STRAIN CHANNELS

	TIME	CH.49	CH.48	CH.47	CH.46	CH.43	CH.42	CH.41	CH.40
1.	25: 9:11:55	-5.000	-2.000	-2.000	-4.000	-4.000	2.000	0.0	-12.000
2.	25: 9:23:48	-70.000	-60.000	-44.000	-51.000	-69.000	-52.000	-33.000	-131.000
3.	25: 9:26:45	-153.000	-131.000	-100.000	-119.000	-152.000	-115.000	-33.000	-276.000
4.	25: 9:29:29	-236.000	-206.000	-158.000	-186.000	-324.000	-183.000	-118.000	-421.000
5.	25: 9:33:19	-324.000	-282.000	-221.000	-258.000	-322.000	-256.000	-163.000	-568.000
6.	25: 9:37:20	-408.000	-356.000	-283.000	-327.000	-405.000	-329.000	-206.000	-705.000
7.	25: 9:41: 3	-493.000	-433.000	-348.000	-395.000	-490.000	-406.000	-249.000	-849.000
8.	25: 9:45:42	-578.000	-510.000	-414.000	-465.000	-574.000	-483.000	-291.000	-984.000
9.	25: 9:48:55	-662.000	-588.000	-480.000	-535.000	-658.000	-561.000	-334.000	-1123.000
10.	25: 9:52:55	-755.000	-673.000	-553.000	-611.000	-750.000	-647.000	-379.000	-1273.000
11.	25: 9:56:40	-845.000	-755.000	-624.000	-685.000	-840.000	-732.000	-422.000	-1414.000
12.	25:10: 0:25	-937.000	-839.000	-694.000	-760.000	-930.000	-818.000	-466.000	-1554.000
13.	25:10: 4:10	-1033.000	-927.000	-767.000	-839.000	-1023.000	-908.000	-507.000	-1702.000
14.	25:10: 7:55	-1136.000	-1019.000	-843.000	-923.000	-1121.000	-1001.000	-552.000	-1849.000
15.	25:10:11:40	-1240.000	-1111.000	-920.000	-1007.000	-1220.000	-1095.000	-597.000	-1983.000
16.	25:10:15:25	-1349.000	-1209.000	-997.000	-1097.000	-1322.000	-1193.000	-641.000	-2116.000
17.	25:10:19:10	-1467.000	-1310.000	-1078.000	-1192.000	-1429.000	-1296.000	-688.000	-2245.000
18.	25:10:22:55	-1592.000	-1409.000	-1162.000	-1295.000	-1539.000	-1404.000	-737.000	-2363.000
19.	25:10:26:40	-1729.000	-1513.000	-1250.000	-1405.000	-1651.000	-1518.000	-789.000	-2465.000
20.	25:10:28:10	-1788.000	-1555.000	-1286.000	-1452.000	-1697.000	-1564.000	-811.000	-2498.000
21.	25:10:29:40	-1851.000	-1599.000	-1322.000	-1504.000	-1745.000	-1613.000	-835.000	-2520.000
22.	25:10:30:25	-1881.000	-1620.000	-1340.000	-1527.000	-1768.000	-1636.000	-846.000	-2524.000
23.	25:10:31:10	-1917.000	-1635.000	-1359.000	-1555.000	-1794.000	-1662.000	-861.000	-2513.000
24.	25:10:32:40	-1949.000	-1663.000	-1376.000	-1581.000	-1817.000	-1685.000	-873.000	-2502.000
25.	25:10:33:55	-1983.000	-1685.000	-1395.000	-1607.000	-1836.000	-1710.000	-885.000	-2496.000
26.	25:10:35:25	-2017.000	-1708.000	-1412.000	-1634.000	-1857.000	-1735.000	-899.000	-2488.000
27.	25:10:36:10	-2055.000	-1731.000	-1432.000	-1665.000	-1882.000	-1760.000	-915.000	-2475.000
28.	25:10:36:55	-2093.000	-1757.000	-1452.000	-1696.000	-1908.000	-1787.000	-928.000	-2463.000
29.	25:10:35:40	-2130.000	-1780.000	-1470.000	-1728.000	-1934.000	-1814.000	-944.000	-2443.000
30.	25:10:36:25	-2027.000	-1806.000	-1490.000	-1768.000	-1962.000	-1841.000	-962.000	-2416.000
31.	25:10:37:10	-1890.000	-1832.000	-1509.000	-1805.000	-1988.000	-1869.000	-978.000	-2386.000
32.	25:10:37:55	-1888.000	-1861.000	-1529.000	-1846.000	-2017.000	-1898.000	-997.000	-2356.000
33.	25:10:38:40	-1885.000	-1889.000	-1549.000	-1893.000	-2046.000	-1927.000	-1018.000	-2315.000
34.	25:10:39:25	-1881.000	-1921.000	-1570.000	-1942.000	-2076.000	-1958.000	-1039.000	-2256.000
35.	25:10:40:10	-1900.000	-1955.000	-1589.000	-1990.000	-2102.000	-1987.000	-1063.000	-2168.000
36.	25:10:40:55	-1926.000	-1990.000	-1609.000	-2043.000	-2131.000	-2016.000	-1091.000	-2086.000
37.	25:10:41:40	-1932.000	-2033.000	-1632.000	-2099.000	-2163.000	-2049.000	-1130.000	-1943.000
38.	25:10:42:25	-1942.000	-2072.000	-1654.000	-2156.000	-2195.000	-2083.000	-1170.000	-1861.000
39.	25:10:43:10	-1922.000	-2113.000	-1677.000	-2218.000	-2231.000	-2118.000	-1220.000	-1774.000
40.	25:10:43:55	-1840.000	-2141.000	-1701.000	-2267.000	-2262.000	-2146.000	-1273.000	-1683.000
41.	25:10:44:40	-1578.000	-2159.000	-1725.000	-2312.000	-2298.000	-2178.000	-1311.000	-1529.000
42.	25:10:45:25	-1454.000	-2189.000	-1737.000	-2357.000	-2335.000	-2212.000	-1264.000	-1381.000
43.	25:10:46:10	-1420.000	-2149.000	-1731.000	-2367.000	-2340.000	-2225.000	-1266.000	-1356.000
44.	25:10:47:40	-1384.000	-2110.000	-1707.000	-2362.000	-2323.000	-2221.000	-1253.000	-1312.000
45.	25:10:49:10	-1354.000	-2095.000	-1673.000	-2342.000	-2290.000	-2198.000	-1227.000	-1274.000
46.	25:10:50:40	-1318.000	-2056.000	-1635.000	-2312.000	-2248.000	-2167.000	-1193.000	-1234.000
47.	25:10:52:10	-1280.000	-2012.000	-1592.000	-2275.000	-2202.000	-2129.000	-1156.000	-1183.000
48.	25:10:53:40	-1235.000	-1960.000	-1542.000	-2233.000	-2151.000	-2083.000	-1121.000	-1114.000
49.	25:10:55:10	-1188.000	-1905.000	-1491.000	-2189.000	-2097.000	-2037.000	-1083.000	-1039.000
50.	25:10:56:40	-1135.000	-1844.000	-1433.000	-2136.000	-2033.000	-1983.000	-1053.000	-953.000
51.	25:10:58:10	-1086.000	-1783.000	-1378.000	-2085.000	-1973.000	-1929.000	-1019.000	-875.000
52.	25:10:59:40	-1034.000	-1719.000	-1320.000	-2030.000	-1910.000	-1871.000	-981.000	-798.000
53.	25:11: 1:10	-980.000	-1651.000	-1257.000	-1968.000	-1841.000	-1807.000	-940.000	-720.000
54.	25:11: 2:40	-928.000	-1581.000	-1195.000	-1907.000	-1770.000	-1741.000	-901.000	-644.000

55. 25:11: 0: 0	-877.000	-1514.000	-1133.000	-1864.000	-1701.000	-1676.000	-260.000	-577.000
56. 25:11: 5:40	-823.000	-1438.000	-1064.000	-1773.000	-1622.000	-1602.000	-814.000	-509.000
57. 25:11: 7:10	-770.000	-1360.000	-996.000	-1699.000	-1541.000	-1525.00	-767.000	-450.000
58. 25:11: 8:40	-720.000	-1282.000	-927.000	-1621.000	-1455.000	-1446.000	-715.000	-369.000
59. 25:11:10:10	-664.000	-1192.000	-846.000	-1529.000	-1354.000	-1353.000	-655.000	-339.000
60. 25:11:11:40	-610.000	-1099.000	-766.000	-1432.000	-1252.000	-1256.000	-595.000	-285.000
61. 25:11:13:10	-553.000	-1002.000	-681.000	-1324.000	-1140.000	-1152.000	-528.000	-233.000
62. 25:11:16:10	-420.000	-765.000	-479.000	-1041.000	-862.000	-894.000	-370.000	-122.000
63. 25:11:18:25	-292.000	-527.000	-294.000	-707.000	-575.000	-639.000	-194.000	-44.000

STRAIN CHANNELS

TIME	CH. 39	CH. 38	CH. 37	CH. 36	CH. 35	CH. 34	CH. 33	CH. 32
1. 25: 9:11:55	-5.000	1.000	-6.000	0.0	2.000	-18.000	0.0	-8.000
2. 25: 9:23:48	-63.000	-37.000	-51.000	-52.000	-24.000	-222.000	-41.000	-74.000
3. 25: 9:26:45	-130.000	-92.000	-109.000	-128.000	-65.000	-459.000	-93.000	-160.000
4. 25: 9:29:29	-200.000	-148.000	-172.000	-207.000	-107.000	-659.000	-143.000	-258.000
5. 25: 9:33:19	-274.000	-207.000	-239.000	-295.000	-154.000	-853.000	-192.000	-369.000
6. 25: 9:37:20	-345.000	-269.000	-305.000	-382.000	-200.000	-1032.000	-241.000	-477.000
7. 25: 9:41: 3	-417.000	-331.000	-371.000	-471.000	-245.000	-1217.000	-290.000	-585.000
8. 25: 9:45:42	-488.000	-389.000	-436.000	-563.000	-292.000	-1396.000	-337.000	-692.000
9. 25: 9:48:55	-563.000	-453.000	-501.000	-657.000	-337.000	-1575.000	-384.000	-797.000
10. 25: 9:52:55	-641.000	-519.000	-573.000	-756.000	-383.000	-1776.000	-434.000	-912.000
11. 25: 9:56:40	-718.000	-582.000	-642.000	-853.000	-430.000	-1962.000	-481.000	-1025.000
12. 25:10: 0:25	-794.000	-648.000	-712.000	-950.000	-478.000	-2149.000	-529.000	-1138.000
13. 25:10: 4:10	-876.000	-709.000	-783.000	-1051.000	-524.000	-2346.000	-578.000	-1254.000
14. 25:10:11:40	-1050.000	-835.000	-934.000	-1156.000	-574.000	-2546.000	-627.000	-1374.000
15. 25:10:15:25	-1137.000	-896.000	-1012.000	-1365.000	-626.000	-2744.000	-676.000	-1493.000
16. 25:10:19:10	-1230.000	-956.000	-1095.000	-1475.000	-682.000	-2921.000	-726.000	-1613.000
17. 25:10:22:55	-1324.000	-1013.000	-1181.000	-1589.000	-750.000	-3055.000	-777.000	-1739.000
18. 25:10:26:40	-1422.000	-1061.000	-1273.000	-1710.000	-823.000	-3211.000	-831.000	-1863.000
19. 25:10:28:10	-1464.000	-1079.000	-1311.000	-1762.000	-895.000	-3348.000	-887.000	-1966.000
20. 25:10:29:40	-1504.000	-1102.000	-1352.000	-1815.000	-914.000	-3399.000	-909.000	-2001.000
21. 25:10:30:25	-1524.000	-1106.000	-1371.000	-1840.000	-945.000	-3456.000	-935.000	-2025.000
22. 25:10:31:10	-1546.000	-1117.000	-1392.000	-1869.000	-959.000	-3478.000	-946.000	-2035.000
23. 25:10:31:55	-1564.000	-1125.000	-1412.000	-1895.000	-974.000	-3504.000	-960.000	-1980.000
24. 25:10:32:40	-1606.000	-1141.000	-1432.000	-1922.000	-992.000	-3526.000	-970.000	-1988.000
25. 25:10:33:25	-1627.000	-1150.000	-1474.000	-1979.000	-1008.000	-3567.000	-981.000	-2005.000
26. 25:10:34:10	-1652.000	-1158.000	-1496.000	-2024.000	-1047.000	-3578.000	-1008.000	-2050.000
27. 25:10:34:55	-1672.000	-1167.000	-1518.000	-2073.000	-1061.000	-3590.000	-1022.000	-2083.000
28. 25:10:35:40	-1696.000	-1179.000	-1541.000	-2112.000	-1105.000	-3492.000	-1052.000	-2142.000
29. 25:10:36:25	-1719.000	-1185.000	-1564.000	-2146.000	-1131.000	-3436.000	-1065.000	-2160.000
30. 25:10:37:10	-1741.000	-1196.000	-1591.000	-2179.000	-1149.000	-3432.000	-1081.000	-2120.000
31. 25:10:37:55	-1764.000	-1207.000	-1615.000	-2211.000	-1177.000	-3421.000	-1097.000	-2114.000
32. 25:10:38:40	-1789.000	-1214.000	-1639.000	-2244.000	-1203.000	-3378.000	-1112.000	-212.000
33. 25:10:40:10	-1814.000	-1222.000	-1663.000	-2274.000	-1225.000	-3377.000	-1127.000	-2106.000
34. 25:10:40:55	-1837.000	-1231.000	-1687.000	-2306.000	-1256.000	-3385.000	-1143.000	-2107.000
35. 25:10:41:40	-1864.000	-1239.000	-1714.000	-2340.000	-1286.000	-3395.000	-1159.000	-2114.000
36. 25:10:42:25	-1898.000	-1248.000	-1742.000	-2375.000	-1318.000	-3381.000	-1178.000	-2119.000
37. 25:10:43:10	-1925.000	-1251.000	-1770.000	-2417.000	-1357.000	-3371.000	-1197.000	-2123.000
38. 25:10:43:55	-1945.000	-1241.000	-1792.000	-2466.000	-1367.000	-3342.000	-1211.000	-2126.000
39. 25:10:44:40	-1952.000	-1228.000	-1816.000	-2511.000	-1400.000	-3315.000	-1226.000	-2129.000
40. 25:10:45:25	-1941.000	-1189.000	-1833.000	-2542.000	-1440.000	-3266.000	-1244.000	-2099.000
41. 25:10:46:10	-1931.000	-1191.000	-1841.000	-2542.000	-1457.000	-3236.000	-1248.000	-2068.000
42. 25:10:46:55	-1904.000	-1169.000	-1836.000	-2531.000	-1458.000	-3199.000	-1241.000	-2012.000
43. 25:10:47:40	-1876.000	-1121.000	-1806.000	-2522.000	-1437.000	-3164.000	-1229.000	-1942.000
44. 25:10:48:25	-1846.000	-1069.000	-1771.000	-2504.000	-1405.000	-3121.000	-1212.000	-1865.000
45. 25:10:49:10	-1813.000	-1016.000	-1731.000	-2476.000	-1370.000	-3066.000	-1193.000	-1782.000
46. 25:10:50:40	-1767.000	-974.000	-1686.000	-2433.000	-1337.000	-2980.000	-1168.000	-172.000
47. 25:10:51:10	-1718.000	-931.000	-1645.000	-2376.000	-1305.000	-2886.000	-1138.000	-1634.000
48. 25:10:52:10	-1660.000	-888.000	-1600.000	-2309.000	-1272.000	-2776.000	-1101.000	-1557.000
49. 25:10:53:40	-1605.000	-845.000	-1557.000	-2241.000	-1240.000	-2672.000	-1066.000	-1430.000
50. 25:10:54:40	-1548.000	-797.000	-1509.000	-2167.000	-1204.000	-2565.000	-1028.000	-1421.000
51. 25:10:55:10	-1486.000	-751.000	-1459.000	-2087.000	-1167.000	-2450.000	-987.000	-1350.000
52. 25:11: 1:10	-1422.000	-704.000	-1410.000	-2006.000	-1129.000	-2338.000	-944.000	-1284.000

55.	25:11: 0: 0	-1360.000	-1352.000	-1923.000	-1090.000	-2234.000	-902.000	-1220.000
56.	25:11: 5:40	-1288.000	-1301.000	-1830.000	-1047.000	-2126.000	-856.000	-1118.000
57.	25:11: 7:10	-1219.000	-1246.000	-1733.000	-999.000	-2034.000	-806.000	-1081.000
58.	25:11: 8:40	-1142.000	-1187.000	-1629.000	-945.000	-1961.000	-754.000	-1012.000
59.	25:11:10:10	-1065.000	-1122.000	-1510.000	-882.000	-1894.000	-695.000	-931.000
60.	25:11:11:40	-980.000	-1052.000	-1391.000	-820.000	-1833.000	-635.000	-855.000
61.	25:11:13:10	-888.000	-977.000	-1261.000	-748.000	-1776.000	-571.000	-774.000
62.	25:11:16:10	-664.000	-793.000	-949.000	-577.000	-1659.000	-413.000	-594.000
63.	25:11:18:25	-434.000	-590.000	-653.000	-392.000	-1523.000	-238.000	-437.000

STRAIN CHANNELS

	TIME	CH. 31	CH. 30	CH.
1.	25: 9:11:55	-6.000	2.000	
2.	25: 9:23:48	-57.000	-27.000	
3.	25: 9:26:45	-119.000	-68.000	
4.	25: 9:29:29	-187.000	-111.000	
5.	25: 9:33:19	-260.000	-154.000	
6.	25: 9:37:20	-333.000	-201.000	
7.	25: 9:41: 3	-410.000	-246.000	
8.	25: 9:45:42	-487.000	-289.000	
9.	25: 9:48:55	-564.000	-335.000	
10.	25: 9:52:55	-649.000	-385.000	
11.	25: 9:56:40	-731.000	-432.000	
12.	25:10: 0:25	-812.000	-481.000	
13.	25:10: 4:10	-899.000	-529.000	
14.	25:10: 7:55	-989.000	-572.000	
15.	25:10:11:40	-1078.000	-619.000	
16.	25:10:15:25	-1168.000	-663.000	
17.	25:10:19:10	-1263.000	-706.000	
18.	25:10:22:55	-1357.000	-751.000	
19.	25:10:26:40	-1458.000	-791.000	
20.	25:10:28:10	-1499.000	-804.000	
21.	25:10:29:40	-1541.000	-823.000	
22.	25:10:30:25	-1562.000	-828.000	
23.	25:10:31:10	-1585.000	-839.000	
24.	25:10:31:55	-1604.000	-844.000	
25.	25:10:32:40	-1627.000	-849.000	
26.	25:10:33:25	-1647.000	-857.000	
27.	25:10:34:10	-1669.000	-866.000	
28.	25:10:34:55	-1694.000	-872.000	
29.	25:10:35:40	-1716.000	-878.000	
30.	25:10:36:25	-1739.000	-888.000	
31.	25:10:37:10	-1764.000	-891.000	
32.	25:10:37:55	-1787.000	-900.000	
33.	25:10:38:40	-1811.000	-909.000	
34.	25:10:39:25	-1838.000	-915.000	
35.	25:10:40:10	-1863.000	-921.000	
36.	25:10:40:55	-1886.000	-928.000	
37.	25:10:41:40	-1915.000	-934.000	
38.	25:10:42:25	-1943.000	-942.000	
39.	25:10:43:10	-1973.000	-947.000	
40.	25:10:43:55	-2000.000	-938.000	
41.	25:10:44:40	-2028.000	-937.000	
42.	25:10:45:25	-2043.000	-967.000	
43.	25:10:46:10	-2042.000	-980.000	
44.	25:10:47:40	-2023.000	-974.000	
45.	25:10:49:10	-1997.000	-940.000	
46.	25:10:50:40	-1968.000	-895.000	
47.	25:10:52:10	-1936.000	-847.000	
48.	25:10:53:40	-1893.000	-806.000	
49.	25:10:55:10	-1846.000	-773.000	
50.	25:10:56:40	-1737.000	-745.000	
51.	25:10:58:10	-1730.000	-713.000	
52.	25:10:59:40	-1673.000	-679.000	
53.	25:11: 1:10	-1607.000	-644.000	
54.	25:11: 2:40	-1539.000	-609.000	
55.	25:11: 0: 0	-1474.000	-576.000	

56.	25:11: 5:40	-1400.000	-541.000
57.	25:11: 7:10	-1326.000	-499.000
58.	25:11: 8:40	-1252.000	-454.000
59.	25:11:10:10	-1166.000	-405.000
60.	25:11:11:40	-1076.000	-358.000
61.	25:11:13:10	-979.000	-312.000
62.	25:11:16:10	-728.000	-214.000
63.	25:11:18:25	-456.000	-129.000

DISPLACEMENT CHANNELS

TIME	CH.19	CH.18	CH.17	CH.16	CH.15	CH.14	CH.13	CH.12
1. 25: 9:11:55	0.0	0.002	-0.016	0.004	-0.008	0.006	-0.002	-0.004
2. 25: 9:23:48	0.0	0.002	-0.014	0.004	-0.016	0.006	-0.002	-0.004
3. 25: 9:26:45	0.0	0.002	-0.012	0.008	-0.016	0.012	-0.002	-0.006
4. 25: 9:29:29	0.0	0.001	-0.014	0.026	-0.018	0.028	-0.002	-0.004
5. 25: 9:33:19	0.0	0.002	-0.004	0.026	-0.020	0.030	-0.002	-0.004
6. 25: 9:37:20	0.0	0.002	0.012	0.026	-0.018	0.030	-0.002	-0.004
7. 25: 9:41:13	0.0	0.002	0.014	0.024	-0.006	0.032	-0.002	-0.004
8. 25: 9:45:42	0.0	0.002	0.016	0.008	0.008	0.030	-0.004	-0.004
9. 25: 9:48:55	0.0	0.002	0.016	0.026	0.006	0.030	-0.002	-0.002
10. 25: 9:52:55	0.0	0.002	0.016	0.024	0.004	0.030	-0.002	-0.004
11. 25: 9:56:40	0.0	0.002	0.016	0.032	0.004	0.030	0.010	-0.004
12. 25:10: 0:25	0.0	0.002	0.016	0.036	0.002	0.034	0.028	-0.002
13. 25:10: 4:10	0.0	0.001	0.016	0.054	0.002	0.040	0.026	-0.004
14. 25:10: 7:55	0.0	0.001	0.016	0.054	0.030	0.058	0.028	-0.002
15. 25:10:11:40	0.0	0.001	0.018	0.054	0.030	0.058	0.028	-0.002
16. 25:10:15:25	0.0	0.002	0.016	0.054	0.030	0.060	0.028	-0.002
17. 25:10:19:10	0.0	-0.001	0.018	0.054	0.028	0.058	0.028	-0.002
18. 25:10:22:55	-0.0021	-0.017	0.016	0.060	0.028	0.058	0.028	-0.002
19. 25:10:26:40	-0.0022	-0.021	0.018	0.072	0.028	0.058	0.028	-0.004
20. 25:10:28:10	-0.0023	-0.022	0.018	0.084	0.028	0.058	0.026	-0.002
21. 25:10:29:40	-0.0029	-0.023	0.016	0.084	0.038	0.062	0.026	-0.002
22. 25:10:30:25	-0.0029	-0.023	0.016	0.084	0.038	0.062	0.028	-0.004
23. 25:10:31:10	-0.0029	-0.024	0.018	0.082	0.156	0.064	0.028	-0.002
24. 25:10:31:55	-0.0027	-0.027	0.018	0.084	0.056	0.068	0.026	-0.002
25. 25:10:32:40	-0.0030	-0.028	0.018	0.084	0.056	0.072	0.028	-0.004
26. 25:10:33:25	-0.0030	-0.028	0.018	0.084	0.056	0.082	0.028	-0.002
27. 25:10:34:10	-0.0030	-0.028	0.018	0.082	0.056	0.088	0.028	-0.002
28. 25:10:34:55	-0.0030	-0.028	0.013	0.084	0.056	0.086	0.028	-0.004
29. 25:10:35:40	-0.0030	-0.028	0.018	0.082	0.056	0.088	0.028	-0.002
30. 25:10:36:25	-0.0030	-0.028	0.018	0.082	0.056	0.088	0.028	-0.012
31. 25:10:37:10	-0.0029	-0.028	0.018	0.082	0.056	0.088	0.026	-0.020
32. 25:10:37:55	-0.0030	-0.028	0.018	0.082	0.056	0.088	0.028	-0.024
33. 25:10:38:40	-0.0029	-0.028	0.018	0.082	0.056	0.086	0.028	-0.026
34. 25:10:39:25	-0.0029	-0.028	0.018	0.084	0.056	0.088	0.028	-0.028
35. 25:10:40:10	-0.0030	-0.028	0.018	0.088	0.056	0.088	0.026	-0.028
36. 25:10:40:55	-0.0030	-0.028	0.020	0.088	0.054	0.088	0.028	-0.028
37. 25:10:41:40	-0.0030	-0.028	0.022	0.090	0.054	0.088	0.028	-0.028
38. 25:10:42:25	-0.0030	-0.028	0.024	0.094	0.056	0.088	0.028	-0.032
39. 25:10:43:10	-0.0030	-0.028	0.024	0.112	0.054	0.088	0.028	-0.032
40. 25:10:43:55	-0.0030	-0.028	0.024	0.112	0.056	0.088	0.026	-0.032
41. 25:10:44:40	-0.0030	-0.028	0.022	0.112	0.062	0.086	0.028	-0.032
42. 25:10:45:25	-0.0029	-0.028	0.022	0.112	0.064	0.088	0.026	-0.034
43. 25:10:46:10	-0.0048	-0.028	0.022	0.112	0.062	0.088	0.028	-0.032
44. 25:10:47:40	-0.0049	-0.028	0.022	0.112	0.060	0.088	0.028	-0.032
45. 25:10:49:10	-0.0050	-0.028	0.018	0.112	0.060	0.086	0.028	-0.032
46. 25:10:50:40	-0.0059	-0.028	0.018	0.114	0.060	0.086	0.028	-0.032
47. 25:10:52:10	-0.0058	-0.028	0.018	0.112	0.060	0.086	0.028	-0.032
48. 25:10:53:40	-0.0059	-0.028	0.018	0.088	0.060	0.086	0.026	-0.032
49. 25:10:55:10	-0.0059	-0.028	0.018	0.088	0.058	0.086	0.028	-0.032
50. 25:10:56:40	-0.0058	-0.028	0.020	0.084	0.058	0.086	0.028	-0.030
51. 25:10:58:10	-0.0059	-0.028	0.018	0.084	0.056	0.086	0.026	-0.032
52. 25:10:59:40	-0.0059	-0.028	0.018	0.082	0.054	0.086	0.028	-0.032
53. 25:11: 1:10	-0.0058	-0.028	0.018	0.082	0.054	0.088	0.028	-0.030
54. 25:11: 2:40	-0.0058	-0.028	0.018	0.084	0.054	0.086	0.026	-0.030

55. 25:11:09:10	-0.052	-0.028	0.018	0.064	0.036	0.088	0.028	-0.032
56. 25:11:5:40	-0.050	-0.028	0.018	0.082	0.054	0.088	0.026	-0.032
57. 25:11:7:10	-0.049	-0.028	0.018	0.076	0.054	0.088	0.026	-0.032
58. 25:11:8:40	-0.047	-0.028	0.018	0.060	0.034	0.070	0.028	-0.032
59. 25:11:10:10	-0.030	-0.028	0.018	0.054	0.030	0.064	0.028	-0.030
60. 25:11:1:40	-0.030	-0.028	0.018	0.054	0.034	0.056	0.028	-0.032
61. 25:11:13:10	-0.029	-0.028	0.018	0.054	0.024	0.058	0.026	-0.032
62. 25:11:16:10	-0.029	-0.028	0.018	0.054	0.024	0.058	0.026	-0.032
63. 25:11:18:25	-0.030	-0.028	0.018	0.026	-0.006	0.042	0.026	-0.026

LOAD CHANNELS

	CH.29	CH.28	CH.27	CH.26	CH.25	CH.22	CH.21	CH.20
1. 25: 9:11:55	1230.000	1580.000	1440.000	1970.000	1460.000	1810.000	1090.000	1190.000
2. 25: 9:23:48	7490.000	7390.000	8400.000	10330.000	9840.000	9810.000	7860.000	6460.000
3. 25: 9:26:45	14880.000	14470.000	16990.000	19120.000	20590.000	18050.000	16080.000	12810.000
4. 25: 9:29:29	21630.000	21630.000	25080.000	28930.000	29630.000	27330.000	23870.000	19050.000
5. 25: 9:33:19	29310.000	29330.000	33040.000	38800.000	39630.000	36640.000	31330.000	26010.000
6. 25: 9:37:20	36530.000	36530.000	41440.000	47360.000	50100.000	44670.000	39310.000	32380.000
7. 25: 9:41:3	44020.000	43720.000	49450.000	57140.000	59170.000	54010.000	47220.000	38610.000
8. 25: 9:45:42	51160.000	51150.000	56790.000	66700.000	68990.000	63140.000	54420.000	45370.000
9. 25: 9:48:55	58320.000	58440.000	64690.000	75230.000	79450.000	71230.000	62480.000	51880.000
10. 25: 9:52:55	65460.000	65980.000	72660.000	85290.000	88720.000	80800.000	70800.000	58380.000
11. 25: 9:56:40	72580.000	73310.000	80150.000	94780.000	98590.000	89800.000	78130.000	65280.000
12. 25: 10: 0:25	79460.000	80220.000	88510.000	103210.000	108880.000	97850.000	86330.000	71960.000
13. 25: 10: 4:10	86280.000	87040.000	96520.000	113140.000	117920.000	107350.000	94200.000	78450.000
14. 25: 10: 7:55	93190.000	94280.000	104220.000	122550.000	123110.000	116220.000	101610.000	85580.000
15. 25: 10: 11:40	100110.000	100810.000	112630.000	131130.000	138110.000	124230.000	109780.000	91940.000
16. 25: 10: 15:25	106620.000	107600.000	120340.000	140630.000	147100.000	133130.000	117190.000	98510.000
17. 25: 10: 19:10	113200.000	114760.000	127890.000	150120.000	156220.000	142120.000	124560.000	105510.000
18. 25: 10: 22:55	120040.000	121460.000	136240.000	158540.000	167150.000	149830.000	132630.000	112130.000
19. 25: 10: 26:40	126450.000	128320.000	144140.000	168330.000	176120.000	159010.000	140230.000	118910.000
20. 25: 10: 28:10	132090.000	131240.000	146860.000	171990.000	180250.000	162440.000	142880.000	121770.000
21. 25: 10: 29:40	131810.000	133730.000	151460.000	175170.000	184380.000	165350.000	147410.000	124320.000
22. 25: 10: 30:25	132800.000	135200.000	152210.000	177320.000	185690.000	167370.000	148080.000	125660.000
23. 25: 10: 31:10	134440.000	136500.000	154310.000	179260.000	187600.000	169230.000	150150.000	127280.000
24. 25: 10: 31:55	135850.000	137810.000	155770.000	180270.000	190130.000	170060.000	151560.000	128520.000
25. 25: 10: 32:40	136790.000	139220.000	156840.000	182710.000	191290.000	172420.000	152560.000	129700.000
26. 25: 10: 33:25	138180.000	140330.000	158830.000	184110.000	193170.000	173690.000	154510.000	130340.000
27. 25: 10: 34:10	139520.000	141840.000	160870.000	185570.000	195770.000	175940.000	156520.000	132720.000
28. 25: 10: 34:55	140730.000	143260.000	162320.000	188180.000	197130.000	177490.000	157960.000	133890.000
29. 25: 10: 35:40	142060.000	144390.000	164300.000	189760.000	198960.000	179950.000	159940.000	135070.000
30. 25: 10: 36:25	143540.000	145920.000	166460.000	191130.000	201620.000	180240.000	162180.000	136990.000
31. 25: 10: 37:10	144510.000	147310.000	169720.000	193480.000	202830.000	182500.000	162990.000	138020.000
32. 25: 10: 37:55	145910.000	148620.000	171670.000	195240.000	204740.000	184140.000	165490.000	139440.000
33. 25: 10: 38:40	147260.000	150070.000	172890.000	196470.000	207200.000	185270.000	167430.000	141130.000
34. 25: 10: 39:25	148400.000	151630.000	174720.000	198930.000	208710.000	187630.000	168620.000	142410.000
35. 25: 10: 40:10	149640.000	152700.000	176720.000	200590.000	210420.000	189210.000	170360.000	143730.000
36. 25: 10: 40:55	150950.000	154130.000	176180.000	201750.000	212950.000	190310.000	171860.000	145420.000
37. 25: 10: 41:40	152060.000	155560.000	177460.000	204300.000	214220.000	192840.000	172840.000	146650.000
38. 25: 10: 42:25	153520.000	156780.000	179630.000	206160.000	216110.000	194560.000	175010.000	147770.000
39. 25: 10: 43:10	154870.000	158490.000	186630.000	207620.000	219410.000	195910.000	176170.000	149990.000
40. 25: 10: 43:55	155870.000	159840.000	188210.000	209640.000	221400.000	197850.000	178250.000	151840.000
41. 25: 10: 44:40	157050.000	160840.000	176520.000	211390.000	222900.000	199480.000	179770.000	152920.000
42. 25: 10: 45:25	158440.000	158290.000	175930.000	208910.000	220120.000	197100.000	171380.000	151450.000
43. 25: 10: 46:10	151040.000	157060.000	177250.000	206320.000	216440.000	194910.000	172710.000	149780.000
44. 25: 10: 47:40	145360.000	155000.000	172630.000	198900.000	207470.000	169740.000	163970.000	145520.000
45. 25: 10: 49:10	137740.000	150340.000	157420.000	189920.000	199170.000	189940.000	163970.000	140740.000
46. 25: 10: 50:40	131220.000	143540.000	157700.000	181860.000	189500.000	187380.000	157400.000	134810.000
47. 25: 10: 52:10	126660.000	136060.000	150370.000	172700.000	179850.000	183730.000	150910.000	128350.000
48. 25: 10: 53:40	111470.000	122850.000	142300.000	162730.000	170690.000	177610.000	143620.000	115660.000
49. 25: 10: 55:10	111050.000	122440.000	134160.000	154360.000	160790.000	170290.000	136230.000	115660.000
50. 25: 10: 56:40	106770.000	116490.000	126350.000	144530.000	150570.000	159160.000	129940.000	109360.000
51. 25: 10: 58:10	98040.000	107550.000	118740.000	135110.000	149170.000	149170.000	123180.000	101970.000
52. 25: 10: 59:40	91170.000	100400.000	110040.000	126400.000	131370.000	139890.000	115100.000	95350.000
53. 25: 11: 1:10	84390.000	92390.000	102390.000	116400.000	121170.000	129460.000	106850.000	88970.000
54. 25: 11: 2:40	77280.000	85220.000	94070.000	106730.000	111910.000	118580.000	98030.000	83570.000

55. 25:11: 0: 0	70720.000	77930.000	86040.000	98190.000	101720.000	109080.000	29560.000	77720.000
56. 25:11: 5:40	64060.000	69950.000	78180.000	88050.000	91530.000	98670.000	81360.000	70820.000
57. 25:11: 7:10	56540.000	62990.000	70020.000	78390.000	82330.000	88050.000	72790.000	63970.000
58. 25:11: 8:40	49390.000	55630.000	61870.000	69810.000	72140.000	78510.000	64220.000	56770.000
59. 25:11:10:10	41500.000	47300.000	53880.000	59640.000	61540.000	67530.000	55830.000	48470.000
60. 25:11:11:40	34200.000	40000.000	45410.000	49820.000	52240.000	55820.000	47040.000	41470.000
61. 25:11:13:10	26950.000	32490.000	36980.000	40970.000	41640.000	47090.000	38350.000	33980.000
62. 25:11:16:10	13720.000	16230.000	20490.000	21100.000	22060.000	25050.000	21250.000	18500.000
63. 25:11:18:25	3680.000	4350.000	7340.000	6490.000	7030.000	8770.000	7390.000	6300.000

ROAD CHANNELS

	CH. 57	CH. 56	CH. 55	CH. 54	CH. 53	CH. 52	CH. 51	CH. 50
1. 25: 9:11:55	0.0	435.601	-89.683	-12.812	-25.624	12.812	0.0	-12.812
2. 25: 9:23:48	-25.624	-140.930	-89.683	0.0	12.812	-230.612	25.624	153.742
3. 25: 9:26:45	12.812	-115.306	-51.247	0.0	-12.812	-499.660	-76.871	294.671
4. 25: 9:29:29	38.435	-64.059	-51.247	-25.624	-12.812	-896.826	-115.306	371.542
5. 25: 9:33:19	38.435	25.624	-38.435	-89.683	-25.624	-896.826	-153.742	461.225
6. 25: 9:37:20	64.059	115.306	-25.624	-128.118	-51.247	-1050.567	-204.989	512.472
7. 25: 9:41:3	115.306	243.424	-12.812	-217.801	-128.118	-1191.497	-243.424	576.531
8. 25: 9:45:42	182.177	397.166	12.812	-320.295	-256.236	-1319.615	-281.859	653.402
9. 25: 9:48:55	294.671	589.343	64.059	-448.413	-409.978	-1486.168	-333.107	755.896
10. 25: 9:52:55	397.166	807.143	102.499	-576.531	-614.966	-1639.510	-371.542	871.202
11. 25: 9:56:40	486.848	986.508	153.742	-743.084	-807.143	-1755.216	-409.978	999.320
12. 25: 10: 0:25	550.907	1140.250	192.177	-845.579	-948.073	-1870.522	-474.036	1140.250
13. 25: 10: 4:10	627.778	1293.991	230.612	-948.073	-1089.003	-1960.205	-499.660	1255.556
14. 25: 10: 7:55	704.649	1460.545	294.671	-1063.379	-1217.121	-2062.699	-550.907	1383.674
15. 25: 10: 11:40	781.520	1614.286	358.730	-1178.685	-1370.862	-2152.382	-576.531	1498.980
16. 25: 10: 15:25	858.390	1793.652	409.978	-1293.991	-1511.792	-2242.064	-614.966	1588.663
17. 25: 10: 19:10	935.261	1960.205	486.848	-1409.298	-1627.098	-2318.935	-627.778	1703.969
18. 25: 10: 22:55	999.320	2139.570	563.719	-1524.604	-1755.216	-2395.806	-679.025	1819.275
19. 25: 10: 26:40	1076.191	2331.747	640.590	-1627.098	-1896.146	-2421.430	-717.461	1921.770
20. 25: 10: 28:10	1114.626	2408.618	679.025	-1691.157	-1960.205	-2472.677	-730.272	1973.017
21. 25: 10: 29:40	1127.438	2472.677	717.461	-1729.593	-1985.829	-2472.677	-755.896	2011.452
22. 25: 10: 30:25	1153.062	2498.301	730.272	-1755.216	-2024.264	-2472.677	-755.896	2024.264
23. 25: 10: 31:10	1153.062	2523.924	755.896	-1742.405	-2011.452	-2472.677	-768.708	2062.699
24. 25: 10: 31:55	1165.874	2562.360	781.520	-1768.028	-2049.888	-2498.301	-781.520	2088.323
25. 25: 10: 33:40	1191.497	2600.795	794.331	-1806.463	-2075.511	-2498.301	-768.708	2101.135
26. 25: 10: 33:25	1204.309	2639.230	819.955	-1819.275	-2113.947	-2511.112	-781.520	2113.947
27. 25: 10: 34:10	1204.309	2652.042	845.579	-1832.028	-2101.135	-2511.112	-794.331	2165.194
28. 25: 10: 35:55	1217.121	2703.289	858.390	-1844.839	-2113.947	-2498.301	-794.331	2165.194
29. 25: 10: 35:40	1229.933	2741.725	871.202	-1857.711	-2139.570	-2511.112	-794.331	2165.194
30. 25: 10: 36:25	1229.933	2767.348	909.637	-1870.522	-2152.382	-2523.924	-807.143	2216.441
31. 25: 10: 37:10	1242.744	2805.784	935.261	-1908.958	-2178.006	-2511.112	-807.143	2229.253
32. 25: 10: 37:55	1255.556	2844.219	960.885	-1921.770	-2203.629	-2523.924	-819.955	2254.876
33. 25: 10: 38:40	1255.556	2869.843	999.320	-1921.770	-2216.441	-2536.736	-832.767	2293.312
34. 25: 10: 39:25	1281.180	2908.278	1024.944	-1960.205	-2254.876	-2536.736	-845.579	2306.124
35. 25: 10: 40:10	1281.180	2959.525	1063.379	-1985.829	-2280.500	-2549.548	-845.579	2318.955
36. 25: 10: 40:55	1281.180	2985.149	1089.003	-1973.017	-2280.500	-2536.736	-871.202	2370.183
37. 25: 10: 41:40	1293.991	3036.396	1127.438	-1998.640	-2318.935	-2549.548	-858.390	2395.806
38. 25: 10: 42:25	1306.803	3074.832	1165.874	-2024.264	-2344.559	-2562.360	-871.202	2408.618
39. 25: 10: 43:10	1293.991	3113.267	1204.309	-2024.264	-2331.747	-2562.360	-884.014	2472.677
40. 25: 10: 43:55	1281.180	3151.702	1242.744	-2037.076	-2370.183	-2562.360	-909.637	2511.112
41. 25: 10: 44:40	1178.685	3292.632	1345.239	-2049.888	-2395.806	-2549.548	-909.637	2575.171
42. 25: 10: 45:25	986.508	3433.562	1375.851	-1998.640	-2408.618	-2575.171	-960.885	2728.913
43. 25: 10: 46:10	922.449	3459.582	1375.851	-1960.205	-2408.618	-2613.607	-986.508	2792.972
44. 25: 10: 47:40	922.449	3536.056	1614.286	-1960.205	-2434.241	-2673.607	-1050.567	2908.278
45. 25: 10: 49:10	960.885	3536.056	1614.286	-1998.640	-2485.489	-2754.536	-1127.438	3036.396
46. 25: 10: 50:40	999.320	3612.927	1652.722	-2024.264	-2536.736	-2857.031	-1229.933	3190.138
47. 25: 10: 52:10	1024.944	3689.798	1703.969	-2062.699	-2562.360	-2985.149	-1358.091	3356.691
48. 25: 10: 53:40	999.320	3705.444	1729.593	-1934.581	-2408.618	-3062.020	-1460.545	3471.997
49. 25: 10: 55:10	871.202	3036.396	1703.969	-1627.098	-2088.323	-3023.584	-1511.792	3523.244
50. 25: 10: 56:40	794.331	2857.031	1703.969	-1409.298	-1883.334	-3087.645	-1601.475	3512.927
51. 25: 10: 58:10	679.025	2613.607	1729.593	-1178.685	-1588.663	-3113.267	-1703.969	3728.233
52. 25: 10: 59:40	563.719	2370.183	1742.405	-922.449	-1281.180	-3177.336	-1780.850	3817.916
53. 25: 11: 1:10	486.848	2165.194	1729.593	-730.272	-1037.756	-3241.385	-1832.087	3881.915
54. 25: 11: 2:40	435.601	2062.699	1716.781	-640.590	-922.449	-3382.315	-1896.146	3946.034

55. 25:11: 0: 0	384.354	1896.146	1729.593	-499.600	-743.084	-3433.562	-1934.581	3984.403
56. 25:11: 5:40	307.483	1691.157	1703.969	-358.730	-512.472	-3484.809	-1973.017	4019.093
57. 25:11: 7:10	269.048	1575.851	1614.286	-307.483	-622.789	-3497.621	-1921.770	3920.410
58. 25:11: 8:40	243.424	1486.168	1511.792	-281.859	-384.354	-3459.185	-1844.899	3830.728
59. 25:11:10:10	204.989	1383.674	1383.674	-230.612	-333.107	-3395.126	-1768.028	3689.798
60. 25:11:11:40	179.365	1281.180	1281.180	-179.365	-281.859	-3369.503	-1703.969	3574.491
61. 25:11:13:10	140.930	1140.250	1153.062	-128.118	-217.801	-3241.385	-1601.425	3356.691
62. 25:11:16:10	115.306	3792.292	832.767	-102.494	-128.118	-2844.219	-1358.051	2767.348
63. 25:11:18:25	128.118	1819.275	674.036	-128.118	-89.683	-2113.947	-1127.438	1883.334

AVERAGE LOAD

1.	1471.250
2.	8447.500
3.	16623.750
4.	24717.500
5.	33056.250
6.	41076.250
7.	49171.250
8.	57215.000
9.	65215.000
10.	73511.250
11.	81585.000
12.	89552.500
13.	97606.250
14.	105720.000
15.	113592.500
16.	121390.000
17.	129372.500
18.	137252.500
19.	145188.750
20.	148310.000
21.	151711.250
22.	153041.250
23.	154846.250
24.	156246.250
25.	157691.250
26.	159207.500
27.	160981.250
28.	162620.000
29.	164178.750
30.	165997.500
31.	167368.750
32.	169150.000
33.	170812.500
34.	172402.500
35.	173868.750
36.	175446.250
37.	176991.250
38.	178692.500
39.	181136.250
40.	180987.500
41.	181608.750
42.	179752.500
43.	178188.750
44.	173255.000
45.	167155.000
46.	160426.250
47.	153328.750
48.	145637.500
49.	138097.500
50.	129796.250
51.	121936.250
52.	113715.000
53.	105262.500
54.	96928.750
55.	88870.000
56.	80327.500
57.	71885.000

63542.500
54461.250
45875.000
37306.250
19800.000
6418.750

58.
59.
60.
61.
62.
63.

3.3 AL-10 MODELS

3.3.1 SPECIMEN #17

TEST NO. 50

CORRUGATED LINER WITH 500 PSI BACKPACKING

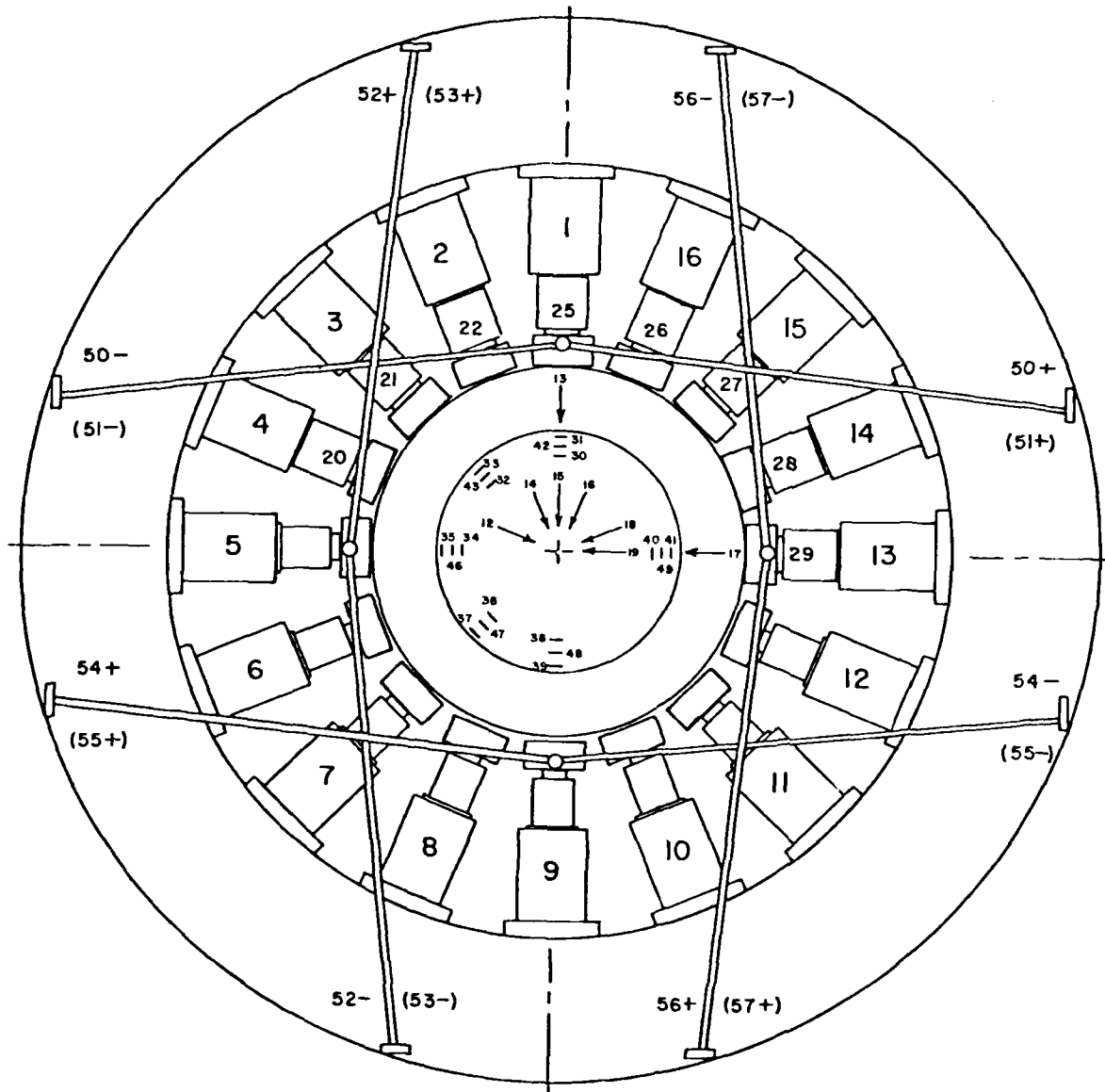
1:1 LOADING RATIO

TESTED 18 AUGUST 1978

REACTION FRAME TEST SET-UP

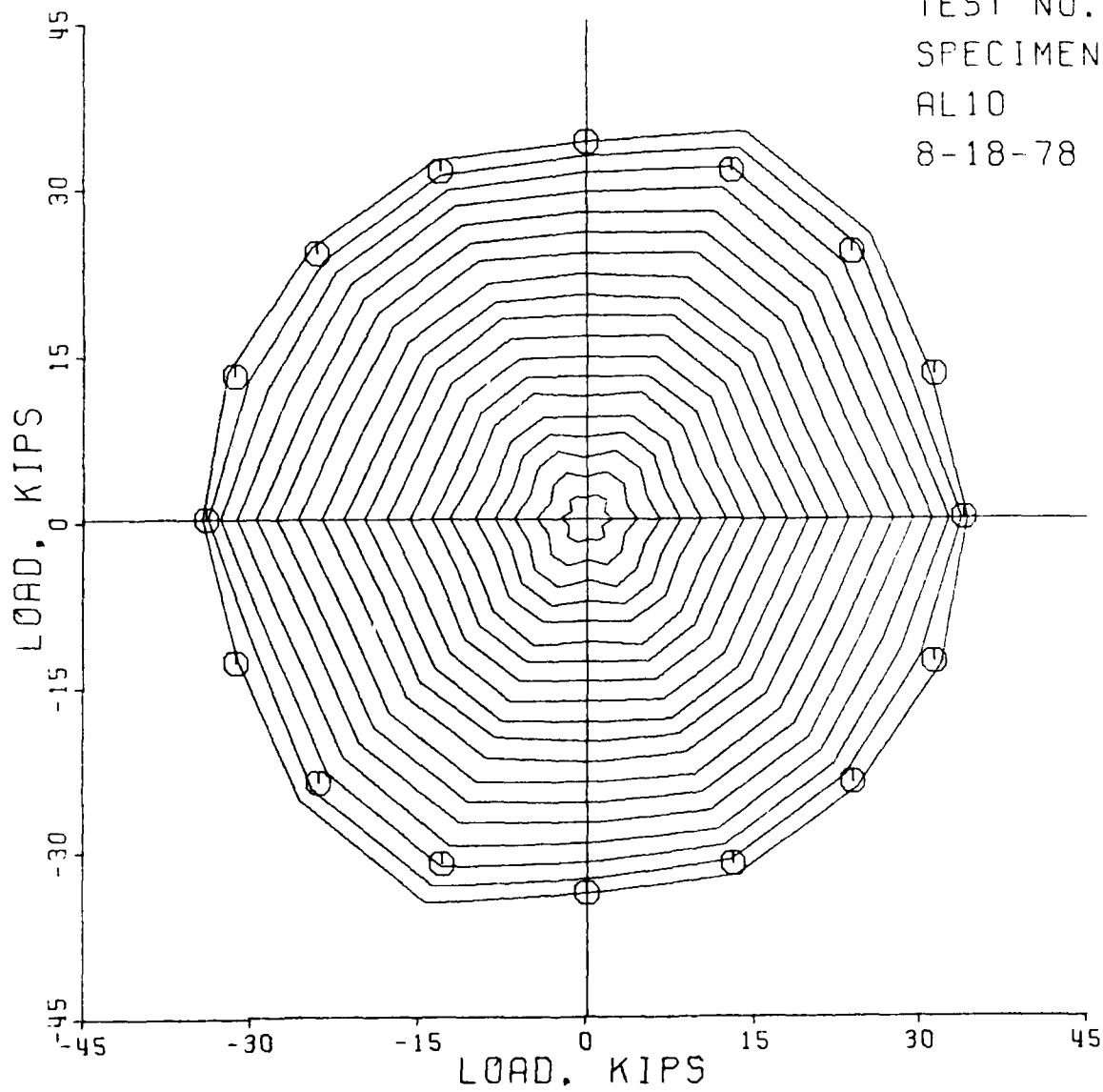
Specimen #17
2/7 Scale AL 10

Test #50
1:1 Load
18 Aug. 1978

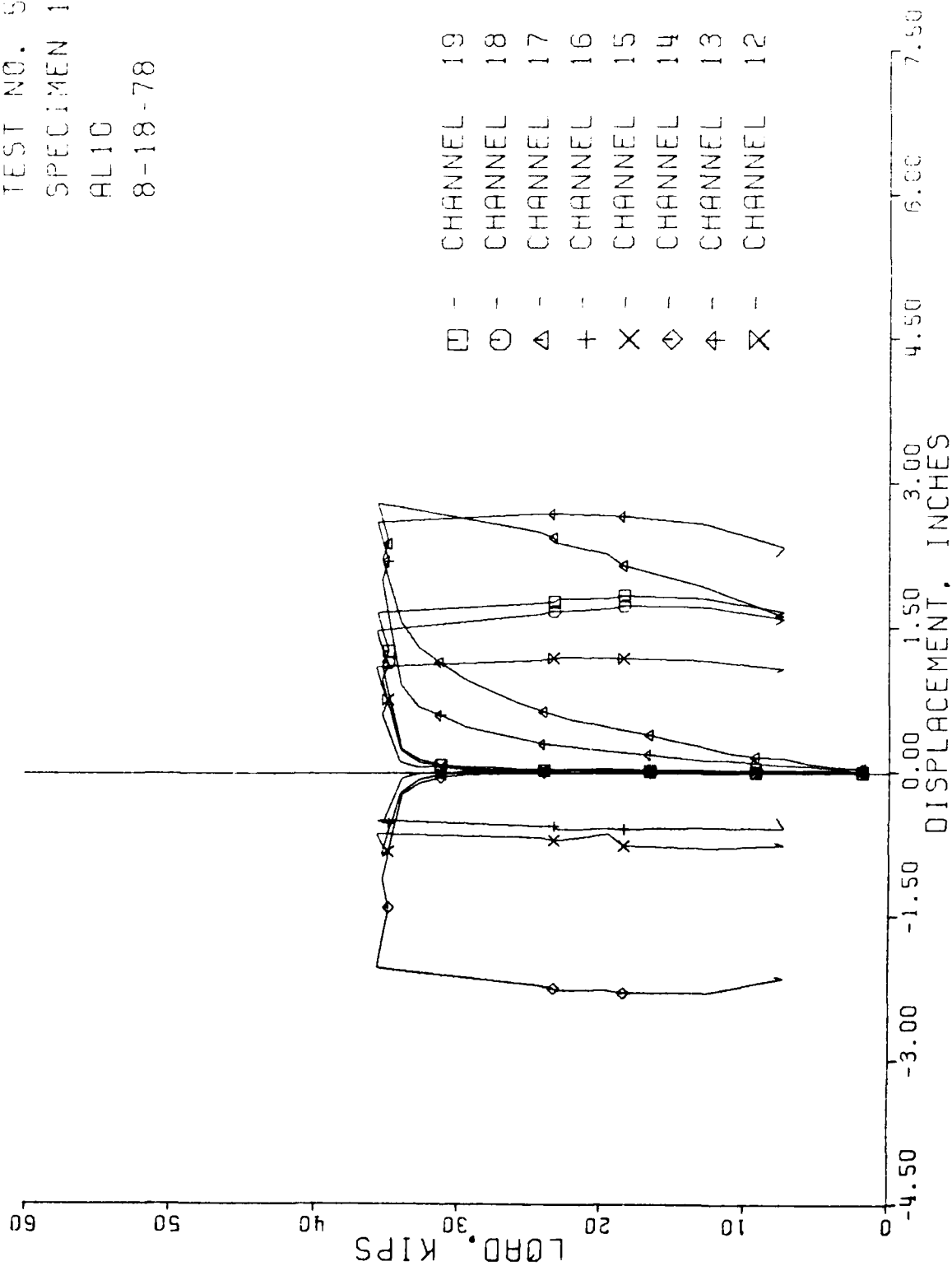


CH 12, 14-16, 18 and 19 load axis I.D. CH 13, 17 Load axis O.D. (Research, Inc. 4040).
CH 20-22, 25-29 Axial load (Transducers, Inc. Model 693-300K).
CH 30, 32, 34, 36, 38 and 40 (Ailtech SG 129-6S) are mounted on crest. (Min. I.D.)
CH 31, 33, 35, 37, 39 and 41 (Ailtech SG 129-6S) are mounted in valley. (Max. I.D.)
CH 42, 43, 46, 47, 48 and 49 (Ailtech SG 129-6S) are mounted midway 6" from top.
CH 50-57 (Ailtech SG 129-6S) Polarity indicates rod under tension.
Lower rod shown (XX).

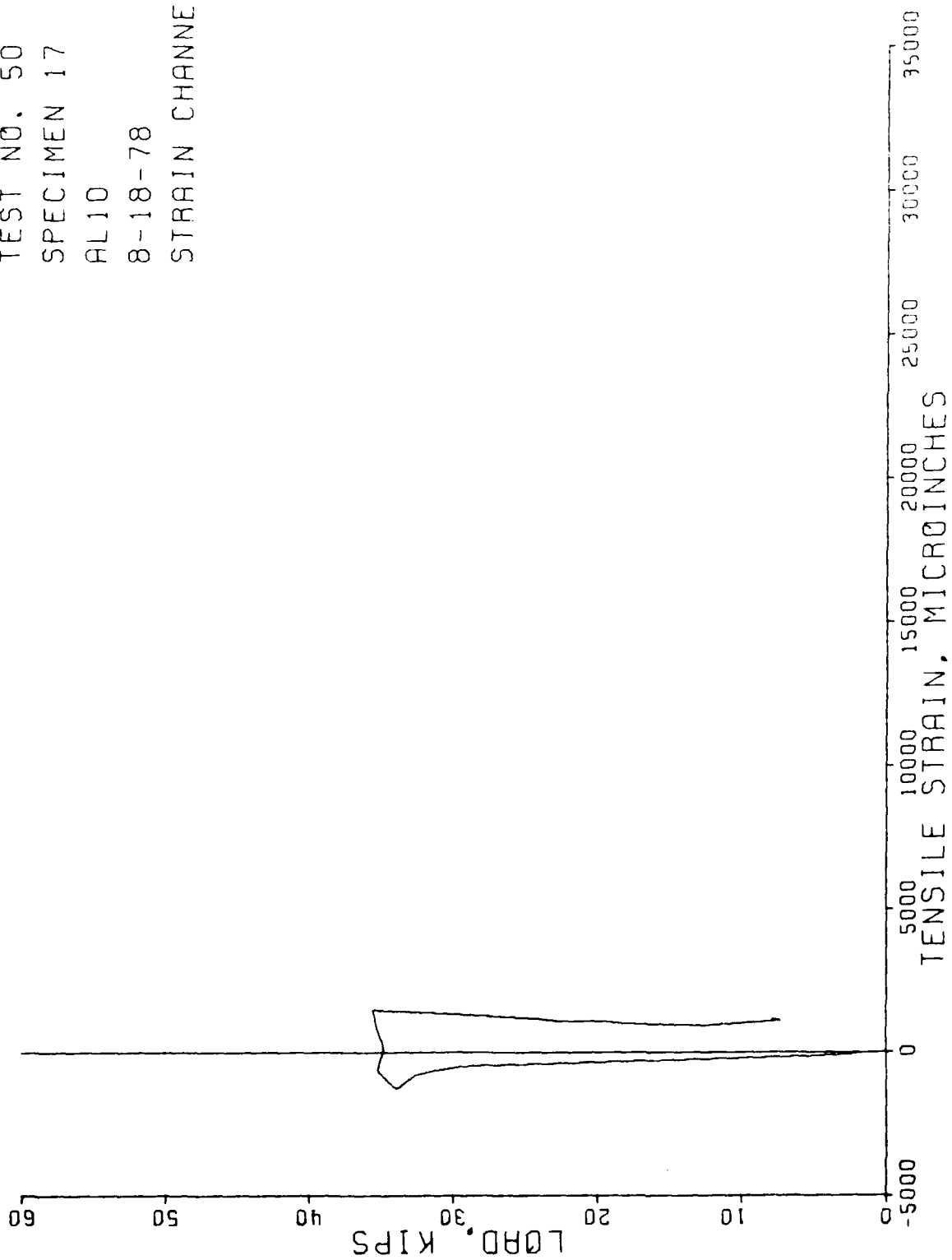
TEST NO. 50
SPECIMEN 17
AL10
8-18-78



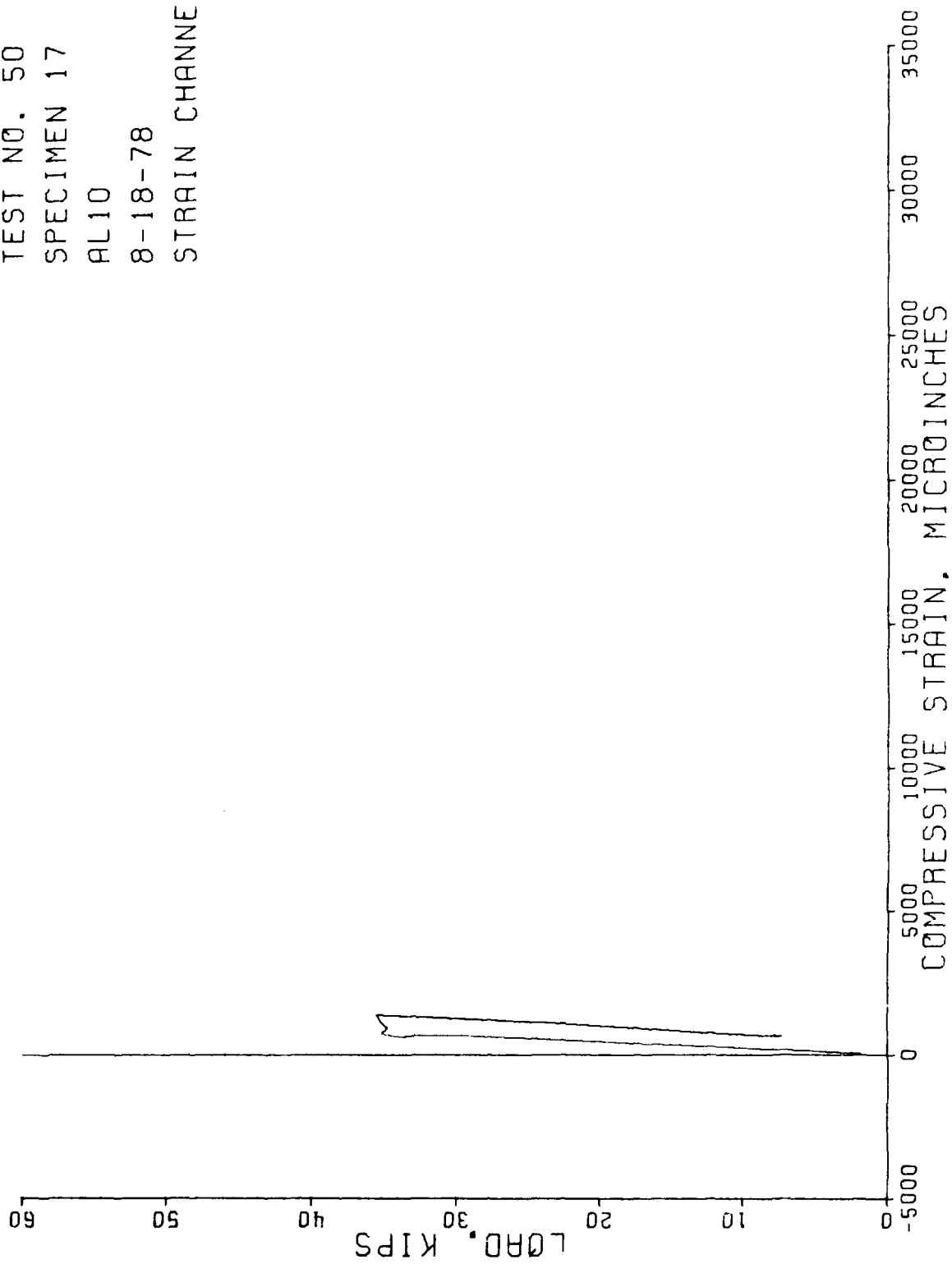
TEST NO. 50
SPECIMEN 17
AL10
8-18-78



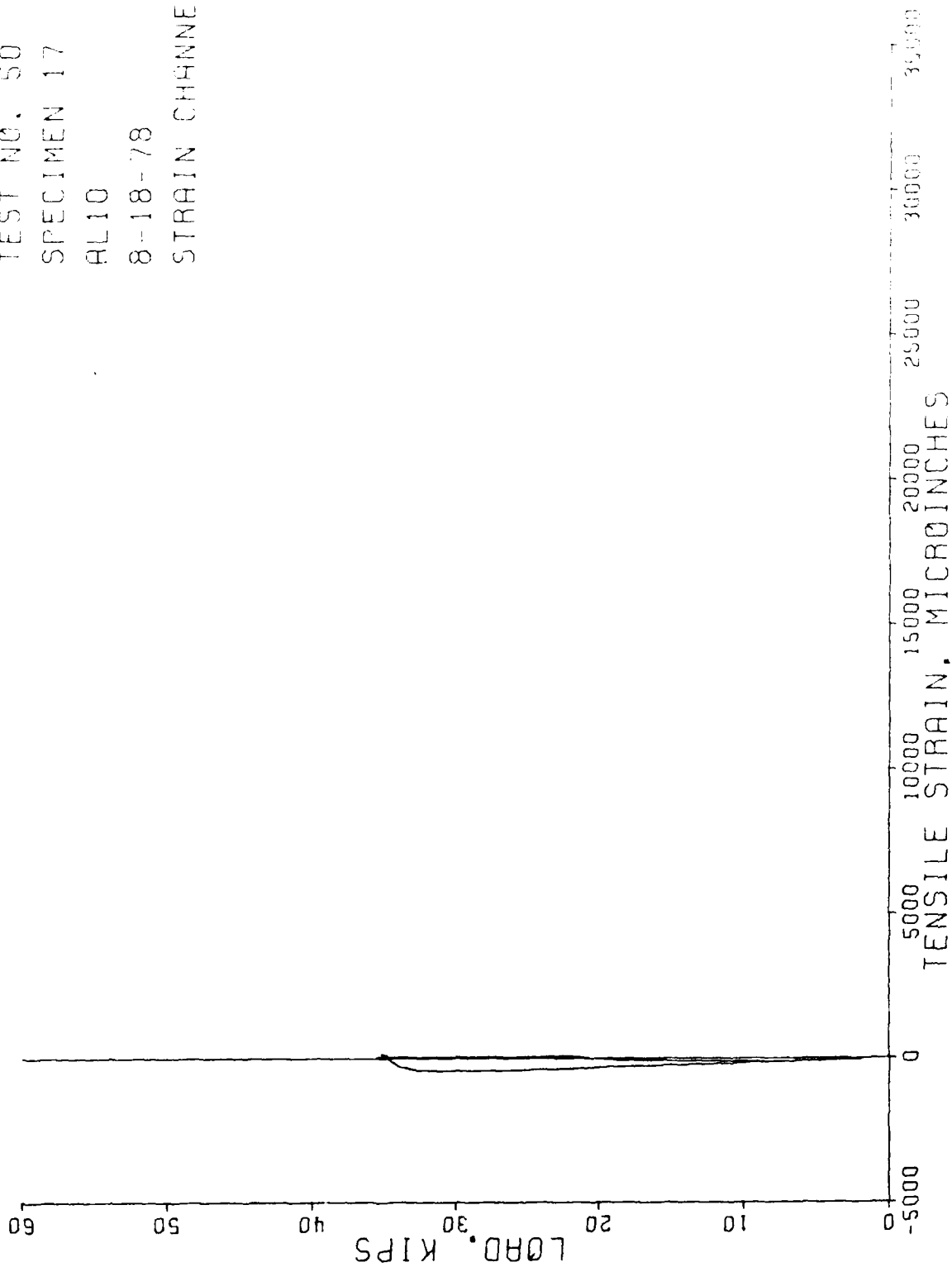
TEST NO. 50
SPECIMEN 17
AL10
8-18-78
STRAIN CHANNEL 30



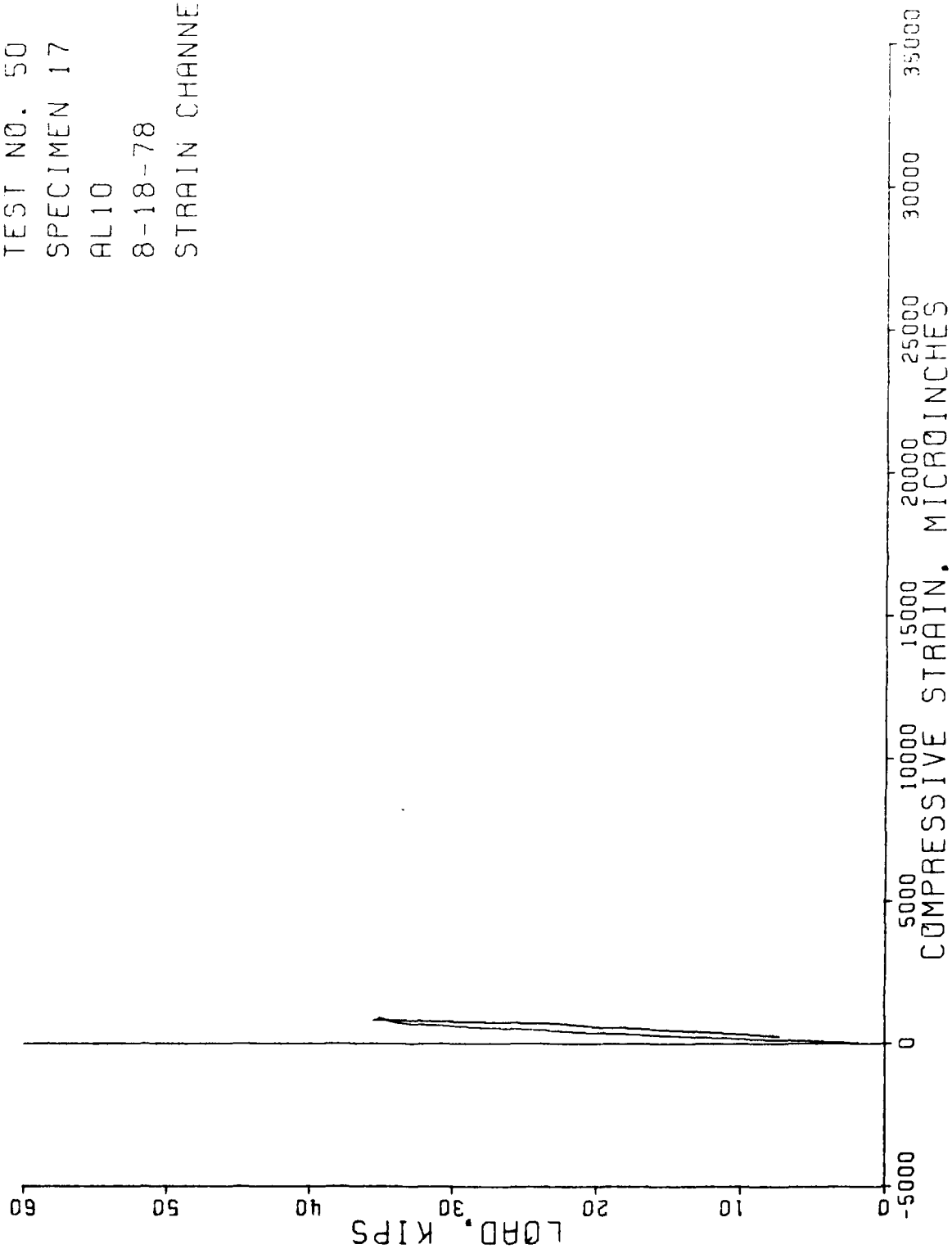
TEST NO. 50
SPECIMEN 17
AL10
8-18-78
STRAIN CHANNEL 31



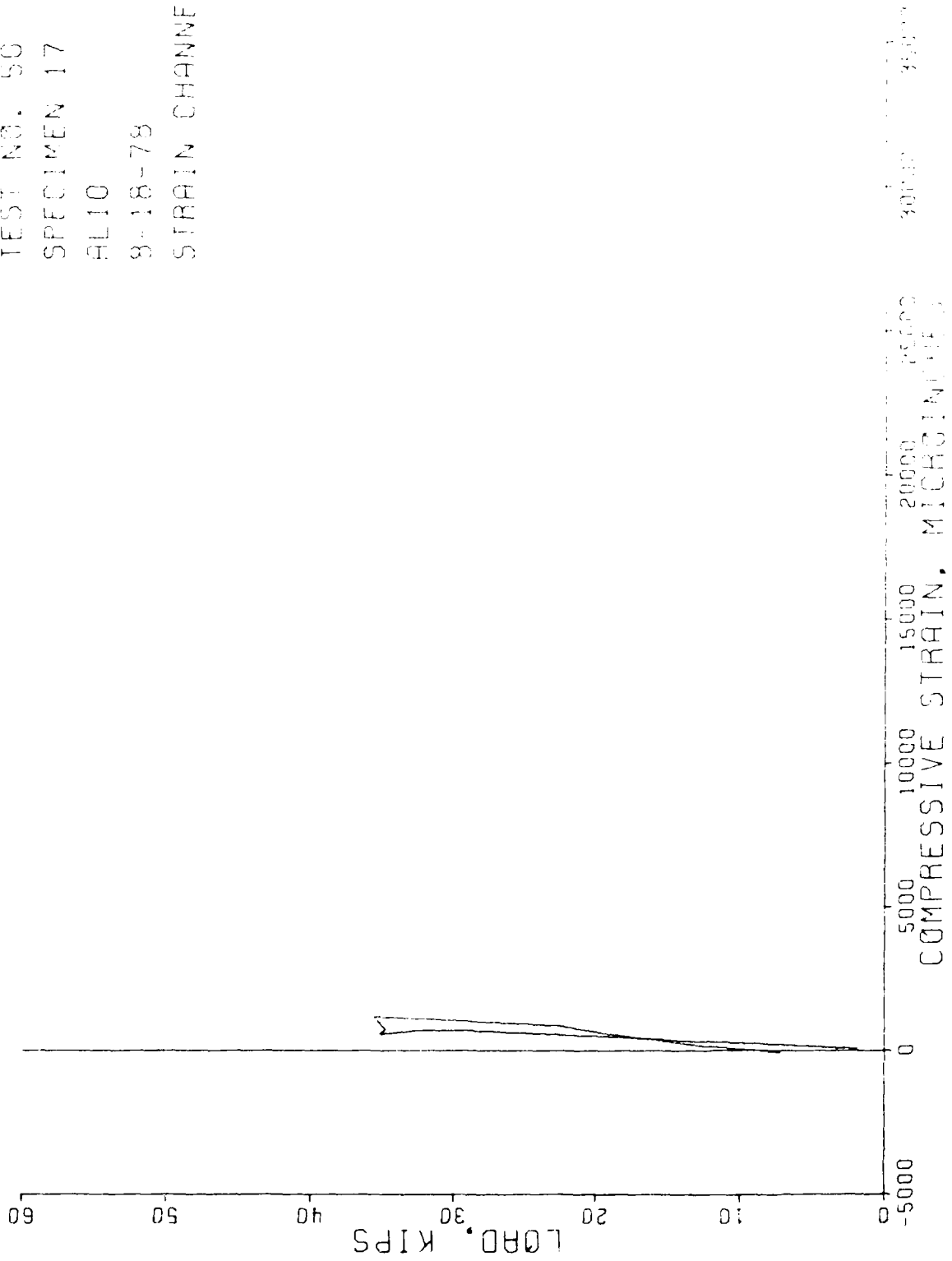
TEST NO. 50
SPECIMEN 17
AL10
8-18-78
STRAIN CHANNEL 32



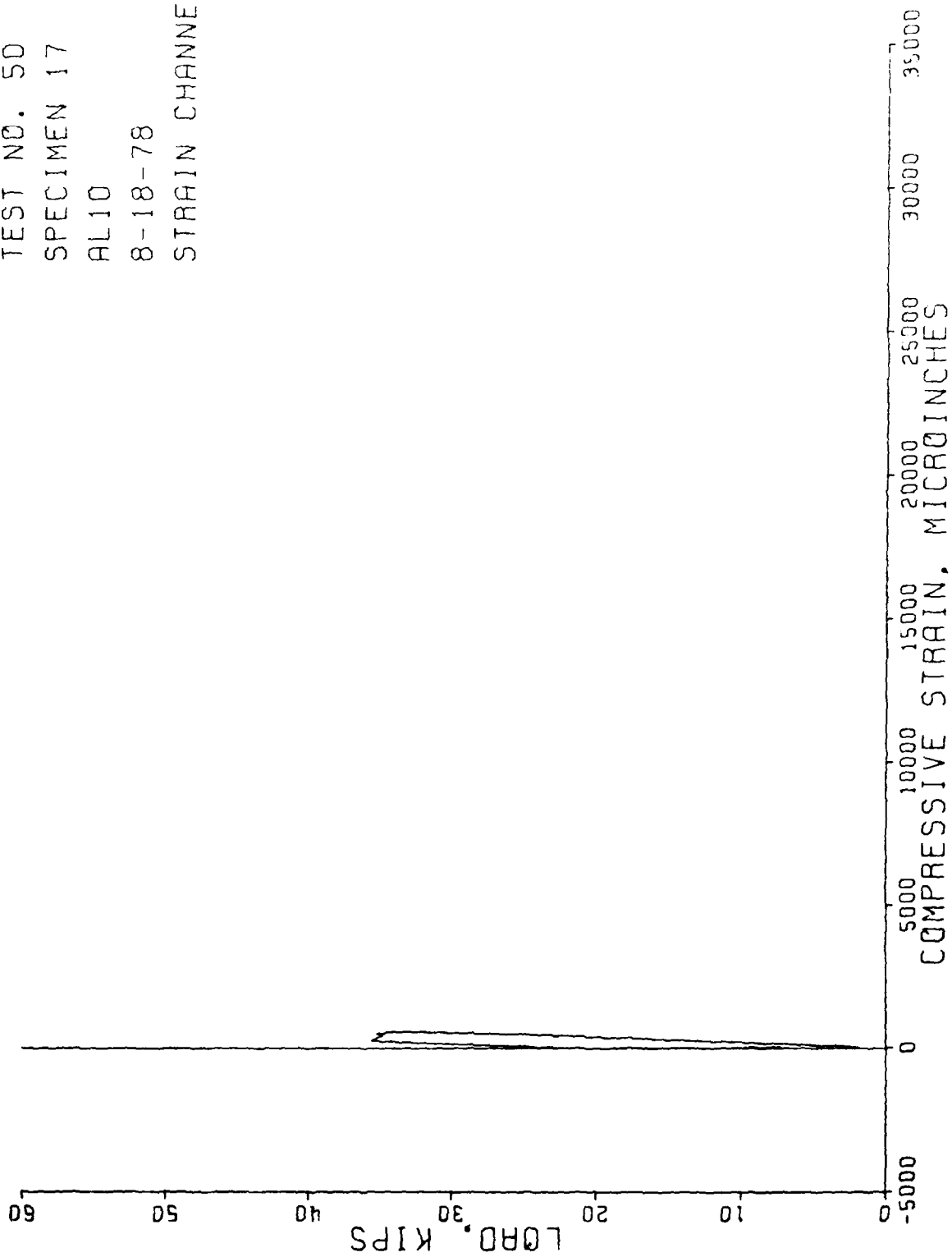
TEST NO. 50
SPECIMEN 17
AL10
8-18-78
STRAIN CHANNEL 33

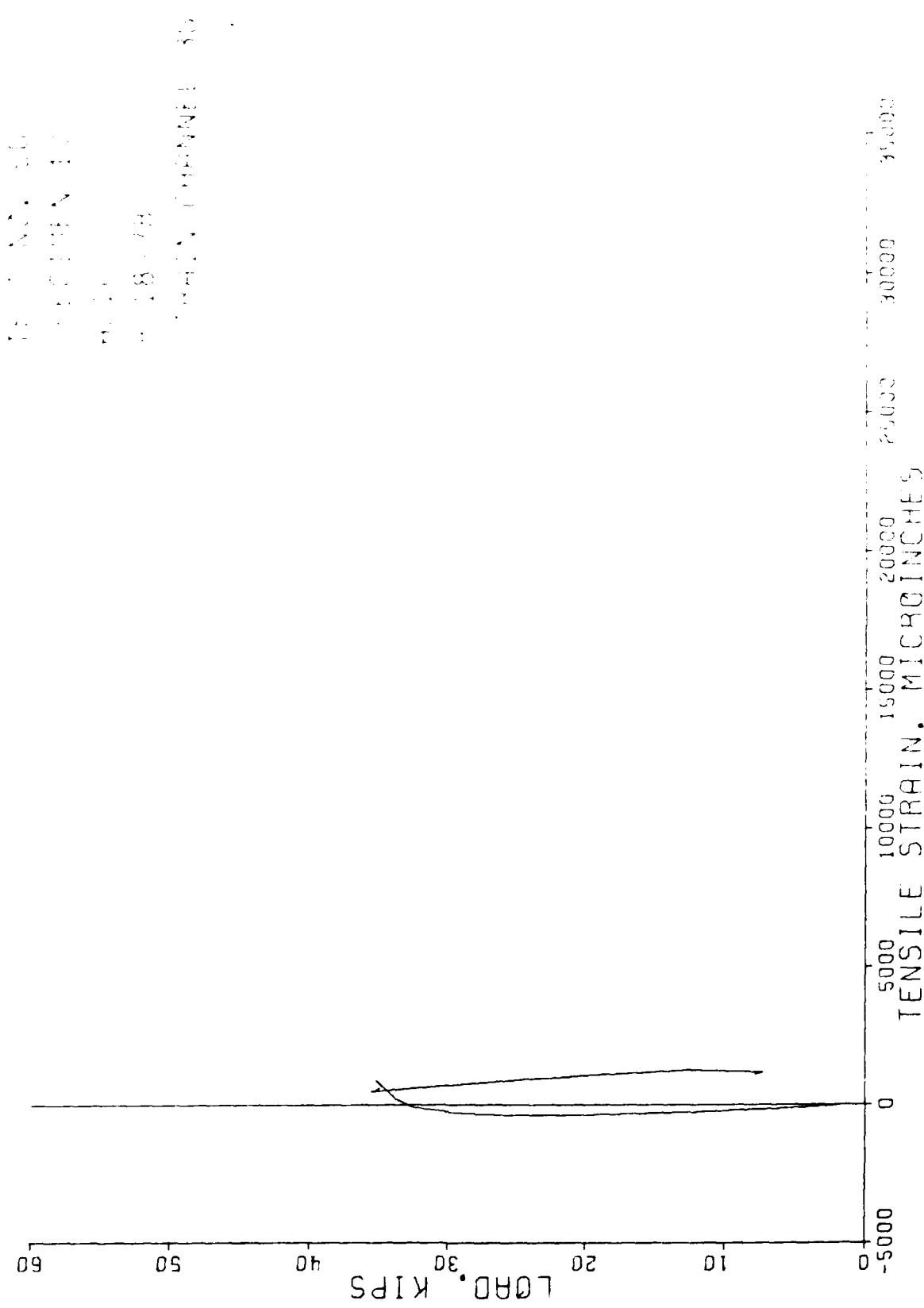


TEST NO. 50
SPECIMEN 17
AL10
8-18-78
STRAIN CHANNEL 34



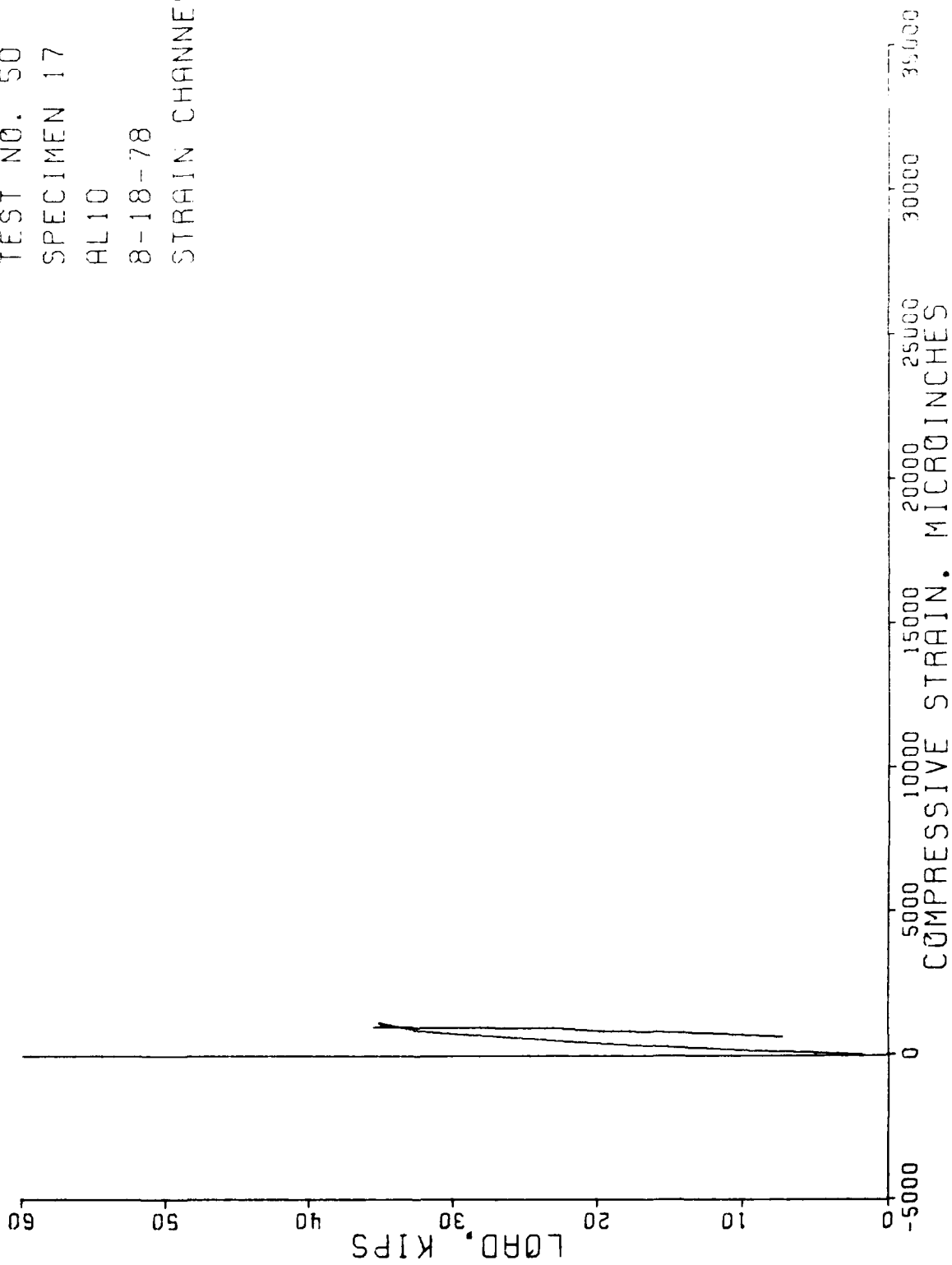
TEST NO. 50
SPECIMEN 17
AL10
8-18-78
STRAIN CHANNEL 35



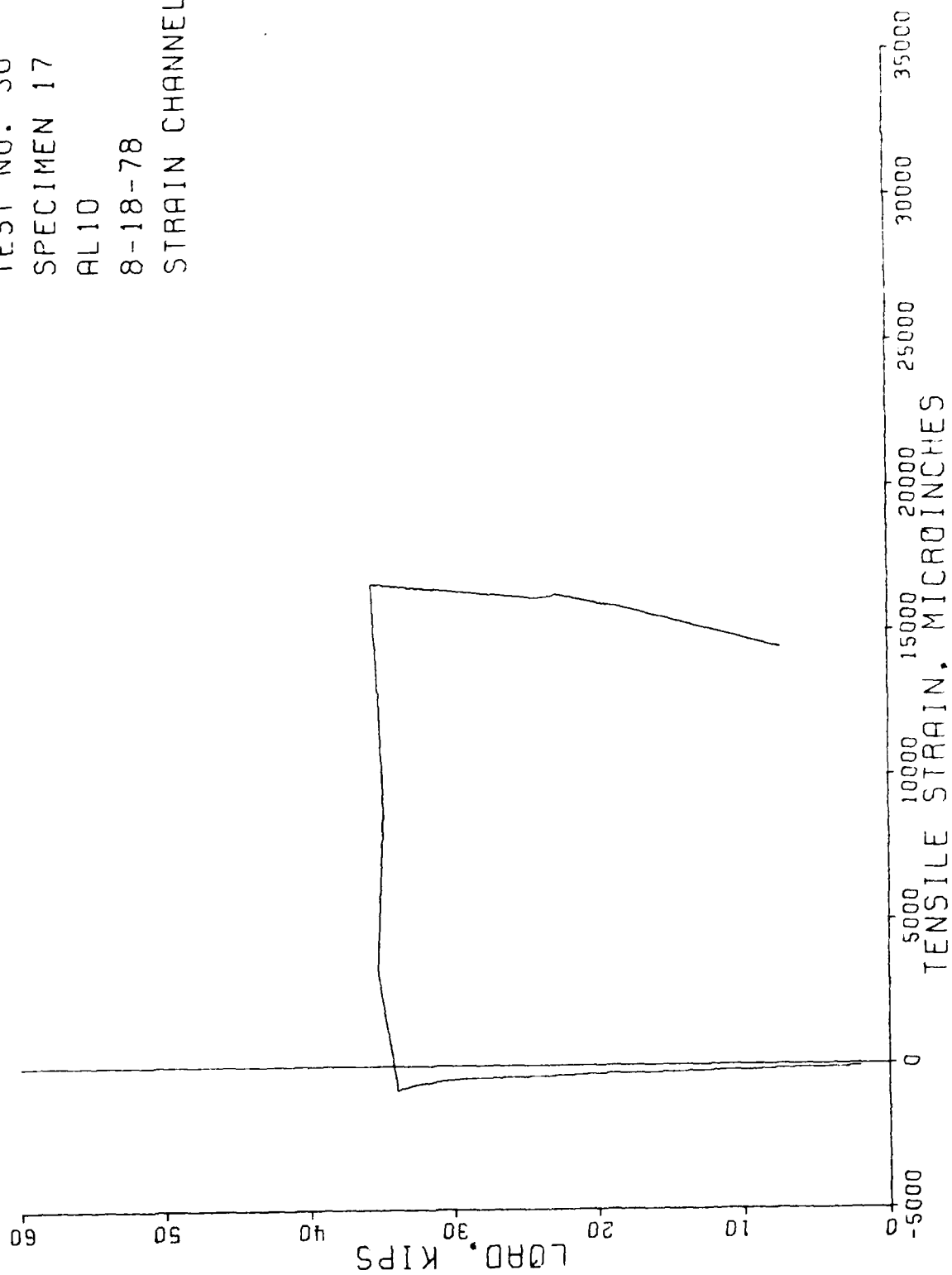


10. 10. 10
 10. 10. 10
 10. 10. 10
 10. 10. 10
 10. 10. 10

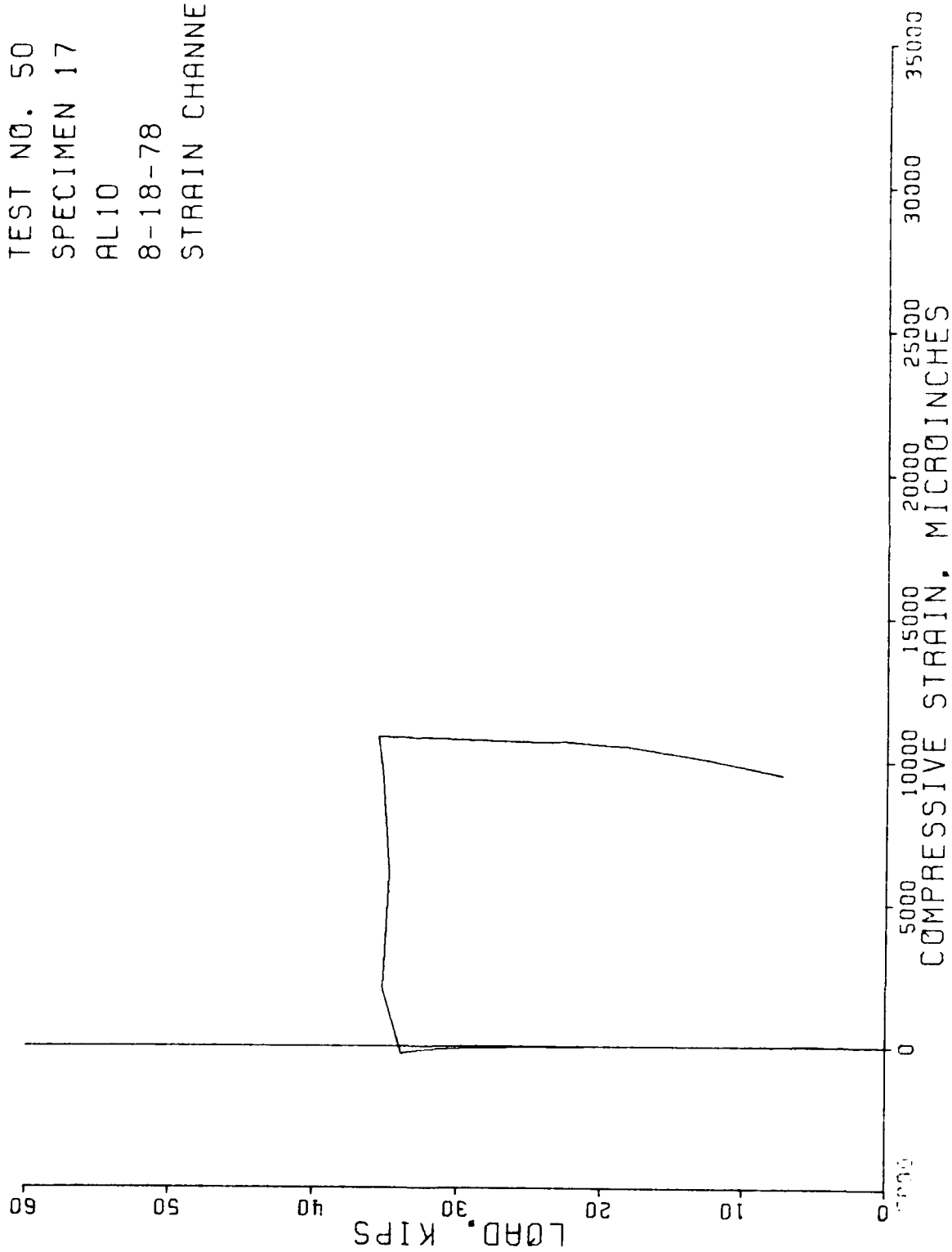
TEST NO. 50
SPECIMEN 17
AL10
8-18-78
STRAIN CHANNEL 37



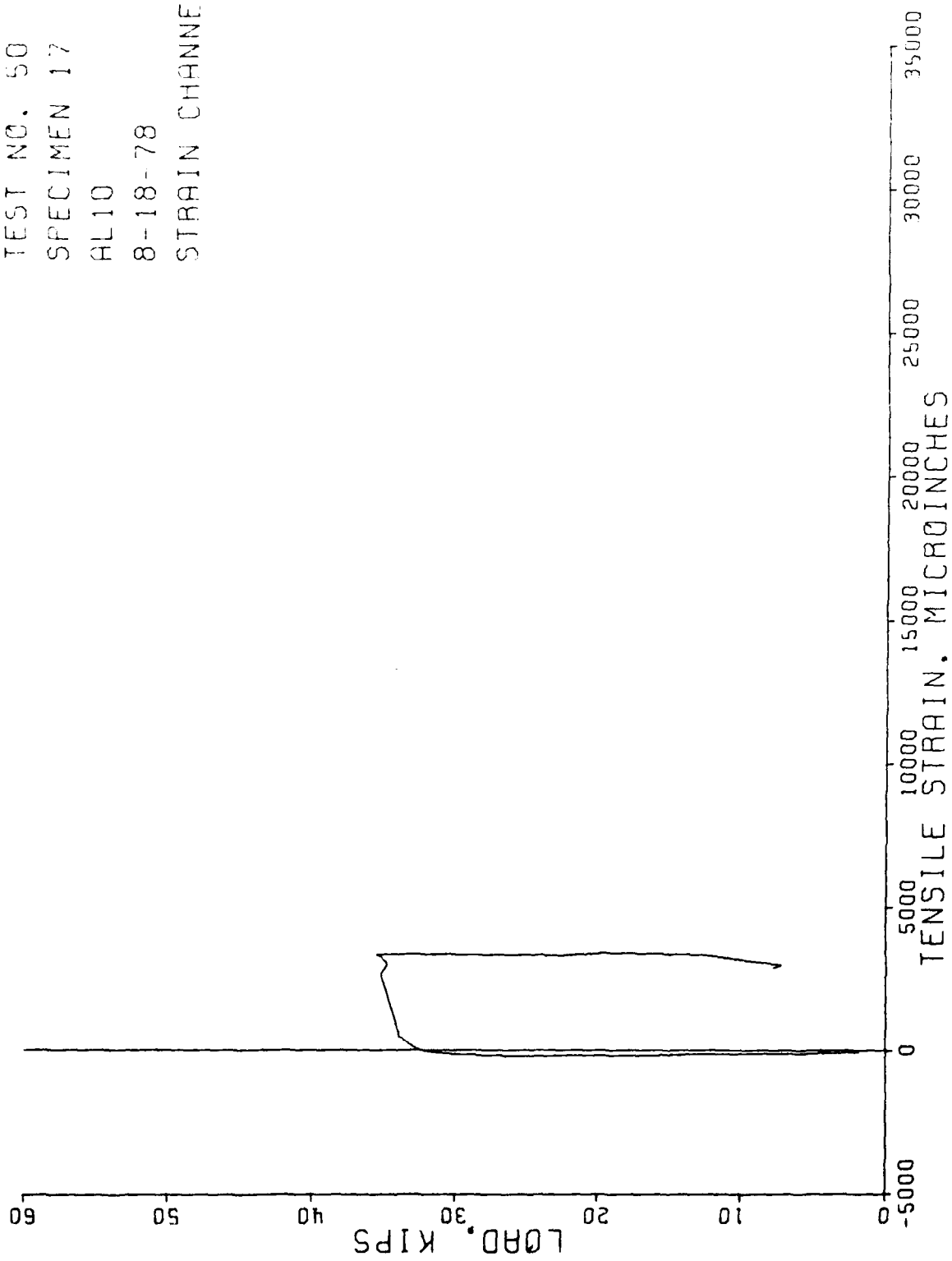
TEST NO. 50
SPECIMEN 17
AL10
8-18-78
STRAIN CHANNEL 38



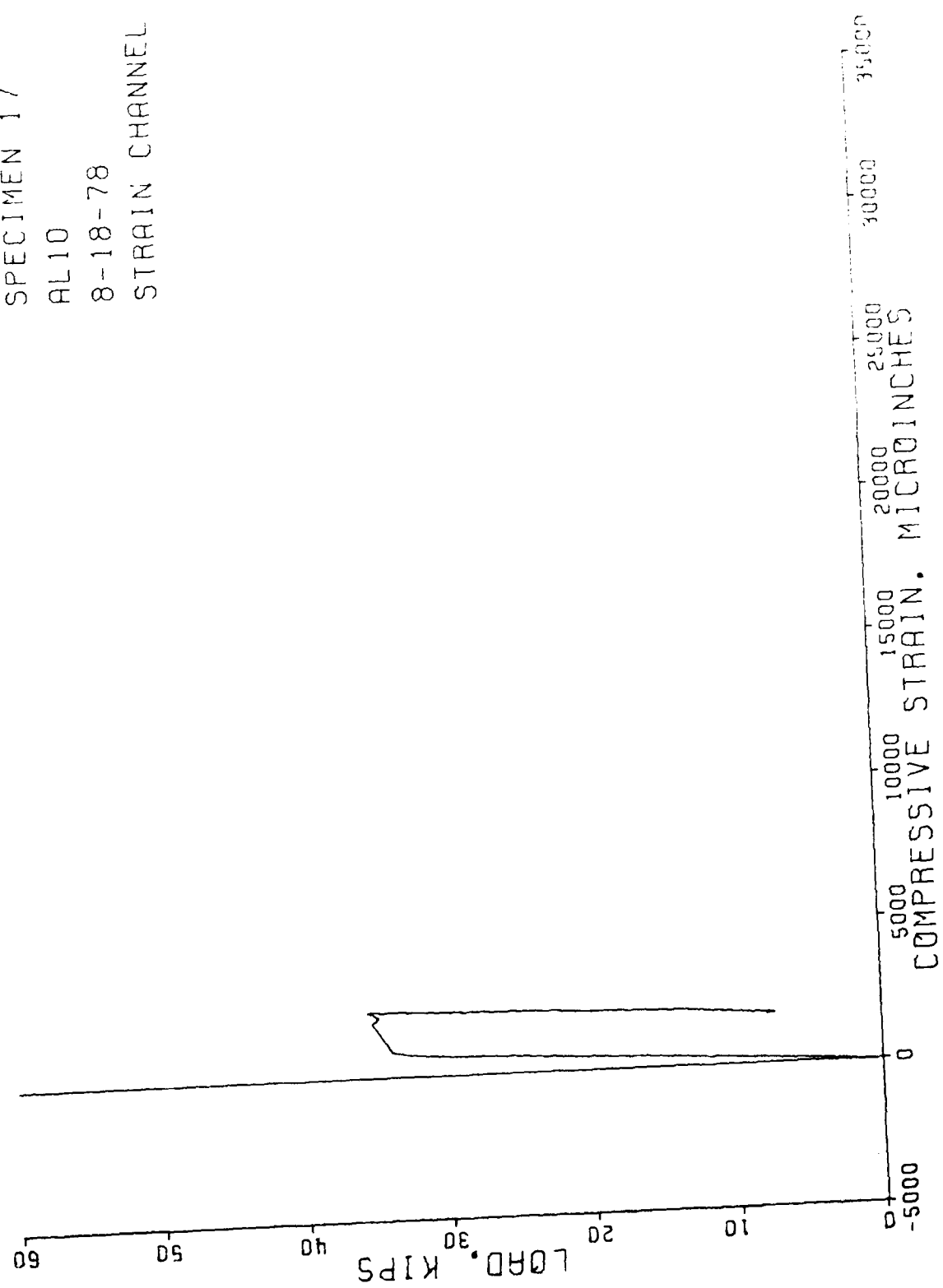
TEST NO. 50
SPECIMEN 17
AL10
8-18-78
STRAIN CHANNEL 39



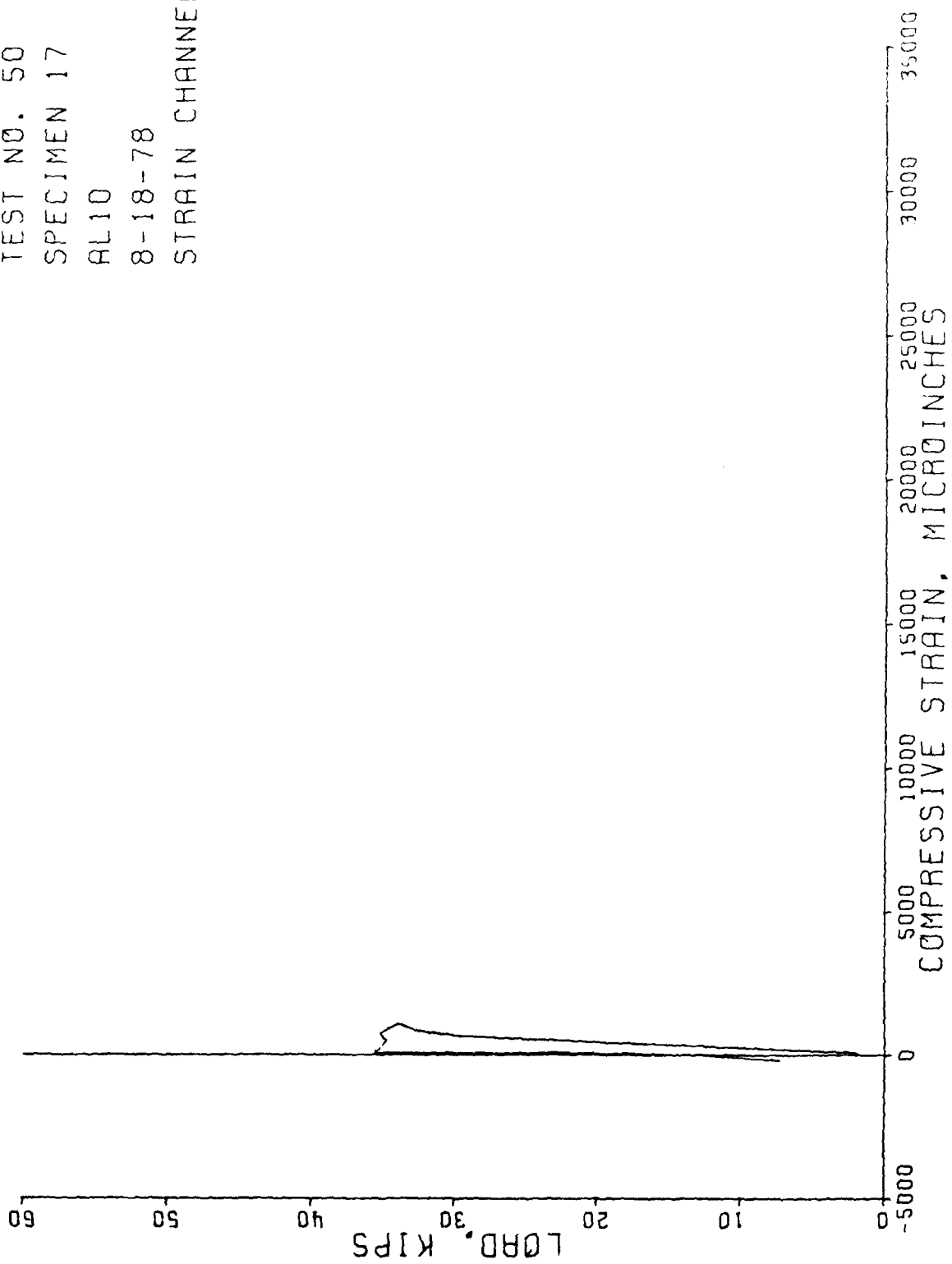
TEST NO. 50
SPECIMEN 17
AL10
8-18-78
STRAIN CHANNEL 40



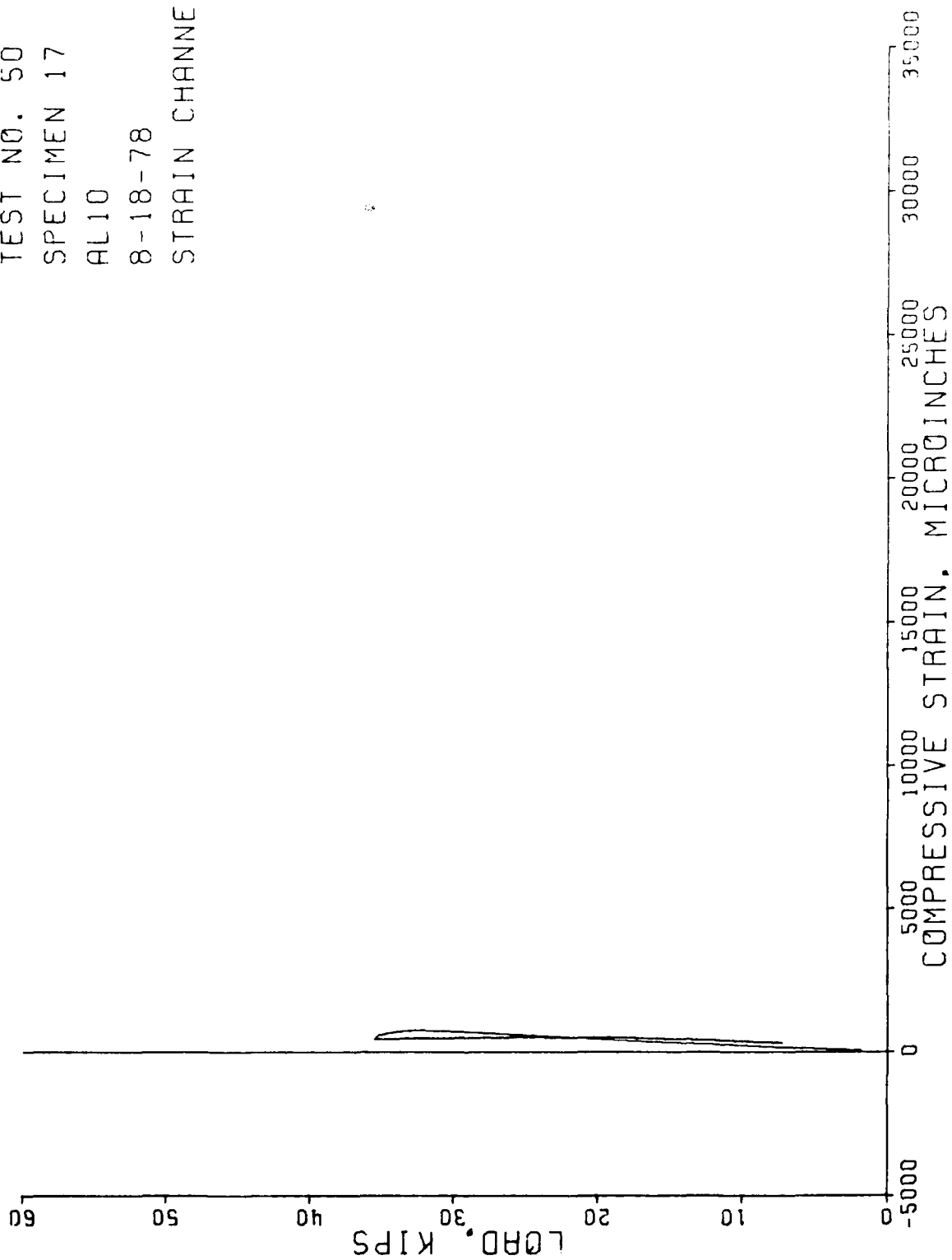
TEST NO. 50
SPECIMEN 17
AL10
8-18-78
STRAIN CHANNEL 41



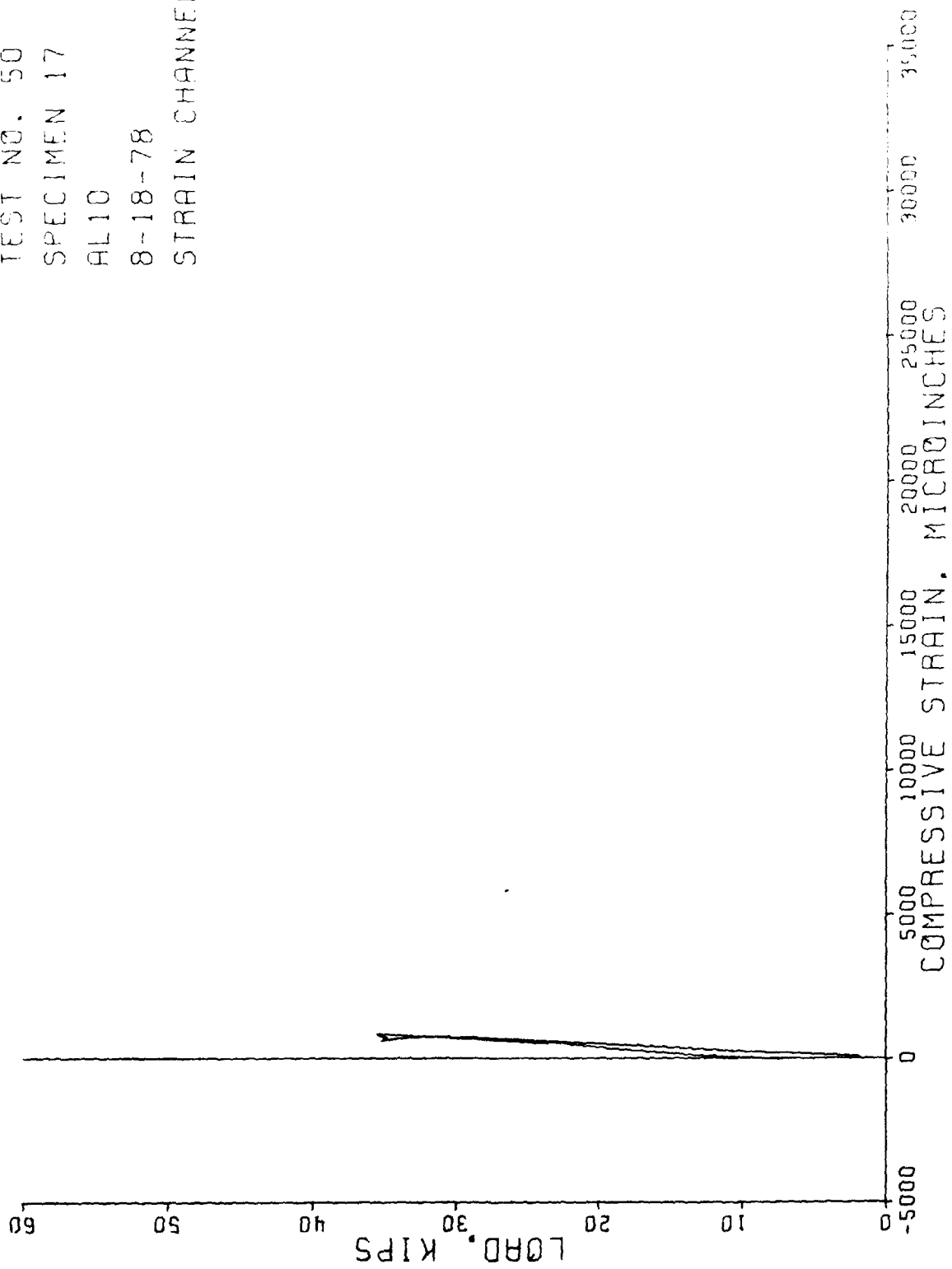
TEST NO. 50
SPECIMEN 17
AL10
8-18-78
STRAIN CHANNEL 42



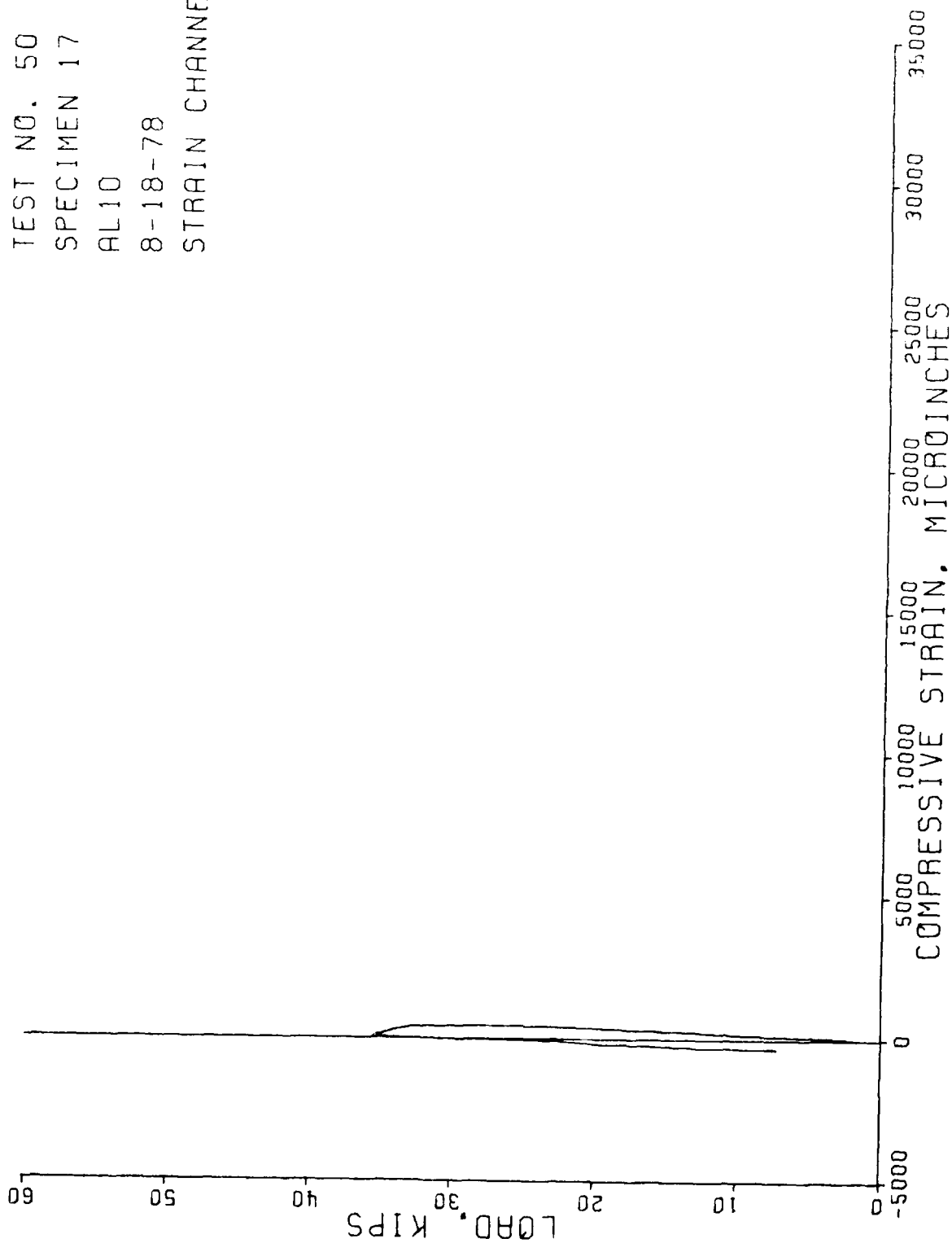
TEST NO. 50
SPECIMEN 17
AL10
8-18-78
STRAIN CHANNEL 43



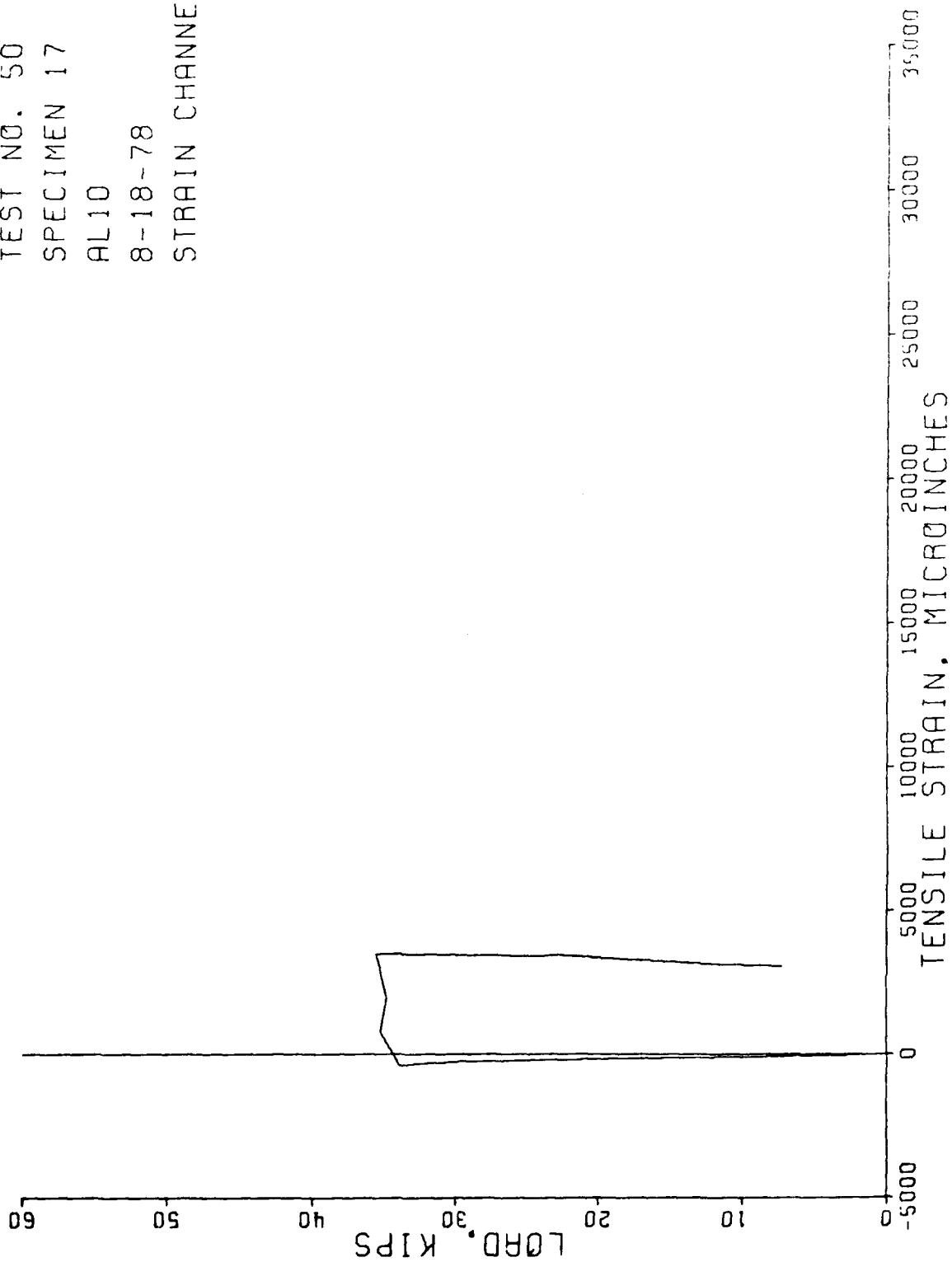
TEST NO. 50
SPECIMEN 17
AL10
8-18-78
STRAIN CHANNEL 46



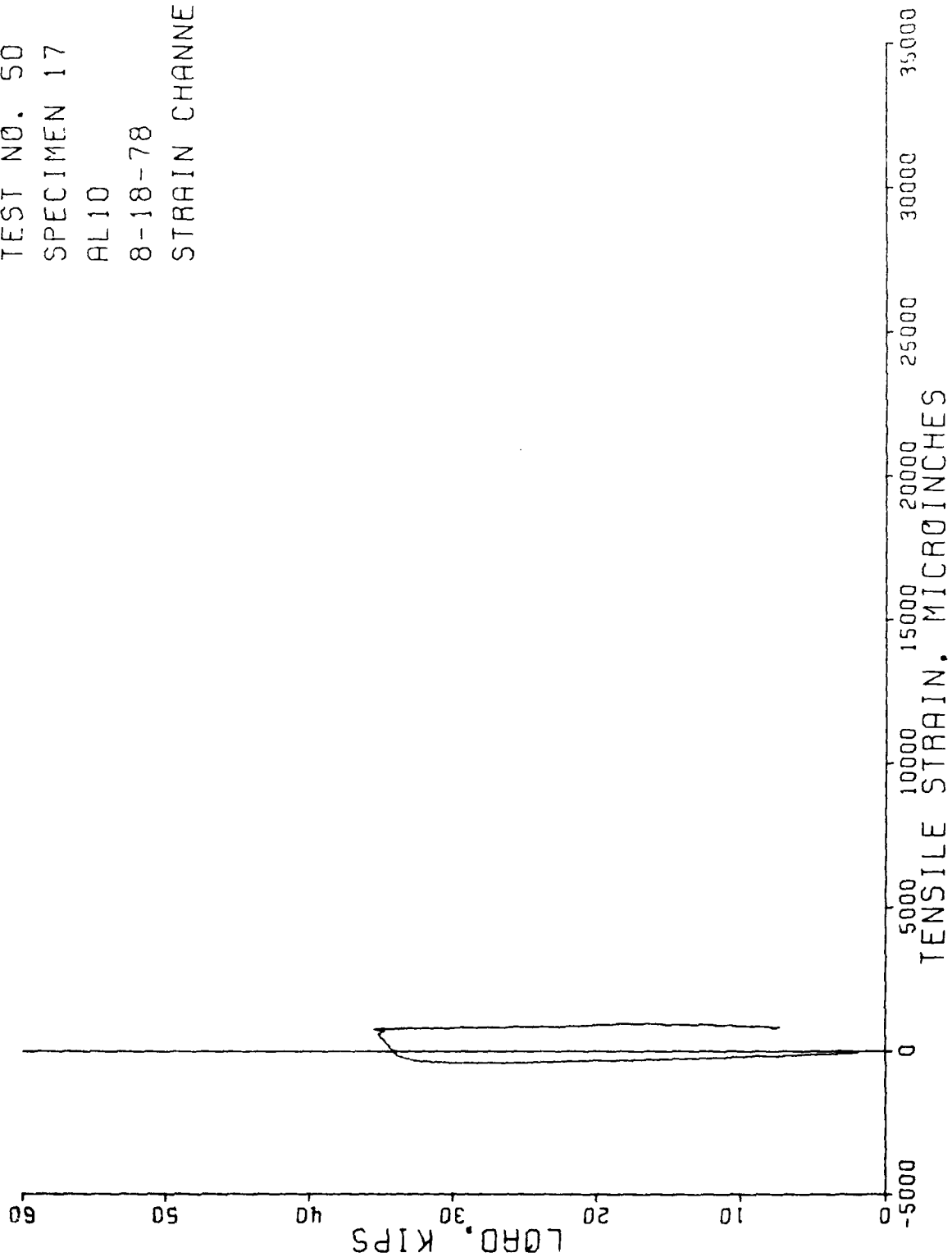
TEST NO. 50
SPECIMEN 17
AL10
8-18-78
STRAIN CHANNEL 47



TEST NO. 50
SPECIMEN 17
AL10
8-18-78
STRAIN CHANNEL 48



TEST NO. 50
SPECIMEN 17
AL10
8-18-78
STRAIN CHANNEL 49



TEST NO. 50 SPECIMEN 17 ALI0 8-18-78

NUMBER OF INCREMENTS= 32
NUMBER OF CHANNELS= 42
NUMBER OF STRAIN CHANNELS= 18
NUMBER OF DISPLACEMENT CHANNELS= 8
NUMBER OF LOAD CHANNELS= 8
NUMBER OF PRESSURE CHANNELS= 0
NUMBER OF RODS= 8

CHANNEL	ZEROSHIFT
57	0.0
56	0.0
55	0.0
54	0.0
53	0.0
52	0.0
51	0.0
50	0.0
49	0.0
48	0.0
47	0.0
46	0.0
45	0.0
44	0.0
43	0.0
42	0.0
41	0.0
40	0.0
39	0.0
38	0.0
37	0.0
36	0.0
35	0.0
34	0.0
33	0.0
32	0.0
31	0.0
30	0.0
29	0.0
28	0.0
27	0.0
26	0.0
25	0.0
24	0.0
23	0.0
22	0.0
21	0.0
20	0.0
19	0.0
18	0.0
17	0.0
16	0.0
15	0.0
14	0.0
13	0.0
12	0.0

STRAIN CHANNEL CALIBRATION

DISPLACEMENT CHANNEL		CALIBRATION	
49		1.000	
48		1.000	
47		1.000	
46		1.000	
43		1.000	
42		1.000	
41		1.000	
40		1.000	
39		1.000	
38		1.000	
37		1.000	
36		1.000	
35		1.000	
34		1.000	
33		1.000	
32		1.000	
31		1.000	
30		1.000	
LOAD CHANNEL		CALIBRATION	
29		0.001	
28		0.001	
27		0.002	
26		0.002	
25		0.002	
22		0.002	
21		0.002	
20		0.002	
ROD CHANNEL		CALIBRATION	
57		1.000	
56		1.000	
55		1.000	
54		1.000	
53		1.000	
52		1.000	
51		1.000	
50		1.000	

STRAIN CHANNELS

	CH. 49	CH. 48	CH. 47	CH. 46	CH. 43	CH. 42	CH. 41	CH. 40
1. 18:10:42:58	-61.000	-23.000	-26.000	-53.000	-42.000	-46.000	-37.000	-65.000
2. 18:10:48:13	-103.000	-38.000	-63.000	-100.000	-78.000	-99.000	-85.000	-96.000
3. 18:10:48:54	-137.000	-53.000	-95.000	-145.000	-116.000	-143.000	-130.000	-115.000
4. 18:10:49:34	-163.000	-70.000	-126.000	-181.000	-154.000	-182.000	-172.000	-127.000
5. 18:10:50:15	-184.000	-88.000	-156.000	-212.000	-191.000	-221.000	-215.000	-130.000
6. 18:10:51:1	-217.000	-98.000	-206.000	-262.000	-240.000	-258.000	-266.000	-147.000
7. 18:10:51:48	-240.000	-114.000	-244.000	-304.000	-276.000	-294.000	-305.000	-162.000
8. 18:10:52:30	-263.000	-128.000	-282.000	-346.000	-317.000	-332.000	-349.000	-171.000
9. 18:10:53:12	-290.000	-154.000	-312.000	-388.000	-361.000	-369.000	-391.000	-190.000
10. 18:10:54:7	-315.000	-169.000	-341.000	-431.000	-409.000	-400.000	-432.000	-208.000
11. 18:10:54:58	-330.000	-188.000	-367.000	-491.000	-453.000	-435.000	-470.000	-208.000
12. 18:10:55:52	-348.000	-205.000	-397.000	-532.000	-503.000	-474.000	-511.000	-208.000
13. 18:10:56:47	-375.000	-222.000	-423.000	-584.000	-557.000	-512.000	-551.000	-225.000
14. 18:10:57:42	-389.000	-240.000	-443.000	-625.000	-606.000	-550.000	-589.000	-220.000
15. 18:10:58:44	-396.000	-257.000	-455.000	-664.000	-651.000	-589.000	-623.000	-203.000
16. 18:10:59:29	-403.000	-291.000	-462.000	-703.000	-693.000	-635.000	-659.000	-184.000
17. 18:11:0:22	-371.000	-332.000	-437.000	-717.000	-721.000	-716.000	-698.000	-93.000
18. 18:11:1:45	-331.000	-412.000	-405.000	-719.000	-740.000	-822.000	-745.000	19.000
19. 18:11:1:45	-140.000	-758.000	-298.000	-673.000	-710.000	-1080.000	-859.000	452.000
20. 18:11:3:43	599.000	1862.000	-66.000	-609.000	-583.000	-748.000	-1841.000	2622.000
21. 18:11:4:2	693.000	2873.000	-133.000	-690.000	-595.000	-448.000	-2061.000	2992.000
22. 18:11:4:20	755.000	3468.000	-138.000	-781.000	-597.000	-195.000	-2219.000	3265.000
23. 18:11:4:38	787.000	3398.000	-30.000	-856.000	-429.000	-50.000	-2264.000	3345.000
24. 18:11:5:14	853.000	3416.000	57.000	-527.000	-496.000	-42.000	-2114.000	3326.000
25. 18:11:5:32	851.000	3432.000	66.000	-517.000	-484.000	-64.000	-2101.000	3312.000
26. 18:11:5:50	849.000	3448.000	72.000	-515.000	-477.000	-73.000	-2093.000	3301.000
27. 18:11:6:8	933.000	3328.000	189.000	-338.000	-465.000	-29.000	-2088.000	3291.000
28. 18:11:6:26	938.000	3306.000	202.000	-310.000	-468.000	-50.000	-2037.000	3394.000
29. 18:11:7:6	923.000	3137.000	312.000	-84.000	-392.000	18.000	-2031.000	3400.000
30. 18:11:7:47	816.000	3039.000	314.000	14.000	-305.000	201.000	-1933.000	3332.000
31. 18:11:8:30	794.000	3061.000	288.000	-3.000	-323.000	209.000	-1727.000	2967.000
32. 18:11:8:30							-1702.000	2873.000

STRAIN CHANNELS

TIME	CH.39	CH.38	CH.37	CH.36	CH.35	CH.34	CH.33	CH.32
1. 18:10:42:58	-4.000	-104.000	-51.000	-20.000	-32.000	-57.000	-26.000	-47.000
2. 18:10:43:13	-9.000	-119.000	-84.000	-75.000	-66.000	-110.000	-58.000	-69.000
3. 18:10:43:54	-14.000	-134.000	-121.000	-127.000	-102.000	-159.000	-92.000	-98.000
4. 18:10:49:34	-12.000	-160.000	-153.000	-169.000	-138.000	-195.000	-124.000	-128.000
5. 18:10:50:15	-8.000	-189.000	-185.000	-206.000	-173.000	-220.000	-156.000	-155.000
6. 18:10:51:1	-12.000	-200.000	-229.000	-252.000	-215.000	-269.000	-193.000	-195.000
7. 18:10:51:48	-6.000	-227.000	-269.000	-280.000	-246.000	-311.000	-227.000	-218.000
8. 18:10:52:30	-2.000	-250.000	-312.000	-312.000	-283.000	-350.000	-265.000	-245.000
9. 18:10:53:12	0.0	-268.000	-360.000	-335.000	-319.000	-399.000	-305.000	-274.000
10. 18:10:54:7	1.000	-281.000	-412.000	-351.000	-351.000	-459.000	-345.000	-306.000
11. 18:10:54:58	6.000	-305.000	-459.000	-366.000	-382.000	-488.000	-382.000	-336.000
12. 18:10:55:52	15.000	-338.000	-512.000	-379.000	-417.000	-520.000	-424.000	-368.000
13. 18:10:56:47	20.000	-363.000	-571.000	-379.000	-449.000	-571.000	-472.000	-398.000
14. 18:10:57:42	29.000	-391.000	-627.000	-370.000	-479.000	-608.000	-514.000	-426.000
15. 18:10:58:44	44.000	-424.000	-688.000	-343.000	-505.000	-642.000	-558.000	-440.000
16. 18:10:59:29	60.000	-458.000	-752.000	-303.000	-531.000	-676.000	-602.000	-457.000
17. 18:11:0:22	108.000	-541.000	-831.000	-186.000	-556.000	-683.000	-643.000	-448.000
18. 18:11:0:58	155.000	-639.000	-906.000	-67.000	-583.000	-671.000	-682.000	-430.000
19. 18:11:1:45	256.000	-861.000	-1036.000	247.000	-575.000	-589.000	-737.000	-296.000
20. 18:11:3:43	-1980.000	3052.000	-1186.000	892.000	-471.000	-561.000	-906.000	170.000
21. 18:11:4:2	-5999.000	8775.000	-1085.000	669.000	-431.000	-746.000	-878.000	107.000
22. 18:11:4:20	-9359.000	13820.000	-1012.000	523.000	-340.000	-986.000	-857.000	76.000
23. 18:11:4:38	-10873.000	16670.000	-989.000	475.000	-253.000	-1181.000	-837.000	48.000
24. 18:11:4:56	-10672.000	16172.000	-962.000	922.000	-23.000	-903.000	-701.000	61.000
25. 18:11:5:14	-10677.000	16204.000	-957.000	945.000	-18.000	-878.000	-695.000	73.000
26. 18:11:5:32	-10688.000	16247.000	-955.000	952.000	-14.000	-877.000	-694.000	87.000
27. 18:11:5:50	-10700.000	16290.000	-951.000	953.000	-12.000	-878.000	-694.000	94.000
28. 18:11:6:8	-10546.000	15949.000	-862.000	1083.000	19.000	-609.000	-559.000	-38.000
29. 18:11:6:26	-10518.000	15867.000	-856.000	1111.000	9.000	-529.000	-543.000	-66.000
30. 18:11:7:6	-10059.000	15136.000	-774.000	1259.000	5.000	-149.000	-388.000	-109.000
31. 18:11:7:47	-9505.000	14436.000	-652.000	1168.000	-26.000	73.000	-242.000	-125.000
32. 18:11:8:30	-9519.000	14489.000	-639.000	1102.000	-29.000	41.000	-259.000	-131.000

STRAIN CHANNELS

	TIME	CH. 31	CH. 30	CH.
1.	18:10:42:58	-52.000	-55.000	
2.	18:10:48:13	-96.000	-105.000	
3.	18:10:48:54	-139.000	-140.000	
4.	18:10:49:34	-180.000	-169.000	
5.	18:10:50:15	-219.000	-199.000	
6.	18:10:51:1	-265.000	-225.000	
7.	18:10:51:48	-303.000	-253.000	
8.	18:10:52:30	-343.000	-285.000	
9.	18:10:53:12	-385.000	-312.000	
10.	18:10:54:7	-430.000	-325.000	
11.	18:10:54:58	-470.000	-348.000	
12.	18:10:55:52	-512.000	-375.000	
13.	18:10:56:47	-557.000	-400.000	
14.	18:10:57:42	-600.000	-424.000	
15.	18:10:58:44	-636.000	-454.000	
16.	18:10:59:29	-672.000	-502.000	
17.	18:11:0:22	-684.000	-522.000	
18.	18:11:0:58	-687.000	-793.000	
19.	18:11:1:45	-614.000	-1280.000	
20.	18:11:3:43	-726.000	-648.000	
21.	18:11:4:2	-920.000	82.000	
22.	18:11:4:20	-1110.000	720.000	
23.	18:11:4:38	-1383.000	1475.000	
24.	18:11:4:56	-1116.000	1185.000	
25.	18:11:5:14	-1094.000	1114.000	
26.	18:11:5:32	-1087.000	1089.000	
27.	18:11:5:50	-1082.000	1077.000	
28.	18:11:6:8	-969.000	1073.000	
29.	18:11:6:26	-942.000	1001.000	
30.	18:11:7:6	-749.000	924.000	
31.	18:11:7:47	-633.000	1099.000	
32.	18:11:8:30	-667.000	1161.000	

DISPLACEMENT CHANNELS

	TIME	CH.19	CH.18	CH.17	CH.16	CH.15	CH.14	CH.13	CH.12
1.	18:10:42:58	0.0	0.0	0.042	-0.008	0.018	0.006	0.034	0.0
2.	18:10:48:13	0.0	0.001	0.062	-0.010	0.022	0.006	0.034	0.0
3.	18:10:48:54	0.0	0.001	0.096	-0.008	0.022	0.006	0.066	0.0
4.	18:10:49:34	0.0	0.001	0.160	-0.008	0.026	0.006	0.072	0.0
5.	18:10:50:15	0.0	0.007	0.168	-0.008	0.026	0.004	0.094	0.004
6.	18:10:51:1	0.0	0.029	0.212	-0.008	0.026	0.004	0.124	0.008
7.	18:10:51:48	0.0	0.029	0.274	-0.008	0.028	0.004	0.128	0.008
8.	18:10:52:30	0.0	0.029	0.332	-0.008	0.028	0.004	0.154	0.012
9.	18:10:53:12	0.013	0.029	0.394	-0.010	0.028	0.004	0.184	0.018
10.	18:10:54:7	0.016	0.029	0.450	-0.008	0.034	0.002	0.212	0.022
11.	18:10:54:58	0.029	0.029	0.508	-0.010	0.040	0.004	0.242	0.026
12.	18:10:55:52	0.029	0.029	0.566	-0.008	0.034	0.002	0.274	0.028
13.	18:10:56:47	0.029	0.029	0.646	-0.010	0.022	0.004	0.302	0.028
14.	18:10:57:42	0.029	0.036	0.744	-0.010	0.014	0.002	0.360	0.028
15.	18:10:58:44	0.028	0.057	0.864	-0.008	0.012	-0.018	0.422	0.028
16.	18:10:59:29	0.057	0.057	0.980	-0.008	0.012	-0.026	0.480	0.028
17.	18:11:0:22	0.086	0.085	1.155	-0.008	-0.020	-0.056	0.600	0.058
18.	18:11:0:58	0.116	0.142	1.316	-0.010	-0.078	-0.114	0.688	0.056
19.	18:11:1:45	0.233	0.254	1.582	-0.066	-0.214	-0.232	0.926	0.116
20.	18:11:3:43	1.099	0.987	2.218	-0.534	-0.852	-1.102	1.992	0.622
21.	18:11:4:2	1.272	1.156	2.396	-0.536	-0.822	-1.402	2.202	0.768
22.	18:11:4:20	1.475	1.326	2.632	-0.516	-0.732	-1.736	2.416	0.934
23.	18:11:4:38	1.678	1.495	2.810	-0.506	-0.638	-2.030	2.612	1.110
24.	18:11:4:56	1.776	1.664	2.514	-0.562	-0.674	-2.210	2.702	1.174
25.	18:11:5:14	1.795	1.693	2.456	-0.564	-0.704	-2.240	2.702	1.198
26.	18:11:5:32	1.824	1.693	2.396	-0.594	-0.702	-2.266	2.702	1.198
27.	18:11:5:50	1.824	1.693	2.396	-0.590	-0.704	-2.266	2.700	1.206
28.	18:11:6:8	1.824	1.721	2.278	-0.582	-0.638	-2.266	2.674	1.198
29.	18:11:6:26	1.853	1.749	2.160	-0.592	-0.762	-2.296	2.672	1.196
30.	18:11:7:6	1.825	1.733	1.926	-0.580	-0.792	-2.298	2.584	1.168
31.	18:11:7:47	1.678	1.608	1.630	-0.594	-0.762	-2.148	2.388	1.082
32.	18:11:8:30	1.649	1.551	1.628	0.470	-0.732	-2.120	2.258	1.052

LOAD CHANNELS

TIME	CH.29	CH.28	CH.27	CH.26	CH.25	CH.22	CH.21	CH.20
1. 18:10:42:58	2280.000	1720.000	2390.000	2370.000	1870.000	2200.000	2180.000	1490.000
2. 18:10:48:13	4420.000	3750.000	4600.000	4660.000	3730.000	4550.000	4270.000	3590.000
3. 18:10:48:54	6440.000	5630.000	6530.000	6730.000	5580.000	6630.000	6210.000	5520.000
4. 18:10:49:34	8260.000	7290.000	8290.000	8510.000	7400.000	8390.000	8030.000	7250.000
5. 18:10:50:15	10050.000	8910.000	9980.000	10110.000	9210.000	9980.000	9800.000	8860.000
6. 18:10:51:1	12310.000	10890.000	11900.000	12450.000	11100.000	12310.000	11730.000	10850.000
7. 18:10:51:48	13900.000	12530.000	13650.000	14030.000	12890.000	13890.000	13470.000	12540.000
8. 18:10:52:30	15860.000	14230.000	15880.000	15910.000	14690.000	15660.000	15290.000	14270.000
9. 18:10:53:12	17840.000	16060.000	17340.000	17960.000	16520.000	17650.000	17130.000	16130.000
10. 18:10:54:7	19770.000	17880.000	19180.000	19920.000	18440.000	19550.000	18980.000	17950.000
11. 18:10:54:58	21600.000	19460.000	20970.000	21550.000	20280.000	21080.000	20690.000	19600.000
12. 18:10:55:52	23570.000	21250.000	22830.000	23530.000	22120.000	22910.000	22500.000	21430.000
13. 18:10:56:47	25660.000	23170.000	24890.000	25670.000	23920.000	25070.000	24410.000	23360.000
14. 18:10:57:42	27570.000	24980.000	26800.000	27880.000	25770.000	26820.000	26190.000	25140.000
15. 18:10:58:44	29430.000	26710.000	28750.000	29910.000	27620.000	28540.000	27970.000	26870.000
16. 18:10:59:29	31160.000	28560.000	30700.000	32130.000	29380.000	30440.000	29730.000	28780.000
17. 18:11:0:22	32640.000	30250.000	32900.000	34180.000	31160.000	32000.000	31370.000	30660.000
18. 18:11:0:58	33740.000	31830.000	34640.000	36070.000	32630.000	33470.000	32900.000	32570.000
19. 18:11:1:45	34300.000	33640.000	36180.000	37660.000	33880.000	34890.000	34490.000	34560.000
20. 18:11:3:43	34330.000	31010.000	29970.000	36580.000	35200.000	36670.000	32120.000	32040.000
21. 18:11:4:2	34170.000	27370.000	25550.000	35680.000	34760.000	36140.000	30900.000	29740.000
22. 18:11:4:20	32020.000	24530.000	23280.000	33980.000	35200.000	34560.000	30190.000	28420.000
23. 18:11:4:38	29800.000	22840.000	21860.000	32750.000	35540.000	33600.000	29390.000	27710.000
24. 18:11:4:56	20570.000	17650.000	21390.000	23060.000	24200.000	24080.000	23410.000	22050.000
25. 18:11:5:14	19820.000	17390.000	20970.000	22600.000	23140.000	23450.000	22900.000	21740.000
26. 18:11:5:32	19440.000	17360.000	20750.000	22510.000	22840.000	23370.000	22850.000	21520.000
27. 18:11:5:50	19180.000	17390.000	20580.000	22470.000	22700.000	23320.000	22780.000	21400.000
28. 18:11:6:8	16770.000	15360.000	17030.000	18690.000	19420.000	19880.000	18380.000	18210.000
29. 18:11:6:26	16150.000	14720.000	16780.000	17970.000	18240.000	18810.000	17550.000	17680.000
30. 18:11:7:6	12000.000	10940.000	12410.000	12130.000	12470.000	12760.000	12730.000	12170.000
31. 18:11:7:47	7400.000	7020.000	7550.000	7750.000	7200.000	7940.000	7280.000	7760.000
32. 18:11:8:30	7750.000	7730.000	7880.000	8620.000	7780.000	8660.000	7900.000	8220.000

R O D C H A N N E L S

	TIME	CH. 57	CH. 56	CH. 55	CH. 54	CH. 53	CH. 52	CH. 51	CH. 50
1.	18:10:42:58	192.177	102.494	-12.812	-38.435	12.812	153.742	166.553	-102.494
2.	18:10:48:13	307.483	166.553	115.306	-25.624	25.624	333.107	307.483	-217.801
3.	18:10:48:54	563.719	512.472	217.801	12.812	25.624	333.107	358.730	-217.801
4.	18:10:49:34	781.520	743.084	307.483	51.247	12.812	307.483	384.354	-217.801
5.	18:10:50:15	948.073	960.885	397.166	115.306	12.812	294.671	422.789	-230.612
6.	18:10:51:1	1101.814	1165.874	474.036	204.989	38.435	281.859	474.036	-29.046
7.	18:10:51:48	1217.121	1319.615	563.719	307.483	38.435	269.048	512.472	-294.671
8.	18:10:52:30	1319.615	1447.733	640.590	409.978	38.435	255.236	538.095	-320.295
9.	18:10:53:12	1409.298	1528.663	743.084	538.095	38.435	217.801	563.719	-307.483
10.	18:10:54:7	1486.168	1716.781	845.579	679.025	25.624	166.553	563.719	-294.671
11.	18:10:54:58	1511.792	1793.652	909.637	781.520	25.624	128.118	602.154	-294.671
12.	18:10:55:47	1537.416	1870.522	973.697	858.390	0.0	76.871	602.154	-320.295
13.	18:10:56:47	1473.357	1934.581	1012.132	922.449	-51.247	25.624	614.966	-345.918
14.	18:10:57:42	1332.427	1896.146	1050.567	986.508	-153.742	0.0	640.590	-345.918
15.	18:10:58:44	1332.427	1896.146	1089.003	1063.379	-243.424	-89.683	640.590	-333.107
16.	18:10:59:29	1076.191	1768.028	1140.250	1153.062	-294.671	-204.989	627.778	-307.483
17.	18:11:0:22	589.343	1460.545	1153.062	1165.874	-307.483	-307.483	602.154	-256.236
18.	18:11:1:45	64.059	1268.368	1140.250	1101.814	-256.236	-294.671	589.343	-230.612
19.	18:11:1:45	64.059	1024.944	1140.250	909.637	-102.494	-320.295	486.848	38.435
20.	18:11:3:43	-525.284	602.154	1383.674	666.213	-1089.003	-948.073	461.225	38.435
21.	18:11:4:20	-1601.475	-64.059	2139.570	948.073	-1012.132	-884.014	333.107	1537.416
22.	18:11:4:38	-1793.652	-832.767	2792.972	935.261	-845.579	-730.272	281.859	1857.711
23.	18:11:4:56	-1793.652	-269.048	2075.511	602.154	-1768.028	-1857.711	973.697	1973.017
24.	18:11:5:14	-1844.899	-397.166	1857.711	679.025	-1678.345	-1832.087	1191.497	422.789
25.	18:11:5:32	-1857.711	-461.225	1883.334	717.461	-1601.475	-1742.405	1140.250	-25.624
26.	18:11:5:50	-1819.275	-512.472	1908.958	743.084	-1563.039	-1691.157	1101.814	0.0
27.	18:11:6:8	-1498.980	-525.284	1934.581	755.896	-1524.604	-1655.534	1076.191	12.812
28.	18:11:6:26	-1511.792	-217.801	1178.685	576.531	-1665.534	-1755.216	1396.686	-345.918
29.	18:11:7:6	-1165.874	-25.624	1140.250	602.154	-1588.663	-1665.534	1370.862	-345.918
30.	18:11:7:47	-781.520	89.683	614.966	281.859	-1293.991	-1306.803	1447.733	-614.966
31.	18:11:8:30	-794.331	51.247	461.225	230.612	-845.579	-805.579	1063.379	-512.472
32.	18:11:8:30	-794.331	51.247	486.848	230.612	-845.579	-845.579	1089.003	-512.472

AVERAGE LOAD

1.	2062.500
2.	4196.250
3.	6158.750
4.	7927.500
5.	9612.500
6.	11692.500
7.	13362.500
8.	15173.750
9.	17078.750
10.	18958.750
11.	20653.750
12.	22517.500
13.	24543.750
14.	26393.750
15.	28225.000
16.	30110.000
17.	31868.750
18.	33481.250
19.	34950.000
20.	33377.500
21.	31788.750
22.	30272.500
23.	29186.250
24.	22051.250
25.	21501.250
26.	21330.000
27.	21227.500
28.	17967.500
29.	17237.500
30.	12201.250
31.	7487.500
32.	8067.500

3.3.2 SPECIMEN #18

TEST NO. 51
CORRUGATED LINER WITH 500 PSI BACKPACKING
1:1.5 LOADING RATIO
TESTED 23 AUGUST 1978

REACTION FRAME TEST SET-UP

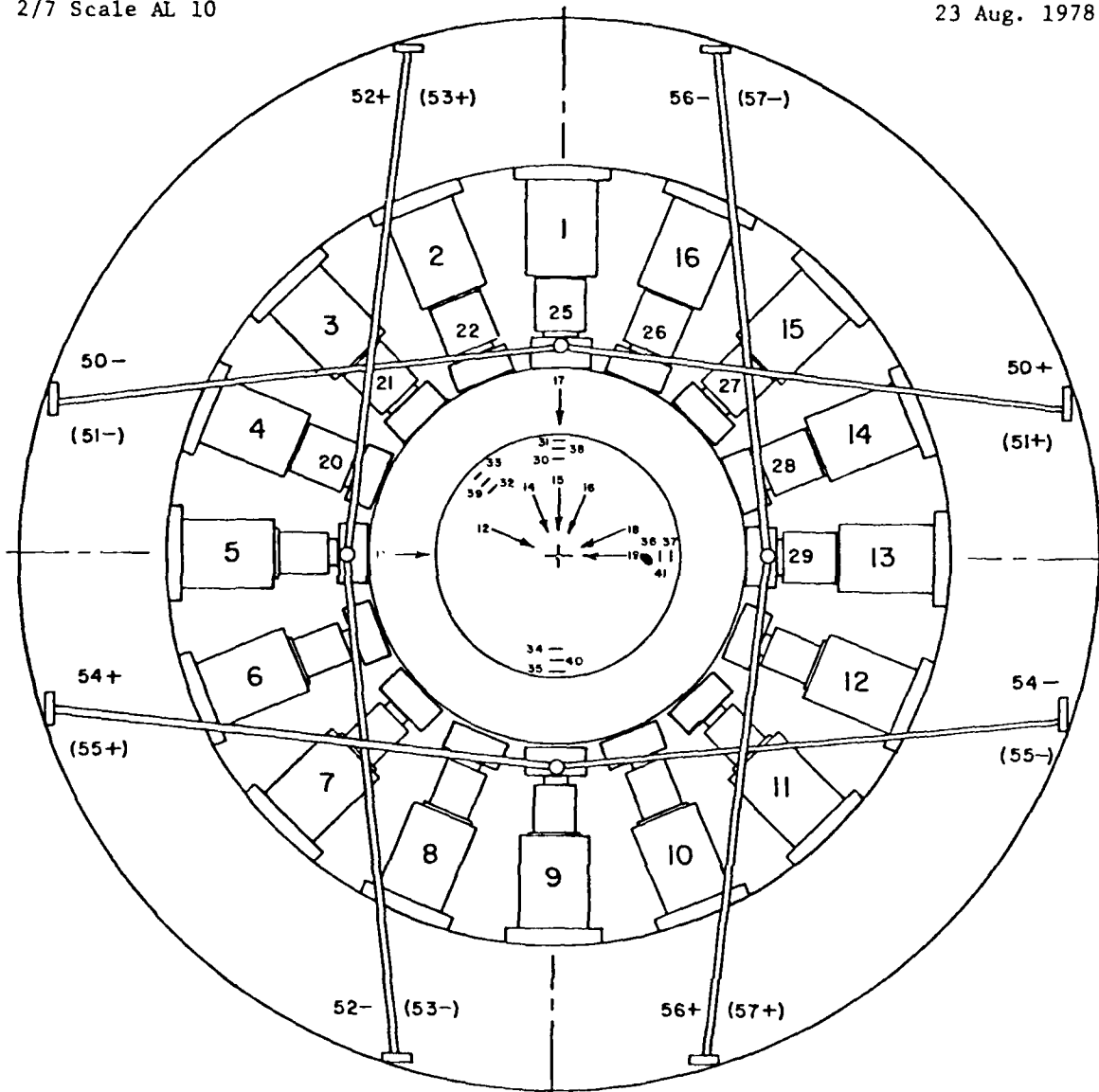
Specimen #18

2/7 Scale AL 10

Test #51

1:1.5 Load

23 Aug. 1978



CH 12, 14-16, 18 and 19 Load axis I.D., CH 13, 17 Load axis O.D. (Research 4040).

CH 20-22, 25-29 Axial load (Transducers, Inc. Model 693-300K).

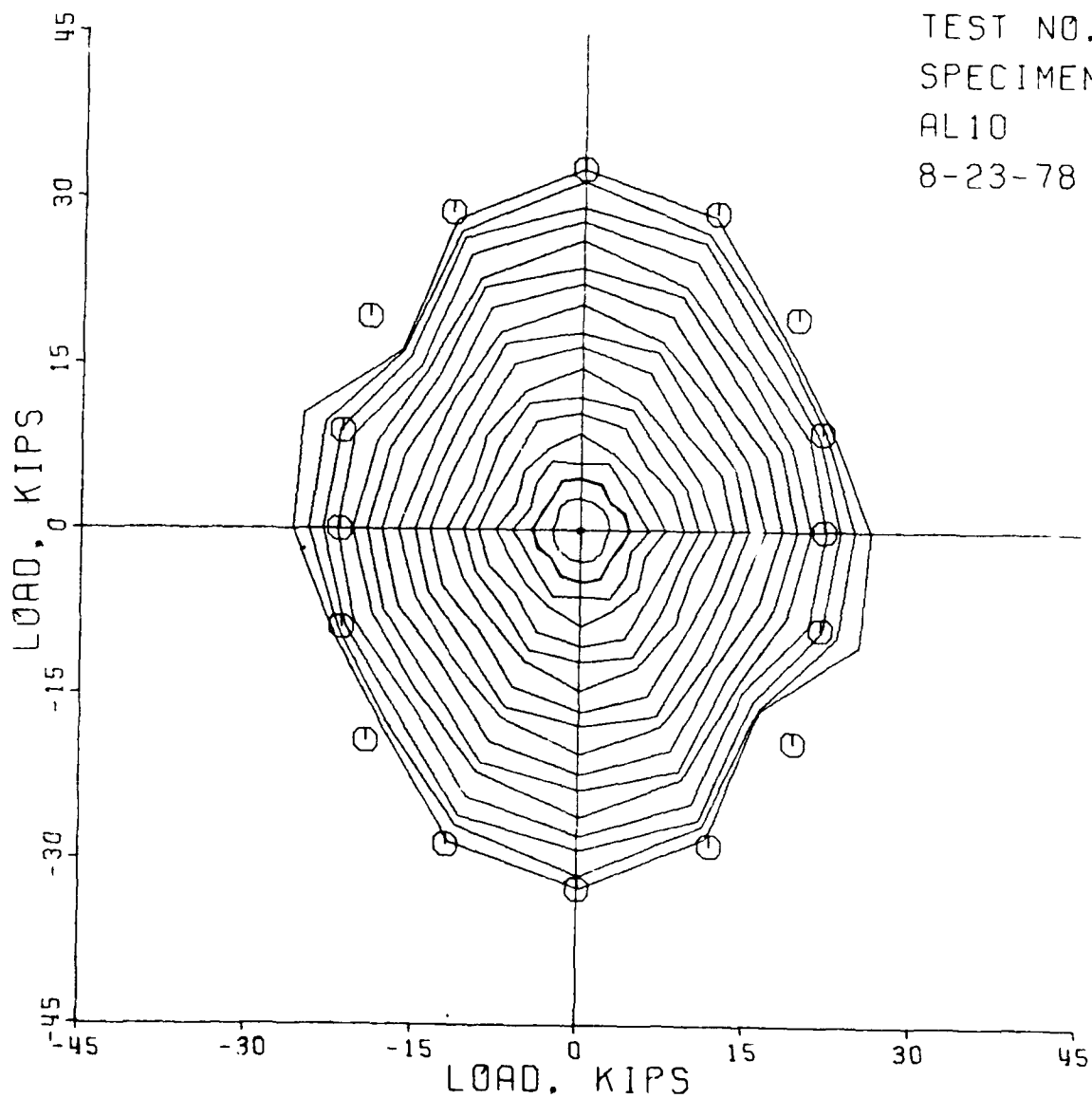
CH 30, 32, 34 and 36 (Ailtech SG 129-6S) are mounted on crest. (Min. I.D.)

CH 31, 33, 35 and 37 (Ailtech SG 129-6S) are mounted in valley. (Max. I.D.)

CH 38, 39, 40 and 41 (Ailtech SG 129-6S) are mounted midway $5 \frac{7}{8}$ " from top.

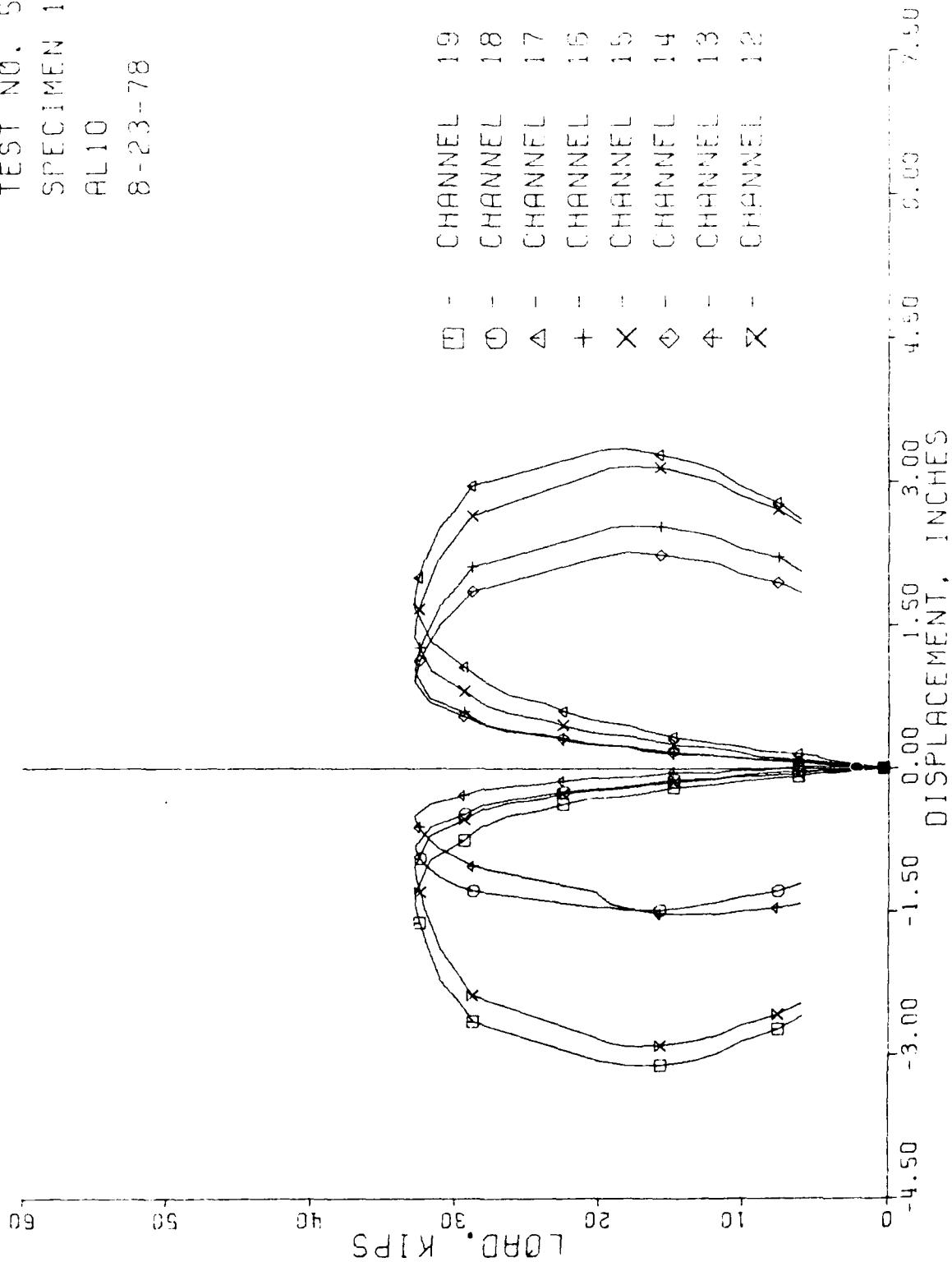
CH 50-57 (Ailtech SG 129-6S) Polarity indicates rod under tension.

Lower rod shown (XX).

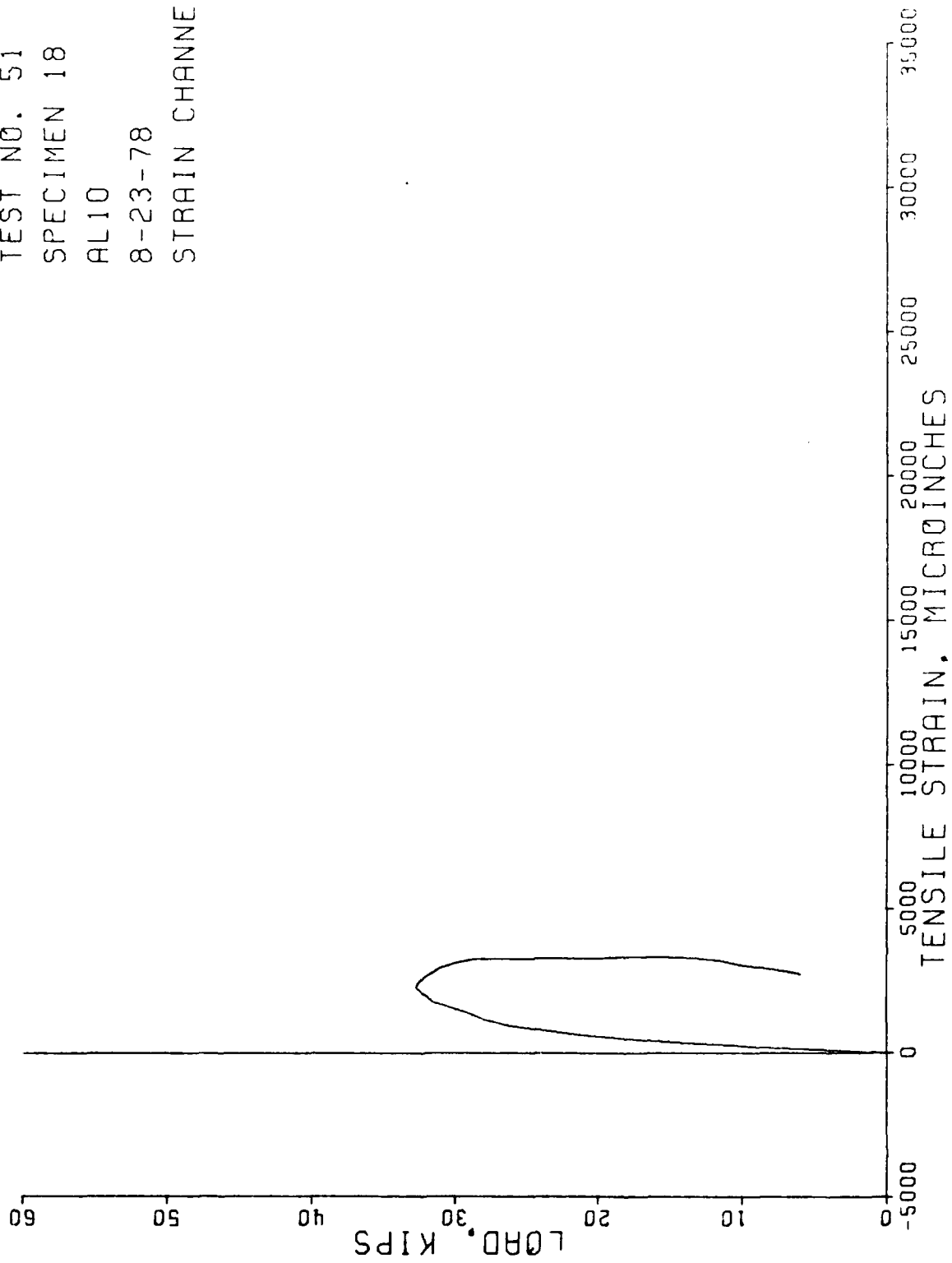


TEST NO. 51
SPECIMEN 18
AL10
8-23-78

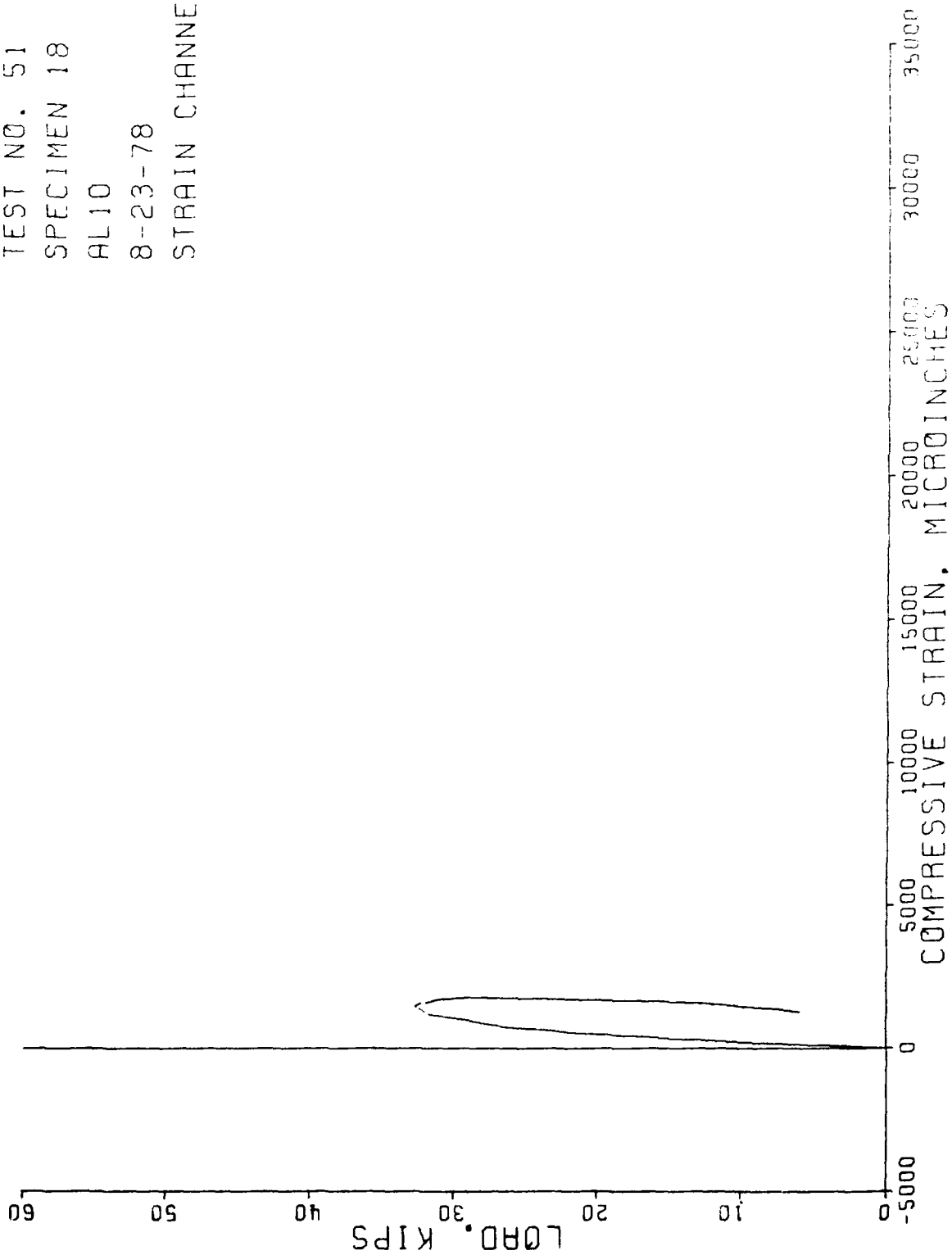
TEST NO. 51
SPECIMEN 18
AL10
8-23-78



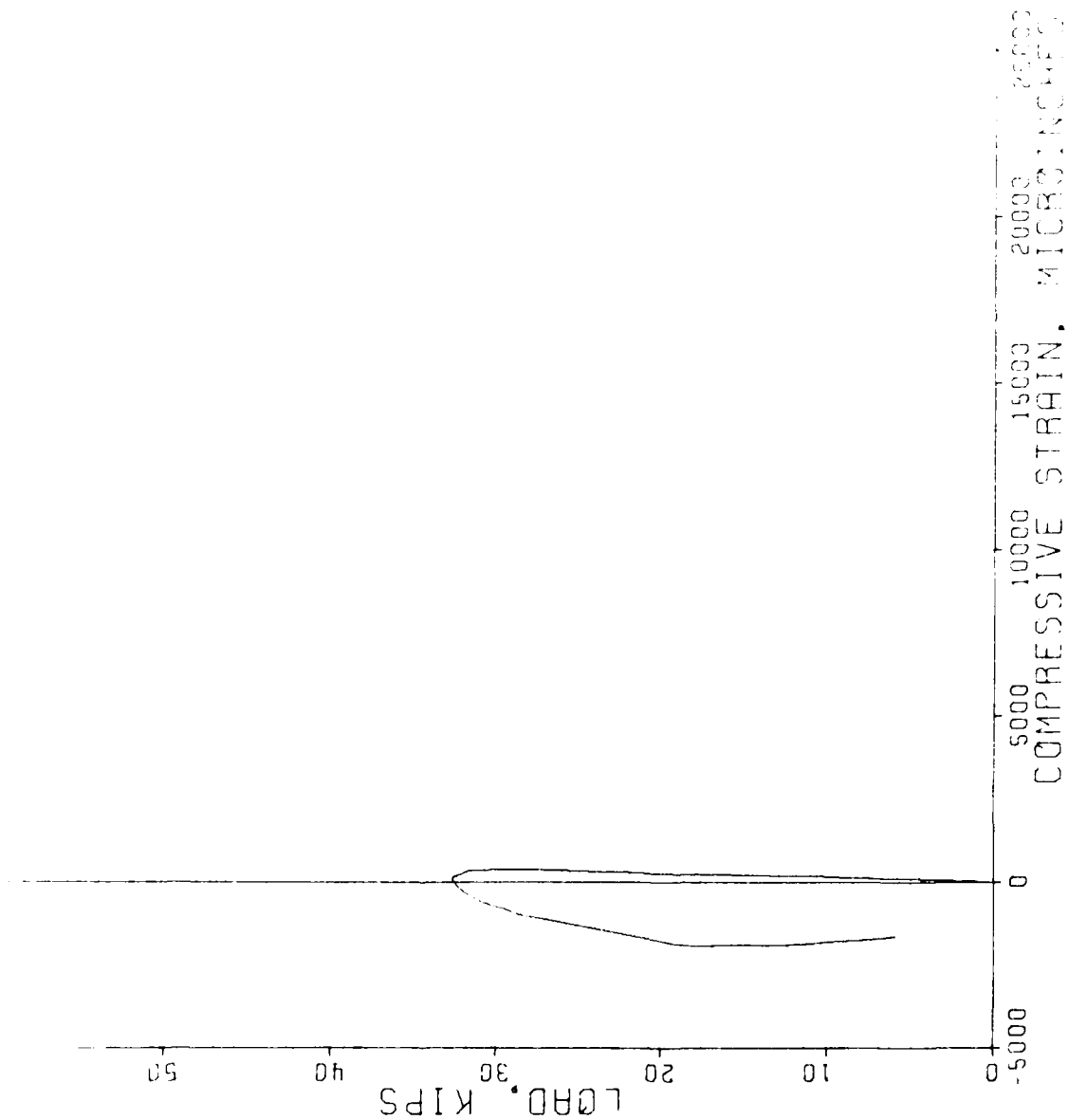
TEST NO. 51
SPECIMEN 18
AL10
8-23-78
STRAIN CHANNEL 30



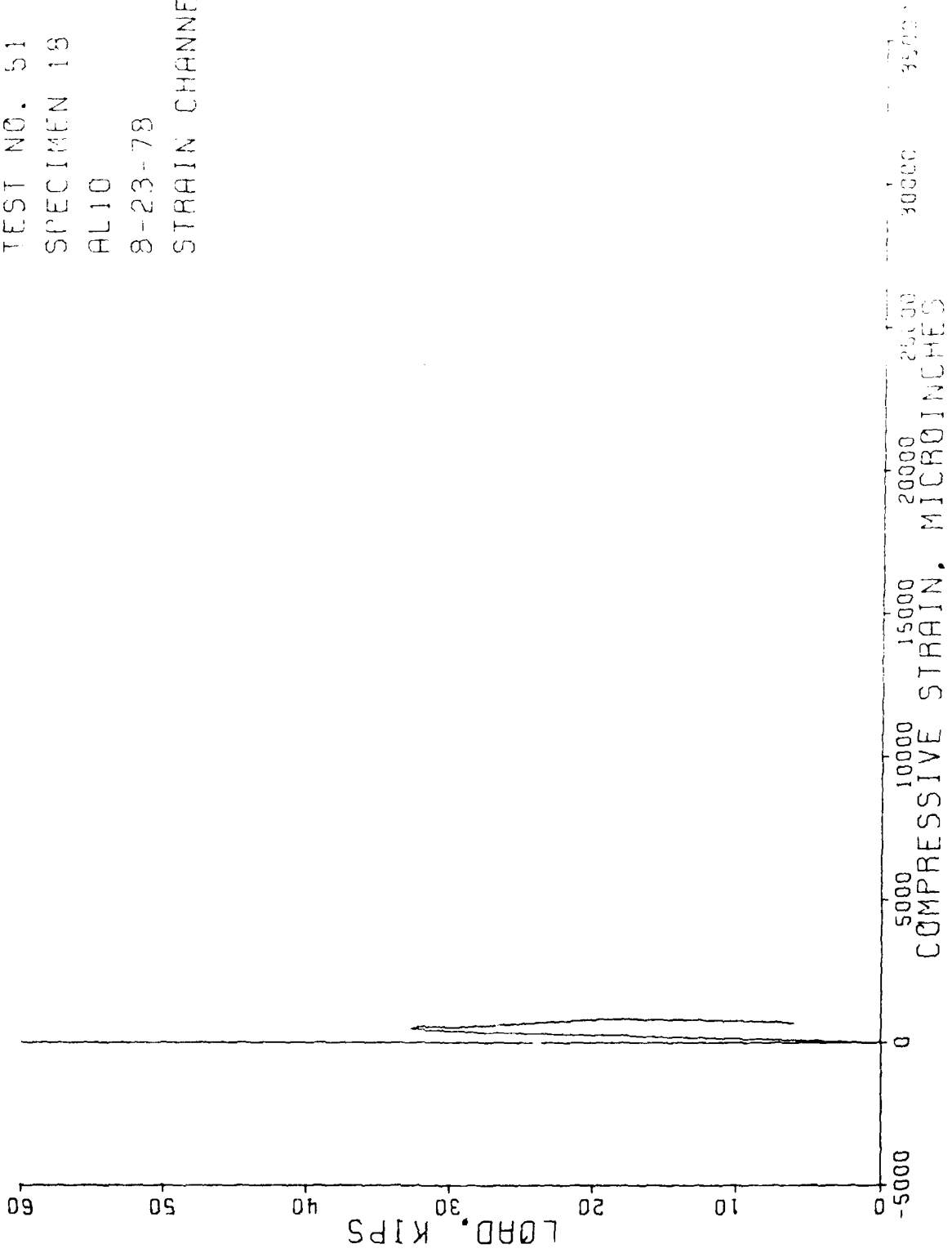
TEST NO. 51
SPECIMEN 18
AL10
8-23-78
STRAIN CHANNEL 31



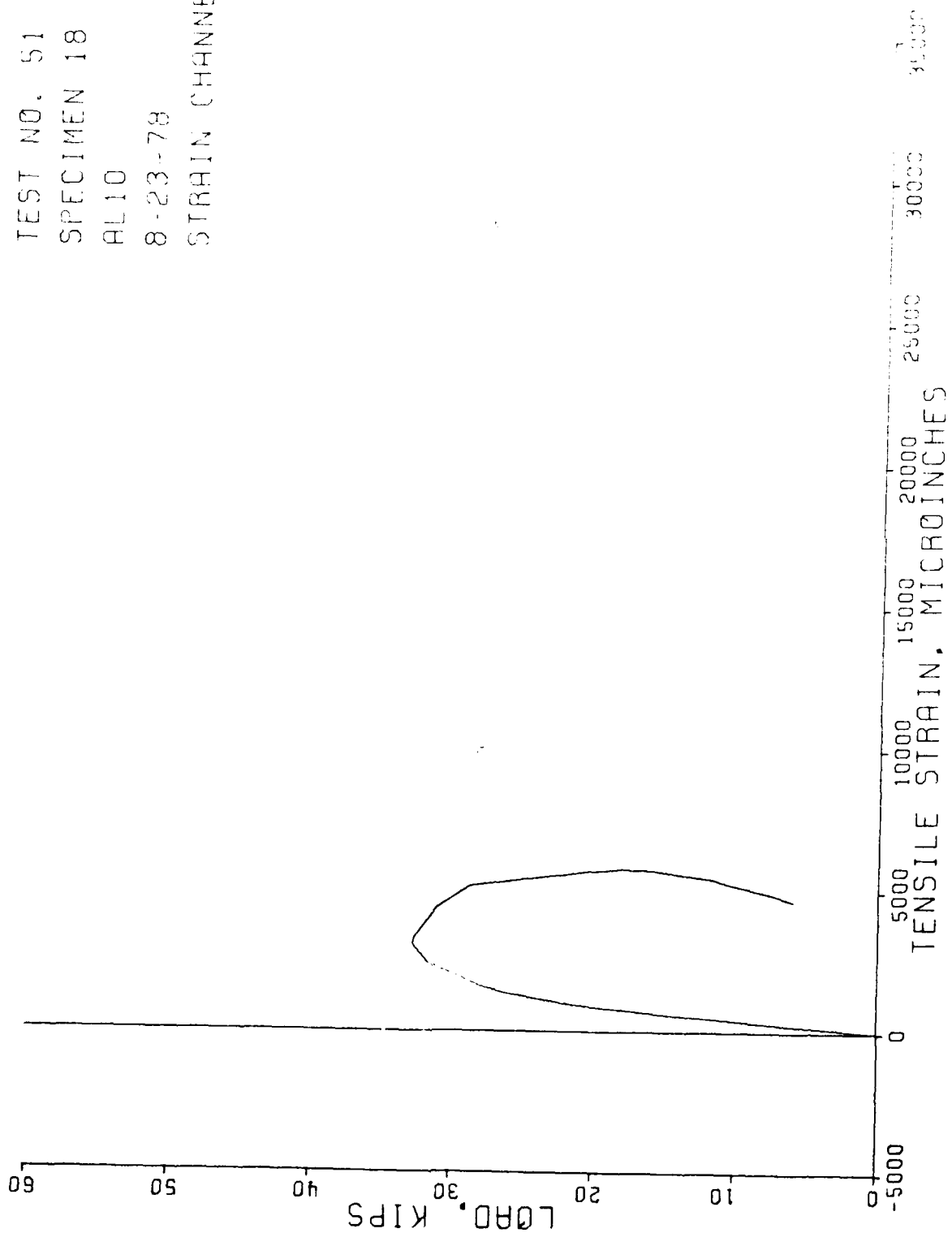
TEST NO. 51
 SPECIMEN 18
 PL 10
 8-23-78
 STRAIN CHANNEL 92



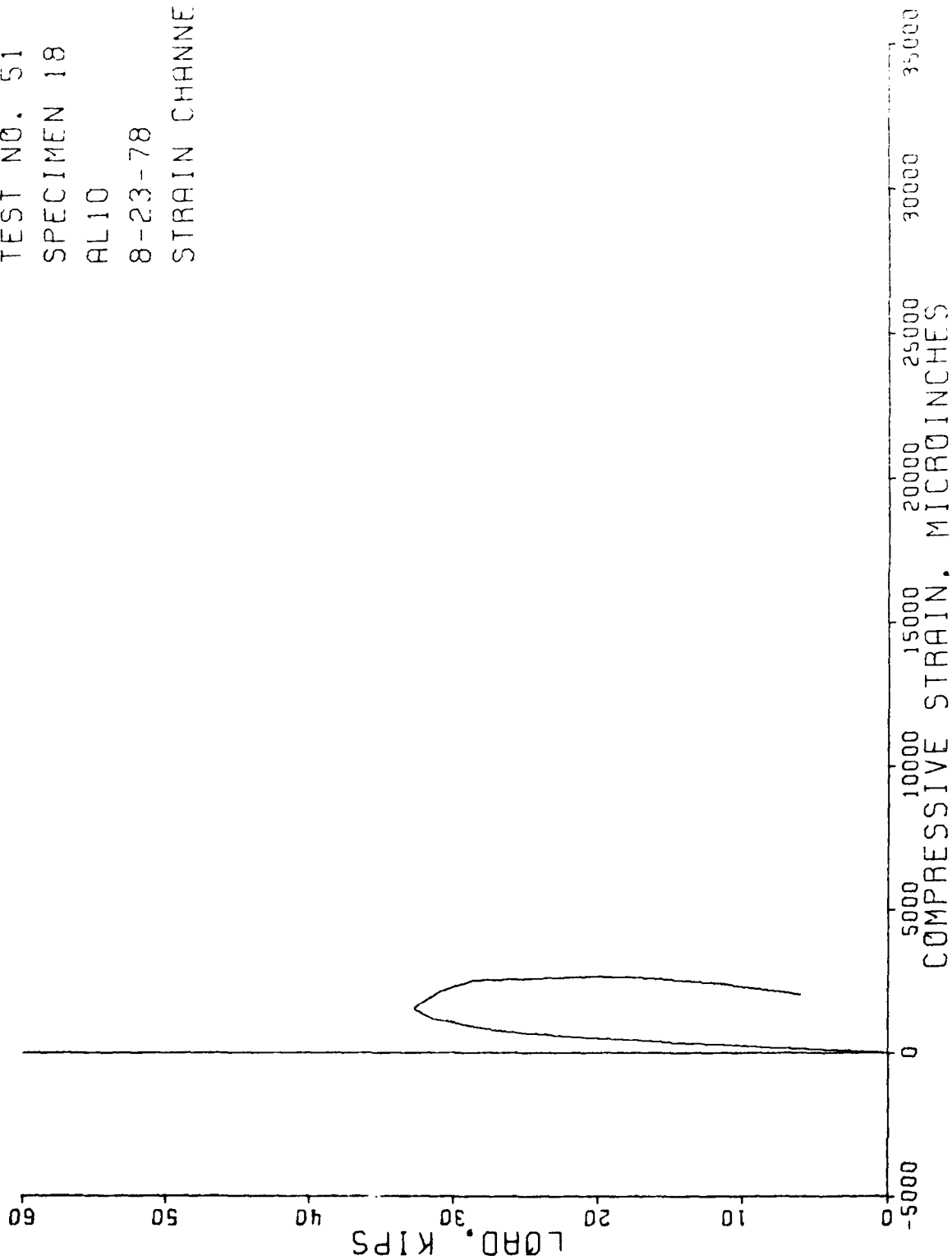
TEST NO. 51
SPECIMEN 18
AL10
8-23-78
STRAIN CHANNEL 33



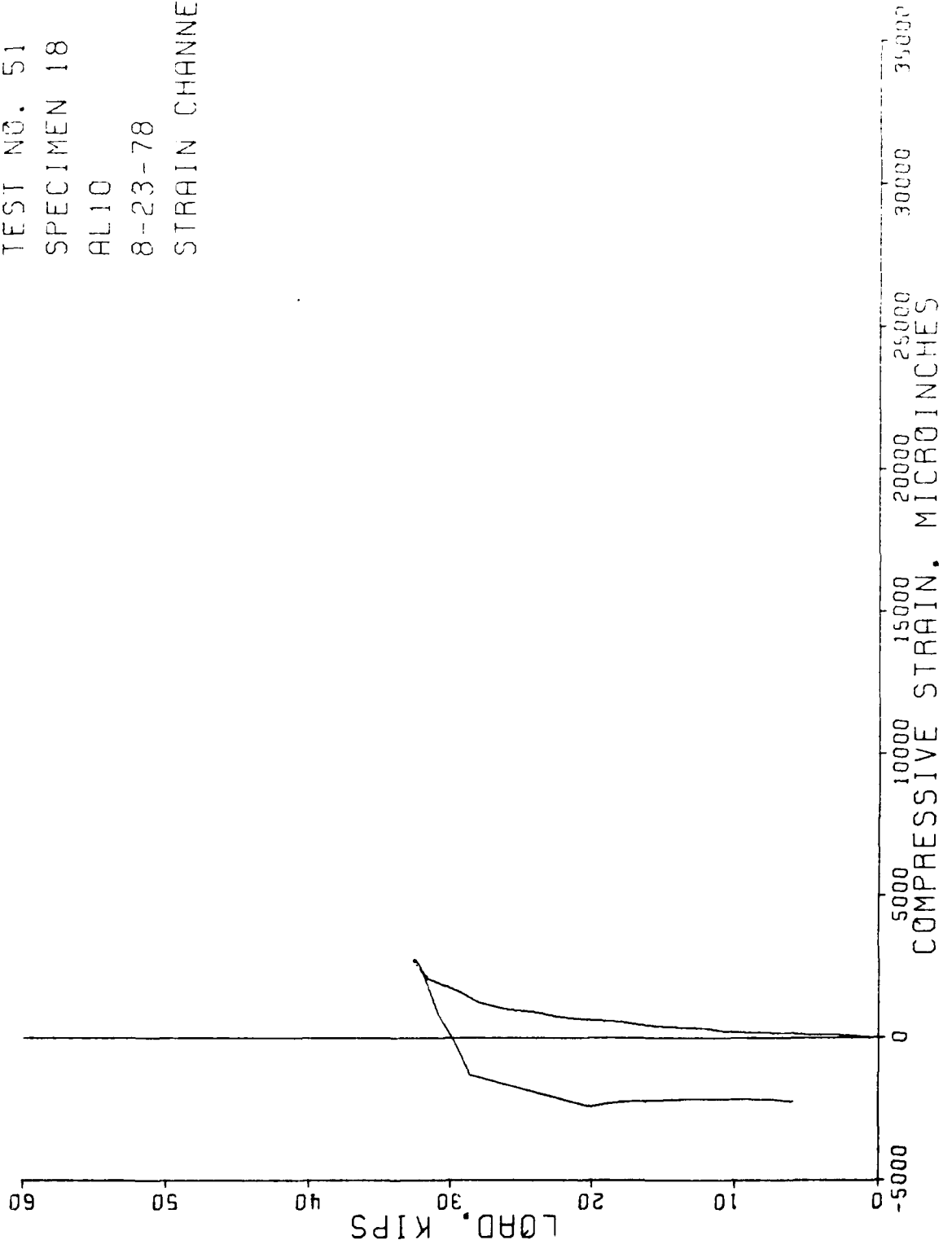
TEST NO. 51
SPECIMEN 18
AL10
8-23-78
STRAIN CHANNEL 34



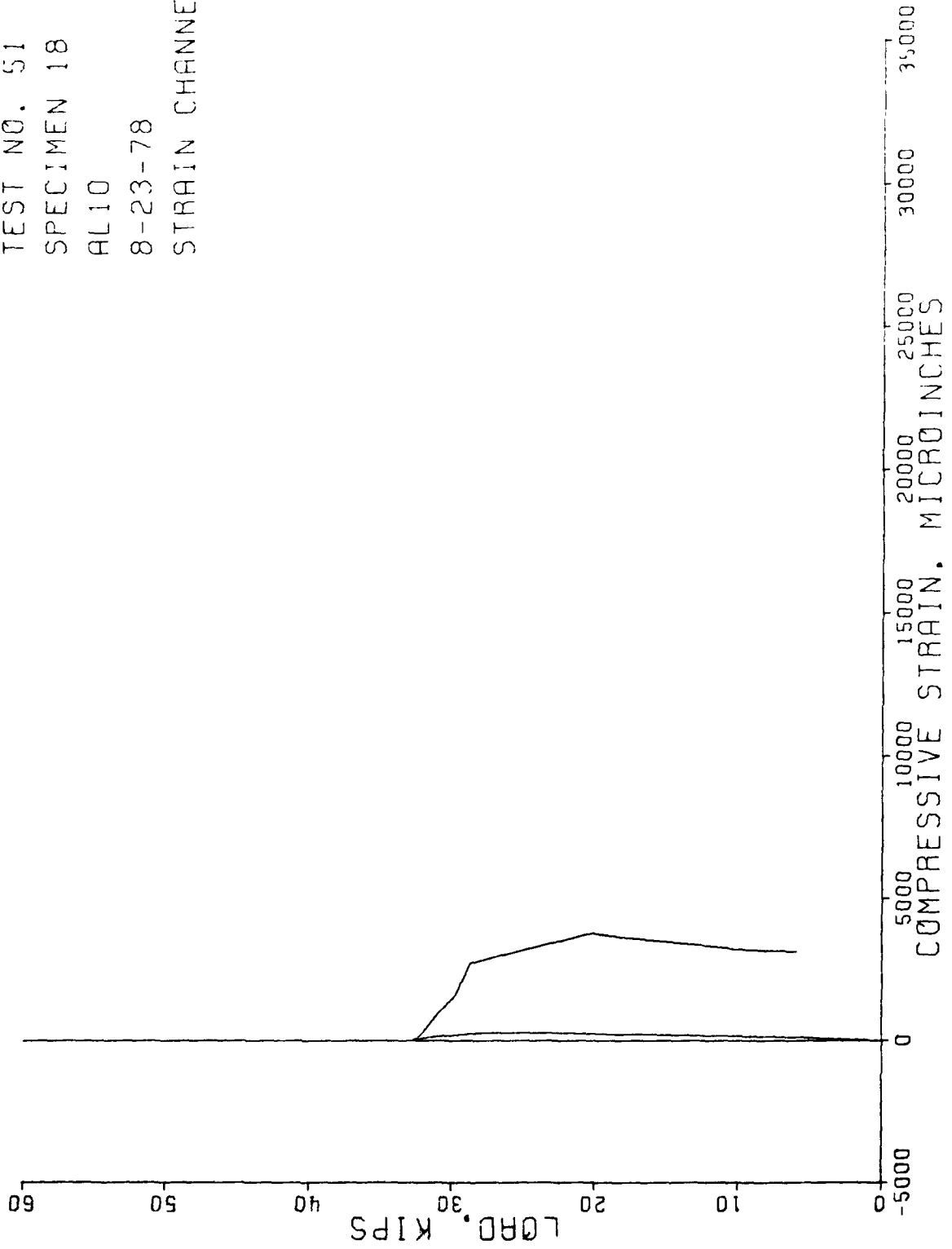
TEST NO. 51
SPECIMEN 18
AL10
8-23-78
STRAIN CHANNEL 35



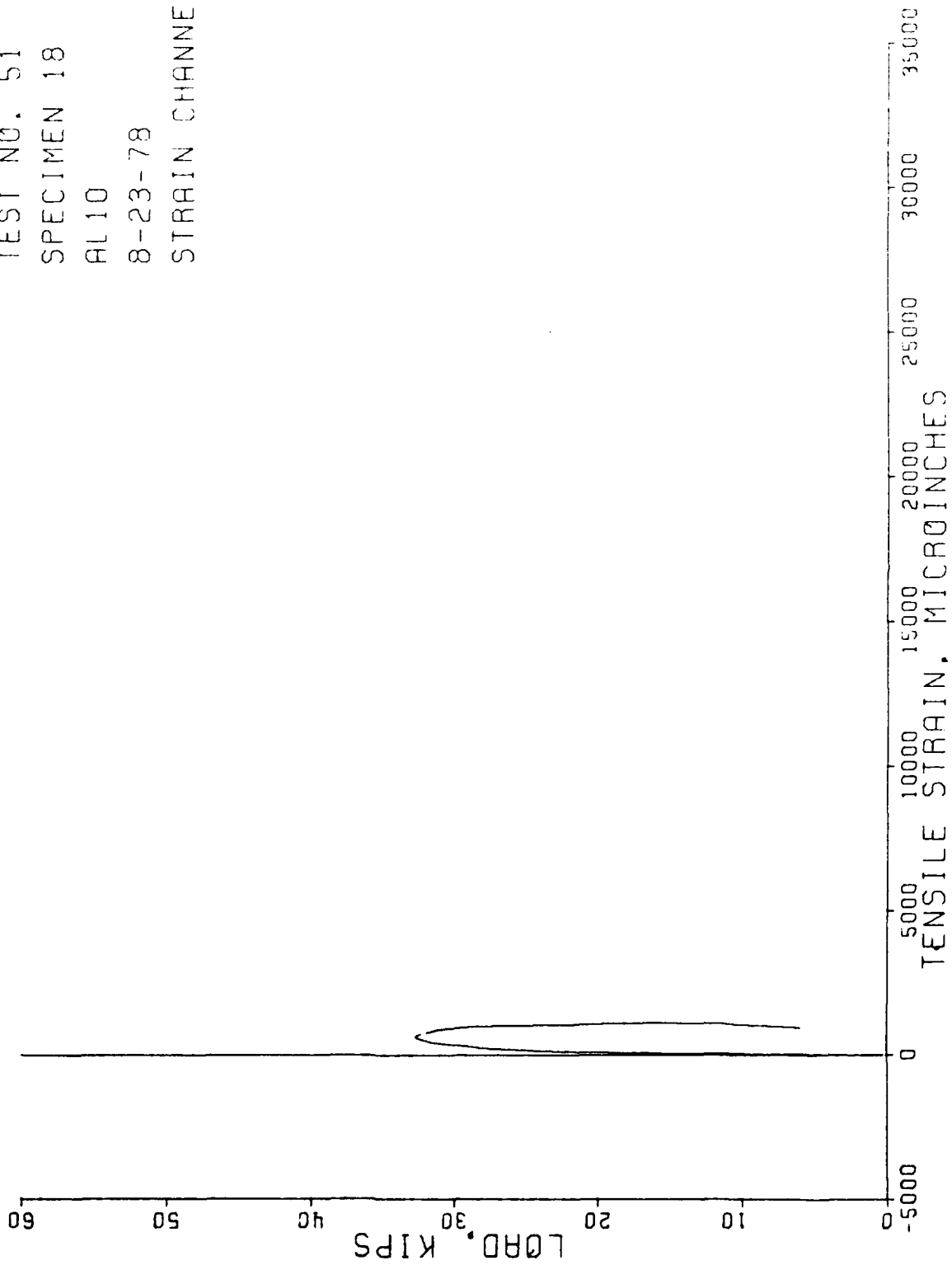
TEST NO. 51
SPECIMEN 18
AL10
8-23-78
STRAIN CHANNEL 36



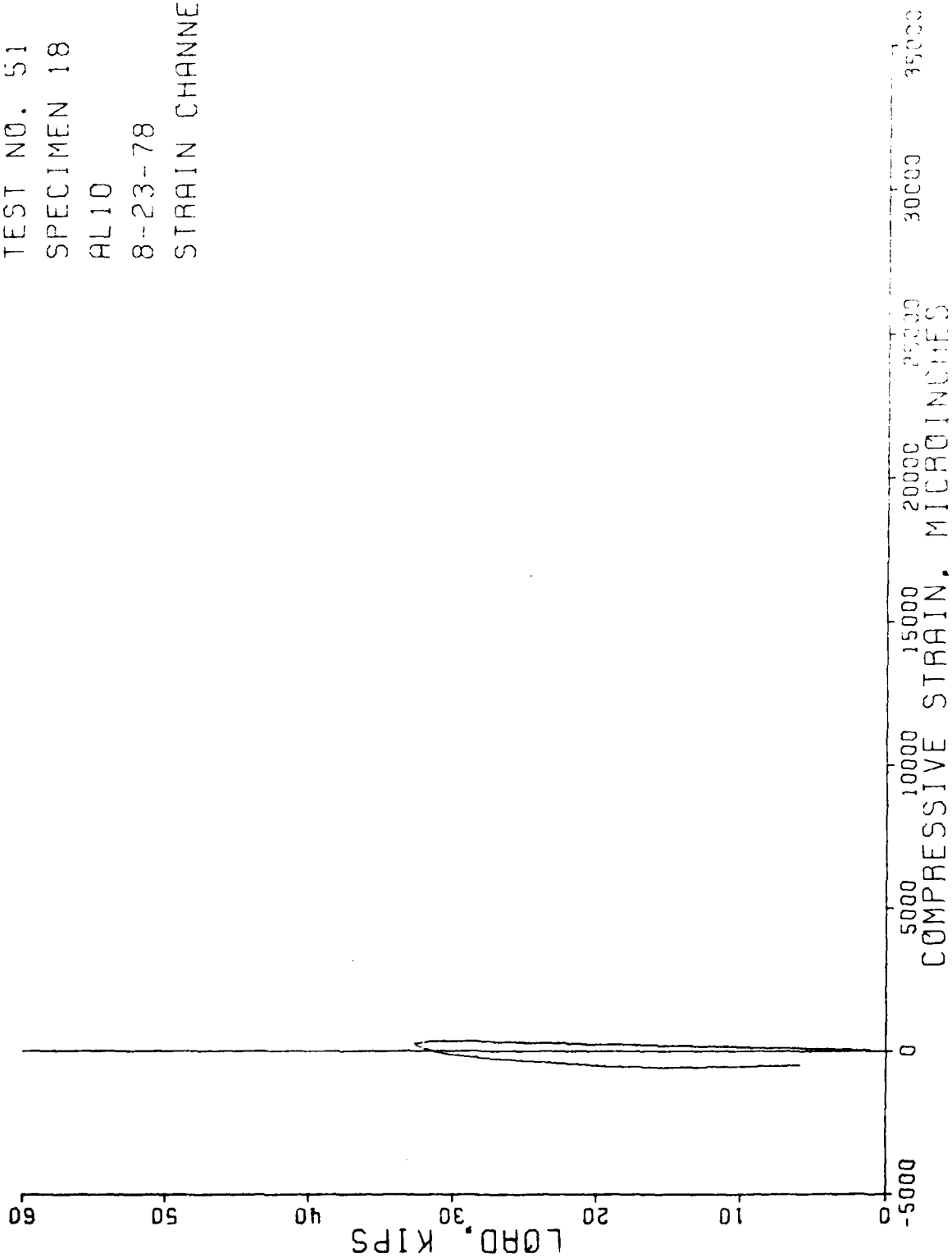
TEST NO. 51
SPECIMEN 18
AL10
8-23-78
STRAIN CHANNEL 37



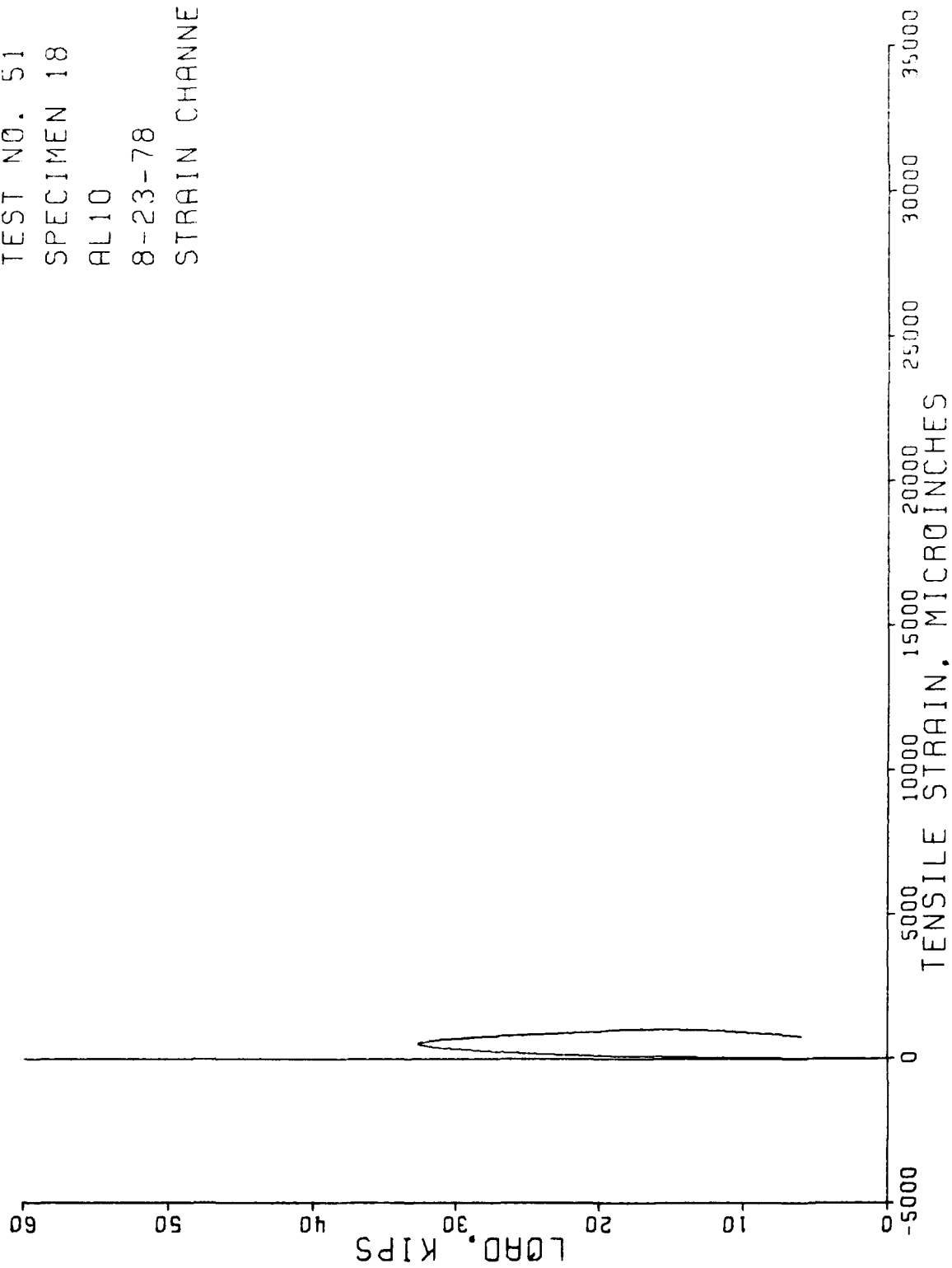
TEST NO. 51
SPECIMEN 18
AL 10
8-23-78
STRAIN CHANNEL 38



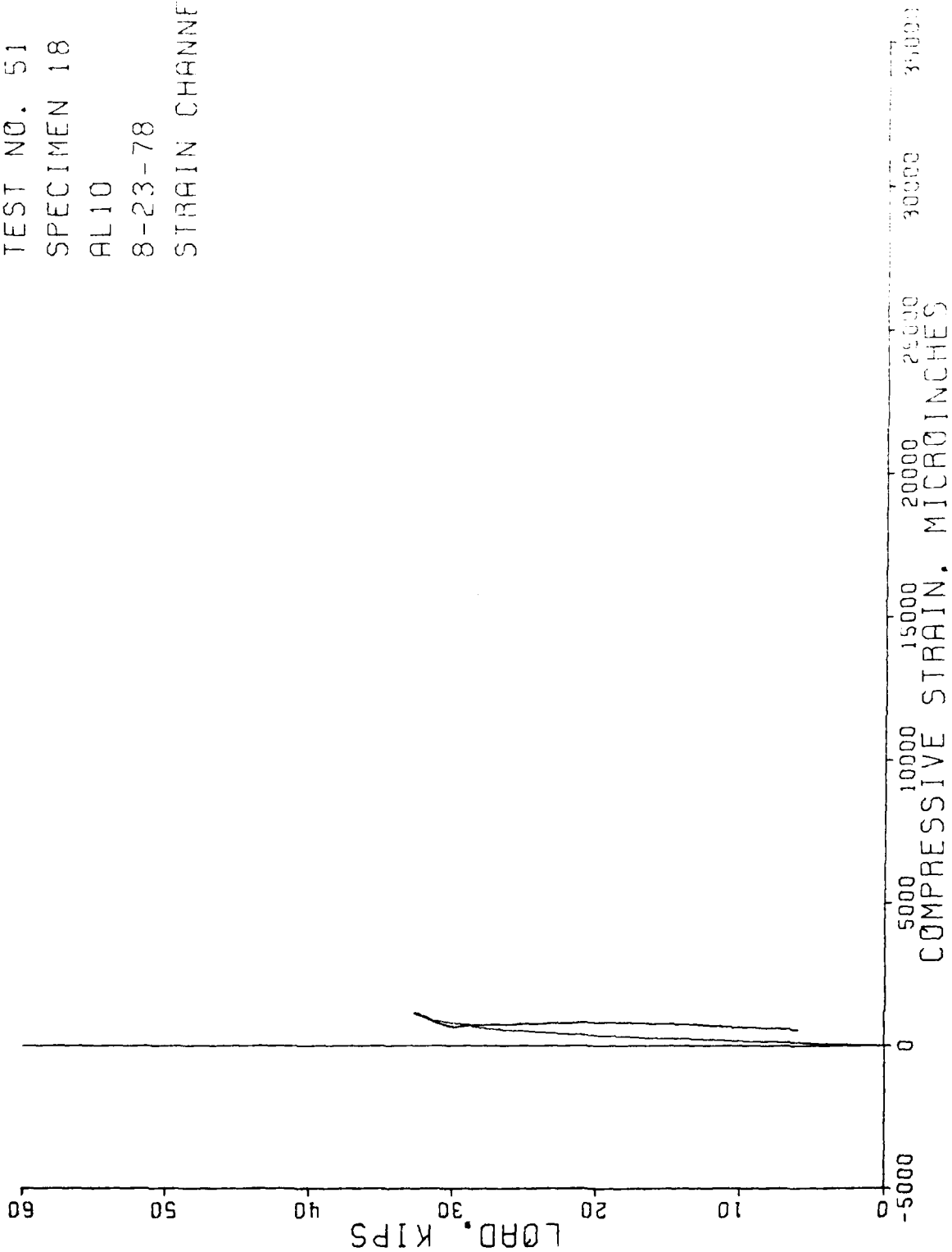
TEST NO. 51
SPECIMEN 18
AL10
8-23-78
STRAIN CHANNEL 39



TEST NO. 51
SPECIMEN 18
AL10
8-23-78
STRAIN CHANNEL 40



TEST NO. 51
SPECIMEN 18
AL10
8-23-78
STRAIN CHANNEL 41



TEST NO. 51 SPECIMEN 18 AL10 8-23-78

NUMBER OF INCREMENTS= 34
NUMBER OF CHANNELS= 36
NUMBER OF STRAIN CHANNELS= 12
NUMBER OF DISPLACEMENT CHANNELS= 8
NUMBER OF LOAD CHANNELS= 8
NUMBER OF PRESSURE CHANNELS= 0
NUMBER OF RODS= 8

CHANNEL ZEROSHIFT

57	0.0
56	0.0
55	0.0
54	0.0
53	0.0
52	0.0
51	0.0
50	0.0
49	0.0
48	0.0
47	0.0
46	0.0
45	0.0
44	0.0
43	0.0
42	0.0
41	0.0
40	0.0
39	0.0
38	0.0
37	0.0
36	0.0
35	0.0
34	0.0
33	0.0
32	0.0
31	0.0
30	0.0
29	0.0
28	0.0
27	0.0
26	0.0
25	0.0
24	0.0
23	0.0
22	0.0
21	0.0
20	0.0
19	0.0
18	0.0
17	0.0
16	0.0
15	0.0
14	0.0
13	0.0
12	0.0

STRAIN CHANNEL	CALIBRATION
41	1.000
40	1.000
39	1.000
38	1.000
37	1.000
36	1.000

35	1.000
34	1.000
33	1.000
32	1.000
31	1.000
30	1.000
DISPLACEMENT CHANNEL	
19	0.001
18	0.001
17	0.001
16	0.002
15	0.002
14	0.002
13	0.002
12	0.002
LOAD CHANNEL	
29	10.000
28	10.000
27	10.000
26	10.000
25	10.000
22	10.000
21	10.000
20	10.000
ROD CHANNEL	
57	1.000
56	1.000
55	1.000
54	1.000
53	1.000
52	1.000
51	1.000
50	1.000

STRAIN CHANNELS

TIME	CH.41	CH.40	CH.39	CH.38	CH.37	CH.36	CH.35	CH.34
1. 23:10:11:57	2.000	-1.000	-2.000	-3.000	-3.000	-1.000	-1.000	2.000
2. 23:10:21:3	-58.000	18.000	-46.000	10.000	-51.000	-88.000	-73.000	126.000
3. 23:10:22:21	-84.000	28.000	-76.000	18.000	-97.000	-91.000	-121.000	207.000
4. 23:10:28:1	-82.000	29.000	-73.000	18.000	-95.000	-92.000	-122.000	209.000
5. 23:10:30:49	-120.000	28.000	-92.000	16.000	-126.000	-143.000	-156.000	251.000
6. 23:10:31:0	-143.000	46.000	-109.000	31.000	-143.000	-180.000	-208.000	352.000
7. 23:10:31:55	-180.000	59.000	-139.000	42.000	-172.000	-236.000	-265.000	445.000
8. 23:10:32:55	-215.000	62.000	-154.000	43.000	-179.000	-314.000	-300.000	495.000
9. 23:10:33:55	-243.000	81.000	-175.000	61.000	-196.000	-364.000	-351.000	596.000
10. 23:10:34:55	-285.000	103.000	-201.000	77.000	-219.000	-443.000	-414.000	710.000
11. 23:10:35:55	-330.000	110.000	-215.000	81.000	-229.000	-541.000	-455.000	772.000
12. 23:10:36:55	-368.000	134.000	-236.000	104.000	-247.000	-617.000	-513.000	888.000
13. 23:10:37:55	-420.000	161.000	-265.000	133.000	-272.000	-717.000	-587.000	1034.000
14. 23:10:38:55	-485.000	182.000	-283.000	155.000	-276.000	-871.000	-649.000	1151.000
15. 23:10:39:55	-542.000	219.000	-300.000	196.000	-281.000	-1006.000	-731.000	1333.000
16. 23:10:40:55	-631.000	264.000	-325.000	257.000	-276.000	-1228.000	-848.000	1593.000
17. 23:10:41:55	-751.000	313.000	-329.000	329.000	-217.000	-1580.000	-970.000	1868.000
18. 23:10:42:55	-905.000	400.000	-325.000	451.000	-117.000	-2079.000	-1189.000	2374.000
19. 23:10:43:55	-1127.000	506.000	-252.000	616.000	-16.000	-2759.000	-1495.000	3036.000
20. 23:10:44:11	-1150.000	545.000	-200.000	668.000	-32.000	-2773.000	-1588.000	3246.000
21. 23:10:44:27	-1124.000	577.000	-145.000	716.000	-106.000	-2630.000	-1677.000	3449.000
22. 23:10:44:43	-1054.000	601.000	-77.000	766.000	-270.000	-2273.000	-1785.000	3670.000
23. 23:10:45:12	-762.000	673.000	67.000	898.000	-935.000	-847.000	-2120.000	4342.000
24. 23:10:45:28	-624.000	706.000	144.000	954.000	-1549.000	146.000	-2324.000	4744.000
25. 23:10:45:44	-699.000	744.000	220.000	997.000	-2722.000	1306.000	-2518.000	5126.000
26. 23:10:46:12	-793.000	950.000	510.000	1071.000	-3779.000	2433.000	-2663.000	5670.000
27. 23:10:46:28	-794.000	994.000	545.000	1092.000	-3688.000	2321.000	-2645.000	5705.000
28. 23:10:46:47	-788.000	1031.000	561.000	1106.000	-3622.000	2251.000	-2641.000	5743.000
29. 23:10:47:38	-746.000	1035.000	563.000	1123.000	-3510.000	2209.000	-2581.000	5689.000
30. 23:10:48:39	-713.000	1004.000	566.000	1110.000	-3379.000	2142.000	-2487.000	544.000
31. 23:10:49:39	-680.000	976.000	559.000	1091.000	-3303.000	2152.000	-2417.000	5399.000
32. 23:10:50:39	-636.000	924.000	542.000	1054.000	-3211.000	2160.000	-2304.000	5196.000
33. 23:10:51:39	-598.000	846.000	525.000	1004.000	-3145.000	2178.000	-2162.000	4897.000
34. 23:10:52:39	-561.000	777.000	495.000	956.000	-3127.000	2259.000	-2037.000	4647.000

STRAIN CHANNELS

	TIME	CH. 33	CH. 32	CH. 31	CH. 30	CH.
1.	23:10:11:57	1.000	-4.000	-2.000	-5.000	
2.	23:10:21:3	-44.000	-58.000	-63.000	69.000	
3.	23:10:22:21	-67.000	-100.000	-103.000	116.000	
4.	23:10:28:1	-61.000	-98.000	-104.000	120.000	
5.	23:10:28:49	-105.000	-100.000	-136.000	140.000	
6.	23:10:31:0	-121.000	-125.000	-182.000	207.000	
7.	23:10:31:55	-150.000	-163.000	-236.000	268.000	
8.	23:10:32:55	-184.000	-164.000	-271.000	299.000	
9.	23:10:33:55	-202.000	-193.000	-325.000	375.000	
10.	23:10:34:55	-229.000	-228.000	-391.000	456.000	
11.	23:10:35:55	-267.000	-224.000	-436.000	498.000	
12.	23:10:36:55	-287.000	-251.000	-498.000	591.000	
13.	23:10:37:55	-302.000	-298.000	-577.000	709.000	
14.	23:10:38:55	-333.000	-309.000	-646.000	807.000	
15.	23:10:39:55	-343.000	-341.000	-735.000	961.000	
16.	23:10:40:55	-356.000	-383.000	-864.000	1174.000	
17.	23:10:41:55	-388.000	-363.000	-995.000	1422.000	
18.	23:10:42:55	-413.000	-355.000	-1180.000	1800.000	
19.	23:10:43:55	-490.000	-120.000	-1418.000	2274.000	
20.	23:10:44:11	-512.000	8.000	-1481.000	2411.000	
21.	23:10:44:27	-532.000	144.000	-1536.000	2538.000	
22.	23:10:44:43	-549.000	299.000	-1586.000	2669.000	
23.	23:10:45:12	-547.000	607.000	-1705.000	3005.000	
24.	23:10:45:28	-536.000	775.000	-1762.000	3173.000	
25.	23:10:45:44	-552.000	963.000	-1786.000	3230.000	
26.	23:10:46:12	-789.000	1774.000	-1669.000	3309.000	
27.	23:10:46:28	-820.000	1876.000	-1651.000	3335.000	
28.	23:10:46:47	-834.000	1928.000	-1639.000	3347.000	
29.	23:10:47:38	-812.000	1910.000	-1620.000	3362.000	
30.	23:10:48:39	-797.000	1897.000	-1571.000	3291.000	
31.	23:10:49:39	-778.000	1867.000	-1524.000	3215.000	
32.	23:10:50:39	-742.000	1794.000	-1439.000	3077.000	
33.	23:10:51:39	-716.000	1737.000	-1341.000	2899.000	
34.	23:10:52:39	-672.000	1633.000	-1257.000	2745.000	

AD-A086 210

MERRITT CASES INC REDLANDS CA F/8 13/13
CONTINUATION OF STATIC TESTS OF SEGMENTS OF TUNNEL LININGS. VOL--ETC(1)
JUN 79 H C DAVIS, K B MORRILL, J L MERRITT DNA001-78-C-0037
78-008-T2-VOL-2 DNA-5000F-2 NL

UNCLASSIFIED

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AD-2005-210

DISPLACEMENT CHANNELS

	TIME	CH.19	CH.18	CH.17	CH.16	CH.15	CH.14	CH.13	CH.12
1.	23:10:11:57	0.004	0.001	-0.001	0.004	0.0	-0.002	0.004	0.002
2.	23:10:21:3	-0.040	-0.006	0.062	0.032	0.062	0.038	0.012	-0.030
3.	23:10:22:21	-0.054	-0.026	0.103	0.038	0.064	0.050	0.012	-0.030
4.	23:10:28:1	-0.055	-0.027	0.121	0.062	0.078	0.048	0.012	-0.028
5.	23:10:28:49	-0.084	-0.027	0.148	0.062	0.092	0.078	0.012	-0.060
6.	23:10:31:0	-0.113	-0.055	0.178	0.090	0.122	0.088	-0.020	-0.082
7.	23:10:31:55	-0.141	-0.083	0.238	0.122	0.184	0.114	-0.020	-0.090
8.	23:10:32:55	-0.170	-0.111	0.266	0.132	0.214	0.136	-0.050	-0.118
9.	23:10:33:55	-0.199	-0.123	0.326	0.150	0.244	0.166	-0.048	-0.148
10.	23:10:34:55	-0.260	-0.168	0.386	0.182	0.302	0.194	-0.080	-0.178
11.	23:10:35:55	-0.289	-0.196	0.445	0.222	0.334	0.224	-0.100	-0.208
12.	23:10:36:55	-0.318	-0.224	0.505	0.248	0.374	0.256	-0.108	-0.238
13.	23:10:37:55	-0.375	-0.252	0.594	0.298	0.452	0.312	-0.136	-0.268
14.	23:10:38:55	-0.432	-0.282	0.682	0.358	0.512	0.340	-0.166	-0.326
15.	23:10:39:55	-0.497	-0.336	0.771	0.386	0.574	0.400	-0.196	-0.370
16.	23:10:40:55	-0.605	-0.393	0.919	0.474	0.676	0.456	-0.226	-0.444
17.	23:10:41:55	-0.749	-0.489	1.068	0.592	0.810	0.546	-0.286	-0.542
18.	23:10:42:55	-1.324	-0.617	1.335	0.738	1.018	0.692	-0.374	-0.706
19.	23:10:43:55	-1.612	-0.814	1.691	1.032	1.374	0.924	-0.494	-1.030
20.	23:10:44:11	-1.784	-0.870	1.862	1.150	1.522	1.012	-0.554	-1.166
21.	23:10:44:27	-2.209	-0.955	2.001	1.270	1.670	1.130	-0.612	-1.294
22.	23:10:44:43	-2.416	-1.011	2.165	1.386	1.818	1.244	-0.692	-1.470
23.	23:10:45:12	-2.646	-1.151	2.518	1.710	2.204	1.508	-0.850	-1.830
24.	23:10:45:28	-3.049	-1.292	2.963	2.116	2.440	1.684	-0.940	-2.138
25.	23:10:45:44	-3.461	-1.461	3.318	2.474	2.666	1.856	-1.028	-2.378
26.	23:10:46:12	-3.078	-1.461	3.348	2.530	3.088	2.206	-1.296	-2.820
27.	23:10:46:28	-3.106	-1.489	3.348	2.534	3.156	2.238	-1.414	-2.880
28.	23:10:46:47	-3.106	-1.489	3.348	2.534	3.156	2.262	-1.472	-2.908
29.	23:10:47:38	-3.049	-1.489	3.288	2.532	3.148	2.236	-1.532	-2.906
30.	23:10:48:39	-3.049	-1.450	3.200	2.474	3.060	2.184	-1.532	-2.848
31.	23:10:49:39	-2.857	-1.405	2.963	2.416	2.982	2.166	-1.532	-2.788
32.	23:10:50:39	-2.733	-1.349	2.785	2.306	2.854	2.032	-1.502	-2.692
33.	23:10:51:39	-2.589	-1.292	2.608	2.210	2.706	1.944	-1.462	-2.582
34.	23:10:52:39	-2.589	-1.208	2.608	2.066	2.558	1.836	-1.414	-2.458

LOAD CHANNELS

	TIME	CH.29	CH.28	CH.27	CH.26	CH.25	CH.22	CH.21	CH.20
1.	23:10:11:57	240.000	350.000	340.000	280.000	280.000	270.000	240.000	330.000
2.	23:10:21:3	2530.000	2660.000	2740.000	2840.000	2940.000	2930.000	2710.000	2320.000
3.	23:10:23:21	4330.000	4280.000	3660.000	4660.000	4790.000	4800.000	3870.000	3870.000
4.	23:10:28:1	4390.000	4160.000	3710.000	4560.000	4730.000	4700.000	3790.000	3820.000
5.	23:10:29:49	6180.000	5360.000	5530.000	6550.000	6550.000	6850.000	5800.000	4920.000
6.	23:10:31:0	7670.000	6800.000	7010.000	7550.000	8070.000	7850.000	7390.000	6350.000
7.	23:10:31:55	9300.000	8900.000	8270.000	10180.000	10650.000	10630.000	8680.000	8470.000
8.	23:10:32:55	10650.000	10190.000	10020.000	11950.000	12060.000	12450.000	10520.000	9580.000
9.	23:10:33:55	12150.000	11500.000	11570.000	12980.000	14680.000	13540.000	12090.000	10830.000
10.	23:10:34:55	13740.000	13560.000	12890.000	15590.000	16640.000	16210.000	13330.000	12860.000
11.	23:10:35:55	15090.000	14910.000	14700.000	17570.000	17910.000	18250.000	15000.000	14100.000
12.	23:10:36:55	16550.000	16170.000	16410.000	18630.000	20480.000	19360.000	16530.000	15410.000
13.	23:10:37:55	18050.000	17980.000	17570.000	21010.000	22380.000	21710.000	17370.000	17370.000
14.	23:10:38:55	19410.000	19290.000	19380.000	23080.000	23780.000	23700.000	18830.000	18810.000
15.	23:10:39:55	20690.000	20390.000	20860.000	23990.000	26220.000	24530.000	20020.000	20130.000
16.	23:10:40:55	22070.000	22130.000	21980.000	26480.000	27980.000	26890.000	20760.000	22280.000
17.	23:10:41:55	23290.000	23020.000	23590.000	28330.000	29250.000	28470.000	22040.000	23580.000
18.	23:10:42:55	24600.000	23740.000	24850.000	29260.000	31600.000	29180.000	22390.000	25120.000
19.	23:10:43:55	26000.000	24250.000	25400.000	30830.000	32690.000	30320.000	23060.000	27170.000
20.	23:10:44:11	26000.000	23960.000	25160.000	30650.000	32610.000	30060.000	22870.000	27250.000
21.	23:10:44:27	25960.000	23620.000	24930.000	30430.000	32370.000	29770.000	22690.000	27310.000
22.	23:10:44:43	25920.000	23100.000	24630.000	30170.000	32000.000	29380.000	22430.000	27340.000
23.	23:10:45:12	25530.000	21750.000	22440.000	29200.000	30940.000	28320.000	20940.000	27310.000
24.	23:10:45:28	25130.000	20790.000	20810.000	28570.000	29730.000	27810.000	19380.000	27190.000
25.	23:10:45:44	24750.000	19630.000	19780.000	27620.000	28650.000	26870.000	18380.000	27040.000
26.	23:10:46:12	15970.000	15780.000	17490.000	20670.000	20100.000	21890.000	17910.000	18340.000
27.	23:10:46:28	13890.000	14190.000	16130.000	18370.000	19080.000	19360.000	16830.000	16050.000
28.	23:10:46:47	12530.000	13260.000	15480.000	17370.000	18010.000	18330.000	16080.000	14490.000
29.	23:10:47:38	10300.000	10860.000	12970.000	15410.000	15610.000	16630.000	12860.000	11840.000
30.	23:10:48:39	8540.000	8710.000	11660.000	13880.000	13190.000	15470.000	11080.000	9450.000
31.	23:10:49:39	6900.000	7700.000	10270.000	12610.000	11530.000	14260.000	9720.000	7960.000
32.	23:10:50:39	4930.000	5980.000	8950.000	9790.000	10090.000	10980.000	8310.000	5850.000
33.	23:10:51:39	3610.000	4280.000	7520.000	8350.000	7510.000	9290.000	6980.000	3780.000
34.	23:10:52:39	2500.000	3250.000	5550.000	6830.000	5900.000	7530.000	5020.000	2680.000

R O D C H A N N E L S

	TIME	CH. 57	CH. 56	CH. 55	CH. 54	CH. 53	CH. 52	CH. 51	CH. 50
1.	23:10:11:57	-12.812	12.812	12.812	12.812	0.0	12.812	0.0	-12.812
2.	23:10:21:3	-12.812	12.812	25.624	12.812	0.0	0.0	0.0	-12.812
3.	23:10:22:21	-12.812	12.812	38.435	0.0	0.0	-12.812	12.812	-12.812
4.	23:10:28:1	-38.435	76.871	-38.435	-64.059	-204.989	-25.624	1037.756	-38.435
5.	23:10:28:49	-25.624	64.059	0.0	-51.247	-217.801	-12.812	1024.944	-51.247
6.	23:10:31:0	-25.624	76.871	25.624	-38.435	-230.612	12.812	1024.944	-64.059
7.	23:10:31:55	-25.624	102.494	64.059	-25.624	-230.612	25.624	1012.132	-76.871
8.	23:10:32:55	-25.624	128.118	64.059	-25.624	-256.236	12.812	999.320	-76.871
9.	23:10:33:55	-25.624	179.365	89.683	-12.812	-243.424	25.624	1012.132	-64.059
10.	23:10:34:55	-25.624	230.612	89.683	-12.812	-269.048	38.435	1024.944	-64.059
11.	23:10:35:55	-12.812	281.859	89.683	-25.624	-269.048	25.624	1024.944	0.0
12.	23:10:36:55	0.0	333.107	115.306	0.0	-281.859	38.435	1050.567	38.435
13.	23:10:37:55	0.0	397.166	140.930	0.0	-269.048	51.247	1076.191	102.494
14.	23:10:38:55	0.0	499.660	179.365	0.0	-256.236	64.059	1101.814	153.742
15.	23:10:39:55	25.624	538.095	192.177	-25.624	-243.424	102.494	1114.626	204.989
16.	23:10:40:55	38.435	512.472	243.424	-115.306	-230.612	115.306	1076.191	243.424
17.	23:10:41:55	12.812	461.225	230.612	-115.306	-230.612	166.553	1076.191	320.295
18.	23:10:42:55	-25.624	371.542	243.424	-166.553	-204.989	217.801	1089.003	371.542
19.	23:10:43:55	-51.247	269.048	307.483	-179.365	-204.989	243.424	1114.626	384.354
20.	23:10:44:11	-64.059	256.236	307.483	-204.989	-256.236	192.177	1165.874	422.789
21.	23:10:44:27	-51.247	269.048	358.730	-179.365	-281.859	153.742	1178.685	435.601
22.	23:10:44:43	-89.683	256.236	422.789	-128.118	-320.295	102.494	1191.497	422.789
23.	23:10:45:12	-217.801	243.424	730.272	115.306	-422.789	0.0	1089.003	320.295
24.	23:10:45:28	-166.553	448.413	973.697	333.107	-563.719	-128.118	1012.132	230.612
25.	23:10:45:44	-89.683	614.966	1281.180	627.778	-768.708	-358.730	922.449	166.553
26.	23:10:46:12	-294.671	550.907	884.014	294.671	-1024.944	-64.966	1588.663	871.202
27.	23:10:46:28	-281.859	589.343	896.826	358.730	-1101.814	-64.966	1550.228	819.955
28.	23:10:46:47	-256.236	589.343	922.449	435.601	-1101.814	-704.649	1524.604	768.708
29.	23:10:47:38	-563.719	345.918	819.955	461.225	-781.520	-371.542	1473.357	704.649
30.	23:10:48:39	-845.579	179.365	653.402	358.730	-538.095	-140.930	1447.733	640.590
31.	23:10:49:39	-884.014	140.930	499.660	230.612	-474.036	-102.494	1434.921	602.154
32.	23:10:50:39	-755.896	192.177	333.107	140.930	-499.660	-153.742	1345.239	538.095
33.	23:10:51:39	-589.343	243.424	217.801	89.683	-474.036	-179.365	1255.556	422.789
34.	23:10:52:39	-499.660	217.801	128.118	64.059	-461.225	-192.177	1217.121	358.730

A V E R A G E L O A D

1.	291.250
2.	2708.750
3.	4282.500
4.	4232.500
5.	5910.000
6.	7423.750
7.	9385.000
8.	10927.500
9.	12417.500
10.	14352.500
11.	15941.250
12.	17442.500
13.	19180.000
14.	20785.000
15.	22103.750
16.	23821.250
17.	25196.250
18.	26405.000
19.	27465.000
20.	27320.000
21.	27135.000
22.	26871.250
23.	25803.750
24.	24926.250
25.	24090.000
26.	18518.750
27.	16737.500
28.	15693.750
29.	13310.000
30.	11497.500
31.	10118.750
32.	8110.000
33.	6422.500
34.	4907.500

3.3.3 SPECIMEN #19

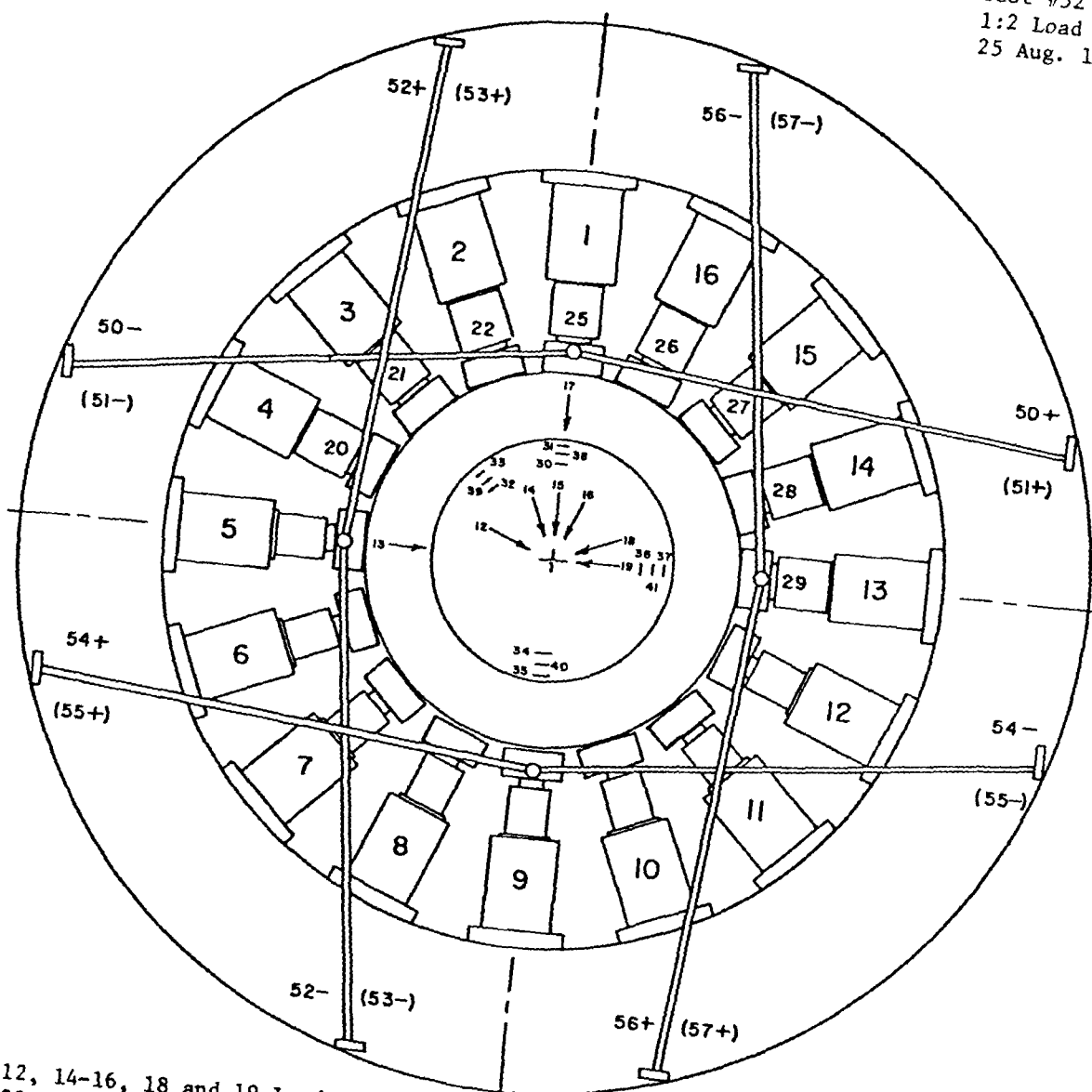
TEST NO. 52
CORRUGATED LINER WITH 500 PSI BACKPACKING
1:2 LOADING RATIO
TESTED 25 AUGUST 1978

REACTION FRAME TEST SET-UP

Specimen #19

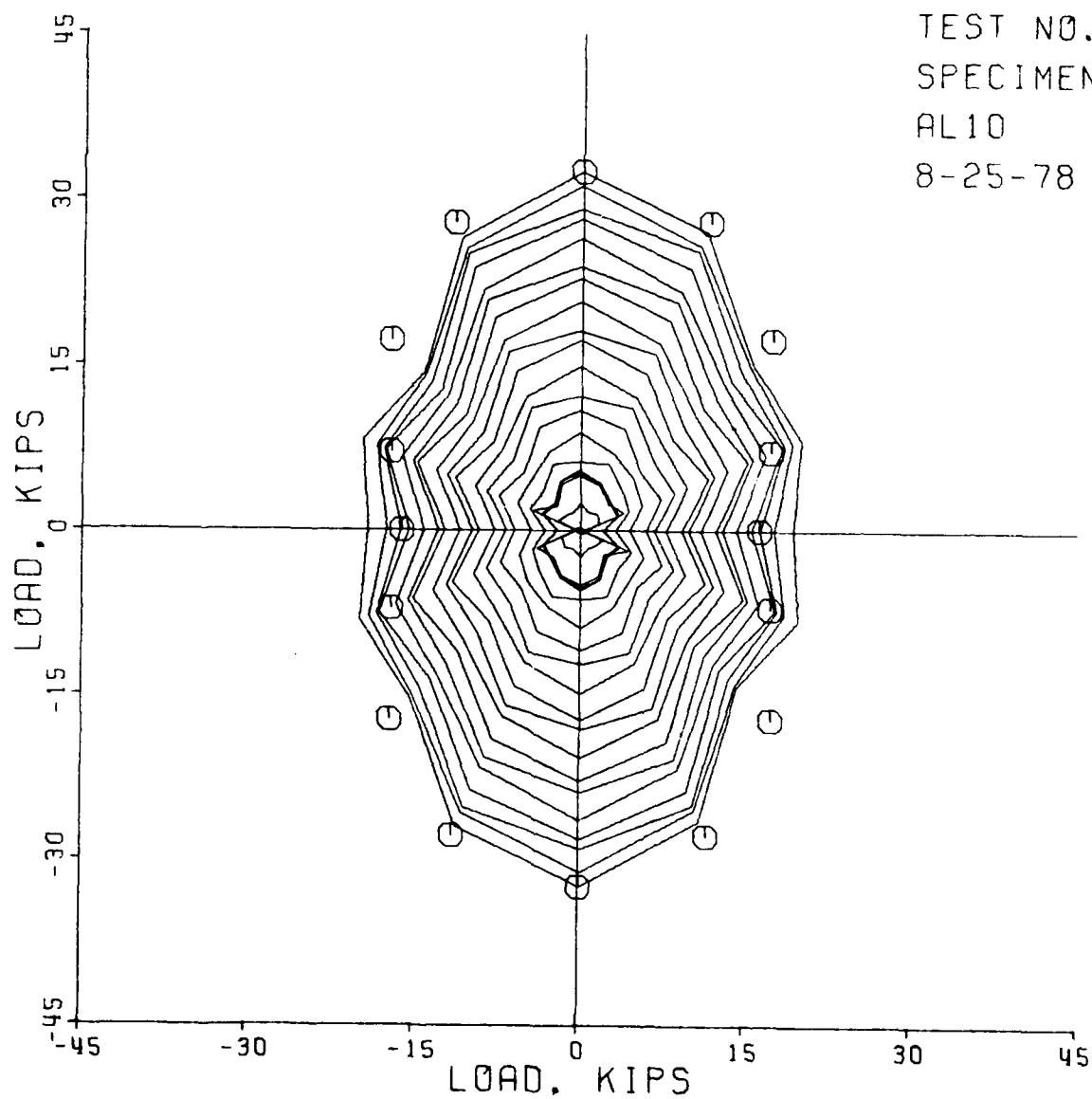
2/7 Scale AL 10

Test #52
1:2 Load
25 Aug. 1978

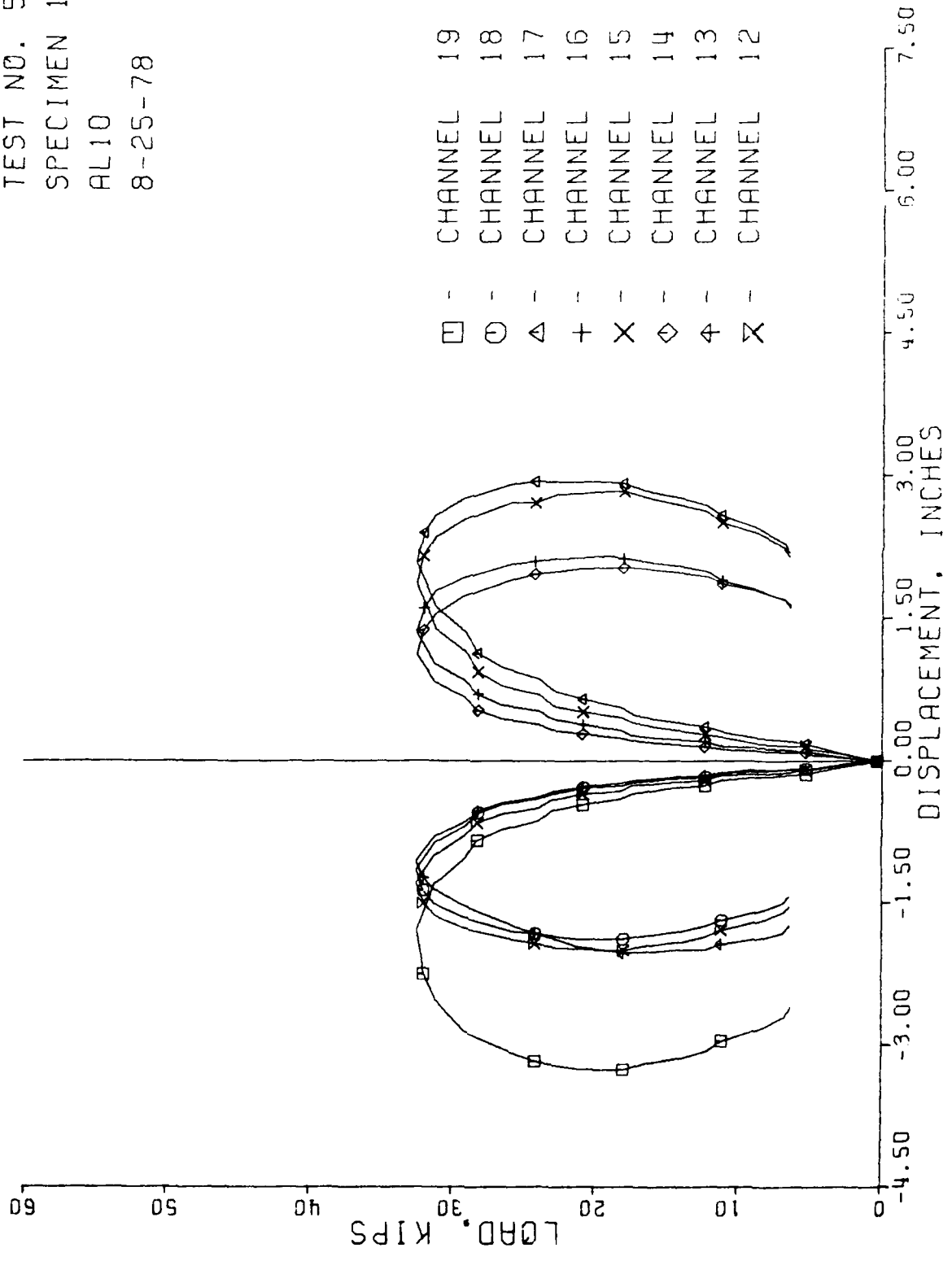


CH 12, 14-16, 18 and 19 Load axis I.D., CH 13, 17 Load axis O.D. (Research, Inc. 4040).
CH 20-22, 25-29 Axial load (Transducers, Inc. Model 693-300K).
CH 30, 32, 34 and 36 (Ailtech SG 129-6S) are mounted on crest. (Min. I.D.)
CH 31, 33, 35 and 37 (Ailtech SG 129-6S) are mounted in valley. (Max. I.D.)
CH 38, 39, 40 and 41 (Ailtech SG 129-6S) are mounted midway $5 \frac{7}{8}$ " from top.
CH 50-57 (Ailtech SG 129-6S) Polarity indicates rod under tension.
Lower rod shown (XX).

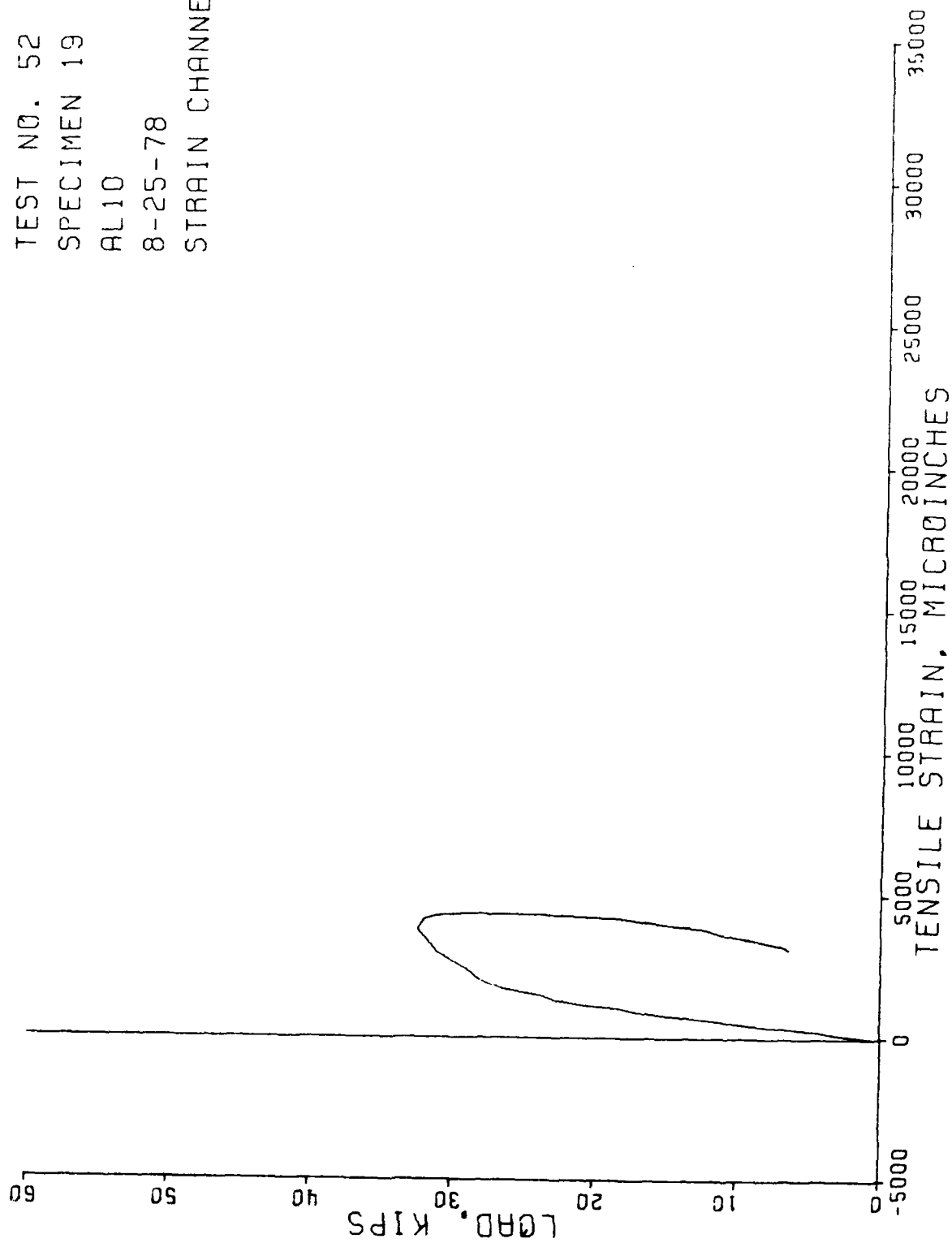
TEST NO. 52
SPECIMEN 19
AL10
8-25-78



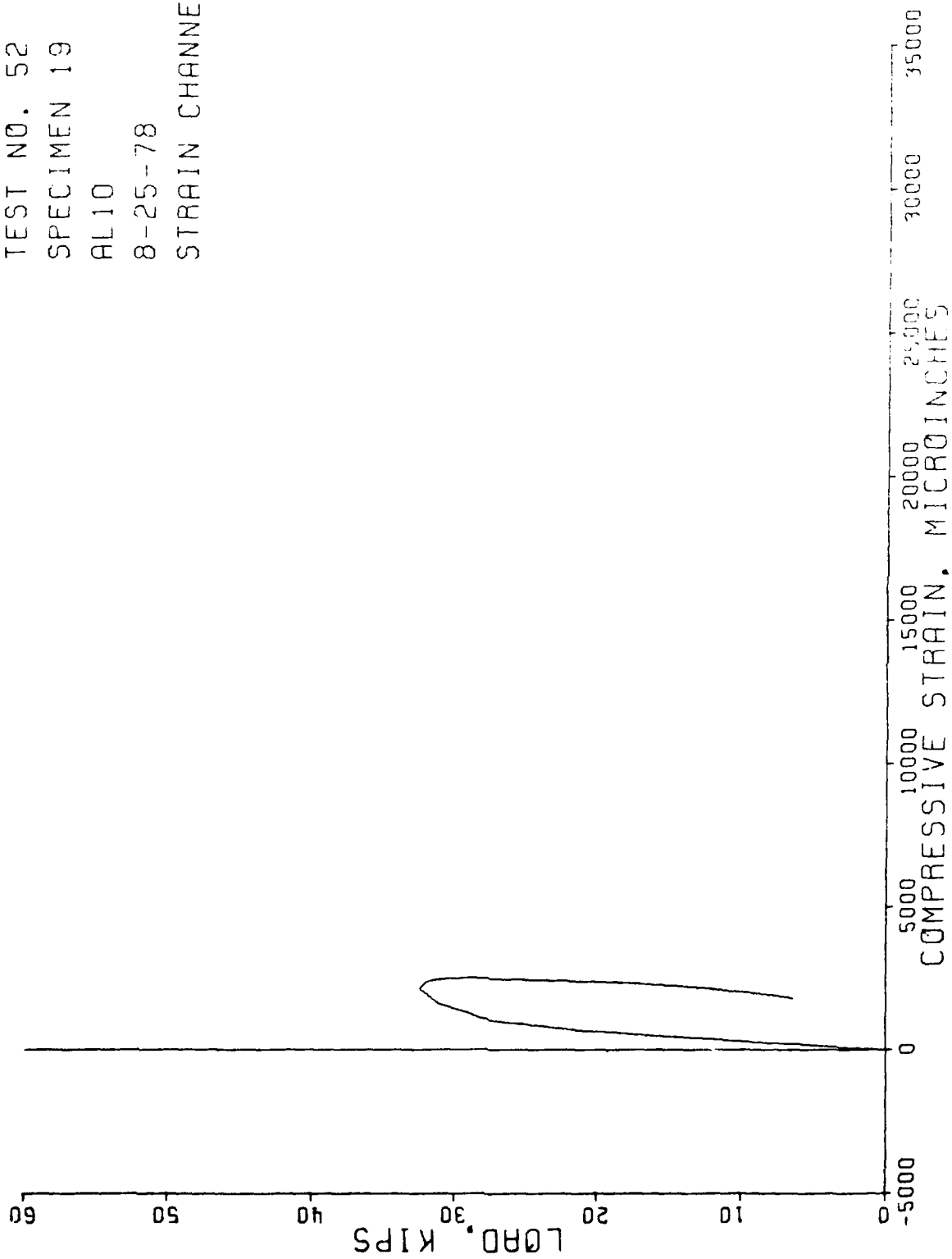
TEST NO. 52
 SPECIMEN 19
 AL10
 8-25-78



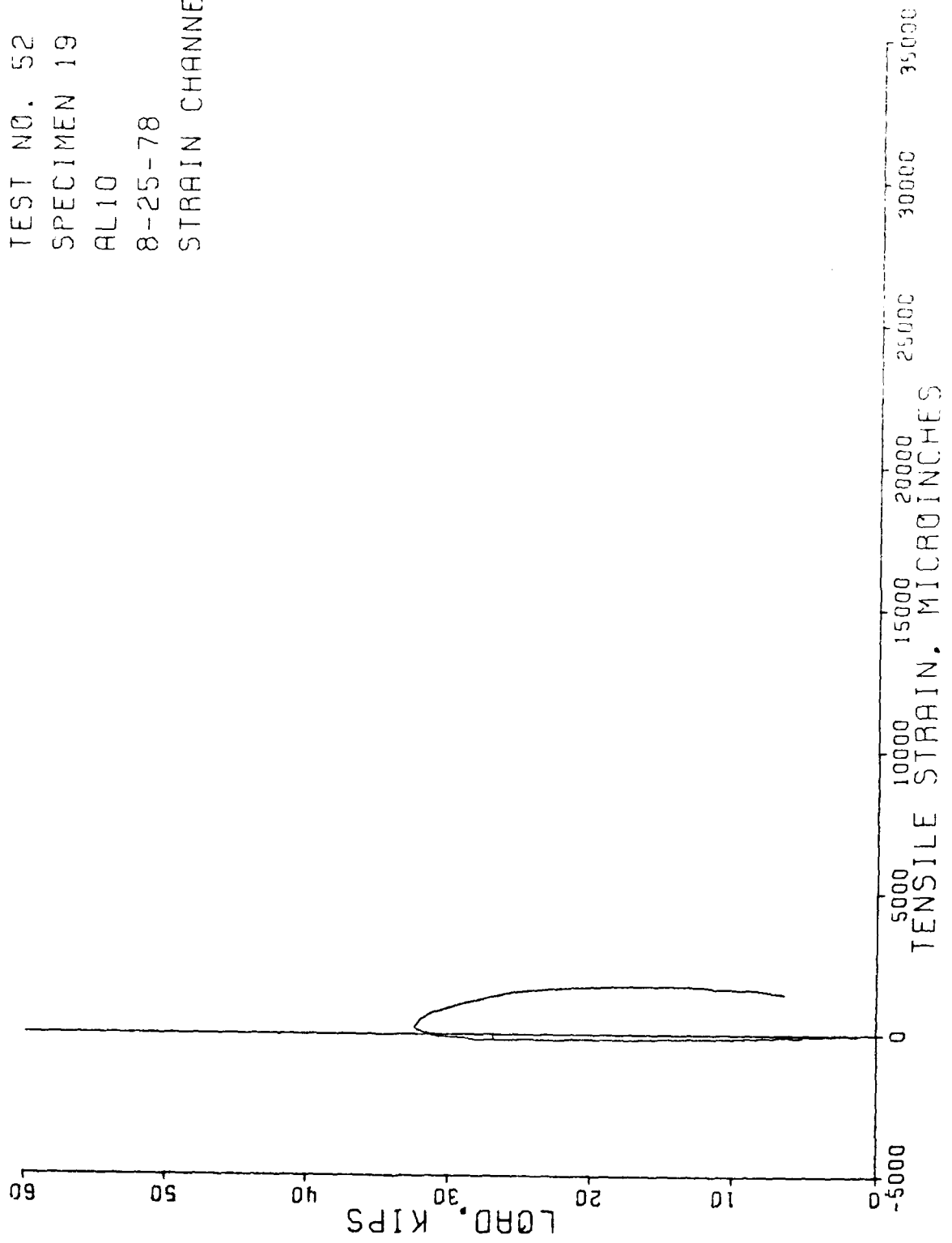
TEST NO. 52
SPECIMEN 19
AL10
8-25-78
STRAIN CHANNEL 30



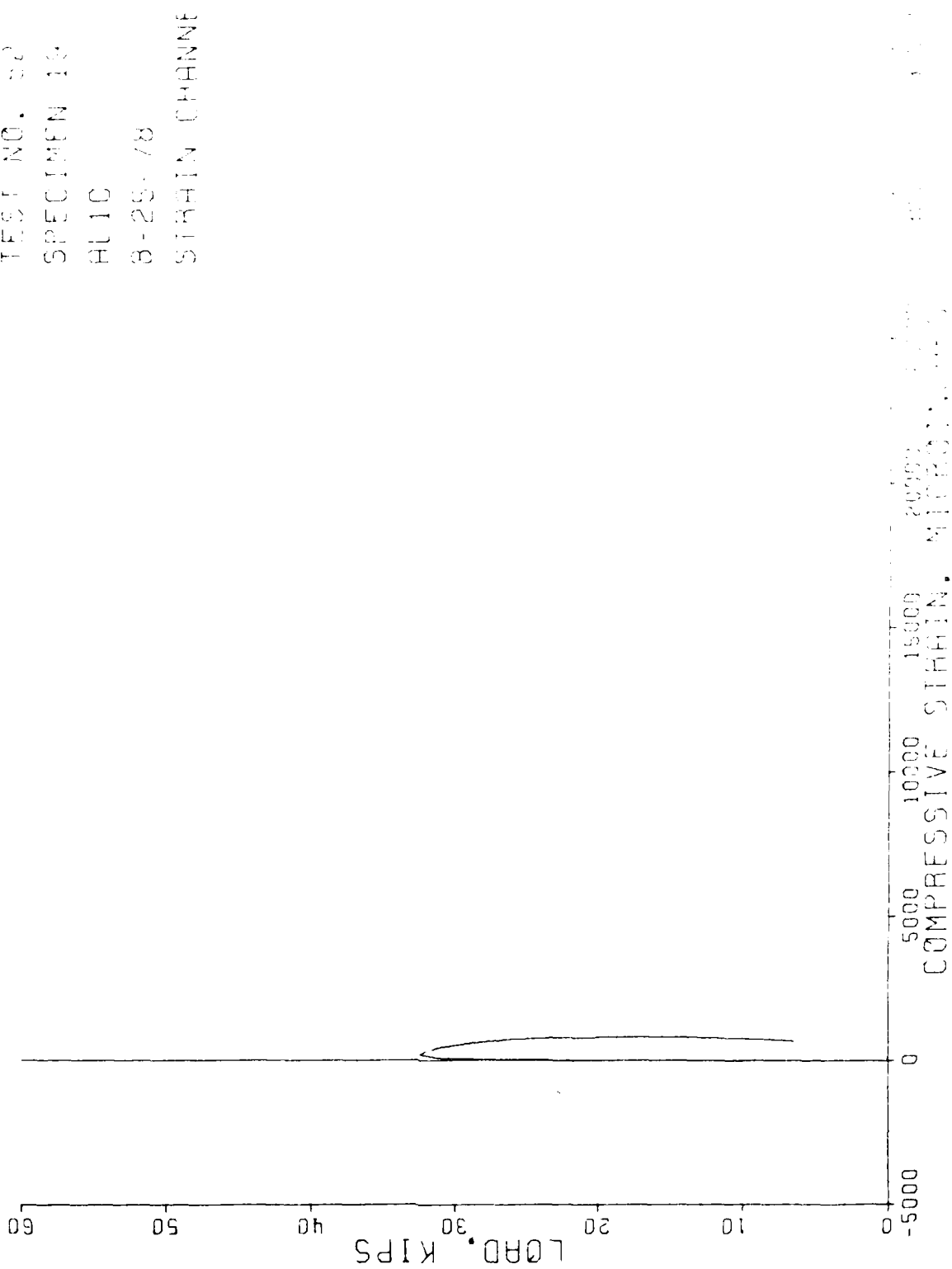
TEST NO. 52
SPECIMEN 19
AL10
8-25-78
STRAIN CHANNEL 31



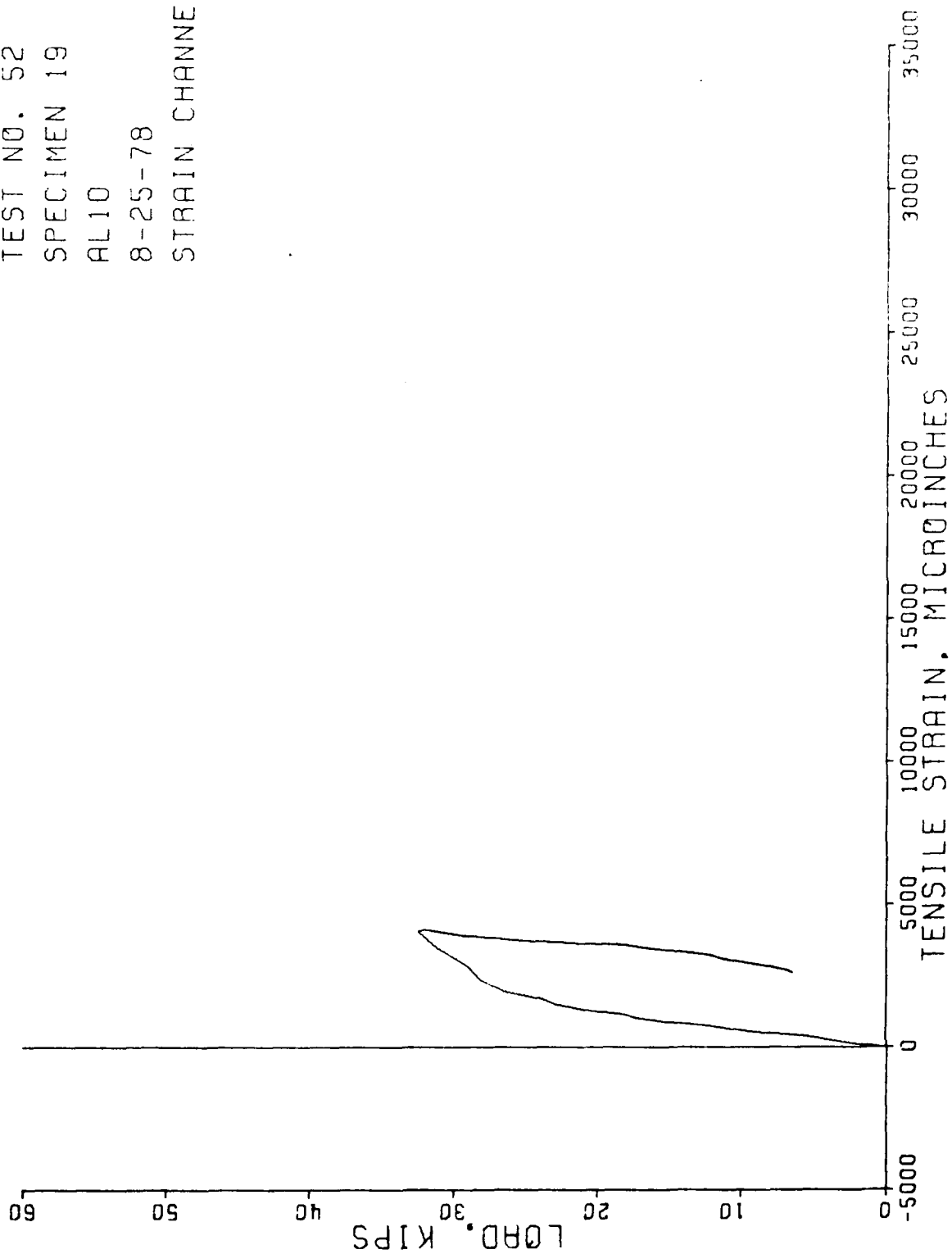
TEST NO. 52
SPECIMEN 19
AL10
8-25-78
STRAIN CHANNEL 32



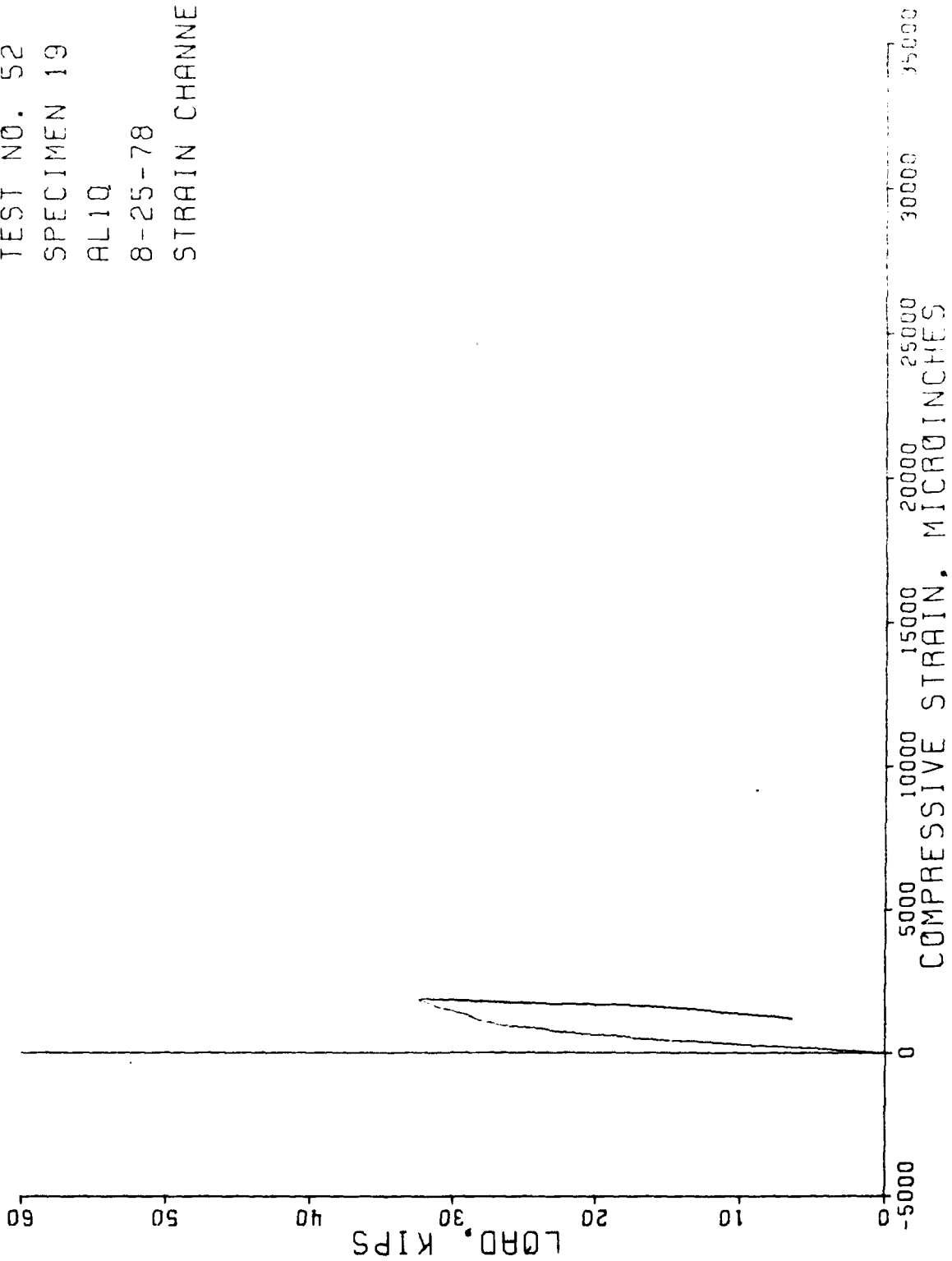
TEST NO. 92
SPECIMEN 19
AL1C
8-29-78
STRAIN CHANNEL 33



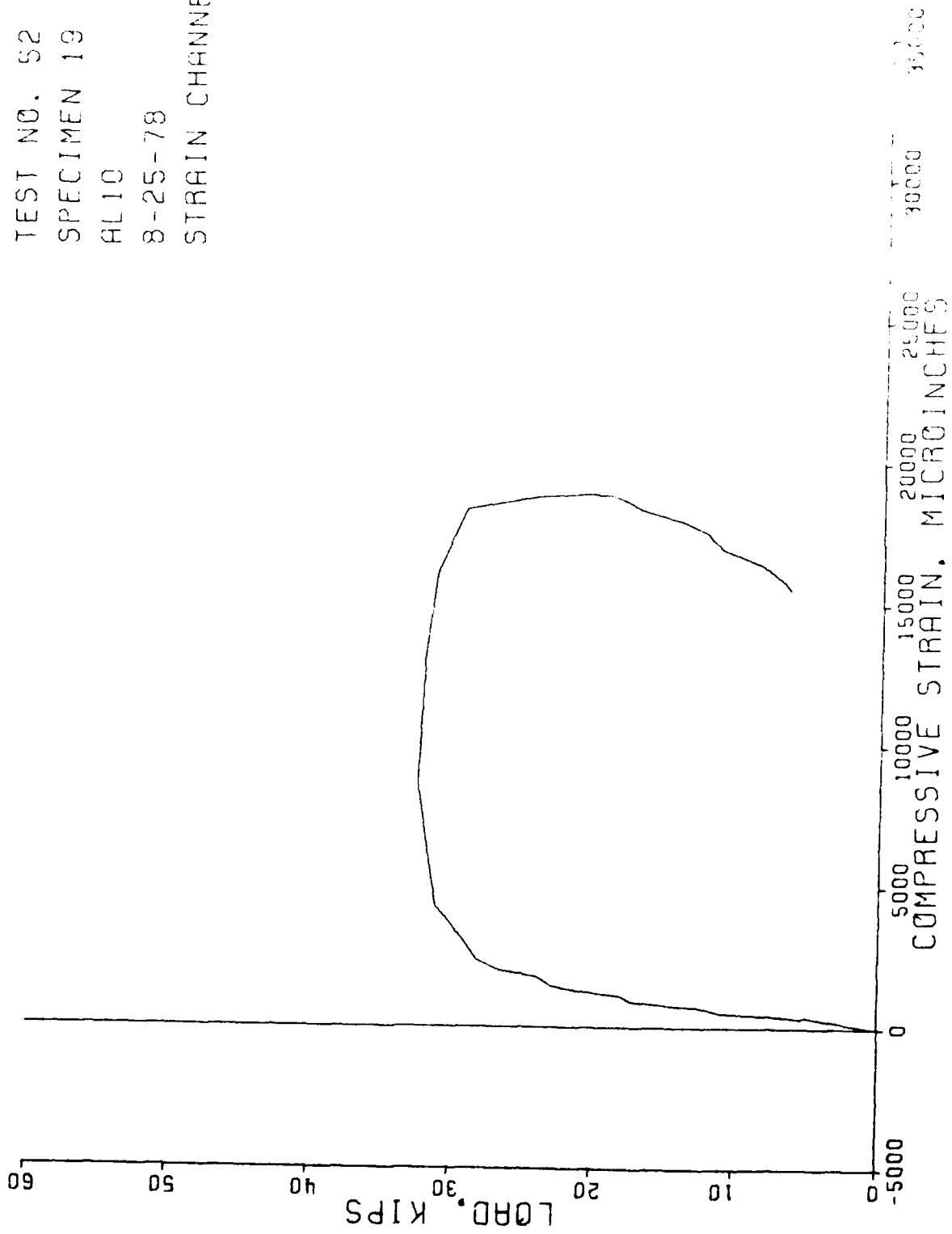
TEST NO. 52
SPECIMEN 19
AL10
8-25-78
STRAIN CHANNEL 34



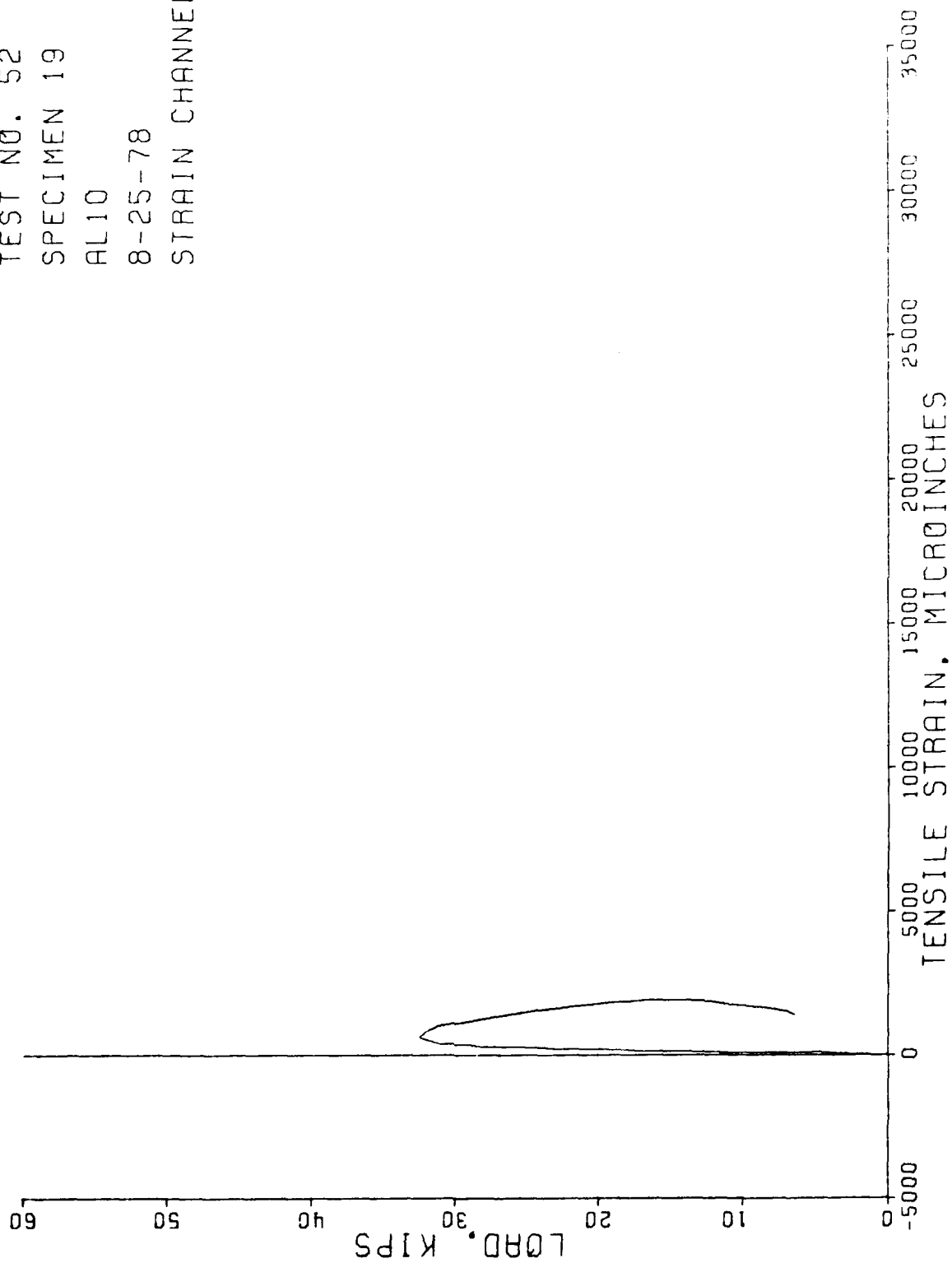
TEST NO. 52
SPECIMEN 19
AL1Q
8-25-78
STRAIN CHANNEL 35



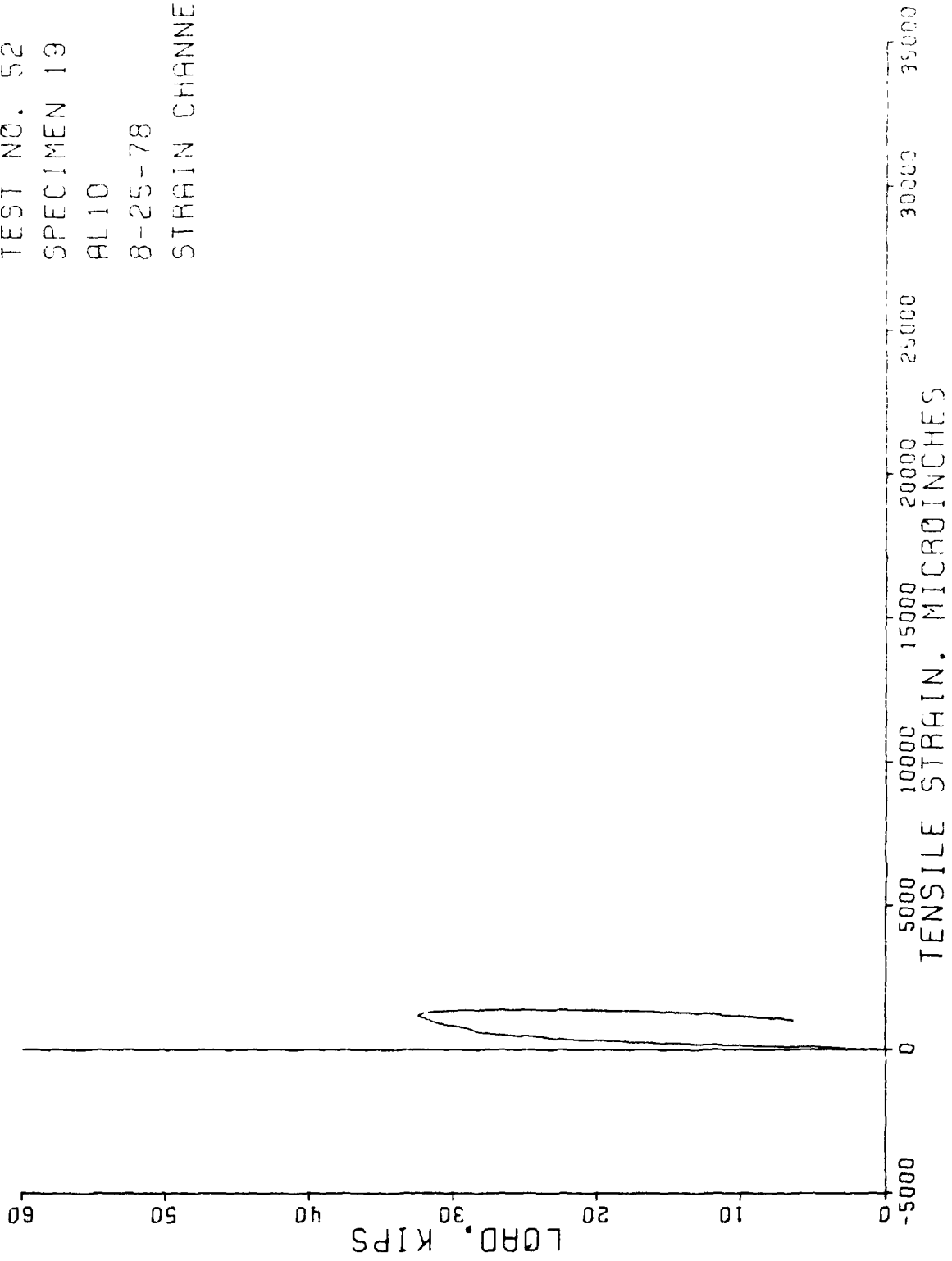
TEST NO. 52
SPECIMEN 19
AL10
8-25-78
STRAIN CHANNEL 35



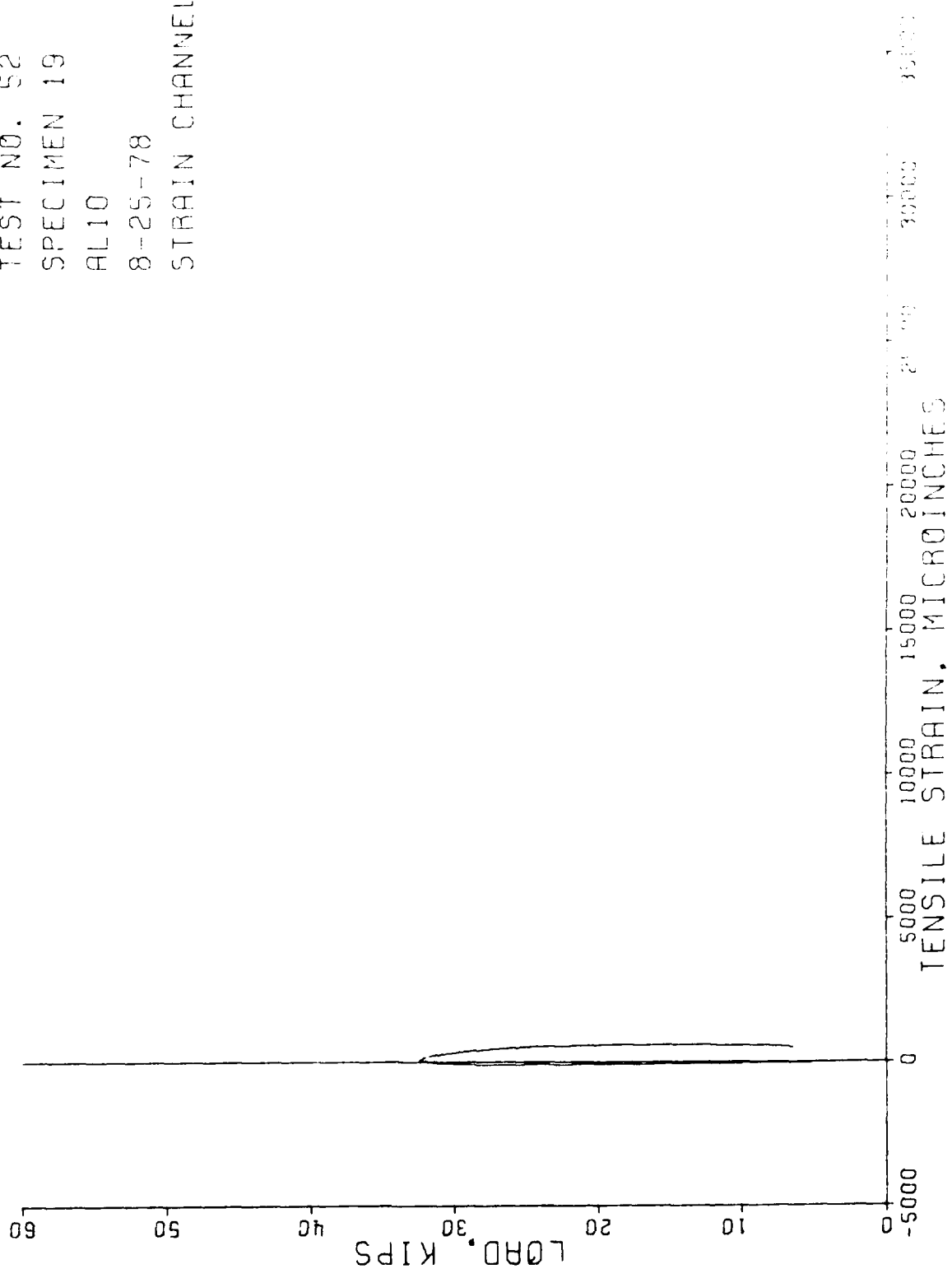
TEST NO. 52
SPECIMEN 19
AL10
8-25-78
STRAIN CHANNEL 37



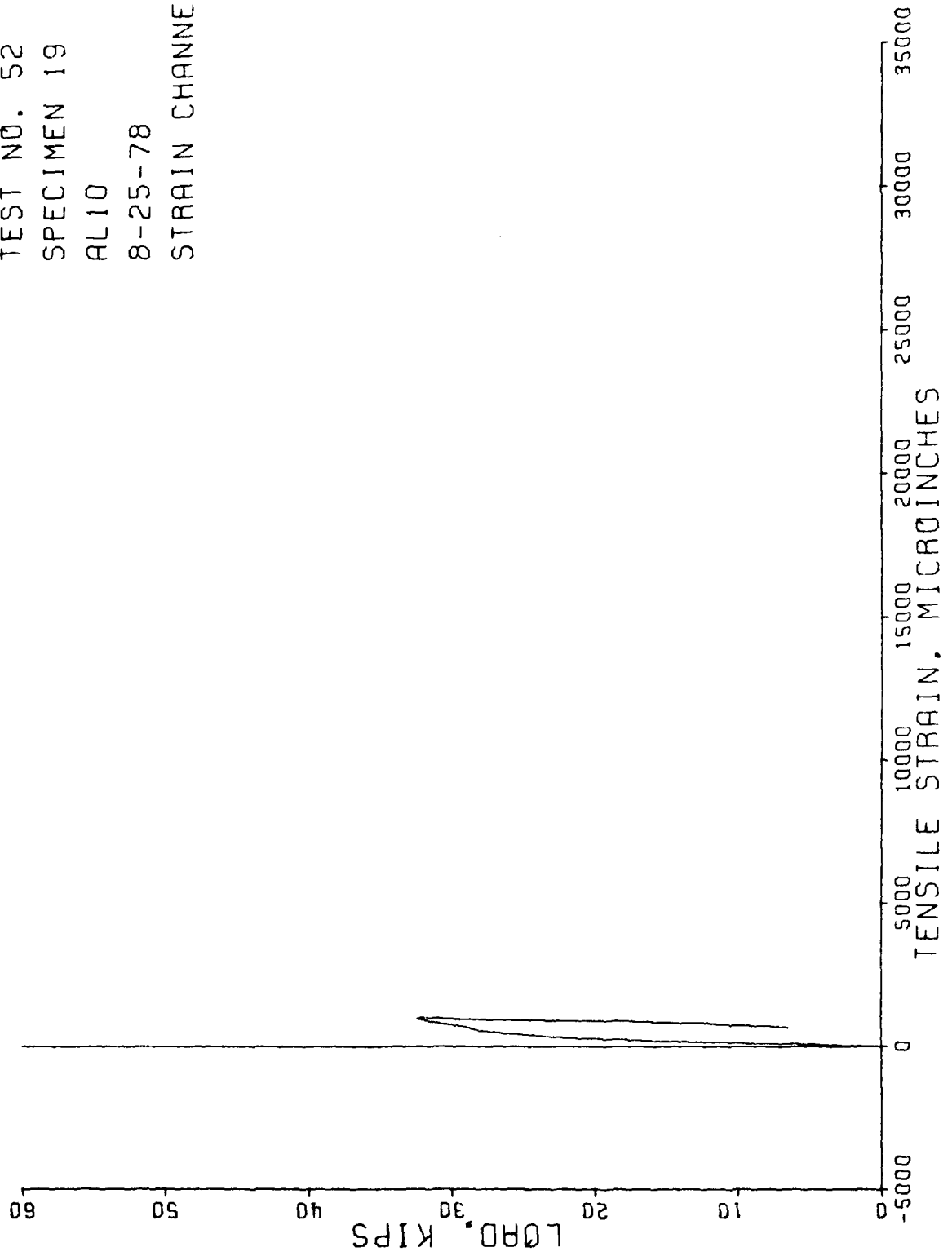
TEST NO. 52
 SPECIMEN 13
 AL10
 8-25-78
 STRAIN CHANNEL 38



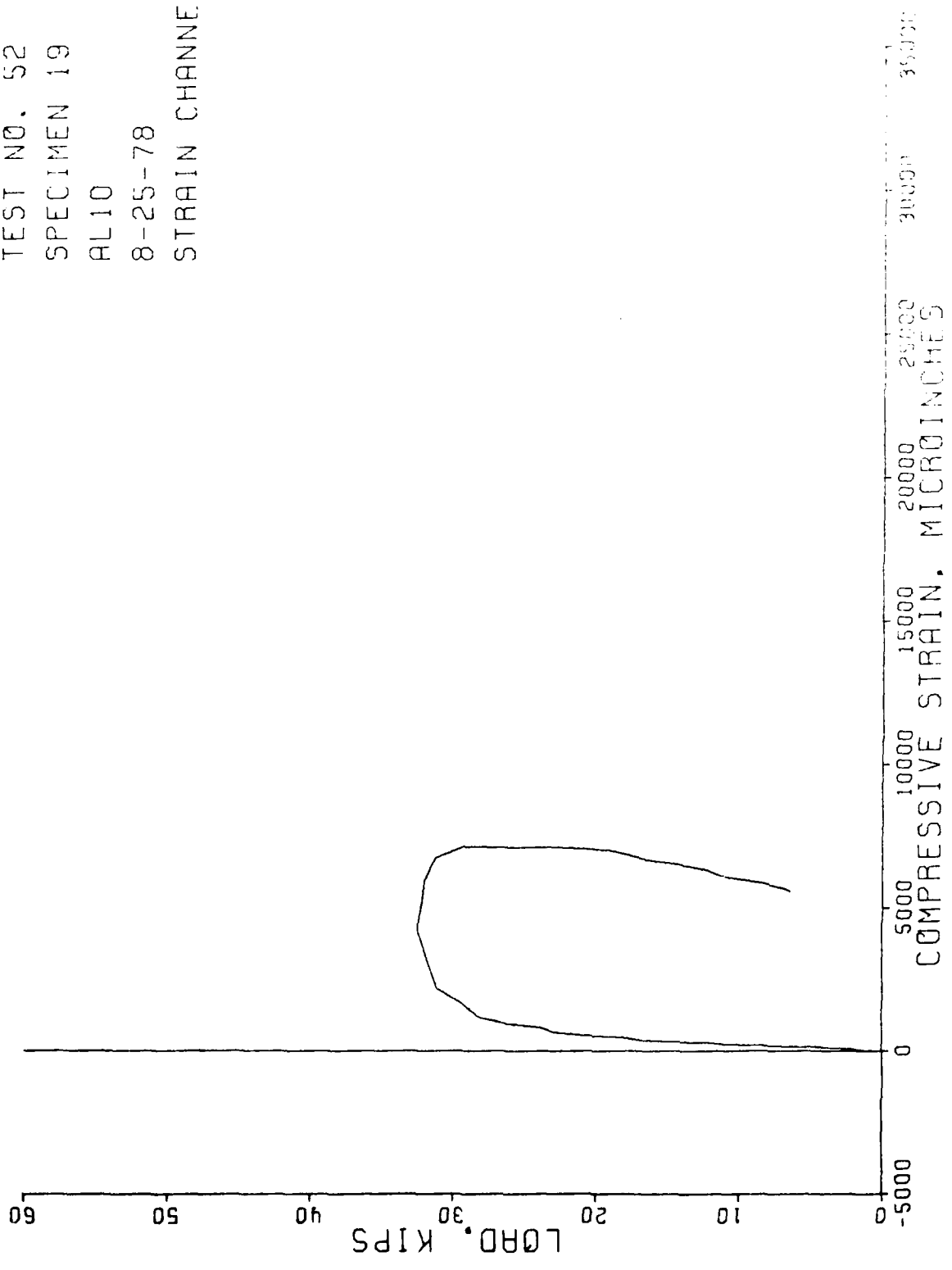
TEST NO. 52
SPECIMEN 19
AL10
8-25-78
STRAIN CHANNEL 39



TEST NO. 52
SPECIMEN 19
AL10
8-25-78
STRAIN CHANNEL 40



TEST NO. 52
SPECIMEN 19
AL10
8-25-78
STRAIN CHANNEL 41



TEST NO. 52 SPECIMEN 19 ALIO 8-25-78

NUMBER OF INCREMENTS= 36
NUMBER OF CHANNELS= 36
NUMBER OF STRAIN CHANNELS= 12
NUMBER OF DISPLACEMENT CHANNELS= 8
NUMBER OF LOAD CHANNELS= 8
NUMBER OF PRESSURE CHANNELS= 0
NUMBER OF RODS= 8

CHANNEL	ZEROSHIFT
57	0.0
56	0.0
55	0.0
54	0.0
53	0.0
52	0.0
51	0.0
50	0.0
41	0.0
40	0.0
39	0.0
38	0.0
37	0.0
36	0.0
35	0.0
34	0.0
33	0.0
32	0.0
31	0.0
30	0.0
29	0.0
28	0.0
27	0.0
26	0.0
25	0.0
22	0.0
21	0.0
20	0.0
19	0.0
18	0.0
17	0.0
16	0.0
15	0.0
14	0.0
13	0.0
12	0.0

STRAIN CHANNEL	CALIBRATION
41	1.000
40	1.000
39	1.000
38	1.000
37	1.000
36	1.000

35	1.000
34	1.000
33	1.000
32	1.000
31	1.000
30	1.000
DISPLACEMENT CHANNEL	
19	0.001
18	0.001
17	0.001
16	0.002
15	0.002
14	0.002
13	0.002
12	0.002
LOAD CHANNEL	
29	10.000
28	10.000
27	10.000
26	10.000
25	10.000
22	10.000
21	10.000
20	10.000
ROD CHANNEL	
57	1.000
56	1.000
55	1.000
54	1.000
53	1.000
52	1.000
51	1.000
50	1.000

STRAIN CHANNELS

TIME	CH.41	CH.40	CH.39	CH.38	CH.37	CH.36	CH.35	CH.34
1. 25:10:21:8	1.000	0.0	-1.000	-2.000	-2.000	0.0	-2.000	-1.000
2. 25:10:24:23	-64.000	27.000	-11.000	34.000	34.000	-171.000	-64.000	127.000
3. 25:10:25:38	-144.000	75.000	-31.000	90.000	89.000	-389.000	-164.000	342.000
4. 25:10:27:15	-123.000	82.000	-40.000	95.000	67.000	-324.000	-176.000	371.000
5. 25:10:30:40	-120.000	80.000	-41.000	94.000	67.000	-319.000	-176.000	366.000
6. 25:10:31:40	-161.000	90.000	-46.000	95.000	71.000	-407.000	-209.000	425.000
7. 25:10:32:40	-190.000	111.000	-59.000	119.000	71.000	-465.000	-258.000	523.000
8. 25:10:33:40	-227.000	138.000	-76.000	156.000	68.000	-537.000	-320.000	649.000
9. 25:10:34:40	-289.000	160.000	-76.000	183.000	108.000	-700.000	-373.000	752.000
10. 25:10:35:40	-330.000	185.000	-85.000	215.000	119.000	-793.000	-429.000	867.000
11. 25:10:36:40	-389.000	218.000	-100.000	259.000	127.000	-913.000	-504.000	1017.000
12. 25:10:37:40	-473.000	247.000	-95.000	292.000	178.000	-1123.000	-567.000	1145.000
13. 25:10:38:40	-546.000	283.000	-103.000	335.000	196.000	-1278.000	-643.000	1302.000
14. 25:10:39:40	-648.000	330.000	-118.000	386.000	200.000	-1449.000	-739.000	1500.000
15. 25:10:40:40	-815.000	379.000	-112.000	441.000	249.000	-1763.000	-840.000	1703.000
16. 25:10:41:40	-974.000	445.000	-121.000	511.000	264.000	-2011.000	-958.000	1962.000
17. 25:10:42:40	-1179.000	543.000	-127.000	605.000	286.000	-2353.000	-1120.000	2346.000
18. 25:10:43:40	-1554.000	667.000	-103.000	746.000	344.000	-2992.000	-1334.000	2842.000
19. 25:10:44:40	-2165.000	825.000	-78.000	921.000	382.000	-4268.000	-1607.000	3476.000
20. 25:10:45:40	-4140.000	974.000	23.000	1163.000	595.000	-8553.000	-1846.000	4045.000
21. 25:10:46:25	-5911.000	989.000	141.000	1283.000	837.000	-13260.000	-1880.000	4114.000
22. 25:10:46:41	-6744.000	970.000	223.000	1330.000	999.000	-16111.000	-1855.000	4054.000
23. 25:10:46:56	-7132.000	934.000	349.000	1365.000	1162.000	-18300.000	-1799.000	3909.000
24. 25:10:47:12	-7096.000	903.000	475.000	1379.000	1427.000	-18605.000	-1721.000	3747.000
25. 25:10:47:28	-7102.000	890.000	514.000	1383.000	1538.000	-18744.000	-1699.000	3700.000
26. 25:10:47:44	-7095.000	883.000	530.000	1381.000	1616.000	-18800.000	-1686.000	3669.000
27. 25:10:48:00	-7060.000	873.000	551.000	1371.000	1733.000	-18839.000	-1666.000	3624.000
28. 25:10:48:16	-7011.000	867.000	565.000	1362.000	1816.000	-18826.000	-1655.000	3599.000
29. 25:10:48:32	-6874.000	863.000	572.000	1354.000	1855.000	-18613.000	-1647.000	3583.000
30. 25:10:48:48	-6674.000	839.000	577.000	1332.000	1888.000	-18283.000	-1588.000	3471.000
31. 25:10:49:04	-6469.000	807.000	586.000	1276.000	1893.000	-17897.000	-1513.000	3325.000
32. 25:10:49:20	-6294.000	788.000	578.000	1243.000	1847.000	-17488.000	-1461.000	3225.000
33. 25:10:51:00	-6067.000	757.000	552.000	1182.000	1755.000	-16933.000	-1384.000	3079.000
34. 25:10:51:16	-5857.000	709.000	540.000	1105.000	1635.000	-16374.000	-1275.000	2862.000
35. 25:10:51:32	-5646.000	675.000	504.000	1042.000	1473.000	-15802.000	-1192.000	2704.000
36. 25:10:52:39	-5558.000	656.000	479.000	1012.000	1387.000	-15534.000	-1150.000	2609.000

STRAIN CHANNELS

TIME	CH. 33	CH. 32	CH. 31	CH. 30	CH.
1. 25:10:21:8	0.0	-2.000	-3.000	-3.000	
2. 25:10:24:23	-1.000	-20.000	-60.000	108.000	
3. 25:10:25:38	4.000	-60.000	-161.000	296.000	
4. 25:10:27:15	17.000	-88.000	-172.000	321.000	
5. 25:10:30:40	17.000	-87.000	-201.000	316.000	
6. 25:10:31:40	4.000	-113.000	-257.000	344.000	
7. 25:10:32:40	4.000	-151.000	-326.000	438.000	
8. 25:10:33:40	14.000	-145.000	-377.000	564.000	
9. 25:10:34:40	6.000	-158.000	-439.000	655.000	
10. 25:10:35:40	6.000	-189.000	-518.000	771.000	
11. 25:10:36:40	9.000	-166.000	-572.000	918.000	
12. 25:10:37:40	-6.000	-176.000	-648.000	1018.000	
13. 25:10:38:40	-9.000	-206.000	-739.000	1159.000	
14. 25:10:39:40	-6.000	-181.000	-823.000	1325.000	
15. 25:10:40:40	-20.000	-192.000	-938.000	1489.000	
16. 25:10:41:40	-21.000	-203.000	-1086.000	1707.000	
17. 25:10:42:40	-20.000	-129.000	-1278.000	1998.000	
18. 25:10:43:40	-47.000	-58.000	-1590.000	2406.000	
19. 25:10:44:40	-78.000	206.000	-2129.000	2965.000	
20. 25:10:45:40	-200.000	523.000	-2371.000	3778.000	
21. 25:10:46:9	-335.000	745.000	-2497.000	4157.000	
22. 25:10:46:25	-583.000	1054.000	-2444.000	4280.000	
23. 25:10:46:41	-715.000	1449.000	-2426.000	4352.000	
24. 25:10:46:56	-748.000	1547.000	-2410.000	4323.000	
25. 25:10:47:12	-764.000	1594.000	-2381.000	4314.000	
26. 25:10:47:28	-782.000	1645.000	-2356.000	4288.000	
27. 25:10:48:9	-793.000	1678.000	-2334.000	4240.000	
28. 25:10:48:39	-793.000	1688.000	-2286.000	4195.000	
29. 25:10:49:9	-788.000	1690.000	-2194.000	4163.000	
30. 25:10:49:39	-796.000	1711.000	-2137.000	4082.000	
31. 25:10:50:9	-779.000	1683.000	-2049.000	3908.000	
32. 25:10:50:39	-743.000	1605.000	-1924.000	3802.000	
33. 25:10:51:9	-722.000	1564.000	-1834.000	3631.000	
34. 25:10:51:39	-676.000	1459.000	-1781.000	3394.000	
35. 25:10:52:9	-651.000	1395.000		3214.000	
36. 25:10:52:39				3111.000	

DISPLACEMENT CHANNELS

TIME	CH.19	CH.18	CH.17	CH.16	CH.15	CH.14	CH.13	CH.12
1. 25:10:21:8	0.0	-0.001	0.001	0.0	0.002	0.002	0.006	0.0
2. 25:10:24:23	-0.058	-0.029	0.063	0.028	0.035	0.032	-0.036	-0.030
3. 25:10:25:38	-0.124	-0.086	0.169	0.093	0.125	0.070	-0.030	-0.070
4. 25:10:27:15	-0.148	-0.086	0.180	0.090	0.118	0.072	-0.000	-0.088
5. 25:10:30:40	-0.148	-0.086	0.210	0.088	0.118	0.092	-0.008	-0.088
6. 25:10:31:40	-0.177	-0.096	0.210	0.116	0.130	0.090	-0.090	-0.118
7. 25:10:32:40	-0.206	-0.115	0.249	0.144	0.150	0.102	-0.090	-0.142
8. 25:10:33:40	-0.206	-0.130	0.298	0.150	0.250	0.120	-0.118	-0.150
9. 25:10:34:40	-0.263	-0.172	0.358	0.206	0.300	0.148	-0.118	-0.202
10. 25:10:35:40	-0.292	-0.184	0.477	0.236	0.350	0.180	-0.176	-0.236
11. 25:10:36:40	-0.350	-0.230	0.477	0.266	0.398	0.208	-0.208	-0.266
12. 25:10:37:40	-0.408	-0.259	0.566	0.324	0.440	0.240	-0.240	-0.324
13. 25:10:38:40	-0.466	-0.287	0.654	0.380	0.518	0.284	-0.284	-0.354
14. 25:10:39:40	-0.524	-0.344	0.744	0.440	0.588	0.326	-0.326	-0.414
15. 25:10:40:40	-0.639	-0.401	0.862	0.528	0.675	0.385	-0.385	-0.502
16. 25:10:41:40	-0.726	-0.459	0.981	0.586	0.766	0.446	-0.446	-0.562
17. 25:10:42:40	-0.841	-0.545	1.129	0.702	0.916	0.534	-0.534	-0.650
18. 25:10:43:40	-1.044	-0.688	1.355	0.846	1.144	0.670	-0.670	-0.798
19. 25:10:44:40	-1.304	-0.860	1.623	1.022	1.380	0.836	-0.798	-1.002
20. 25:10:45:40	-1.806	-1.146	2.081	1.372	1.856	1.134	-1.000	-1.294
21. 25:10:46:9	-2.255	-1.375	2.403	1.606	2.100	1.374	-1.294	-1.504
22. 25:10:46:25	-2.538	-1.518	2.581	1.782	2.318	1.552	-1.504	-1.646
23. 25:10:46:51	-2.862	-1.661	2.758	1.926	2.514	1.732	-1.552	-1.772
24. 25:10:46:56	-3.095	-1.804	2.907	2.072	2.714	1.908	-1.732	-1.890
25. 25:10:47:12	-3.182	-1.832	2.937	2.102	2.716	1.968	-1.890	-1.938
26. 25:10:47:28	-3.226	-1.861	2.936	2.130	2.802	1.998	-1.938	-1.978
27. 25:10:48:9	-3.259	-1.889	2.936	2.140	2.812	2.026	-1.978	-1.984
28. 25:10:48:19	-3.270	-1.889	2.935	2.160	2.822	2.034	-2.008	-2.003
29. 25:10:49:9	-3.270	-1.890	2.914	2.152	2.822	2.034	-2.008	-2.008
30. 25:10:49:29	-3.212	-1.861	2.846	2.102	2.772	2.028	-2.008	-1.968
31. 25:10:50:9	-3.141	-1.804	2.757	2.048	2.684	1.978	-1.918	-1.918
32. 25:10:50:39	-3.065	-1.747	2.682	1.996	2.606	1.942	-1.860	-1.860
33. 25:10:51:9	-2.964	-1.689	2.581	1.898	2.506	1.866	-1.796	-1.796
34. 25:10:51:39	-2.835	-1.592	2.433	1.782	2.376	1.774	-1.686	-1.686
35. 25:10:52:9	-2.709	-1.503	2.286	1.694	2.240	1.704	-1.594	-1.594
36. 25:10:52:39	-2.602	-1.432	2.196	1.634	2.152	1.614	-1.534	-1.534

LOAD CHANNELS

TIME	CH.29	CH.28	CH.27	CH.26	CH.25	CH.22	CH.21	CH.20
1. 25:10:21:8	210.000	380.000	330.000	290.000	300.000	340.000	350.000	400.000
2. 25:10:24:23	400.000	1800.000	2140.000	1840.000	2400.000	1760.000	1910.000	2190.000
3. 25:10:25:38	400.000	4240.000	3520.000	4520.000	5000.000	4430.000	3080.000	4730.000
4. 25:10:27:15	2090.000	3660.000	3710.000	4740.000	5460.000	4780.000	3380.000	3940.000
5. 25:10:27:40	2100.000	3610.000	3660.000	4730.000	5270.000	4790.000	3340.000	3730.000
6. 25:10:31:40	3190.000	4690.000	5350.000	6600.000	6310.000	6520.000	4880.000	5010.000
7. 25:10:32:40	4530.000	6010.000	6800.000	6010.000	8950.000	7620.000	6320.000	6240.000
8. 25:10:33:40	6010.000	7910.000	7670.000	10100.000	10950.000	10030.000	7290.000	8050.000
9. 25:10:34:40	6740.000	9280.000	9280.000	12090.000	12260.000	12040.000	8810.000	9200.000
10. 25:10:35:40	7830.000	10510.000	10720.000	13040.000	14900.000	13080.000	10210.000	10300.000
11. 25:10:36:40	9210.000	12550.000	11800.000	15420.000	17300.000	15510.000	11230.000	12270.000
12. 25:10:37:40	9830.000	13190.000	13310.000	17390.000	18160.000	17470.000	12530.000	13070.000
13. 25:10:38:40	10930.000	14430.000	14780.000	18390.000	20790.000	18540.000	13910.000	14160.000
14. 25:10:39:40	12270.000	16410.000	15690.000	20680.000	22890.000	20790.000	14740.000	16030.000
15. 25:10:40:40	12930.000	16920.000	17150.000	22510.000	23390.000	22500.000	15990.000	16420.000
16. 25:10:41:40	14140.000	18080.000	18430.000	23450.000	26450.000	23460.000	17170.000	17480.000
17. 25:10:42:40	15490.000	19760.000	19230.000	25770.000	28170.000	25620.000	17960.000	19060.000
18. 25:10:43:40	16270.000	19930.000	20480.000	27410.000	29070.000	27050.000	19120.000	19210.000
19. 25:10:44:40	17530.000	20680.000	21400.000	27960.000	31170.000	27530.000	19940.000	19970.000
20. 25:10:45:40	19300.000	21600.000	21720.000	29310.000	32470.000	28580.000	20100.000	21390.000
21. 25:10:46:9	19520.000	21120.000	21140.000	28730.000	31970.000	28070.000	19550.000	21250.000
22. 25:10:46:25	19600.000	21020.000	20610.000	28330.000	31170.000	27660.000	19030.000	21160.000
23. 25:10:46:41	19930.000	20820.000	19970.000	28180.000	29150.000	27470.000	18520.000	21010.000
24. 25:10:46:56	15500.000	16050.000	18270.000	22720.000	25790.000	22000.000	17380.000	16500.000
25. 25:10:47:12	14340.000	14670.000	17460.000	21680.000	24130.000	21750.000	16240.000	15500.000
26. 25:10:47:28	13100.000	13780.000	16610.000	20750.000	22600.000	20730.000	15530.000	14330.000
27. 25:10:48:9	11650.000	12300.000	15630.000	19110.000	21030.000	19090.000	14610.000	12900.000
28. 25:10:48:39	10400.000	10890.000	14450.000	18390.000	19070.000	18230.000	13680.000	11680.000
29. 25:10:49:9	9450.000	10200.000	12930.000	17040.000	17970.000	17960.000	12400.000	10720.000
30. 25:10:49:39	7810.000	8490.000	11730.000	14500.000	16580.000	16780.000	10970.000	8850.000
31. 25:10:50:9	5940.000	6810.000	10460.000	12780.000	13890.000	14680.000	10230.000	6860.000
32. 25:10:50:39	4960.000	5790.000	8960.000	11850.000	12170.000	13530.000	9040.000	5650.000
33. 25:10:51:9	3800.000	4270.000	7850.000	9380.000	11110.000	10580.000	7830.000	4210.000
34. 25:10:51:39	2470.000	2630.000	6580.000	7800.000	8330.000	8660.000	6620.000	2600.000
35. 25:10:52:9	1830.000	1890.000	4960.000	6790.000	6730.000	7420.000	5020.000	1830.000
36. 25:10:52:39	1980.000	2030.000	4700.000	7170.000	6360.000	6960.000	5100.000	2010.000

ROD CHANNELS

	TIME	CH. 57	CH. 56	CH. 55	CH. 54	CH. 53	CH. 52	CH. 51	CH. 50
1.	25:10:21:8	0.0	12.812	-12.812	12.812	12.812	-12.812	0.0	0.0
2.	25:10:24:23	-12.812	12.812	-25.624	-12.812	0.0	-25.624	12.812	0.0
3.	25:10:25:38	-12.812	38.435	0.0	-12.812	-12.812	-25.624	0.0	-51.247
4.	25:10:27:15	-25.624	38.435	0.0	12.812	0.0	-51.247	-12.812	-38.435
5.	25:10:30:40	-25.624	38.435	12.812	0.0	25.624	-38.435	730.272	-38.435
6.	25:10:31:40	12.812	51.247	12.812	12.812	-12.812	-76.871	730.272	-25.624
7.	25:10:32:40	12.812	76.871	0.0	0.0	-38.435	-89.683	768.708	0.0
8.	25:10:33:40	64.059	115.306	25.624	0.0	-51.247	-89.683	781.520	-12.812
9.	25:10:34:40	64.059	140.930	38.435	0.0	0.0	-51.247	768.708	-64.059
10.	25:10:35:40	64.059	140.930	38.435	12.812	0.0	0.0	794.331	-38.435
11.	25:10:36:40	76.871	153.742	38.435	12.812	0.0	0.0	832.767	-38.435
12.	25:10:37:40	51.247	140.930	38.435	64.059	0.0	0.0	807.143	-64.059
13.	25:10:38:40	76.871	153.742	51.247	64.059	12.812	12.812	845.579	-64.059
14.	25:10:39:40	64.059	166.557	64.059	64.059	12.812	12.812	884.014	-12.812
15.	25:10:40:40	76.871	179.365	64.059	76.871	0.0	89.683	909.637	-12.812
16.	25:10:41:40	89.683	256.236	0.0	76.871	12.812	115.306	935.261	0.0
17.	25:10:42:40	140.930	345.918	64.059	76.871	0.0	128.118	935.261	0.0
18.	25:10:43:40	192.177	461.225	76.871	89.683	0.0	128.118	909.637	-12.812
19.	25:10:44:40	243.424	550.907	89.683	102.494	12.812	192.177	909.637	0.0
20.	25:10:45:40	179.365	576.531	76.871	51.247	38.435	294.671	960.885	140.930
21.	25:10:46:9	102.494	499.660	38.435	-51.247	76.871	345.918	922.449	140.930
22.	25:10:46:25	243.424	512.472	-128.118	-384.354	64.059	589.343	832.767	-38.435
23.	25:10:46:41	269.048	448.413	-140.930	-320.295	0.0	102.494	1076.191	-25.624
24.	25:10:46:56	320.295	448.413	-217.801	-384.354	0.0	25.624	948.073	-153.742
25.	25:10:47:12	345.918	512.472	-179.365	-320.295	0.0	25.624	935.261	-166.553
26.	25:10:47:28	358.730	499.660	-140.930	-269.048	12.812	25.624	948.073	-140.930
27.	25:10:48:9	358.730	486.848	-64.059	-128.118	0.0	38.435	948.073	-140.930
28.	25:10:48:39	333.107	499.660	12.812	76.871	0.0	38.435	858.390	-217.801
29.	25:10:48:59	333.107	474.036	153.742	269.048	25.624	76.871	755.896	-320.295
30.	25:10:49:39	204.989	345.918	204.989	358.730	51.247	128.118	704.649	-345.918
31.	25:10:50:9	153.742	294.671	217.801	371.542	51.247	128.118	666.213	-345.918
32.	25:10:50:39	102.494	256.236	179.365	384.354	76.871	115.306	666.213	-345.918
33.	25:10:51:9	89.683	230.612	140.930	333.107	51.247	89.683	717.461	-281.859
34.	25:10:51:39	64.059	192.177	89.683	269.048	25.624	64.059	755.896	-256.236
35.	25:10:52:9	38.435	153.742	-38.435	140.930	25.624	51.247	832.767	-179.365
36.	25:10:52:39	38.435	128.118	38.435	140.930	51.247	64.059	845.579	-166.553

AVERAGE LOAD

1.	325.000
2.	1805.000
3.	3740.000
4.	3957.500
5.	3903.750
6.	5318.750
7.	6767.500
8.	8501.250
9.	9962.500
10.	11323.750
11.	13161.250
12.	14368.750
13.	15741.250
14.	17437.500
15.	18538.750
16.	19832.500
17.	21382.500
18.	22317.500
19.	23272.500
20.	24308.750
21.	23918.750
22.	23580.000
23.	23131.250
24.	19276.250
25.	18221.250
26.	17178.750
27.	15790.000
28.	14598.750
29.	13580.000
30.	11963.750
31.	10206.250
32.	8993.750
33.	7378.750
34.	5711.250
35.	4558.750
36.	4538.750

3.3.4 SPECIMEN #21

TEST NO. 53

CORRUGATED LINER WITH 500 PSI BACKPACKING

1:2 LOADING RATIO

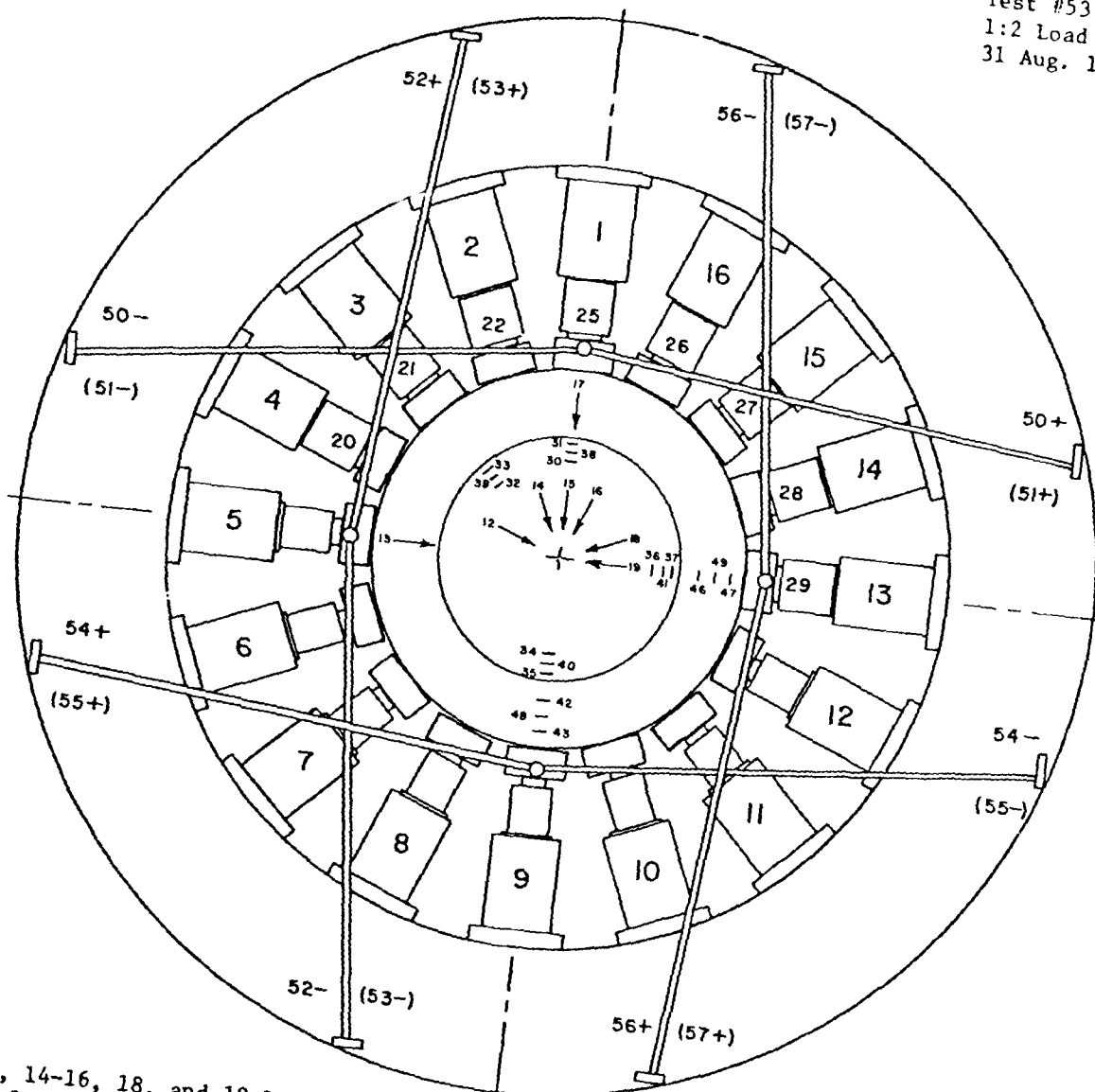
TESTED 31 AUGUST 1978

REACTION FRAME TEST SET-UP

Specimen #21

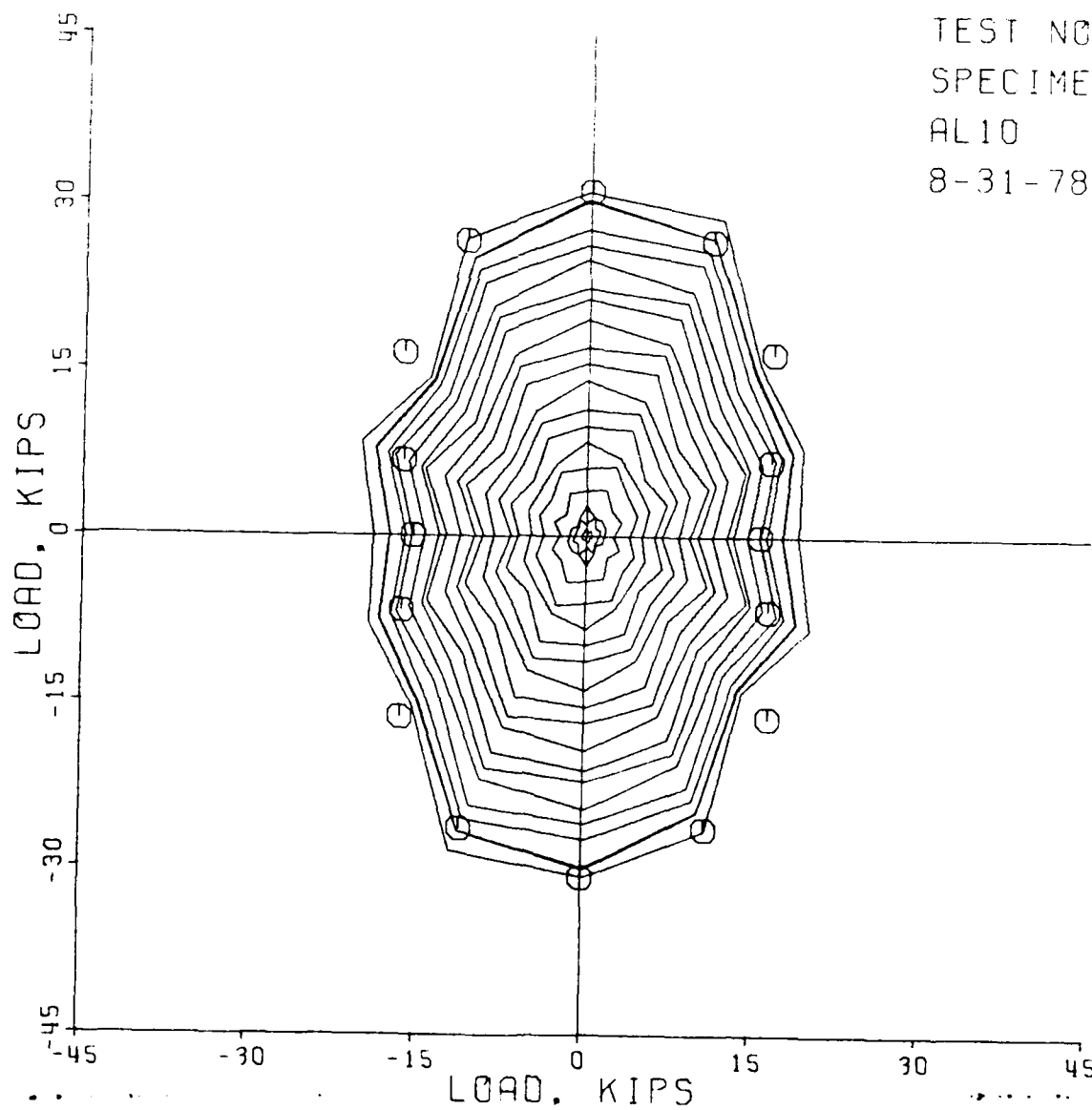
2/7 Scale AL 10

Test #53
1:2 Load
31 Aug. 1978

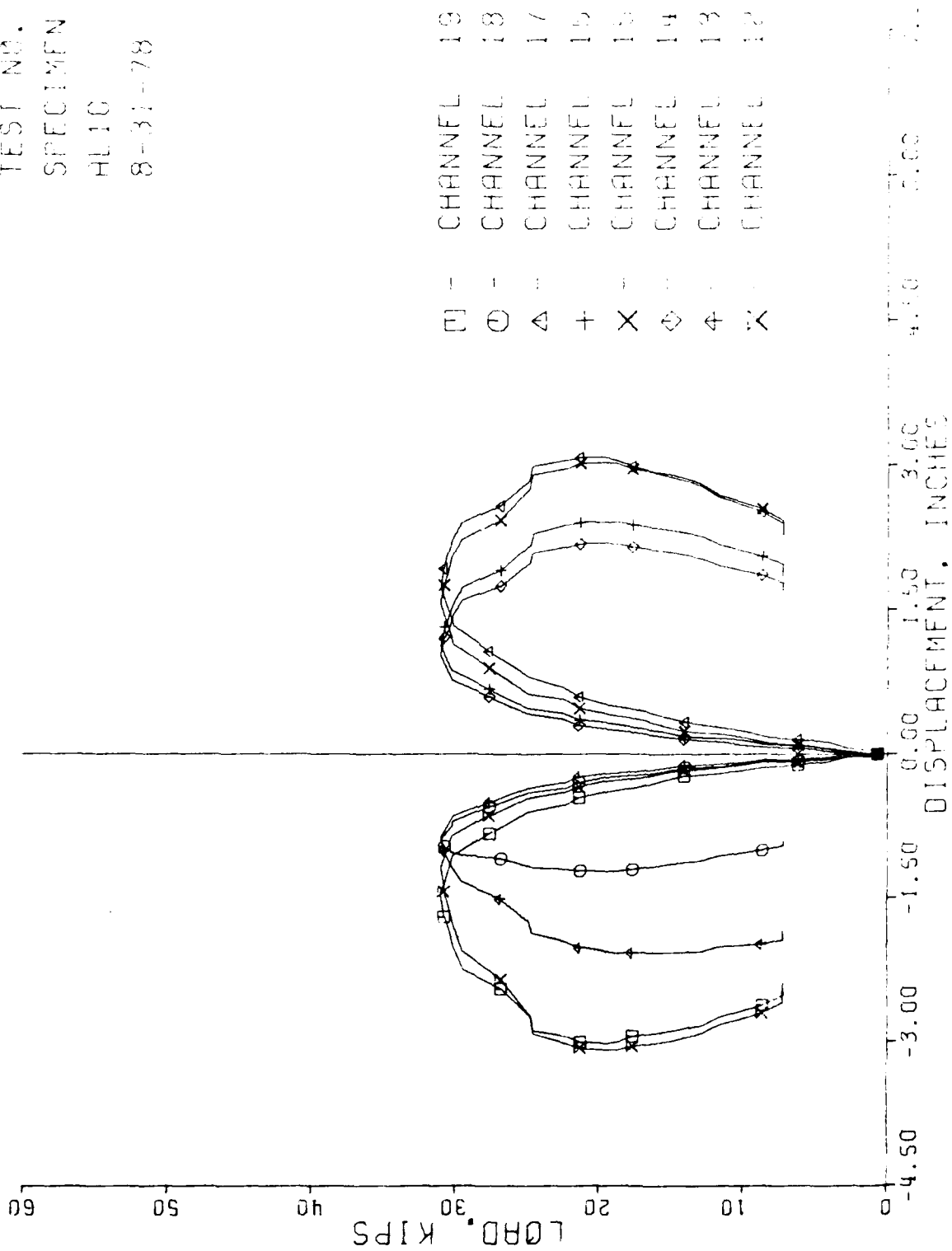


CH 12, 14-16, 18, and 19 Load axis I.D., CH 13, 17 Load axis O.D. (Research, Inc. 4040).
CH 20-22, 25-29 Axial load (Transducers, Inc. Model 693-300K).
CH 30, 32, 34 and 36 (Ailtech SG 129-6S) are mounted on crest. (Min. I.D.)
CH 31, 33, 35 and 37 (Ailtech SG 129-6S) are mounted in valley. (Max. I.D.)
CH 38, 39, 40 and 41 (Ailtech SG 129-6S) are mounted midway $6 \frac{3}{4}$ " from top.
CH 42, 43, 46-49 (BLH PA-3) On top surface. $2 \frac{3}{4}$ inch spacing.
CH 50-57 (Ailtech SG 129-6S) Polarity indicates rod under tension.
Lower rod shown (XX).

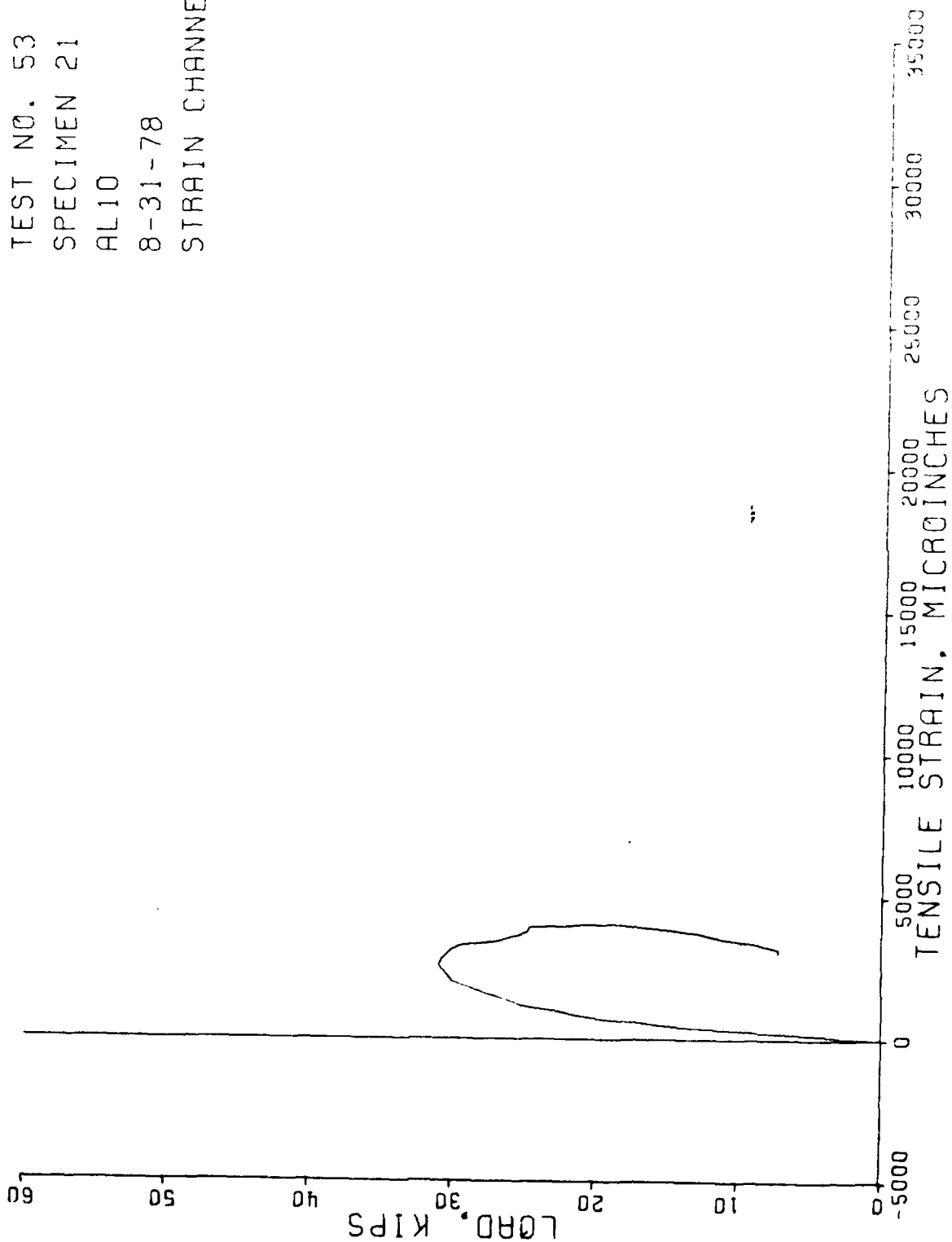
TEST NO. 53
SPECIMEN 21
AL10
8-31-78



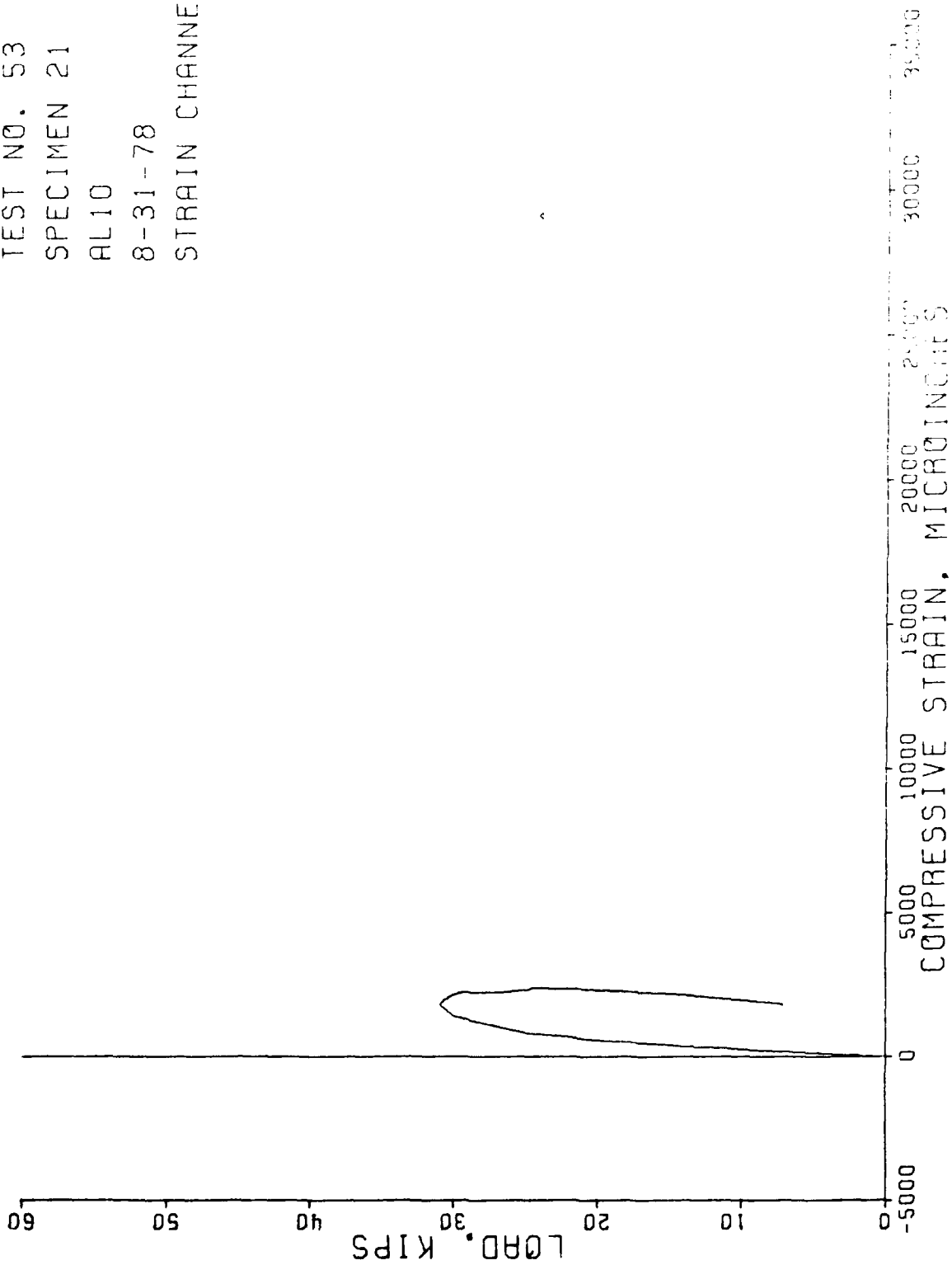
TEST NO. 53
SPECIMEN 21
HL10
8-31-78



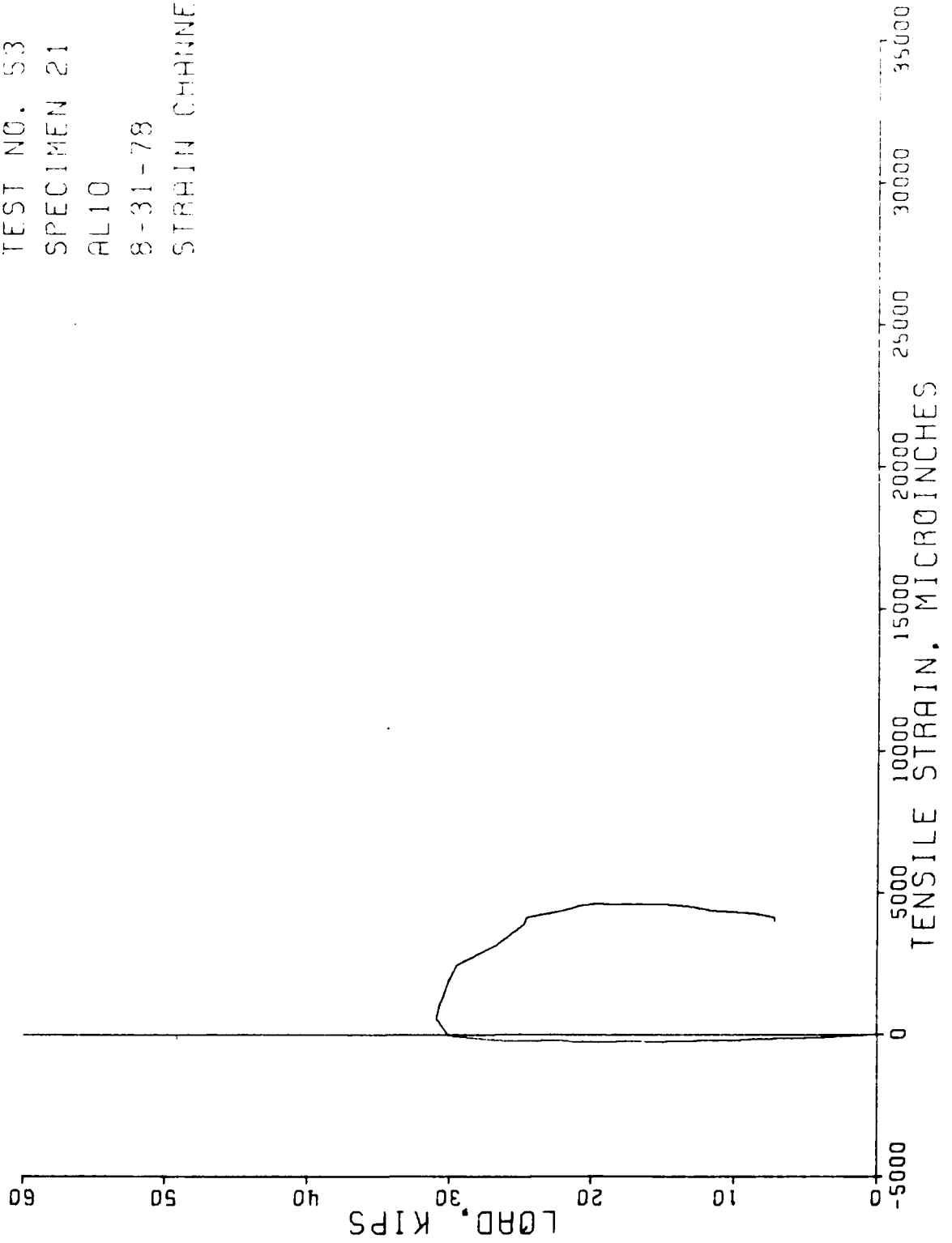
TEST NO. 53
SPECIMEN 21
AL10
8-31-78
STRAIN CHANNEL 30



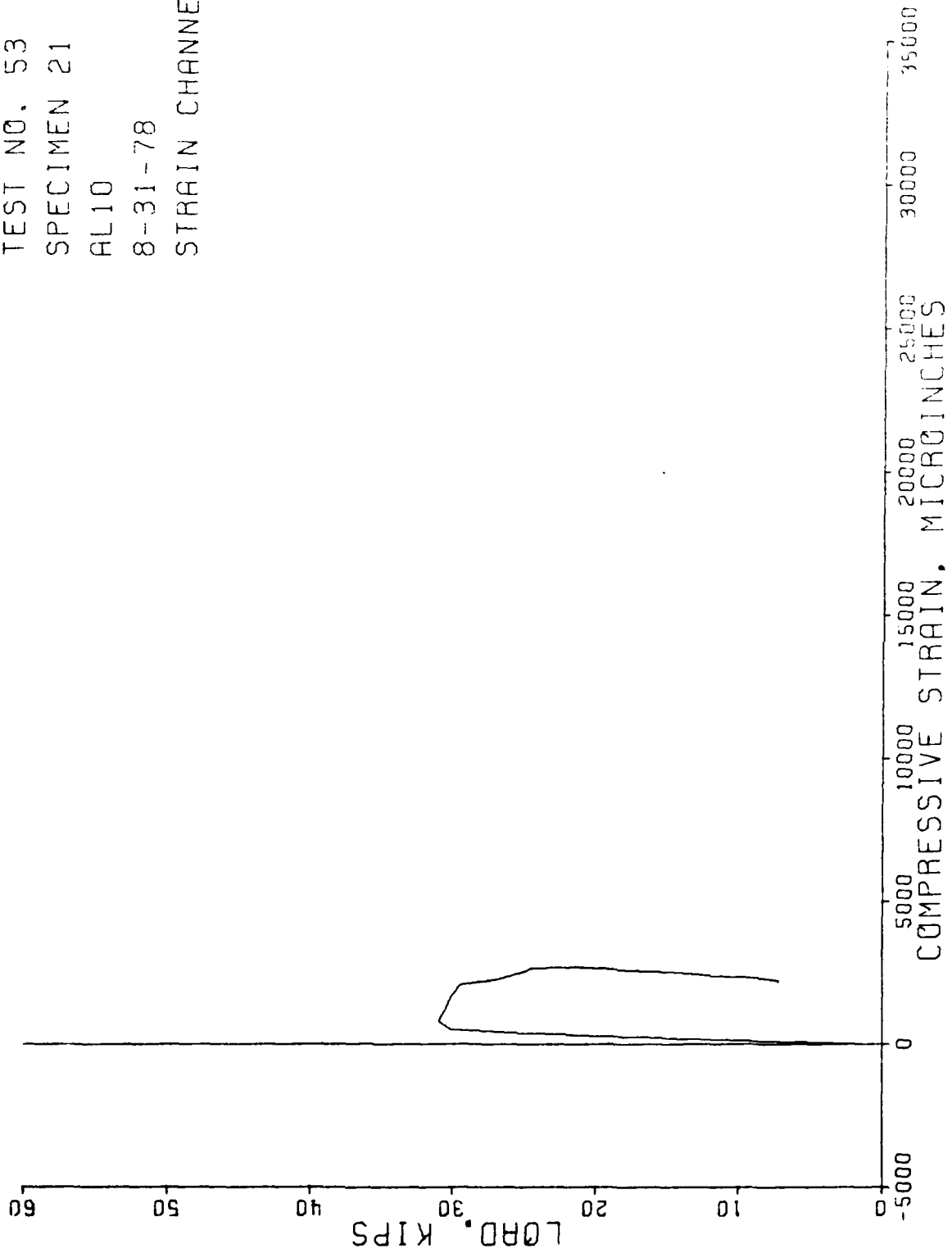
TEST NO. 53
SPECIMEN 21
AL10
8-31-78
STRAIN CHANNEL 31



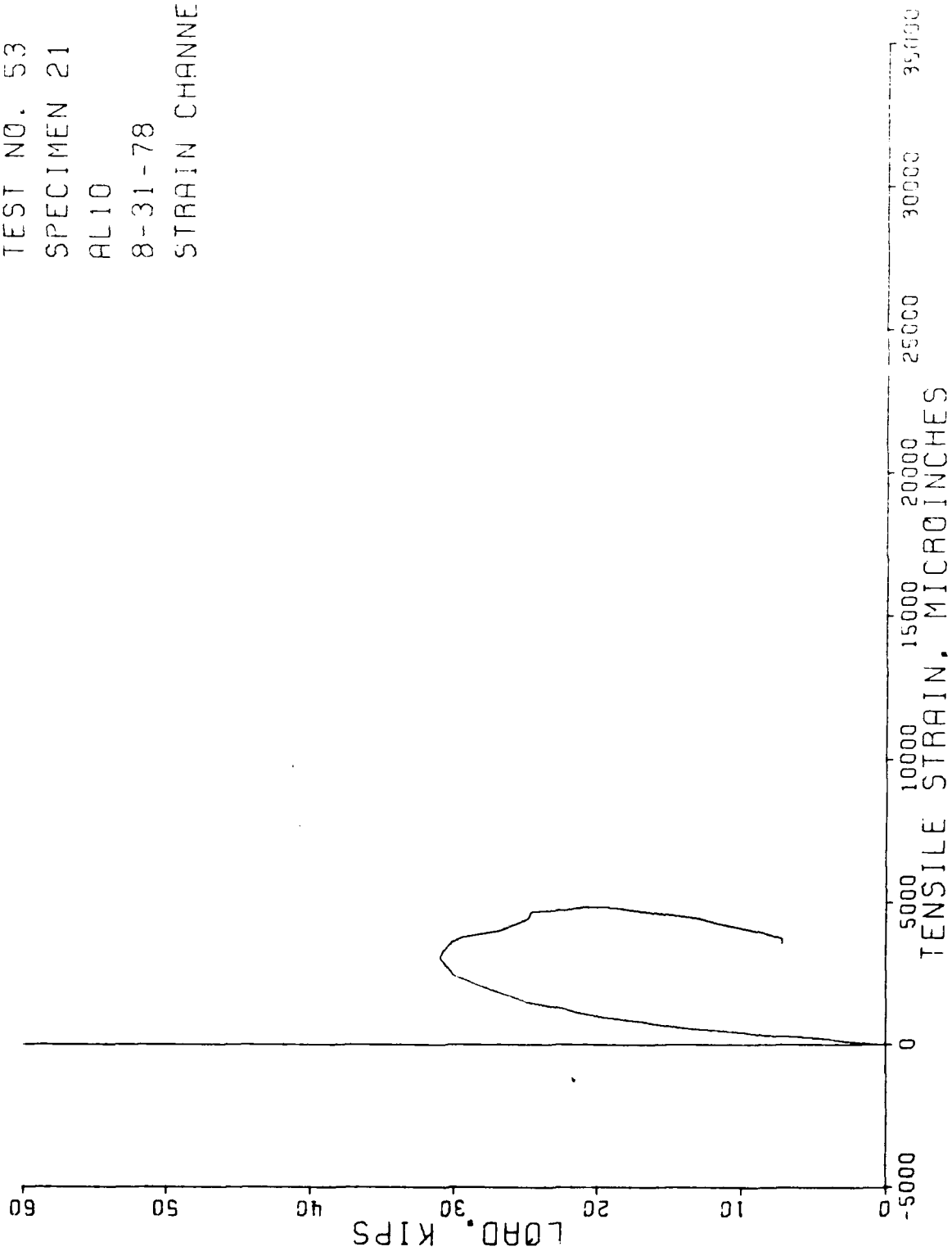
TEST NO. 53
SPECIMEN 21
AL10
8-31-78
STRAIN CHANNEL 32



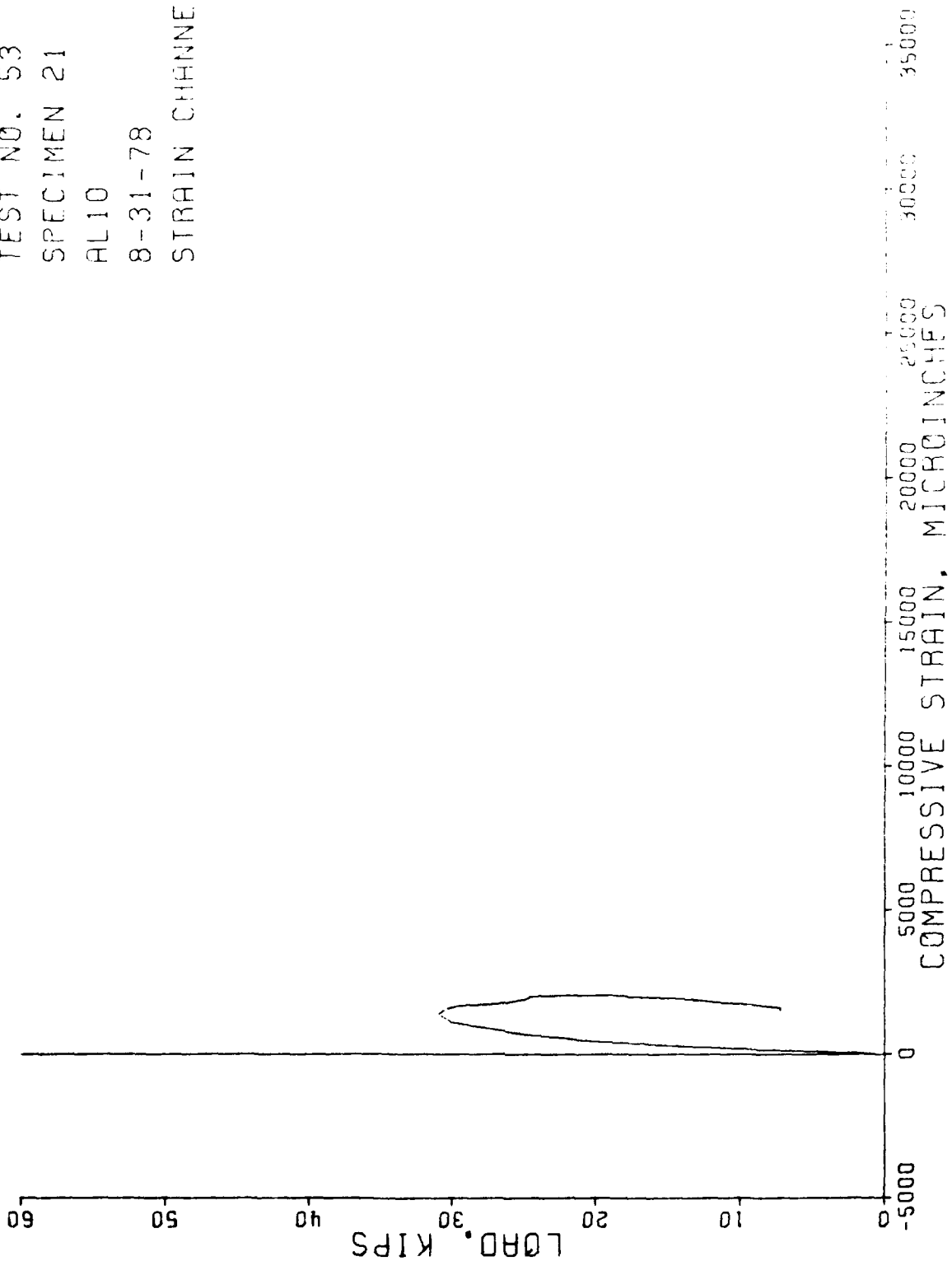
TEST NO. 53
SPECIMEN 21
AL10
8-31-78
STRAIN CHANNEL 33



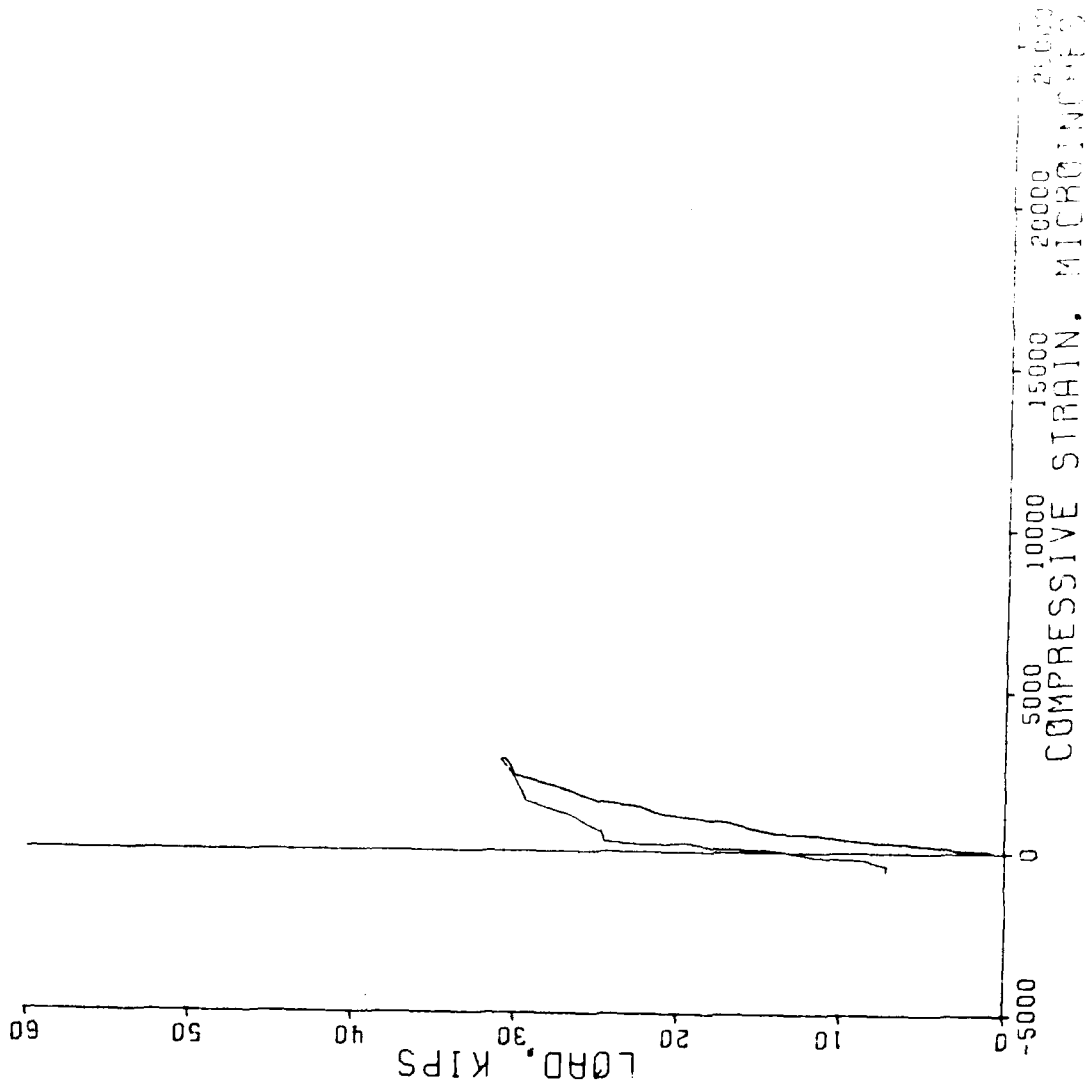
TEST NO. 53
SPECIMEN 21
AL10
8-31-78
STRAIN CHANNEL 34



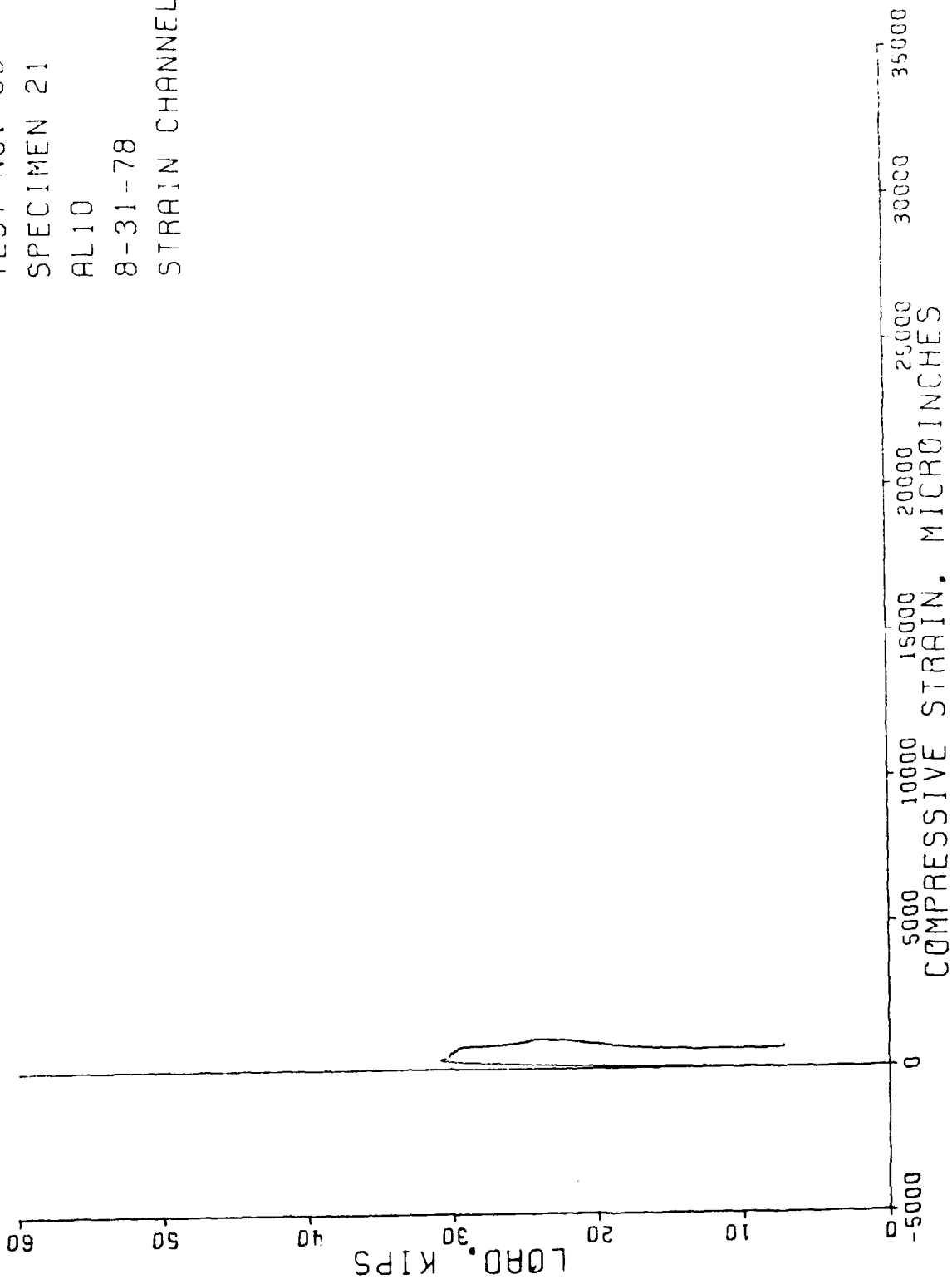
TEST NO. 53
SPECIMEN 21
AL10
8-31-78
STRAIN CHANNEL 35



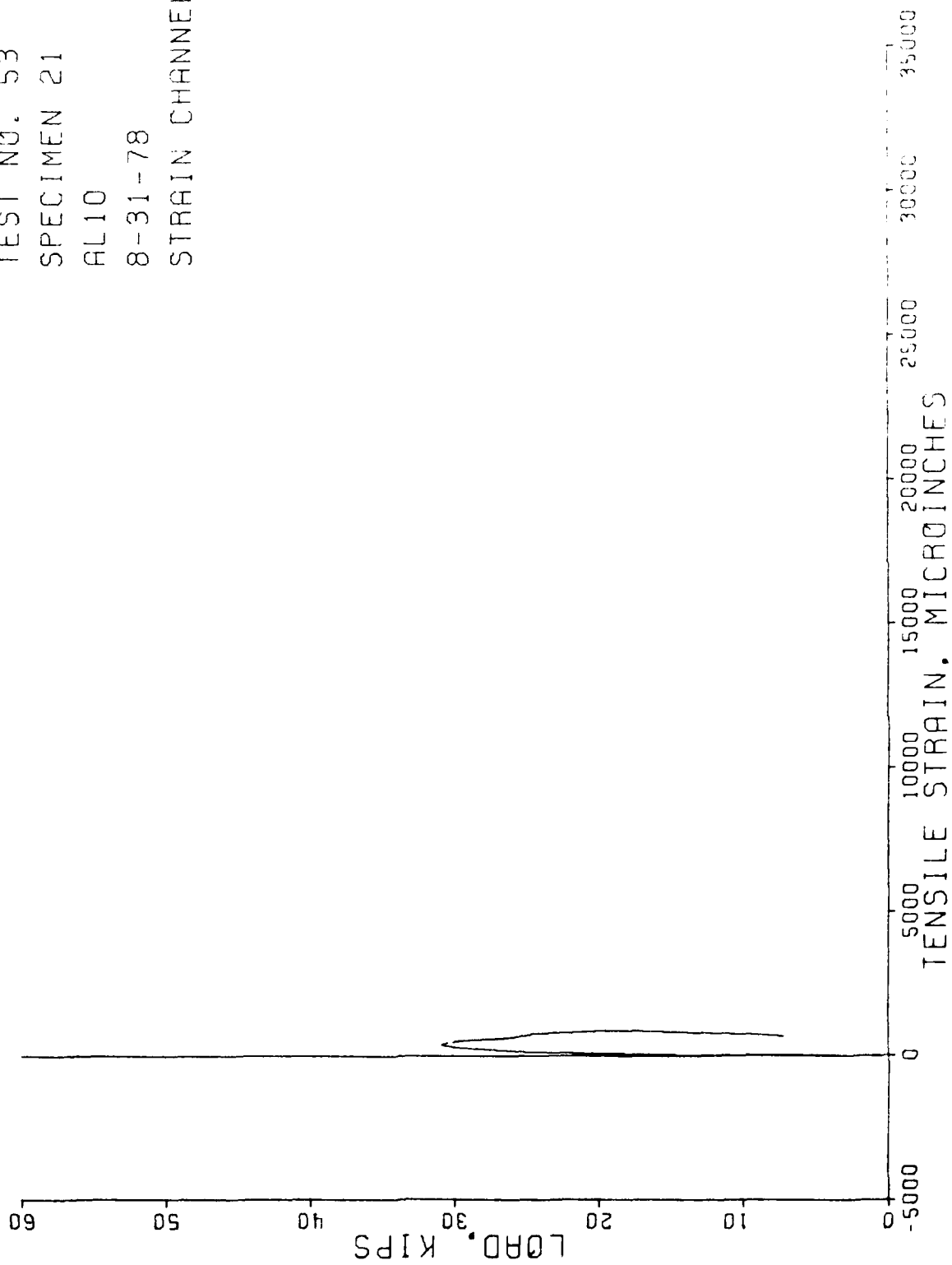
TEST NO. 93
SPECIMEN 21
H110
9 31-78
STRAIN CHANNEL 30



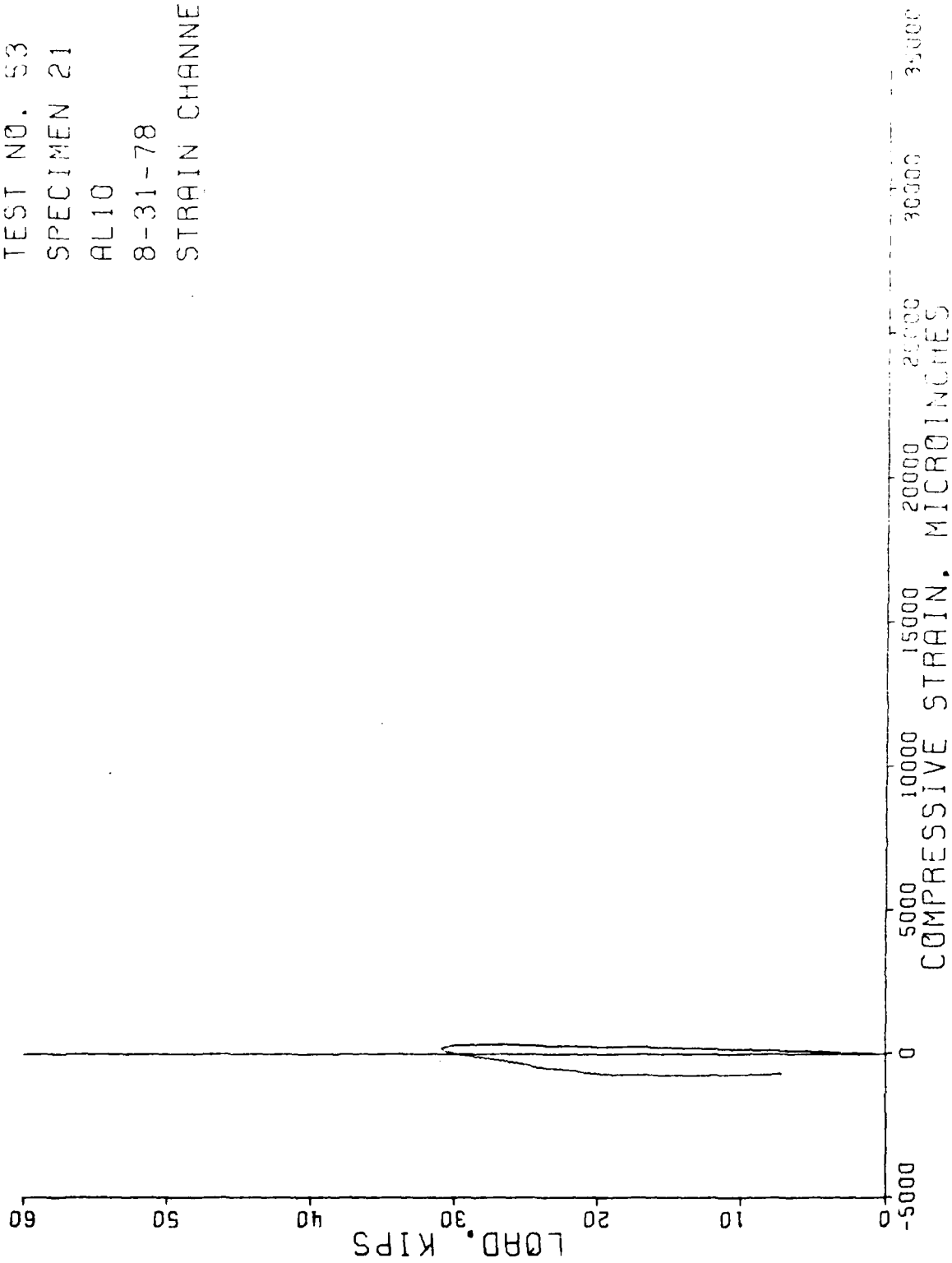
TEST NO. 53
SPECIMEN 21
AL10
8-31-78
STRAIN CHANNEL 37



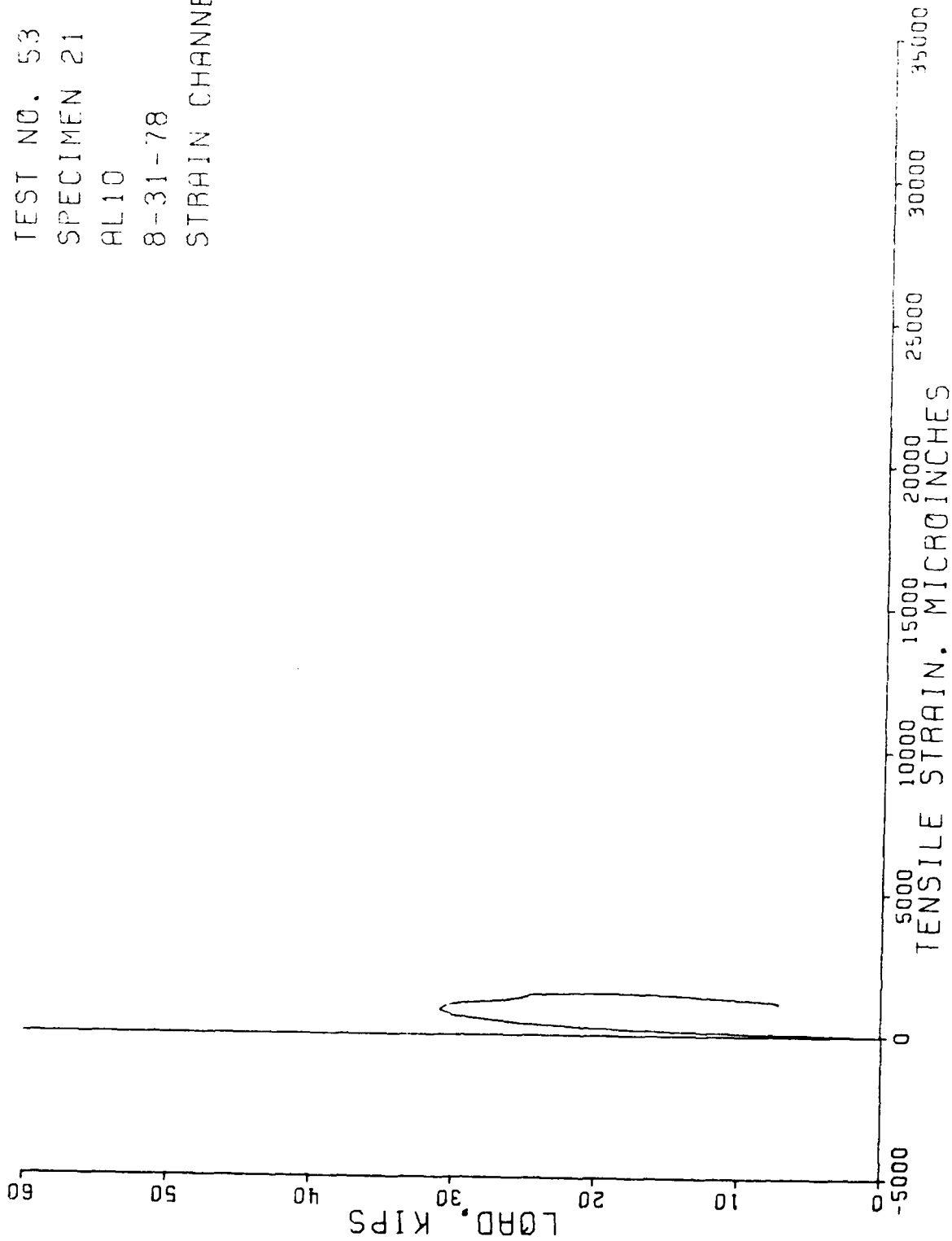
TEST NO. 53
 SPECIMEN 21
 AL10
 8-31-78
 STRAIN CHANNEL 38



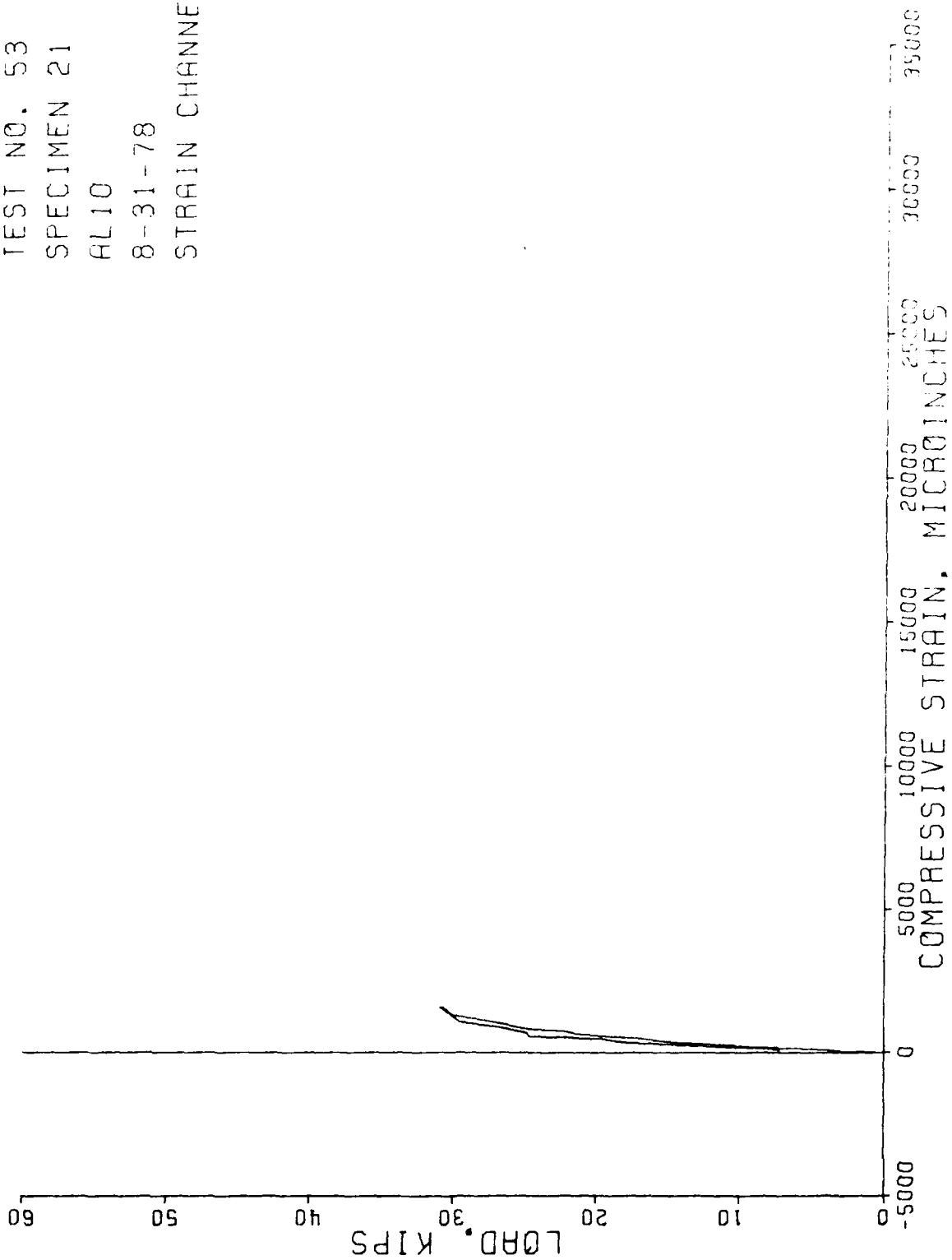
TEST NO. 53
SPECIMEN 21
AL10
8-31-78
STRAIN CHANNEL 39



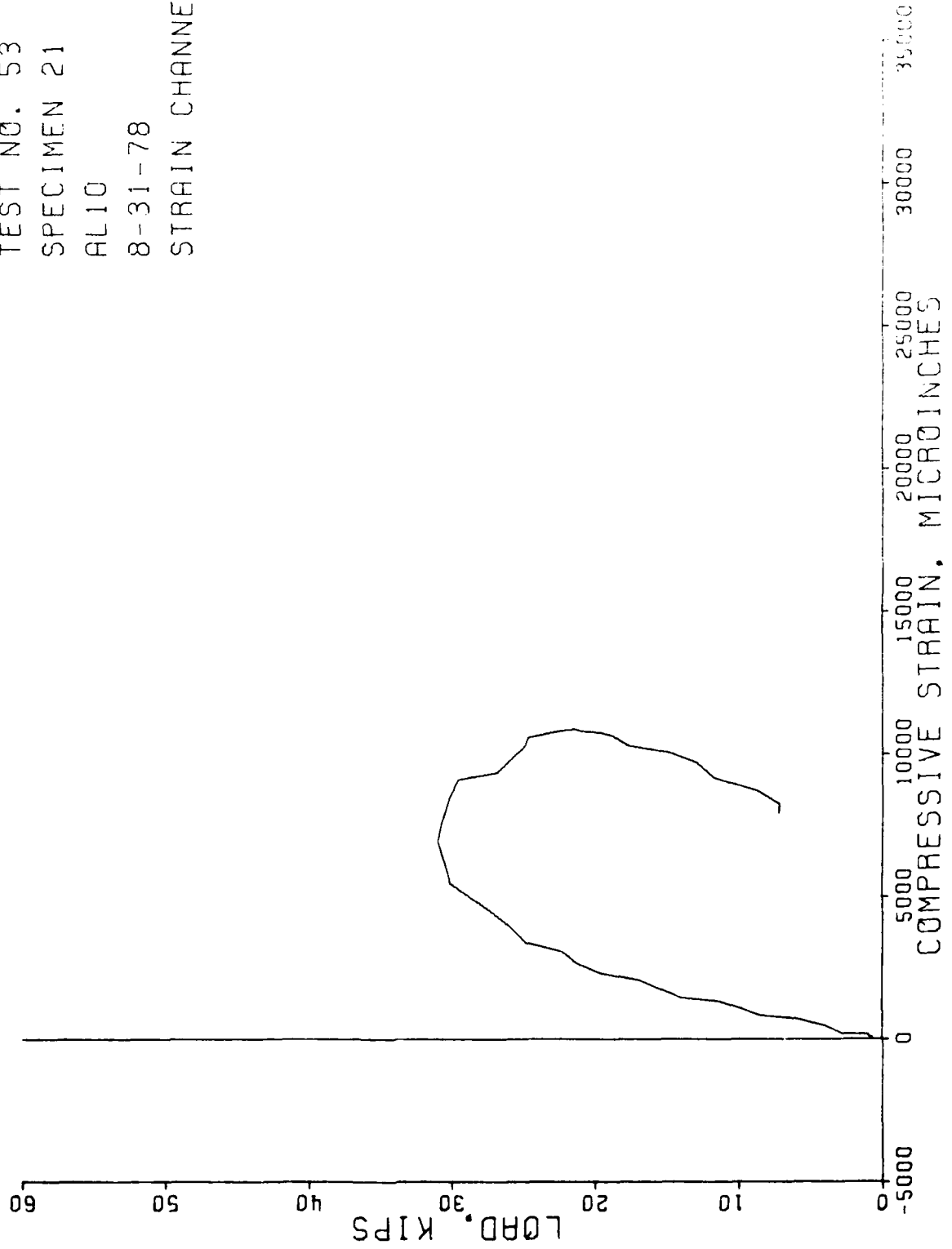
TEST NO. 53
SPECIMEN 21
AL10
8-31-78
STRAIN CHANNEL 40



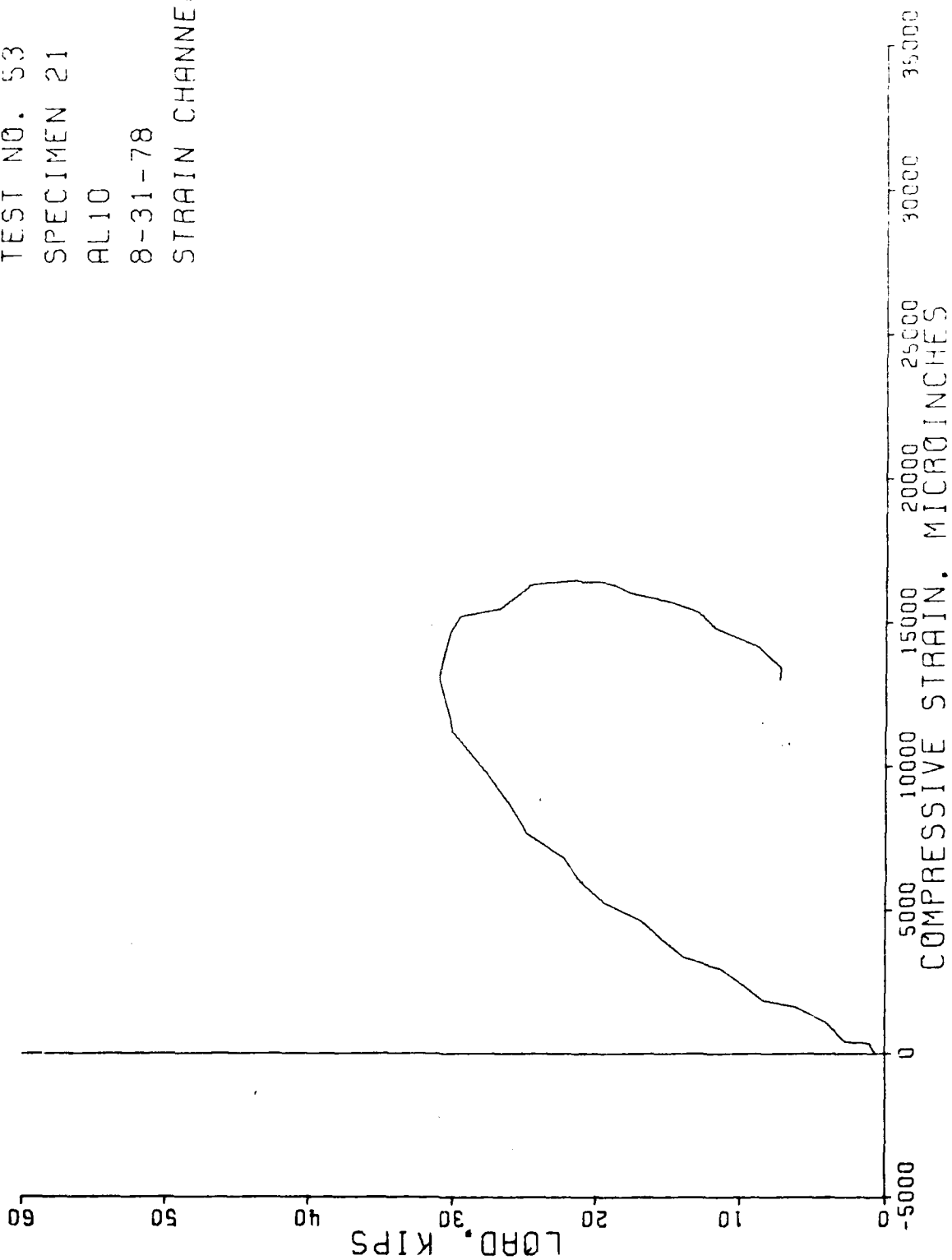
TEST NO. 53
SPECIMEN 21
AL10
8-31-78
STRAIN CHANNEL 41



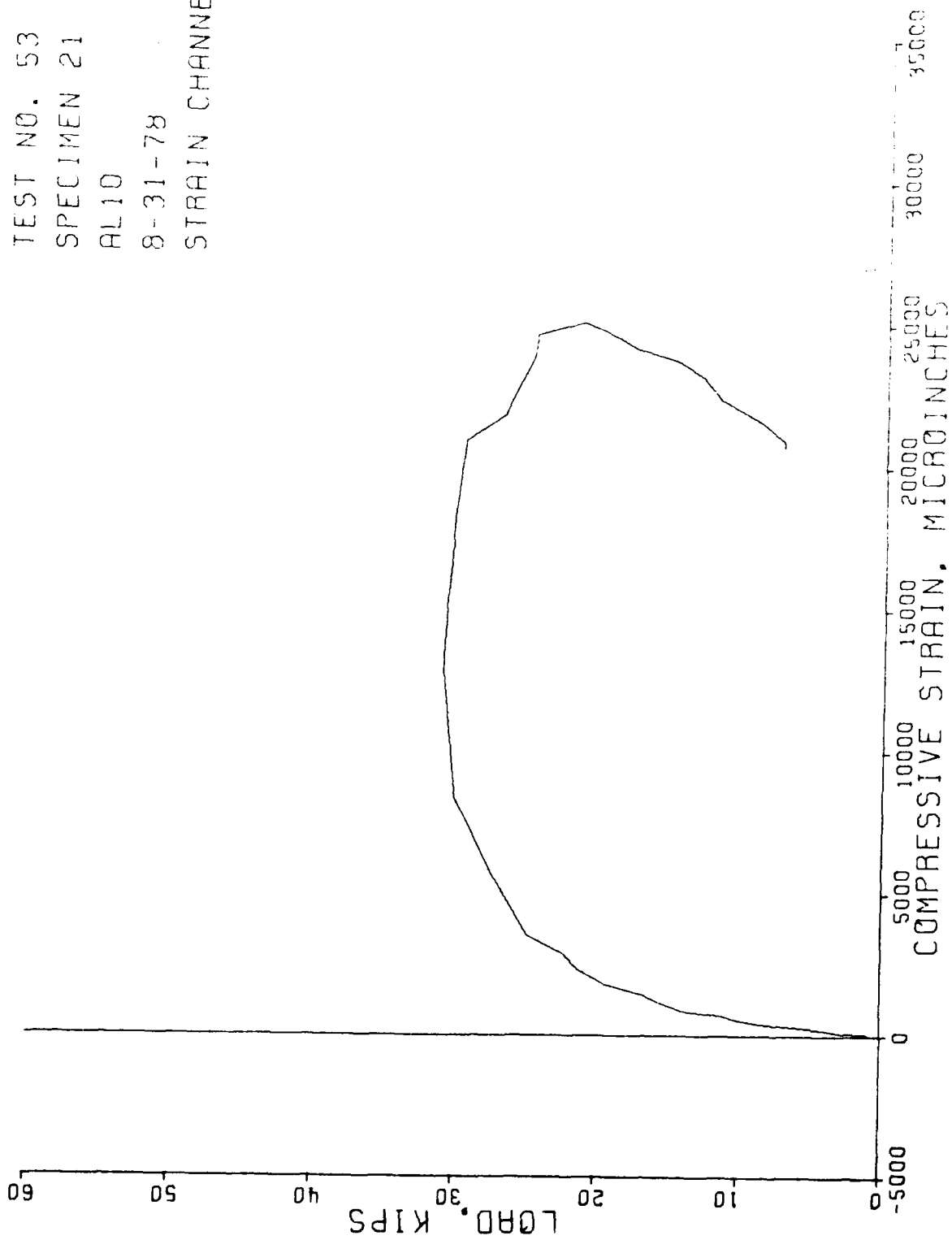
TEST NO. 53
SPECIMEN 21
AL10
8-31-78
STRAIN CHANNEL 42



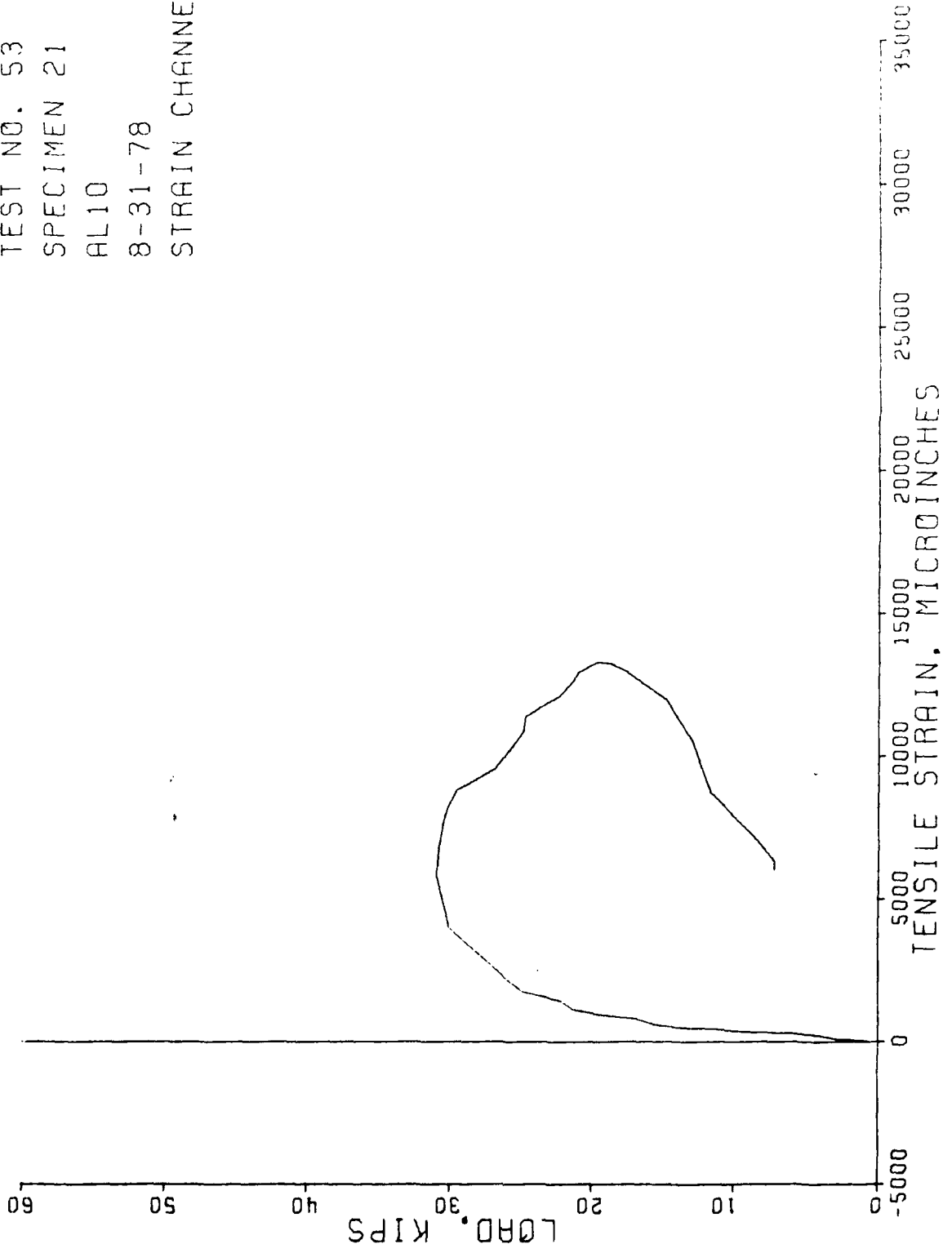
TEST NO. 53
SPECIMEN 21
AL10
8-31-78
STRAIN CHANNEL 43



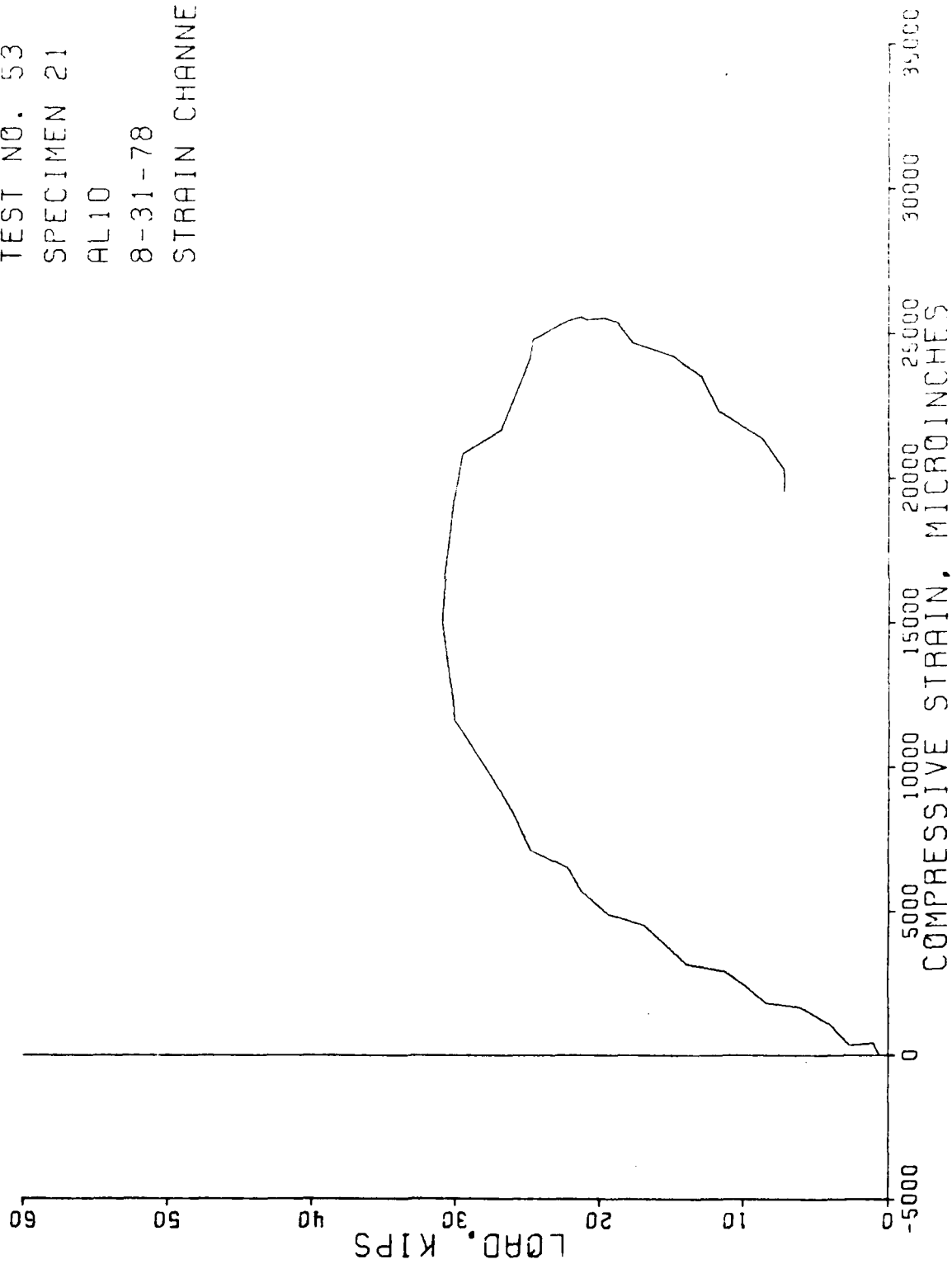
TEST NO. 53
SPECIMEN 21
AL10
8-31-78
STRAIN CHANNEL 46



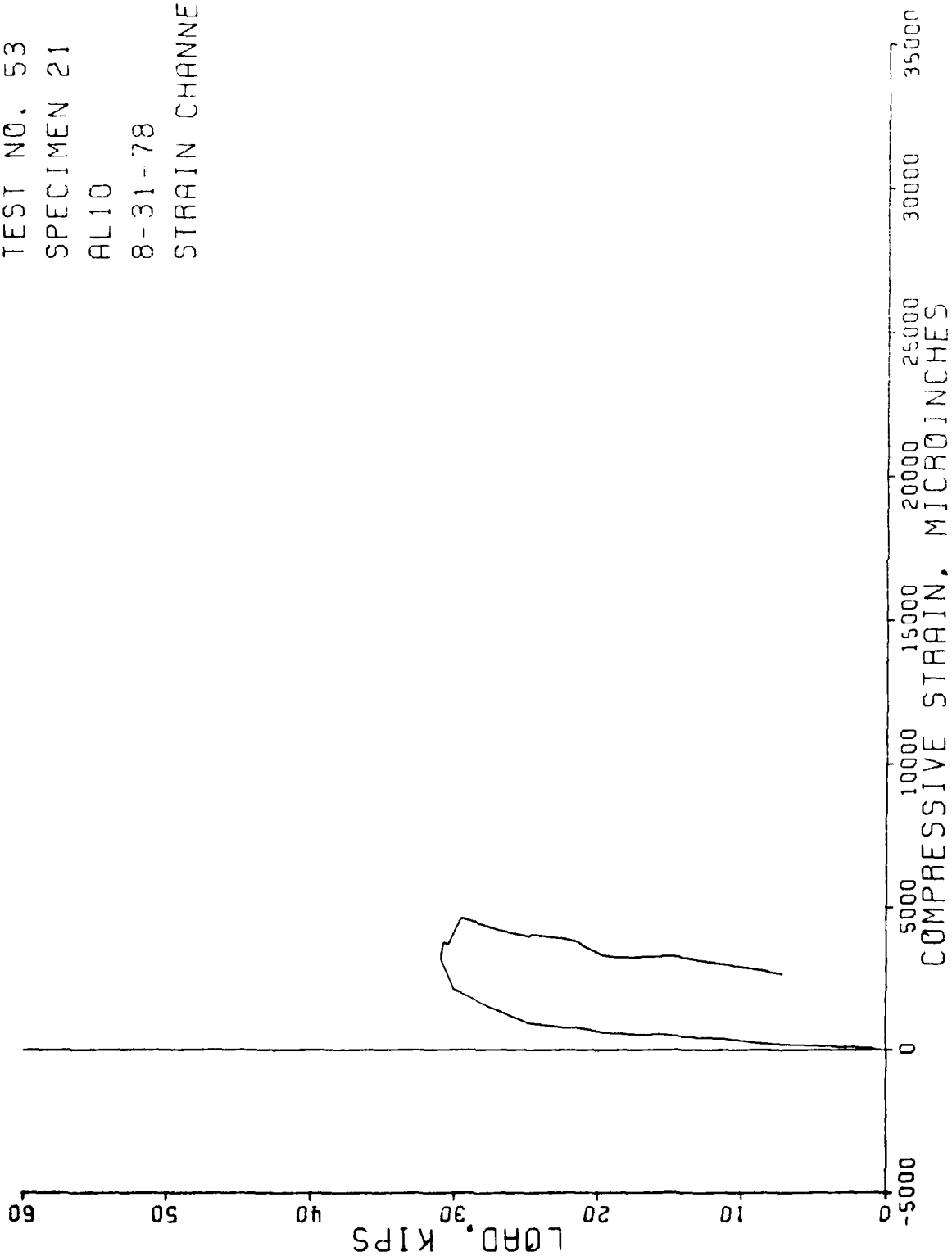
TEST NO. 53
SPECIMEN 21
AL10
8-31-78
STRAIN CHANNEL 47



TEST NO. 53
 SPECIMEN 21
 AL10
 8-31-78
 STRAIN CHANNEL 48



TEST NO. 53
SPECIMEN 21
AL10
8-31-78
STRAIN CHANNEL 49



TEST NO. 53 SPECIMEN 21 AL10 8-31-78

NUMBER OF INCREMENTS= 39
 NUMBER OF CHANNELS= 42
 NUMBER OF STRAIN CHANNELS= 18
 NUMBER OF DISPLACEMENT CHANNELS= 8
 NUMBER OF LOAD CHANNELS= 8
 NUMBER OF PRESSURE CHANNELS= 0
 NUMBER OF RODS= 8

CHANNEL	ZEROSHIFT
57	0.0
56	0.0
55	0.0
54	0.0
53	0.0
52	0.0
51	0.0
50	0.0
49	0.0
48	0.0
47	0.0
46	0.0
45	0.0
44	0.0
43	0.0
42	0.0
41	0.0
40	0.0
39	0.0
38	0.0
37	0.0
36	0.0
35	0.0
34	0.0
33	0.0
32	0.0
31	0.0
30	0.0
29	0.0
28	0.0
27	0.0
26	0.0
25	0.0
24	0.0
23	0.0
22	0.0
21	0.0
20	0.0
19	0.0
18	0.0
17	0.0
16	0.0
15	0.0
14	0.0
13	0.0
12	0.0

STRAIN CHANNEL CALIBRATION

49 1.000
 48 1.000
 47 1.000
 46 1.000
 45 1.000
 44 1.000
 43 1.000
 42 1.000
 41 1.000
 40 1.000
 39 1.000
 38 1.000
 37 1.000
 36 1.000
 35 1.000
 34 1.000
 33 1.000
 32 1.000
 31 1.000
 30 1.000

CALIBRATION

19 0.001
 18 0.001
 17 0.001
 16 0.002
 15 0.002
 14 0.002
 13 0.002
 12 0.002

CALIBRATION

29 10.000
 28 10.000
 27 10.000
 26 10.000
 25 10.000
 24 10.000
 23 10.000
 22 10.000
 21 10.000
 20 10.000

CALIBRATION

57 1.000
 56 1.000
 55 1.000
 54 1.000
 53 1.000
 52 1.000
 51 1.000
 50 1.000

49
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DISPLACEMENT CHANNEL

19
 18
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 12

LOAD CHANNEL

29
 28
 27
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 24
 23
 22
 21
 20

ROD CHANNEL

57
 56
 55
 54
 53
 52
 51
 50

STRAIN CHANNELS

TIME	CH.49	CH.48	CH.47	CH.46	CH.43	CH.42	CH.41	CH.40
1. 30:10:24:56	-2.000	-3.000	-1.000	-1.000	-3.000	-3.000	0.0	0.0
2. 30:10:32:29	-71.000	-422.000	49.000	-64.000	-362.000	-180.000	-20.000	7.000
3. 30:10:33:40	-93.000	-349.000	82.000	-111.000	-408.000	-166.000	-36.000	24.000
4. 30:10:39:15	-120.000	-1079.000	235.000	-214.000	-1098.000	-735.000	-98.000	51.000
5. 30:10:40:46	-170.000	-1667.000	304.000	-326.000	-1629.000	-735.000	-150.000	68.000
6. 30:10:41:46	-225.000	-1831.000	322.000	-417.000	-1882.000	-826.000	-177.000	86.000
7. 30:10:42:46	-315.000	-2451.000	377.000	-554.000	-2450.000	-1104.000	-226.000	107.000
8. 30:10:43:46	-388.000	-2929.000	444.000	-719.000	-2957.000	-1319.000	-282.000	122.000
9. 30:10:44:46	-444.000	-3185.000	505.000	-886.000	-3384.000	-1455.000	-321.000	145.000
10. 30:10:45:46	-553.000	-3868.000	597.000	-1157.000	-4026.000	-1777.000	-404.000	173.000
11. 30:10:46:46	-530.000	-4523.000	807.000	-1463.000	-4647.000	-2085.000	-497.000	201.000
12. 30:10:47:46	-606.000	-4922.000	956.000	-1826.000	-5287.000	-2293.000	-569.000	239.000
13. 30:10:48:46	-765.000	-5694.000	1126.000	-2323.000	-6066.000	-2677.000	-651.000	279.000
14. 30:10:49:46	-778.000	-6541.000	1660.000	-2860.000	-6819.000	-3082.000	-754.000	321.000
15. 30:10:50:46	-960.000	-7157.000	1739.000	-3532.000	-7680.000	-3391.000	-834.000	377.000
16. 30:10:51:46	-1199.000	-8429.000	2196.000	-4489.000	-8677.000	-4004.000	-960.000	442.000
17. 30:10:52:46	-1489.000	-9708.000	2885.000	-5807.000	-9694.000	-4602.000	-1106.000	522.000
18. 30:10:54:46	-2143.000	-11613.000	3997.000	-8331.000	-11241.000	-5464.000	-1302.000	685.000
19. 30:10:54:26	-2269.000	-12269.000	4280.000	-8872.000	-11559.000	-5713.000	-1348.000	714.000
20. 30:10:55:27	-3202.000	-15006.000	5806.000	-12736.000	-12965.000	-5900.000	-1576.000	860.000
21. 30:10:55:57	-3781.000	-16619.000	6934.000	-15037.000	-13626.000	-7513.000	-1564.000	940.000
22. 30:10:56:15	-3679.000	-17834.000	7733.000	-16555.000	-14162.000	-7970.000	-1496.000	988.000
23. 30:10:56:34	-3948.000	-19210.000	8178.000	-18454.000	-14673.000	-8428.000	-1341.000	1042.000
24. 30:10:56:52	-4637.000	-20880.000	8828.000	-20889.000	-15221.000	-9115.000	-1050.000	1104.000
25. 30:10:57:10	-4130.000	-21689.000	9581.000	-21824.000	-15459.000	-9370.000	-887.000	1185.000
26. 30:10:58:4	-3956.000	-24151.000	10350.000	-23818.000	-16177.000	-10332.000	-623.000	1254.000
27. 30:10:58:34	-4035.000	-24822.000	11407.000	-24653.000	-16293.000	-10601.000	-560.000	1409.000
28. 30:10:59:4	-3881.000	-25444.000	12137.000	-24981.000	-16437.000	-10848.000	-516.000	1429.000
29. 30:10:59:34	-3758.000	-25591.000	12620.000	-25064.000	-16467.000	-10889.000	-494.000	1449.000
30. 30:11:0:4	-3603.000	-25498.000	12959.000	-25002.000	-16401.000	-10819.000	-476.000	1459.000
31. 30:11:0:34	-3304.000	-25552.000	13309.000	-24721.000	-16389.000	-10783.000	-464.000	1462.000
32. 30:11:1:4	-3235.000	-25412.000	13222.000	-24688.000	-16306.000	-10680.000	-404.000	1460.000
33. 30:11:1:34	-3217.000	-24693.000	13009.000	-24167.000	-16021.000	-10317.000	-323.000	1440.000
34. 30:11:2:4	-3285.000	-24215.000	12010.000	-23741.000	-15711.000	-10071.000	-282.000	1391.000
35. 30:11:2:34	-3136.000	-23525.000	10541.000	-23186.000	-15345.000	-9734.000	-237.000	1354.000
36. 30:11:3:4	-3023.000	-22330.000	8748.000	-22403.000	-14803.000	-9173.000	-193.000	1301.000
37. 30:11:3:34	-2789.000	-21376.000	7215.000	-21587.000	-14159.000	-8736.000	-160.000	1216.000
38. 30:11:4:4	-2660.000	-20330.000	6326.000	-20953.000	-13462.000	-8281.000	-90.000	1154.000
39. 30:11:4:54	-2712.000	-19544.000	6010.000	-20728.000	-12991.000	-7930.000	-32.000	1105.000

STRAIN CHANNELS

	CH.39	CH.38	CH.37	CH.36	CH.35	CH.34	CH.33	CH.32
1. 30:10:24:56	1.000	1.000	0.0	1.000	0.0	2.000	2.000	1.000
2. 30:10:32:29	-19.000	0.0	-2.000	-44.000	-16.000	32.000	-10.000	-33.000
3. 30:10:33:40	-34.000	10.000	-4.000	-77.000	-39.000	91.000	-19.000	-56.000
4. 30:10:39:15	-65.000	24.000	-1.000	-193.000	-86.000	199.000	-40.000	-100.000
5. 30:10:40:46	-98.000	24.000	-8.000	-287.000	-121.000	269.000	-79.000	-126.000
6. 30:10:41:46	-124.000	29.000	-30.000	-329.000	-153.000	337.000	-99.000	-160.000
7. 30:10:42:46	-157.000	32.000	-37.000	-409.000	-192.000	422.000	-125.000	-201.000
8. 30:10:43:46	-173.000	32.000	-53.000	-524.000	-222.000	483.000	-159.000	-197.000
9. 30:10:44:46	-200.000	34.000	-44.000	-584.000	-263.000	576.000	-181.000	-233.000
10. 30:10:45:46	-227.000	39.000	-58.000	-726.000	-314.000	685.000	-214.000	-252.000
11. 30:10:46:46	-238.000	51.000	-51.000	-913.000	-365.000	798.000	-251.000	-230.000
12. 30:10:47:46	-259.000	65.000	-70.000	-1040.000	-427.000	944.000	-277.000	-240.000
13. 30:10:48:46	-287.000	78.000	-102.000	-1180.000	-499.000	1102.000	-307.000	-262.000
14. 30:10:49:46	-285.000	107.000	-105.000	-1385.000	-571.000	1261.000	-342.000	-212.000
15. 30:10:50:46	-306.000	136.000	-143.000	-1515.000	-663.000	1476.000	-355.000	-223.000
16. 30:10:51:46	-323.000	175.000	-183.000	-1728.000	-772.000	1712.000	-396.000	-216.000
17. 30:10:52:46	-318.000	223.000	-204.000	-1995.000	-889.000	1960.000	-440.000	-144.000
18. 30:10:54:46	-302.000	302.000	-256.000	-2339.000	-1108.000	2446.000	-506.000	-21.000
19. 30:10:54:26	-292.000	321.000	-252.000	-2416.000	-1154.000	2547.000	-520.000	31.000
20. 30:10:55:27	-195.000	381.000	-297.000	-2845.000	-1376.000	3018.000	-771.000	540.000
21. 30:10:55:57	-106.000	425.000	-329.000	-2841.000	-1485.000	3272.000	-1008.000	1014.000
22. 30:10:56:15	-64.000	449.000	-378.000	-2683.000	-1545.000	3419.000	-1245.000	1374.000
23. 30:10:56:34	-33.000	477.000	-506.000	-2286.000	-1607.000	3583.000	-1609.000	1837.000
24. 30:10:56:52	32.000	524.000	-748.000	-1547.000	-1669.000	3759.000	-2067.000	2483.000
25. 30:10:57:10	213.000	609.000	-792.000	-1130.000	-1745.000	3992.000	-2272.000	3122.000
26. 30:10:58:4	373.000	714.000	-934.000	-609.000	-1922.000	4420.000	-2587.000	3865.000
27. 30:10:58:34	455.000	772.000	-1000.000	-301.000	-2010.000	4669.000	-2653.000	4126.000
28. 30:10:59:4	547.000	798.000	-976.000	-232.000	-2038.000	4733.000	-2684.000	4358.000
29. 30:10:59:34	603.000	822.000	-887.000	-229.000	-2057.000	4790.000	-2688.000	4480.000
30. 30:11:0:4	641.000	843.000	-813.000	-228.000	-2062.000	4814.000	-2674.000	4544.000
31. 30:11:0:34	696.000	867.000	-771.000	-273.000	-2061.000	4815.000	-2648.000	4618.000
32. 30:11:1:4	713.000	881.000	-708.000	-200.000	-2051.000	4803.000	-2615.000	4611.000
33. 30:11:1:34	734.000	871.000	-708.000	-109.000	-2011.000	4755.000	-2572.000	4602.000
34. 30:11:2:4	752.000	835.000	-654.000	-69.000	-1943.000	4558.000	-2528.000	4528.000
35. 30:11:2:34	766.000	812.000	-635.000	23.000	-1887.000	4428.000	-2458.000	4492.000
36. 30:11:3:4	732.000	783.000	-629.000	144.000	-1805.000	4240.000	-2377.000	4367.000
37. 30:11:3:34	728.000	724.000	-620.000	222.000	-1688.000	3951.000	-2314.000	4284.000
38. 30:11:4:4	700.000	683.000	-684.000	421.000	-1599.000	3737.000	-2228.000	4121.000
39. 30:11:4:54	670.000	649.000	-755.000	601.000	-1520.000	3546.000	-2178.000	3990.000

STRAIN CHANNELS

TIME	CH. 31	CH. 30	CH.
1. 30:10:24:56	1.000	0.0	
2. 30:10:32:29	-18.000	14.000	
3. 30:10:33:40	-43.000	60.000	
4. 30:10:39:15	-95.000	139.000	
5. 30:10:40:46	-147.000	188.000	
6. 30:10:41:46	-195.000	249.000	
7. 30:10:42:46	-253.000	316.000	
8. 30:10:43:46	-295.000	361.000	
9. 30:10:44:46	-352.000	437.000	
10. 30:10:45:46	-421.000	511.000	
11. 30:10:46:46	-475.000	594.000	
12. 30:10:47:46	-552.000	705.000	
13. 30:10:48:46	-635.000	819.000	
14. 30:10:49:46	-702.000	946.000	
15. 30:10:50:46	-809.000	1117.000	
16. 30:10:51:46	-937.000	1323.000	
17. 30:10:52:46	-1088.000	1566.000	
18. 30:10:54:46	-1403.000	2021.000	
19. 30:10:54:26	-1454.000	2110.000	
20. 30:10:55:27	-1786.000	2558.000	
21. 30:10:55:57	-1938.000	2801.000	
22. 30:10:56:15	-2030.000	2943.000	
23. 30:10:56:34	-2129.000	3095.000	
24. 30:10:56:52	-2219.000	3273.000	
25. 30:10:57:10	-2215.000	3432.000	
26. 30:10:58:4	-2315.000	3744.000	
27. 30:10:58:34	-2369.000	3918.000	
28. 30:10:59:4	-2362.000	3958.000	
29. 30:10:59:34	-2350.000	3995.000	
30. 30:11:0:4	-2335.000	4016.000	
31. 30:11:0:34	-2304.000	4034.000	
32. 30:11:1:4	-2286.000	4044.000	
33. 30:11:1:34	-2241.000	3980.000	
34. 30:11:2:4	-2165.000	3827.000	
35. 30:11:2:34	-2104.000	3717.000	
36. 30:11:3:4	-2029.000	3584.000	
37. 30:11:3:34	-1911.000	3346.000	
38. 30:11:4:4	-1831.000	3183.000	
39. 30:11:4:54	-1778.000	3039.000	

DISPLACEMENT CHANNELS

	TIME	CH.19	CH.18	CH.17	CH.16	CH.15	CH.14	CH.13	CH.12
1.	30:10:24:56	0.0	-0.002	0.0	-0.002	0.0	0.0	-0.004	0.004
2.	30:10:32:29	-0.029	-0.019	0.034	0.002	-0.002	0.0	-0.002	-0.008
3.	30:10:33:40	-0.028	-0.019	0.063	0.014	0.030	0.0	-0.002	-0.026
4.	30:10:39:15	-0.086	-0.047	0.124	0.060	0.058	0.030	-0.032	-0.054
5.	30:10:40:46	-0.114	-0.076	0.153	0.090	0.090	0.068	-0.062	-0.084
6.	30:10:41:46	-0.143	-0.104	0.180	0.096	0.118	0.090	-0.062	-0.086
7.	30:10:42:46	-0.172	-0.132	0.239	0.146	0.176	0.090	-0.090	-0.116
8.	30:10:43:46	-0.201	-0.144	0.269	0.156	0.206	0.120	-0.104	-0.144
9.	30:10:44:46	-0.230	-0.178	0.328	0.178	0.236	0.148	-0.122	-0.172
10.	30:10:45:46	-0.288	-0.189	0.387	0.236	0.296	0.178	-0.150	-0.202
11.	30:10:46:46	-0.346	-0.217	0.447	0.266	0.354	0.208	-0.180	-0.254
12.	30:10:47:46	-0.404	-0.245	0.507	0.326	0.416	0.252	-0.210	-0.292
13.	30:10:48:46	-0.461	-0.302	0.595	0.354	0.476	0.296	-0.240	-0.344
14.	30:10:49:46	-0.532	-0.358	0.684	0.412	0.566	0.356	-0.298	-0.404
15.	30:10:50:46	-0.605	-0.402	0.802	0.472	0.624	0.414	-0.358	-0.464
16.	30:10:51:46	-0.713	-0.471	0.920	0.558	0.744	0.488	-0.418	-0.520
17.	30:10:52:46	-0.836	-0.556	1.068	0.676	0.892	0.590	-0.508	-0.646
18.	30:10:54:46	-1.067	-0.702	1.336	0.864	1.138	0.768	-0.656	-0.834
19.	30:10:54:26	-1.125	-0.754	1.395	0.884	1.190	0.798	-0.686	-0.882
20.	30:10:55:27	-1.471	-0.967	1.721	1.148	1.544	1.042	-0.870	-1.206
21.	30:10:55:57	-1.702	-0.995	1.939	1.322	1.752	1.210	-1.012	-1.438
22.	30:10:56:15	-1.846	-1.008	2.076	1.440	1.868	1.306	-1.102	-1.590
23.	30:10:56:34	-2.019	-1.036	2.224	1.558	2.048	1.446	-1.192	-1.796
24.	30:10:56:52	-2.250	-1.065	2.402	1.736	2.226	1.594	-1.340	-2.062
25.	30:10:57:10	-2.452	-1.093	2.580	1.912	2.432	1.746	-1.516	-2.356
26.	30:10:58:4	-2.746	-1.177	2.846	2.174	2.756	1.986	-1.756	-2.738
27.	30:10:58:34	-2.891	-1.194	2.994	2.392	2.904	2.094	-1.876	-2.914
28.	30:10:59:4	-2.949	-1.206	3.035	2.584	2.964	2.152	-1.964	-3.024
29.	30:10:59:34	-3.009	-1.222	3.084	2.410	3.020	2.188	-2.024	-3.064
30.	30:11:0:4	-3.025	-1.233	3.082	2.412	3.022	2.190	-2.024	-3.092
31.	30:11:1:4	-3.010	-1.232	3.053	2.410	3.020	2.180	-2.084	-3.082
32.	30:11:1:34	-2.948	-1.205	2.976	2.384	2.962	2.152	-2.080	-3.052
33.	30:11:1:4	-2.891	-1.148	2.876	2.324	2.902	2.094	-2.080	-2.994
34.	30:11:2:4	-2.833	-1.120	2.787	2.266	2.814	2.036	-2.072	-2.916
35.	30:11:3:4	-2.746	-1.064	2.669	2.178	2.696	1.956	-2.020	-2.828
36.	30:11:3:34	-2.628	-1.008	2.520	2.058	2.550	1.858	-1.990	-2.708
37.	30:11:4:4	-2.511	-0.951	2.403	1.970	2.428	1.776	-1.944	-2.590
38.	30:11:4:4	-2.395	-0.892	2.285	1.850	2.282	1.700	-1.840	-2.474
39.									

LOAD CHANNELS

	TIME	CH.29	CH.28	CH.27	CH.26	CH.25	CH.22	CH.21	CH.20
1.	30:10:24:56	450.000	420.000	560.000	210.000	650.000	500.000	320.000	450.000
2.	30:10:32:29	1050.000	1300.000	1040.000	1870.000	1030.000	1710.000	1060.000	1070.000
3.	30:10:33:40	1550.000	1750.000	1860.000	1860.000	2720.000	1700.000	1160.000	1560.000
4.	30:10:39:15	2400.000	3360.000	3180.000	4530.000	4060.000	4130.000	2690.000	3170.000
5.	30:10:40:46	3830.000	4870.000	5130.000	6820.000	6100.000	6170.000	4580.000	4590.000
6.	30:10:41:46	4960.000	5980.000	6340.000	7710.000	8450.000	6970.000	5820.000	5670.000
7.	30:10:42:46	6090.000	7720.000	7360.000	10430.000	9930.000	9400.000	6820.000	7420.000
8.	30:10:43:46	6750.000	8660.000	9060.000	12030.000	11370.000	10900.000	8330.000	8500.000
9.	30:10:44:46	8240.000	9920.000	10290.000	13210.000	14000.000	12090.000	9560.000	9830.000
10.	30:10:45:46	9260.000	11650.000	11380.000	15870.000	15550.000	14530.000	10590.000	11650.000
11.	30:10:46:46	10010.000	12420.000	13000.000	17670.000	16950.000	16300.000	12050.000	12520.000
12.	30:10:47:46	11280.000	13580.000	14350.000	18790.000	19520.000	17460.000	13410.000	13730.000
13.	30:10:48:46	12560.000	15350.000	15280.000	21260.000	21280.000	19780.000	14360.000	15550.000
14.	30:10:49:46	13090.000	15780.000	16660.000	22800.000	22290.000	21220.000	15640.000	16020.000
15.	30:10:50:46	14380.000	16940.000	17780.000	23860.000	24830.000	22260.000	16730.000	17220.000
16.	30:10:51:46	15490.000	18220.000	18750.000	26450.000	26070.000	24550.000	17570.000	18540.000
17.	30:10:52:46	16130.000	18770.000	20120.000	27780.000	27560.000	25720.000	18730.000	19200.000
18.	30:10:53:46	17570.000	19890.000	21060.000	28960.000	30110.000	26910.000	19480.000	20440.000
19.	30:10:54:26	17540.000	19840.000	21030.000	28980.000	30190.000	26940.000	19440.000	20410.000
20.	30:10:55:27	18940.000	20890.000	21720.000	30960.000	30930.000	28720.000	19980.000	21730.000
21.	30:10:55:57	18990.000	20640.000	21460.000	30700.000	30700.000	28580.000	19760.000	21610.000
22.	30:10:56:15	19040.000	20470.000	21200.000	30420.000	30420.000	28330.000	19560.000	21550.000
23.	30:10:56:34	18890.000	20210.000	20950.000	30020.000	30080.000	28000.000	19450.000	21450.000
24.	30:10:56:52	18860.000	19850.000	20540.000	29310.000	29450.000	27450.000	19410.000	21230.000
25.	30:10:57:10	16060.000	17430.000	18670.000	26100.000	26740.000	24690.000	18520.000	18440.000
26.	30:10:58:4	14580.000	16060.000	17160.000	24760.000	24770.000	24120.000	16840.000	17200.000
27.	30:10:58:34	13510.000	15270.000	16250.000	22750.000	24540.000	22660.000	16240.000	16350.000
28.	30:10:59:4	12220.000	13980.000	15550.000	22120.000	22220.000	22010.000	15540.000	15150.000
29.	30:10:59:34	13040.000	13040.000	14910.000	21130.000	21240.000	21160.000	14780.000	14370.000
30.	30:11:0:4	10460.000	12060.000	14610.000	19500.000	20870.000	20200.000	14180.000	13560.000
31.	30:11:0:34	9200.000	10460.000	13980.000	18220.000	19530.000	19050.000	13530.000	12130.000
32.	30:11:1:4	8230.000	9630.000	12740.000	17040.000	18690.000	18470.000	12330.000	11290.000
33.	30:11:1:34	6700.000	8400.000	11550.000	14560.000	17620.000	16110.000	11440.000	9730.000
34.	30:11:2:4	5230.000	6850.000	10490.000	13240.000	14740.000	14430.000	10280.000	8000.000
35.	30:11:2:34	4140.000	5750.000	8860.000	11820.000	12860.000	12850.000	8640.000	6590.000
36.	30:11:3:4	3290.000	4320.000	7560.000	9340.000	11580.000	10230.000	7420.000	4740.000
37.	30:11:3:34	2050.000	2910.000	6500.000	7700.000	8620.000	8490.000	6410.000	2930.000
38.	30:11:4:4	1690.000	2160.000	4910.000	6650.000	7100.000	7340.000	4960.000	1960.000
39.	30:11:4:54	1900.000	2390.000	5010.000	6130.000	7210.000	7050.000	4900.000	2010.000

ROD CHANNELS

TIME	CH.57	CH.56	CH.55	CH.54	CH.53	CH.52	CH.51	CH.50
1. 30:10:24:56	0.0	-12.812	0.0	0.0	12.812	0.0	12.812	12.812
2. 30:10:32:29	0.0	12.812	12.812	0.0	12.812	12.812	38.435	25.624
3. 30:10:33:50	0.0	12.812	12.812	0.0	12.812	-12.812	38.435	12.812
4. 30:10:39:15	-12.812	25.624	12.812	12.812	76.871	-12.812	1921.770	25.624
5. 30:10:40:46	12.812	140.930	25.624	0.0	38.435	-51.247	1947.393	12.812
6. 30:10:41:46	12.812	179.365	25.624	0.0	25.624	-64.059	1960.205	12.812
7. 30:10:42:46	25.624	269.046	25.624	0.0	0.0	-38.435	1960.205	12.812
8. 30:10:43:46	25.624	307.742	25.624	0.0	-12.812	-51.247	1947.393	12.812
9. 30:10:44:46	25.624	371.542	38.435	0.0	-25.624	-38.435	1908.958	12.812
10. 30:10:45:46	25.624	409.978	38.435	0.0	-102.694	-25.624	1883.334	-12.812
11. 30:10:46:46	38.435	461.225	38.435	0.0	-153.742	-38.435	1896.146	-38.435
12. 30:10:47:46	38.435	538.095	25.624	0.0	-204.989	-64.059	1896.146	-64.059
13. 30:10:48:46	38.435	640.590	0.0	-12.812	-294.671	-115.306	1896.146	-102.494
14. 30:10:49:46	102.494	743.084	0.0	-25.624	-358.730	-153.742	1934.581	-115.306
15. 30:10:50:46	166.553	743.084	0.0	-38.435	-422.789	-166.553	1934.581	-128.118
16. 30:10:51:46	358.730	948.073	0.0	-76.871	-397.166	-192.177	1985.829	-115.306
17. 30:10:52:46	384.354	935.261	12.812	-76.871	-384.354	-115.306	2152.382	-102.494
18. 30:10:54:46	345.918	871.202	25.624	-64.059	-269.048	0.0	2408.618	-25.624
19. 30:10:55:27	345.918	807.143	-64.059	-51.247	-217.801	-12.812	2523.924	51.247
20. 30:10:55:57	281.859	755.896	128.118	-89.683	-256.236	0.0	2511.112	64.059
21. 30:10:56:15	294.671	845.579	89.683	-128.118	-89.683	333.107	2421.430	-25.624
22. 30:10:56:34	192.177	755.896	0.0	-166.553	-217.801	358.730	2472.677	12.812
23. 30:10:56:52	102.494	743.084	-115.306	-256.236	-76.871	512.472	2370.183	-76.871
24. 30:10:57:10	89.683	781.520	-256.236	-20.612	140.930	794.331	2447.053	-51.247
25. 30:10:57:40	12.812	781.520	-435.601	-192.177	243.424	935.261	2549.548	-25.624
26. 30:10:58:4	12.812	819.955	-461.225	-140.930	384.354	1076.191	2459.865	-76.871
27. 30:10:58:34	115.306	909.637	-435.601	-115.306	486.848	1178.685	2395.806	-140.930
28. 30:10:59:34	217.801	999.320	-422.789	-51.247	563.719	1229.933	2280.500	-243.424
29. 30:10:59:34	256.236	1024.944	-254.671	-51.247	730.272	1383.674	2101.135	-409.978
30. 30:11:0:4	358.730	1089.003	-166.553	25.624	884.014	1408.298	1921.770	-550.907
31. 30:11:1:4	345.918	1076.191	51.247	128.118	986.508	1268.368	1742.405	-653.402
32. 30:11:1:34	474.036	1127.438	140.930	51.247	1012.132	1114.626	1652.722	-704.649
33. 30:11:2:4	602.154	1165.874	102.494	-25.624	819.915	768.708	1639.910	-589.343
34. 30:11:2:34	653.402	1063.379	89.683	-51.247	666.213	666.213	1870.522	-448.413
35. 30:11:2:34	550.907	896.826	-12.812	-128.118	474.036	461.225	2011.452	-358.730
36. 30:11:3:4	384.354	704.649	38.435	-89.683	345.918	345.918	2126.758	-333.107
37. 30:11:3:34	294.671	589.343	-38.435	-89.683	345.918	333.107	2165.194	
38. 30:11:4:4	243.424	525.284	-38.435	-89.683				
39. 30:11:4:54								

AVERAGE LOAD

1.	445.000
2.	1266.250
3.	1767.500
4.	3440.000
5.	5261.250
6.	6487.500
7.	8146.250
8.	9450.000
9.	10892.500
10.	12566.250
11.	13865.000
12.	15265.000
13.	16927.500
14.	17937.500
15.	19250.000
16.	20705.000
17.	21751.250
18.	23052.500
19.	23046.250
20.	24233.750
21.	24055.000
22.	23873.750
23.	23631.250
24.	2262.500
25.	20823.750
26.	19436.250
27.	18446.250
28.	17348.750
29.	16481.250
30.	15680.000
31.	14512.500
32.	13560.000
33.	12016.250
34.	10407.500
35.	8938.750
36.	7310.000
37.	5701.250
38.	4596.250
39.	4575.000

3.3.5 SPECIMEN #22

TEST NO. 54
CORRUGATED LINER WITHOUT BACKPACKING
1:1 LOADING RATIO
TESTED 8 SEPTEMBER 1978

REACTION FRAME TEST SET-UP

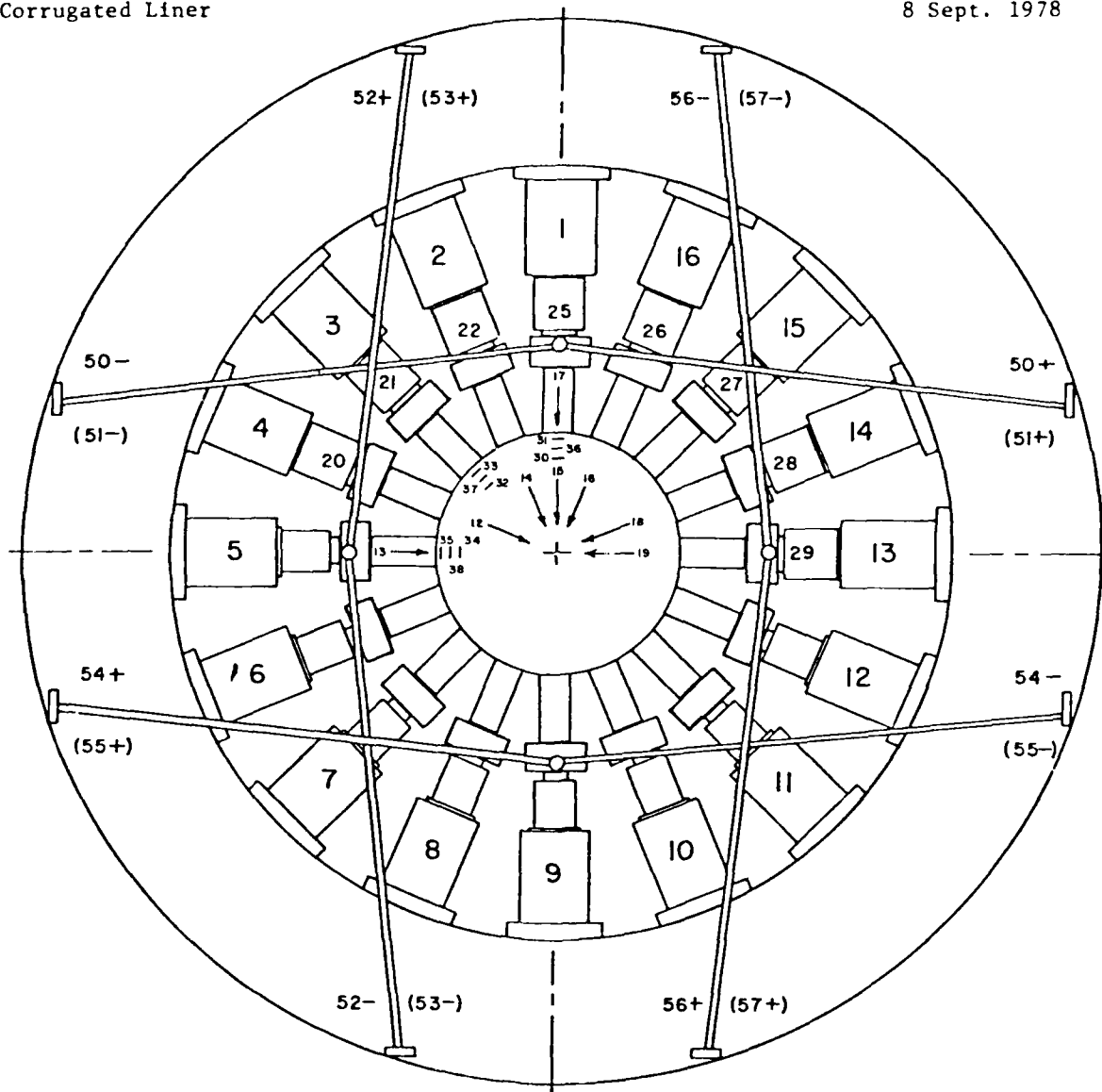
Specimen #22

Corrugated Liner

Test #54

1:1 Load

8 Sept. 1978



CH 12, 14-16, 18 and 19 Load axis I.D., CH 13 and 17 are mounted on the steel load blocks measuring load axis diameters outside the 4" x 8" x 12" wooden spacers. (Research, Inc. 4040).

CH 20-22, 25-29 Axial load (Transducers, Inc. Model 693-300k).

CH 30, 32 and 34 (Ailtech SG 129-6S) are mounted on crest. (Min. I.D.)

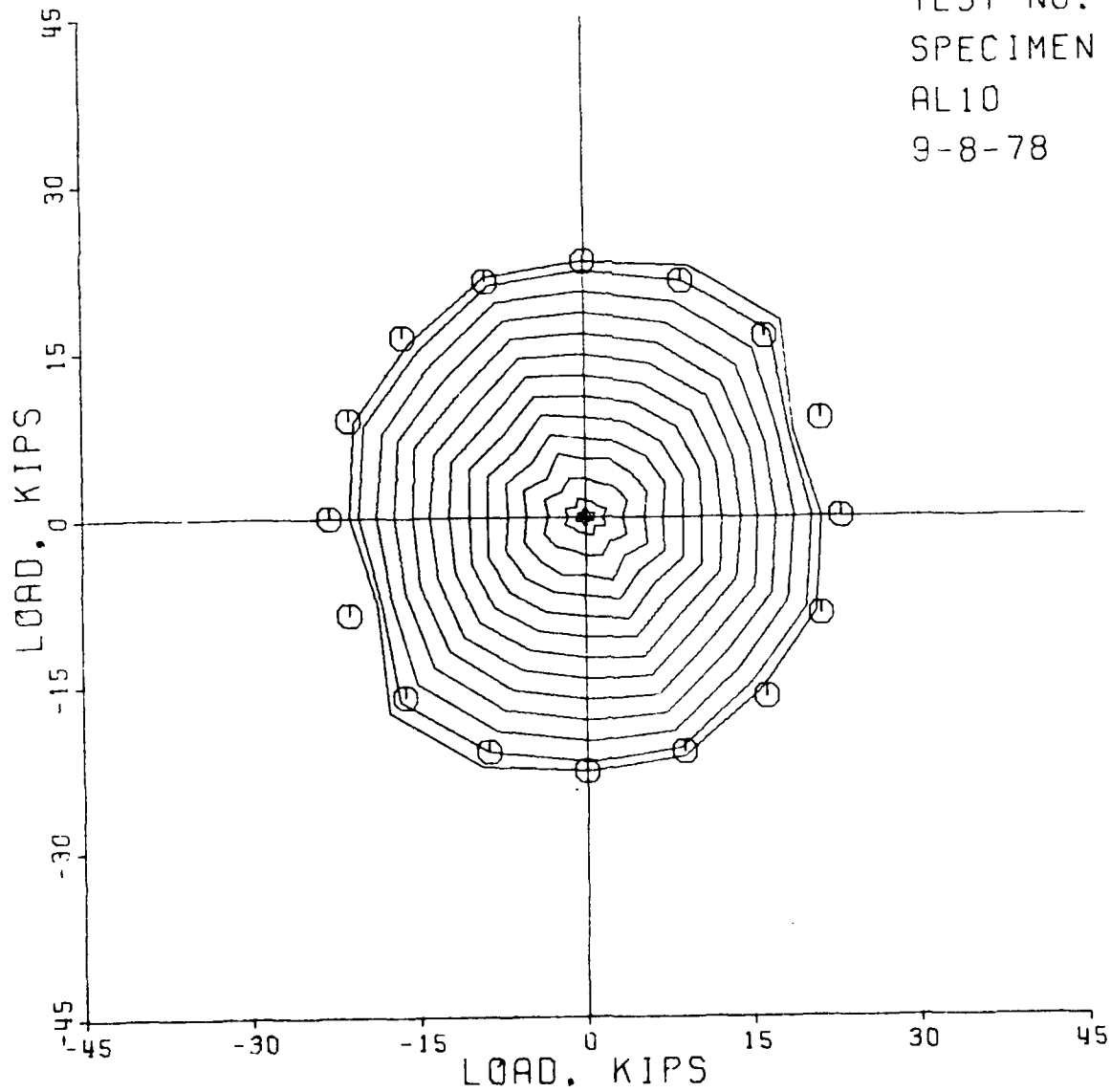
CH 31, 33 and 35 (Ailtech SG 129-6S) are mounted in valley. (Max. I.D.)

CH 36, 37 and 38 (Ailtech SG 129-6S) are mounted midway 6" from top.

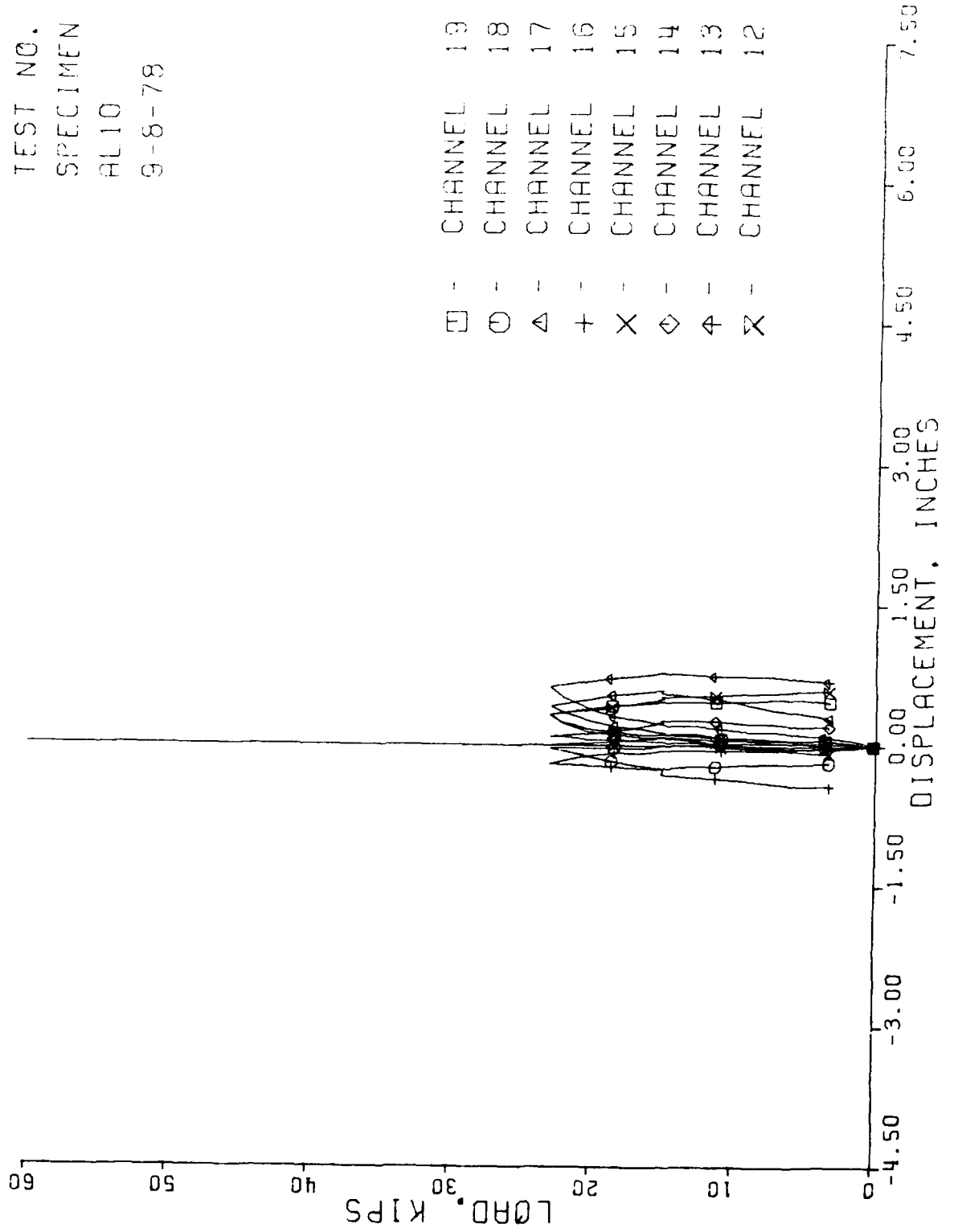
CH 50-57 (Ailtech SG 129-6S) Polarity indicates rod under tension.

Lower rod shown (XX).

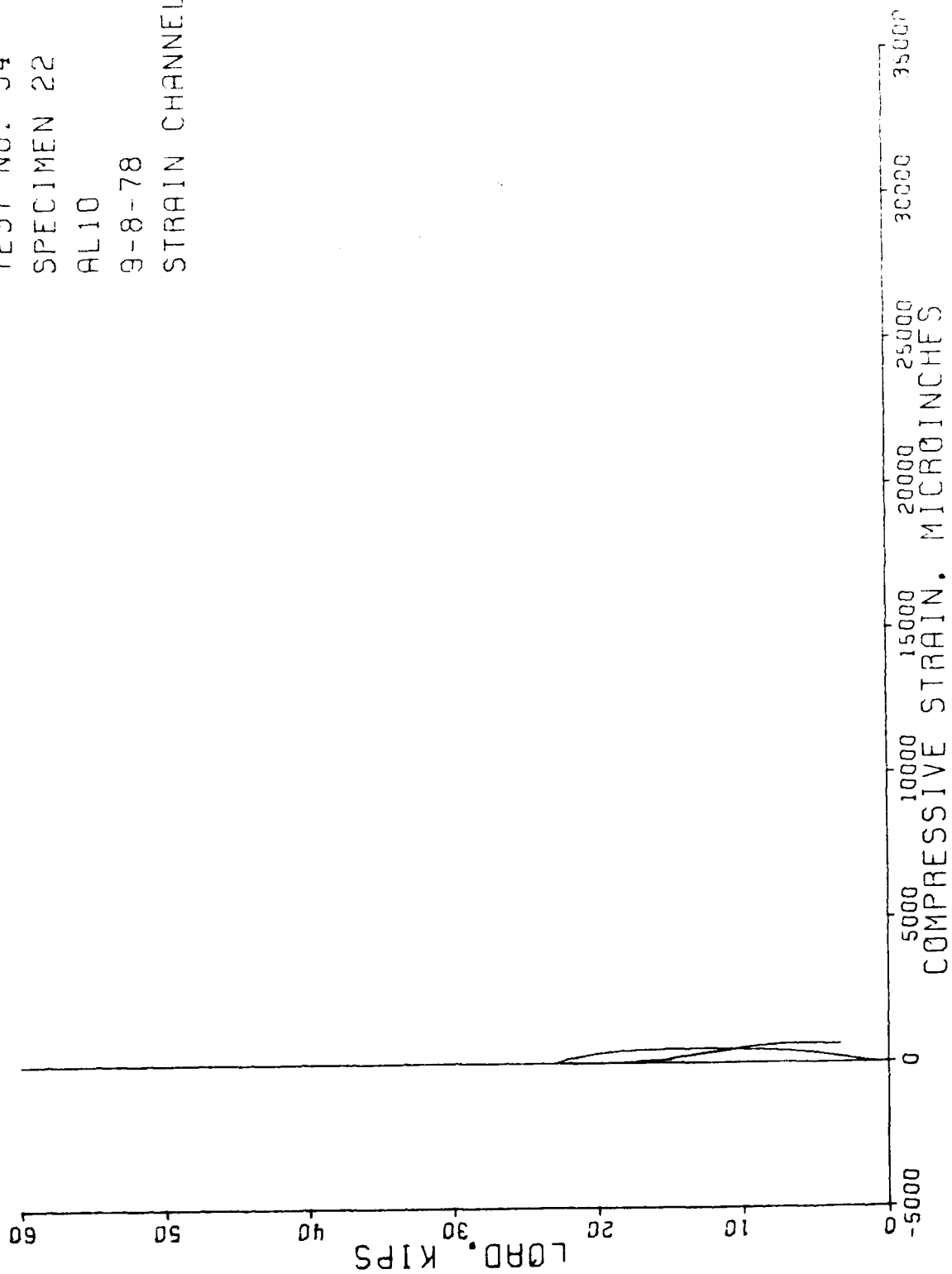
TEST NO. 54
SPECIMEN 22
AL10
9-8-78



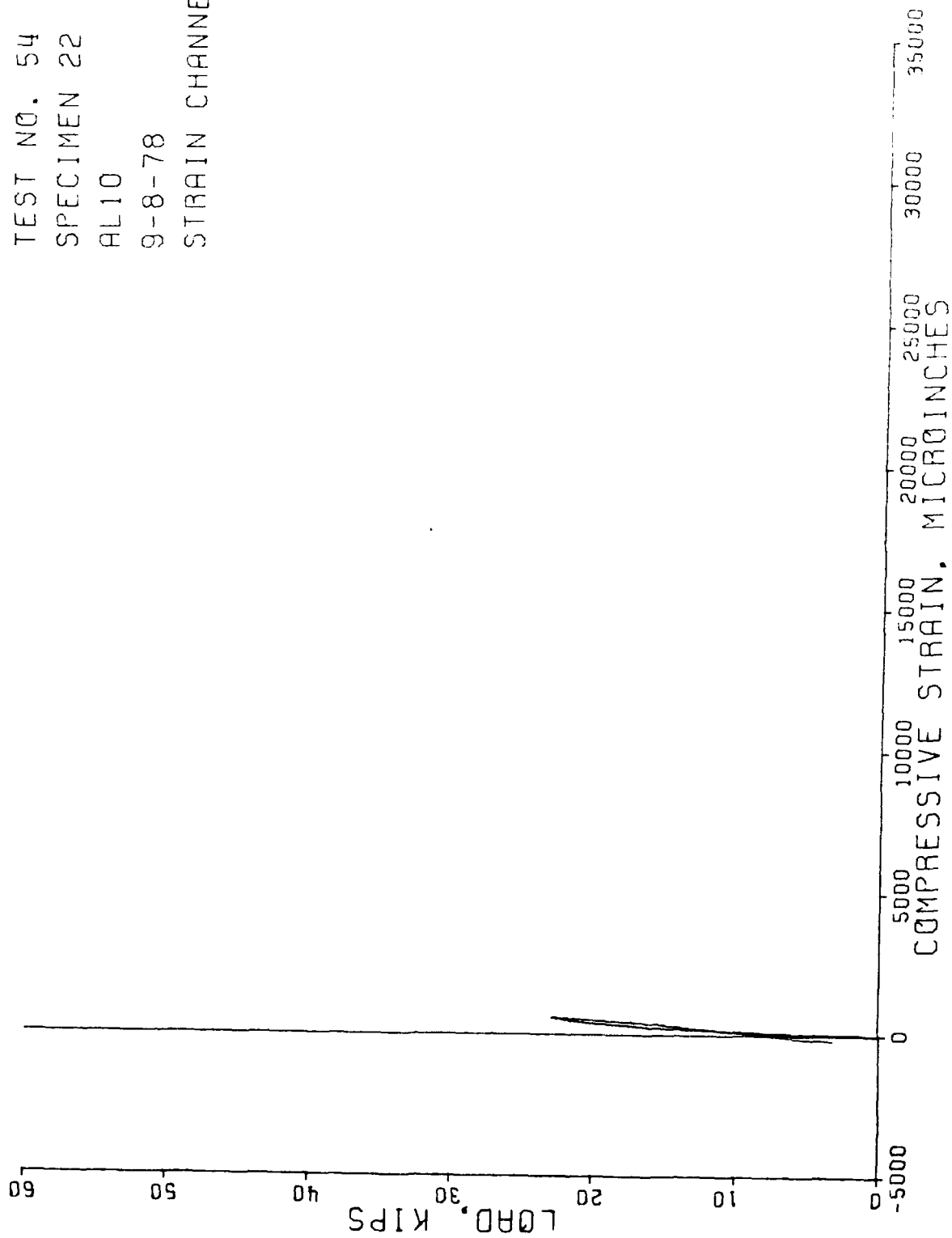
TEST NO. 54
 SPECIMEN 22
 AL10
 9-8-78



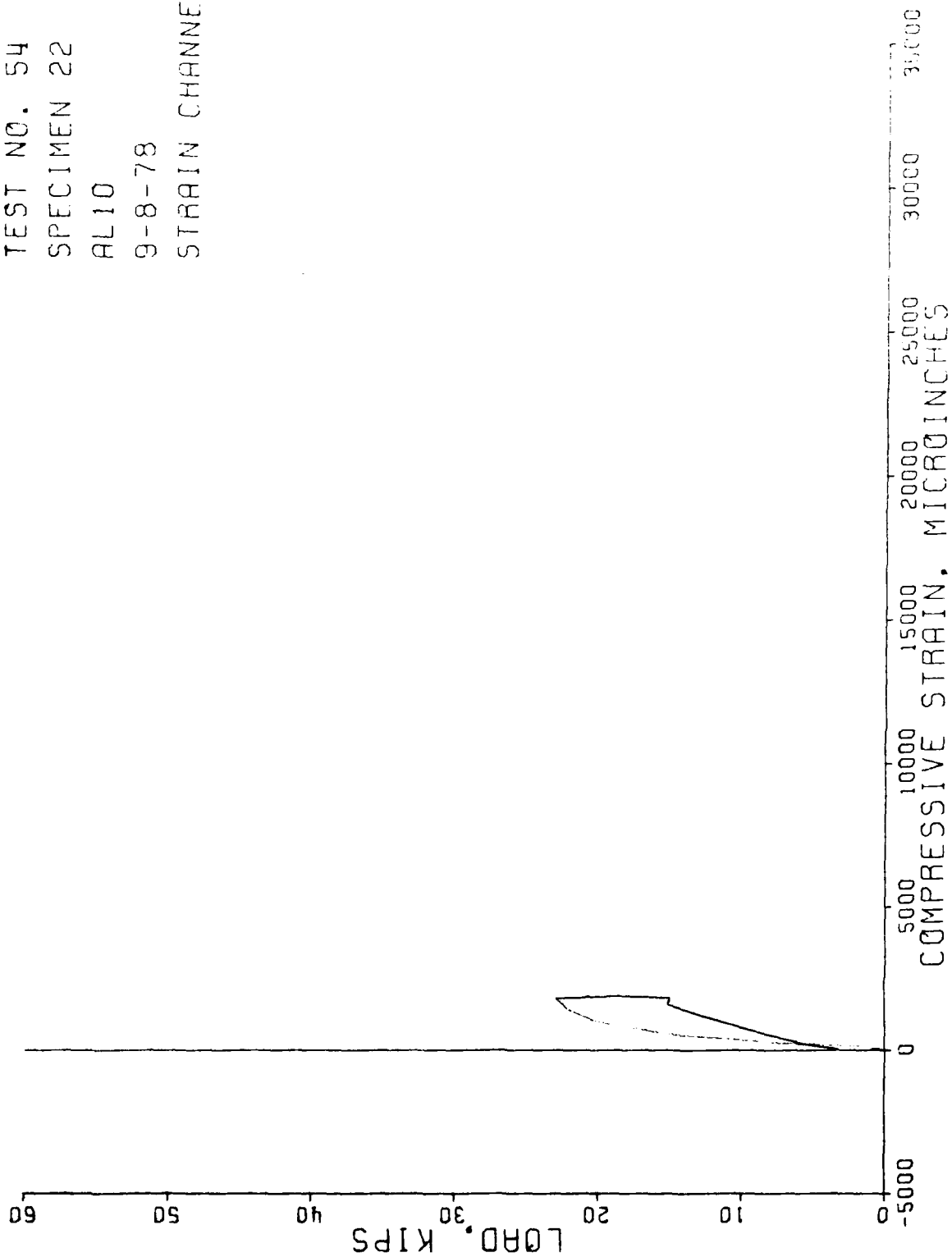
TEST NO. 54
SPECIMEN 22
AL10
9-8-78
STRAIN CHANNEL 30



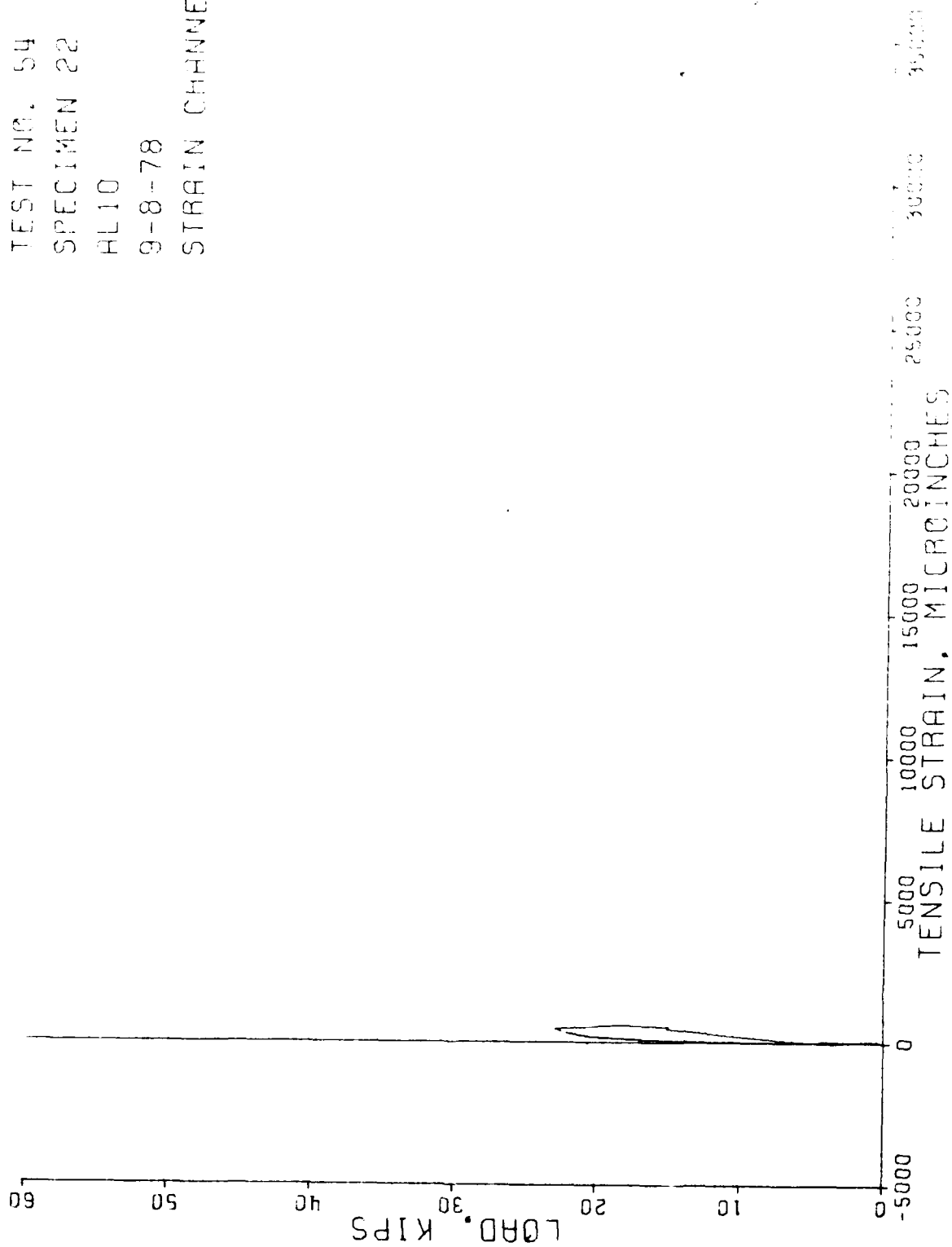
TEST NO. 54
SPECIMEN 22
AL10
9-8-78
STRAIN CHANNEL 31



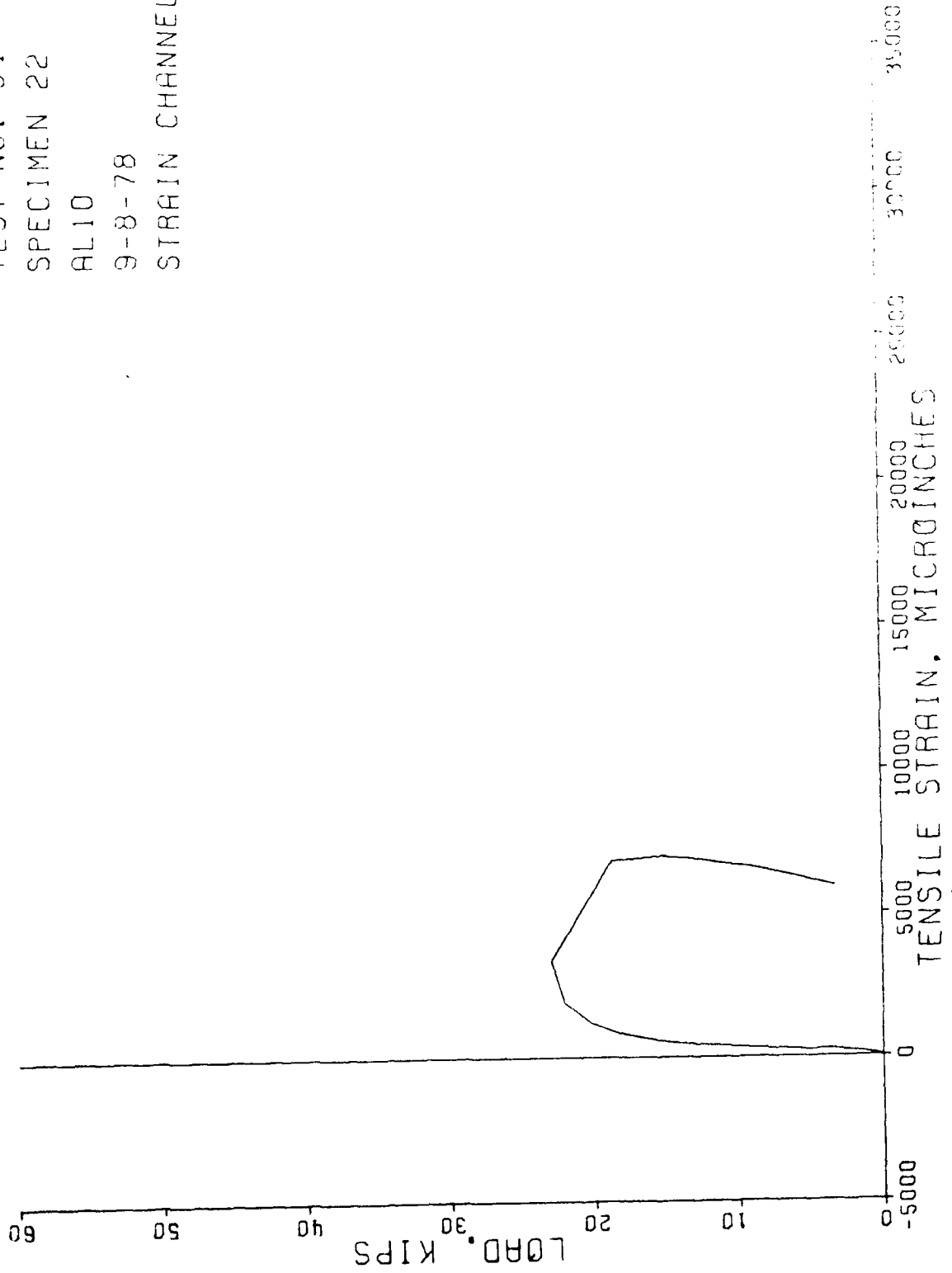
TEST NO. 54
SPECIMEN 22
AL10
9-8-78
STRAIN CHANNEL 32



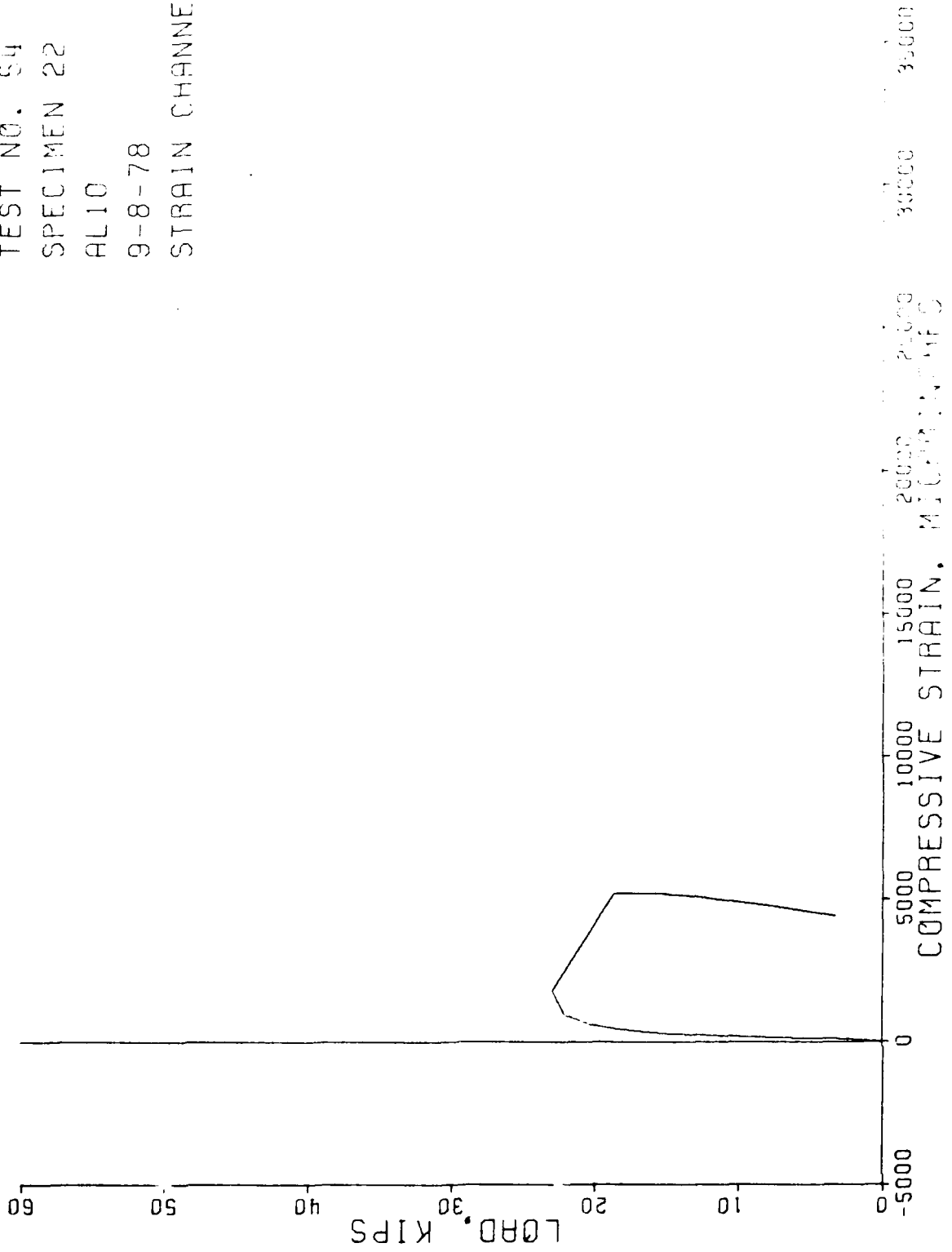
TEST NO. 54
SPECIMEN 22
AL10
9-8-78
STRAIN CHANNEL 33



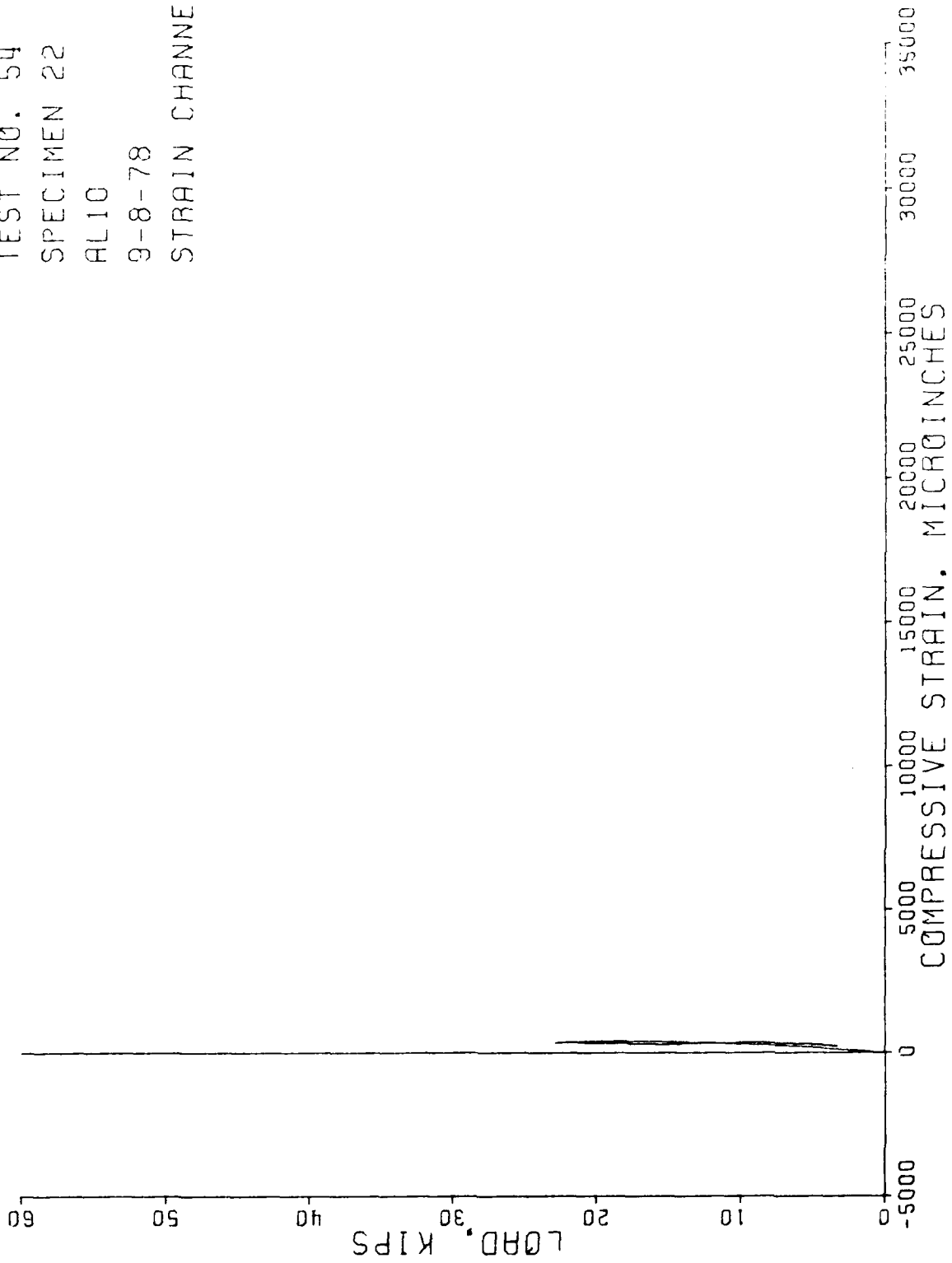
TEST NO. 54
SPECIMEN 22
AL10
9-8-78
STRAIN CHANNEL 34



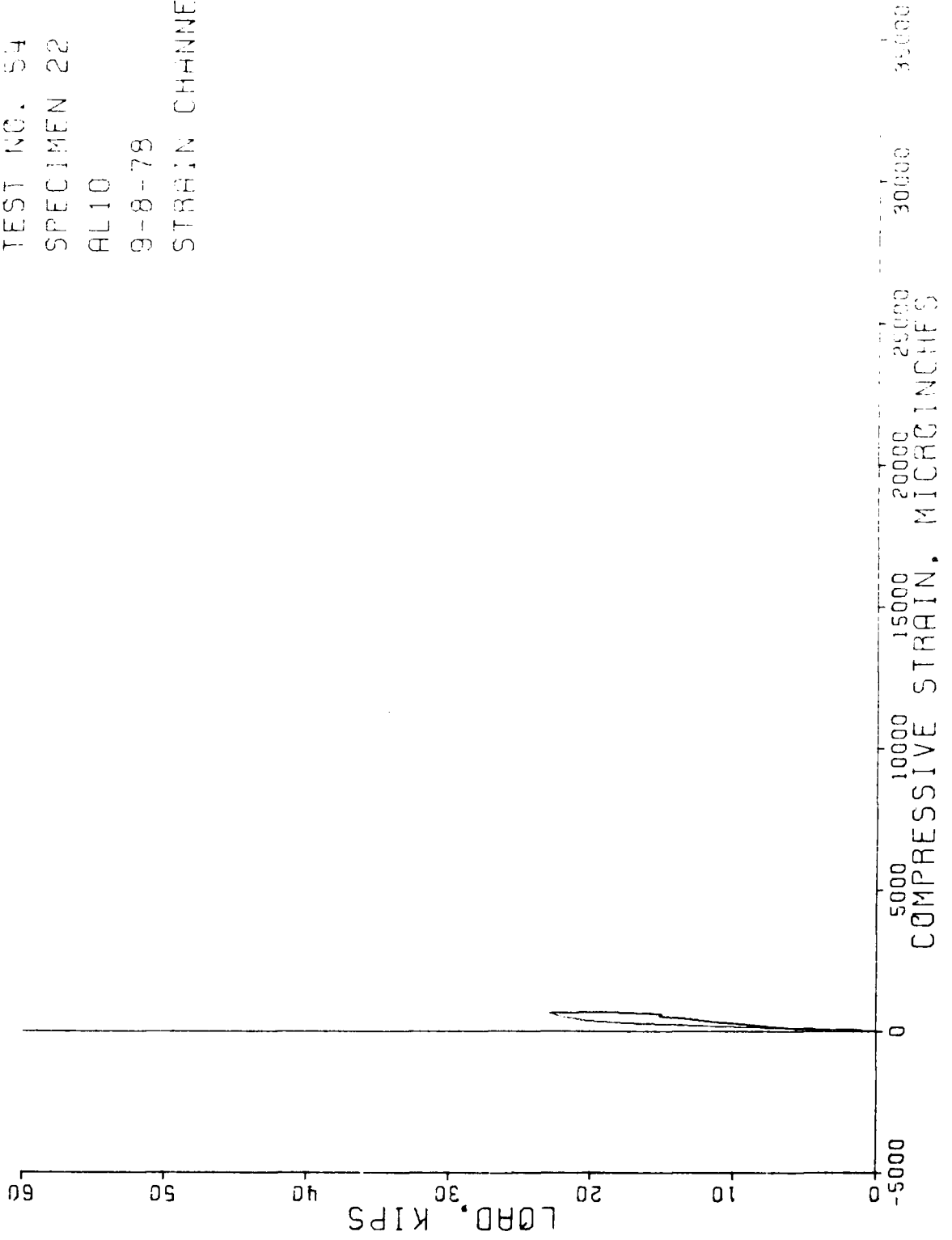
TEST NO. 54
SPECIMEN 22
AL10
9-8-78
STRAIN CHANNEL 35



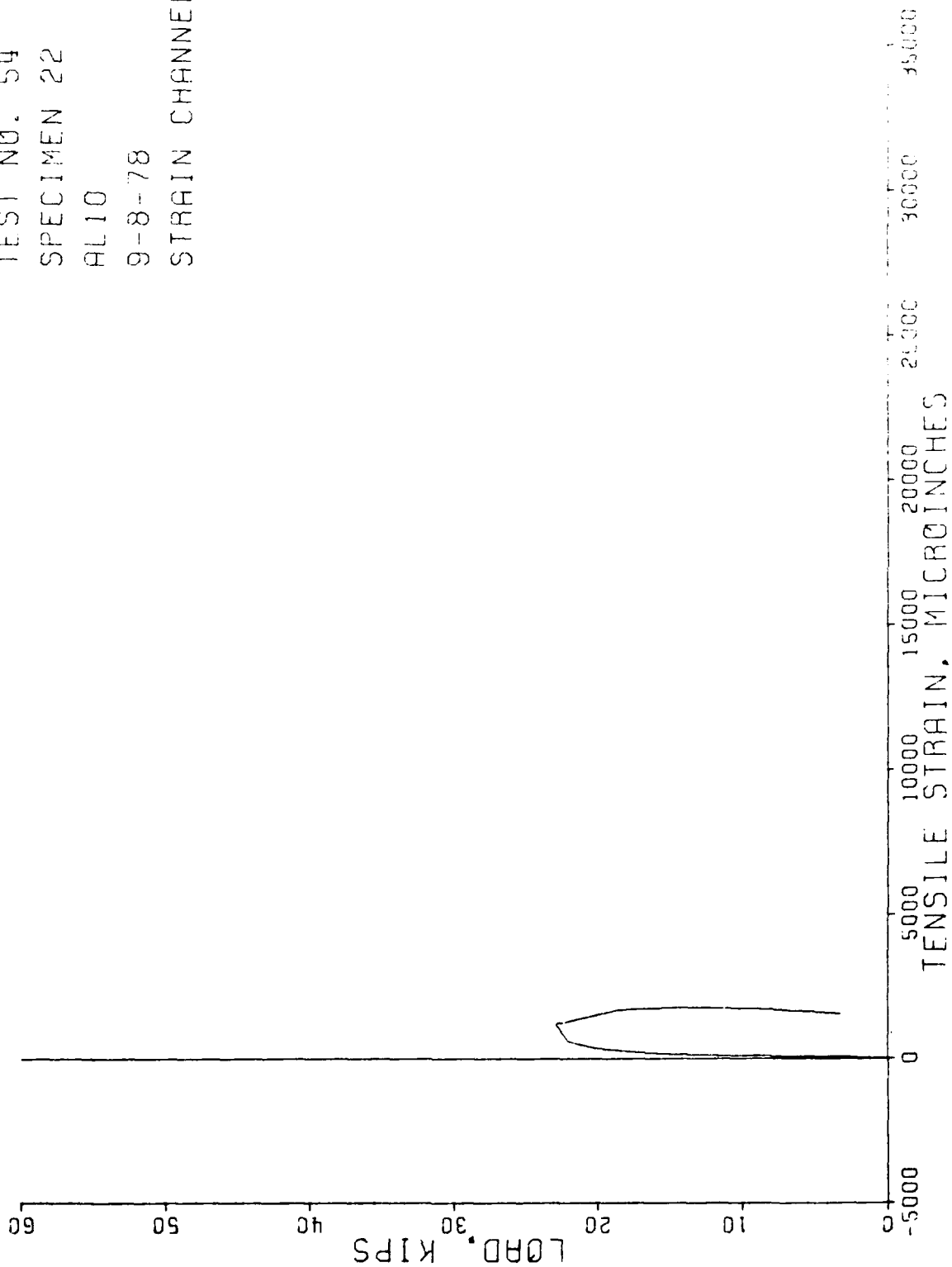
TEST NO. 54
SPECIMEN 22
AL10
9-8-78
STRAIN CHANNEL 35



TEST NO. 54
SPECIMEN 22
AL10
9-8-78
STRAIN CHANNEL 37



TEST NO. 54
SPECIMEN 22
AL10
9-8-78
STRAIN CHANNEL 38



TEST NO. 54 SPECIMEN 22 AL10 9-8-78

NUMBER OF INCREMENTS= 26
NUMBER OF CHANNELS= 33
NUMBER OF STRAIN CHANNELS= 9
NUMBER OF DISPLACEMENT CHANNELS= 8
NUMBER OF LOAD CHANNELS= 8
NUMBER OF PRESSURE CHANNELS= 0
NUMBER OF RODS= 8

CHANNEL ZEROSHIFT

57	0.0
56	0.0
55	0.0
54	0.0
53	0.0
52	0.0
51	0.0
50	0.0
38	0.0
37	0.0
36	0.0
35	0.0
34	0.0
33	0.0
32	0.0
31	0.0
30	0.0
29	0.0
28	0.0
27	0.0
26	0.0
25	0.0
22	0.0
21	0.0
20	0.0
19	0.0
18	0.0
17	0.0
16	0.0
15	0.0
14	0.0
13	0.0
12	0.0

STRAIN CHANNEL CALIBRATION

38	1.000
37	1.000
36	1.000
35	1.000
34	1.000
33	1.000
32	1.000
31	1.000
30	1.000

DISPLACEMENT CHANNEL	CALIBRATION
19	0.001
18	0.001
17	0.001
16	0.002
15	0.002
14	0.002
13	0.002
12	0.002

LOAD CHANNEL	CALIBRATION
29	10.000
28	10.000
27	10.000
26	10.000
25	10.000
22	10.000
21	10.000
20	10.000

ROD CHANNEL	CALIBRATION
57	1.000
56	1.000
55	1.000
54	1.000
53	1.000
52	1.000
51	1.000
50	1.000

STRAIN CHANNELS

	TIME	CH.38	CH.37	CH.36	CH.35	CH.34	CH.33	CH.32	CH.31
1.	8:14:38:52	0.0	-1.000	1.000	0.0	1.000	2.000	1.000	2.000
2.	8:14:40:53	17.000	-16.000	-2.000	-23.000	53.000	15.000	-41.000	-2.000
3.	8:14:42:9	22.000	-25.000	-7.000	-35.000	70.000	16.000	-62.000	-11.000
4.	8:14:44:0	49.000	-63.000	-38.000	-82.000	161.000	35.000	-158.000	-18.000
5.	8:14:51:24	69.000	-75.000	-119.000	-130.000	247.000	23.000	-173.000	-24.000
6.	8:14:52:24	67.000	-99.000	-189.000	-132.000	234.000	12.000	-215.000	-40.000
7.	8:14:53:24	78.000	-119.000	-241.000	-155.000	271.000	5.000	-250.000	-68.000
8.	8:14:54:24	90.000	-149.000	-279.000	-173.000	306.000	11.000	-323.000	-107.000
9.	8:14:55:24	110.000	-177.000	-316.000	-203.000	365.000	16.000	-389.000	-146.000
10.	8:14:56:24	131.000	-206.000	-345.000	-246.000	429.000	28.000	-464.000	-188.000
11.	8:14:57:24	154.000	-238.000	-368.000	-274.000	503.000	44.000	-550.000	-236.000
12.	8:14:58:24	205.000	-282.000	-393.000	-351.000	658.000	78.000	-628.000	-285.000
13.	8:14:59:24	269.000	-330.000	-401.000	-444.000	850.000	122.000	-821.000	-342.000
14.	8:15:0:24	384.000	-386.000	-399.000	-604.000	1191.000	182.000	-1002.000	-408.000
15.	8:15:1:24	636.000	-522.000	-370.000	-947.000	1902.000	328.000	-1404.000	-517.000
16.	8:15:1:53	1203.000	-643.000	-341.000	-1750.000	3314.000	480.000	-1793.000	-602.000
17.	8:15:2:7	1700.000	-677.000	-354.000	-5199.000	6853.000	593.000	-1885.000	-465.000
18.	8:15:2:22	1777.000	-594.000	-274.000	-5200.000	6988.000	555.000	-1816.000	-375.000
19.	8:15:2:37	1783.000	-534.000	-295.000	-5179.000	6975.000	482.000	-1596.000	-351.000
20.	8:15:3:36	1782.000	-429.000	-323.000	-5090.000	6906.000	366.000	-1259.000	-254.000
21.	8:15:4:6	1749.000	-336.000	-335.000	-4981.000	6760.000	270.000	-982.000	-169.000
22.	8:15:4:36	1723.000	-239.000	-366.000	-4860.000	6614.000	163.000	-672.000	-63.000
23.	8:15:5:6	1677.000	-156.000	-336.000	-4723.000	6425.000	73.000	-417.000	32.000
24.	8:15:5:36	1624.000	-81.000	-301.000	-4576.000	6211.000	-7.000	-185.000	115.000
25.	8:15:6:6	1550.000	-24.000	-266.000	-4400.000	5933.000	-60.000	-13.000	171.000
26.	8:15:6:50	1546.000	-29.000	-237.000	-4394.000	5918.000	-57.000	-24.000	185.000

STRAIN CHANNELS

	TIME	CH. 30	CH.
1.	8:14:38:52	2.000	
2.	8:14:40:53	1.000	
3.	8:14:42:9	2.000	
4.	8:14:44:0	-60.000	
5.	8:14:51:24	-216.000	
6.	8:14:52:24	-341.000	
7.	8:14:53:24	-412.000	
8.	8:14:54:24	-449.000	
9.	8:14:55:24	-485.000	
10.	8:14:56:24	-493.000	
11.	8:14:57:24	-479.000	
12.	8:14:58:24	-452.000	
13.	8:14:59:24	-417.000	
14.	8:15:0:24	-335.000	
15.	8:15:1:24	-154.000	
16.	8:15:1:53	-8.000	
17.	8:15:2:7	11.000	
18.	8:15:2:22	-94.000	
19.	8:15:2:37	-135.000	
20.	8:15:3:36	-296.000	
21.	8:15:4:6	-405.000	
22.	8:15:4:36	-540.000	
23.	8:15:5:6	-621.000	
24.	8:15:5:36	-660.000	
25.	8:15:6:6	-615.000	
26.	8:15:6:50	-660.000	

DISPLACEMENT CHANNELS

	TIME	CH.19	CH.18	CH.17	CH.16	CH.15	CH.14	CH.13	CH.12
1.	8:14:38:52	0.0	0.0	-0.003	0.004	0.0	0.0	-0.002	-0.002
2.	8:14:40:53	0.001	0.0	-0.002	0.008	0.0	0.0	0.0	0.0
3.	8:14:42:9	0.001	0.0	-0.003	0.008	0.0	0.0	0.032	0.008
4.	8:14:44:0	0.030	0.012	-0.003	-0.018	-0.020	-0.002	0.060	0.028
5.	8:14:51:24	0.059	0.029	0.002	-0.026	-0.030	-0.024	0.096	0.058
6.	8:14:52:24	0.059	0.029	0.028	-0.028	-0.030	-0.030	0.122	0.056
7.	8:14:53:24	0.059	0.029	0.028	-0.054	-0.030	-0.018	0.150	0.066
8.	8:14:54:24	0.059	0.015	0.058	-0.054	-0.030	0.0	0.150	0.086
9.	8:14:55:24	0.070	0.001	0.088	-0.054	-0.016	-0.002	0.182	0.086
10.	8:14:56:24	0.088	0.0	0.120	-0.054	0.0	0.028	0.210	0.094
11.	8:14:57:24	0.088	-0.028	0.178	-0.034	0.002	0.030	0.210	0.114
12.	8:14:58:24	0.117	-0.028	0.206	-0.084	0.002	0.056	0.270	0.116
13.	8:14:59:24	0.146	-0.028	0.265	-0.114	0.002	0.058	0.302	0.144
14.	8:15:0:24	0.232	-0.028	0.355	-0.172	0.002	0.062	0.388	0.174
15.	8:15:1:53	0.319	-0.028	0.414	-0.200	0.002	0.088	0.508	0.240
16.	8:15:2:7	0.417	-0.169	0.533	-0.230	0.034	0.146	0.626	0.322
17.	8:15:2:22	0.464	-0.255	0.592	-0.258	0.092	0.242	0.716	0.405
18.	8:15:2:37	0.464	-0.255	0.563	-0.316	0.092	0.264	0.774	0.494
19.	8:15:3:36	0.464	-0.226	0.533	-0.348	0.062	0.264	0.758	0.520
20.	8:15:4:6	0.464	-0.200	0.504	-0.350	0.032	0.262	0.744	0.524
21.	8:15:4:36	0.470	-0.198	0.444	-0.378	0.002	0.234	0.746	0.536
22.	8:15:5:6	0.493	-0.193	0.384	-0.406	-0.026	0.204	0.744	0.554
23.	8:15:5:36	0.493	-0.184	0.355	-0.436	-0.056	0.204	0.716	0.564
24.	8:15:6:6	0.464	-0.170	0.295	-0.434	-0.086	0.176	0.684	0.584
25.	8:15:6:50	0.464		0.266	-0.434	-0.114		0.686	0.584
26.									

LOAD CHANNELS

	TIME	CH.29	CH.28	CH.27	CH.26	CH.25	CH.22	CH.21	CH.20
1.	8:14:38:52	150.000	190.000	140.000	170.000	150.000	130.000	100.000	160.000
2.	8:14:40:53	400.000	510.000	250.000	360.000	380.000	390.000	180.000	470.000
3.	8:14:42:9	570.000	970.000	510.000	580.000	740.000	630.000	420.000	840.000
4.	8:14:44:0	1580.000	2040.000	1440.000	1580.000	1550.000	1880.000	1180.000	1950.000
5.	8:14:51:24	3390.000	4020.000	3780.000	3350.000	3560.000	3780.000	3070.000	4010.000
6.	8:14:52:24	5300.000	6040.000	5700.000	5700.000	5240.000	6290.000	4890.000	6030.000
7.	8:14:53:24	6560.000	7770.000	7750.000	7400.000	7140.000	8040.000	6780.000	7750.000
8.	8:14:54:24	8750.000	9460.000	9670.000	9340.000	9020.000	9980.000	8590.000	9500.000
9.	8:14:55:24	10460.000	11110.000	11610.000	11210.000	10890.000	11800.000	10400.000	11260.000
10.	8:14:56:24	12220.000	12700.000	13460.000	13110.000	12750.000	13640.000	12210.000	12950.000
11.	8:14:57:24	13930.000	14250.000	15340.000	14990.000	14640.000	15440.000	14030.000	14620.000
12.	8:14:58:24	15420.000	15990.000	17220.000	16990.000	16480.000	17320.000	15810.000	16480.000
13.	8:14:59:24	17100.000	17490.000	19200.000	18930.000	18400.000	19090.000	17650.000	18070.000
14.	8:15:0:24	18780.000	18800.000	21290.000	20930.000	20260.000	20830.000	19410.000	19680.000
15.	8:15:1:24	20350.000	19840.000	23580.000	22990.000	22110.000	23470.000	21120.000	21440.000
16.	8:15:1:53	21180.000	20210.000	24890.000	24460.000	22930.000	23300.000	22170.000	22380.000
17.	8:15:2:7	18620.000	15380.000	18520.000	20940.000	18610.000	19380.000	17040.000	16730.000
18.	8:15:2:32	14070.000	15000.000	15020.000	18660.000	14930.000	17900.000	12900.000	16100.000
19.	8:15:2:37	13140.000	13940.000	14870.000	14820.000	15150.000	15680.000	11950.000	13930.000
20.	8:15:3:36	11370.000	12590.000	13010.000	12680.000	13070.000	13650.000	10930.000	11810.000
21.	8:15:4:6	9760.000	11460.000	11130.000	11090.000	11280.000	11970.000	9840.000	10470.000
22.	8:15:4:36	8010.000	9900.000	9120.000	9000.000	9230.000	9750.000	8560.000	8600.000
23.	8:15:5:6	6350.000	8090.000	7140.000	7080.000	7270.000	7780.000	7030.000	6980.000
24.	8:15:5:36	4600.000	6030.000	5210.000	5120.000	5290.000	5730.000	5390.000	5200.000
25.	8:15:6:6	2720.000	3720.000	3180.000	3080.000	3260.000	3590.000	3390.000	3370.000
26.	8:15:6:50	2660.000	3860.000	3220.000	3240.000	3210.000	3660.000	3420.000	3460.000

ROD CHANNELS

	TIME	CH. 57	CH. 56	CH. 55	CH. 54	CH. 53	CH. 52	CH. 51	CH. 50
1.	8:14:38:52	25.624	25.624	0.0	12.812	12.312	25.624	12.812	12.812
2.	8:14:40:53	12.812	38.435	12.812	12.812	25.624	-25.624	38.435	51.247
3.	8:14:42:9	0.0	25.624	-12.812	-25.624	0.0	-25.624	115.306	89.683
4.	8:14:44:0	-76.871	-12.812	-51.247	-51.247	-38.435	-76.871	-576.531	166.553
5.	8:14:51:24	-153.742	-25.624	12.812	12.812	-179.365	-192.177	-704.649	243.424
6.	8:14:52:24	-269.048	-140.930	25.624	25.624	-243.424	-256.236	-563.719	371.542
7.	8:14:53:24	-333.107	-230.612	64.059	38.435	-307.483	-320.295	-461.225	448.413
8.	8:14:54:24	-409.978	-333.107	102.494	76.871	-355.918	-345.918	-358.730	538.095
9.	8:14:55:24	-486.848	-461.225	166.553	115.306	-384.354	-397.166	-256.236	614.966
10.	8:14:56:24	-576.531	-589.343	256.236	140.930	-409.978	-435.601	-166.553	704.649
11.	8:14:57:24	-666.213	-743.084	333.107	179.365	-422.789	-461.036	-102.494	832.767
12.	8:14:58:24	-755.896	-512.472	371.542	179.365	-474.036	-474.036	-12.812	884.014
13.	8:14:59:24	-832.767	-307.483	422.789	153.742	-537.166	-435.601	38.435	909.637
14.	8:15:0:24	-922.449	-281.859	461.225	166.553	-597.742	-345.918	64.059	845.579
15.	8:15:1:24	-1012.132	-269.048	525.284	115.306	-627.742	-192.177	-25.624	768.708
16.	8:15:1:53	-1140.250	-64.059	409.978	-627.742	-76.871	-179.365	-89.683	884.014
17.	8:15:2:7	-1039.003	-89.683	-153.742	-474.036	-51.247	179.365	-153.742	999.320
18.	8:15:2:22	-935.261	51.247	-25.624	-448.413	-76.871	153.742	-89.683	922.449
19.	8:15:2:37	-835.261	25.624	0.0	-345.918	-140.930	115.306	-153.742	819.955
20.	8:15:3:36	-807.143	128.118	12.812	-269.048	-192.177	76.871	-256.236	704.649
21.	8:15:4:6	-666.213	294.671	25.624	-204.989	-243.424	64.059	-384.354	576.531
22.	8:15:4:36	-538.095	461.225	51.247	-140.930	-256.236	64.059	-512.472	435.601
23.	8:15:5:6	-422.789	576.531	76.871	-76.871	-217.801	89.683	-666.213	269.048
24.	8:15:5:36	-307.483	896.826	89.683	-64.059	-217.801	76.871	-871.202	
25.	8:15:6:6	-179.365	858.390	89.683	-64.059	-217.801	76.871		
26.	8:15:6:50	-192.177	631.837	89.683	-64.059	-217.801	76.871		

AVERAGE LOAD

1.	148.750
2.	367.500
3.	657.500
4.	1650.000
5.	3620.000
6.	5648.750
7.	7448.750
8.	9288.750
9.	8477.500
10.	12880.000
11.	14655.000
12.	16463.750
13.	18241.250
14.	19997.500
15.	21737.500
16.	22690.000
17.	18152.500
18.	15572.500
19.	14185.000
20.	12388.750
21.	10875.000
22.	9021.250
23.	7215.000
24.	5321.250
25.	3288.750
26.	3341.250

3.4 S-X-11 MODELS

3.4.1 SPECIMEN #23

TEST NO. 55

STEEL LINER WITH 2000 PSI BACKPACKING

1:1 LOADING RATIO

TESTED 26 SEPTEMBER 1978

REACTION FRAME TEST SET-UP

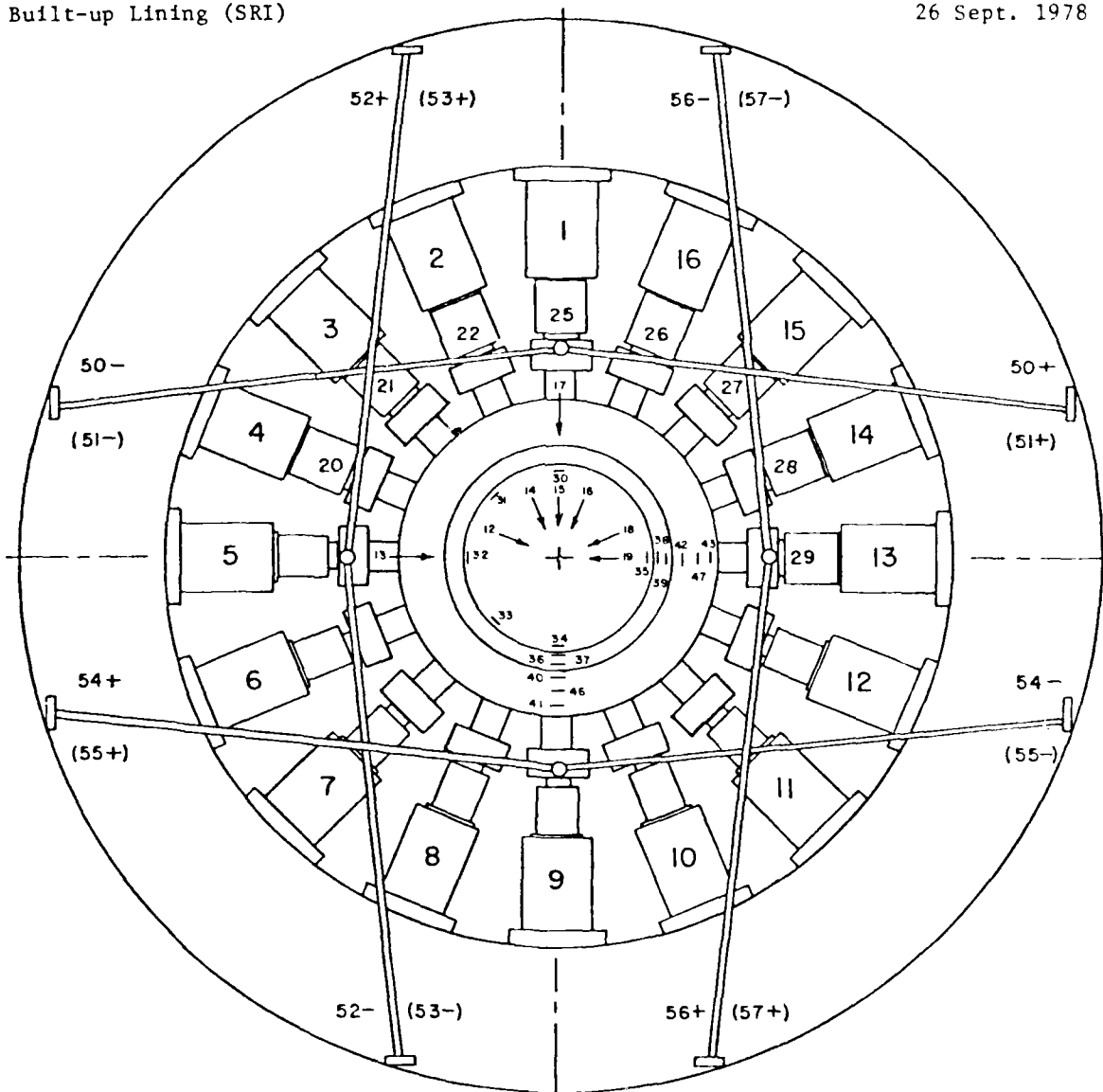
Specimen #23

Built-up Lining (SRI)

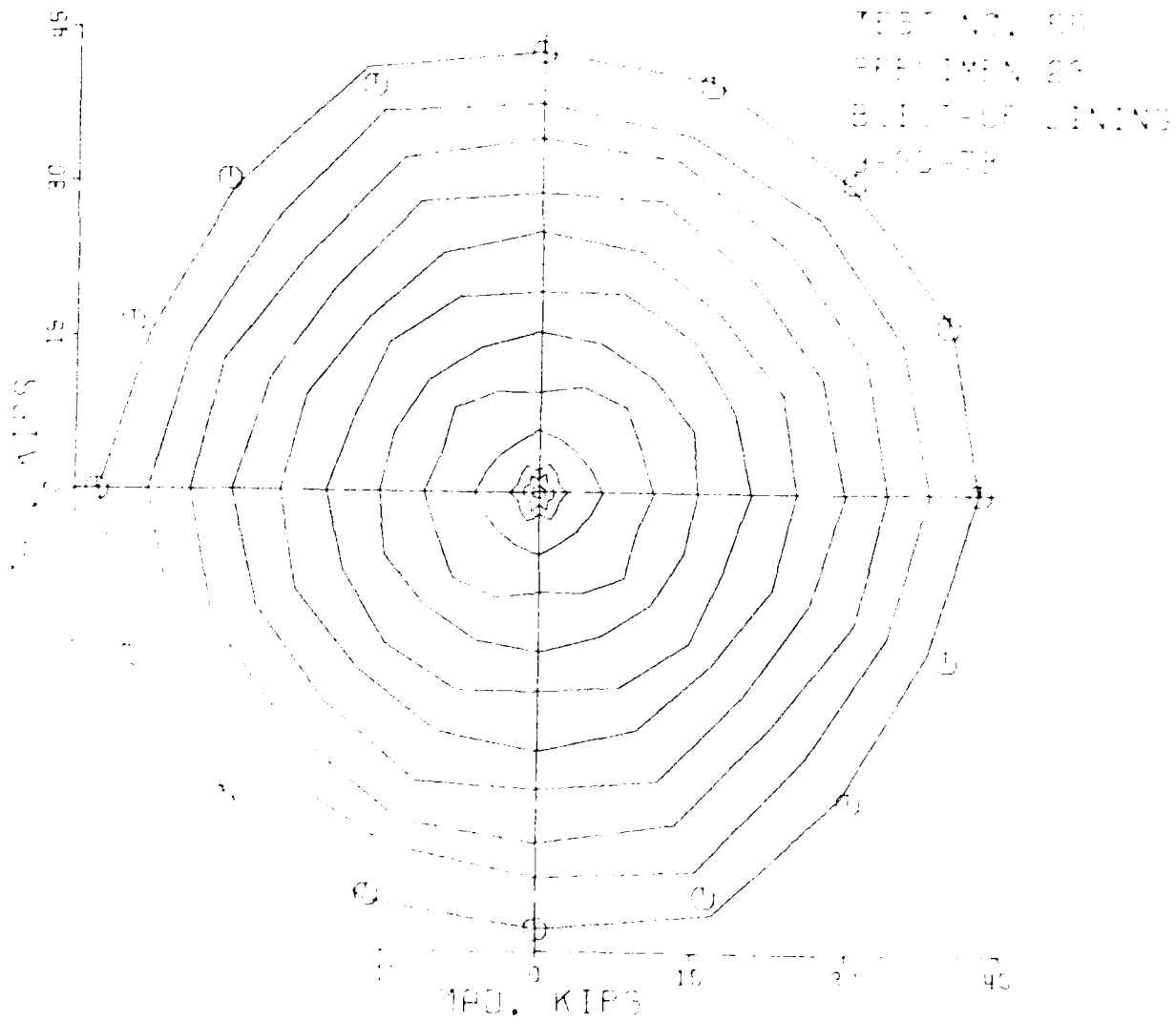
Test #55

1:1 Load

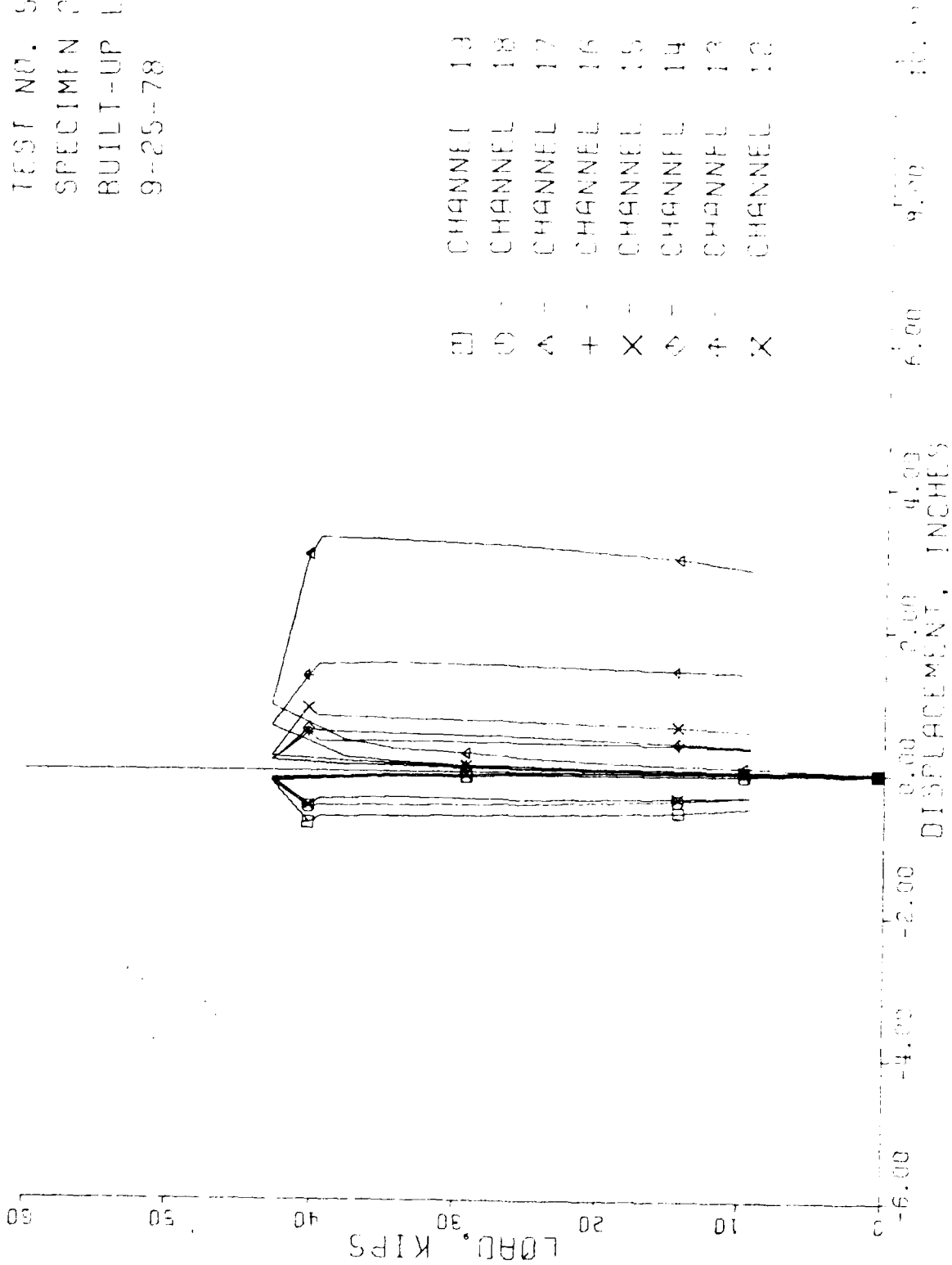
26 Sept. 1978



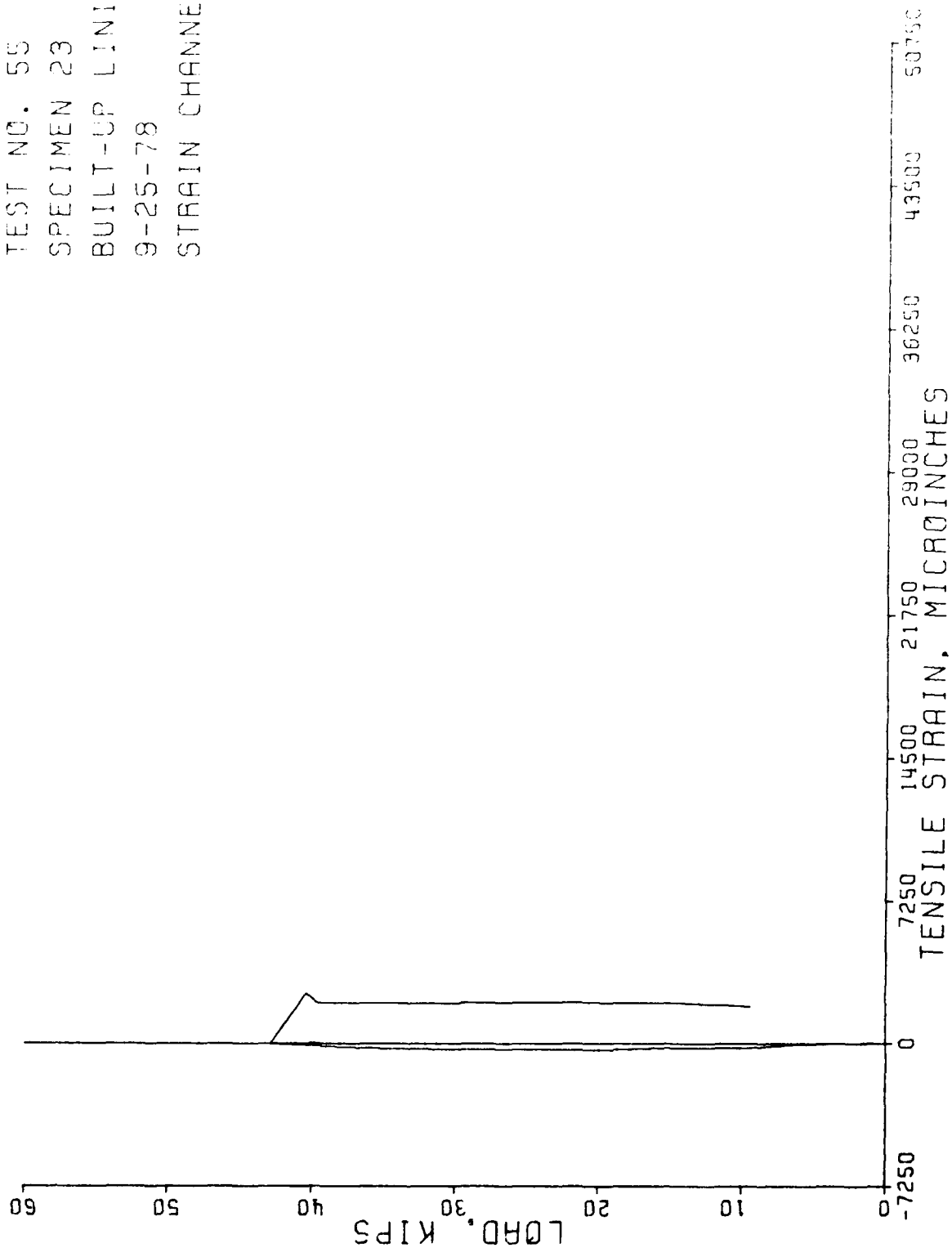
CH 12, 14-16, 18 and 19 Load axis I.D., CH 13, 17 Load axis O.D. (Research, Inc. 4040).
 CH 20-22, 25-29 Axial load (Transducers, Inc. Model 693-300K).
 CH 30-35 (Ailtech SG 129-6S) Inside on load axis at center.
 CH 36-39 (Ailtech SG 129-6S) Top surface on load axis - .33" spacing. Even gages inside.
 CH 40-43, 46 and 47 (BLH PA-7) Top surface on load axis - 1.0" spacing
 CH 50-57 (Ailtech SG 129-6S) Polarity indicates rod under tension.
 Lower rod shown (XX).



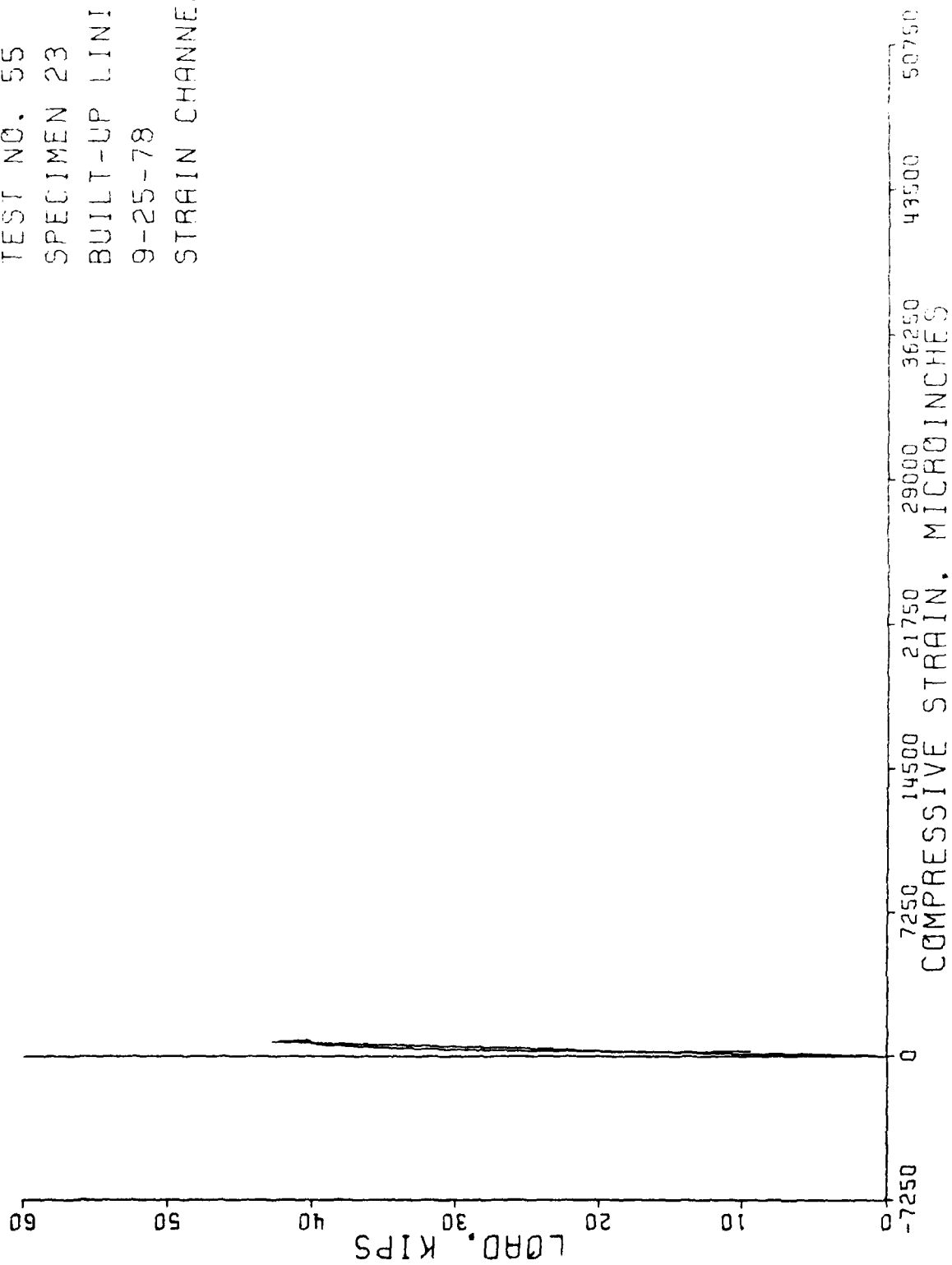
TEST NO. 55
 SPECIMEN 23
 BUILT-UP LINING
 9-25-78



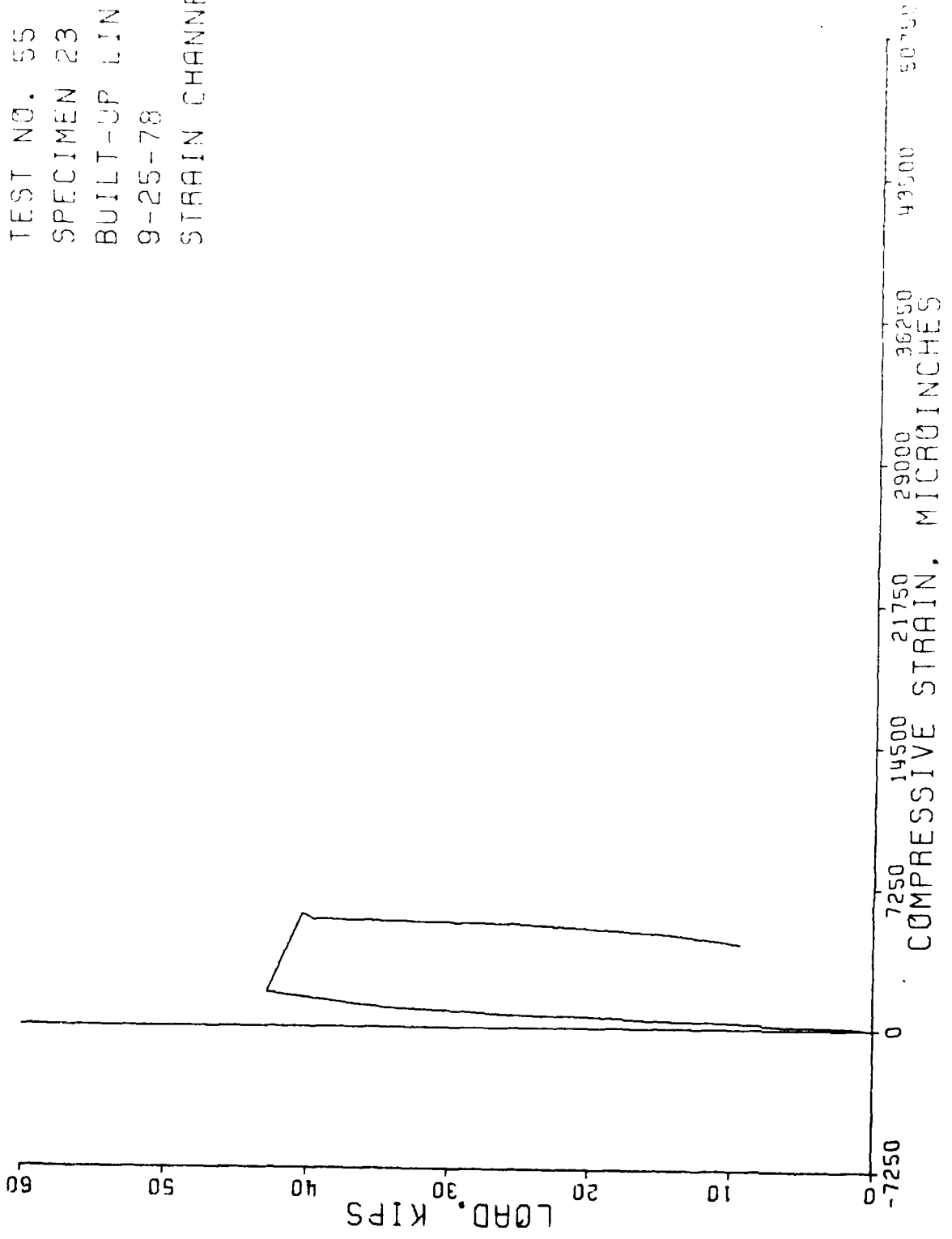
TEST NO. 55
 SPECIMEN 23
 BUILT-UP LINING
 9-25-78
 STRAIN CHANNEL 30



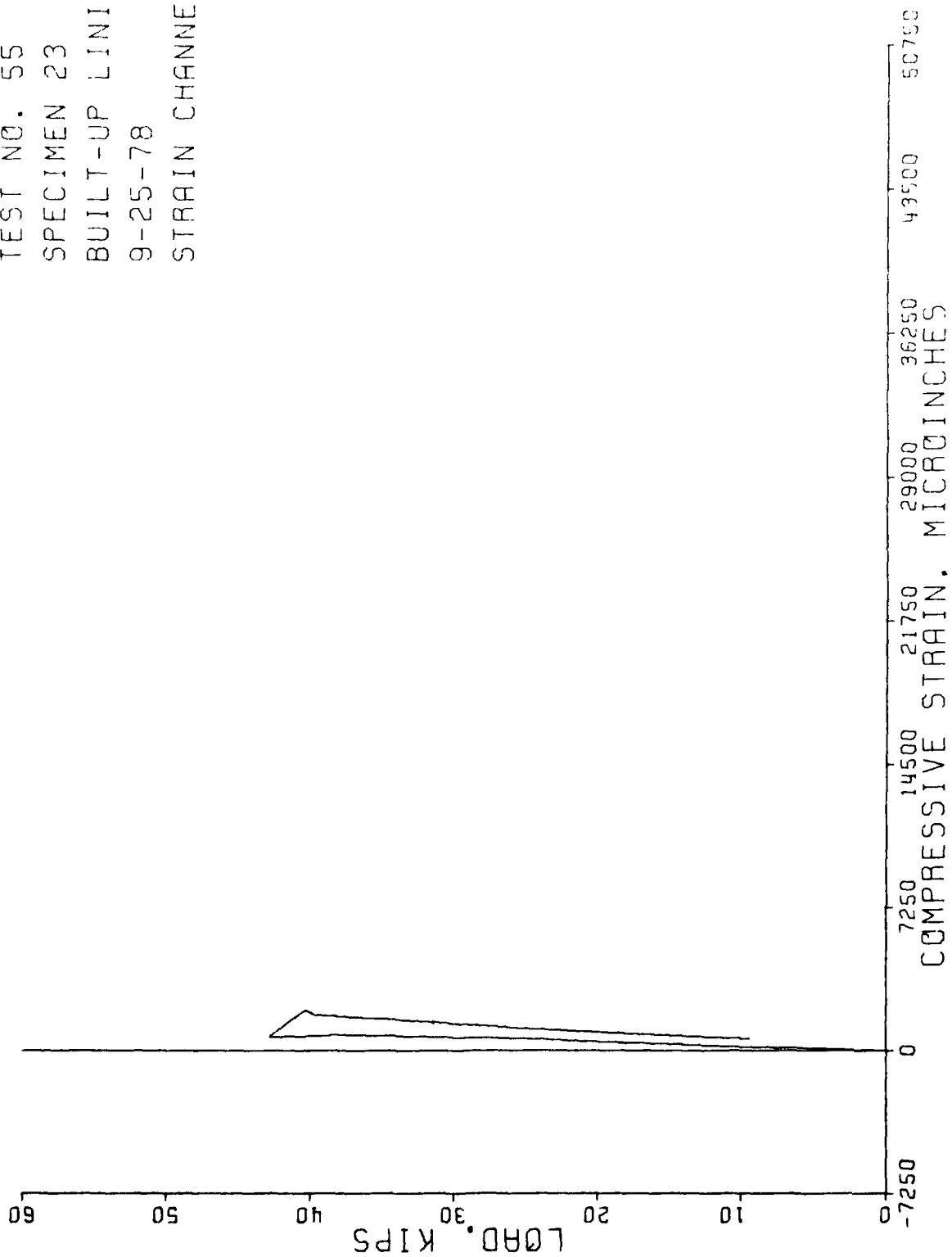
TEST NO. 55
SPECIMEN 23
BUILT-UP LINING
9-25-78
STRAIN CHANNEL 31



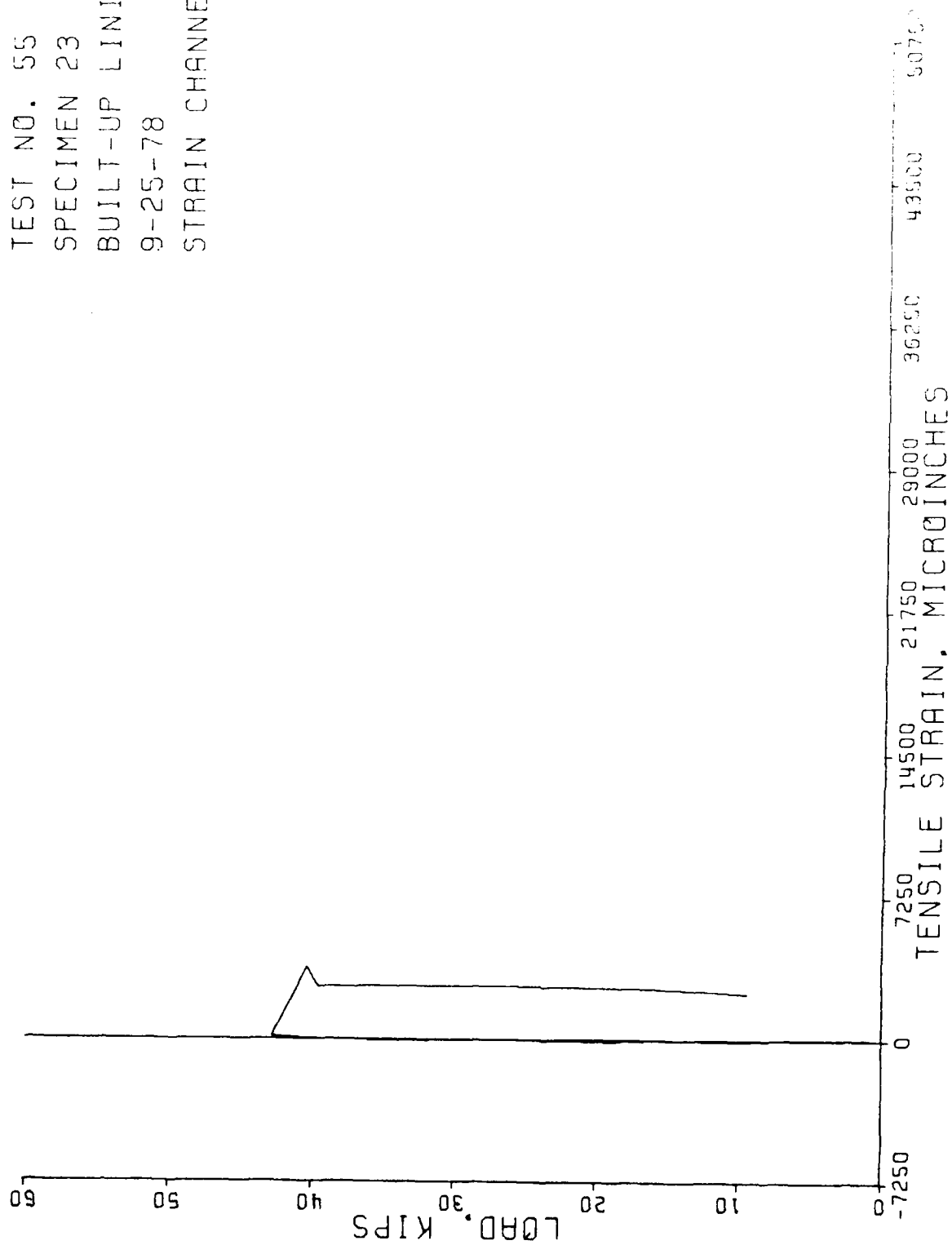
TEST NO. 55
 SPECIMEN 23
 BUILT-UP LINING
 9-25-78
 STRAIN CHANNEL 32



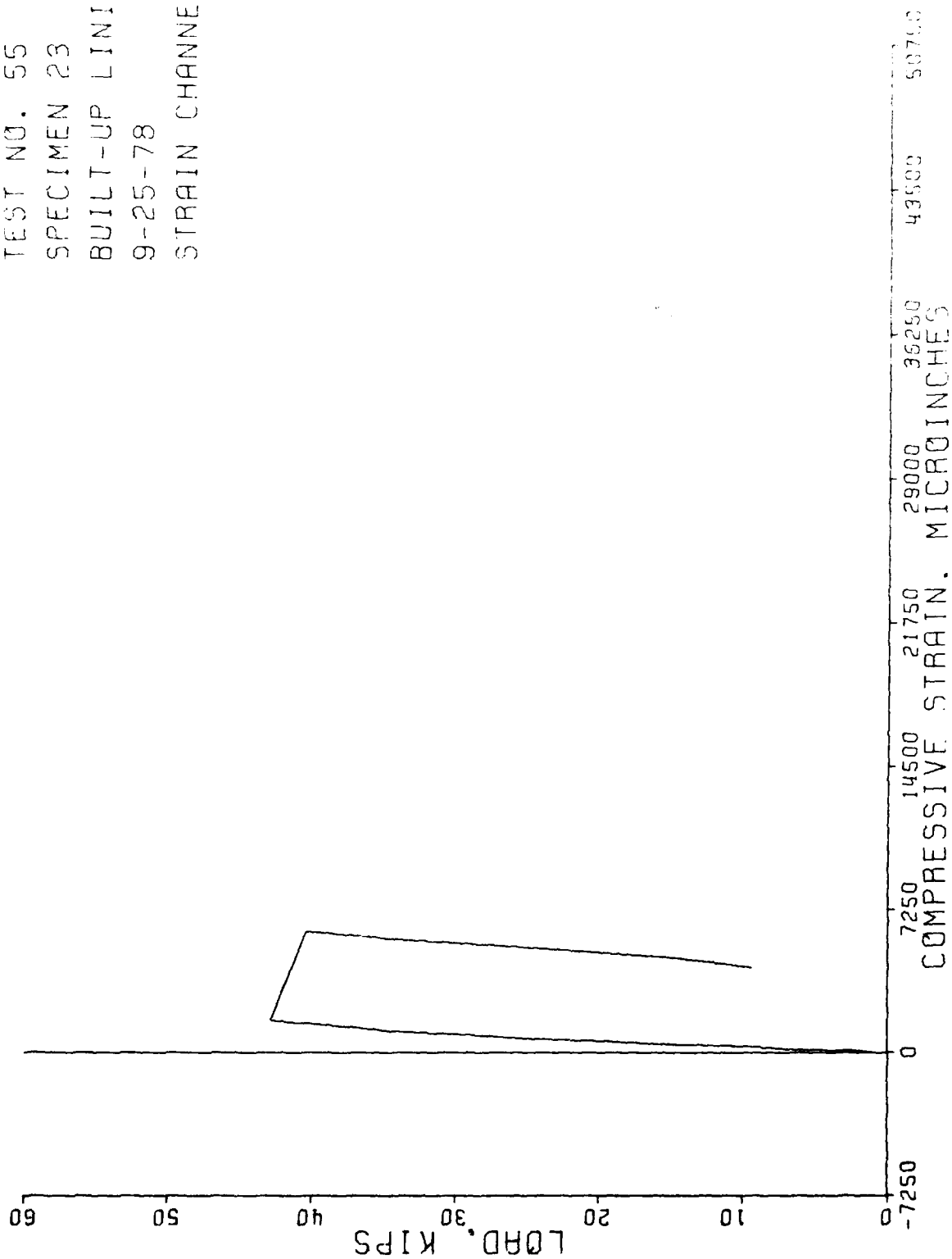
TEST NO. 55
SPECIMEN 23
BUILT-UP LINING
9-25-78
STRAIN CHANNEL 33



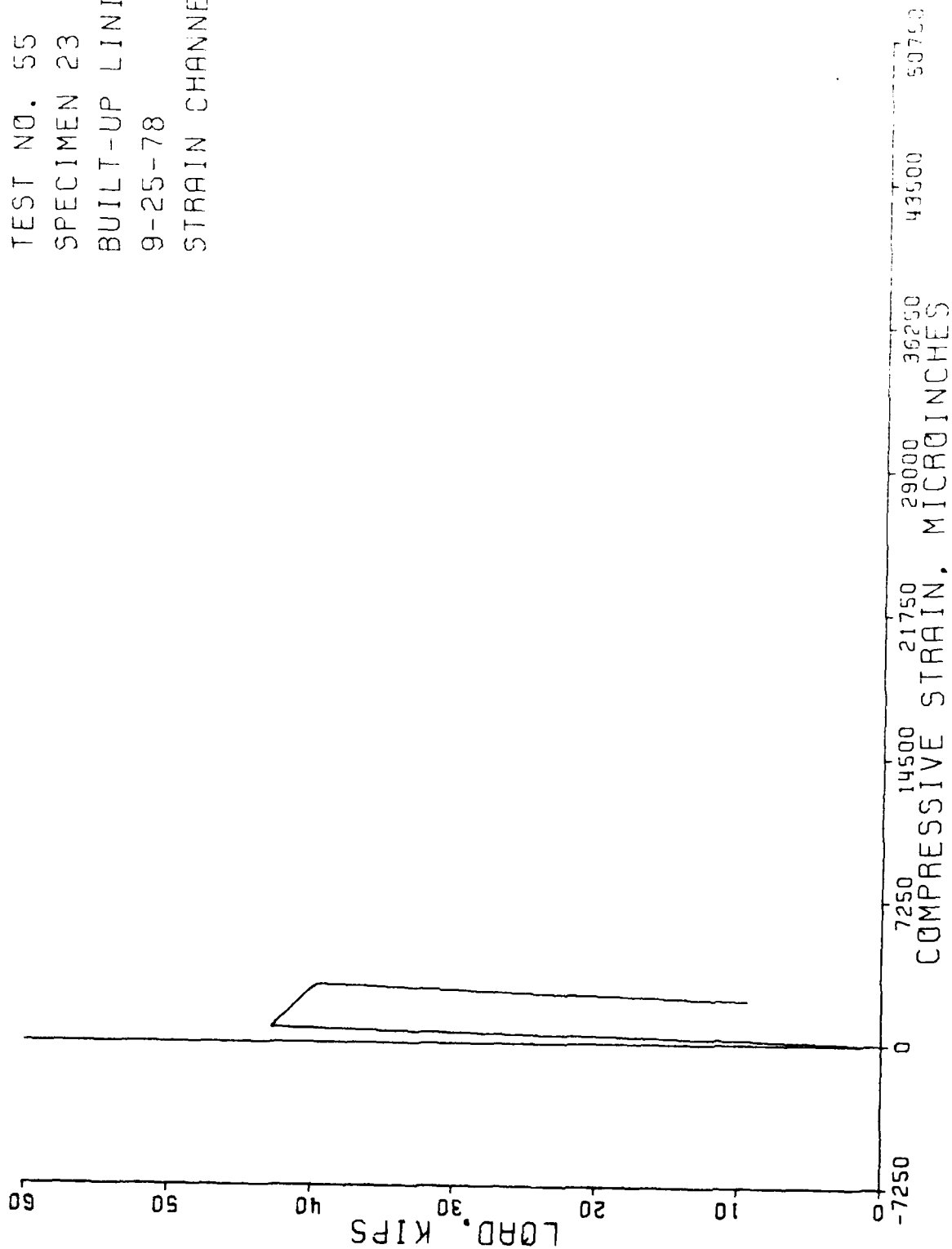
TEST NO. 55
 SPECIMEN 23
 BUILT-UP LINING
 9-25-78
 STRAIN CHANNEL 34



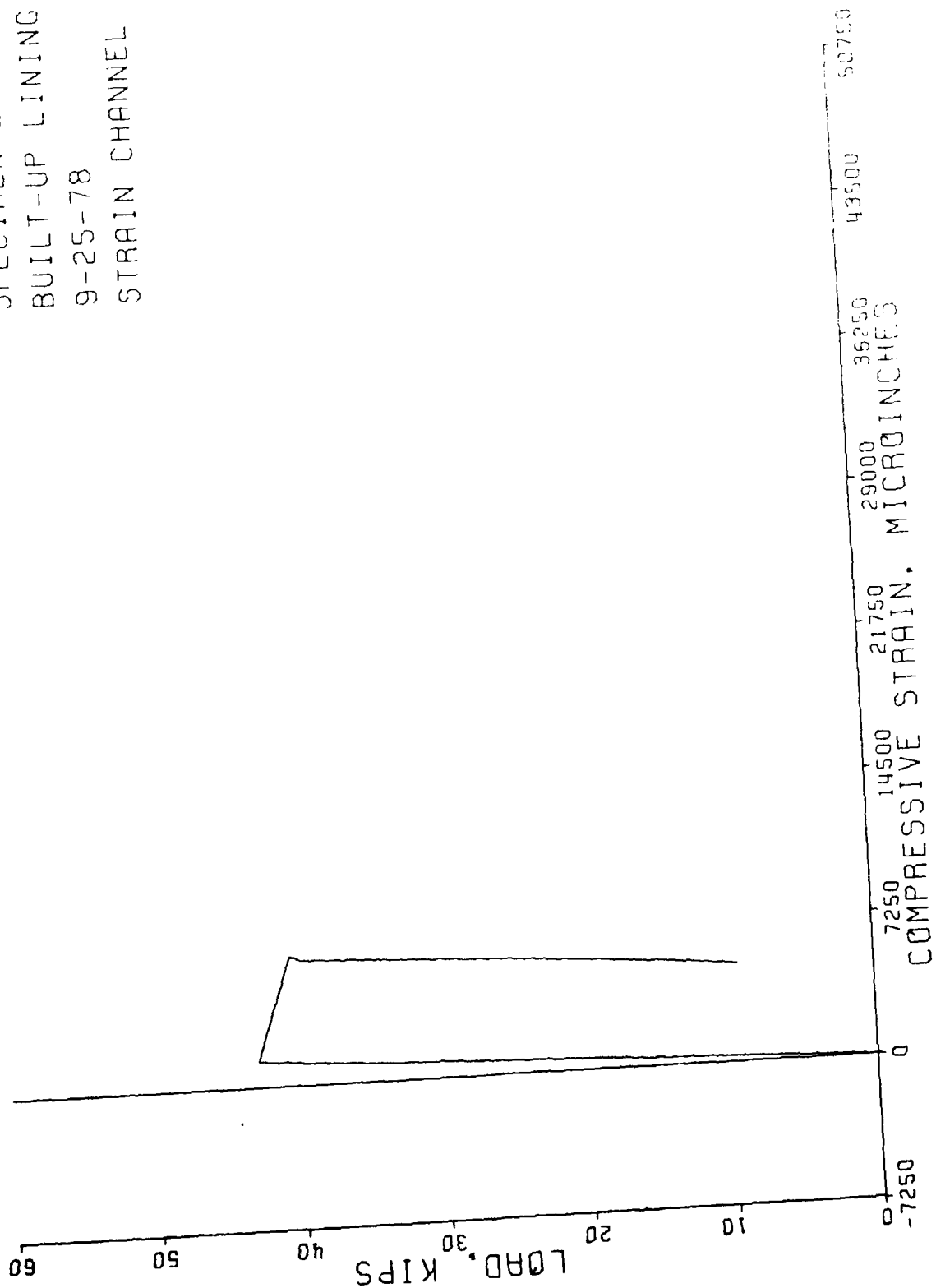
TEST NO. 55
 SPECIMEN 23
 BUILT-UP LINING
 9-25-78
 STRAIN CHANNEL 35



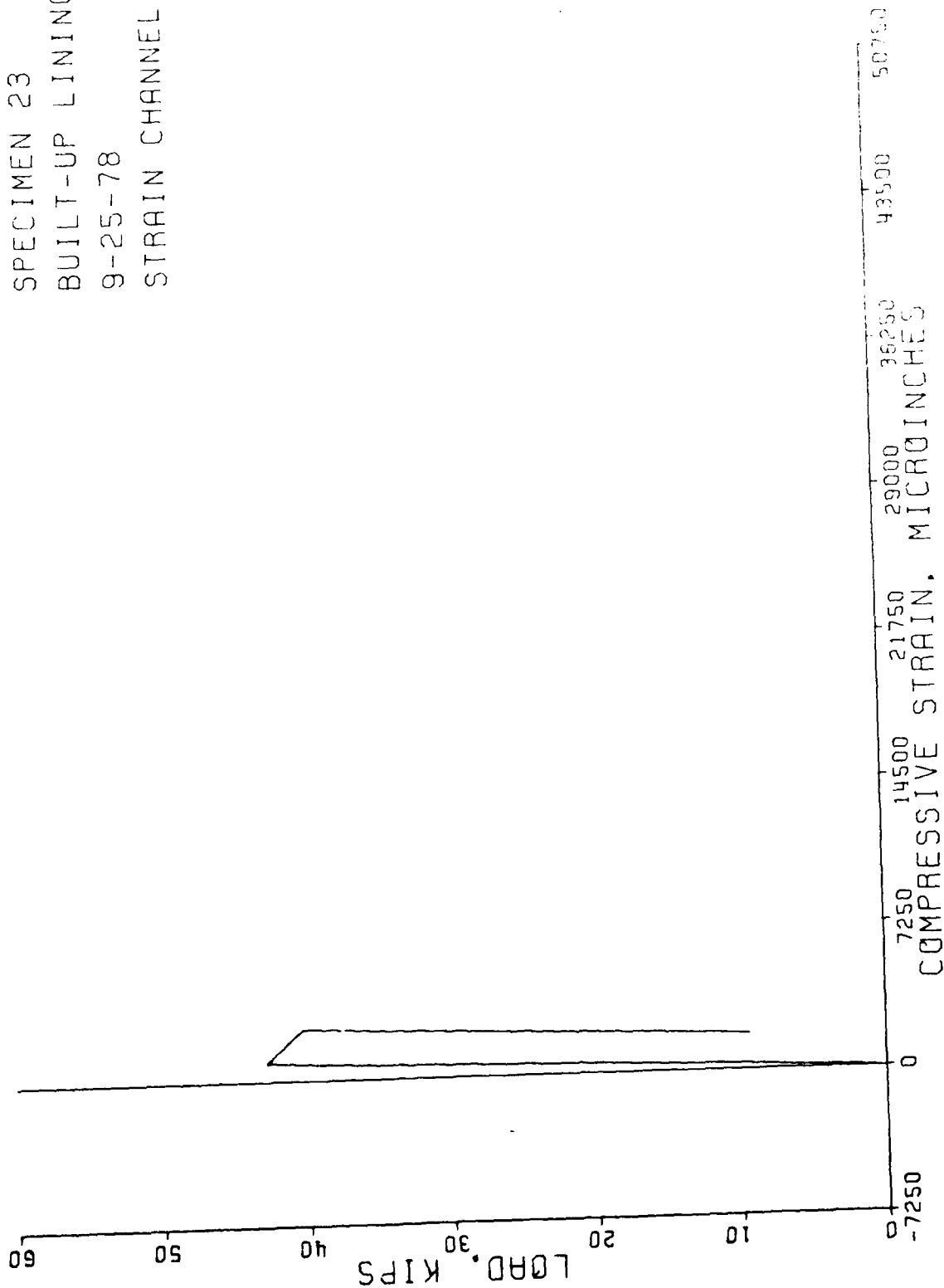
TEST NO. 55
SPECIMEN 23
BUILT-UP LINING
9-25-78
STRAIN CHANNEL 36



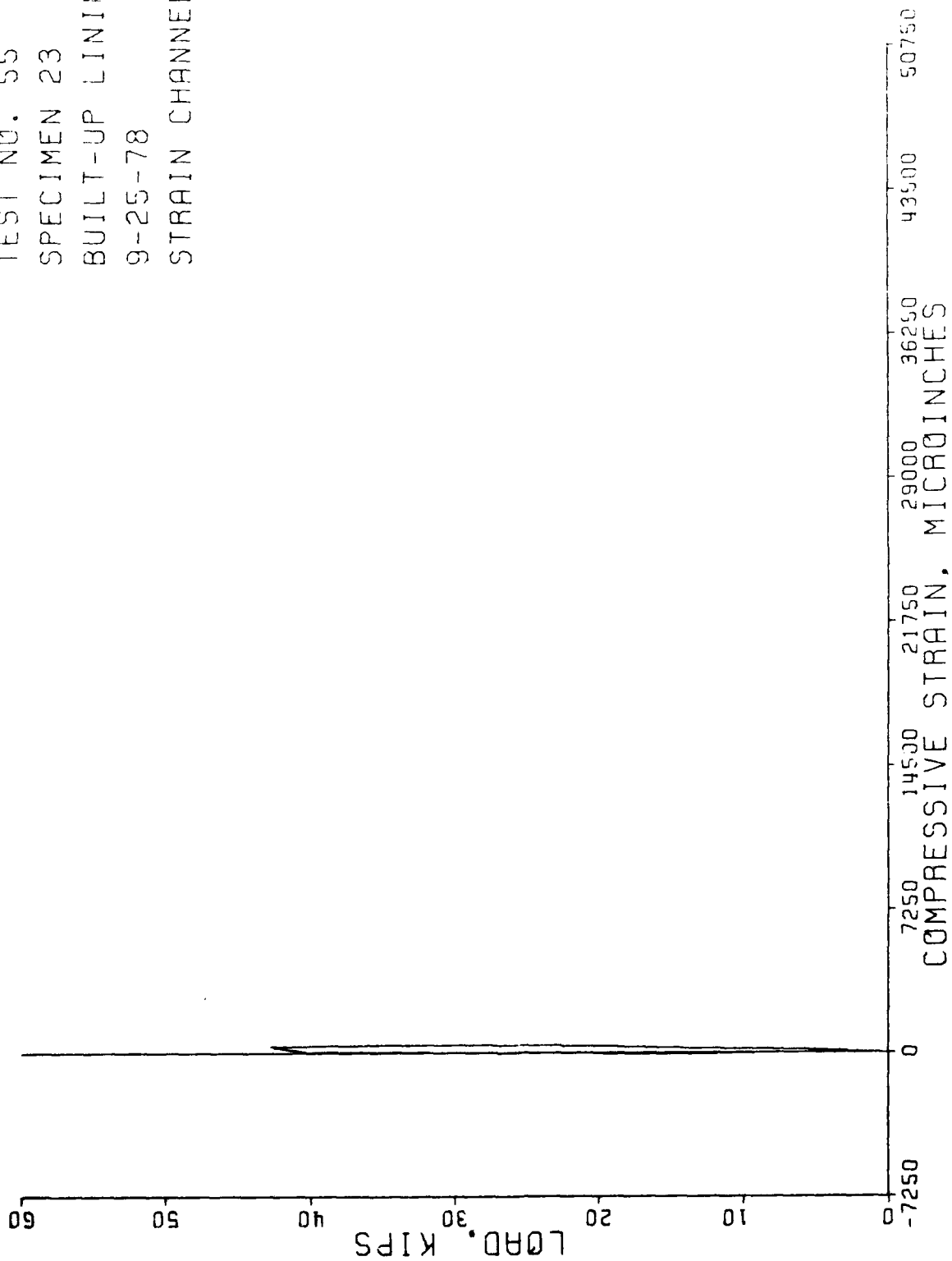
TEST NO. 55
 SPECIMEN 23
 BUILT-UP LINING
 9-25-78
 STRAIN CHANNEL 37



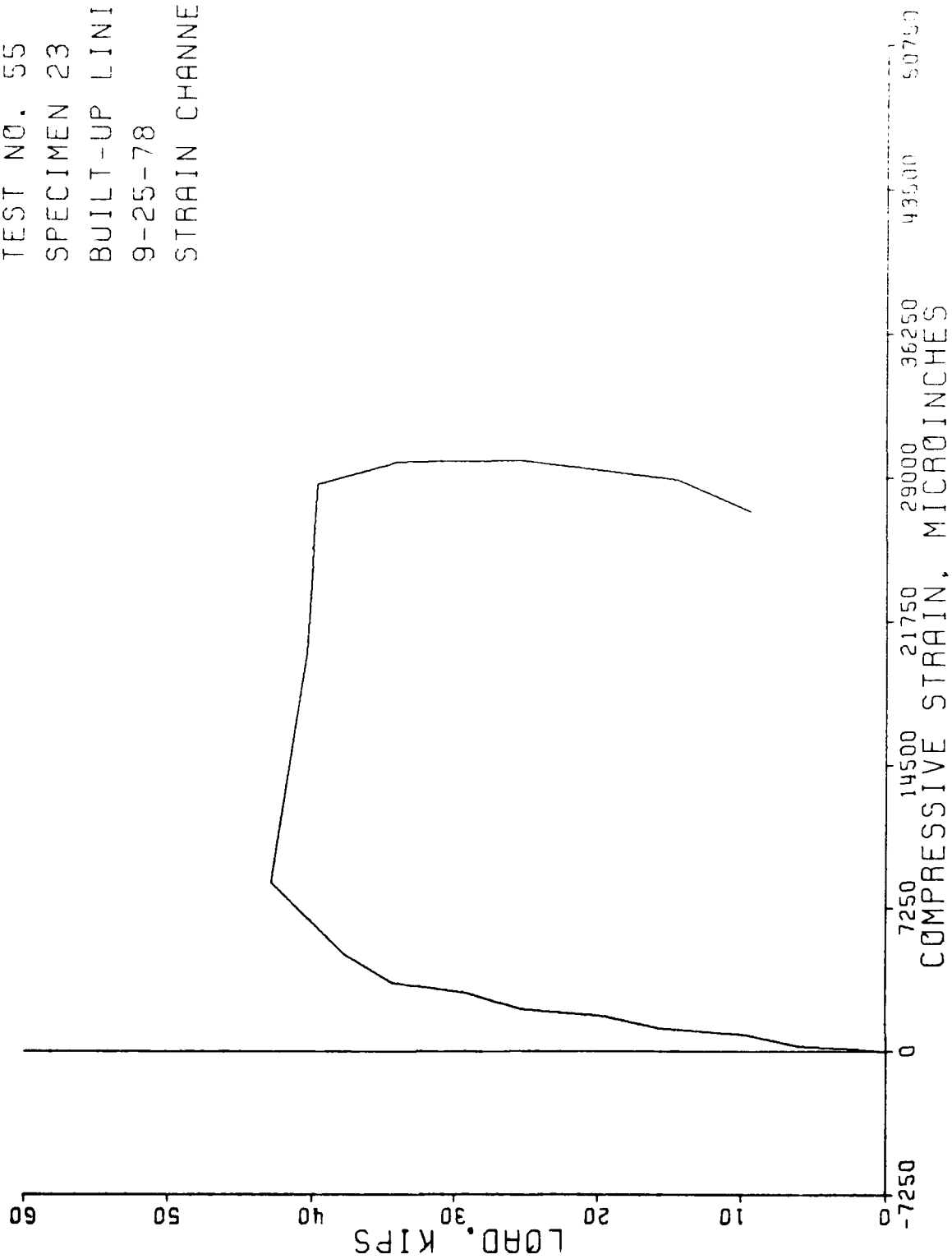
TEST NO. 55
 SPECIMEN 23
 BUILT-UP LINING
 9-25-78
 STRAIN CHANNEL 38



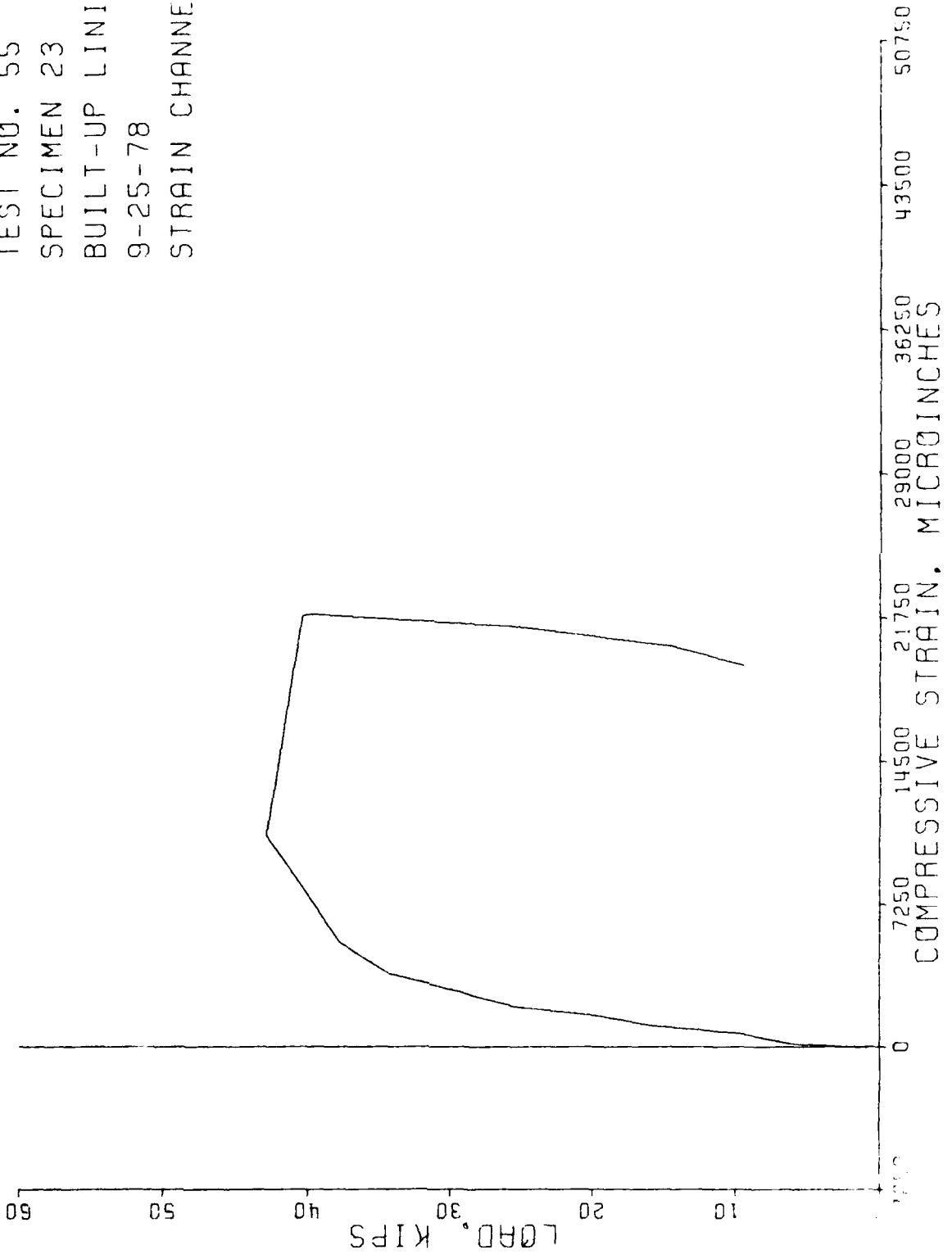
TEST NO. 55
 SPECIMEN 23
 BUILT-UP LINING
 9-25-78
 STRAIN CHANNEL 39



TEST NO. 55
SPECIMEN 23
BUILT-UP LINING
9-25-78
STRAIN CHANNEL 40



TEST NO. 55
SPECIMEN 23
BUILT-UP LINING
9-25-78
STRAIN CHANNEL 41



AD-A086 210

MERRITT CASES INC. REDLANDS CA

F/8 13/13

CONTINUATION OF STATIC TESTS OF SEGMENTS OF TUNNEL LININGS. VOL--ETC (U)

JUN 79 H C DAVIS, K B MORRILL, J L MERRITT

DNA001-78-C-0037

UNCLASSIFIED

78-004-T2-VOL-2

DNA-5000F-2

NL

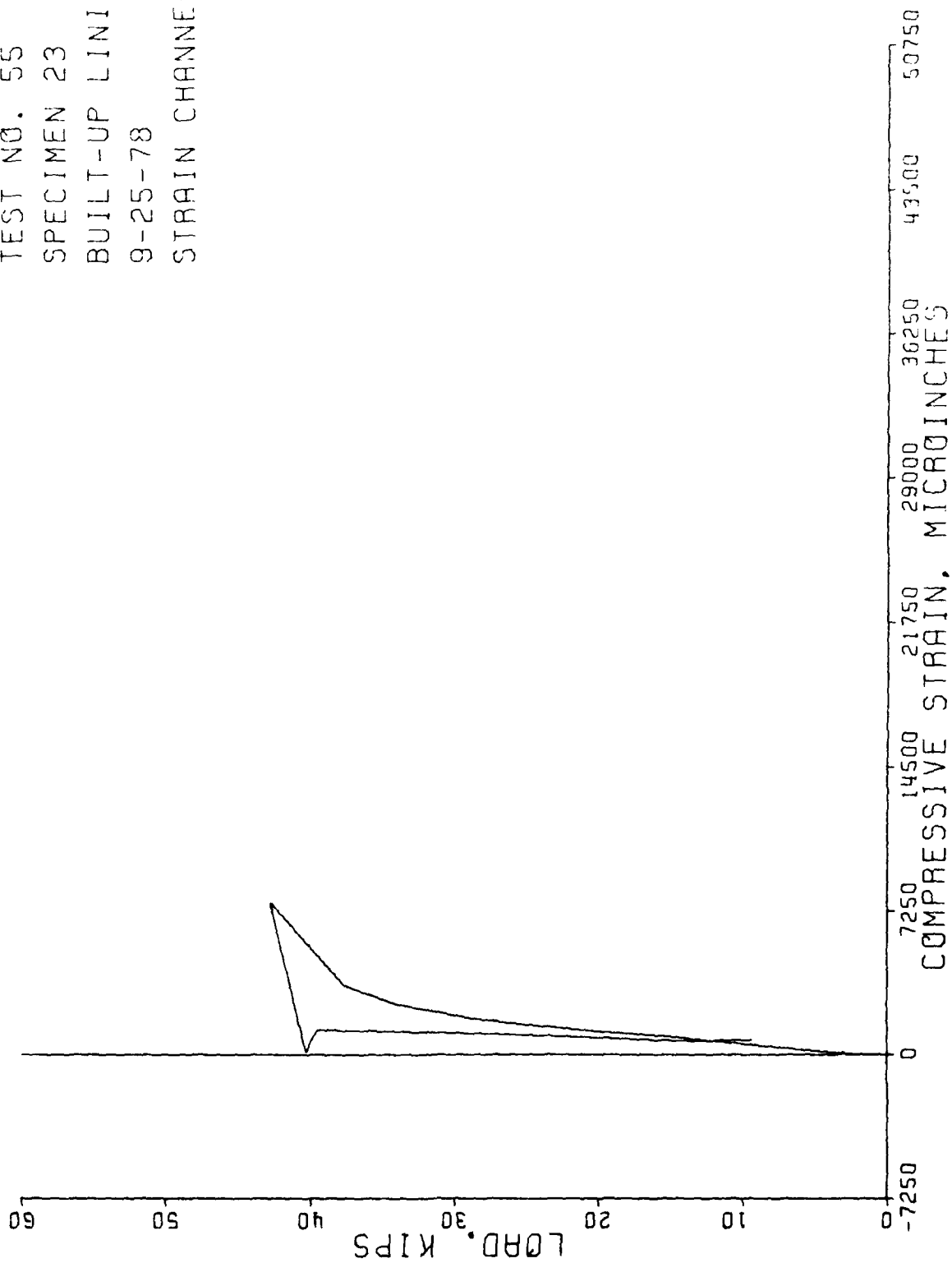
5-6

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED

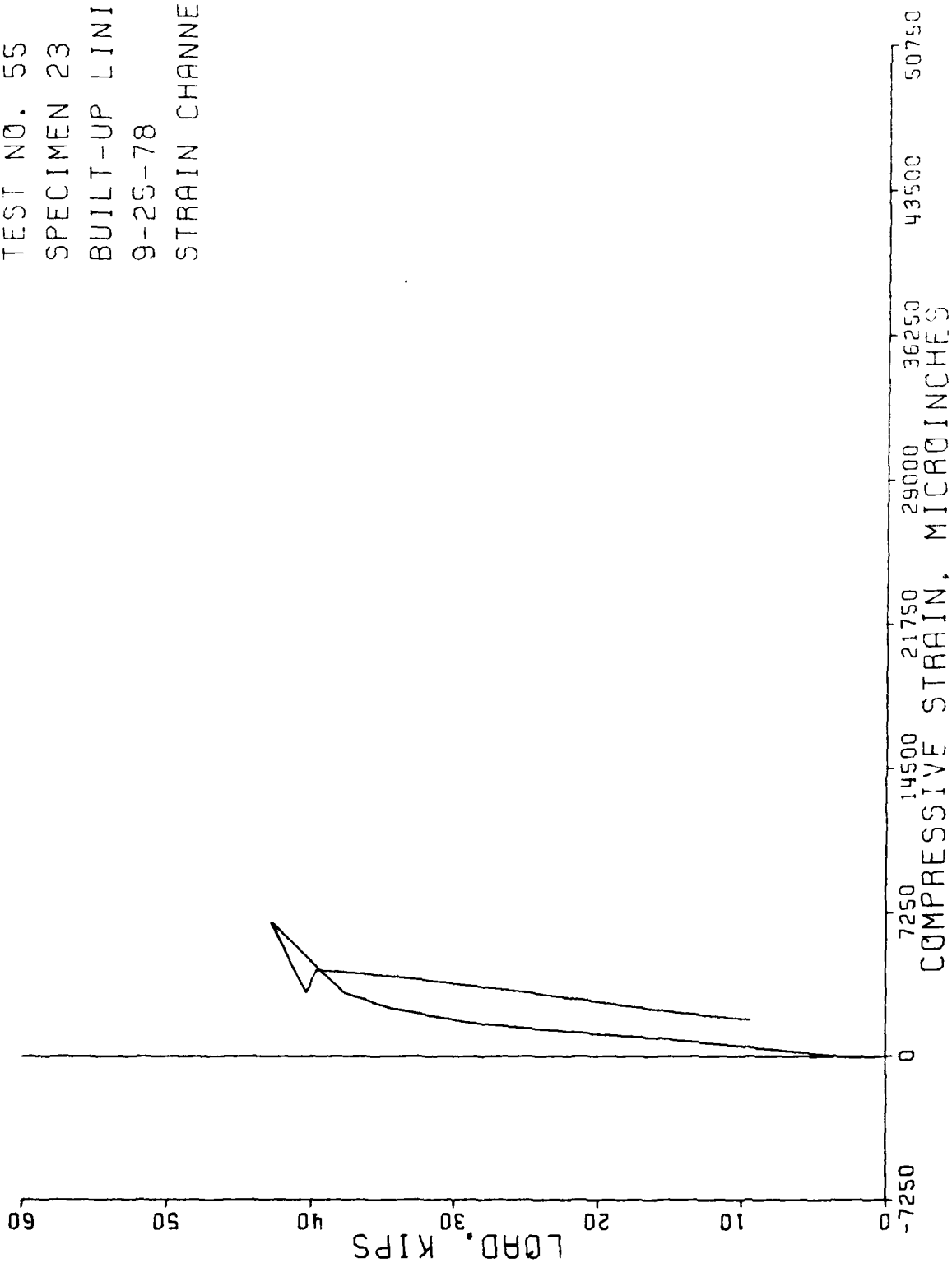
DATE 10-10-80 BY 1045

1045

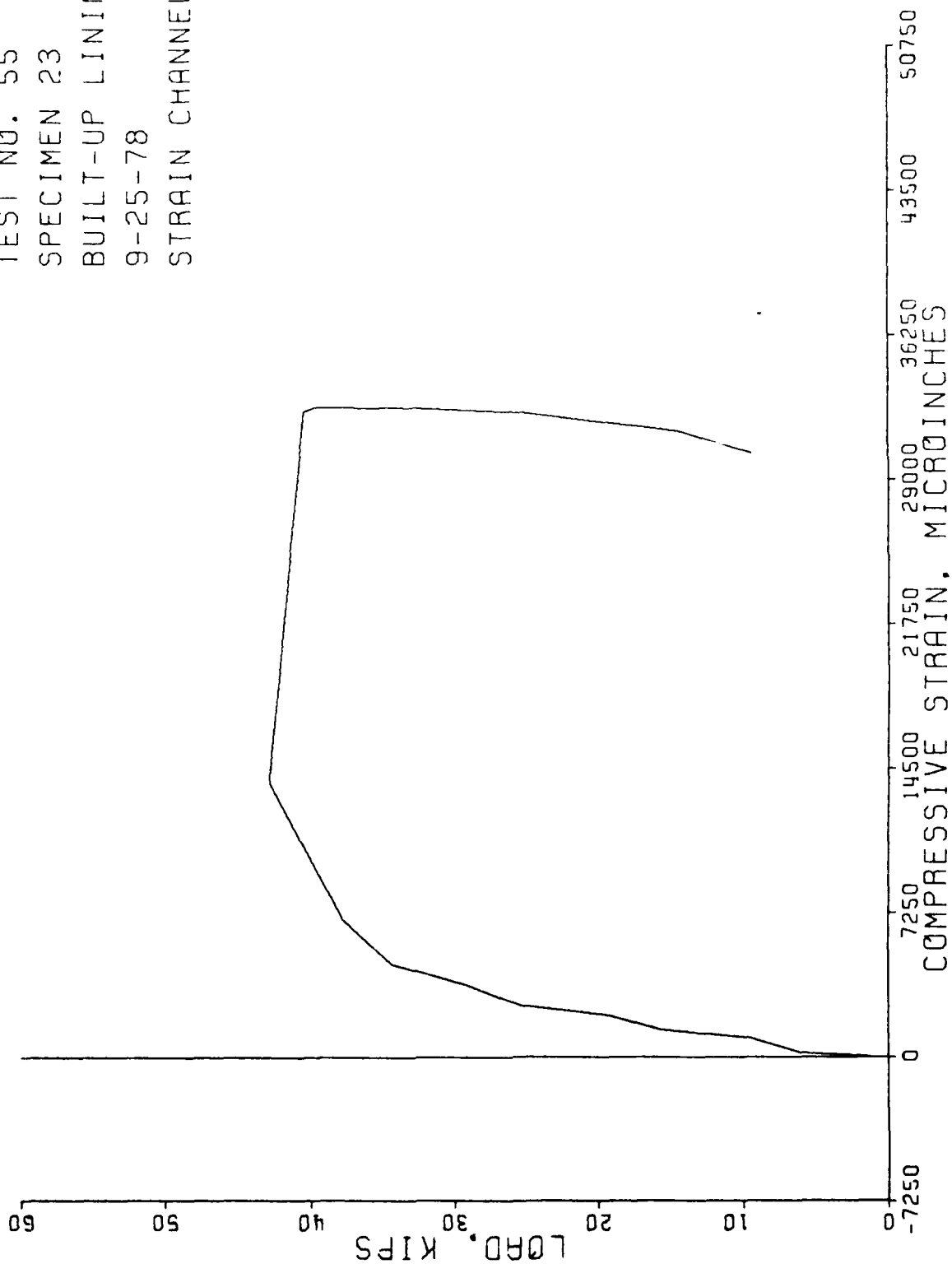
TEST NO. 55
SPECIMEN 23
BUILT-UP LINING
9-25-78
STRAIN CHANNEL 42



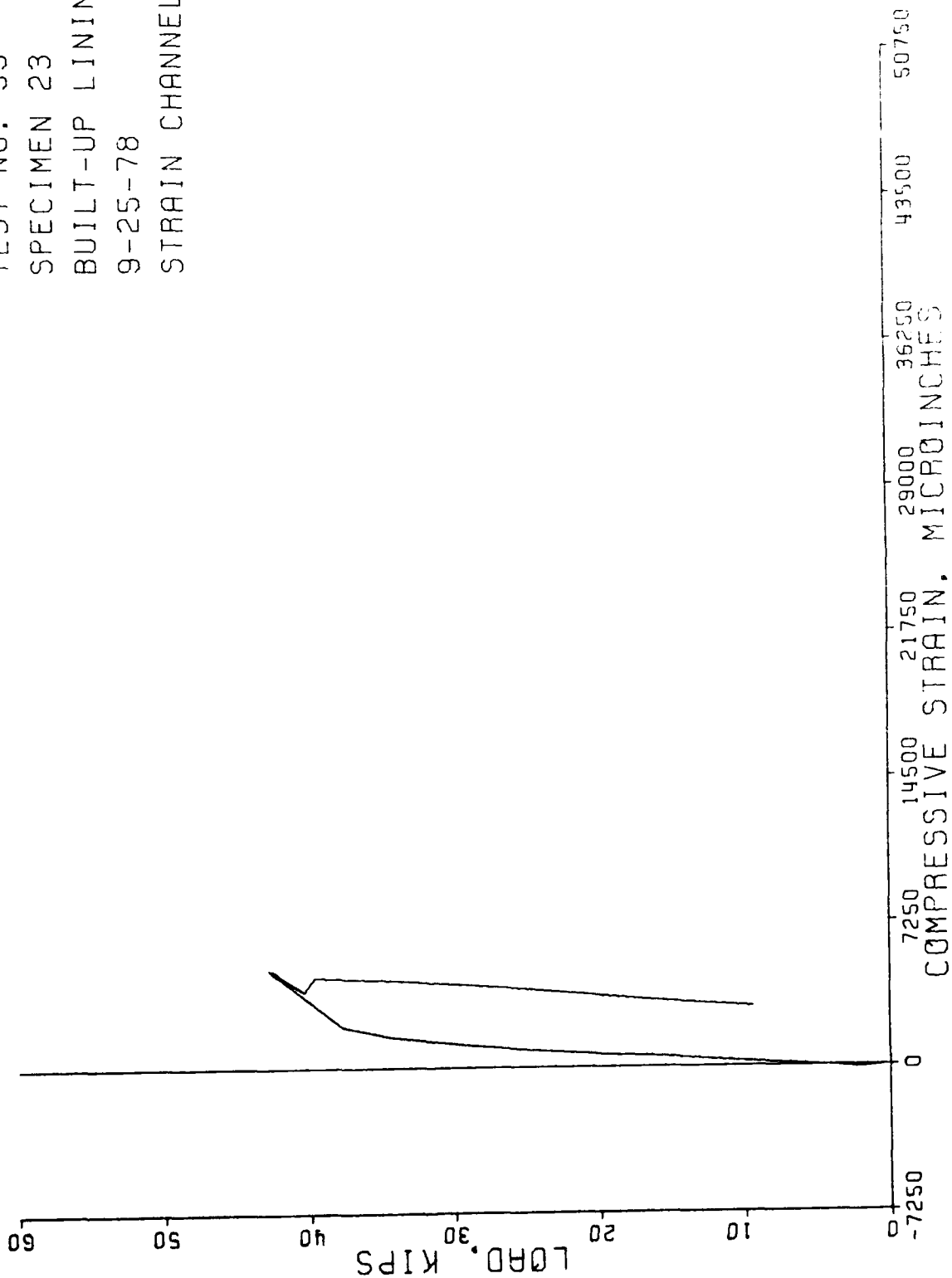
TEST NO. 55
SPECIMEN 23
BUILT-UP LINING
9-25-78
STRAIN CHANNEL 43



TEST NO. 55
SPECIMEN 23
BUILT-UP LINING
9-25-78
STRAIN CHANNEL 46



TEST NO. 55
 SPECIMEN 23
 BUILT-UP LINING
 9-25-78
 STRAIN CHANNEL 47



TEST NO. 55 SPECIMEN 23 BUILT-UP LINING 9-25-78

NUMBER OF INCREMENTS= 18
 NUMBER OF CHANNELS= 40
 NUMBER OF STRAIN CHANNELS= 16
 NUMBER OF DISPLACEMENT CHANNELS= 8
 NUMBER OF LOAD CHANNELS= 8
 NUMBER OF PRESSURE CHANNELS= 0
 NUMBER OF RODS= 8

CHANNEL	ZEROSHIFT
57	0.0
56	0.0
55	0.0
54	0.0
53	0.0
52	0.0
51	0.0
50	0.0
47	0.0
46	0.0
43	0.0
42	0.0
41	0.0
40	0.0
39	0.0
38	0.0
37	0.0
36	0.0
35	0.0
34	0.0
33	0.0
32	0.0
31	0.0
30	0.0
29	0.0
28	0.0
27	0.0
26	0.0
25	0.0
22	0.0
21	0.0
20	0.0
19	0.0
18	0.0
17	0.0
16	0.0
15	0.0
14	0.0
13	0.0
12	0.0

STRAIN CHANNEL	CALIBRATION
47	1.000
46	1.000

43	1.000	
42	1.000	
41	1.000	
40	1.000	
39	1.000	
38	1.000	
37	1.000	
36	1.000	
35	1.000	
34	1.000	
33	1.000	
32	1.000	
31	1.000	
30	1.000	
		CALIBRATION
19	0.001	
18	0.001	
17	0.001	
16	0.002	
15	0.002	
14	0.002	
13	0.002	
12	0.002	
		CALIBRATION
29	10.000	
28	10.000	
27	10.000	
26	10.000	
25	10.000	
22	10.000	
21	10.000	
20	10.000	
		CALIBRATION
57	1.000	
56	1.000	
55	1.000	
54	1.000	
53	1.000	
52	1.000	
51	1.000	
50	1.000	

DISPLACEMENT CHANNEL

LOAD CHANNEL

ROD CHANNEL

STRAIN CHANNELS

TIME	CH. 47	CH. 46	CH. 43	CH. 42	CH. 41	CH. 40	CH. 39	CH. 38
1. 26:14:14: 4	-1.000	-1.000	0.0	-1.000	0.0	-2.000	-1.000	-1.000
2. 26:14:15:43	58.000	-10.000	37.000	5.000	34.000	-47.000	-13.000	-37.000
3. 26:14:19:11	125.000	-61.000	73.000	17.000	14.000	-99.000	-28.000	-72.000
4. 26:14:26:57	-69.000	-232.000	-214.000	-370.000	-128.000	-243.000	-129.000	-163.000
5. 26:14:27:58	-235.000	-984.000	-480.000	-521.000	-677.000	-827.000	-194.000	-288.000
6. 26:14:28:58	-495.000	-1390.000	-893.000	-932.000	-1036.000	-1160.000	-271.000	-375.000
7. 26:14:29:58	-624.000	-2121.000	-1073.000	-1119.000	-1036.000	-1767.000	-322.000	-473.000
8. 26:14:30:58	-872.000	-2602.000	-1459.000	-1536.000	-1559.000	-2124.000	-378.000	-546.000
9. 26:14:31:58	-1106.000	-3671.000	-1752.000	-1862.000	-2044.000	-2969.000	-394.000	-631.000
10. 26:14:32:58	-1562.000	-4729.000	-2430.000	-2609.000	-3735.000	-3486.000	-399.000	-689.000
11. 26:14:33:58	-2120.000	-6946.000	-3244.000	-3520.000	-2764.000	-4915.000	-366.000	-770.000
12. 26:14:37:28	-4968.000	-13777.000	-6769.000	-7634.000	-3292.000	-8529.000	-337.000	-895.000
13. 26:14:41:58	-3862.000	-32468.000	-3175.000	-121.000	-10651.000	-20160.000	6.000	-2574.000
14. 26:14:42:47	-4578.000	-32681.000	-4361.000	-1217.000	-21827.000	-28657.000	-49.000	-2586.000
15. 26:14:43:34	-4405.000	-32667.000	-4020.000	-1176.000	-21654.000	-29763.000	-20.000	-2409.000
16. 26:14:44:29	-3934.000	-32410.000	-3258.000	-982.000	-21276.000	-29821.000	49.000	-2180.000
17. 26:14:45:16	-3266.000	-31480.000	-2207.000	-702.000	-20287.000	-28907.000	85.000	-1923.000
18. 26:14:46:10	-3006.000	-30347.000	-1853.000	-724.000	-19531.000	-27284.000	27.000	-1763.000

STRAIN CHANNELS

	TIME	CH.37	CH.36	CH.35	CH.34	CH.33	CH.32	CH.31	CH.30
1.	26:14:14:4	-1.000	0.0	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
2.	26:14:15:43	-39.000	-8.000	-51.000	29.000	-26.000	-48.000	-29.000	-26.000
3.	26:14:19:11	-74.000	-25.000	-96.000	36.000	-40.000	-97.000	-37.000	16.000
4.	26:14:25:57	-175.000	-91.000	-131.000	30.000	-128.000	-142.000	-105.000	-34.000
5.	26:14:27:58	-283.000	-203.000	-321.000	-62.000	-198.000	-315.000	-104.000	-204.000
6.	26:14:28:58	-414.000	-276.000	-428.000	-50.000	-360.000	-385.000	-224.000	-227.000
7.	26:14:29:58	-529.000	-368.000	-593.000	-94.000	-434.000	-565.000	-249.000	-311.000
8.	26:14:30:58	-669.000	-430.000	-710.000	-44.000	-601.000	-643.000	-390.000	-287.000
9.	26:14:31:58	-792.000	-510.000	-903.000	-51.000	-660.000	-836.000	-669.000	-282.000
10.	26:14:32:58	-917.000	-595.000	-1073.000	-57.000	-760.000	-972.000	-574.000	-259.000
11.	26:14:33:58	-1045.000	-660.000	-1328.000	-23.000	-780.000	-1251.000	-634.000	-180.000
12.	26:14:37:28	-1266.000	-734.000	-1643.000	91.000	-633.000	-1724.000	-740.000	18.000
13.	26:14:41:58	-6536.000	-2530.000	-6109.000	3646.000	-2071.000	-5802.000	-808.000	2580.000
14.	26:14:42:47	-6322.000	-2946.000	-6089.000	2677.000	-1827.000	-5514.000	-568.000	2064.000
15.	26:14:43:34	-6137.000	-2786.000	-5744.000	2734.000	-1552.000	-5425.000	-391.000	2060.000
16.	26:14:44:29	-5787.000	-2552.000	-5322.000	2724.000	-1107.000	-5339.000	-256.000	2115.000
17.	26:14:45:16	-5293.000	-2298.000	-4771.000	2557.000	-751.000	-4826.000	-224.000	2065.000
18.	26:14:46:10	-4981.000	-2188.000	-4324.000	2351.000	-612.000	-4361.000	-239.000	1883.000

DISPLACEMENT CHANNELS

TIME	CH.19	CH.18	CH.17	CH.16	CH.15	CH.14	CH.13	CH.12
1. 26:14:14:4	0.001	-0.001	0.001	0.002	-0.002	0.0	0.002	0.002
2. 26:14:15:43	0.001	-0.003	0.031	0.002	-0.002	0.0	0.0	0.0
3. 26:14:19:11	0.001	-0.016	0.031	0.028	0.028	0.006	0.0	0.0
4. 26:14:26:57	0.001	-0.014	0.061	0.030	0.028	0.006	0.030	0.002
5. 26:14:27:58	-0.025	-0.030	0.092	0.032	0.028	0.030	0.032	0.002
6. 26:14:28:58	-0.028	-0.030	0.121	0.032	0.030	0.028	0.060	0.002
7. 26:14:29:58	-0.028	-0.030	0.150	0.032	0.030	0.036	0.060	0.002
8. 26:14:30:58	-0.028	-0.030	0.210	0.054	0.060	0.060	0.090	-0.012
9. 26:14:31:58	-0.056	-0.059	0.270	0.060	0.090	0.060	0.150	-0.028
10. 26:14:32:58	-0.056	-0.059	0.329	0.090	0.120	0.090	0.205	-0.058
11. 26:14:33:58	-0.085	-0.088	0.448	0.150	0.150	0.098	0.628	-0.098
12. 26:14:37:28	-0.143	-0.117	0.921	0.528	0.208	0.148	1.326	-0.470
13. 26:14:41:58	-0.717	-0.493	3.027	0.412	0.884	0.590	1.492	-0.382
14. 26:14:42:47	-0.631	-0.472	3.263	0.416	0.770	0.560	1.522	-0.376
15. 26:14:43:34	-0.619	-0.464	3.234	0.412	0.740	0.522	1.490	-0.352
16. 26:14:44:29	-0.602	-0.436	3.163	0.412	0.710	0.498	1.430	-0.352
17. 26:14:45:16	-0.545	-0.378	2.998	0.390	0.652	0.416	1.430	-0.352
18. 26:14:46:10	-0.483	-0.320	2.850	0.352	0.592	0.372	1.400	-0.322

LOAD CHANNELS

TIME	CH.29	CH.28	CH.27	CH.26	CH.25	CH.22	CH.21	CH.20
1. 26:14:14:4	560.000	690.000	550.000	620.000	500.000	650.000	710.000	640.000
2. 26:14:15:43	1510.000	1390.000	1190.070	1930.000	1250.000	1910.000	1170.000	1440.000
3. 26:14:19:11	2770.000	2110.000	2590.000	2970.000	2200.000	2910.000	2400.000	2180.000
4. 26:14:26:57	6190.000	5630.000	5640.000	5610.000	6130.000	5370.000	5290.000	5560.000
5. 26:14:27:58	11140.000	10690.000	11860.000	11140.000	9740.000	10680.000	11620.000	10250.000
6. 26:14:28:58	15430.000	16270.000	15750.000	15710.000	15690.000	15290.000	15360.000	15250.000
7. 26:14:29:58	20600.000	20540.000	21150.000	21050.000	19560.000	20610.000	20700.000	19390.000
8. 26:14:30:58	24980.000	25470.000	24750.000	25490.000	25450.000	25160.000	23800.000	24430.000
9. 26:14:31:58	29710.000	29610.000	29250.000	30740.000	29200.000	30580.000	28060.000	28370.000
10. 26:14:32:58	33780.000	34120.000	33670.000	34940.000	34420.000	35140.000	32170.000	33100.000
11. 26:14:33:58	37900.000	37960.000	37660.000	37560.000	37780.000	40120.000	36690.000	36560.000
12. 26:14:37:28	42660.000	43090.000	42500.000	43320.000	42790.000	44630.000	41830.000	40810.000
13. 26:14:41:58	45980.000	38060.000	35000.000	43610.000	40290.000	44320.000	33650.000	33750.000
14. 26:14:42:47	38030.000	37600.000	37260.000	39960.000	39550.000	38430.000	36380.000	38110.000
15. 26:14:43:34	33040.000	31350.000	31870.000	32550.000	33980.000	32310.000	31880.000	30970.000
16. 26:14:44:29	23580.000	22160.000	22650.000	23370.000	25210.000	22560.000	23850.000	21670.000
17. 26:14:45:16	12800.000	11380.000	13230.000	13120.000	14360.000	12490.000	13450.000	11620.000
18. 26:14:46:10	7400.000	7370.000	7880.000	7690.000	9350.000	7440.000	7820.000	7430.000

ROD CHANNELS

TIME	CH.57	CH.56	CH.55	CH.54	CH.53	CH.52	CH.51	CH.50
1. 26:14:14:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.812
2. 26:14:15:43	0.0	25.624	0.0	0.0	25.624	12.812	12.812	12.812
3. 26:14:19:11	0.0	25.624	12.812	12.812	38.435	38.435	38.435	12.812
4. 26:14:26:57	12.812	76.871	51.247	38.435	25.624	38.435	38.435	0.0
5. 26:14:27:58	12.812	38.435	76.871	140.930	89.683	64.059	128.118	12.812
6. 26:14:28:58	12.812	51.247	115.306	204.989	80.683	25.624	230.612	12.812
7. 26:14:29:58	12.812	51.247	102.494	243.424	102.494	0.0	269.048	12.812
8. 26:14:30:58	12.812	38.435	102.494	281.859	89.683	-38.435	269.048	12.812
9. 26:14:31:58	12.812	64.059	76.871	333.107	51.247	-166.553	243.424	12.812
10. 26:14:32:58	0.0	-25.624	128.118	384.354	12.812	-307.483	76.871	-140.930
11. 26:14:33:58	12.812	-166.553	89.683	294.671	-115.306	-448.413	-89.683	-243.424
12. 26:14:37:58	-25.624	-807.143	-128.118	384.354	-832.767	-602.154	-256.236	-192.177
13. 26:14:41:58	153.742	0.0	-140.930	-12.812	-550.907	-51.247	-1460.545	-12.812
14. 26:14:42:57	-25.624	-512.472	-563.719	-204.989	-153.742	-25.624	-2139.570	-307.483
15. 26:14:43:54	-12.812	-1268.368	76.871	-358.730	-64.059	-12.812	-1652.722	-64.059
16. 26:14:44:29	-12.812	-397.166	64.059	-64.059	12.812	12.812	-1319.615	-76.871
17. 26:14:45:16	-12.812	-217.801	51.247	-12.812	76.871	128.118	-909.637	-64.059
18. 26:14:46:10	12.812	-102.494	51.247	-12.812	140.930	179.365	-704.649	-51.247

A V E R A G E L O A D

1.	615.000
2.	1473.750
3.	2516.250
4.	5652.500
5.	10890.000
6.	15593.750
7.	20450.000
8.	24941.250
9.	29440.000
10.	33917.500
11.	37803.750
12.	42678.750
13.	39332.500
14.	38165.000
15.	32243.750
16.	23131.250
17.	12806.250
18.	7797.500

3.4.2 SPECIMEN #24

TEST NO. 56
STEEL LINER WITH 2000 PSI BACKPACKING
1:1 LOADING RATIO
TESTED 29 SEPTEMBER 1978

REACTION FRAME TEST SET-UP

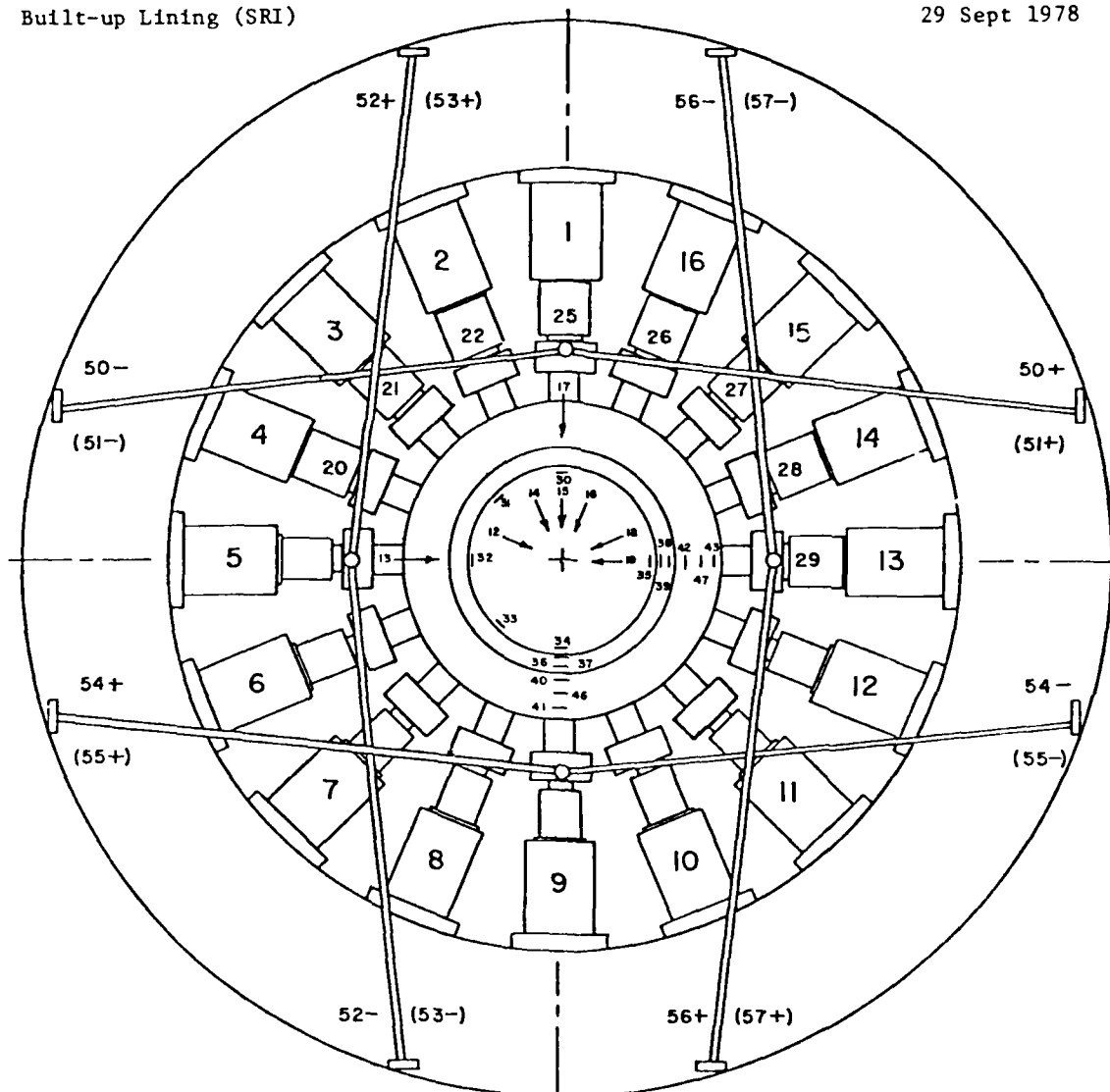
Specimen #24

Built-up Lining (SRI)

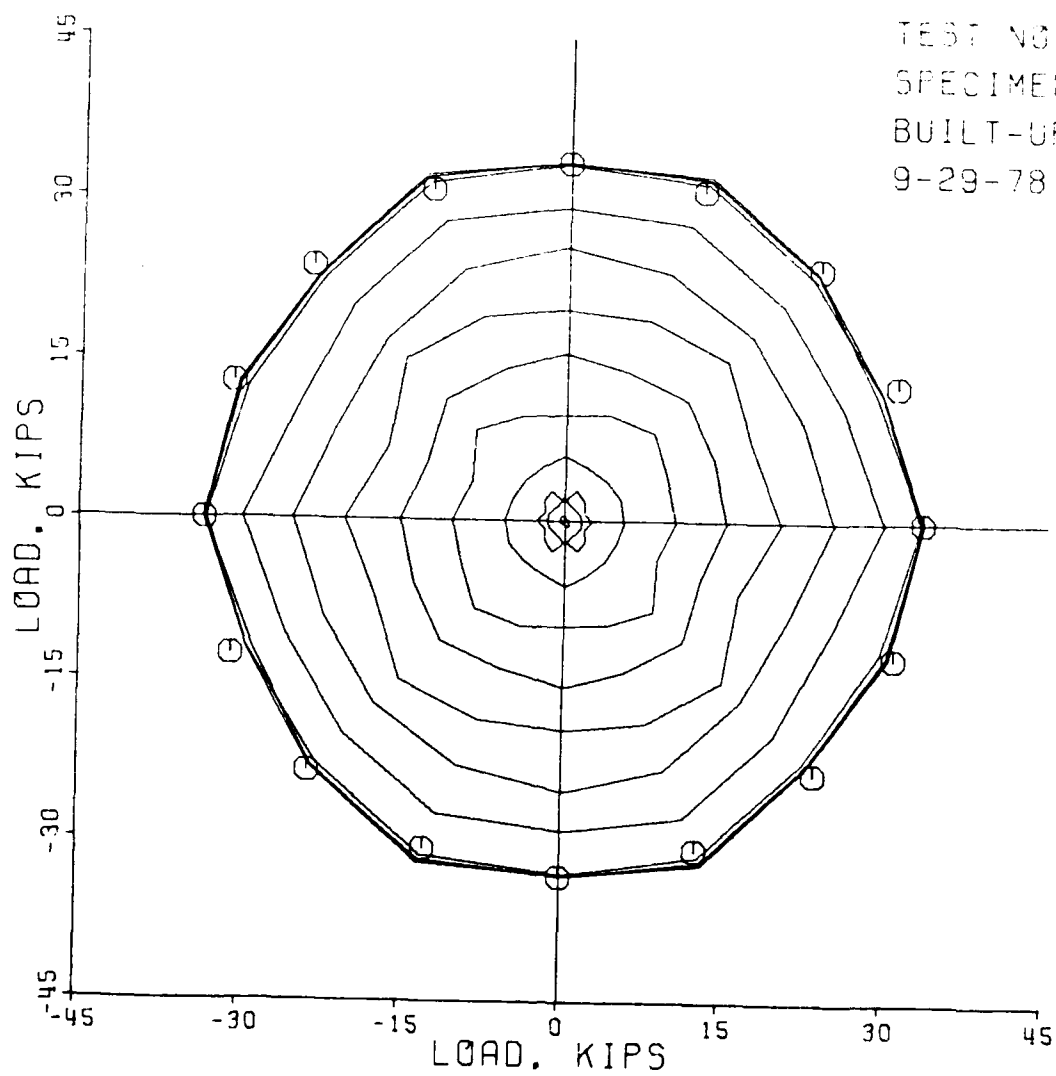
Test #56

1:1 Load

29 Sept 1978

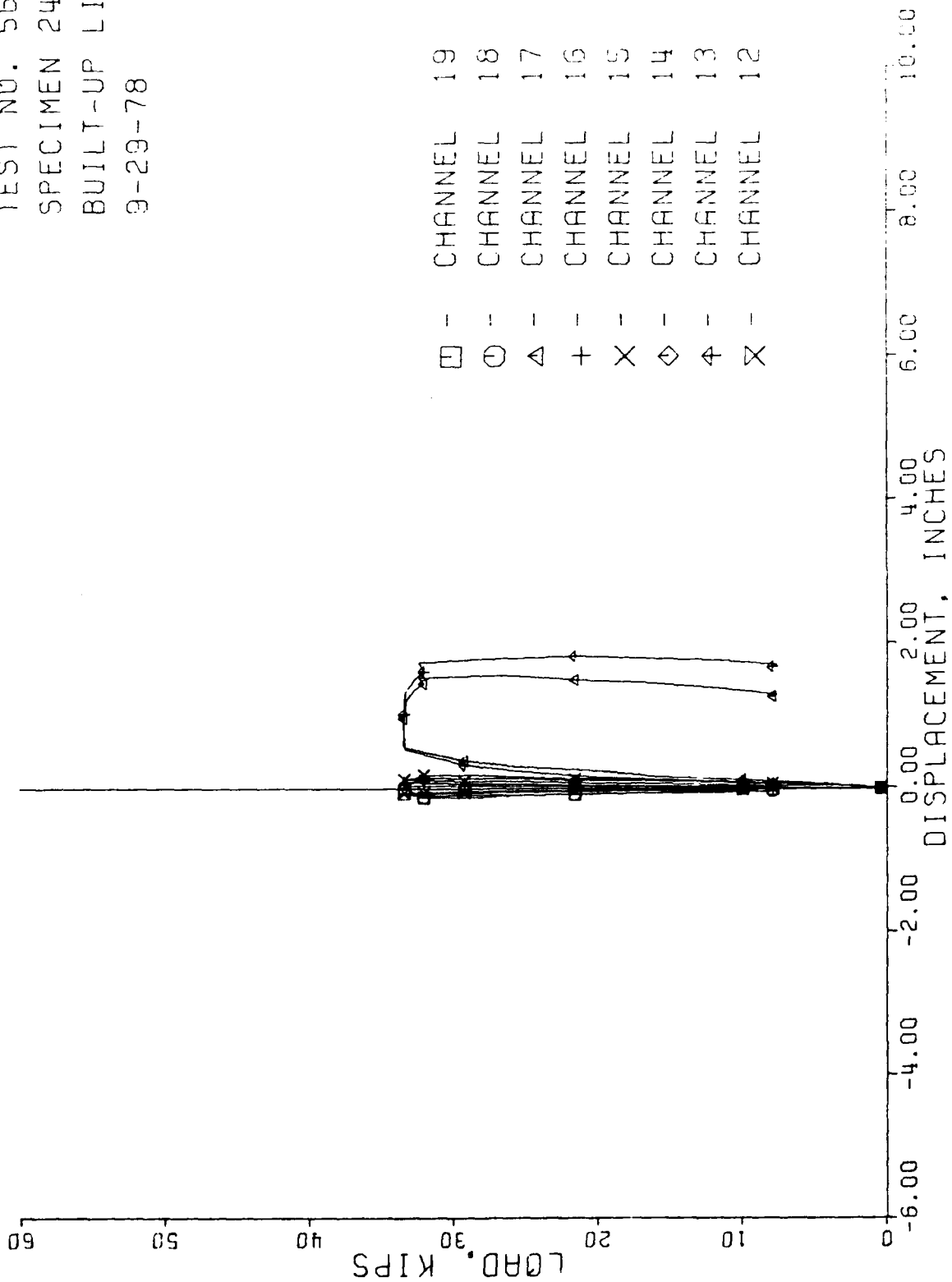


CH 12, 14-16, 18 and 19 Load axis I.D., CH 13, 17 Load axis O.D. (Research, Inc. 4040).
 CH 20-22, 25-29 Axial load (Transducers, Inc. Model 693-300K).
 CH 30-35 (Ailtech SG 129-6S) Inside on load axis at center.
 CH 36-39 (Ailtech SG 129-6S) Top surface on load axis - .33" spacing. Even gages inside.
 CH 40-43, 46 and 47 (BLH PA-7) Top surface on load axis - 1.0" spacing.
 CH 50-57 (Ailtech SG 129-6S) Polarity indicates rod under tension.
 Lower rod shown (XX).

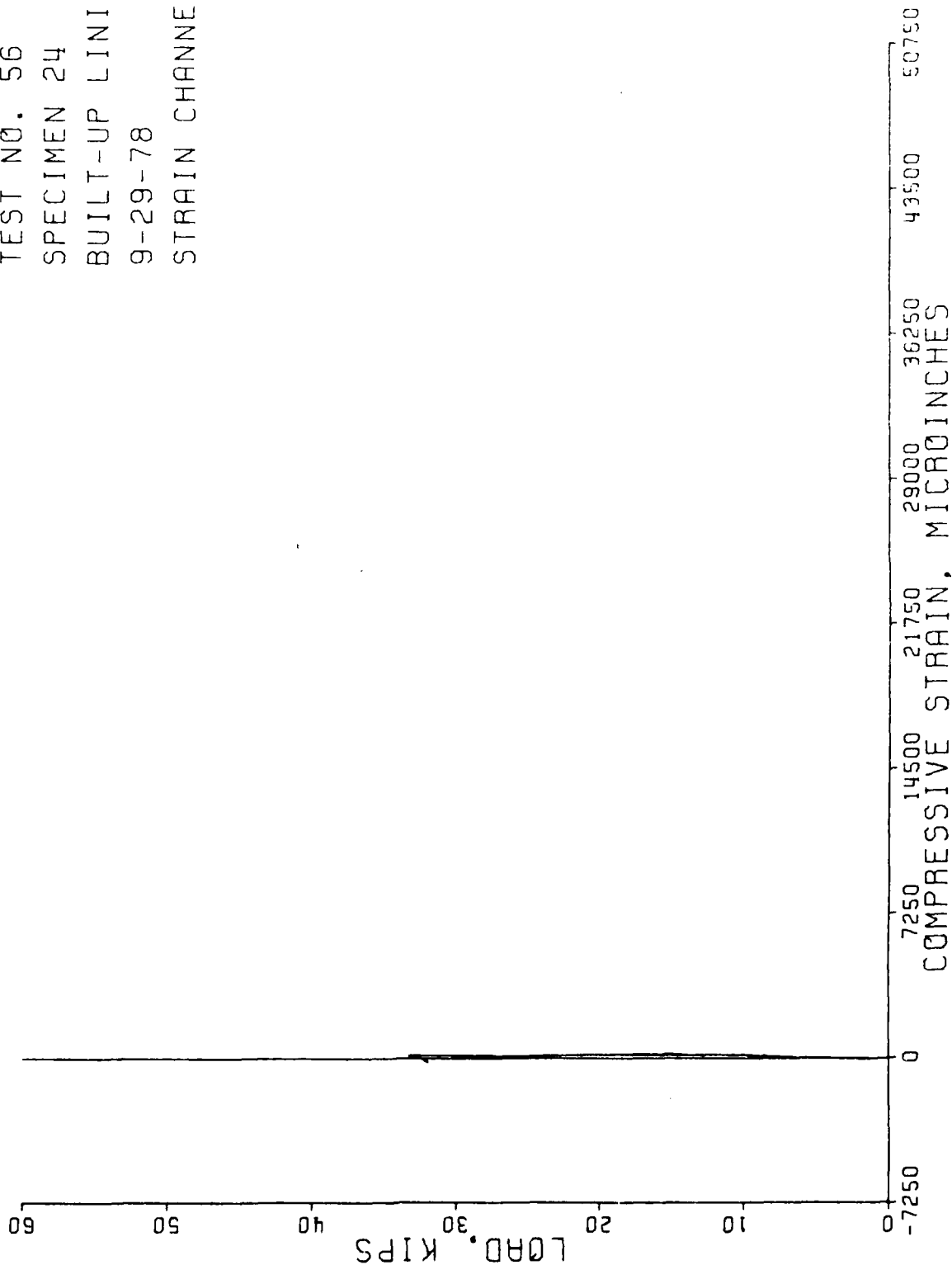


TEST NO. 98
SPECIMEN 24
BUILT-UP LINING
9-29-78

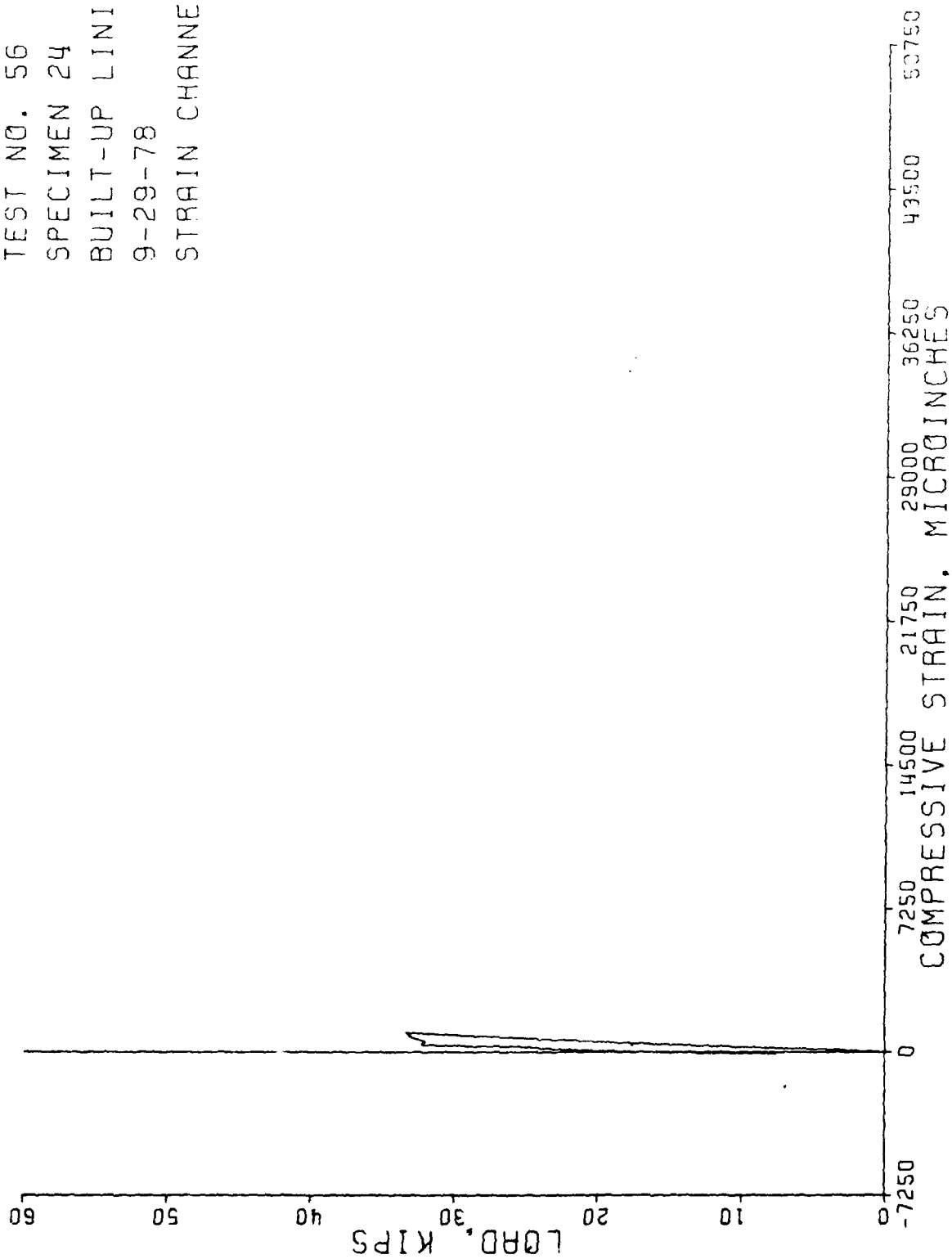
TEST NO. 56
 SPECIMEN 24
 BUILT-UP LINING
 9-29-78



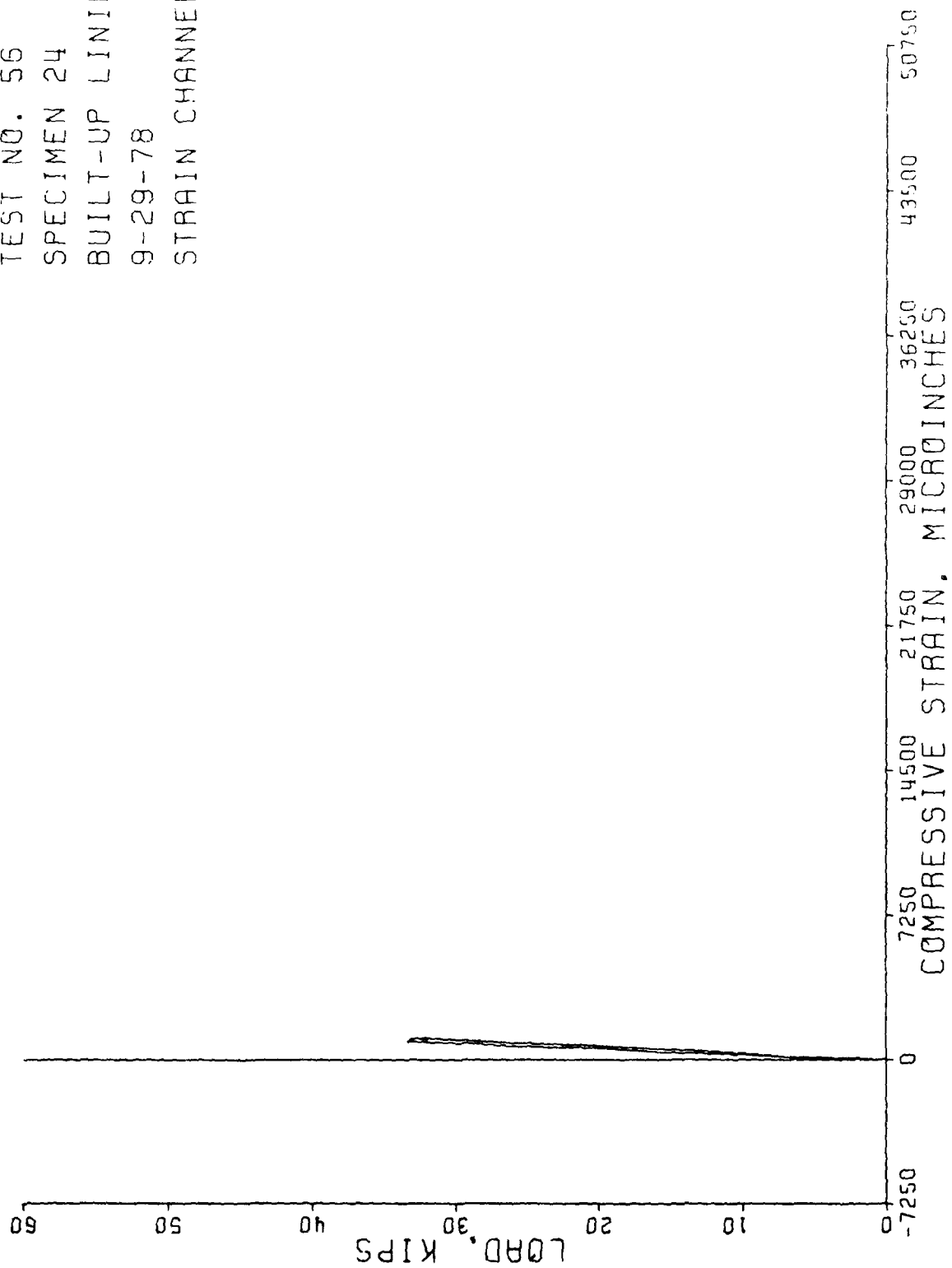
TEST NO. 56
SPECIMEN 24
BUILT-UP LINING
9-29-78
STRAIN CHANNEL 30



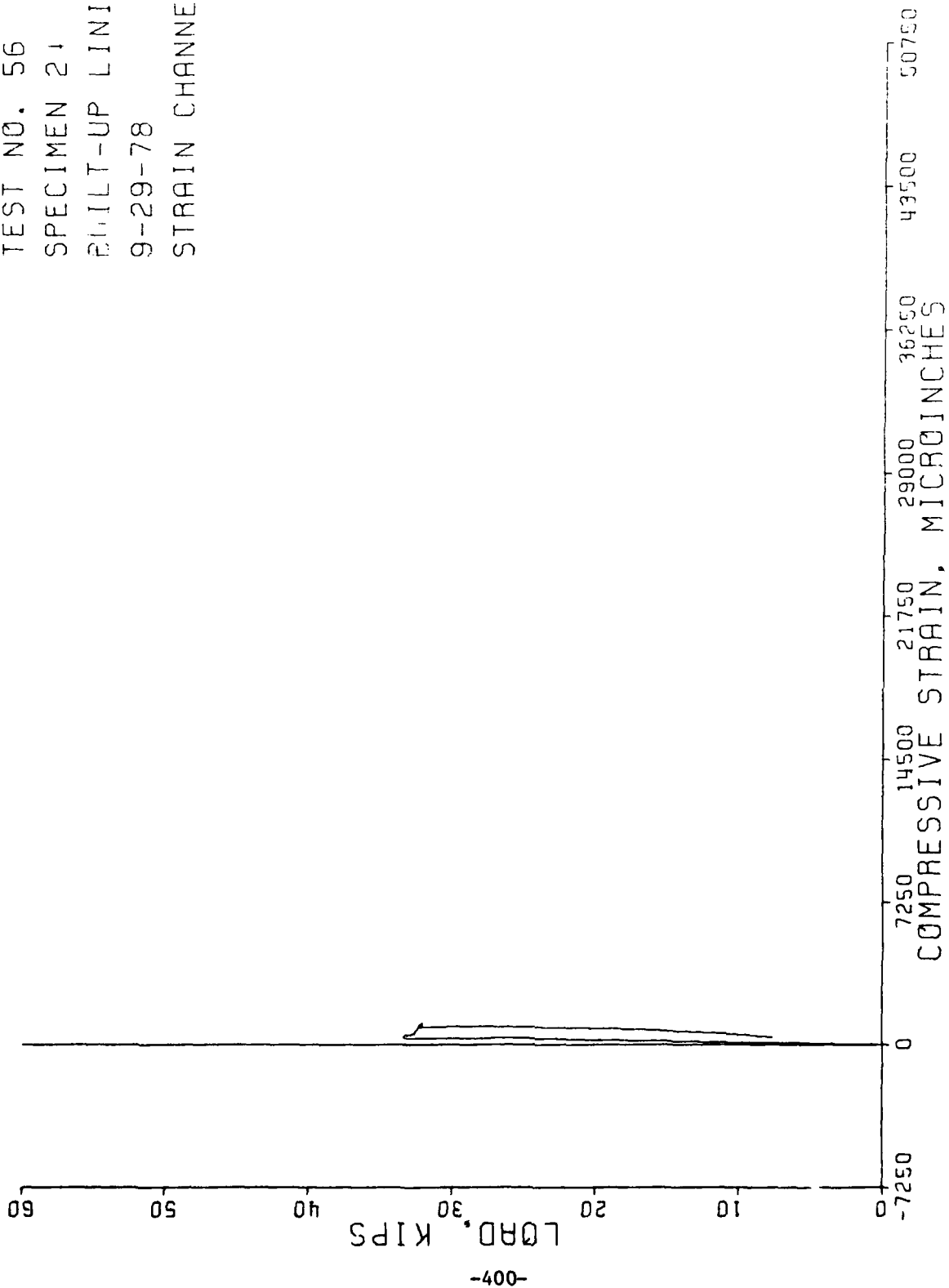
TEST NO. 56
SPECIMEN 24
BUILT-UP LINING
9-29-78
STRAIN CHANNEL 31



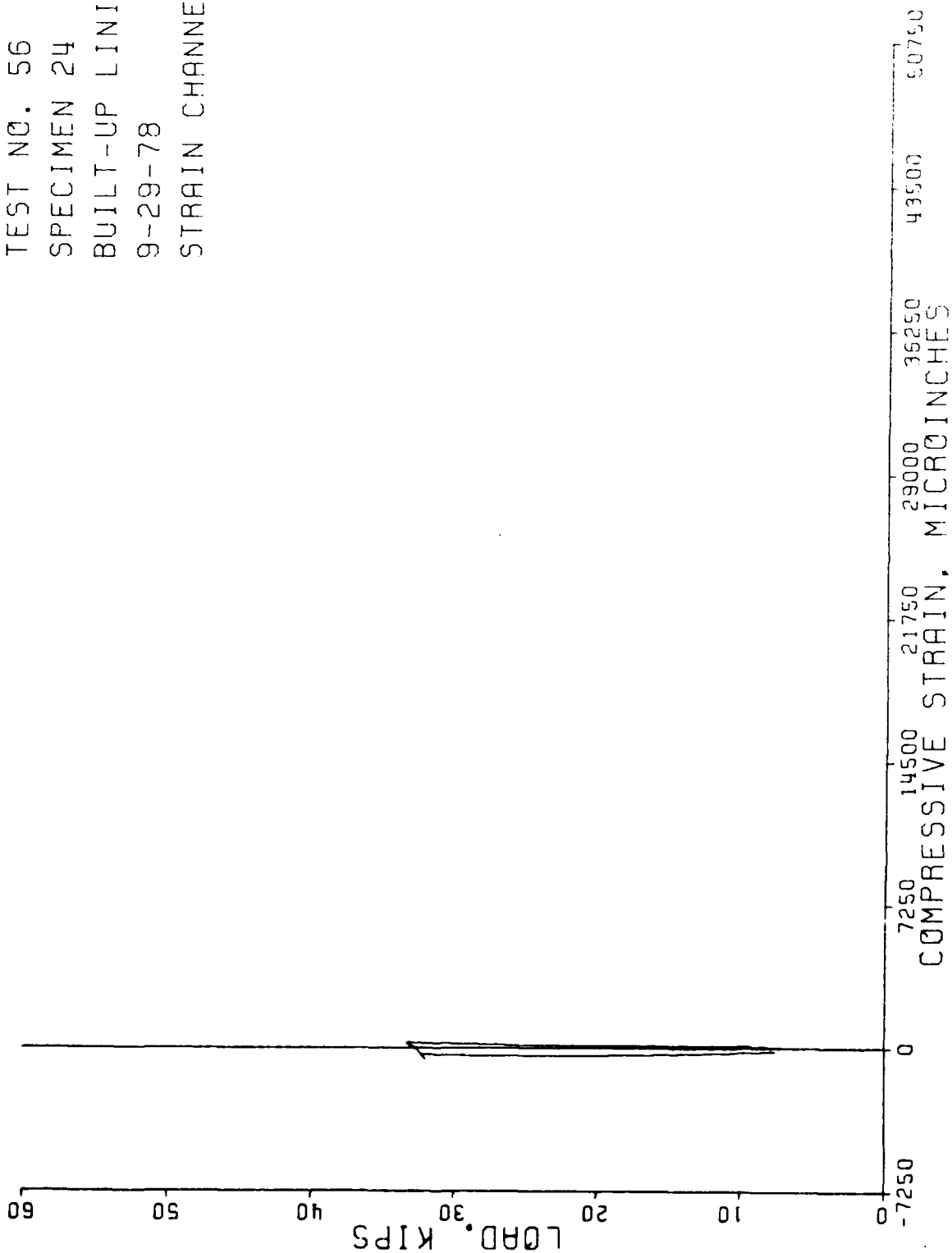
TEST NO. 56
 SPECIMEN 24
 BUILT-UP LINING
 9-29-78
 STRAIN CHANNEL 32



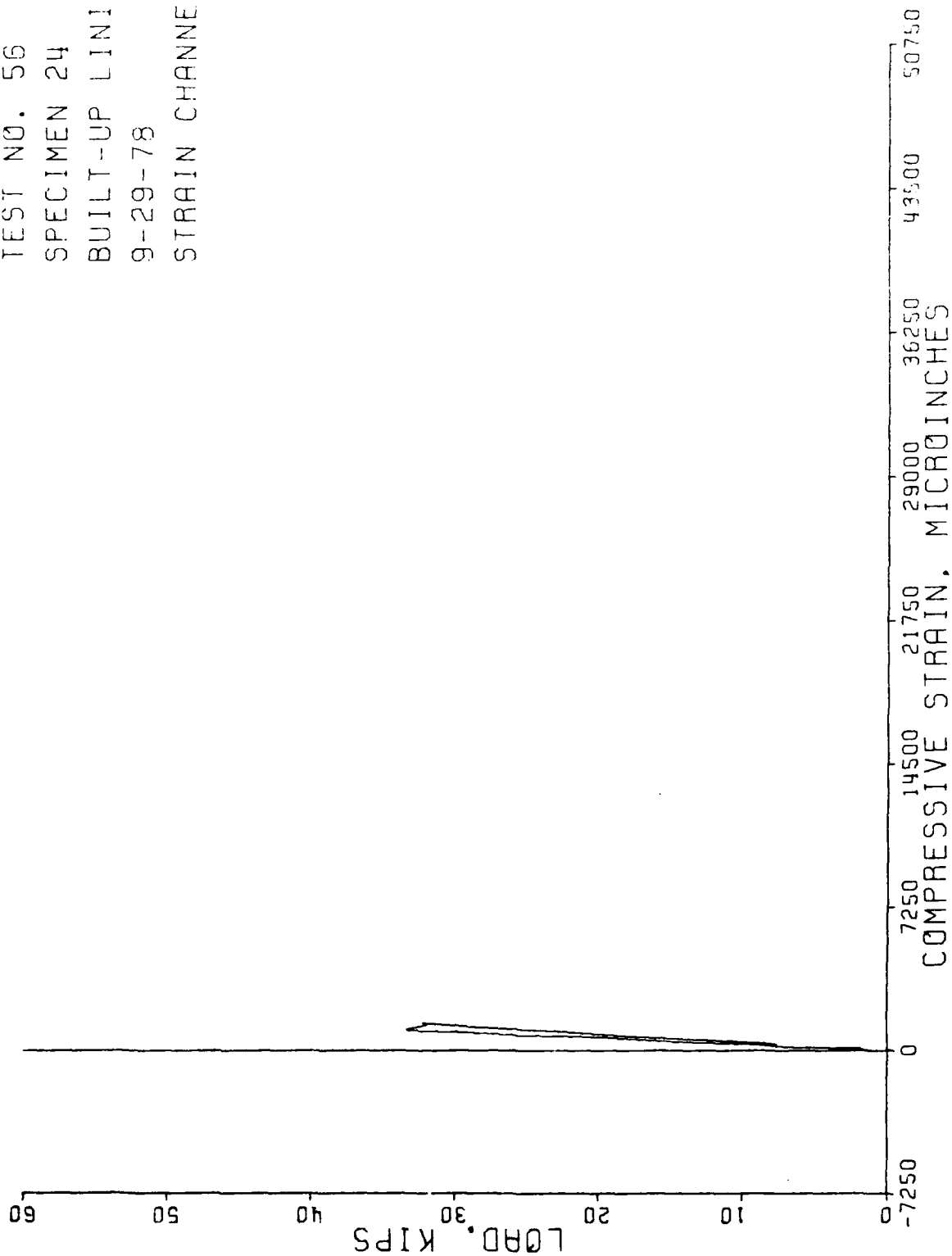
TEST NO. 56
SPECIMEN 21
PILT-UP LINING
9-29-78
STRAIN CHANNEL 33



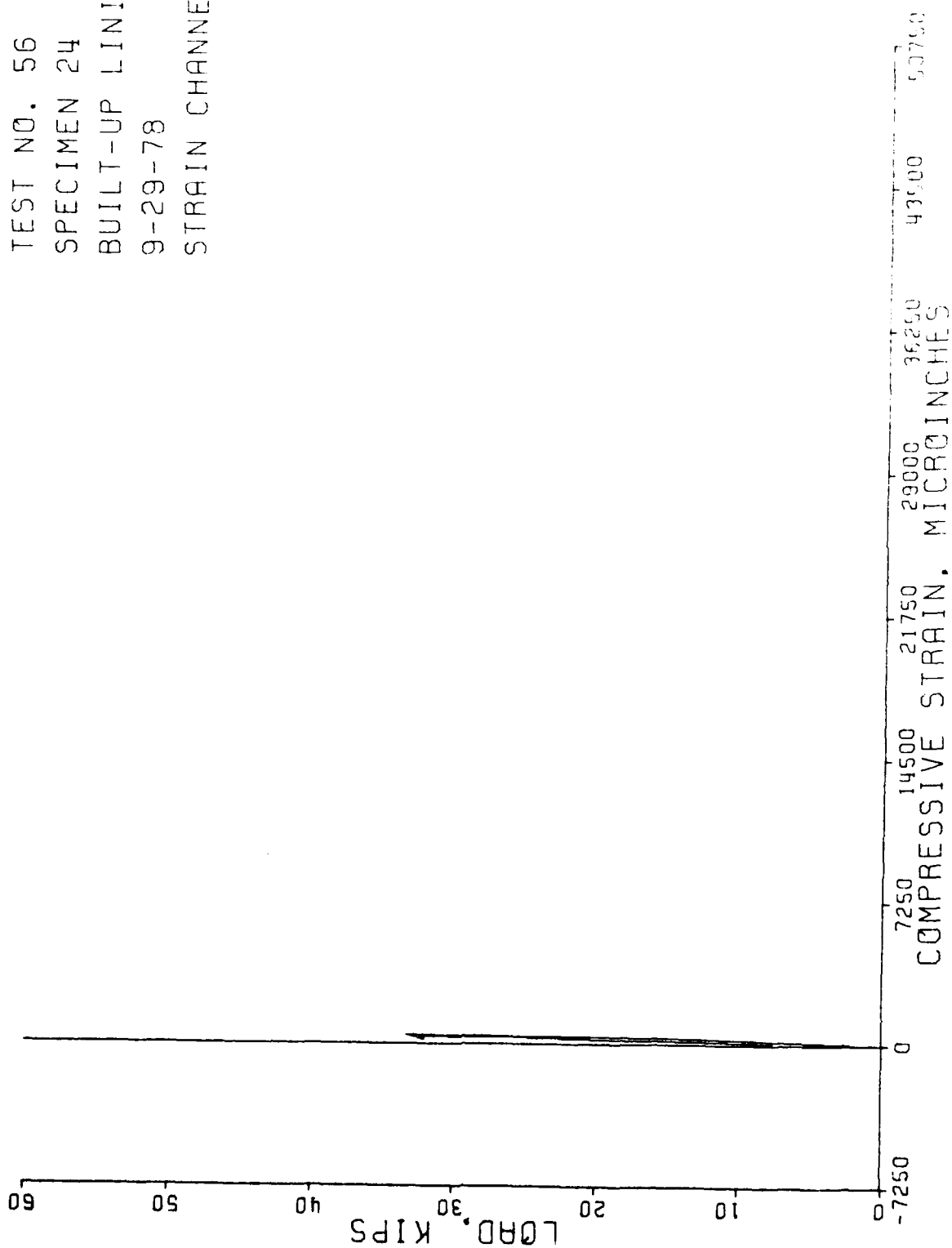
TEST NO. 56
 SPECIMEN 24
 BUILT-UP LINING
 9-29-78
 STRAIN CHANNEL 34



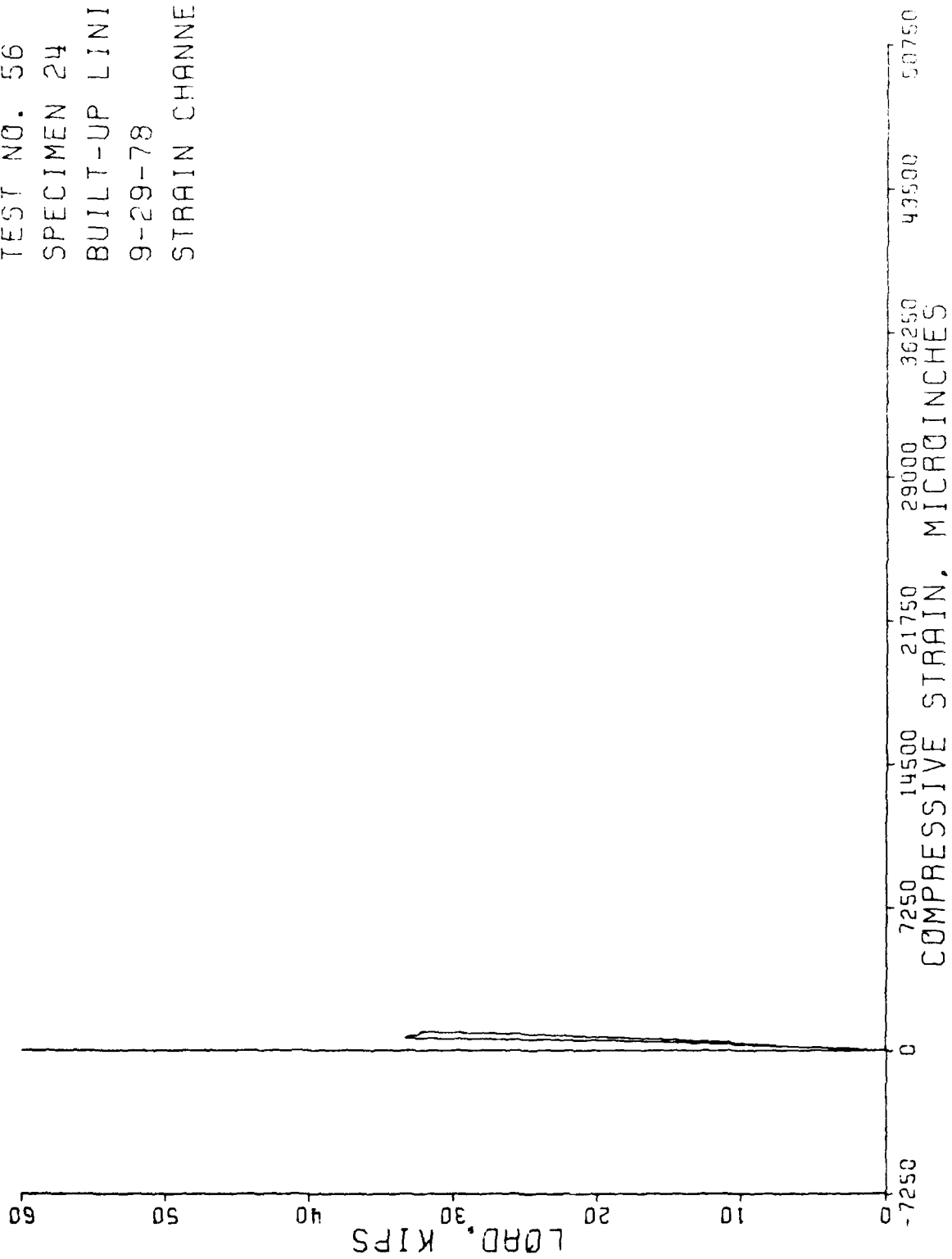
TEST NO. 56
SPECIMEN 24
BUILT-UP LINING
9-29-78
STRAIN CHANNEL 35



TEST NO. 56
 SPECIMEN 24
 BUILT-UP LINING
 9-29-78
 STRAIN CHANNEL 36



TEST NO. 56
 SPECIMEN 24
 BUILT-UP LINING
 9-29-78
 STRAIN CHANNEL 37



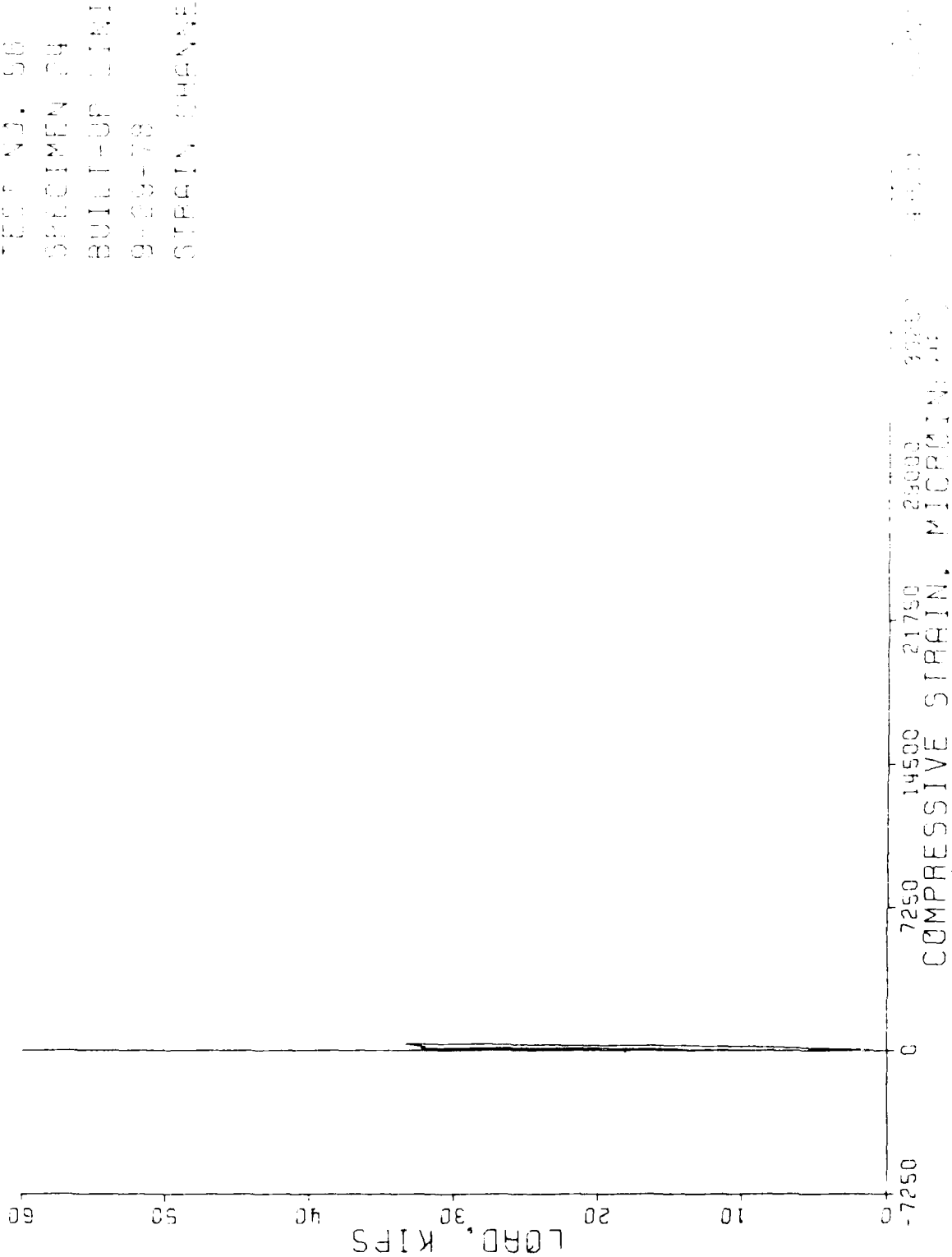
TEST NO. 58
 SPECIMEN 24
 BUILT-UP LINING
 9-29-76
 STRAIN CHANNEL 38

60
 50
 40
 30
 20
 10
 0
 -7250

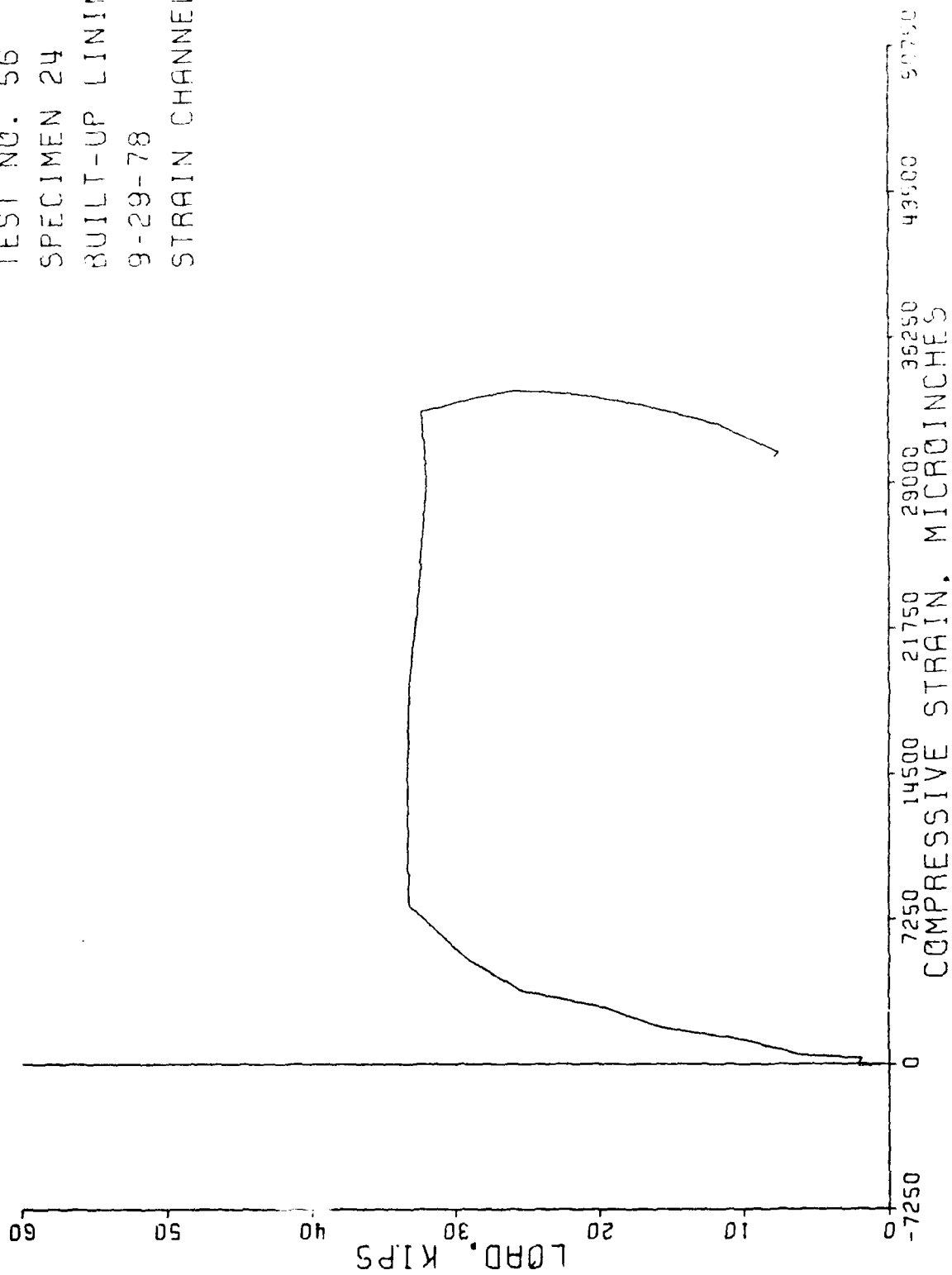
SEAL KIPS

7250 14500 21750 29000 37250 45500 53750
 COMPRESSIVE STRAIN. MICROINCHES

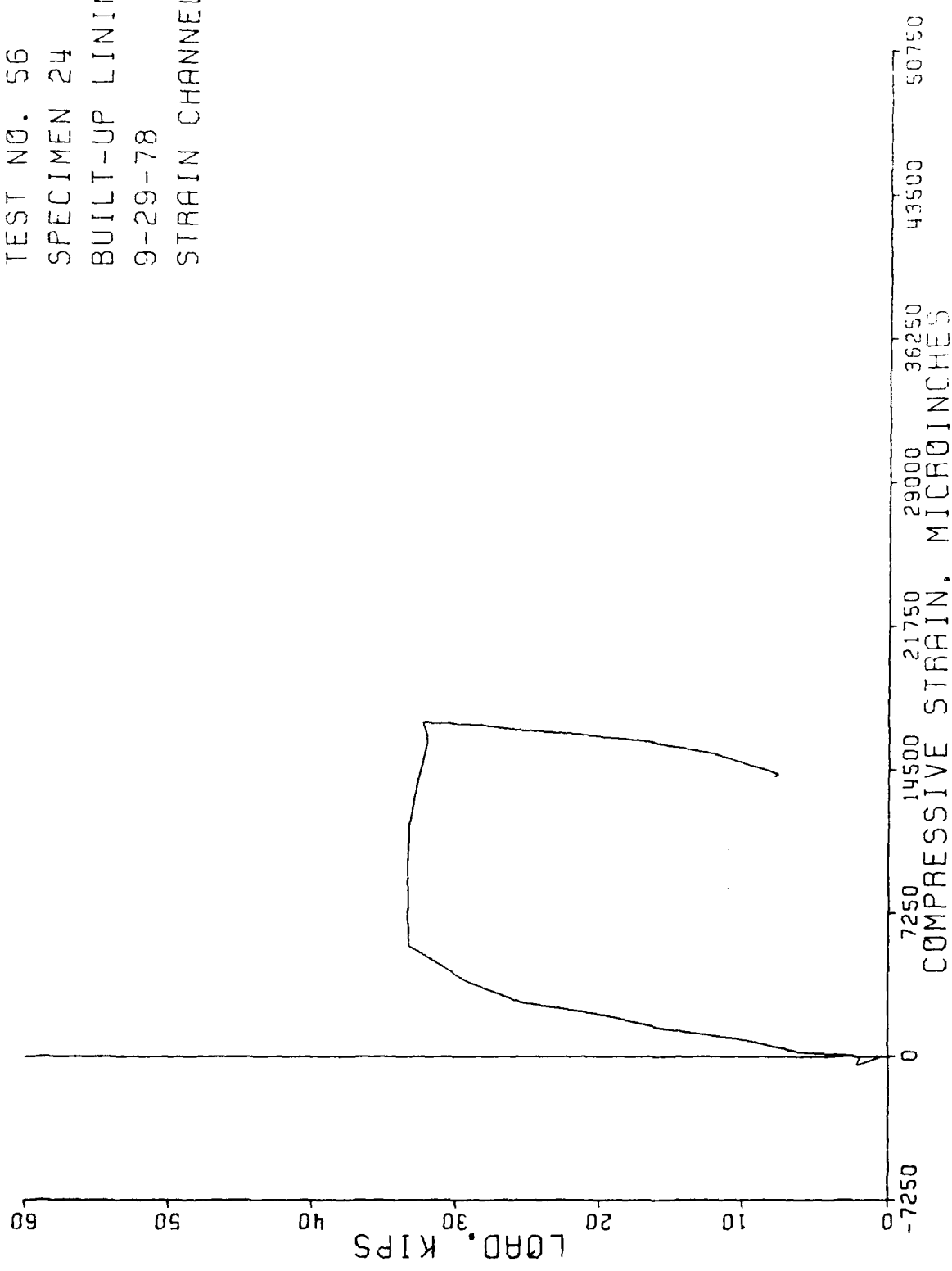
TEST NO. 50
 SPECIMEN 24
 BUILT-UP LINING
 9-26-78
 STRAIN CHANNEL 24



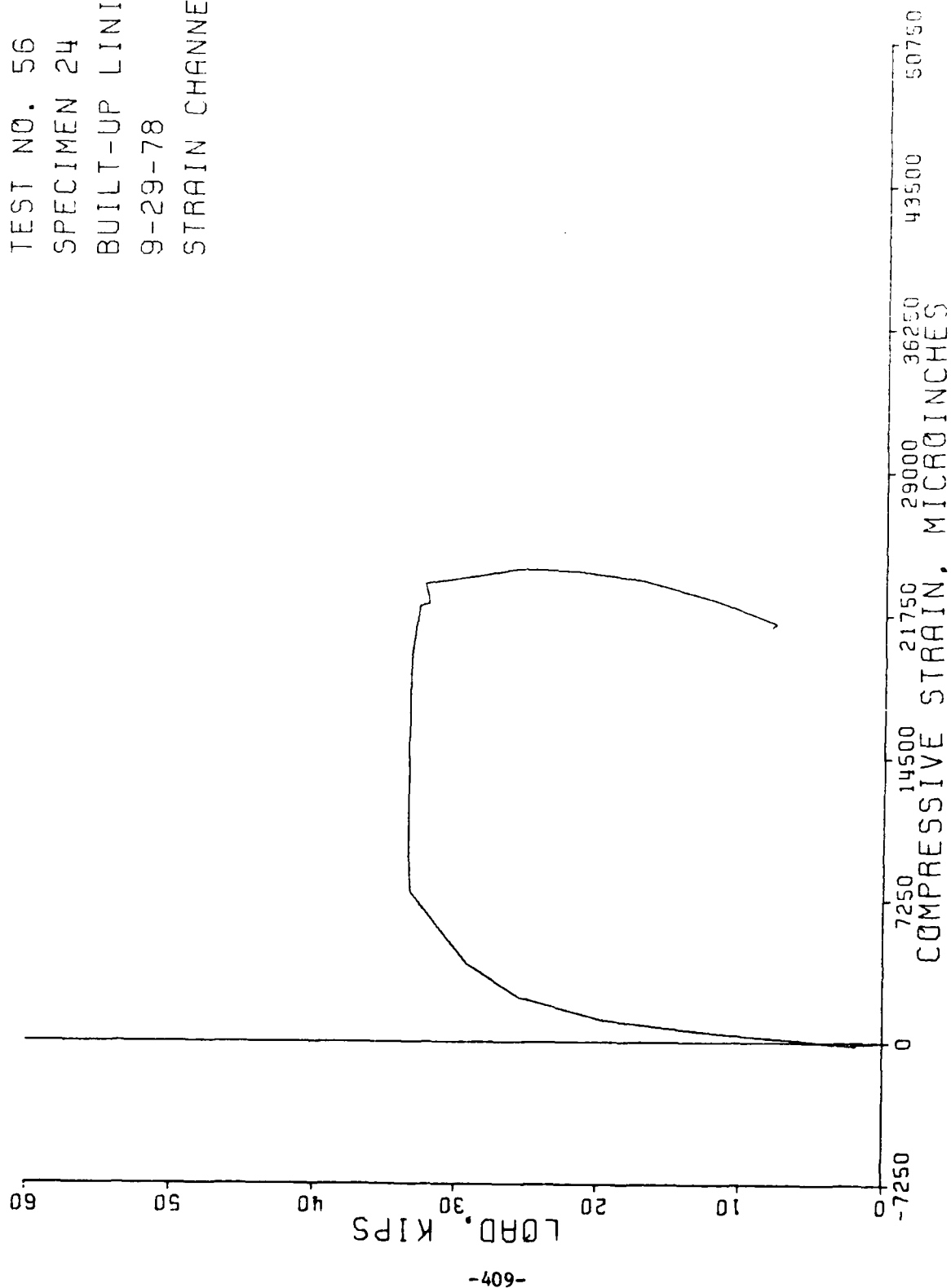
TEST NO. 56
SPECIMEN 24
BUILT-UP LINING
9-29-78
STRAIN CHANNEL 40



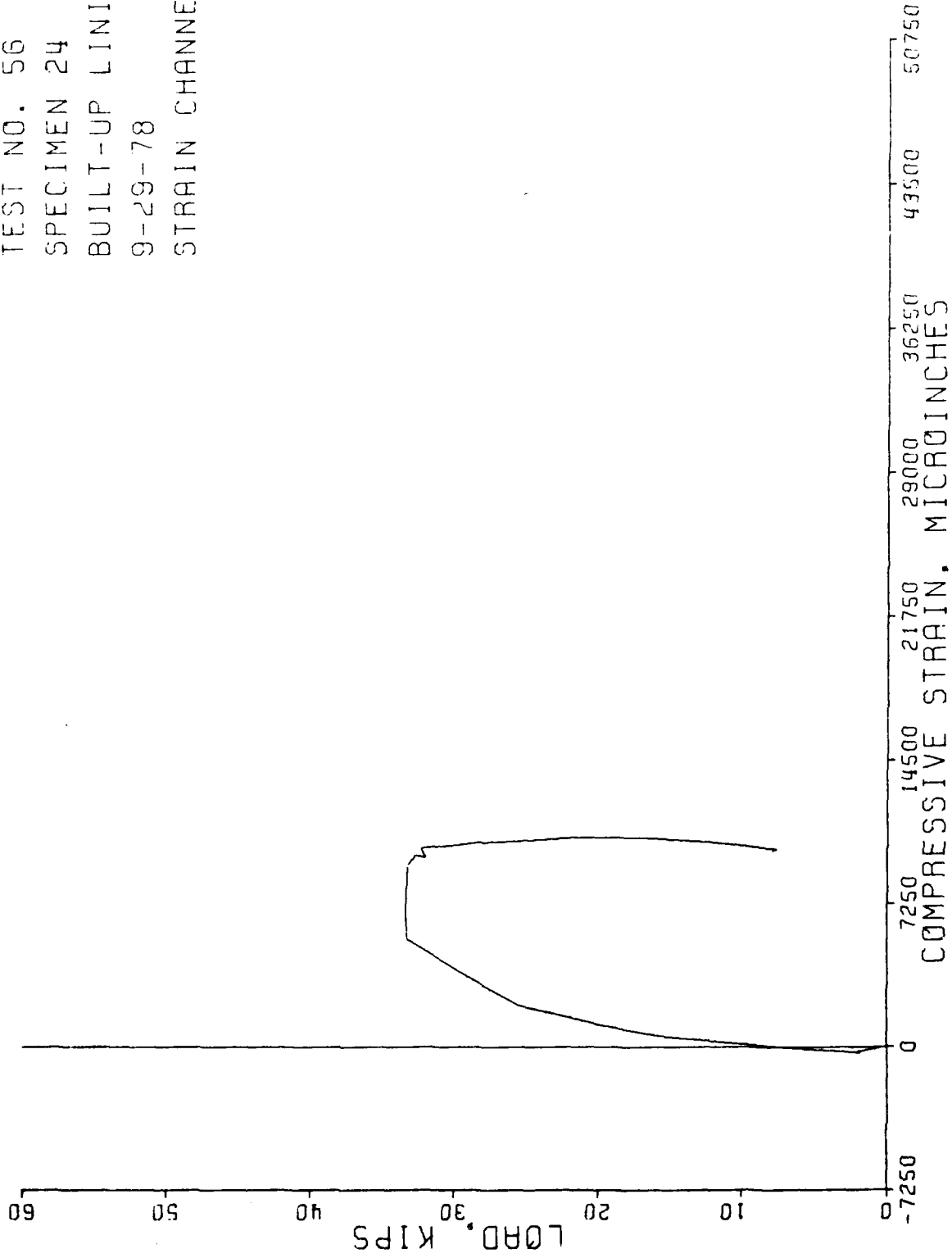
TEST NO. 56
SPECIMEN 24
BUILT-UP LINING
9-29-78
STRAIN CHANNEL 41



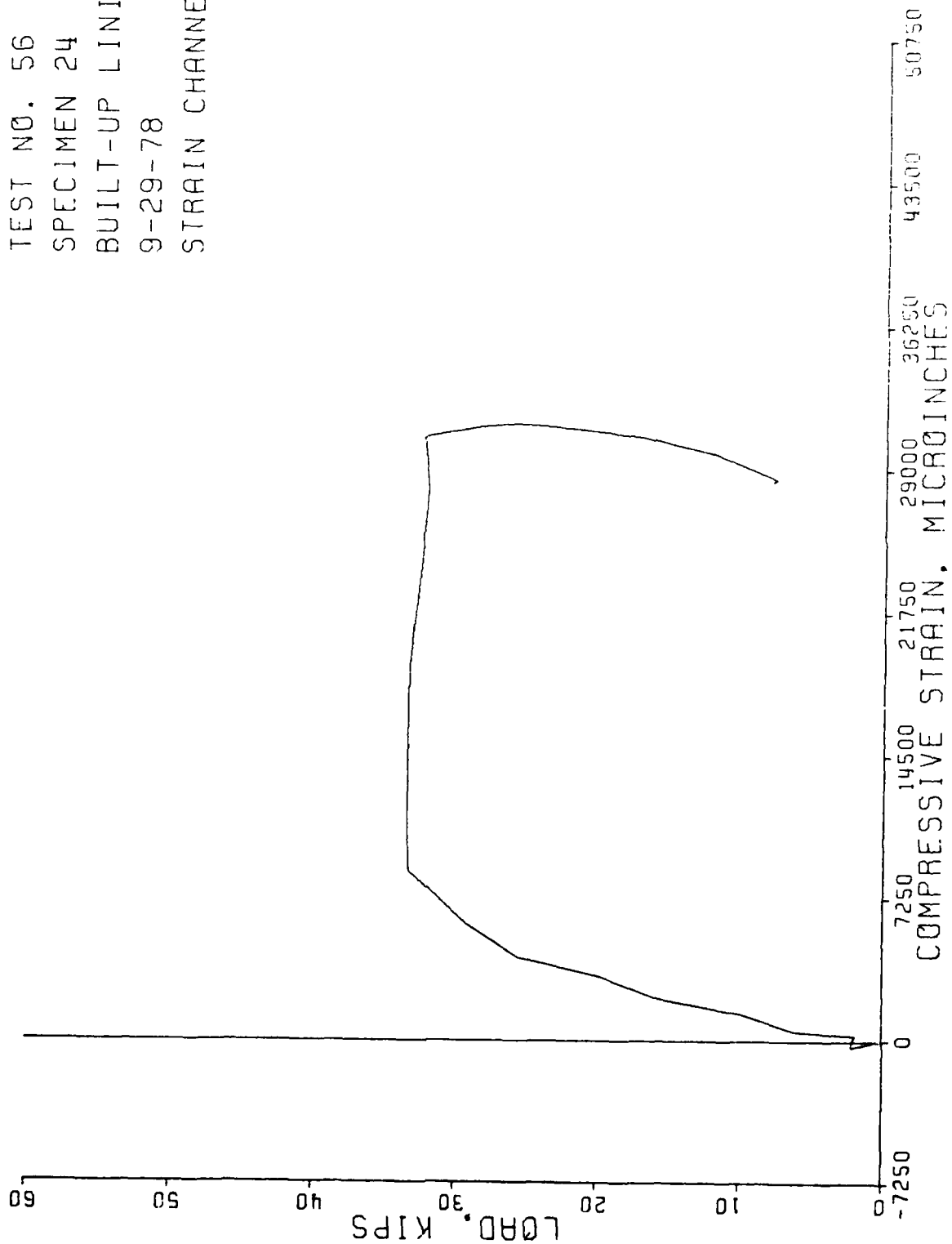
TEST NO. 56
SPECIMEN 24
BUILT-UP LINING
9-29-78
STRAIN CHANNEL 42



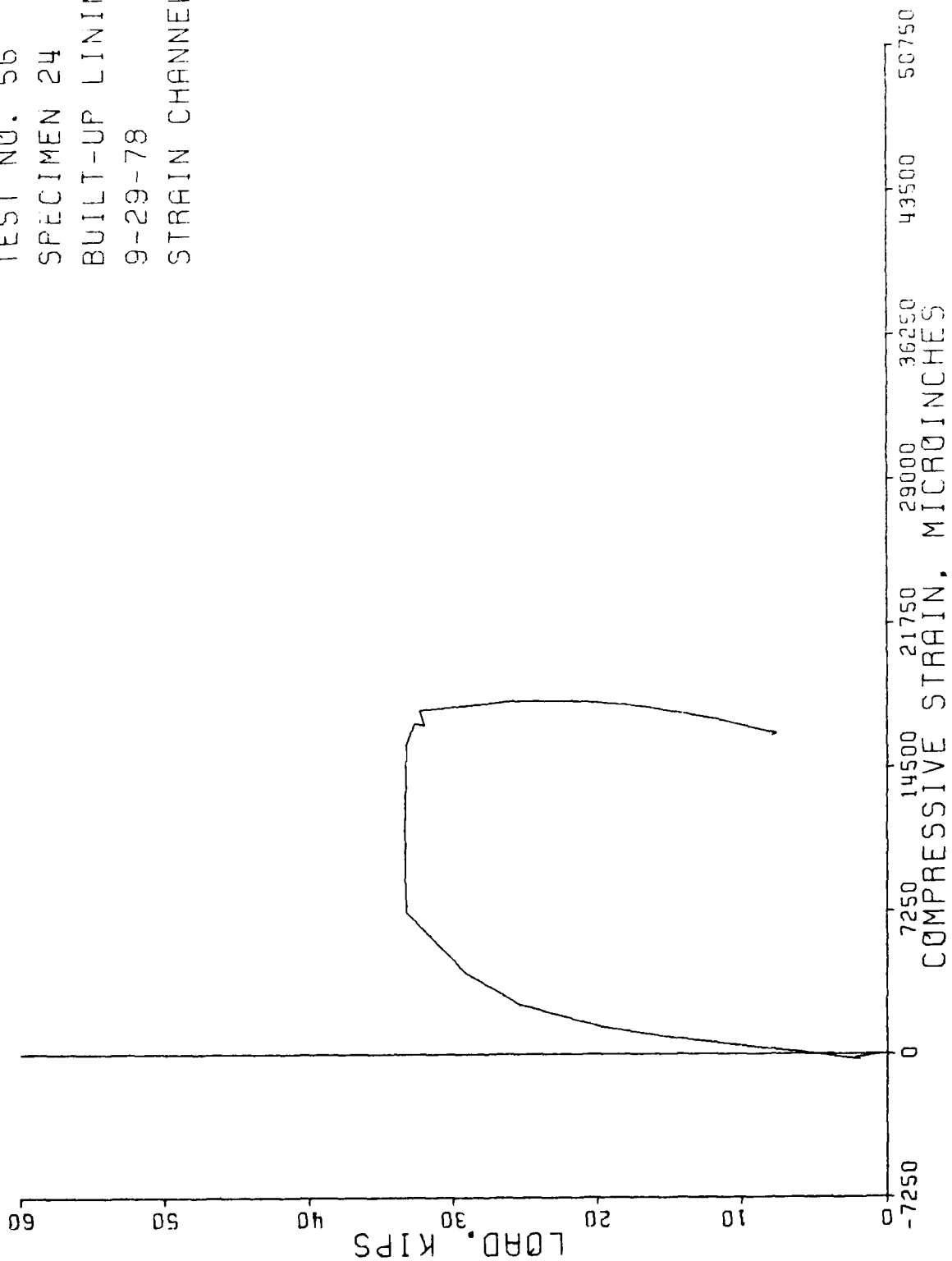
TEST NO. 56
SPECIMEN 24
BUILT-UP LINING
9-29-78
STRAIN CHANNEL 43



TEST NO. 56
SPECIMEN 24
BUILT-UP LINING
9-29-78
STRAIN CHANNEL 46



TEST NO. 56
SPECIMEN 24
BUILT-UP LINING
9-29-78
STRAIN CHANNEL 47



TEST NO. 56 SPECIMEN 24 BUILT-UP LINING 9-29-73

NUMBER OF INCREMENTS= 25
 NUMBER OF CHANNELS= 40
 NUMBER OF STRAIN CHANNELS= 16
 NUMBER OF DISPLACEMENT CHANNELS= 8
 NUMBER OF LOAD CHANNELS= 8
 NUMBER OF PRESSURE CHANNELS= 0
 NUMBER OF RODS= 8

CHANNEL ZEROSHIFT

57	0.0
56	0.0
55	0.0
54	0.0
53	0.0
52	0.0
51	0.0
50	0.0
47	0.0
46	0.0
43	0.0
42	0.0
41	0.0
40	0.0
39	0.0
38	0.0
37	0.0
36	0.0
35	0.0
34	0.0
33	0.0
32	0.0
31	0.0
30	0.0
29	0.0
28	0.0
27	0.0
26	0.0
25	0.0
22	0.0
21	0.0
20	0.0
19	0.0
18	0.0
17	0.0
16	0.0
15	0.0
14	0.0
13	0.0
12	0.0

STRAIN CHANNEL CALIBRATION

47	1.000
46	1.000

43	1.000
42	1.000
41	1.000
40	1.000
39	1.000
38	1.000
37	1.000
36	1.000
35	1.000
34	1.000
33	1.000
32	1.000
31	1.000
30	1.000

DISPLACEMENT CHANNEL	CALIBRATION
19	0.001
18	0.001
17	0.001
16	0.002
15	0.002
14	0.002
13	0.002
12	0.002

LOAD CHANNEL	CALIBRATION
29	10.000
28	10.000
27	10.000
26	10.000
25	10.000
22	10.000
21	10.000
20	10.000

ROD CHANNEL	CALIBRATION
57	1.000
56	1.000
55	1.000
54	1.000
53	1.000
52	1.000
51	1.000
50	1.000

STRAIN CHANNELS

TIME	CH.47	CH.46	CH.43	CH.42	CH.41	CH.40	CH.39	CH.38
1. 29: 9:59:58	0 0	2.000	1.000	1.000	2.000	2.000	-1.000	0 0
2. 29:10: 4: 2	188.000	274.000	230.000	109.000	437.000	118.000	-31.000	-50.000
3. 29:10: 5:16	273.000	-296.000	299.000	169.000	-4.000	-308.000	-43.000	-89.000
4. 29:10:14: 6	-99.000	-496.000	58.000	-104.000	-213.000	-451.000	-134.000	-168.000
5. 29:10:15: 7	-401.000	-1403.000	-138.000	-331.000	-837.000	-1182.000	-203.000	-313.000
6. 29:10:16: 7	-892.000	-2173.000	-533.000	-763.000	-1414.000	-1807.000	-266.000	-406.000
7. 29:10:17: 7	-1378.000	-3290.000	-1082.000	-1174.000	-2095.000	-2811.000	-266.000	-504.000
8. 29:10:18: 7	-2530.000	-4243.000	-2103.000	-2271.000	-2755.000	-3681.000	-305.000	-551.000
9. 29:10:19: 7	-4088.000	-5958.000	-3591.000	-3960.000	-3783.000	-5228.000	-311.000	-599.000
10. 29:10:20: 7	-7163.000	-8634.000	-5447.000	-7636.000	-5600.000	-7949.000	-323.000	-658.000
11. 29:10:21: 7	-9140.000	-10760.000	-6279.000	-9942.000	-7001.000	-10084.000	-314.000	-681.000
12. 29:10:22: 7	-10780.000	-12812.000	-6932.000	-11913.000	-8186.000	-12163.000	-307.000	-697.000
13. 29:10:23: 7	-12349.000	-14812.000	-7601.000	-14018.000	-9313.000	-14138.000	-318.000	-710.000
14. 29:10:24: 7	-13975.000	-16872.000	-8368.000	-16547.000	-10428.000	-16336.000	-323.000	-721.000
15. 29:10:25: 7	-15593.000	-19043.000	-9154.000	-19309.000	-11587.000	-18703.000	-329.000	-728.000
16. 29:10:26: 7	-16737.000	-22358.000	-9696.000	-22205.000	-13873.000	-22610.000	-261.000	-775.000
17. 29:10:26:31	-16638.000	-27847.000	-9573.000	-22310.000	-15849.000	-28765.000	-175.000	-777.000
18. 29:10:26:48	-17391.000	-30634.000	-10056.000	-23293.000	-16841.000	-32574.000	-103.000	-743.000
19. 29:10:27: 6	-17698.000	-31169.000	-10325.000	-23750.000	-16745.000	-33308.000	-106.000	-629.000
20. 29:10:27:23	-17880.000	-31314.000	-10401.000	-24088.000	-16505.000	-33650.000	-102.000	-595.000
21. 29:10:28:27	-17870.000	-31083.000	-10577.000	-23951.000	-16286.000	-33436.000	-93.000	-494.000
22. 29:10:28:57	-17605.000	-30652.000	-10569.000	-23485.000	-15940.000	-32879.000	-77.000	-377.000
23. 29:10:29:27	-16969.000	-29814.000	-10347.000	-22493.000	-15272.000	-31926.000	-42.000	-254.000
24. 29:10:29:57	-16192.000	-28543.000	-9994.000	-21313.000	-14265.000	-30539.000	-11.000	-157.000
25. 29:10:30:27	-16091.000	-28410.000	-9915.000	-21126.000	-14134.000	-30310.000	-28.000	-154.000

STRAIN CHANNELS

	TIME	CH.37	CH.36	CH.35	CH.34	CH.33	CH.32	CH.31	CH.30
1.	29: 9:59:58	0.0	0.0	0.0	1.000	0.0	0.0	1.000	-1.000
2.	29:10: 4: 2	-46.000	-11.000	-48.000	25.000	-12.000	-26.000	-70.000	28.000
3.	29:10: 5:16	-69.000	-35.000	-98.000	9.000	7.000	-86.000	-69.000	-3.000
4.	29:10:14: 6	-195.000	-160.000	-139.000	2.000	-73.000	-98.000	-180.000	-29.000
5.	29:10:15: 7	-305.000	-262.000	-334.000	-95.000	-89.000	-266.000	-239.000	-167.000
6.	29:10:16: 7	-421.000	-322.000	-459.000	-94.000	-195.000	-368.000	-398.000	-146.000
7.	29:10:17: 7	-496.000	-354.000	-678.000	-123.000	-235.000	-583.000	-490.000	-165.000
8.	29:10:18: 7	-558.000	-377.000	-772.000	-144.000	-320.000	-657.000	-709.000	-124.000
9.	29:10:19: 7	-590.000	-415.000	-897.000	-230.000	-296.000	-829.000	-834.000	-145.000
10.	29:10:20: 7	-626.000	-444.000	-1011.000	-281.000	-300.000	-924.000	-985.000	-162.000
11.	29:10:21: 7	-640.000	-438.000	-1047.000	-259.000	-323.000	-939.000	-982.000	-150.000
12.	29:10:22: 7	-652.000	-437.000	-1073.000	-240.000	-352.000	-956.000	-962.000	-128.000
13.	29:10:23: 7	-661.000	-440.000	-1089.000	-227.000	-378.000	-967.000	-933.000	-118.000
14.	29:10:24: 7	-670.000	-444.000	-1101.000	-217.000	-397.000	-968.000	-910.000	-118.000
15.	29:10:25: 7	-677.000	-445.000	-1102.000	-205.000	-422.000	-965.000	-875.000	-126.000
16.	29:10:26: 7	-769.000	-318.000	-1204.000	43.000	-519.000	-1115.000	-611.000	-70.000
17.	29:10:26:51	-961.000	-29.000	-1309.000	573.000	-1034.000	-981.000	-535.000	215.000
18.	29:10:26:48	-929.000	-32.000	-1403.000	328.000	-867.000	-1109.000	-370.000	1.000
19.	29:10:27: 6	-861.000	-316.000	-1159.000	404.000	-899.000	-925.000	-285.000	-31.000
20.	29:10:27:23	-819.000	-333.000	-1092.000	383.000	-866.000	-831.000	-282.000	-28.000
21.	29:10:28:27	-737.000	-259.000	-918.000	383.000	-88.000	-756.000	-70.000	-191.000
22.	29:10:28:57	-608.000	-197.000	-705.000	346.000	-750.000	-576.000	17.000	-204.000
23.	29:10:29:27	-426.000	-136.000	-492.000	258.000	-575.000	-387.000	90.000	-172.000
24.	29:10:29:57	-260.000	-82.000	-311.000	171.000	-373.000	-224.000	87.000	-77.000
25.	29:10:30:27	-253.000	-98.000	-281.000	135.000	-363.000	-187.000	55.000	-95.000

DISPLACEMENT CHANNELS

TIME	CH.19	CH.18	CH.17	CH.16	CH.15	CH.14	CH.13	CH.12
1. 29: 9:59:58	0.0	-0.001	0.001	0.002	0.006	0.002	0.002	0.002
2. 29:10: 4: 2	-0.001	-0.001	0.031	0.002	0.024	0.002	0.032	0.002
3. 29:10: 5:16	-0.006	0.0	0.030	0.002	0.040	0.004	0.032	0.002
4. 29:10:14: 6	-0.006	0.001	0.085	0.0	0.042	0.004	0.062	0.0
5. 29:10:15: 7	-0.006	0.009	0.120	0.030	0.042	0.014	0.090	-0.022
6. 29:10:16: 7	-0.006	-0.001	0.161	0.030	0.072	0.026	0.120	-0.028
7. 29:10:17: 7	-0.035	-0.001	0.239	0.044	0.074	0.028	0.150	-0.028
8. 29:10:18: 7	-0.035	0.0	0.298	0.060	0.102	0.034	0.238	-0.050
9. 29:10:19: 7	-0.036	0.0	0.387	0.074	0.102	0.040	0.328	-0.058
10. 29:10:20: 7	-0.064	-0.001	0.566	0.088	0.130	0.040	0.550	-0.074
11. 29:10:21: 7	-0.064	0.0	0.714	0.088	0.130	0.040	0.742	-0.076
12. 29:10:22: 7	-0.064	0.0	0.862	0.090	0.132	0.044	0.888	-0.076
13. 29:10:23: 7	-0.064	-0.001	0.981	0.090	0.130	0.056	1.038	-0.064
14. 29:10:24: 7	-0.064	0.0	1.100	0.088	0.130	0.058	1.184	-0.060
15. 29:10:25: 7	-0.064	-0.001	1.218	0.088	0.130	0.056	1.332	-0.058
16. 29:10:26: 7	-0.093	-0.057	1.366	0.090	0.136	0.086	1.508	-0.058
17. 29:10:26:31	-0.122	-0.113	1.663	0.088	0.190	0.144	1.628	-0.058
18. 29:10:26:48	-0.122	-0.102	1.545	0.090	0.188	0.150	1.746	-0.060
19. 29:10:27: 6	-0.118	-0.085	1.574	0.060	0.188	0.144	1.804	-0.052
20. 29:10:27:23	-0.093	-0.085	1.573	0.058	0.158	0.144	1.812	-0.030
21. 29:10:28:27	-0.083	-0.078	1.515	0.030	0.128	0.114	1.836	-0.028
22. 29:10:28:57	-0.064	-0.057	1.485	0.030	0.130	0.106	1.806	-0.006
23. 29:10:29:27	-0.035	-0.057	1.396	0.002	0.098	0.086	1.776	0.032
24. 29:10:29:57	-0.035	-0.029	1.307	0.002	0.070	0.056	1.716	0.0
25. 29:10:30:27	-0.006	-0.029	1.277	0.0	0.070	0.056	1.694	0.002

LOAD CHANNELS

TIME	CH.29	CH.28	CH.27	CH.26	CH.25	CH.22	CH.21	CH.20
1. 29: 9:59:58	330.000	400.000	340.000	310.000	420.000	580.000	500.000	430.000
2. 29:10: 4: 2	1560.000	1610.000	1470.000	1600.000	2170.000	1580.000	1470.000	1610.000
3. 29:10: 5:16	2520.000	2040.000	2650.000	3050.000	1870.000	3070.000	2620.000	1960.000
4. 29:10:14: 6	5610.000	5680.000	5430.000	5470.000	6140.000	5450.000	5350.000	5250.000
5. 29:10:15: 7	10500.000	10440.000	11820.000	10810.000	9920.000	10540.000	11850.000	9450.000
6. 29:10:16: 7	15290.000	15200.000	16090.000	15140.000	13660.000	15240.000	15900.000	13930.000
7. 29:10:17: 7	20420.000	19000.000	21430.000	20360.000	19750.000	20560.000	21170.000	17810.000
8. 29:10:18: 7	25220.000	24070.000	24600.000	25050.000	23520.000	25280.000	23740.000	22940.000
9. 29:10:19: 7	29850.000	27980.000	28620.000	29950.000	29150.000	30090.000	28220.000	27050.000
10. 29:10:20: 7	33250.000	31810.000	32350.000	34090.000	33240.000	34010.000	31930.000	31990.000
11. 29:10:21: 7	33390.000	31280.000	32840.000	34620.000	33360.000	34600.000	32370.000	32650.000
12. 29:10:22: 7	33450.000	31850.000	32940.000	34840.000	33360.000	34840.000	32500.000	32880.000
13. 29:10:23: 7	33440.000	31790.000	32960.000	34970.000	33310.000	34970.000	32630.000	32930.000
14. 29:10:24: 7	33380.000	31720.000	32940.000	35030.000	33260.000	35030.000	32580.000	32890.000
15. 29:10:25: 7	33360.000	31570.000	32890.000	35040.000	33220.000	35010.000	32540.000	32700.000
16. 29:10:26: 7	32260.000	30930.000	32100.000	34400.000	33610.000	34220.000	31760.000	31430.000
17. 29:10:26:31	31910.000	29500.000	27910.000	33350.000	31950.000	33360.000	27920.000	27120.000
18. 29:10:26:48	31190.000	29310.000	30460.000	33250.000	32290.000	33560.000	29000.000	27110.000
19. 29:10:27: 6	27060.000	26440.000	27890.000	28490.000	28250.000	28550.000	28480.000	24740.000
20. 29:10:27:23	25230.000	24510.000	26020.000	26420.000	25700.000	26450.000	26140.000	22200.000
21. 29:10:28:27	21730.000	23020.000	23140.000	22110.000	21510.000	22060.000	23910.000	21130.000
22. 29:10:28:57	17680.000	19350.000	17960.000	17840.000	16920.000	17760.000	18480.000	18400.000
23. 29:10:29:27	12710.000	13060.000	13360.000	12300.000	11810.000	12260.000	13760.000	12590.000
24. 29:10:29:57	7260.000	8380.000	7880.000	7590.000	7560.000	7630.000	8230.000	8130.000
25. 29:10:30:27	7290.000	8640.000	7700.000	7510.000	7870.000	7160.000	8170.000	8070.000

R O D C H A N N E L S

TIME	CH.57	CH.56	CH.55	CH.54	CH.53	CH.52	CH.51	CH.50
1. 29: 9:59:58	0.0	0.0	-12.812	0.0	0.0	0.0	0.0	0.0
2. 29:10: 4: 2	-12.812	0.0	-25.624	-25.624	38.435	51.247	12.812	0.0
3. 29:10: 5:16	0.0	0.0	-25.624	-25.624	64.059	76.871	12.812	0.0
4. 29:10:14: 6	12.812	25.624	-12.812	12.812	102.494	128.118	76.871	0.0
5. 29:10:15: 7	12.812	12.812	-12.812	12.812	153.742	226.236	102.494	-12.812
6. 29:10:16: 7	25.624	51.247	-25.624	25.624	153.742	281.859	115.306	-12.812
7. 29:10:17: 7	64.059	64.059	0.0	51.247	179.365	371.542	153.742	-25.624
8. 29:10:18: 7	166.553	153.742	12.812	140.930	140.930	345.918	204.989	-25.624
9. 29:10:19: 7	179.365	102.494	25.624	409.978	256.236	474.036	51.247	-20.612
10. 29:10:20: 7	-25.624	-102.494	717.461	960.885	717.461	845.579	-281.859	-589.343
11. 29:10:21: 7	-192.177	-269.048	1037.756	1178.685	896.876	960.885	-461.225	-679.025
12. 29:10:22: 7	-358.730	-371.542	1191.497	1255.556	973.697	986.508	-499.660	-633.402
13. 29:10:23: 7	-512.472	-461.225	1293.991	1293.991	1037.756	1012.132	-512.472	-627.778
14. 29:10:24: 7	-640.590	-538.095	1345.239	1293.991	1089.003	1024.944	-474.036	-533.907
15. 29:10:25: 7	-768.708	-627.778	1383.674	1281.180	1191.497	1037.756	-468.413	-627.778
16. 29:10:26: 7	-1268.368	-1204.309	858.390	550.907	1844.899	1063.379	-307.483	-128.118
17. 29:10:26:31	-896.826	-1242.744	563.719	435.601	1229.933	679.025	-345.918	-38.435
18. 29:10:26:48	-1127.438	-1524.604	461.225	435.601	1268.368	858.390	-384.354	-51.247
19. 29:10:27: 6	-1024.944	-1422.109	409.978	397.166	1153.062	768.708	-345.918	-38.435
20. 29:10:27:23	-1063.379	-1422.109	461.225	435.601	1127.438	781.520	-333.107	-64.059
21. 29:10:28:27	-563.719	-935.261	371.542	345.918	781.520	461.225	-269.048	-25.624
22. 29:10:28:57	-64.059	-422.789	307.483	281.859	371.542	102.494	-204.989	-12.812
23. 29:10:29:27	102.494	-25.624	153.742	166.553	51.247	-12.812	-153.742	-12.812
24. 29:10:29:57	409.978	179.365	38.435	64.059	-25.624	-281.859	-140.930	-12.812
25. 29:10:30:27	409.978	204.389	25.624	64.059	-12.812	-281.859	-153.742	-12.812

A V E R A G E L O A D

1.	413.750
2.	1633.750
3.	2472.500
4.	5547.500
5.	10666.250
6.	15306.250
7.	20062.500
8.	24552.500
9.	28865.000
10.	32835.000
11.	33138.750
12.	33332.500
13.	33375.000
14.	33353.750
15.	33291.250
16.	32463.750
17.	30377.500
18.	30771.250
19.	27487.500
20.	25333.750
21.	22326.250
22.	18048.750
23.	12731.250
24.	7832.500
25.	7801.250

3.4.3 SPECIMEN #25

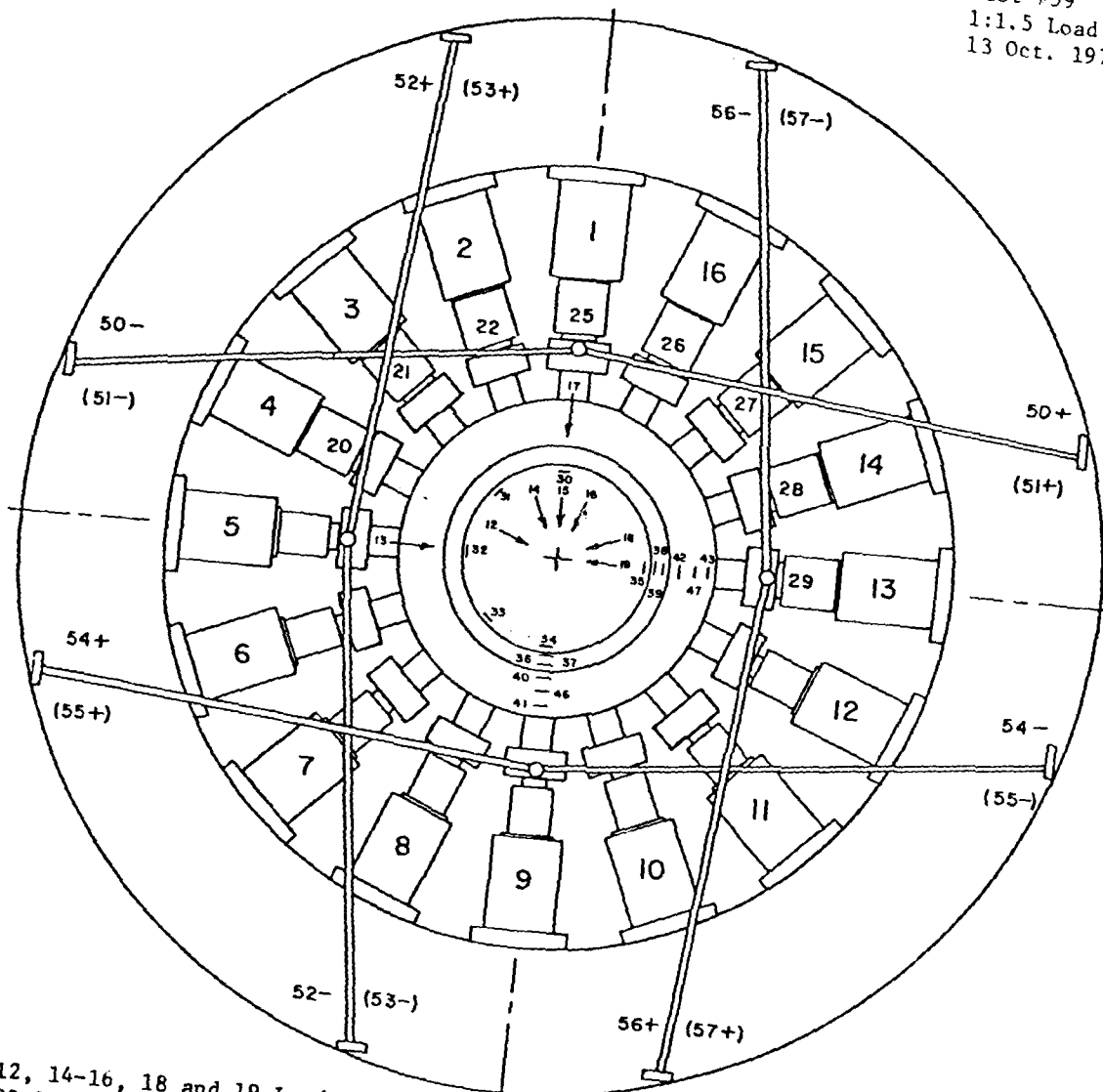
TEST NO. 59
STEEL LINER WITH 2000 PSI BACKPACKING
1:1.5 LOADING RATIO
TESTED 13 OCTOBER 1978

REACTION FRAME TEST SET-UP

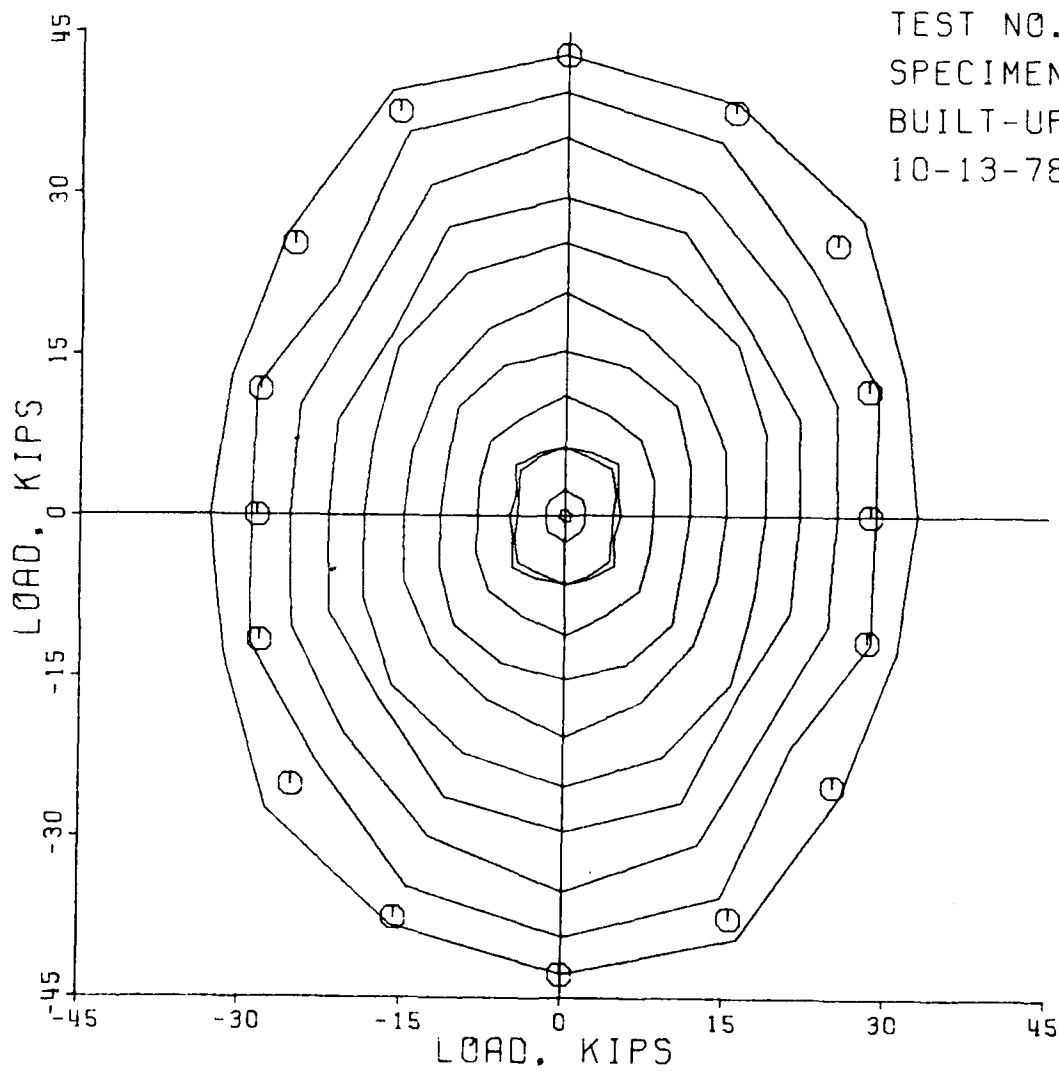
Specimen #25

Built-up Lining (SRI)

Test #59
1:1.5 Load
13 Oct. 1978

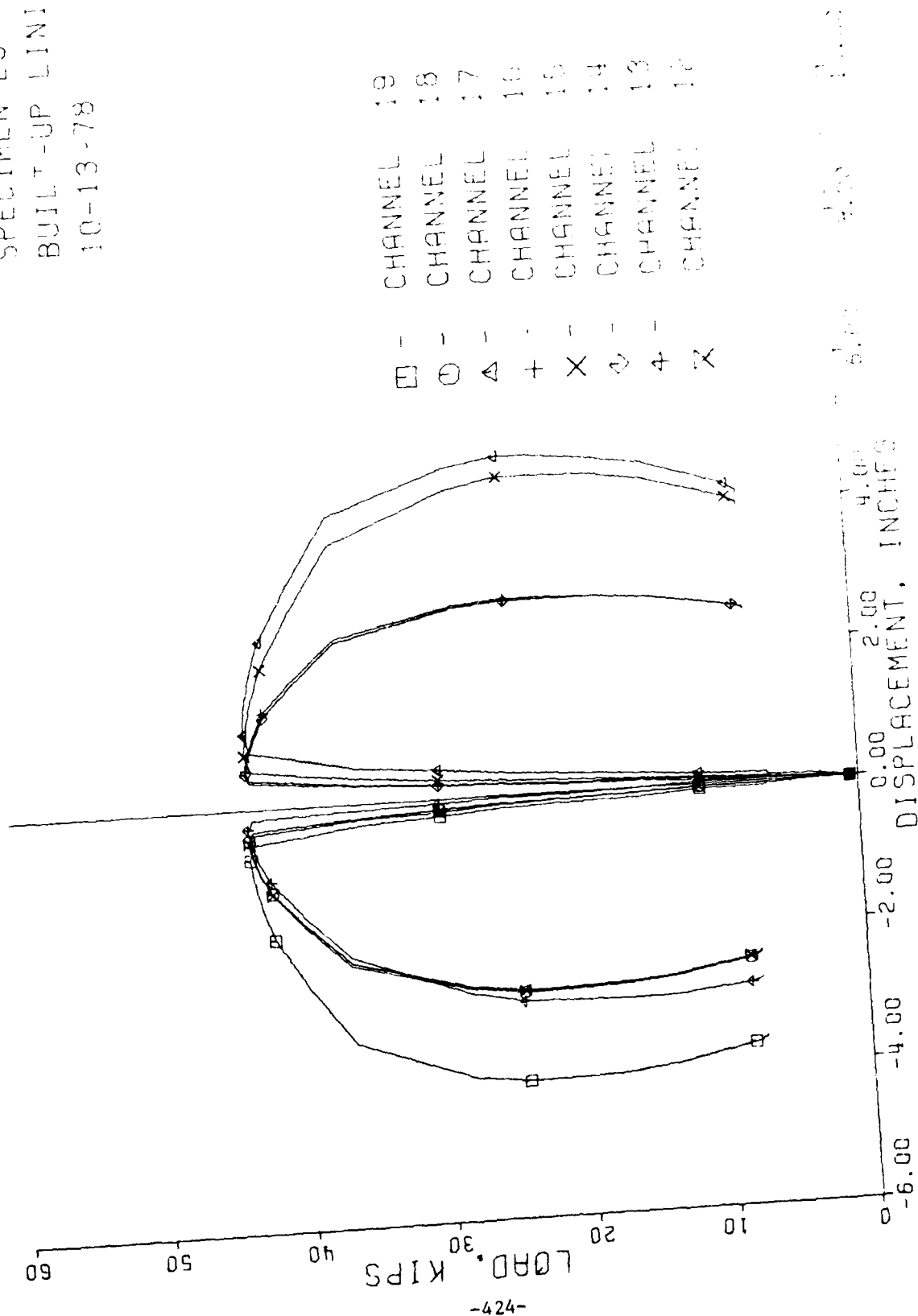


CH 12, 14-16, 18 and 19 Load axis I.D., CH 13, 17 Load axis O.D. (Research, Inc. 4040).
CH 20-22, 25-29 Axial load (Transducers, Inc. Model 693-300K).
CH 30-35 (Ailtech SG 129-6S) Inside on load axis at center.
CH 36-39 (Ailtech SG 129-6S) Top surface on load axis - .33" spacing. Even gages inside.
CH 40-43, 46 and 47 (BLH PA-7) Top surface on load axis - 1.0" spacing.
CH 50-57 (Ailtech SG 129-6S) Polarity indicates rod under tension.
Lower rod shown (XX).

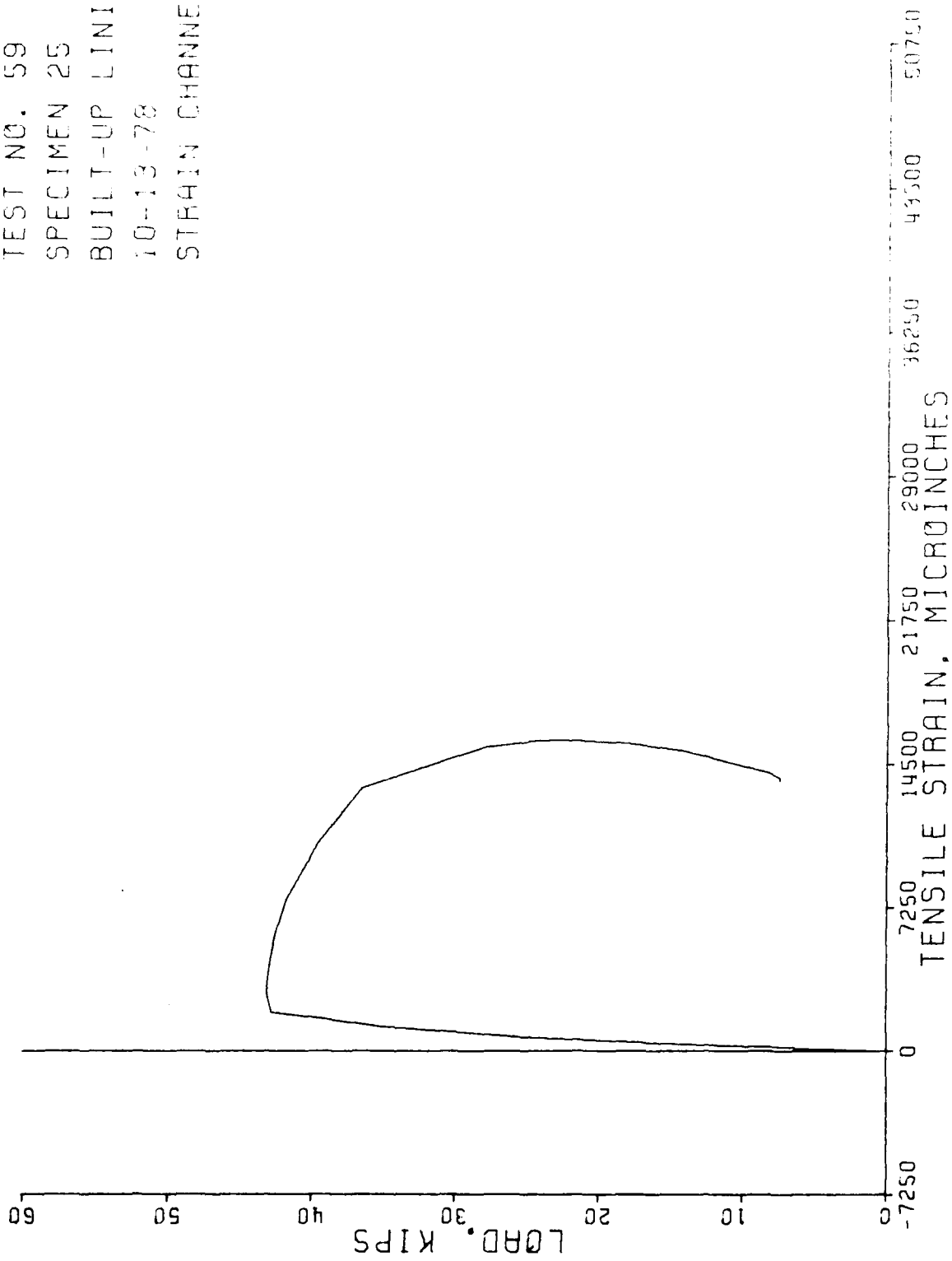


TEST NO. 59
SPECIMEN 25
BUILT-UP LINING
10-13-78

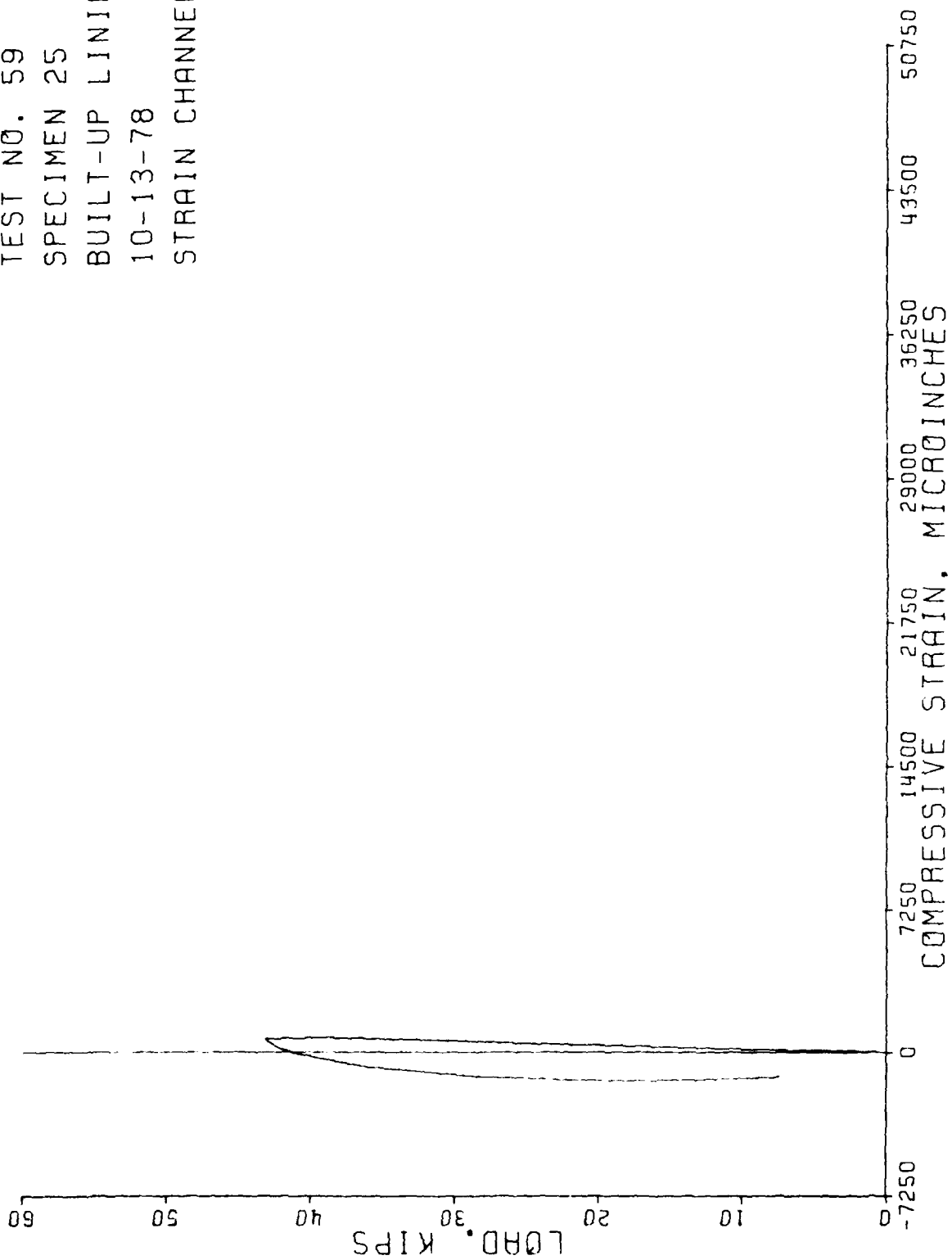
TEST NO. 59
SPECIMEN 25
BUILT-UP LINING
10-13-78



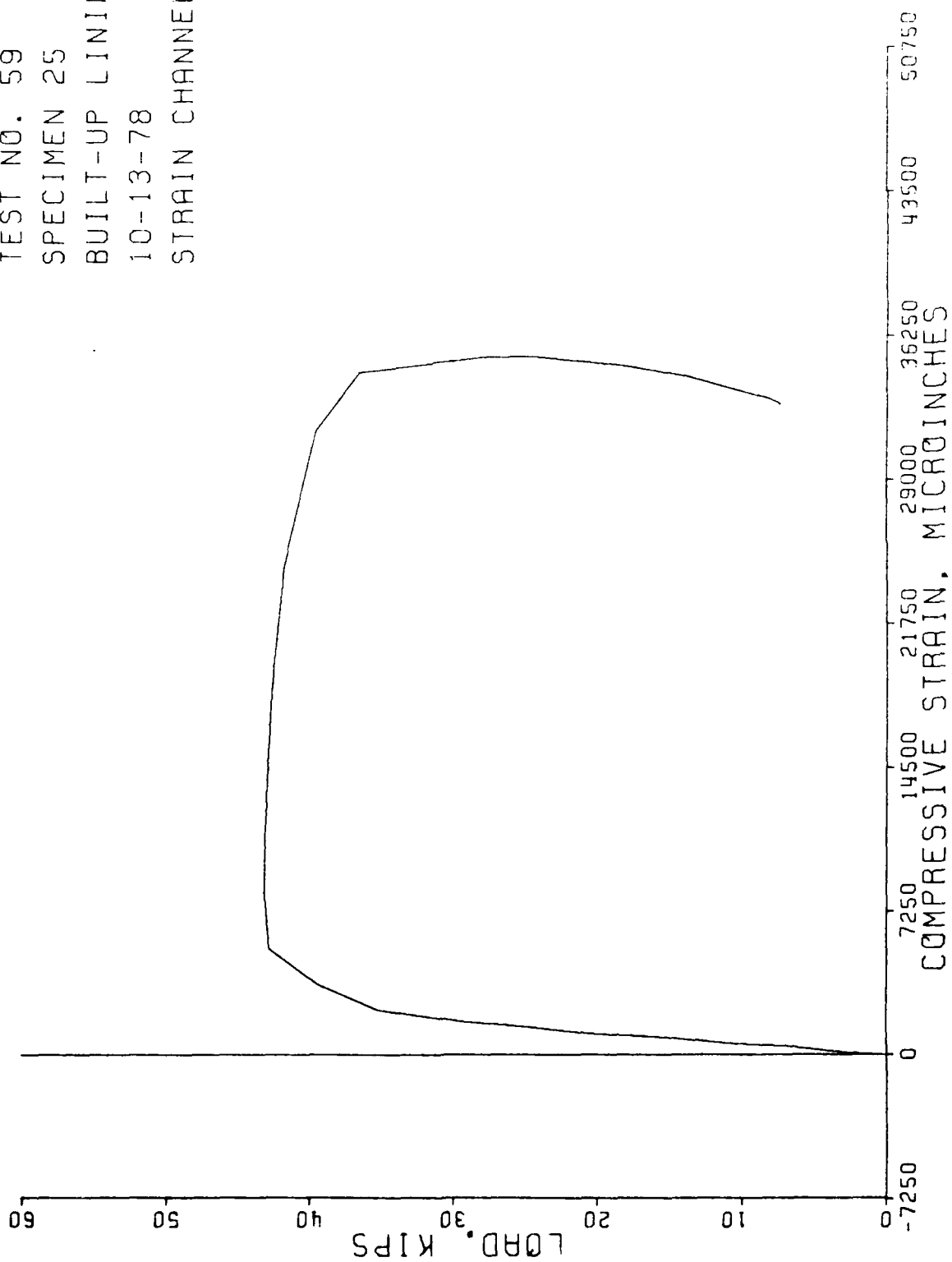
TEST NO. 59
SPECIMEN 25
BUILT-UP LINING
10-13-78
STRAIN CHANNEL 30



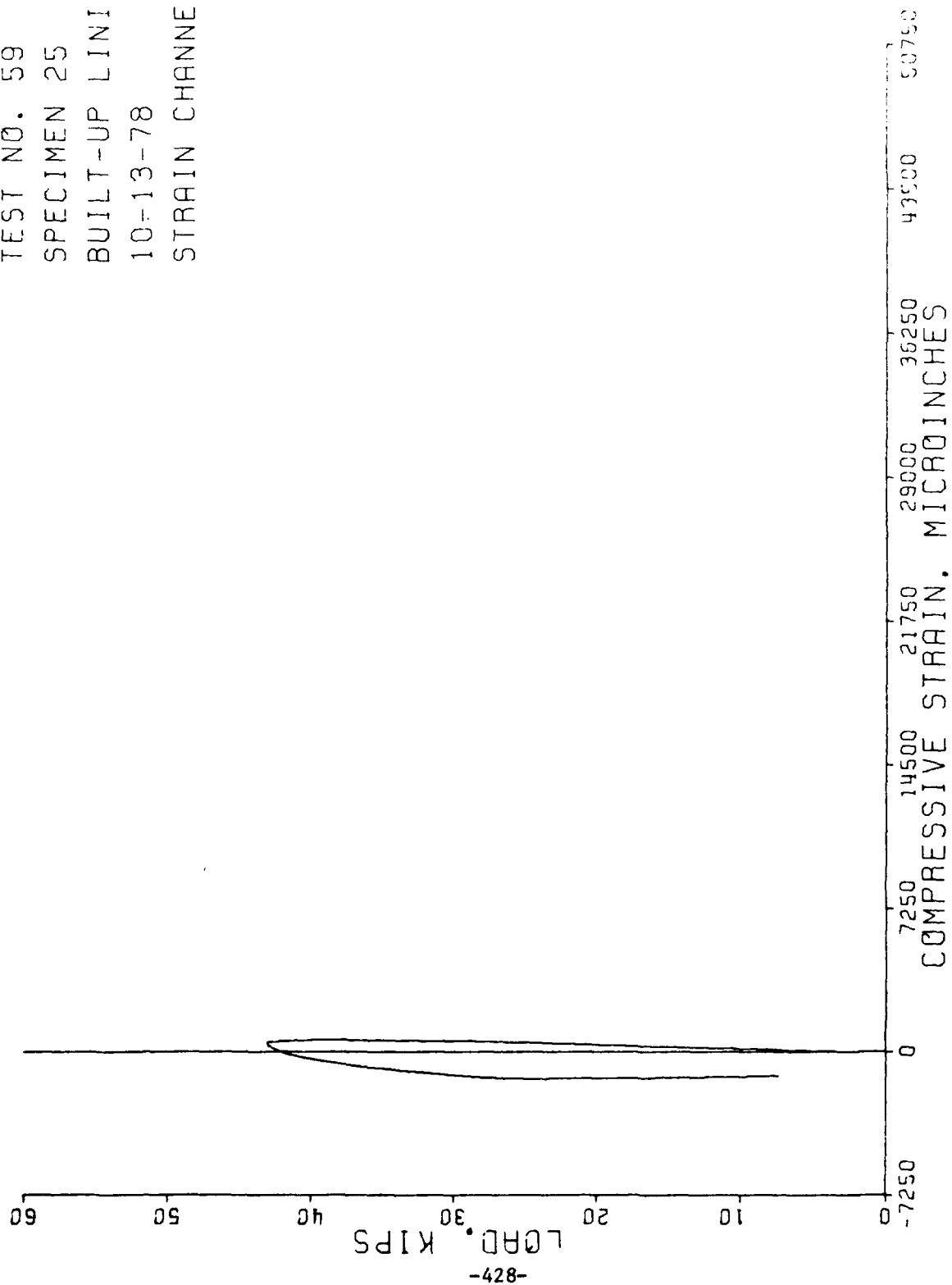
TEST NO. 59
SPECIMEN 25
BUILT-UP LINING
10-13-78
STRAIN CHANNEL 31



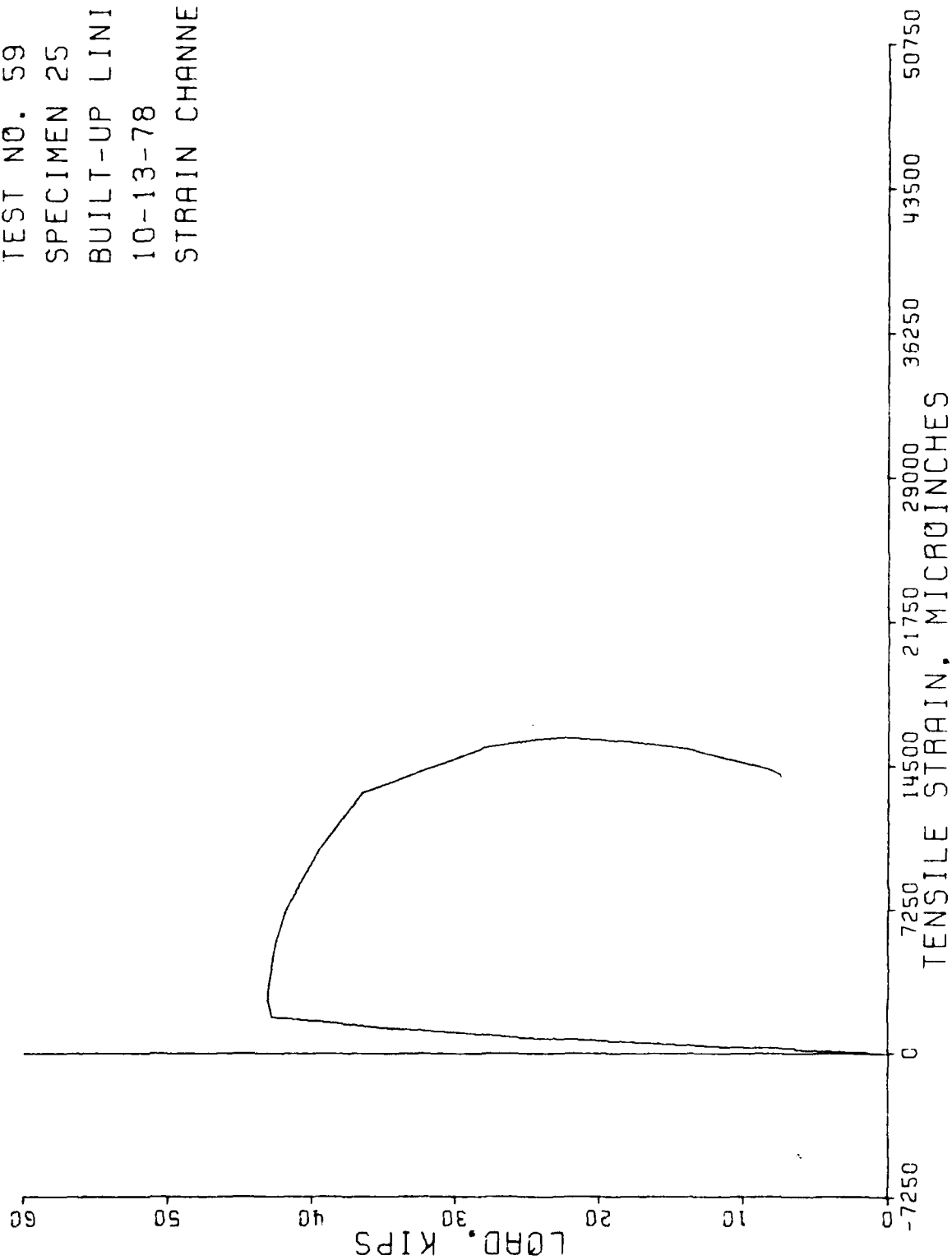
TEST NO. 59
SPECIMEN 25
BUILT-UP LINING
10-13-78
STRAIN CHANNEL 32



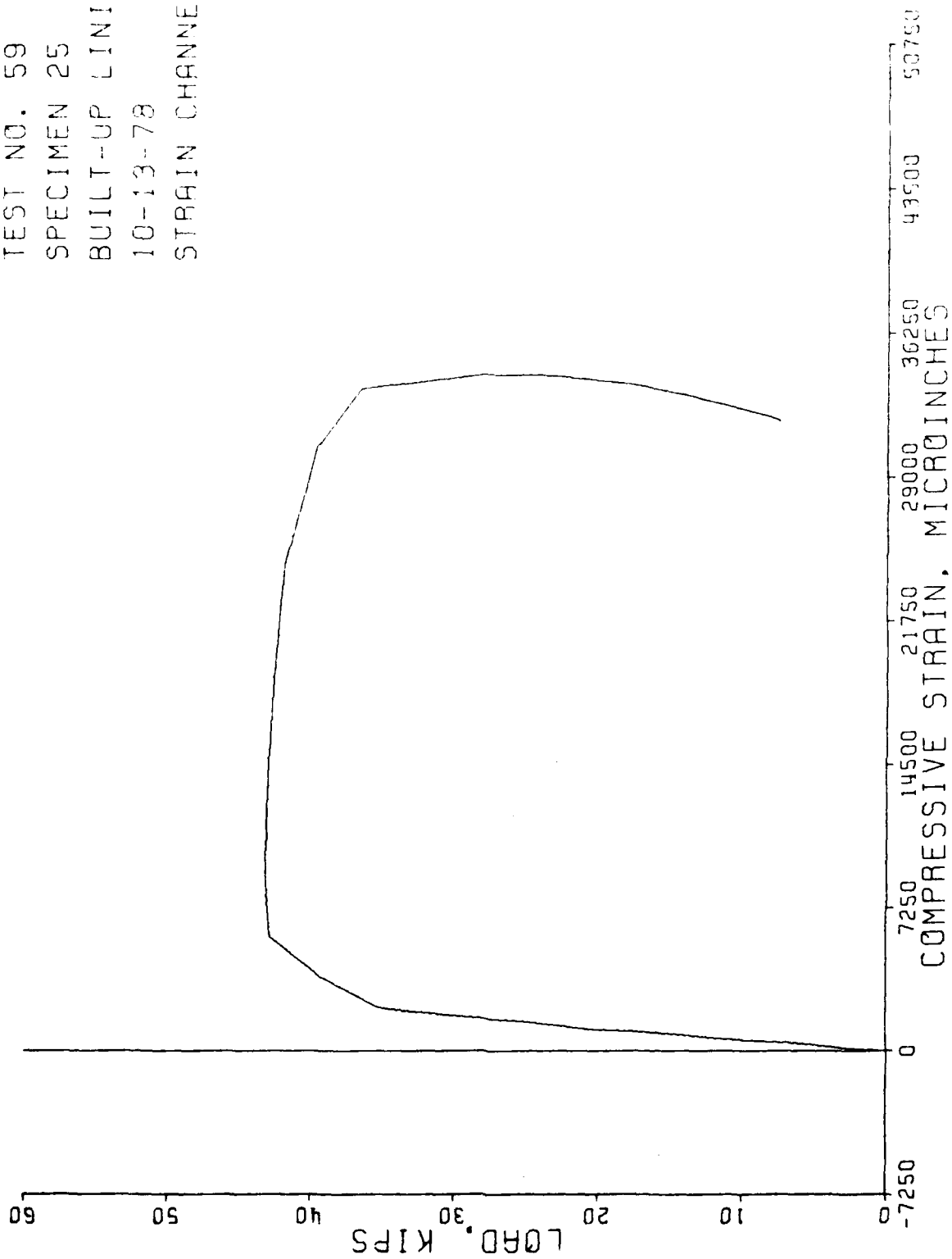
TEST NO. 59
SPECIMEN 25
BUILT-UP LINING
10-13-78
STRAIN CHANNEL 33



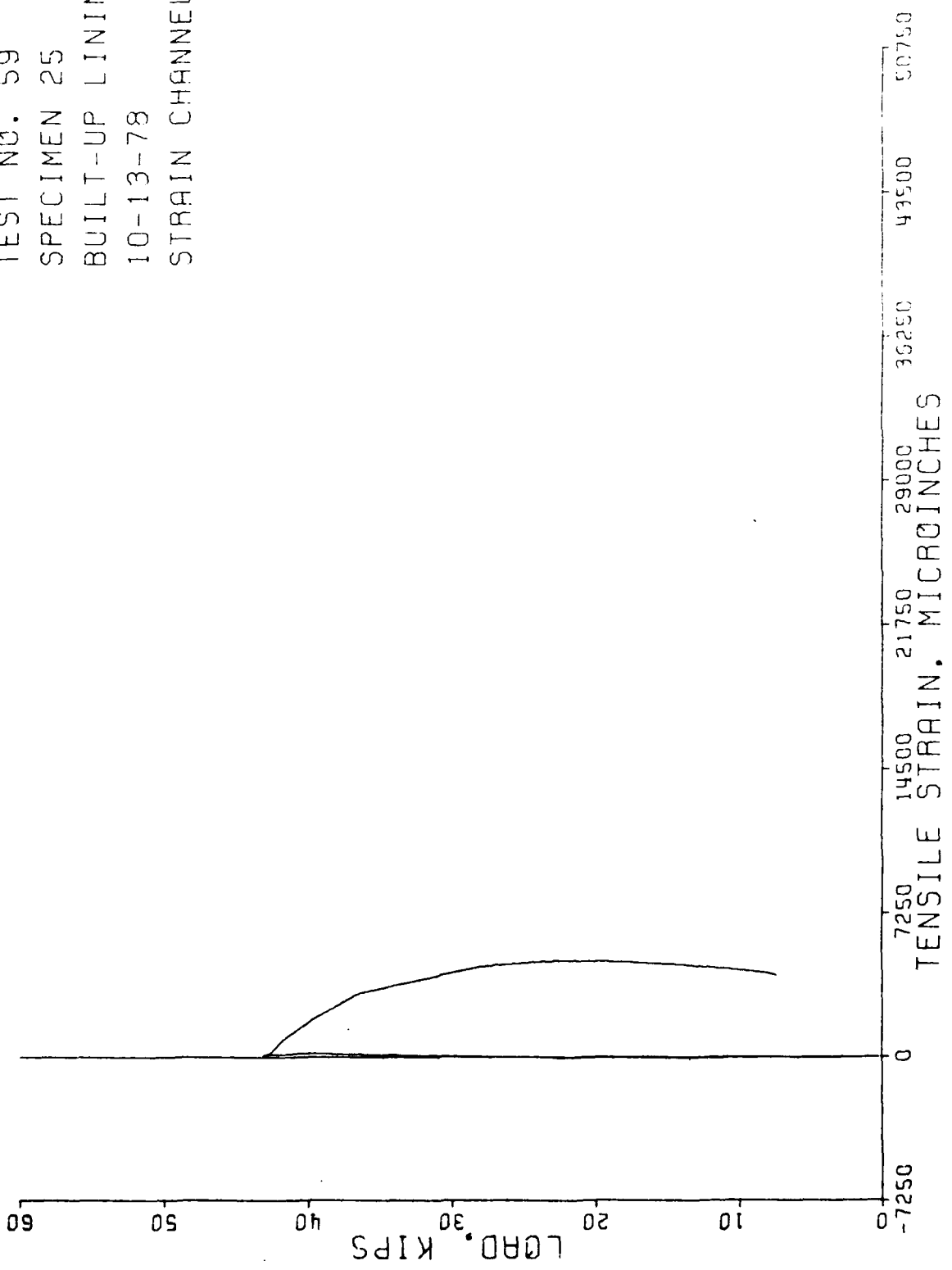
TEST NO. 59
SPECIMEN 25
BUILT-UP LINING
10-13-78
STRAIN CHANNEL 34



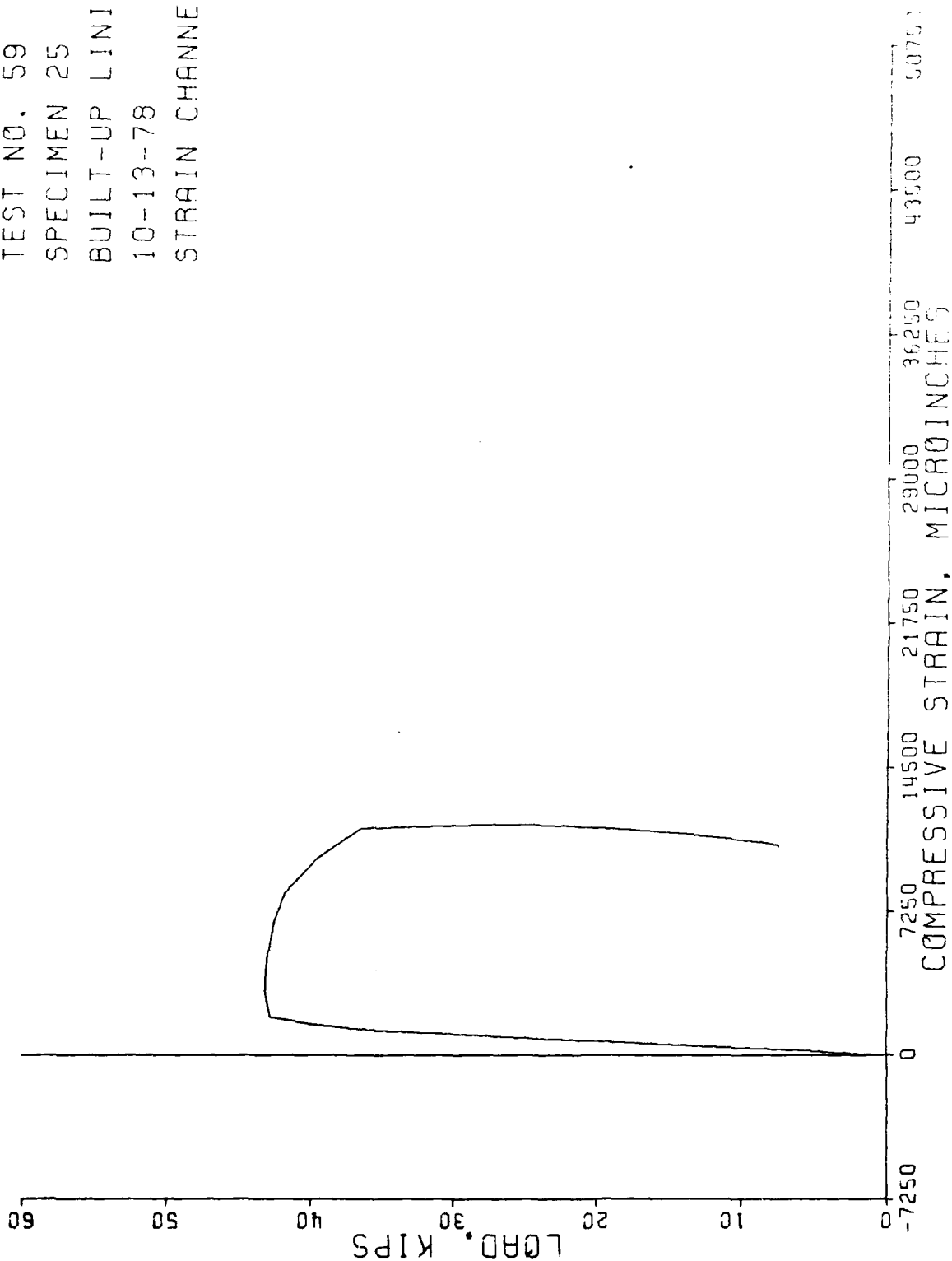
TEST NO. 59
SPECIMEN 25
BUILT-UP LINING
10-13-78
STRAIN CHANNEL 35



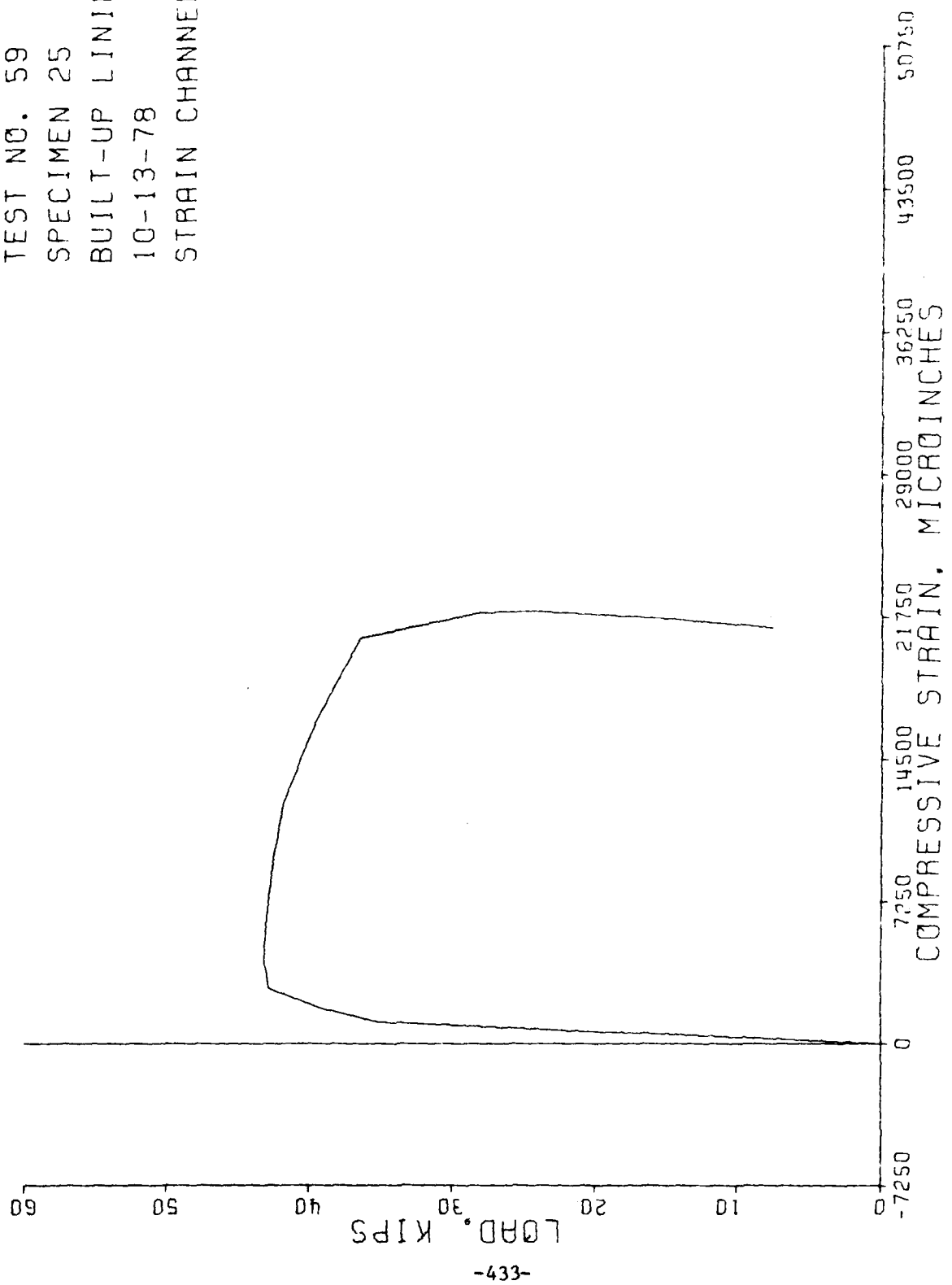
TEST NO. 59
SPECIMEN 25
BUILT-UP LINING
10-13-78
STRAIN CHANNEL 36



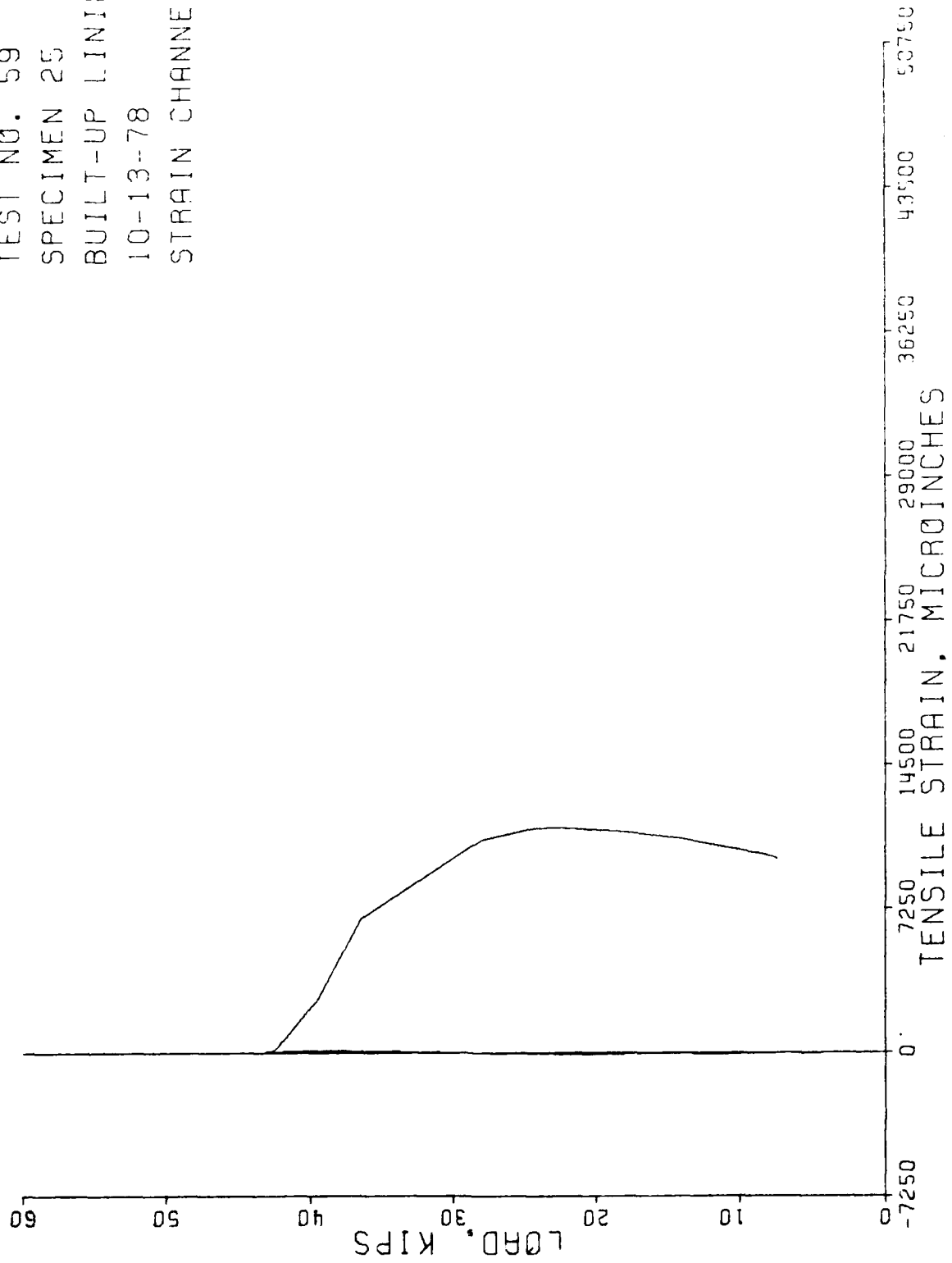
TEST NO. 59
SPECIMEN 25
BUILT-UP LINING
10-13-78
STRAIN CHANNEL 37



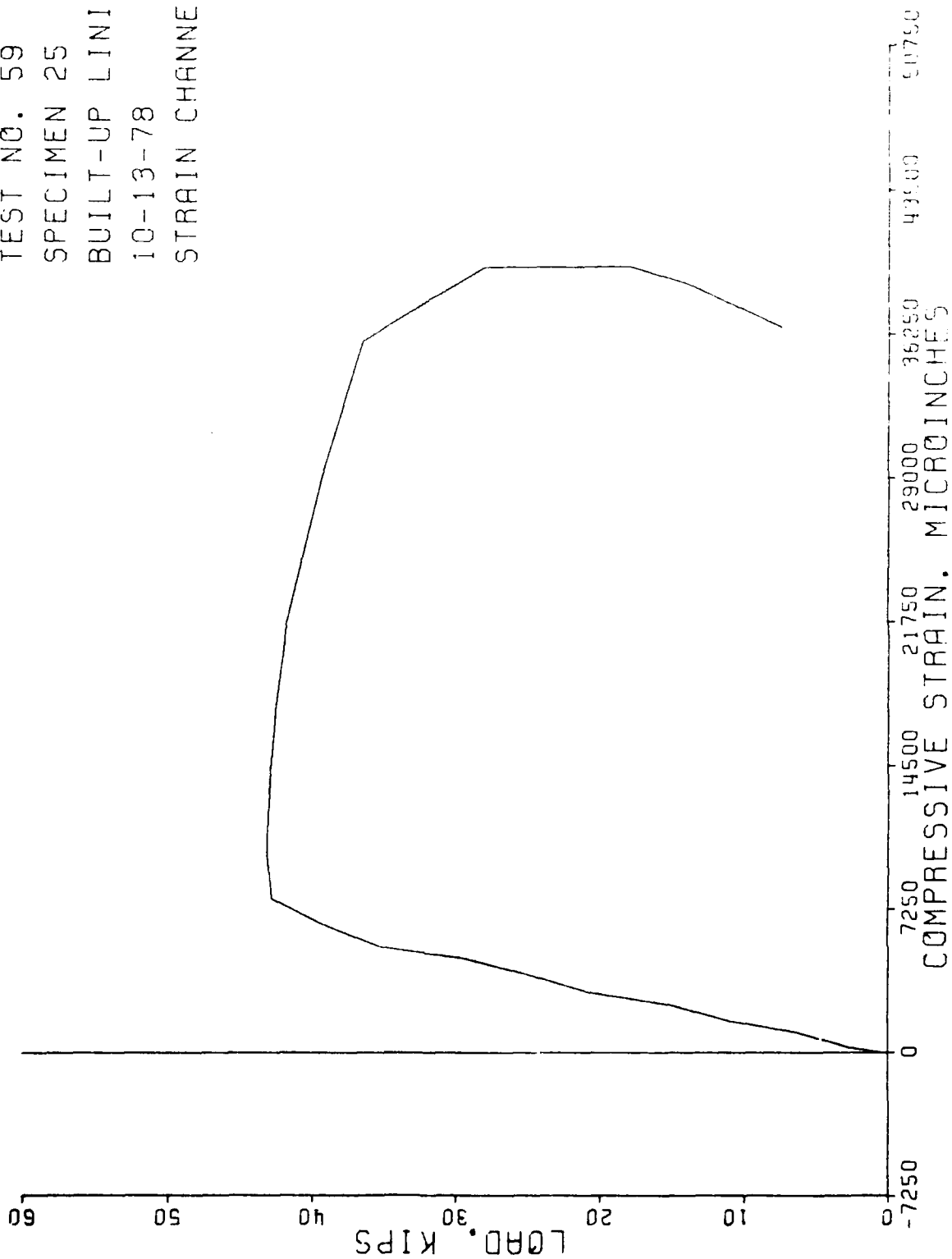
TEST NO. 59
SPECIMEN 25
BUILT-UP LINING
10-13-78
STRAIN CHANNEL 38



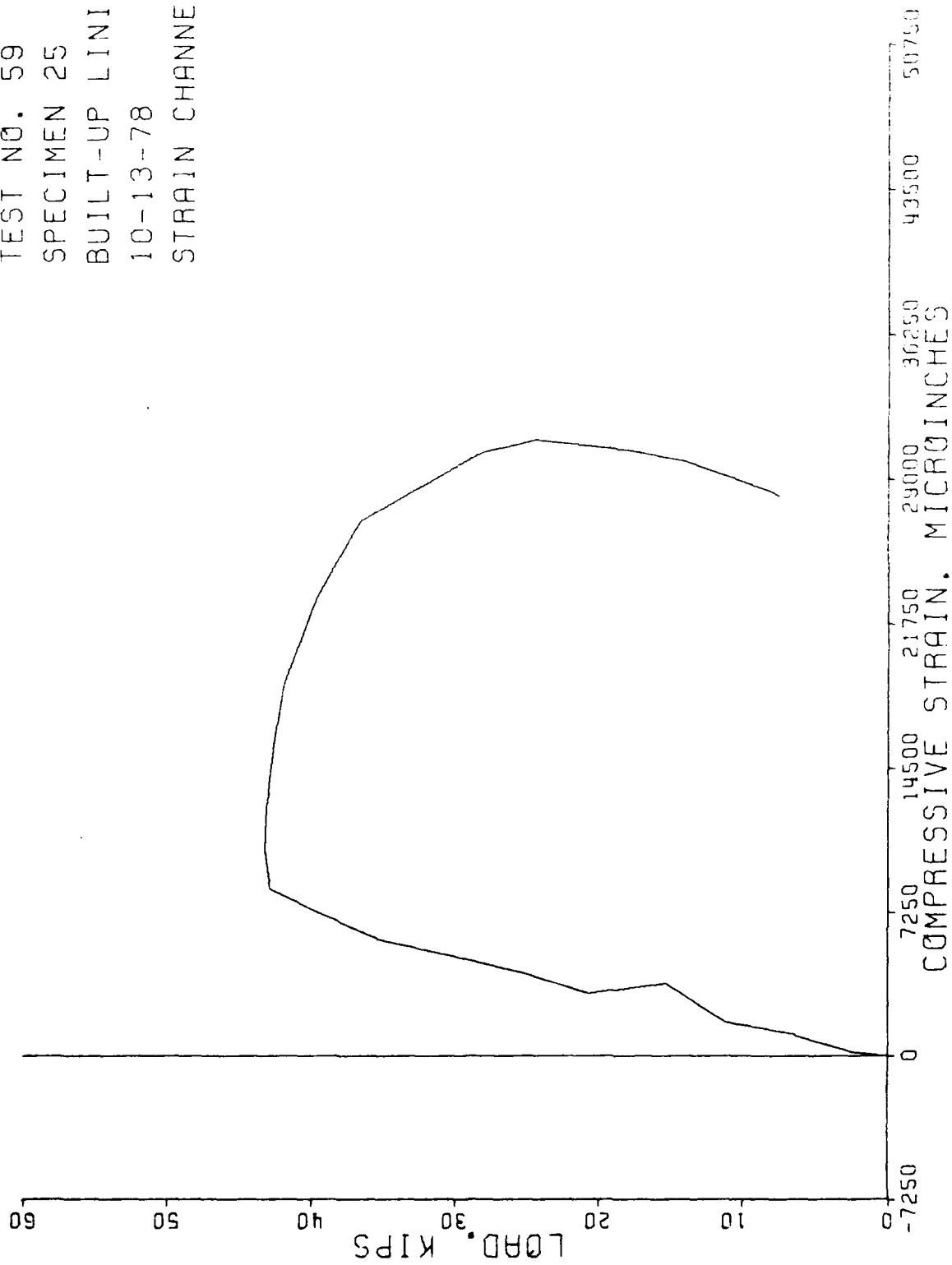
TEST NO. 59
SPECIMEN 25
BUILT-UP LINING
10-13-78
STRAIN CHANNEL 39



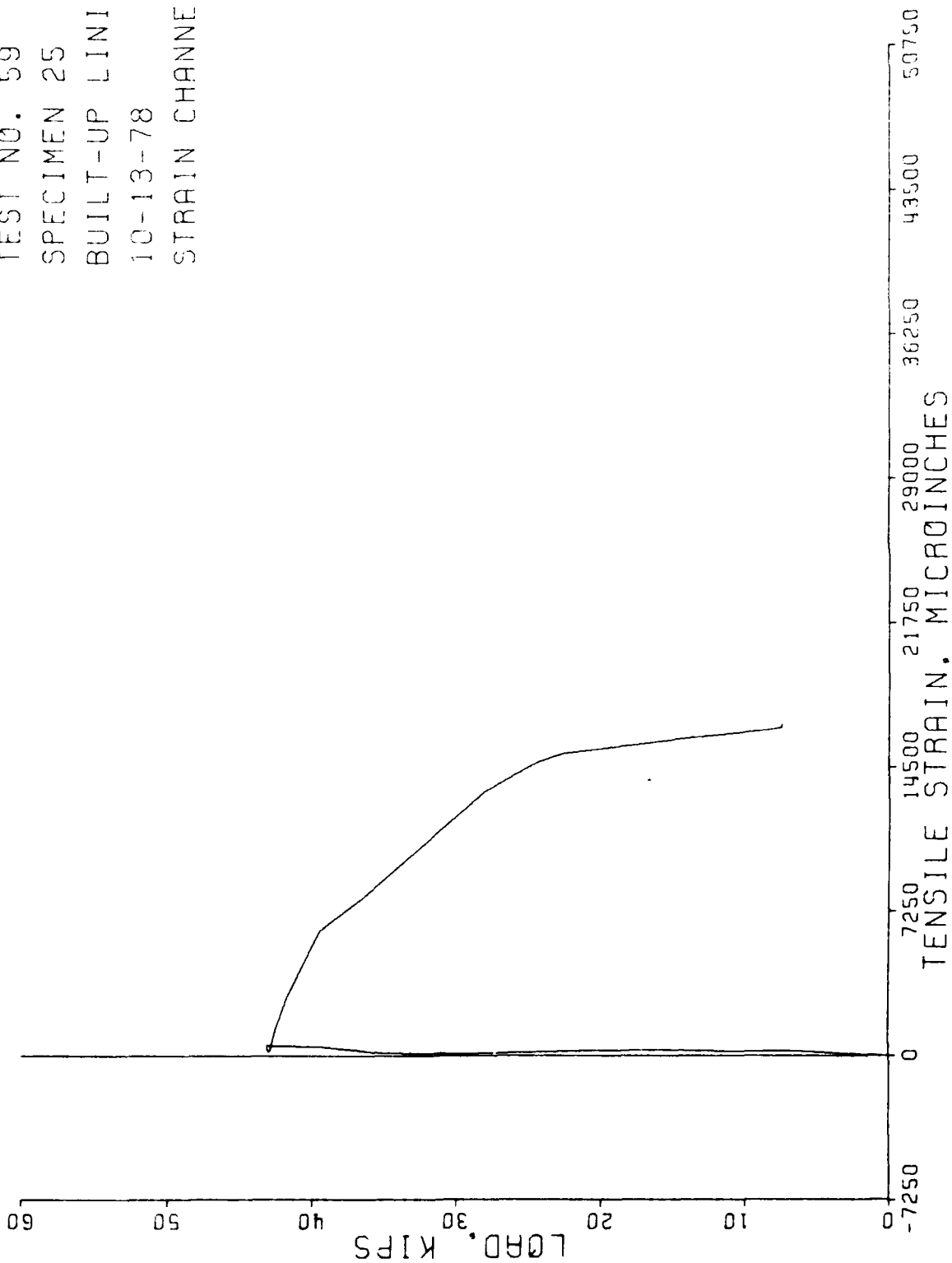
TEST NO. 59
SPECIMEN 25
BUILT-UP LINING
10-13-78
STRAIN CHANNEL 40



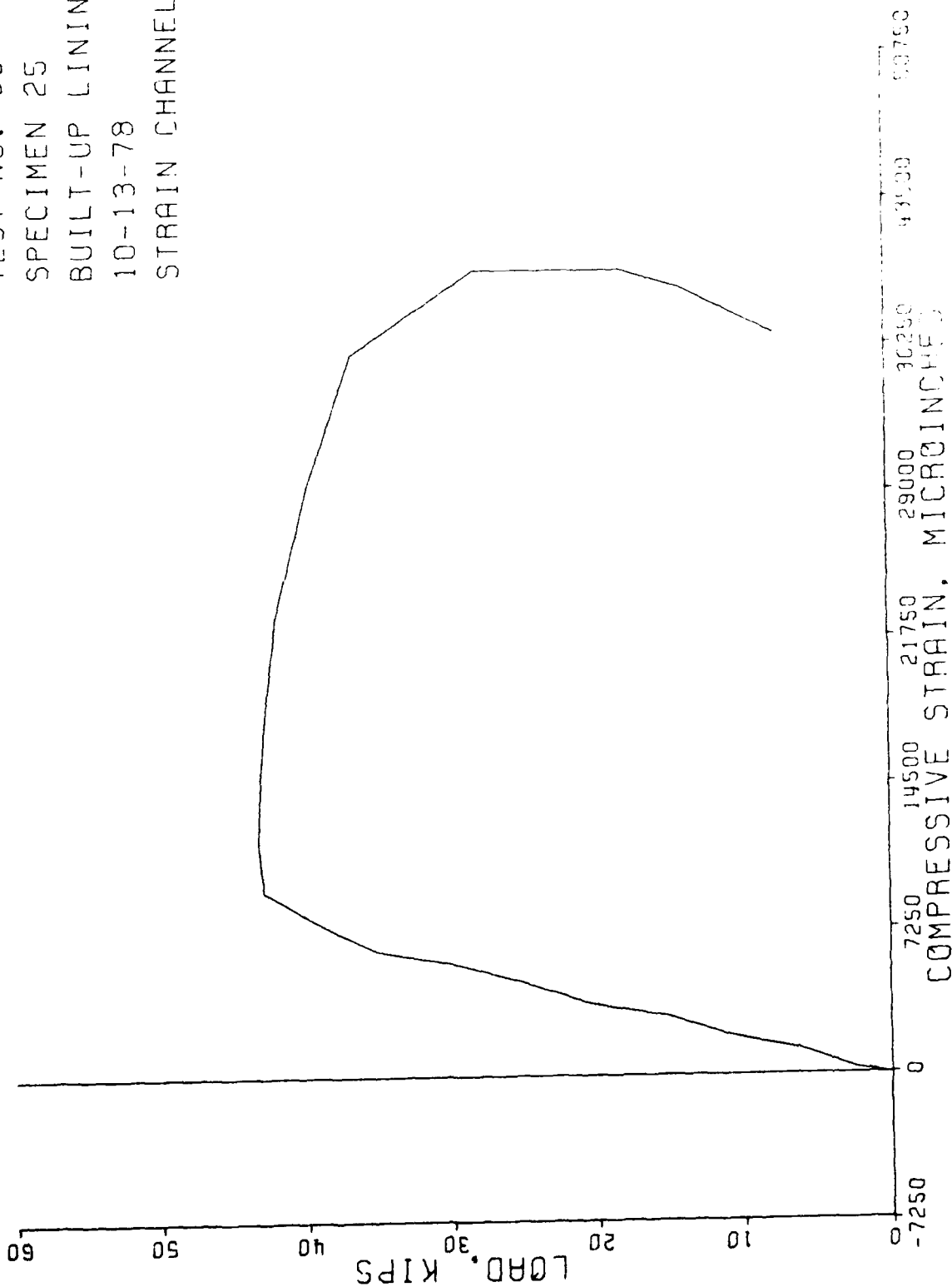
TEST NO. 59
SPECIMEN 25
BUILT-UP LINING
10-13-78
STRAIN CHANNEL 41



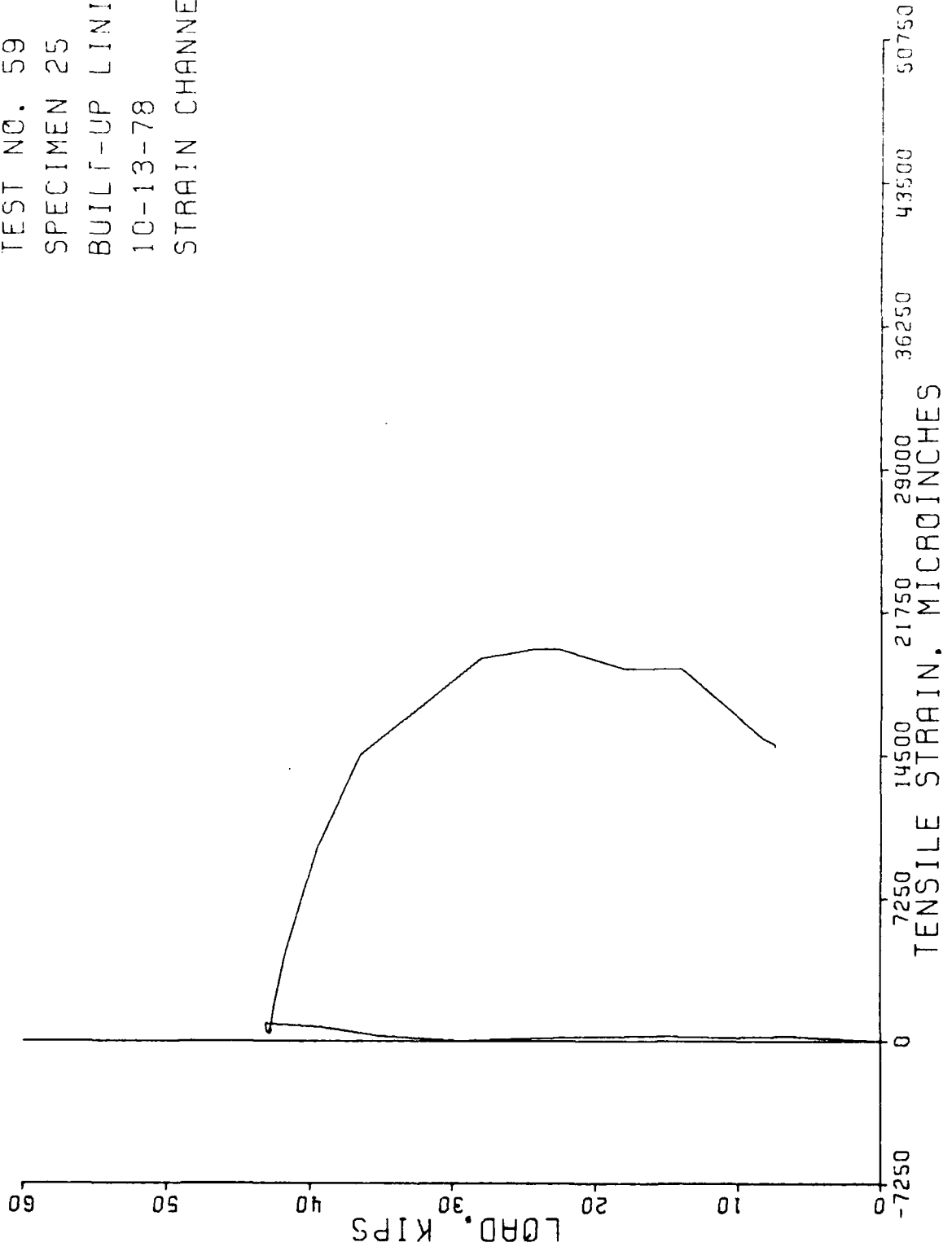
TEST NO. 59
SPECIMEN 25
BUILT-UP LINING
10-13-78
STRAIN CHANNEL 42



TEST NO. 59
 SPECIMEN 25
 BUILT-UP LINING
 10-13-78
 STRAIN CHANNEL 46



TEST NO. 59
SPECIMEN 25
BUILT-UP LINING
10-13-78
STRAIN CHANNEL 47



TEST NO. 59 SPECIMEN 25 BUILT-UP LINING 10-13-78

NUMBER OF INCREMENTS= 27
 NUMBER OF CHANNELS= 39
 NUMBER OF STRAIN CHANNELS= 15
 NUMBER OF DISPLACEMENT CHANNELS= 8
 NUMBER OF LOAD CHANNELS= 8
 NUMBER OF PRESSURE CHANNELS= 0
 NUMBER OF RODS= 8

CHANNEL	ZEROSHIFT	STRAIN CHANNEL	CALIBRATION
57	0.0	47	1.000
56	0.0	46	1.000
55	0.0	42	1.000
54	0.0		
53	0.6		
52	0.0		
51	0.0		
50	0.0		
47	0.0		
46	0.0		
42	0.0		
41	0.0		
40	0.0		
39	0.0		
38	0.0		
37	0.0		
36	0.0		
35	0.0		
34	0.0		
33	0.0		
32	0.0		
31	0.0		
30	0.0		
29	0.0		
28	0.0		
27	0.0		
26	0.0		
25	0.0		
22	0.0		
21	0.0		
20	0.0		
19	0.0		
18	0.0		
17	0.0		
16	0.0		
15	0.0		
14	0.0		
13	0.0		
12	0.0		

41	1.000	
40	1.000	
39	1.000	
38	1.000	
37	1.000	
36	1.000	
35	1.000	
34	1.000	
33	1.000	
32	1.000	
31	1.000	
30	1.000	
		CALIBRATION
19	0.001	
18	0.001	
17	0.001	
16	0.002	
15	0.002	
14	0.002	
13	0.002	
12	0.002	
		CALIBRATION
29	10.000	
28	10.000	
27	10.000	
26	10.000	
25	10.000	
22	10.000	
21	10.000	
20	10.000	
		CALIBRATION
57	1.000	
56	1.000	
55	1.000	
54	1.000	
53	1.000	
52	1.000	
51	1.000	
50	1.000	

DISPLACEMENT CHANNEL

LOAD CHANNEL

ROD CHANNEL

STRAIN CHANNELS

TIME	CH.47	CH.46	CH.42	CH.41	CH.49	CH.39	CH.38	CH.37
1. 13:14:46:19	-1.000	1.000	0.0	0.0	0.0	0.0	0.0	0.0
2. 13:14:54:43	82.000	-241.000	83.000	-190.000	-223.000	-15.000	-57.000	-79.000
3. 13:14:55:58	242.000	-1257.000	257.000	-1020.000	-1017.000	-26.000	-217.000	-236.000
4. 13:14:59:28	270.000	-1239.000	261.000	-1087.000	-999.000	-2.000	-218.000	-255.000
5. 13:15: 6:35	175.000	-2006.000	297.000	-3653.000	-1648.000	-57.000	-353.000	-392.000
6. 13:15: 7:35	259.000	-2982.000	297.000	-3653.000	-2475.000	-51.000	-512.000	-550.000
7. 13:15: 8:35	204.000	-3619.000	261.000	-3166.000	-3063.000	-63.000	-630.000	-707.000
8. 13:15: 9:35	97.000	-4698.000	156.000	-4199.000	-4030.000	-31.000	-803.000	-879.000
9. 13:15:10:35	-1.000	-5543.000	83.000	-4935.000	-4792.000	0.0	-925.000	-1045.000
10. 13:15:11:35	-265.000	-6313.000	-149.000	-5875.000	-5370.000	84.000	-1125.000	-1233.000
11. 13:15:12:35	-725.000	-7769.000	-470.000	-7209.000	-6556.000	100.000	-1887.000	-1488.000
12. 13:15:13:43	-883.000	-9254.000	-517.000	-8449.000	-7808.000	-41.000	-2851.000	-1936.000
13. 13:15:14:44	-921.000	-11496.000	-544.000	-10338.000	-9951.000	-66.000	-4145.000	-3146.000
14. 13:15:15:44	-432.000	-13542.000	-168.000	-11972.000	-11974.000	-69.000	-5576.000	-4208.000
15. 13:15:16:44	382.000	-15780.000	380.000	-13667.000	-14242.000	-24.000	-7211.000	-5314.000
16. 13:15:17:44	1867.000	-18658.000	1364.000	-15715.000	-17186.000	149.000	-9295.000	-6584.000
17. 13:15:18:44	4419.000	-22965.000	2937.000	-18783.000	-21583.000	727.000	-12354.000	-8115.000
18. 13:15:19:44	9853.000	-29390.000	6317.000	-23078.000	-28478.000	2711.000	-16491.000	-9892.000
19. 13:15:20:44	14564.000	-35842.000	7960.000	-26928.000	-35880.000	6762.000	-20711.000	-11112.000
20. 13:15:21:44	19459.000	-39969.000	13358.000	-30356.000	-39610.000	10755.000	-22008.000	-11628.000
21. 13:15:22:37	19947.000	0.0	14776.000	-30957.000	0.0	11358.000	-22082.000	-11620.000
22. 13:15:22:57	19923.000	0.0	15239.000	-30819.000	0.0	11368.000	-22001.000	-11553.000
23. 13:15:23:19	18921.000	-39997.000	15628.000	-30463.000	-39652.000	11151.000	-21834.000	-11371.000
24. 13:15:23:40	0.0	-39097.000	15980.000	-29917.000	-38793.000	10790.000	-21628.000	-11151.000
25. 13:15:24:21	15371.000	-37042.000	16433.000	-28432.000	-36865.000	10006.000	-21269.000	-10676.000
26. 13:15:25:21	15092.000	-36792.000	16530.000	-28171.000	-36583.000	9826.000	-21216.000	-10568.000
27. 13:15:28:18	14932.000	-36801.000	16683.000	-28145.000	-36576.000	9746.000	-21198.000	-10525.000

STRAIN CHANNELS

TIME	CH. 36	CH. 35	CH. 34	CH. 33	CH. 32	CH. 31	CH. 30	CH.
1. 13:14:46:19	1.000	0.0	1.000	1.000	-1.000	-1.000	1.000	
2. 13:14:54:43	-37.000	-93.000	41.000	-4.000	-79.000	-64.000	40.000	
3. 13:14:55:58	-54.000	-387.000	169.000	-61.000	-361.000	-101.000	120.000	
4. 13:14:59:28	-14.000	-415.000	253.000	-79.000	-393.000	-101.000	184.000	
5. 13:15: 6:35	-44.000	-604.000	330.000	-182.000	-574.000	-182.000	245.000	
6. 13:15: 7:35	-47.000	-919.000	467.000	-235.000	-875.000	-241.000	362.000	
7. 13:15: 8:35	-20.000	-1134.000	684.000	-369.000	-1090.000	-358.000	539.000	
8. 13:15: 9:35	-15.000	-1509.000	801.000	-457.000	-1449.000	-417.000	686.000	
9. 13:15:10:35	42.000	-1773.000	1035.000	-554.000	-1713.000	-580.000	944.000	
10. 13:15:11:35	113.000	-2218.000	1291.000	-597.000	-2290.000	-680.000	1247.000	
11. 13:15:12:35	176.000	-3823.000	1623.000	-694.000	-3553.000	-746.000	1681.000	
12. 13:15:13:43	153.000	-5766.000	1854.000	-511.000	-5363.000	-704.000	1963.000	
13. 13:15:14:44	106.000	-8424.000	2694.000	-455.000	-8049.000	-704.000	2819.000	
14. 13:15:15:44	29.000	-11262.000	3399.000	-348.000	-11150.000	-620.000	3623.000	
15. 13:15:16:44	92.000	-14555.000	4336.000	-239.000	-14555.000	-396.000	4627.000	
16. 13:15:17:44	342.000	-18759.000	5603.000	-103.000	-18780.000	-335.000	5884.000	
17. 13:15:18:44	889.000	-24476.000	7438.000	111.000	-24497.000	-82.000	7608.000	
18. 13:15:19:44	2023.000	-30404.000	10328.000	449.000	-31518.000	304.000	10541.000	
19. 13:15:20:44	3266.000	-33397.000	13249.000	767.000	-34430.000	734.000	13330.000	
20. 13:15:21:44	4591.000	-34094.000	15495.000	1295.000	-32211.000	1253.000	15379.000	
21. 13:15:22:37	4828.000	-34113.000	15897.000	1395.000	-35230.000	1359.000	15727.000	
22. 13:15:22:57	4893.000	-34034.000	15970.000	1354.000	-35099.000	1397.000	15777.000	
23. 13:15:23:19	4825.000	-33683.000	15752.000	1348.000	-34736.000	1445.000	15572.000	
24. 13:15:23:40	4694.000	-33136.000	15402.000	1300.000	-34207.000	1406.000	15195.000	
25. 13:15:24:21	4268.000	-32073.000	14373.000	1219.000	-33094.000	1286.000	14114.000	
26. 13:15:25:21	4137.000	-31862.000	14071.000	1193.000	-32852.000	1230.000	13803.000	
27. 13:15:28:18	4079.000	-31779.000	13943.000	1184.000	-32761.000	1202.000	13671.000	

DISPLACEMENT CHANNELS

	TIME	CH.19	CH.18	CH.17	CH.16	CH.15	CH.14	CH.13	CH.12
1.	13:14:46:19	0.001	0.001	0.001	-0.002	0.002	-0.002	0.002	0.002
2.	13:14:54:43	0.001	0.001	0.090	0.022	0.004	0.010	0.026	0.0
3.	13:14:55:58	-0.028	-0.028	0.090	0.052	0.062	0.040	0.026	-0.030
4.	13:14:59:28	-0.057	-0.028	0.119	0.052	0.064	0.040	0.026	-0.030
5.	13:15: 6:35	-0.057	-0.056	0.148	0.082	0.096	0.050	0.028	-0.034
6.	13:15: 7:35	-0.115	-0.056	0.208	0.110	0.126	0.098	-0.002	-0.060
7.	13:15: 8:35	-0.143	-0.085	0.267	0.130	0.184	0.106	-0.032	-0.088
8.	13:15: 9:35	-0.172	-0.114	0.326	0.168	0.216	0.158	-0.032	-0.118
9.	13:15:10:35	-0.231	-0.142	0.416	0.200	0.272	0.188	-0.062	-0.172
10.	13:15:11:35	-0.288	-0.199	0.505	0.256	0.362	0.248	-0.092	-0.208
11.	13:15:12:35	-0.407	-0.256	0.683	0.344	0.450	0.306	-0.120	-0.286
12.	13:15:13:43	-0.494	-0.313	0.814	0.404	0.538	0.366	-0.150	-0.346
13.	13:15:14:44	-0.696	-0.428	1.069	0.550	0.774	0.502	-0.270	-0.472
14.	13:15:15:44	-0.898	-0.571	1.331	0.696	0.978	0.632	-0.388	-0.612
15.	13:15:16:44	-1.129	-0.714	1.573	0.844	1.214	0.780	-0.536	-0.738
16.	13:15:17:44	-1.418	-0.893	1.899	1.048	1.510	0.986	-0.742	-0.940
17.	13:15:18:44	-1.850	-1.199	2.372	1.346	1.980	1.280	-1.038	-1.206
18.	13:15:19:44	-2.570	-1.713	3.141	1.808	2.772	1.752	-1.556	-1.678
19.	13:15:20:44	-3.378	-2.285	4.084	2.338	3.682	2.294	-2.164	-2.238
20.	13:15:21:44	-3.967	-2.714	4.680	2.718	4.360	2.692	-2.784	-2.680
21.	13:15:22:37	-4.055	-2.800	4.798	2.776	4.506	2.754	-2.932	-2.768
22.	13:15:22:57	-4.055	-2.800	4.798	2.776	4.506	2.752	-2.934	-2.768
23.	13:15:23:19	-4.026	-2.773	4.708	2.690	4.480	2.748	-2.964	-2.738
24.	13:15:23:40	-3.938	-2.703	4.590	2.690	4.362	2.692	-2.962	-2.676
25.	13:15:24:21	-3.702	-2.487	4.235	2.514	4.038	2.514	-2.842	-2.466
26.	13:15:25:21	-3.644	-2.429	4.116	2.454	3.950	2.456	-2.782	-2.408
27.	13:15:28:18	-3.614	-2.400	4.057	2.426	3.904	2.426	-2.782	-2.384

LOAD CHANNELS

	TIME	CH.29	CH.28	CH.27	CH.26	CH.25	CH.22	CH.21	CH.20
1.	13:14:46.19	540.000	630.000	450.000	540.000	560.000	660.000	660.000	480.000
2.	13:14:54.43	1820.000	1940.000	2210.000	2080.000	2510.000	2040.000	1970.000	1960.000
3.	13:14:55.58	5150.000	5290.000	6890.000	6890.000	6450.000	6360.000	6610.000	4960.000
4.	13:14:59.28	4420.000	5130.000	6170.000	5940.000	6420.000	6030.000	5910.000	4740.000
5.	13:15: 6.35	8150.000	8940.000	10020.000	10200.000	11170.000	10090.000	9840.000	8600.000
6.	13:15: 7.35	11620.000	12550.000	14530.000	15050.000	15300.000	15080.000	14260.000	11930.000
7.	13:15: 8.35	14970.000	16120.000	17360.000	18700.000	20700.000	18550.000	17020.000	15440.000
8.	13:15: 9.35	18640.000	20200.000	22550.000	24090.000	25330.000	24370.000	22070.000	19230.000
9.	13:15:10.35	21910.000	23630.000	24300.000	28550.000	29540.000	28960.000	23220.000	22900.000
10.	13:15:11.35	25450.000	27370.000	28900.000	32550.000	35210.000	33200.000	27260.000	26650.000
11.	13:15:12.35	29060.000	31470.000	32490.000	37650.000	39380.000	38540.000	30250.000	30890.000
12.	13:15:13.43	32870.000	34150.000	38960.000	41470.000	42790.000	42720.000	36700.000	33530.000
13.	13:15:14.44	32740.000	35480.000	36660.000	41860.000	43110.000	43090.000	33570.000	33330.000
14.	13:15:15.44	32880.000	35480.000	36340.000	41750.000	42980.000	43230.000	33390.000	33590.000
15.	13:15:16.44	33070.000	35490.000	35690.000	41340.000	42800.000	43180.000	33170.000	35640.000
16.	13:15:17.44	33340.000	35480.000	34750.000	40630.000	42460.000	42890.000	32820.000	35570.000
17.	13:15:18.44	33830.000	35390.000	33340.000	39220.000	41710.000	42040.000	32170.000	33330.000
18.	13:15:19.44	34310.000	35180.000	28210.000	36590.000	39440.000	39540.000	27900.000	35110.000
19.	13:15:20.44	34360.000	35760.000	25670.000	33020.000	36420.000	35830.000	25180.000	35160.000
20.	13:15:21.44	23270.000	23920.000	21110.000	24240.000	27960.000	27040.000	21050.000	23620.000
21.	13:15:22.37	19150.000	20330.000	19470.000	21560.000	24240.000	24310.000	19280.000	20120.000
22.	13:15:22.57	15790.000	16880.000	17560.000	19190.000	22480.000	21670.000	17160.000	16800.000
23.	13:15:23.19	10790.000	12240.000	14090.000	15750.000	17890.000	18010.000	13760.000	12210.000
24.	13:15:23.40	6630.000	8640.000	9990.000	12090.000	13900.000	13930.000	9870.000	8930.000
25.	13:15:24.21	3430.000	4050.000	6090.000	6030.000	8200.000	6820.000	5980.000	4070.000
26.	13:15:25.21	3900.000	4360.000	5890.000	5990.000	7410.000	6640.000	5710.000	4380.000
27.	13:15:28.13	4090.000	4890.000	5940.000	6090.000	7390.000	6520.000	5840.000	4890.000

R O D C H A N N E L S

	TIME	CH.57	CH.56	CH.55	CH.54	CH.53	CH.52	CH.51	CH.50
1.	13:14:46:19	0.0	-12.812	12.812	12.812	12.812	0.0	12.812	0.0
2.	13:14:54:43	0.0	12.812	-64.059	-64.059	38.435	38.435	51.247	12.812
3.	13:14:55:58	-25.624	0.0	-51.247	-76.871	38.435	38.435	-38.435	12.812
4.	13:14:59:28	-25.624	-12.812	-51.247	-76.871	38.435	76.871	51.247	0.0
5.	13:15:6:35	12.812	140.930	-38.435	-51.247	64.059	128.118	38.435	12.812
6.	13:15:7:35	12.812	140.930	-12.812	-38.435	64.059	166.553	64.059	12.812
7.	13:15:8:35	64.059	230.612	25.624	-25.624	102.494	320.295	115.306	12.812
8.	13:15:9:35	64.059	243.424	25.624	0.0	140.930	320.295	128.118	0.0
9.	13:15:10:35	153.742	345.918	38.435	12.812	140.930	358.730	128.118	-12.812
10.	13:15:11:35	166.553	384.354	38.435	12.812	179.355	474.036	128.118	-64.059
11.	13:15:12:35	128.118	384.354	38.435	12.812	256.256	627.778	51.247	-192.177
12.	13:15:13:43	25.624	320.295	38.435	25.624	397.166	819.955	-25.624	-281.859
13.	13:15:14:44	-102.494	243.424	51.247	64.059	538.095	948.073	-38.435	-320.295
14.	13:15:15:44	-140.930	256.256	38.435	64.059	602.154	960.885	-64.059	-333.107
15.	13:15:16:44	-179.365	320.295	38.435	64.059	666.213	722.449	-102.494	-345.918
16.	13:15:17:44	-102.494	409.928	38.435	38.435	653.402	858.390	-102.494	-345.918
17.	13:15:18:44	12.812	538.095	38.435	25.624	730.272	884.014	-64.059	-320.295
18.	13:15:19:44	-140.930	435.601	51.247	0.0	935.261	973.697	-38.435	-371.542
19.	13:15:20:44	-230.612	358.730	-166.553	-230.612	576.531	614.966	128.118	-435.601
20.	13:15:21:44	-128.118	422.789	-320.295	-409.978	384.354	345.918	333.107	-217.801
21.	13:15:22:37	-89.683	422.789	-345.918	-435.601	333.107	269.048	358.730	-128.118
22.	13:15:22:57	-153.742	333.107	-422.789	-486.848	358.730	281.859	461.225	25.624
23.	13:15:23:19	-38.435	397.166	-384.354	-435.601	243.424	153.742	397.166	128.118
24.	13:15:23:40	51.247	422.789	-333.107	-371.542	115.306	64.059	307.483	115.306
25.	13:15:24:21	102.494	358.730	-256.256	-294.671	38.435	-25.624	230.612	64.059
26.	13:15:25:21	64.059	320.295	-269.048	-307.483	64.059	12.812	204.989	64.059
27.	13:15:28:18	51.247	307.483	-269.048	-307.483	89.683	25.624	204.989	64.059

AVERAGE LOAD

1.	565.000
2.	2066.250
3.	6015.000
4.	5595.000
5.	9626.250
6.	13790.000
7.	17395.000
8.	22060.000
9.	25376.250
10.	29575.000
11.	33716.250
12.	37898.750
13.	37733.750
14.	37705.000
15.	37567.500
16.	37242.500
17.	36628.750
18.	34535.000
19.	32675.000
20.	24026.250
21.	21070.000
22.	18441.250
23.	14342.500
24.	10497.500
25.	5583.750
26.	5535.000
27.	5706.250

3.4.4 SPECIMEN #26

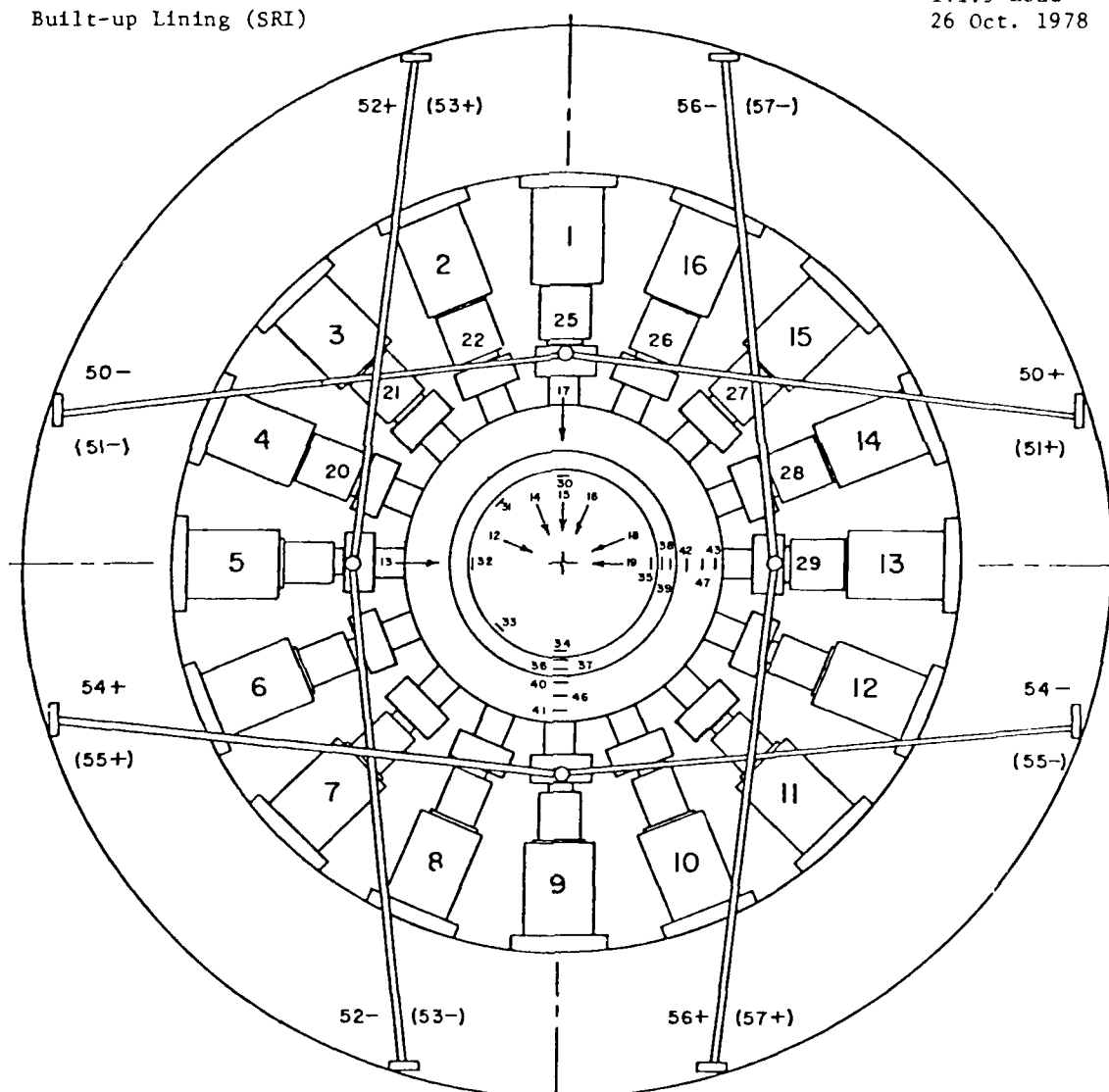
TEST NO. 60
STEEL LINER WITH 2000 PSI BACKPACKING
1:1.5 LOADING RATIO
TESTED 26 OCTOBER 1978

REACTION FRAME TEST SET-UP

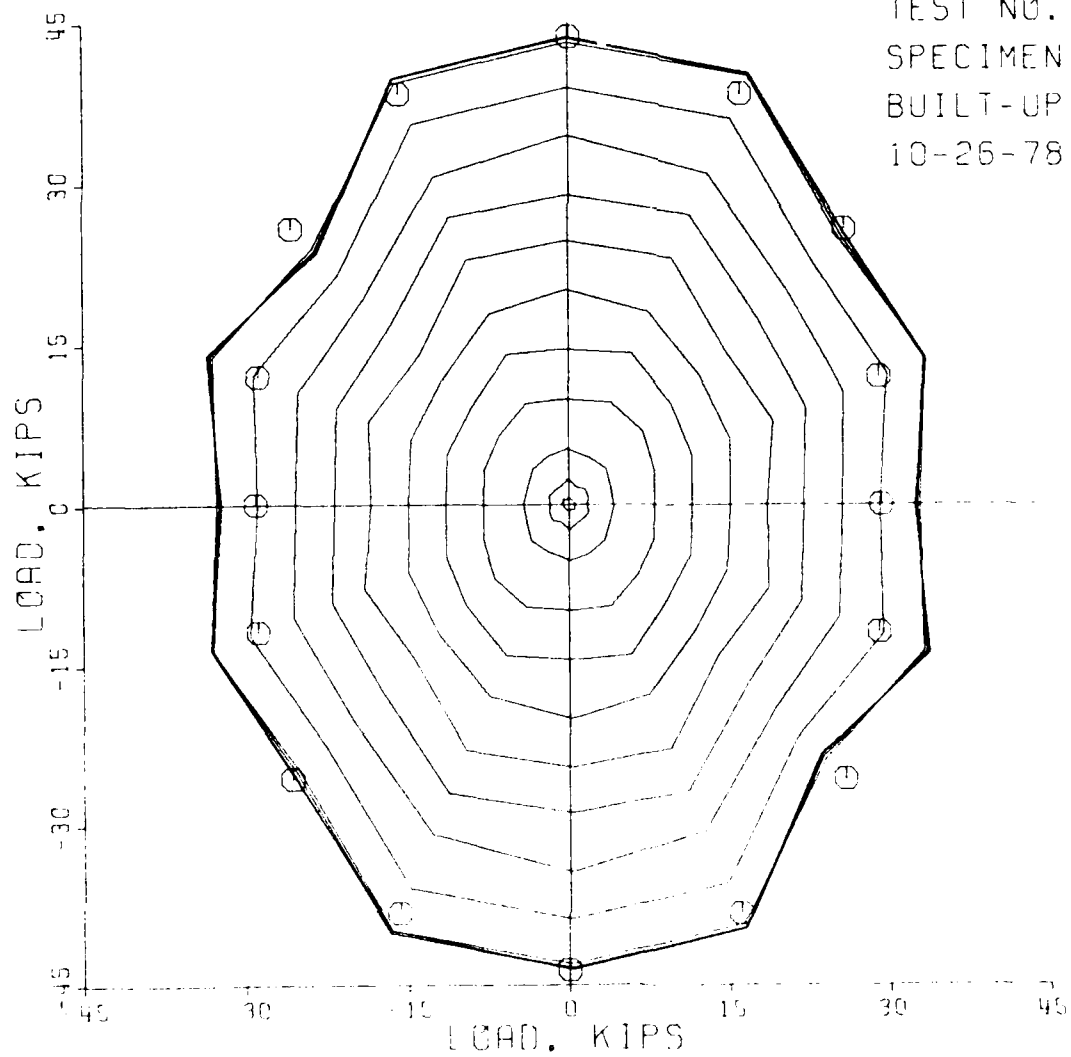
Specimen #26

Built-up Lining (SRI)

Test #60
1:1.5 Load
26 Oct. 1978

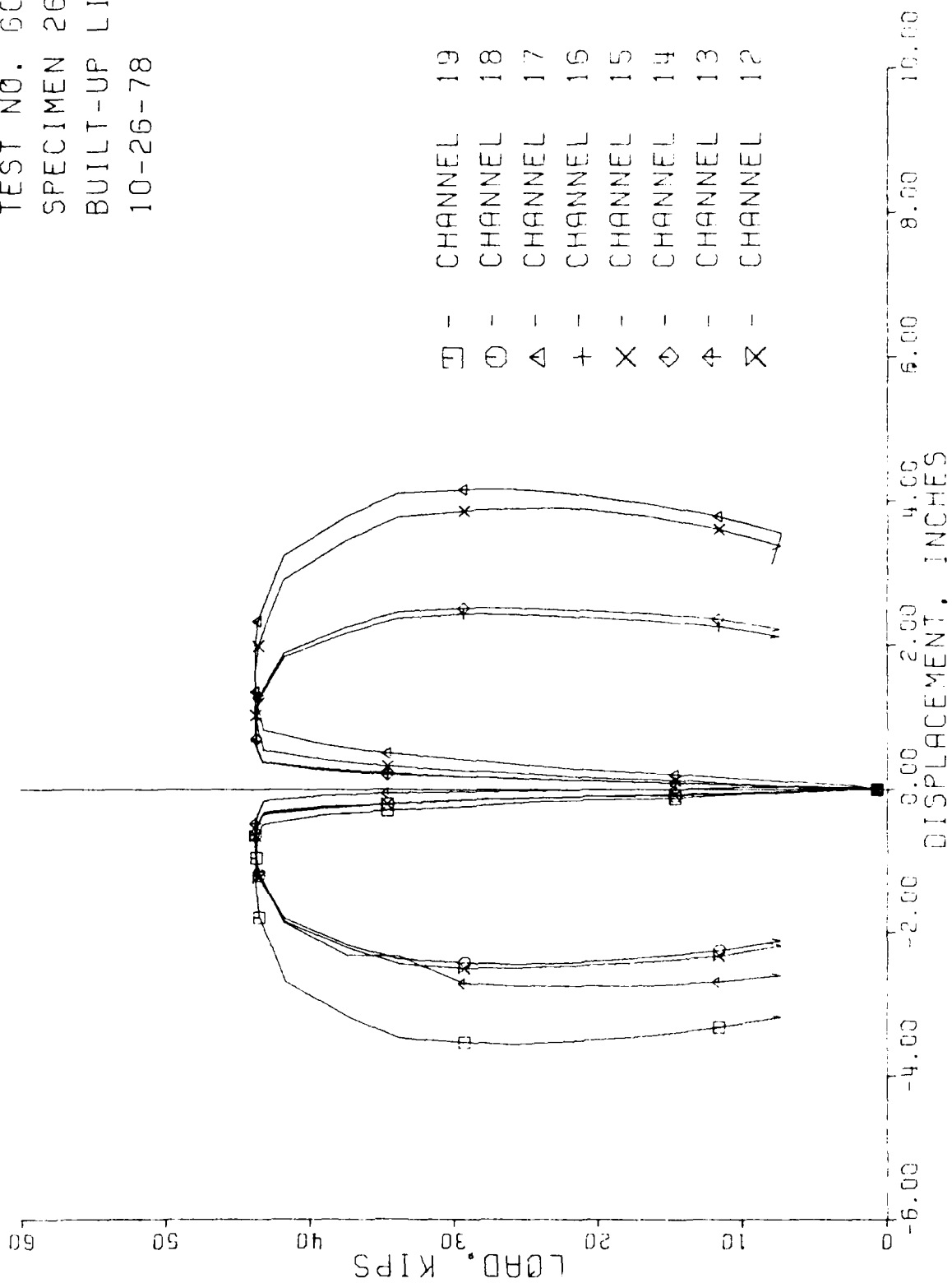


CH 12, 14-16, 18 and 19 Load axis I.D., CH 13, 17 Load axis O.D. (Research, Inc. 4040).
 CH 20-22, 25-29 Axial load (Transducers, Inc. Model 693-300K).
 CH 30-35 (Ailtech SG 129-6S) Inside on load axis at center.
 CH 36-39 (Ailtech SG 129-6S) Top surface on load axis - .33" spacing. Even gages inside.
 CH 40-43, 46 and 47 (BLH PA-7) Top surface on load axis - 1.0" spacing.
 CH 50-57 (Ailtech SG 129-6S) Polarity indicates rod under tension.
 Lower rod shown (XX).

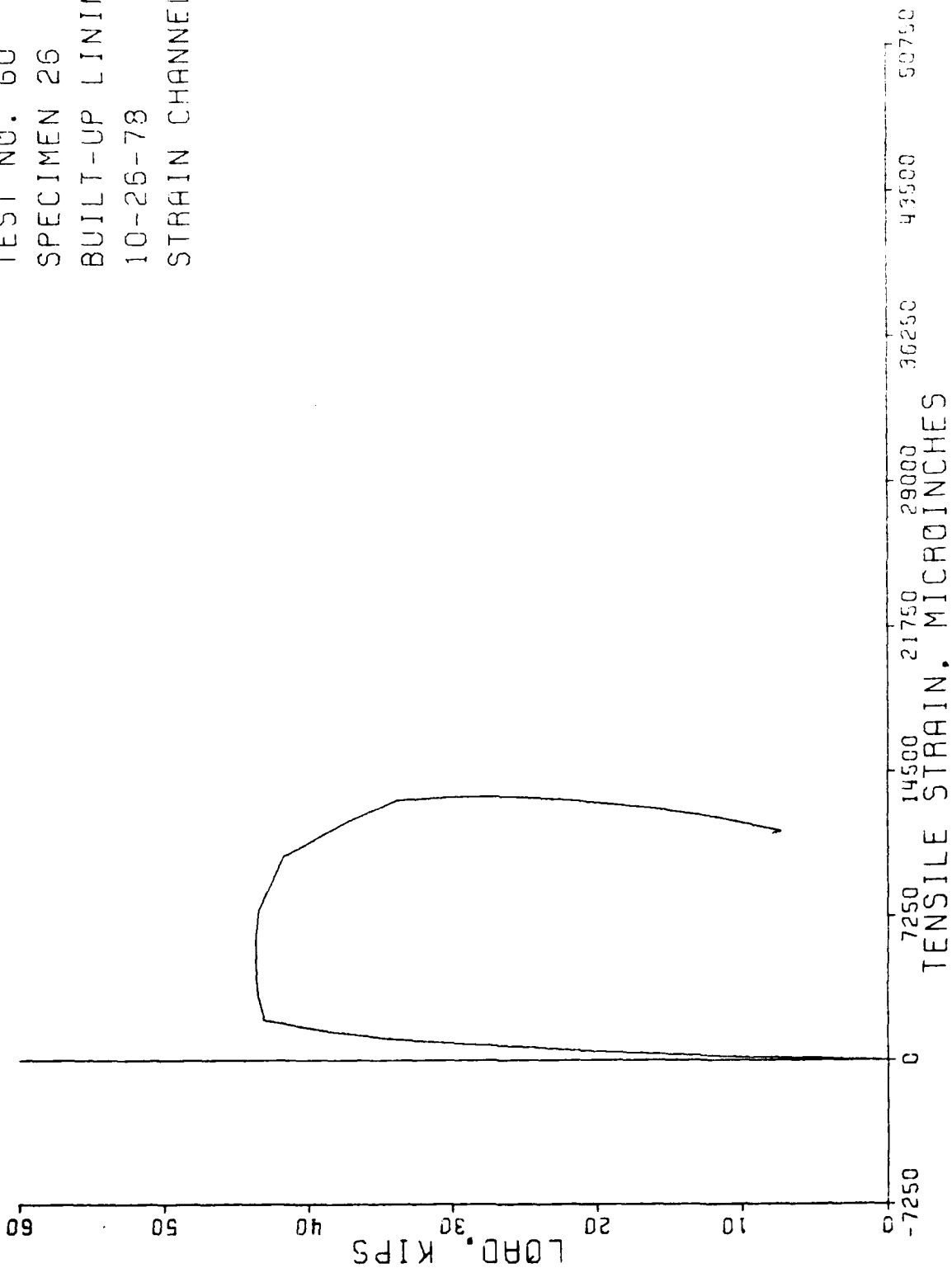


TEST NO. 60
SPECIMEN 26
BUILT-UP LINING
10-26-78

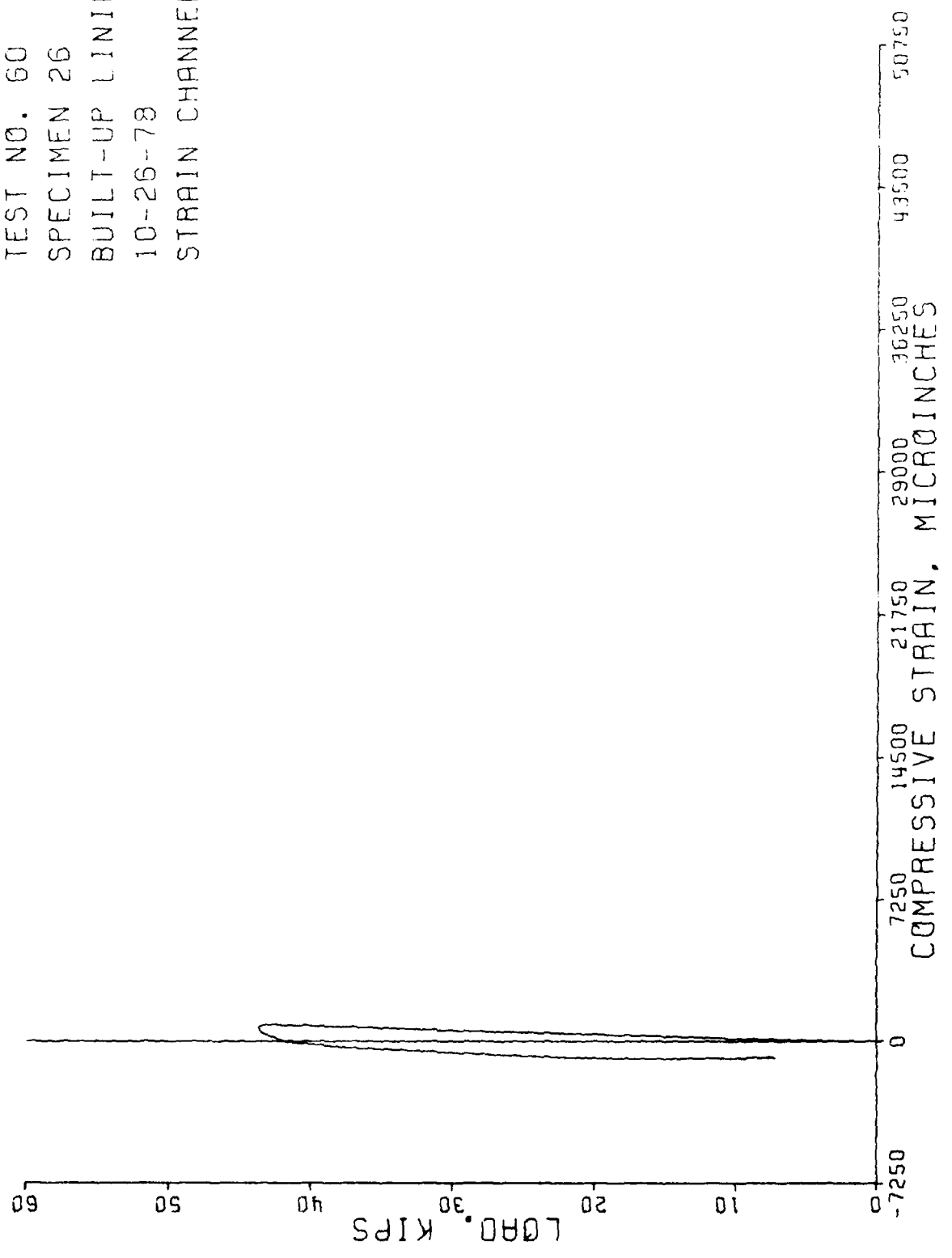
TEST NO. 60
 SPECIMEN 26
 BUILT-UP LINING
 10-26-78



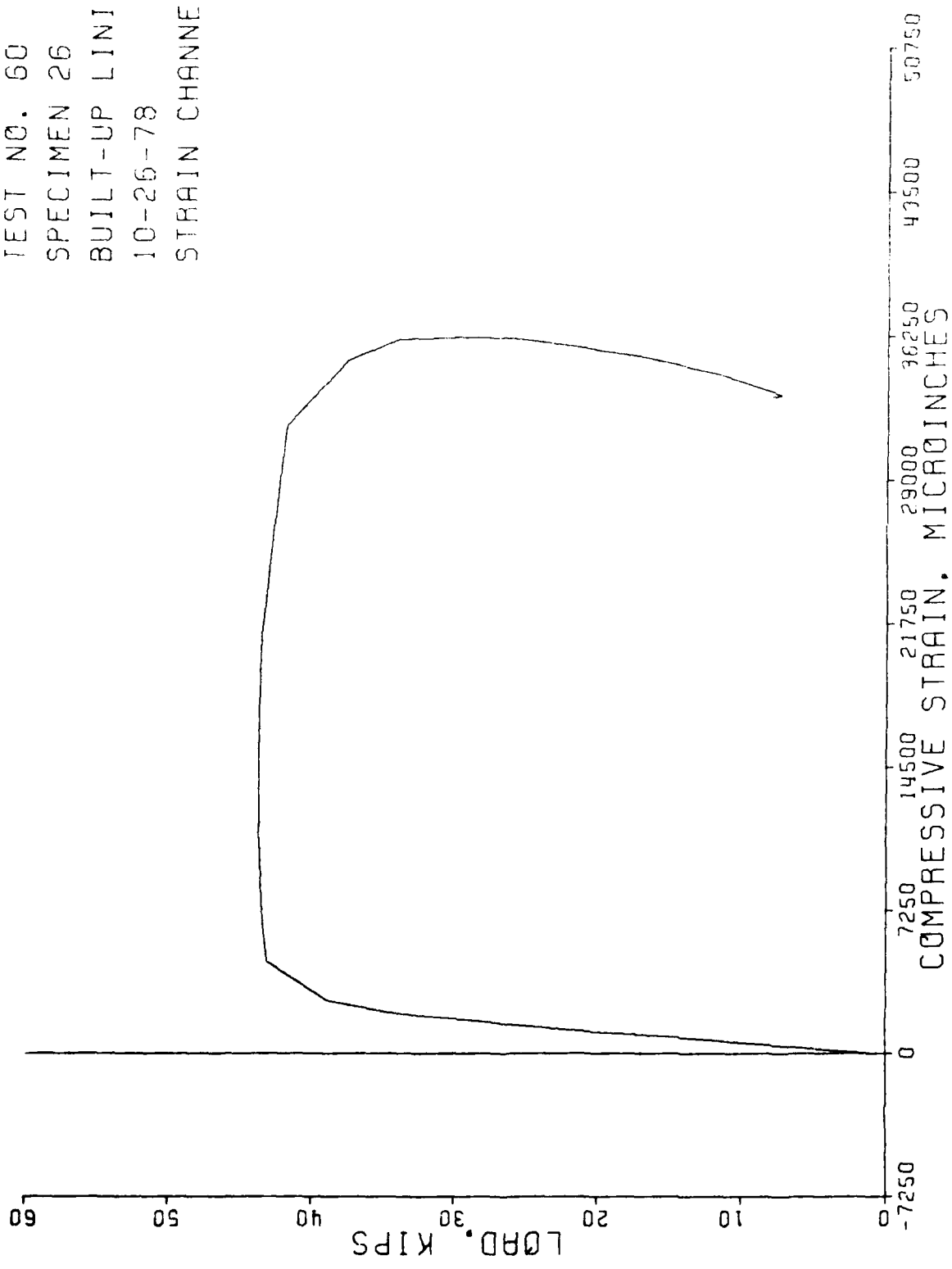
TEST NO. 60
 SPECIMEN 26
 BUILT-UP LINING
 10-26-78
 STRAIN CHANNEL 30



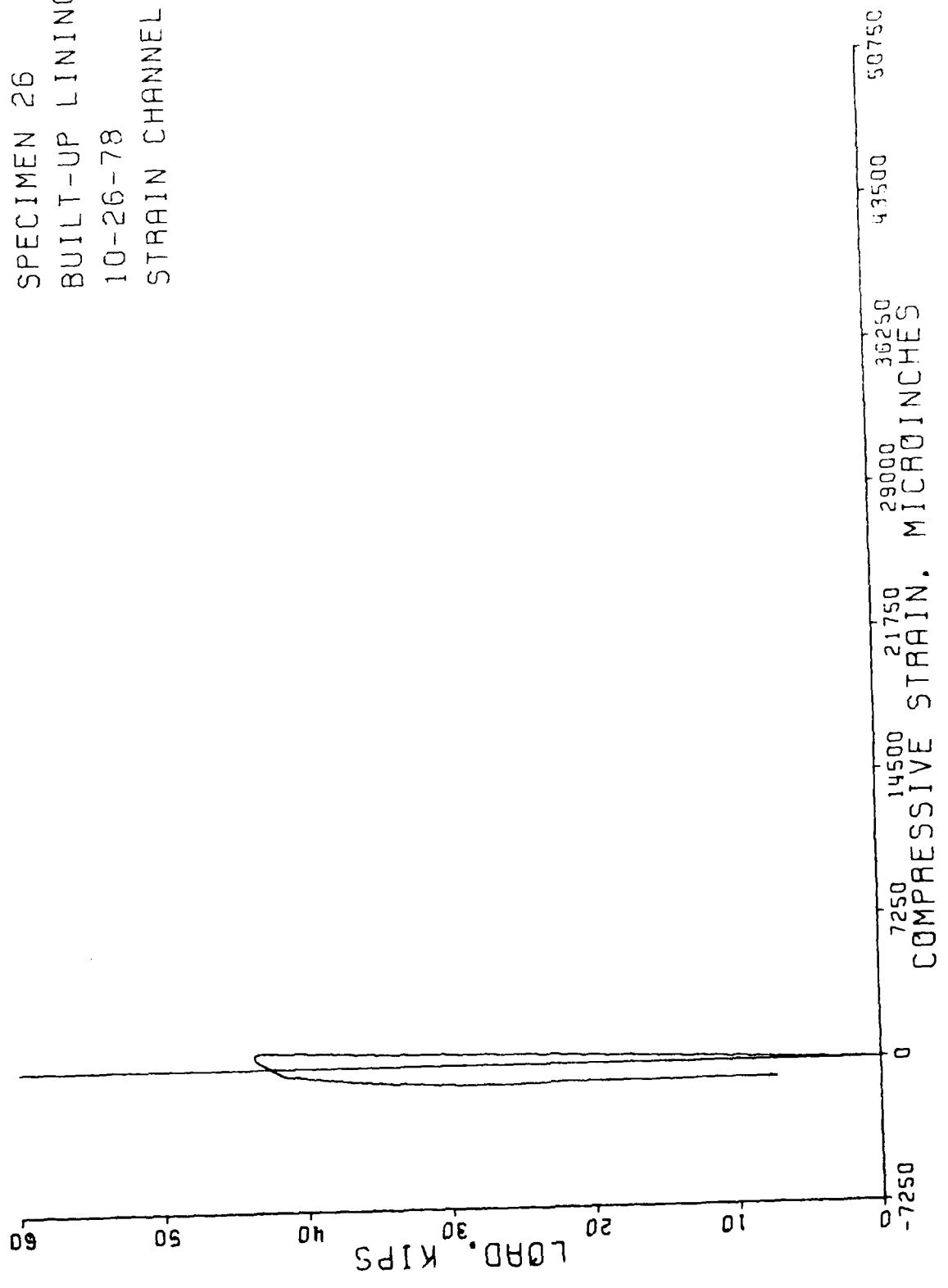
TEST NO. 60
 SPECIMEN 26
 BUILT-UP LINING
 10-26-78
 STRAIN CHANNEL 31



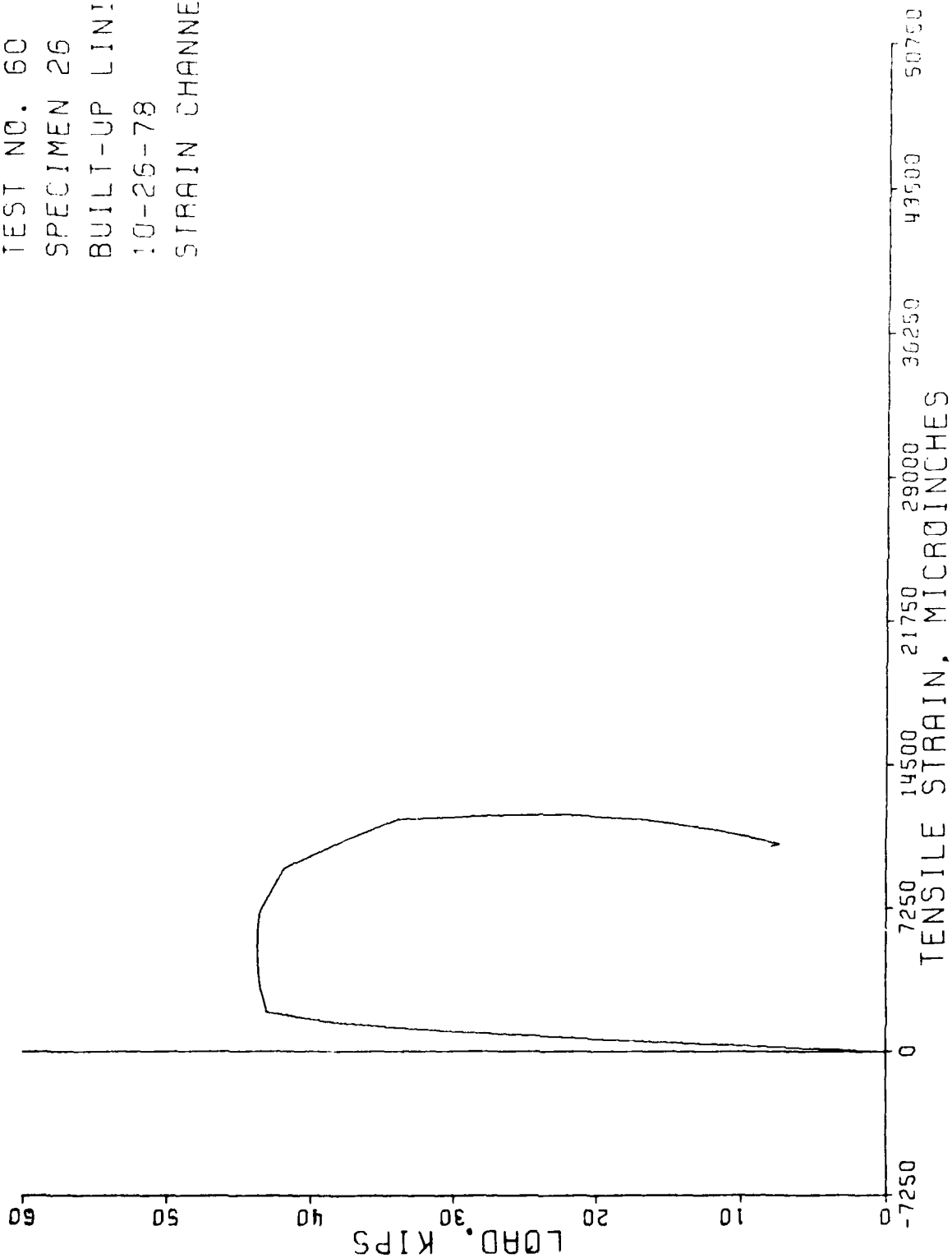
TEST NO. 60
SPECIMEN 26
BUILT-UP LINING
10-26-78
STRAIN CHANNEL 32



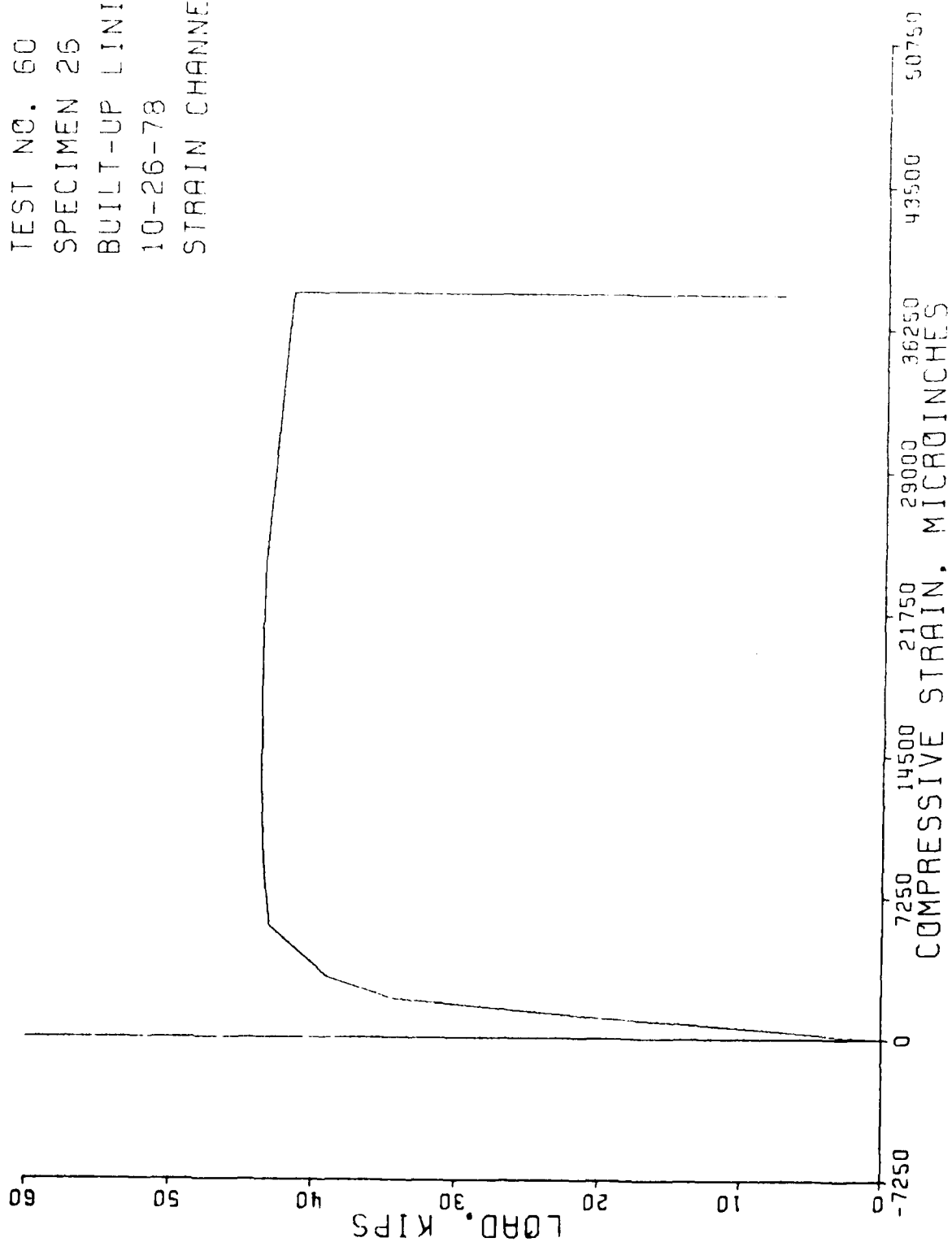
TEST NO. 60
SPECIMEN 26
BUILT-UP LINING
10-26-78
STRAIN CHANNEL 33



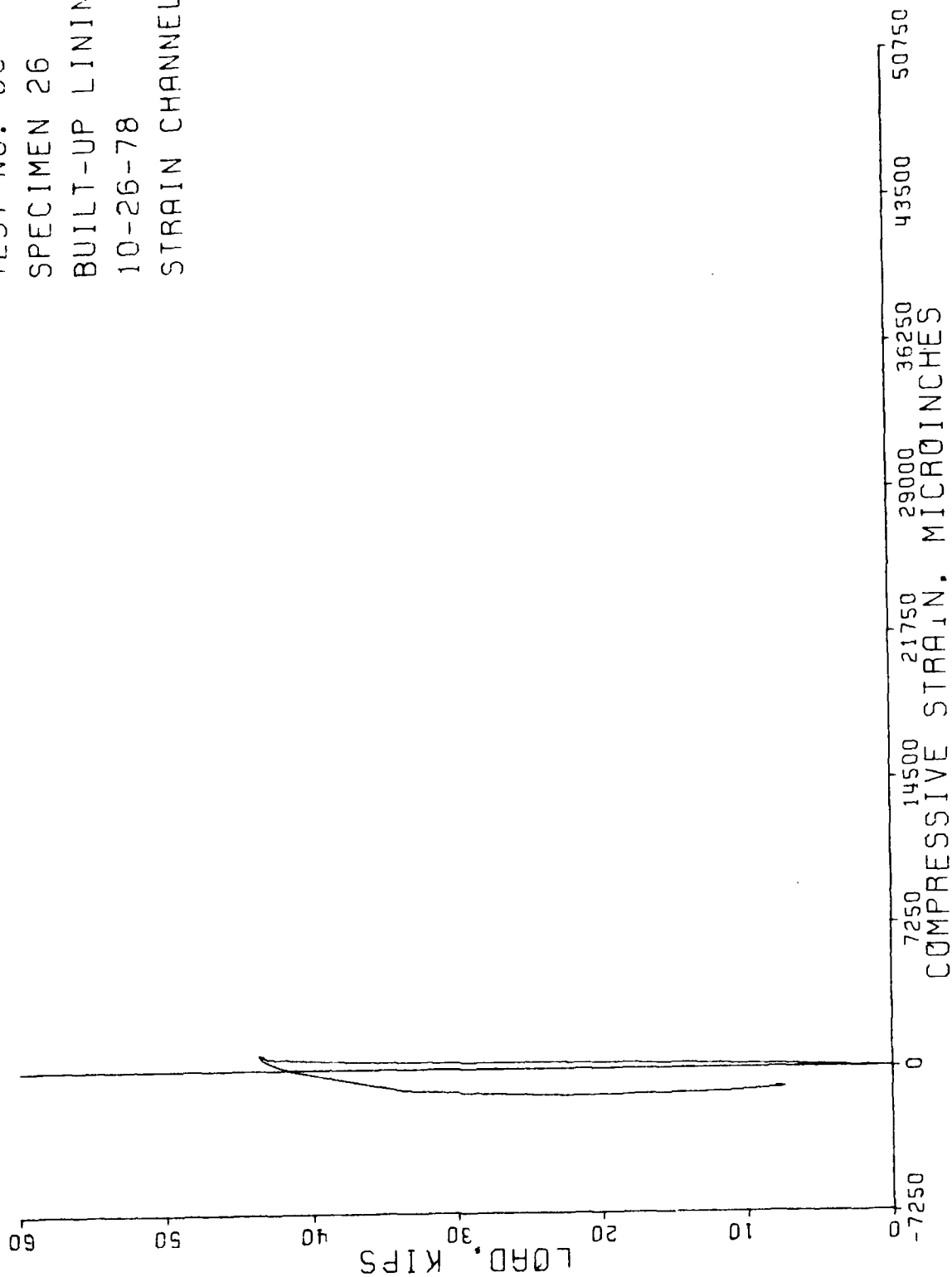
TEST NO. 60
SPECIMEN 26
BUILT-UP LINING
10-26-78
STRAIN CHANNEL 34



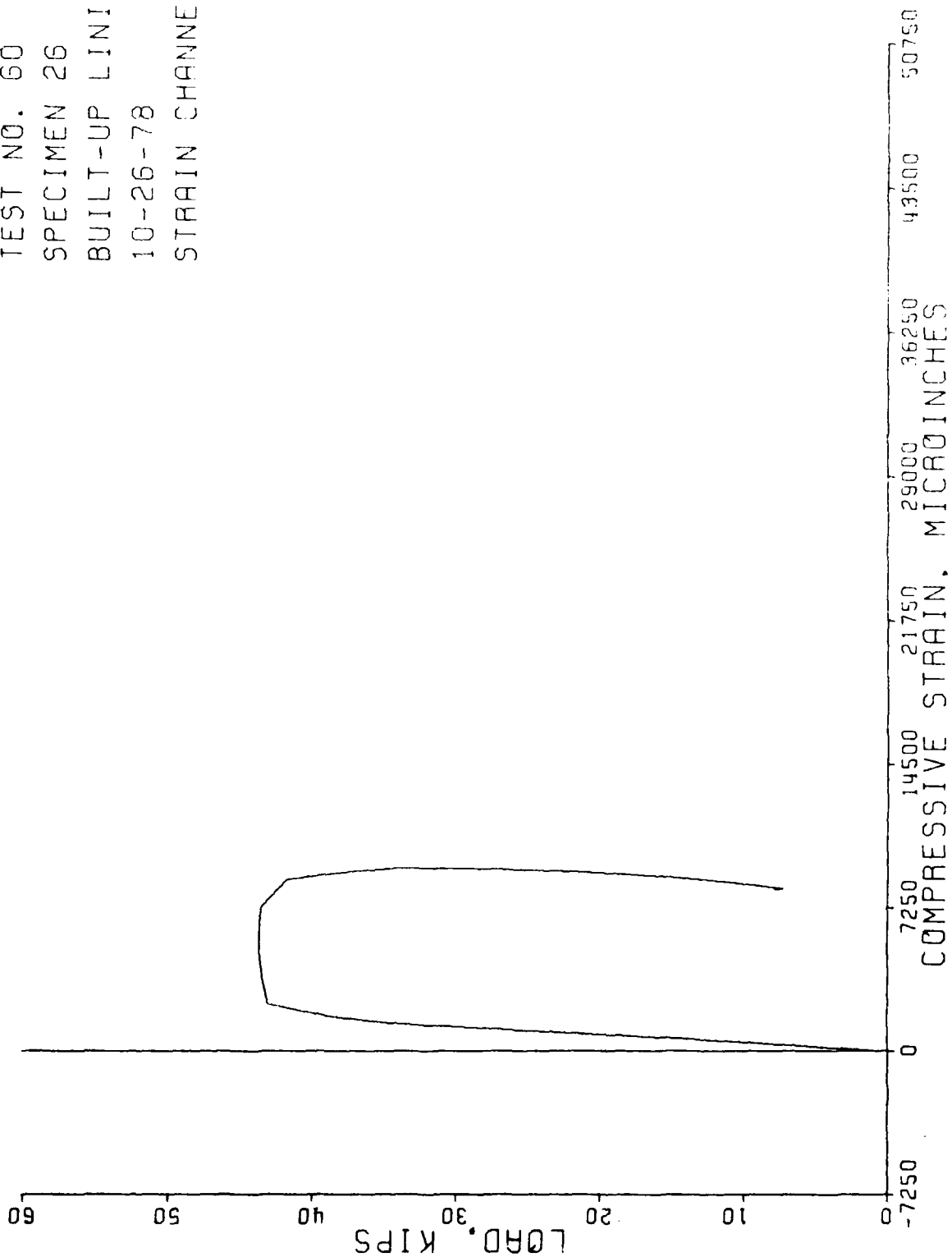
TEST NO. 60
SPECIMEN 25
BUILT-UP LINING
10-26-78
STRAIN CHANNEL 35



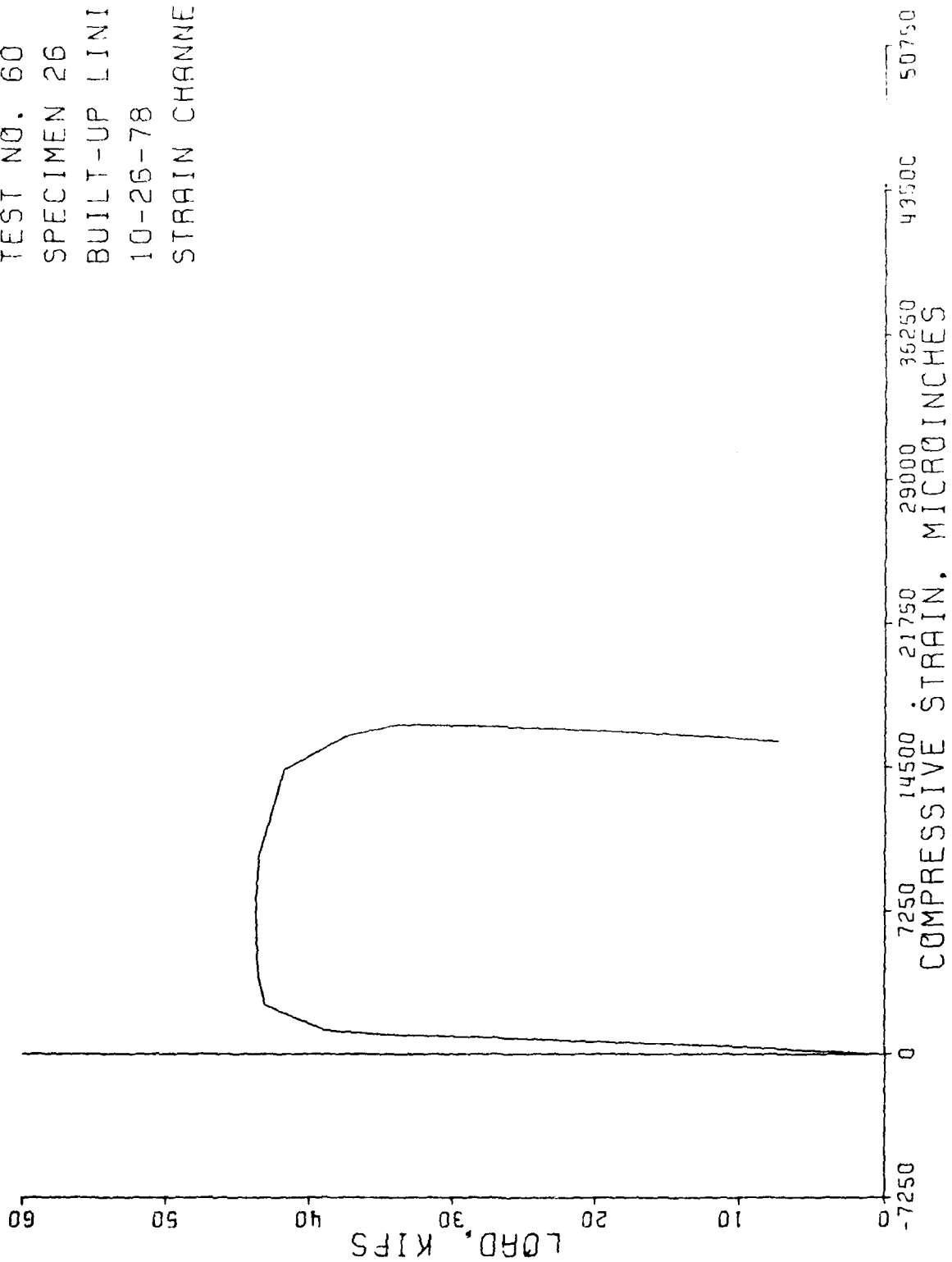
TEST NO. 60
SPECIMEN 26
BUILT-UP LINING
10-26-78
STRAIN CHANNEL 36



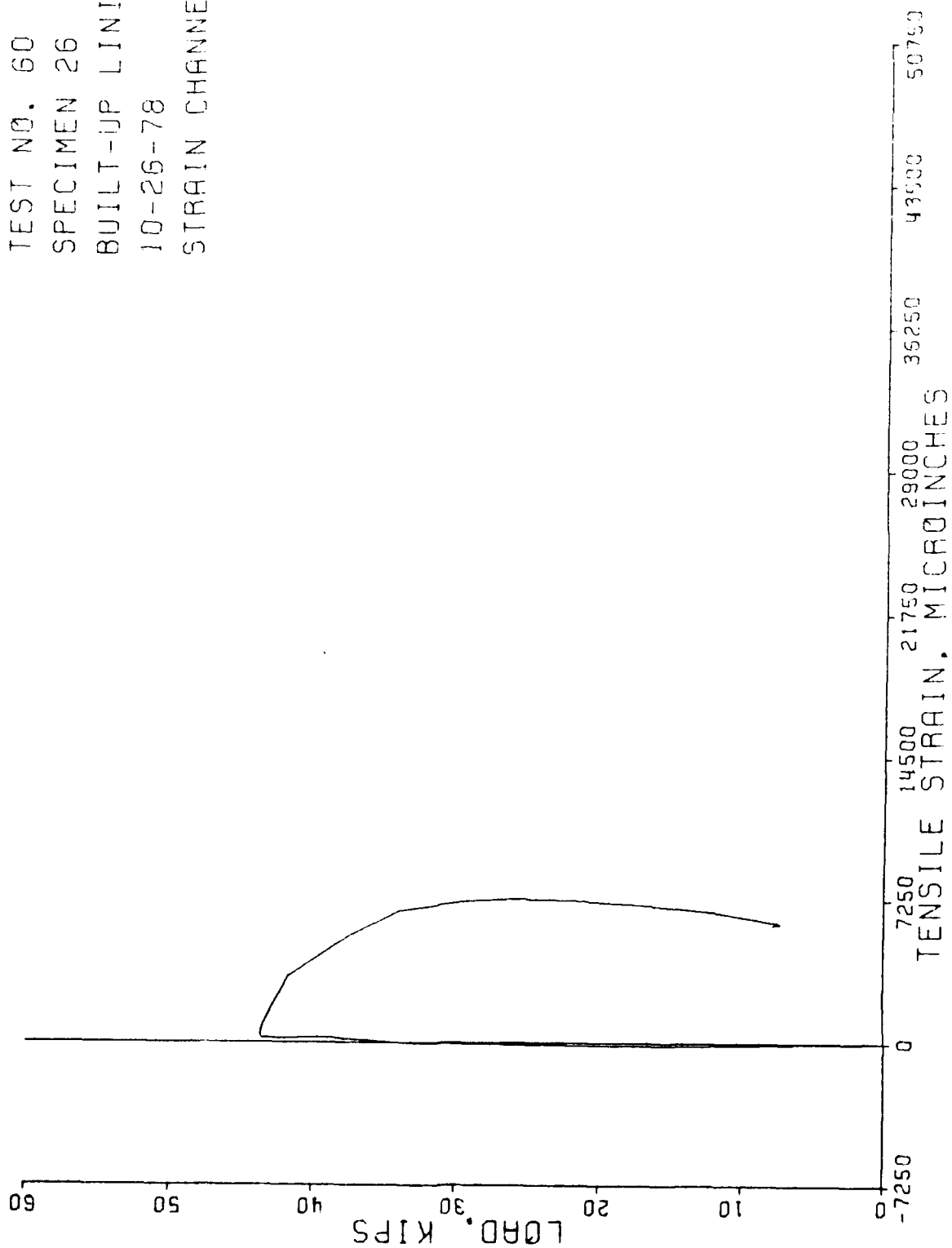
TEST NO. 60
SPECIMEN 26
BUILT-UP LINING
10-26-78
STRAIN CHANNEL 37



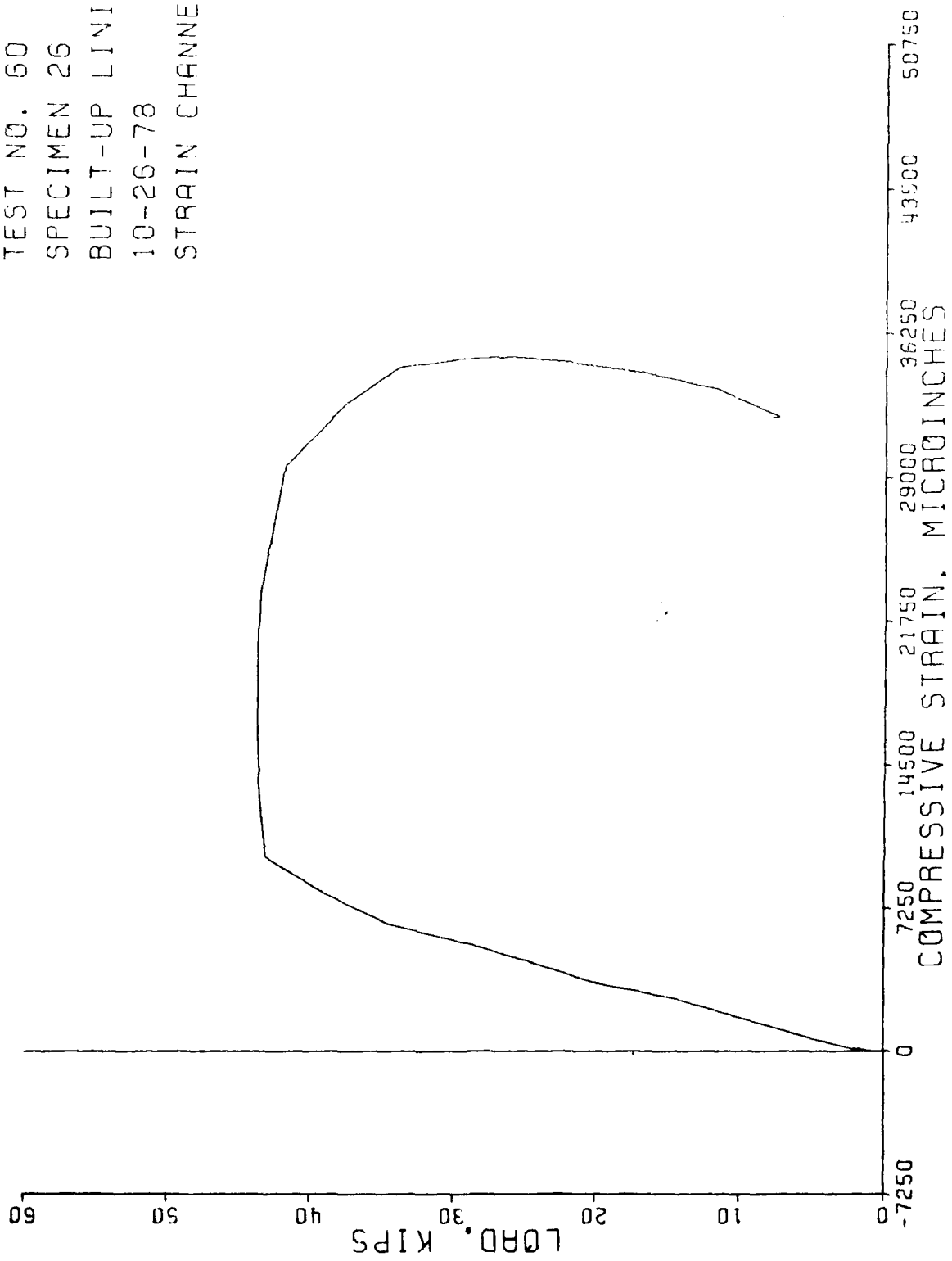
TEST NO. 60
SPECIMEN 26
BUILT-UP LINING
10-26-78
STRAIN CHANNEL 38



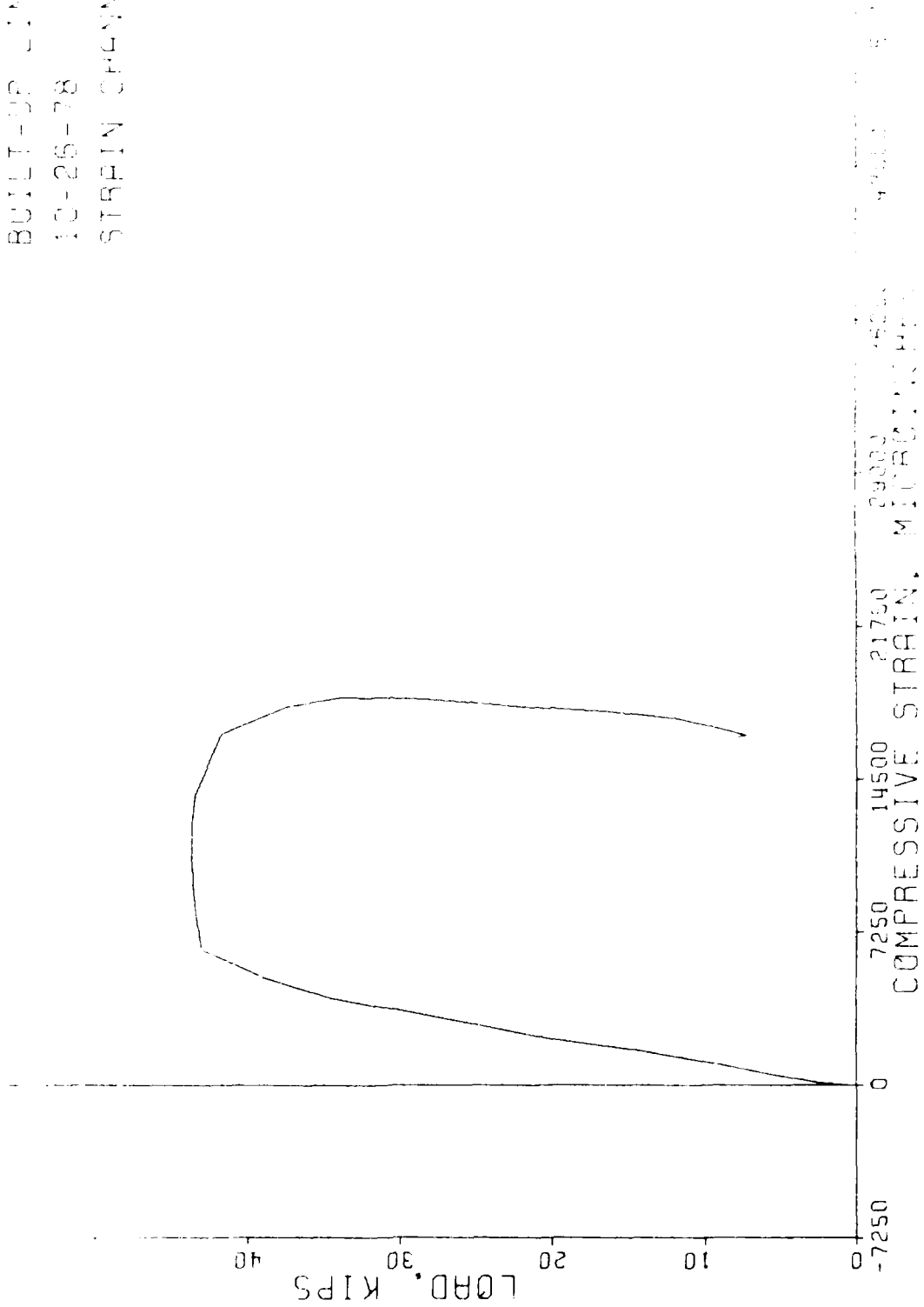
TEST NO. 60
SPECIMEN 26
BUILT-UP LINING
10-26-78
STRAIN CHANNEL 39



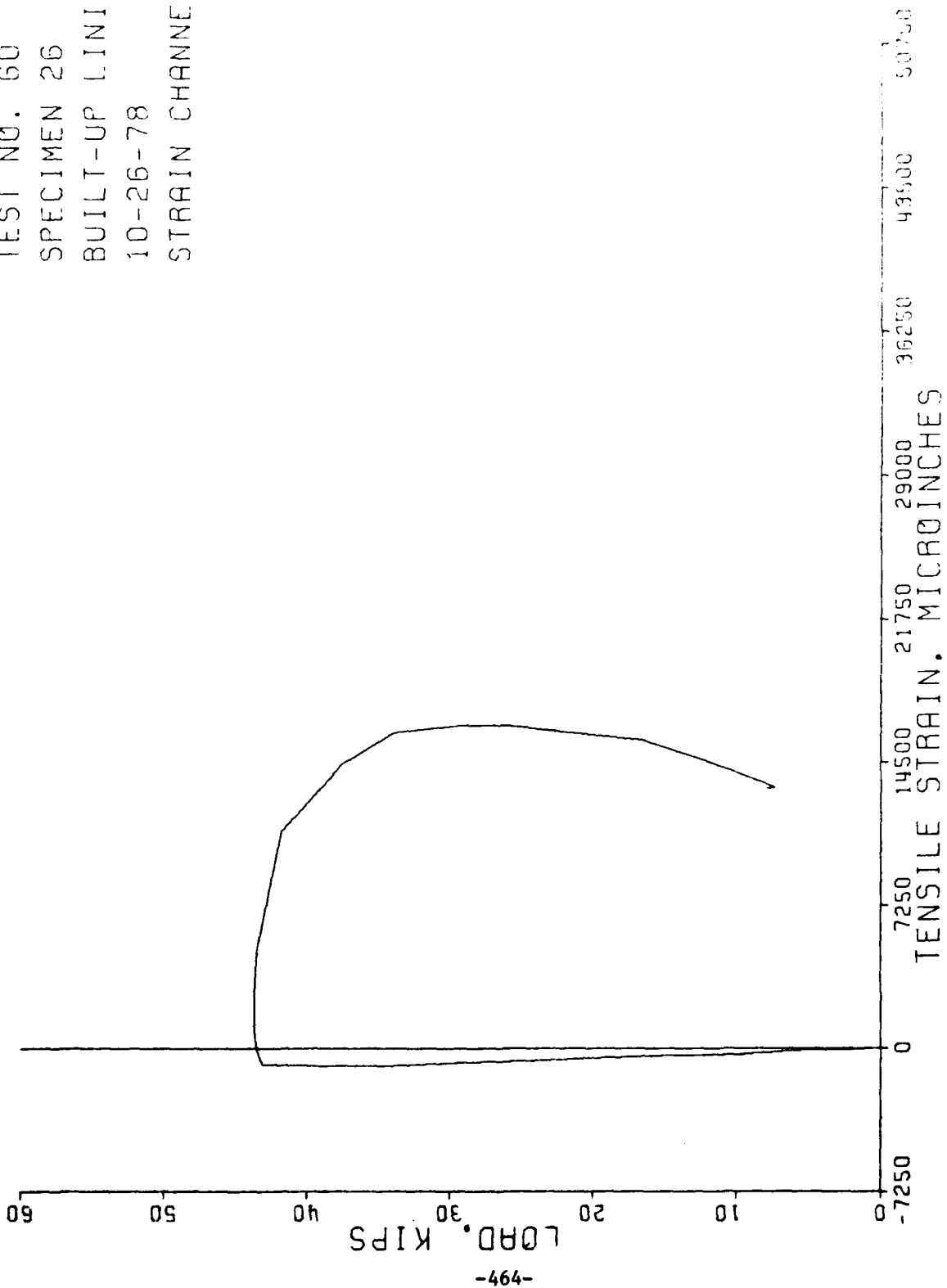
TEST NO. 60
SPECIMEN 26
BUILT-UP LINING
10-26-78
STRAIN CHANNEL 40



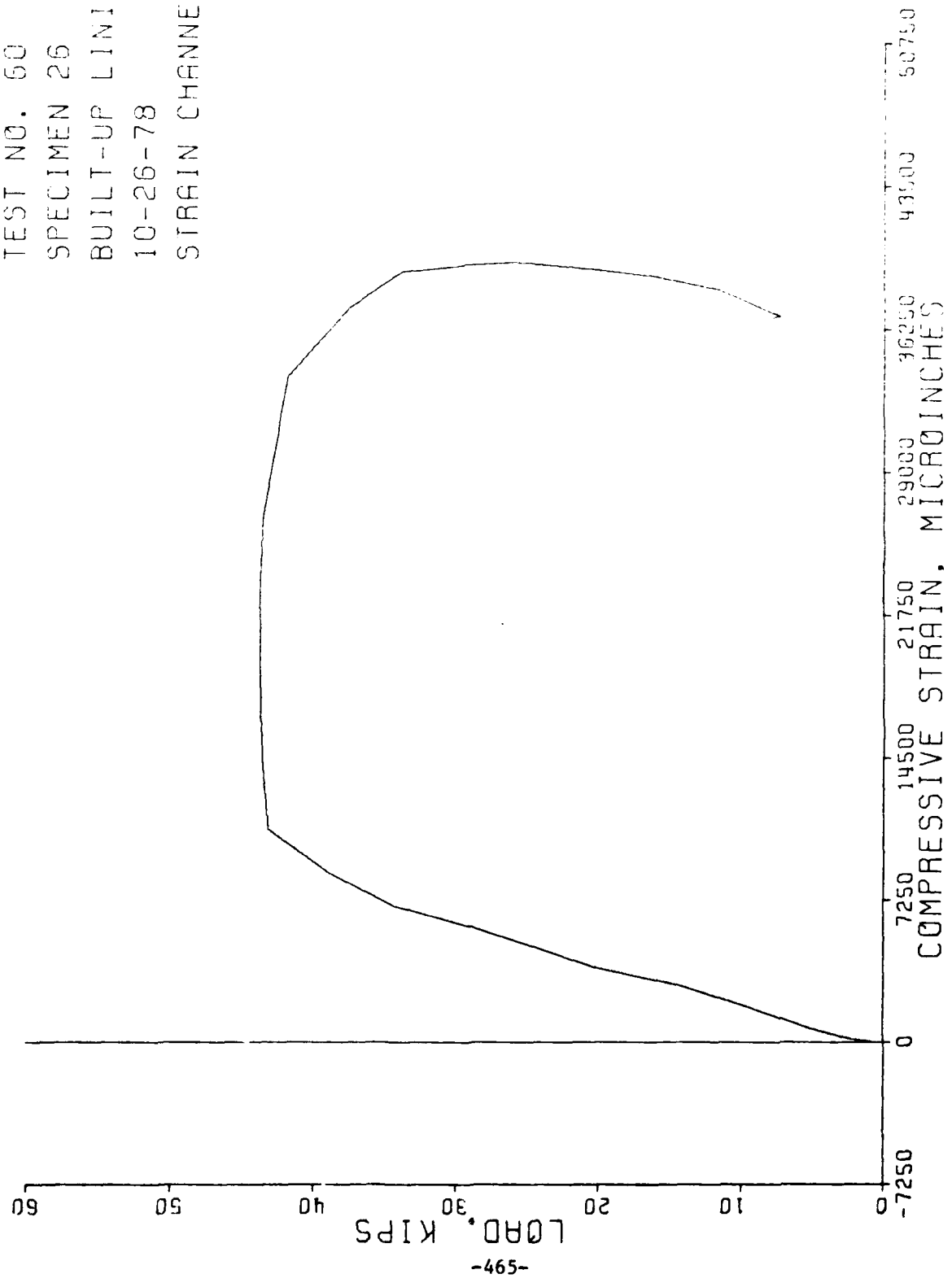
TEST NO. 60
 SPECIMEN 26
 BUILT-UP CHANNEL
 10-26-78
 STRAIN CHANNEL 41



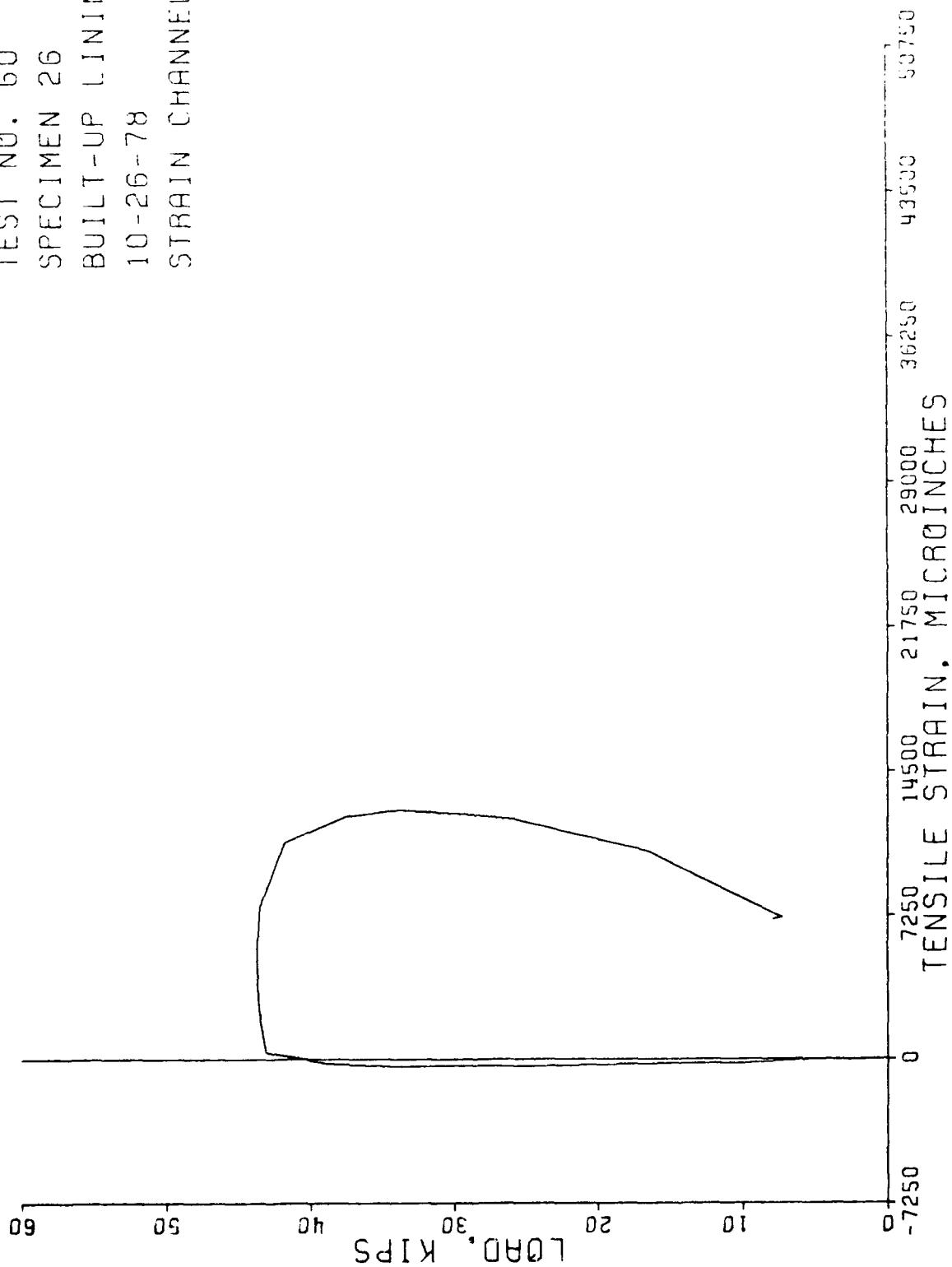
TEST NO. 60
SPECIMEN 26
BUILT-UP LINING
10-26-78
STRAIN CHANNEL 42



TEST NO. 60
SPECIMEN 26
BUILT-UP LINING
10-26-78
STRAIN CHANNEL 46



TEST NO. 60
SPECIMEN 26
BUILT-UP LINING
10-26-78
STRAIN CHANNEL 47



TEST NO. 60 SPECIMEN 26 BUILT-UP LINING 10-26-78

NUMBER OF INCREMENTS= 27
 NUMBER OF CHANNELS= 40
 NUMBER OF STRAIN CHANNELS= 16
 NUMBER OF DISPLACEMENT CHANNELS= 8
 NUMBER OF LOAD CHANNELS= 8
 NUMBER OF PRESSURE CHANNELS= 0
 NUMBER OF RODS= 3

CHANNEL ZEROSHIFT

57	0.0
56	0.0
55	0.0
54	0.0
53	0.0
52	0.0
51	0.0
50	0.0
49	0.0
47	0.0
46	0.0
42	0.0
41	0.0
40	0.0
39	0.0
38	0.0
37	0.0
36	0.0
35	0.0
34	0.0
33	0.0
32	0.0
31	0.0
30	0.0
29	0.0
28	0.0
27	0.0
26	0.0
25	0.0
22	0.0
21	0.0
20	0.0
19	0.0
18	0.0
17	0.0
16	0.0
15	0.0
14	0.0
13	0.0
12	0.0

STRAIN CHANNEL

49
47

CALIBRATION

1.000
1.000

DISPLACEMENT CHANNEL	CALIBRATION
46	1.000
42	1.000
41	1.000
40	1.000
39	1.000
38	1.000
37	1.000
36	1.000
35	1.000
34	1.000
33	1.000
32	1.000
31	1.000
30	1.000

LOAD CHANNEL	CALIBRATION
19	0.001
18	0.001
17	0.001
16	0.002
15	0.002
14	0.002
13	0.002
12	0.002

ROD CHANNEL	CALIBRATION
29	10.000
28	10.000
27	10.000
26	10.000
25	10.000
22	10.000
21	10.000
20	10.000

ROD CHANNEL	CALIBRATION
57	1.000
56	1.000
55	1.000
54	1.000
53	1.000
52	1.000
51	1.000
50	1.000

STRAIN CHANNELS

TIME	CH. 49	CH. 47	CH. 46	CH. 42	CH. 41	CH. 40	CH. 39	CH. 38
1. 26:10:29:12	3.000	12.000	3.000	2.000	6.000	7.000	-3.000	-1.000
2. 26:10:30:24	-27.000	-48.000	-168.000	-68.000	-97.000	-171.000	-25.000	-60.000
3. 26:10:31:24	56.000	-4.000	-723.000	-75.000	-436.000	-686.000	-47.000	-164.000
4. 26:10:32:23	-69.000	-231.000	-1882.000	-331.000	-1038.000	-1716.000	-119.000	-365.000
5. 26:10:40:23	573.000	-226.000	-2928.000	-372.000	-1673.000	-2671.000	-129.000	-504.000
6. 26:10:41:23	2969.000	-291.000	-3775.000	-502.000	-2169.000	-3470.000	-140.000	-625.000
7. 26:10:42:23	6065.000	-364.000	-4909.000	-662.000	-2825.000	-4526.000	-124.000	-753.000
8. 26:10:43:23	9865.000	-339.000	-5891.000	-730.000	-3402.000	-5470.000	-74.000	-866.000
9. 26:10:44:23	0.0	-368.000	-6981.000	-889.000	-4110.000	-6407.000	3.000	-978.000
10. 26:10:45:23	0.0	-222.000	-8664.000	-922.000	-5125.000	-7939.000	265.000	-1189.000
11. 26:10:46:23	0.0	365.930	-10884.000	-835.000	-6502.000	-9840.000	206.000	-2493.000
12. 26:10:49:23	0.0	2062.000	-14458.000	-144.000	-8473.000	-12716.000	219.000	-3870.000
13. 26:10:52:23	0.0	3013.000	-16944.000	422.000	-9649.000	-14755.000	239.000	-4838.000
14. 26:10:55:23	36125.000	3789.000	-19088.000	964.000	-10586.000	-16537.000	292.000	-5818.000
15. 26:10:58:23	0.0	4663.000	-21148.000	1663.000	-11464.000	-18281.000	375.000	-6827.000
16. 26:11: 1:23	0.0	5746.000	-23477.000	2705.000	-12430.000	-20266.000	538.000	-2050.000
17. 26:11: 4:23	35319.000	7704.000	-26702.000	4889.000	-13765.000	-23048.000	970.000	-6318.000
18. 26:11: 7:23	29012.000	10966.000	-33897.000	10978.000	-16702.000	-29526.000	3366.000	-14343.000
19. 26:11: 8:23	28922.000	12272.000	-37392.000	14427.000	-18010.000	-32728.000	5466.000	-16060.000
20. 26:11: 9:23	32623.000	12557.000	-39182.000	16012.000	-15457.000	-34528.000	6756.000	-16536.000
21. 26:11:10:23	37220.000	12400.000	-39601.000	16395.000	-18388.000	-34927.000	7220.000	-16520.000
22. 26:11:11:23	0.0	12147.000	-39721.000	16380.000	-18234.000	-35049.000	7325.000	-16536.000
23. 26:11:12:23	0.0	11453.000	-39471.000	16053.000	-17997.000	-34785.000	7441.000	-16407.000
24. 26:11:13:23	0.0	10501.000	-39047.000	15655.000	-17746.000	-34261.000	7013.000	-15740.000
25. 26:11:14:23	23864.000	8692.000	-38326.000	14506.000	-17401.000	-33452.000	6637.000	-16044.000
26. 26:11:15:23	16051.000	7127.000	-36953.000	13274.000	-16596.000	-32094.000	6073.000	-15790.000
27. 26:11:16:23	15729.000	7084.000	-36879.000	13215.000	-16531.000	-32003.000	6002.000	-15789.000

STRAIN CHANNELS

LINE	CH.37	CH.36	CH.35	CH.34	CH.33	CH.32	CH.31	CH.30
1. 26:10:29:12	-3.000	-1.000	-1.000	0.0	1.000	-2.000	-1.000	-1.000
2. 26:10:30:26	-90.000	-38.000	-83.000	57.000	-22.000	-82.000	-45.000	28.000
3. 26:10:31:24	-229.000	-93.000	-254.000	151.000	-90.000	-261.000	-157.000	91.000
4. 26:10:39:23	-439.000	-188.000	-531.000	274.000	-167.000	-552.000	-177.000	160.000
5. 26:10:40:23	-636.000	-245.000	-799.000	437.000	-282.000	-817.000	-253.000	299.000
6. 26:10:41:23	-822.000	-283.000	-1037.000	605.000	-385.000	-1075.000	-351.000	450.000
7. 26:10:42:23	-1019.000	-319.000	-1324.000	792.000	-492.000	-1386.000	-466.000	635.000
8. 26:10:43:23	-1187.000	-342.000	-1632.000	947.000	-544.000	-1706.000	-546.000	803.000
9. 26:10:44:23	-1431.000	-378.000	-1980.000	1179.000	-631.000	-2059.000	-672.000	1078.000
10. 26:10:45:23	-1784.000	-447.000	-3042.000	1478.000	-725.000	-2675.000	-810.000	1485.000
11. 26:10:46:23	-2397.000	-576.000	-5702.000	1955.000	-788.000	-4657.000	-863.000	2022.000
12. 26:10:49:23	-3664.000	-725.000	-8946.000	3108.000	-768.000	-7593.000	-792.000	3220.000
13. 26:10:52:23	-4515.000	-762.000	-11389.000	3907.000	-701.000	-9775.000	-758.000	4125.000
14. 26:10:55:23	-5211.000	-753.000	-13466.000	4597.000	-627.000	-11904.000	-707.000	4875.000
15. 26:10:58:23	-5864.000	-731.000	-16154.000	5277.000	-564.000	-14177.000	-646.000	5583.000
16. 26:11:1:23	-6530.000	-674.000	-19265.000	6021.000	-468.000	-16987.000	-555.000	6372.000
17. 26:11:4:23	-7324.000	-523.000	-24341.000	7039.000	-313.000	-21143.000	-414.000	7526.000
18. 26:11:7:23	-8698.000	-4.000	-37941.000	9216.000	364.000	-31680.000	36.000	10245.000
19. 26:11:8:23	-9107.000	589.000	0.0	10658.000	679.000	-34973.000	318.000	11550.000
20. 26:11:9:23	-9288.000	1059.000	0.0	11668.000	856.000	-36028.000	453.000	13074.000
21. 26:11:10:23	-9228.000	1179.000	0.0	11829.000	1002.000	-36149.000	633.000	13254.000
22. 26:11:11:23	-9170.000	1266.000	0.0	11932.000	1014.000	-36106.000	722.000	13278.000
23. 26:11:12:23	-9070.000	1325.000	0.0	11952.000	924.000	-35734.000	819.000	13080.000
24. 26:11:13:23	-8856.000	1283.000	0.0	11658.000	921.000	-35132.000	891.000	12685.000
25. 26:11:14:23	-8569.000	1183.000	0.0	11172.000	882.000	-34327.000	879.000	12185.000
26. 26:11:15:23	-8184.000	1025.000	0.0	10468.000	852.000	-33261.000	831.000	11475.000
27. 26:11:16:23	-6158.000	992.000	0.0	10374.000	832.000	-33158.000	790.000	11385.000

DISPLACEMENT CHANNELS

	TIME	CH.19	CH.18	CH.17	CH.16	CH.15	CH.14	CH.13	CH.12
1.	26:10:29:12	0.001	-0.001	0.004	-0.002	0.002	0.0	0.004	0.002
2.	26:10:30:26	0.001	-0.001	0.063	0.028	0.004	0.0	0.014	0.002
3.	26:10:31:24	-0.028	-0.030	0.093	0.028	0.034	0.030	0.036	-0.022
4.	26:10:32:23	-0.057	-0.058	0.153	0.058	0.066	0.060	0.034	-0.048
5.	26:10:33:23	-0.115	-0.075	0.211	0.088	0.126	0.088	0.004	-0.068
6.	26:10:34:23	-0.164	-0.087	0.272	0.118	0.156	0.118	0.004	-0.086
7.	26:10:35:23	-0.173	-0.115	0.341	0.148	0.216	0.148	-0.024	-0.116
8.	26:10:36:23	-0.231	-0.144	0.420	0.184	0.260	0.178	-0.026	-0.144
9.	26:10:37:23	-0.289	-0.201	0.509	0.234	0.334	0.212	-0.054	-0.202
10.	26:10:38:23	-0.350	-0.231	0.628	0.294	0.424	0.272	-0.084	-0.255
11.	26:10:39:23	-0.494	-0.317	0.834	0.390	0.554	0.382	-0.164	-0.308
12.	26:10:40:23	-0.754	-0.495	1.161	0.558	0.836	0.560	-0.350	-0.524
13.	26:10:41:23	-0.956	-0.628	1.373	0.684	1.042	0.708	-0.470	-0.646
14.	26:10:42:23	-1.101	-0.742	1.576	1.172	1.224	0.826	-0.616	-0.766
15.	26:10:43:23	-1.273	-0.856	1.760	1.572	1.420	0.942	-0.726	-0.832
16.	26:10:44:23	-1.474	-0.998	2.020	1.958	1.640	1.088	-0.888	-1.030
17.	26:10:45:23	-1.792	-1.198	2.364	2.364	1.998	1.294	-1.154	-1.236
18.	26:10:46:23	-2.685	-1.796	3.264	3.264	2.918	1.898	-1.864	-1.854
19.	26:10:47:23	-3.175	-2.166	3.796	3.796	3.472	2.262	-2.316	-2.444
20.	26:10:48:23	-3.467	-2.366	4.121	4.121	3.788	2.466	-2.366	-2.444
21.	26:10:49:23	-3.526	-2.423	4.180	4.180	3.878	2.526	-2.714	-2.504
22.	26:10:50:23	-3.556	-2.440	4.181	4.181	3.908	2.526	-2.746	-2.474
23.	26:10:51:23	-3.517	-2.422	4.122	4.122	3.918	2.504	-2.748	-2.414
24.	26:10:52:23	-3.439	-2.352	3.974	3.974	3.800	2.448	-2.746	-2.326
25.	26:10:53:23	-3.320	-2.252	3.797	3.797	3.618	2.370	-2.688	-2.180
26.	26:10:54:23	-3.175	-2.109	3.568	3.568	3.390	2.234	-2.602	-2.030
27.	26:10:55:23	-3.146	-2.080	3.135	3.135	3.336	2.214	-2.572	-2.150

LOAD CHANNELS

	TIME	CH.29	CH.28	CH.27	CH.26	CH.25	CH.22	CH.21	CH.20
1.	26:10:29:12	570.000	510.000	550.000	590.000	650.000	470.000	690.000	570.000
2.	26:10:30:26	1750.000	1960.000	2030.000	1860.000	2430.000	1830.000	1840.000	1910.000
3.	26:10:31:24	4190.000	4250.000	4250.000	4870.000	5270.000	4830.000	4650.000	4130.000
4.	26:10:39:23	7950.000	8630.000	9710.000	10390.000	9910.000	10240.000	9160.000	8490.000
5.	26:10:40:23	11470.000	12400.000	13460.000	15340.000	14570.000	15160.000	12720.000	12240.000
6.	26:10:41:23	14990.000	16230.000	17230.000	19450.000	20090.000	19220.000	16710.000	15390.000
7.	26:10:42:23	18460.000	20580.000	20480.000	25030.000	24680.000	24700.000	19730.000	20140.000
8.	26:10:43:23	21790.000	23870.000	24570.000	29390.000	28940.000	28990.000	23570.000	23420.000
9.	26:10:44:23	25390.000	27670.000	28500.000	33560.000	34520.000	33030.000	27060.000	27230.000
10.	26:10:45:23	28970.000	32090.000	32070.000	39030.000	38900.000	38360.000	30320.000	31650.000
11.	26:10:46:23	32680.000	35930.000	36180.000	43370.000	43090.000	42540.000	33750.000	33810.000
12.	26:10:49:23	32480.000	35770.000	36020.000	43630.000	43510.000	42950.000	33430.000	36040.000
13.	26:10:52:23	32370.000	35830.000	35790.000	43580.000	43620.000	43020.000	33230.000	36170.000
14.	26:10:55:23	32270.000	35940.000	35450.000	43370.000	43630.000	42960.000	33050.000	36350.000
15.	26:10:58:23	32240.000	36070.000	3570.000	43190.000	43650.000	42830.000	32790.000	36620.000
16.	26:11:1:23	32220.000	35990.000	34530.000	42840.000	43580.000	42630.000	32470.000	36720.000
17.	26:11:4:23	32280.000	35570.000	33550.000	42090.000	43400.000	42120.000	31900.000	36360.000
18.	26:11:7:23	32790.000	36000.000	3180.000	43810.000	41670.000	39540.000	30720.000	35690.000
19.	26:11:8:23	28820.000	29300.000	2750.000	33620.000	37340.000	35570.000	26990.000	31440.000
20.	26:11:9:23	24410.000	26050.000	24160.000	29050.000	33750.000	31660.000	23660.000	27570.000
21.	26:11:10:23	20560.000	21660.000	22610.000	25530.000	29210.000	28030.000	22200.000	22990.000
22.	26:11:11:23	17550.000	18730.000	20470.000	23780.000	25840.000	26050.000	20210.000	19980.000
23.	26:11:12:23	13130.000	15670.000	17090.000	19360.000	21950.000	21310.000	16970.000	16640.000
24.	26:11:13:23	9320.000	11230.000	13720.000	15260.000	16380.000	16790.000	13540.000	12010.000
25.	26:11:14:23	6070.000	7410.000	9610.000	11260.000	11540.000	12760.000	9390.000	8230.000
26.	26:11:15:23	3170.000	3730.000	5780.000	6150.000	7230.000	6700.000	5460.000	4780.000
27.	26:11:16:23	3820.000	4340.000	6050.000	6400.000	7950.000	6790.000	5920.000	5100.000

ROD CHANNELS

TIME	CH.57	CH.56	CH.55	CH.54	CH.53	CH.52	CH.51	CH.50
1. 26:10:29:12	25.624	12.812	0.0	12.812	12.812	12.812	0.0	0.0
2. 26:10:30:26	12.812	12.812	0.0	-33.435	12.812	12.812	25.624	12.812
3. 26:10:31:24	25.624	38.435	0.0	-38.435	25.624	0.0	51.247	25.624
4. 26:10:39:23	-12.812	25.624	-25.624	-12.812	64.059	64.059	102.494	33.435
5. 26:10:40:23	38.435	25.624	-38.435	-12.812	64.059	102.474	102.494	33.435
6. 26:10:41:23	76.871	33.435	-38.435	-12.812	29.683	192.177	102.494	12.812
7. 26:10:42:23	89.683	0.0	-38.435	12.812	140.830	307.683	89.683	0.0
8. 26:10:43:23	89.683	0.0	-64.059	0.0	217.301	435.501	89.683	0.0
9. 26:10:44:23	115.306	0.0	-102.494	12.812	229.671	602.154	89.683	0.0
10. 26:10:45:23	89.683	-64.059	-128.118	25.624	661.225	896.826	76.871	0.0
11. 26:10:46:23	-102.494	-435.601	-140.930	25.624	794.331	1206.803	51.247	-12.812
12. 26:10:49:23	-474.036	-884.014	-115.306	25.624	1140.250	1575.851	38.435	-12.812
13. 26:10:52:23	-731.520	-1178.685	-102.494	25.624	1268.368	1639.910	51.247	0.0
14. 26:10:55:23	-999.320	-1370.862	-115.306	25.624	1396.486	1703.969	76.871	0.0
15. 26:10:58:23	-1165.674	-1498.980	-89.683	12.812	1434.921	1703.969	115.306	12.812
16. 26:11:1:23	-1319.615	-1627.098	-115.306	12.812	1511.792	1729.593	115.306	38.435
17. 26:11:4:23	-1583.663	-1793.552	-179.365	12.812	1575.851	1691.157	76.871	89.683
18. 26:11:7:23	-2434.241	-2549.548	-269.048	12.812	2024.264	2037.076	269.048	243.424
19. 26:11:8:23	-2318.935	-2467.053	-384.354	-165.553	1883.334	1870.522	102.494	12.812
20. 26:11:9:23	-1998.640	-2075.511	-422.789	-243.424	1639.910	1627.098	115.306	-89.683
21. 26:11:10:23	-1703.969	-1729.593	-397.165	-230.612	1439.298	1396.486	76.871	-102.494
22. 26:11:11:23	-1460.545	-1486.168	-371.542	-217.801	1217.121	1204.309	64.059	-76.871
23. 26:11:12:23	-1012.132	-1037.756	-256.236	-128.118	845.579	858.190	12.812	-12.812
24. 26:11:13:23	-627.778	-665.213	-192.177	-64.059	550.907	563.719	51.247	51.247
25. 26:11:14:23	-307.483	-397.166	-128.118	-25.624	294.671	320.295	115.306	115.306
26. 26:11:15:23	-12.812	-128.118	-115.306	-25.624	76.871	102.494	128.118	115.306
27. 26:11:16:23	-64.059	-192.177	-128.118	-38.43	128.118	140.930	128.118	128.118

AVERAGE LOAD

1.	570.000
2.	1957.500
3.	4641.250
4.	9310.000
5.	13420.000
6.	17451.250
7.	21725.000
8.	25580.000
9.	29626.250
10.	33923.750
11.	37918.750
12.	37978.750
13.	37951.250
14.	37877.500
15.	37807.500
16.	37622.500
17.	37183.750
18.	35600.000
19.	31390.000
20.	27538.750
21.	24111.250
22.	21576.250
23.	17765.000
24.	13531.250
25.	9483.750
26.	5350.000
27.	5796.250

3.5 C-X-9 MODEL WITH BACKPACKING

3.5.1 SPECIMEN #13

TEST NO. 61

COMPOSITE INTEGRAL LINER WITH 1000 PSI BACKPACKING

1:1.5 LOADING RATIO

TESTED 9 NOVEMBER 1978

(PUMP MALFUNCTIONED; TEST RESUMED ON 27 NOVEMBER 1978)

REACTION FRAME TEST SET-UP

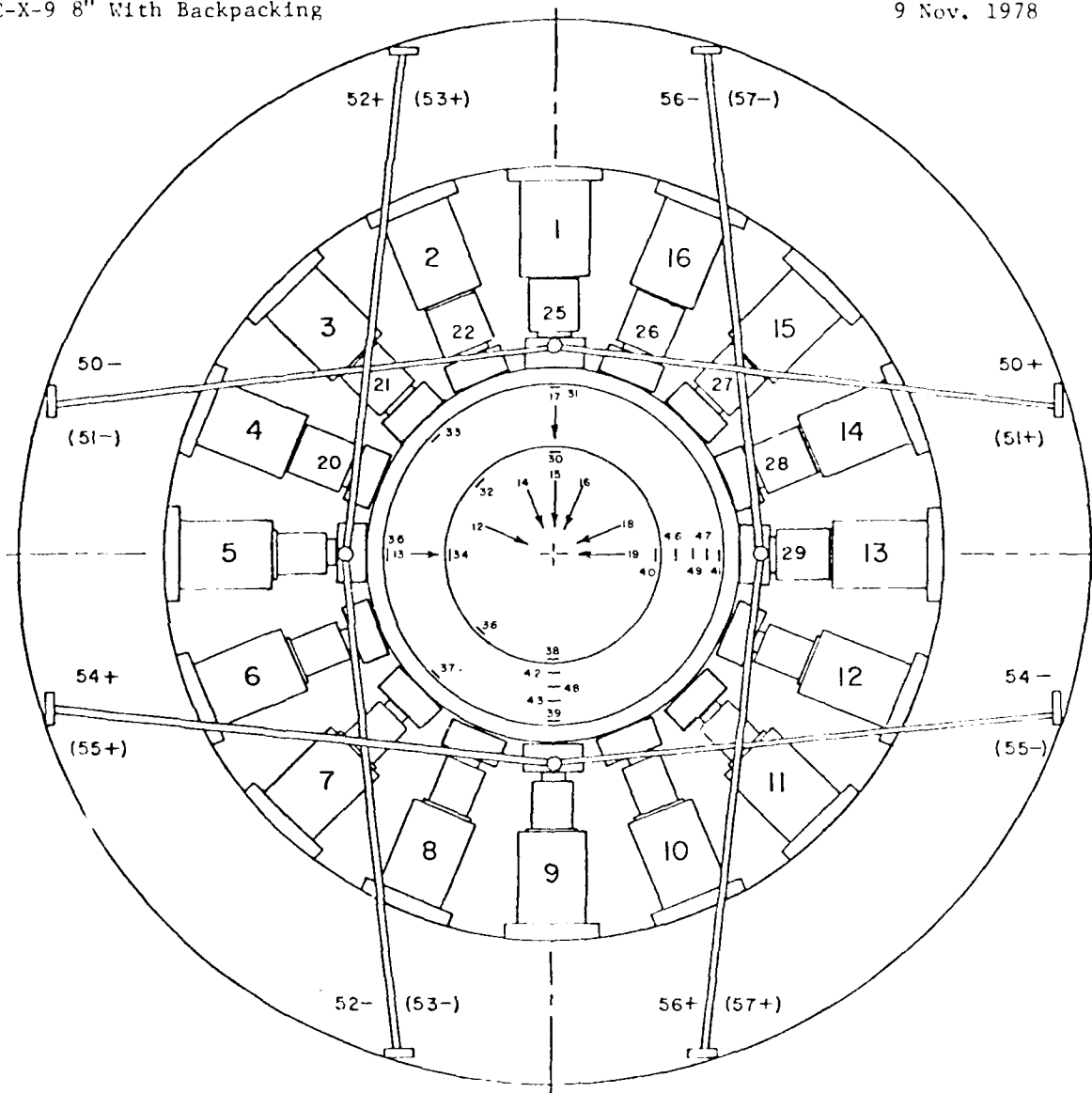
Specimen #13

C-X-9 8" With Backpacking

Test #61

1:1.5 Load

9 Nov. 1978

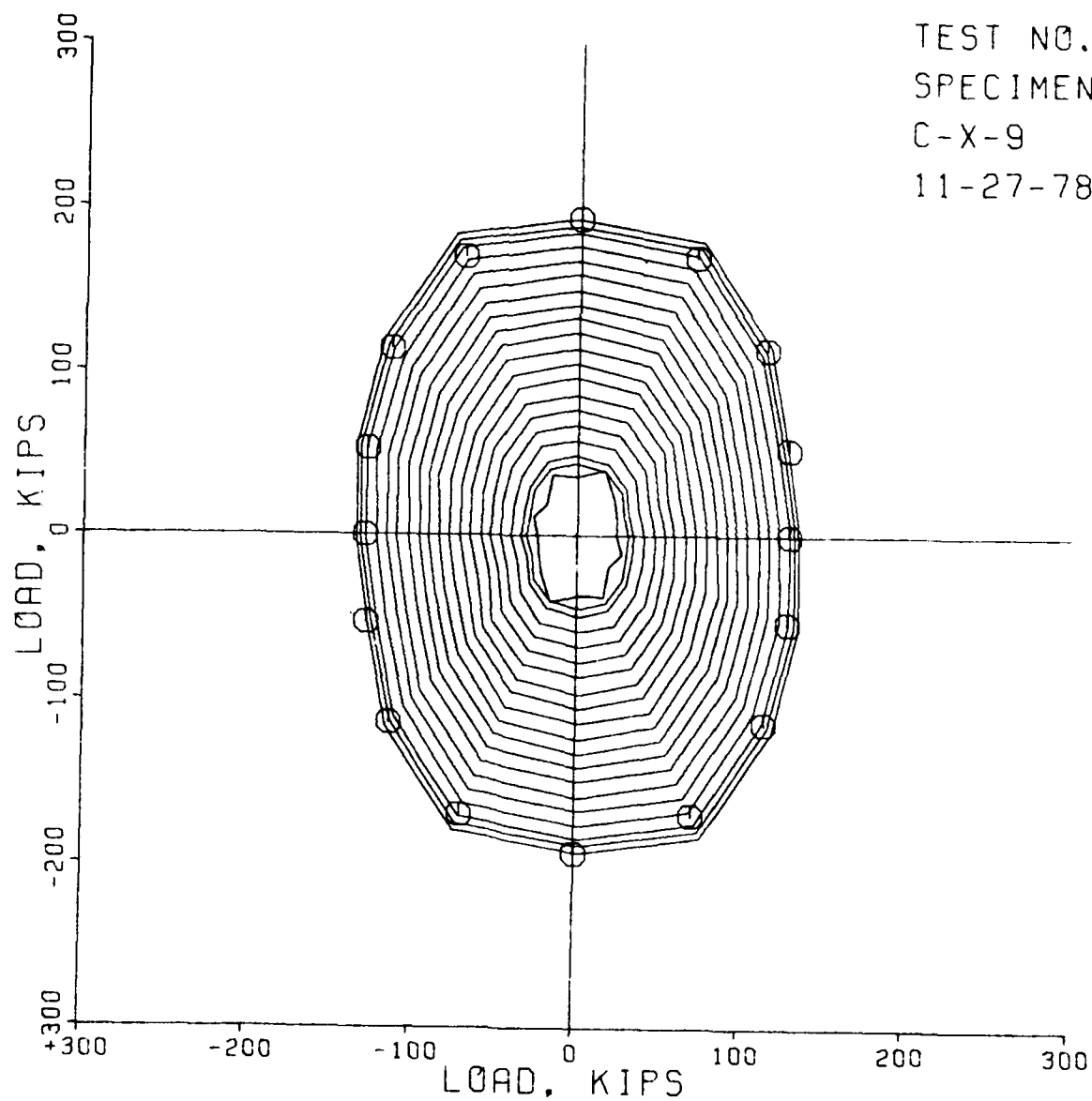


CH 12, 14-16, 18 and 19 Load axis I.D., CH 13 and 17 Load axis O.D. (Research, Inc. 4040)
 CH 20-22, 25-29 Axial load (Transducers, Inc. Model 693-300K).
 CH 30-41 (Ailtech SG 129-6S) Radial pairs on load axis at center. Odd gages on rebar.
 CH 42, 43, 46-49 (BLH PA-3) On load axis top surface. 2.0" spacing.
 CH 50-57 (Ailtech SG 129-6S) Polarity indicates rod under tension.
 Lower rod shown (XX).

ML

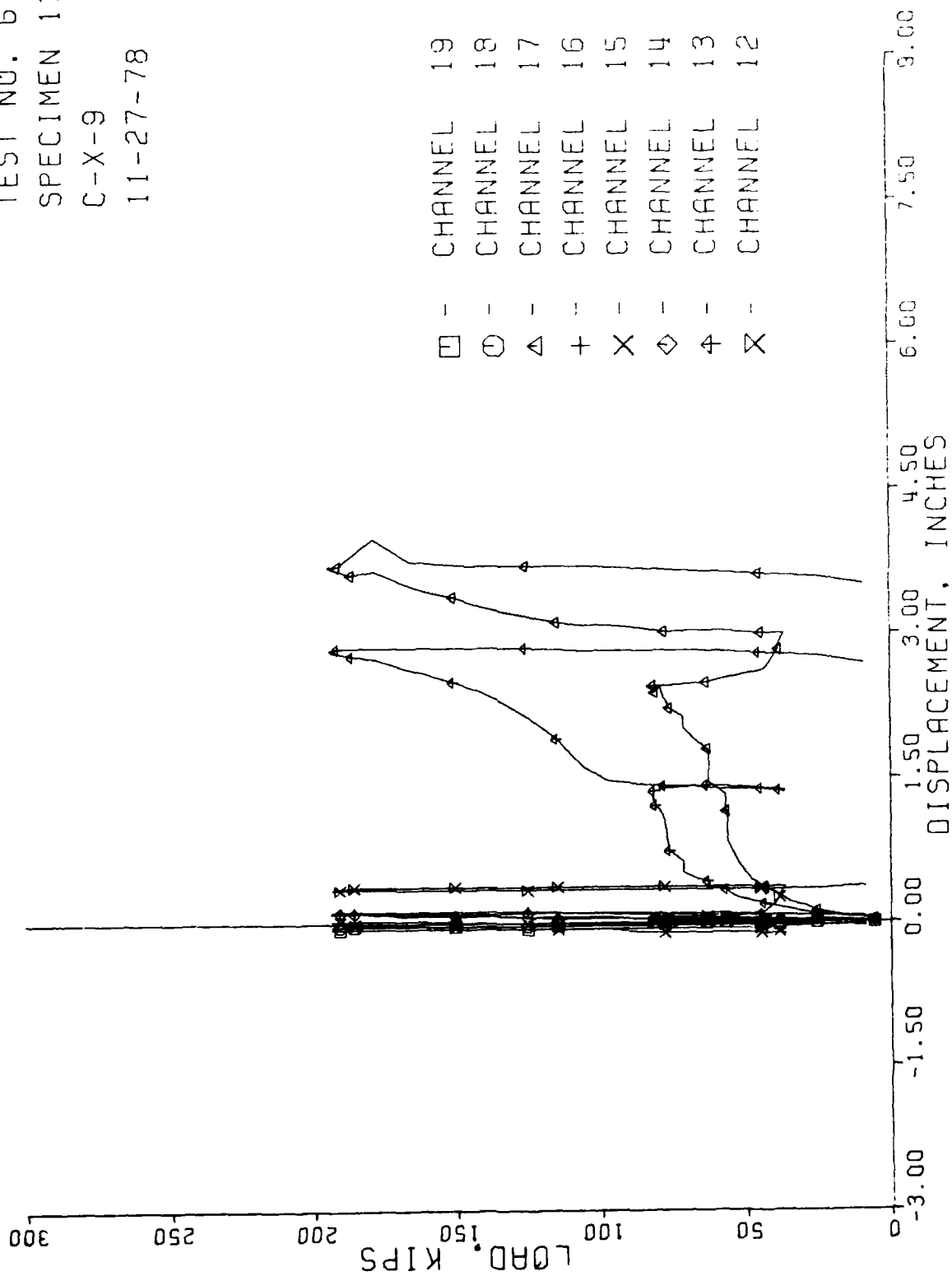
1

0-30
-512

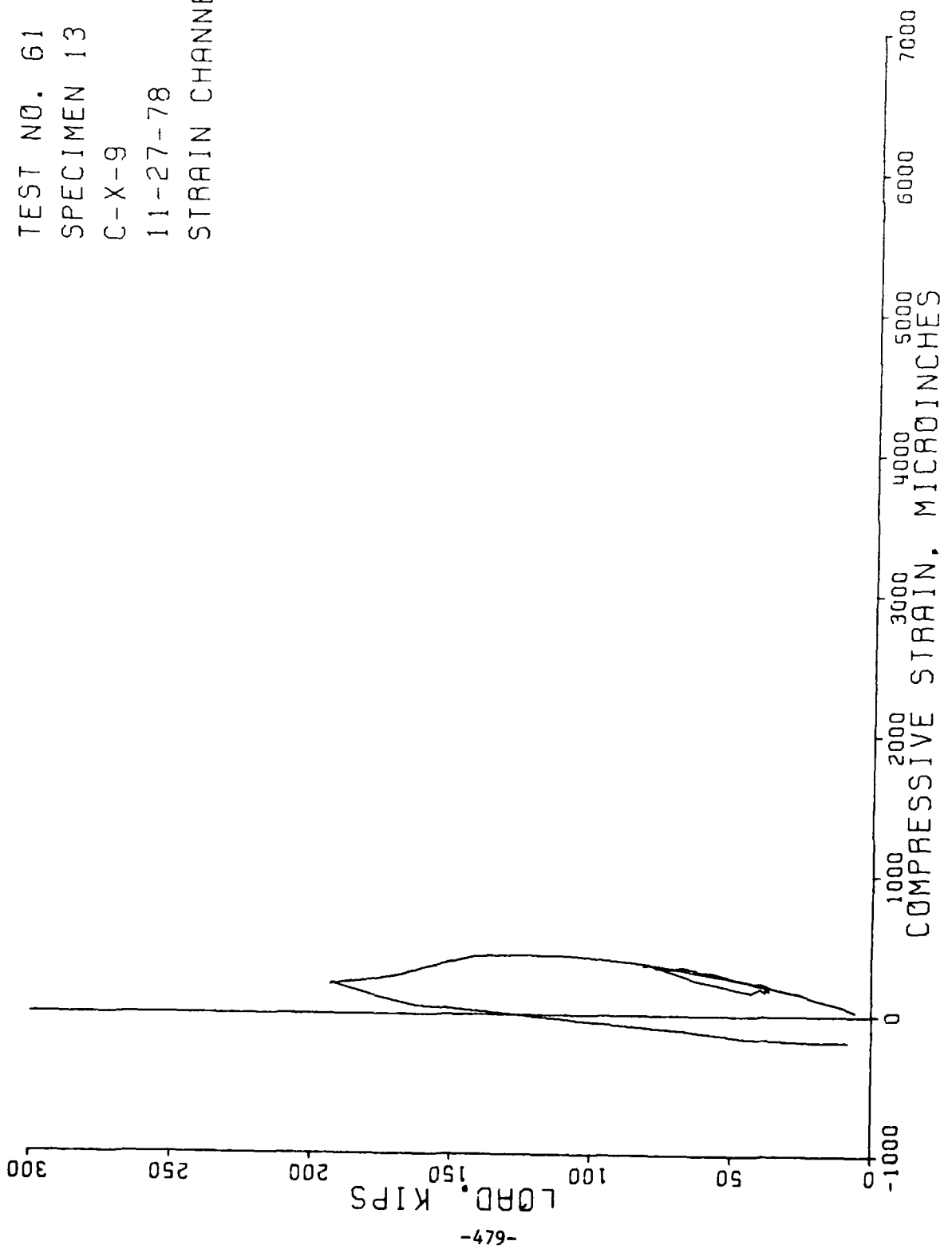


TEST NO. 61
SPECIMEN 13
C-X-9
11-27-78

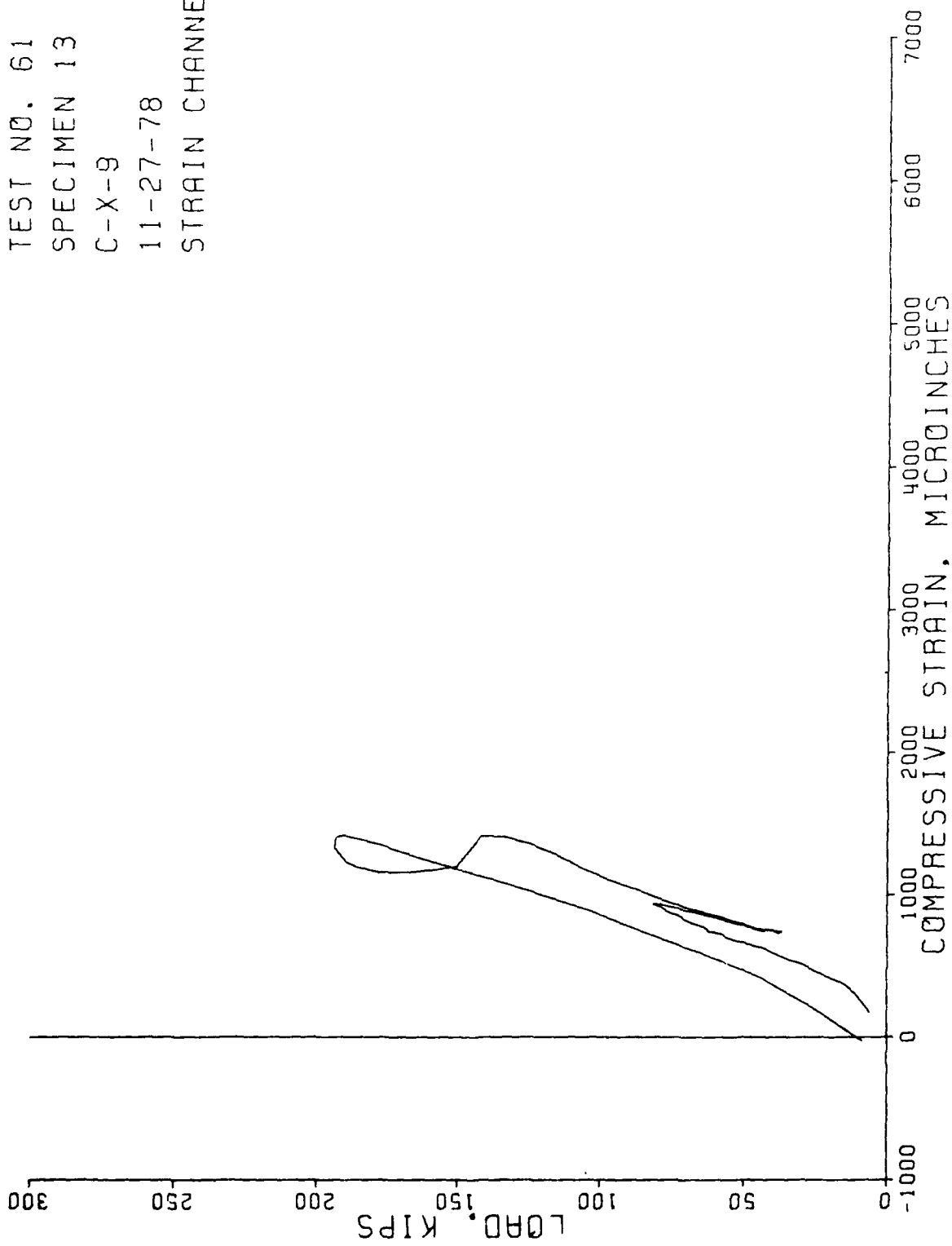
TEST NO. 61
 SPECIMEN 13
 C-X-9
 11-27-78



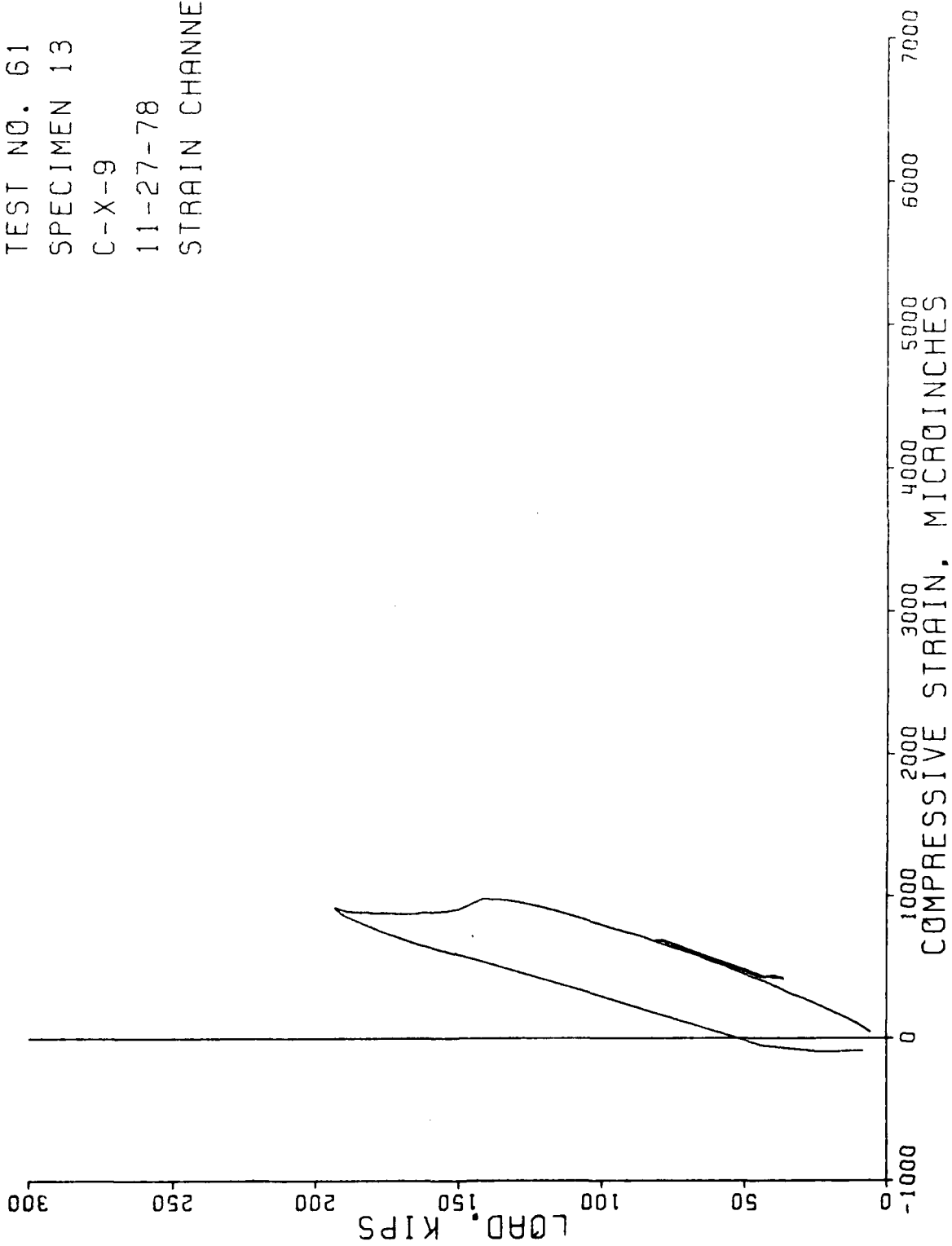
TEST NO. 61
SPECIMEN 13
C-X-9
11-27-78
STRAIN CHANNEL 30



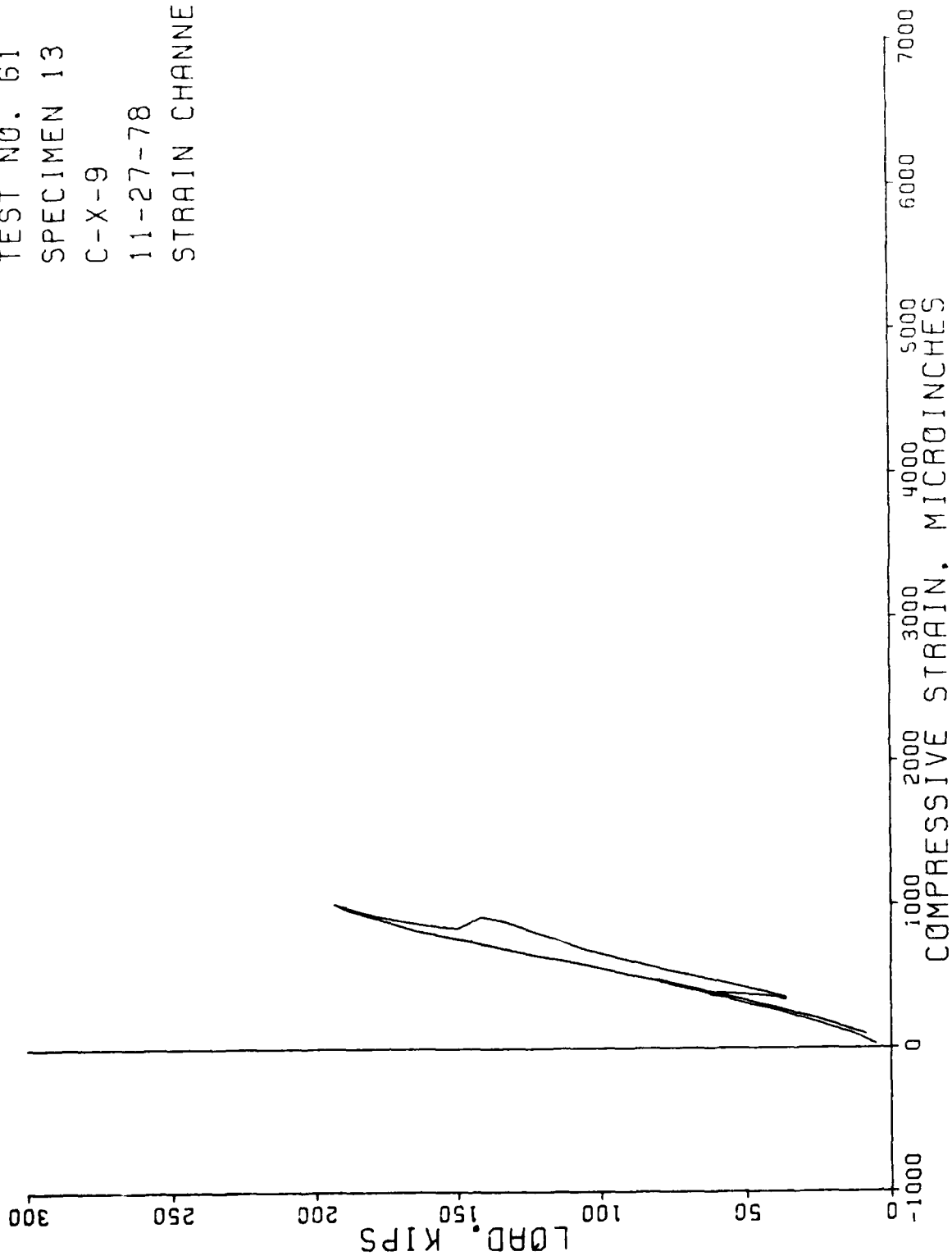
TEST NO. 61
SPECIMEN 13
C-X-9
11-27-78
STRAIN CHANNEL 31



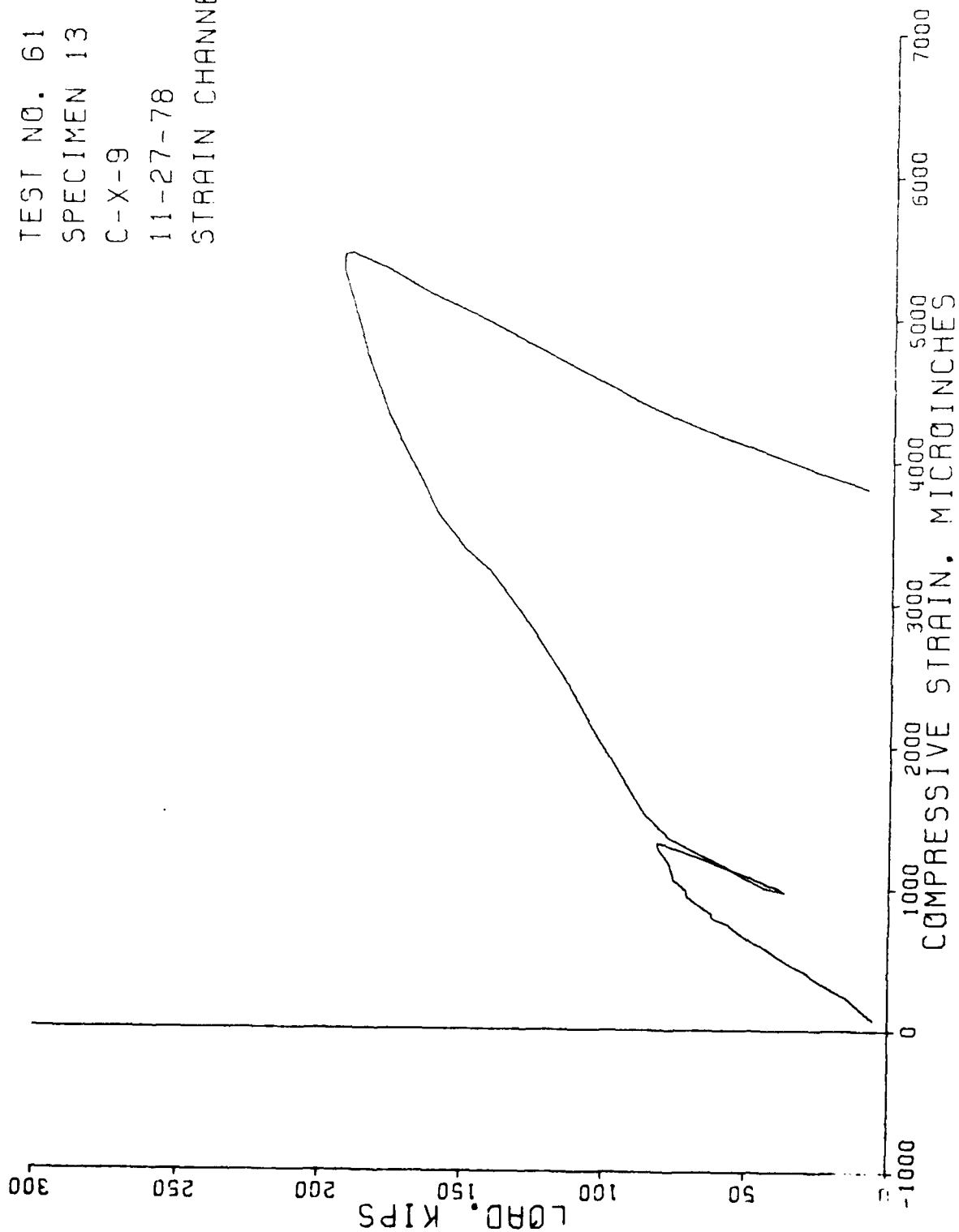
TEST NO. 61
SPECIMEN 13
C-X-9
11-27-78
STRAIN CHANNEL 32



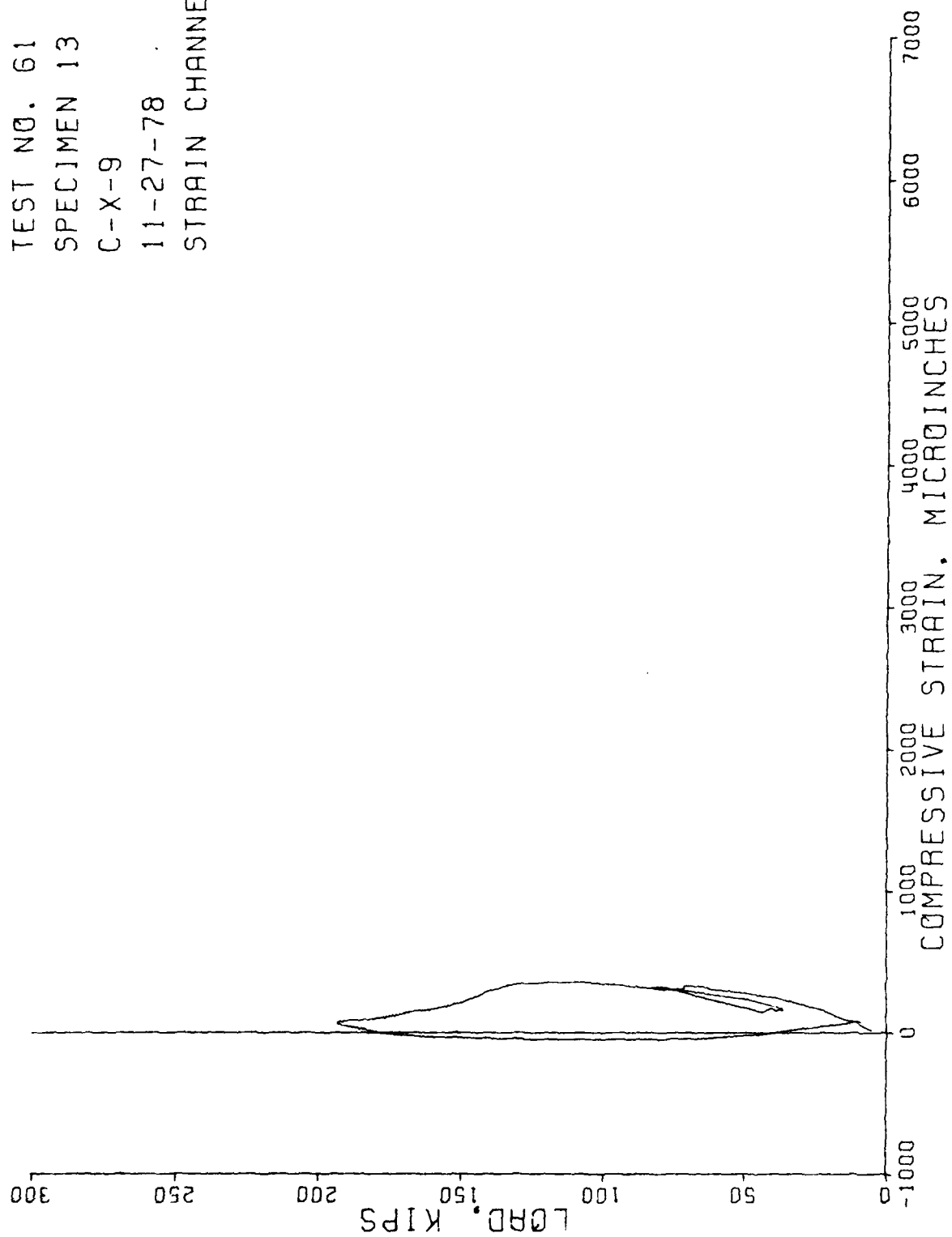
TEST NO. 61
SPECIMEN 13
C-X-9
11-27-78
STRAIN CHANNEL 33



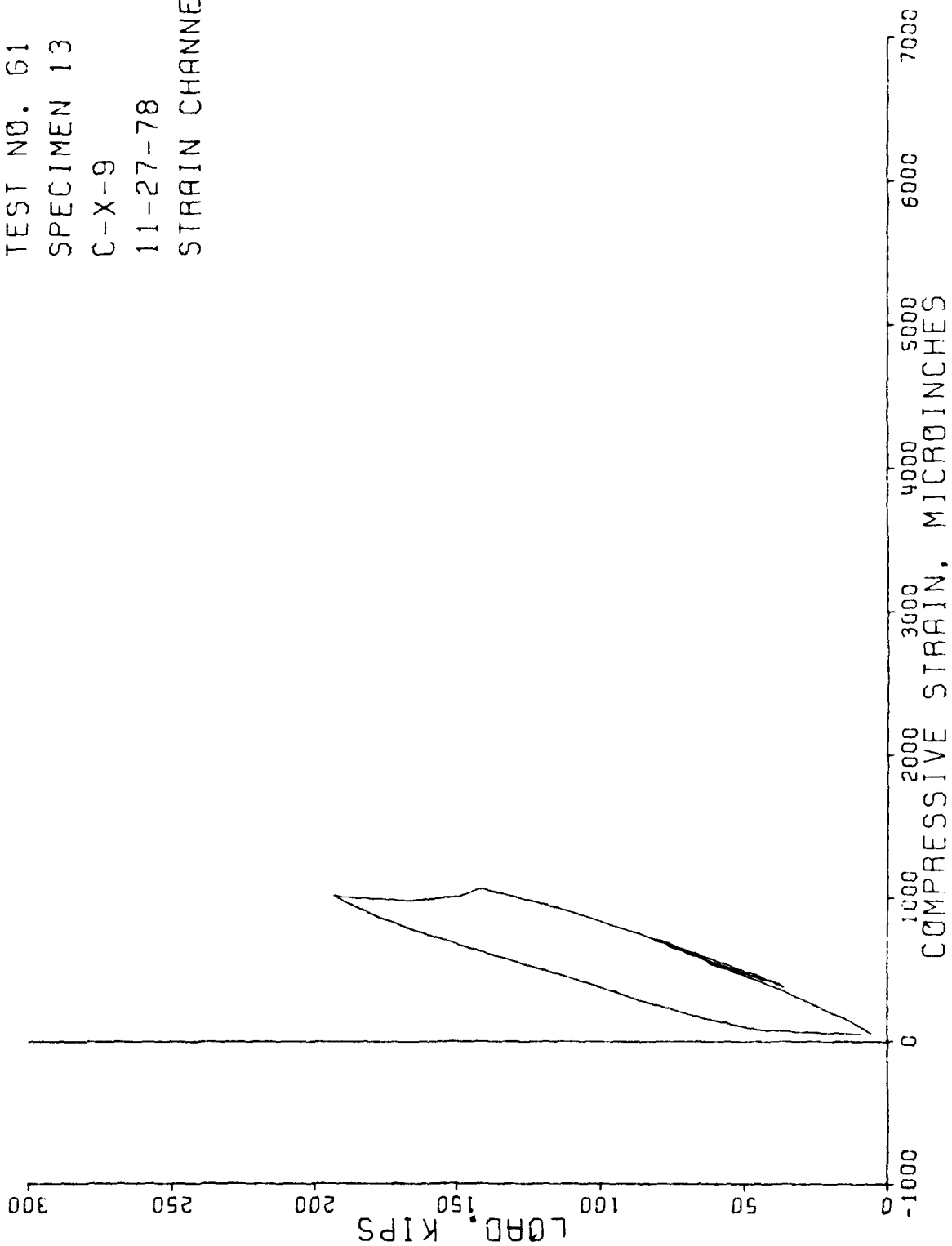
TEST NO. 61
SPECIMEN 13
C-X-9
11-27-78
STRAIN CHANNEL 34



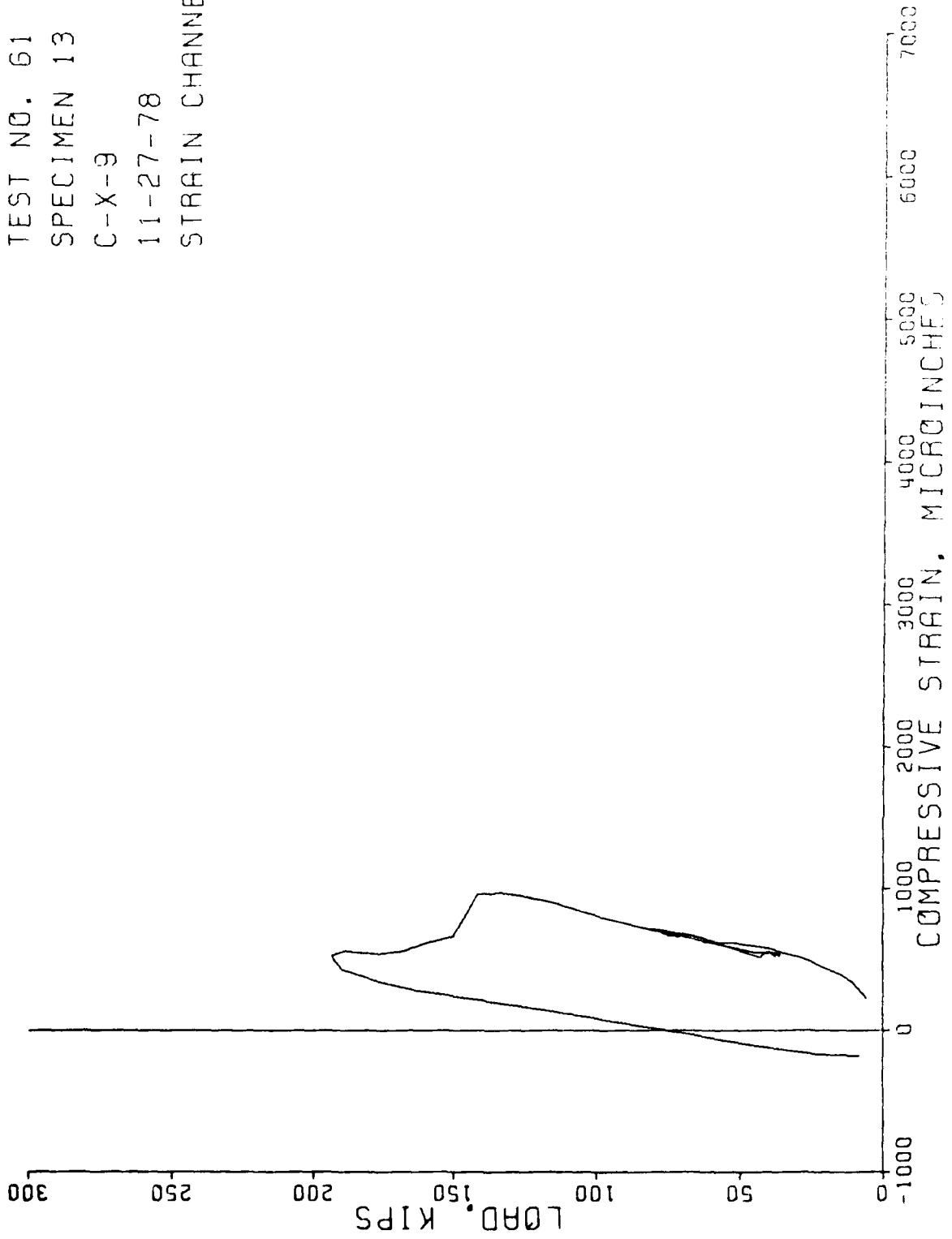
TEST NO. 61
SPECIMEN 13
C-X-9
11-27-78
STRAIN CHANNEL 35



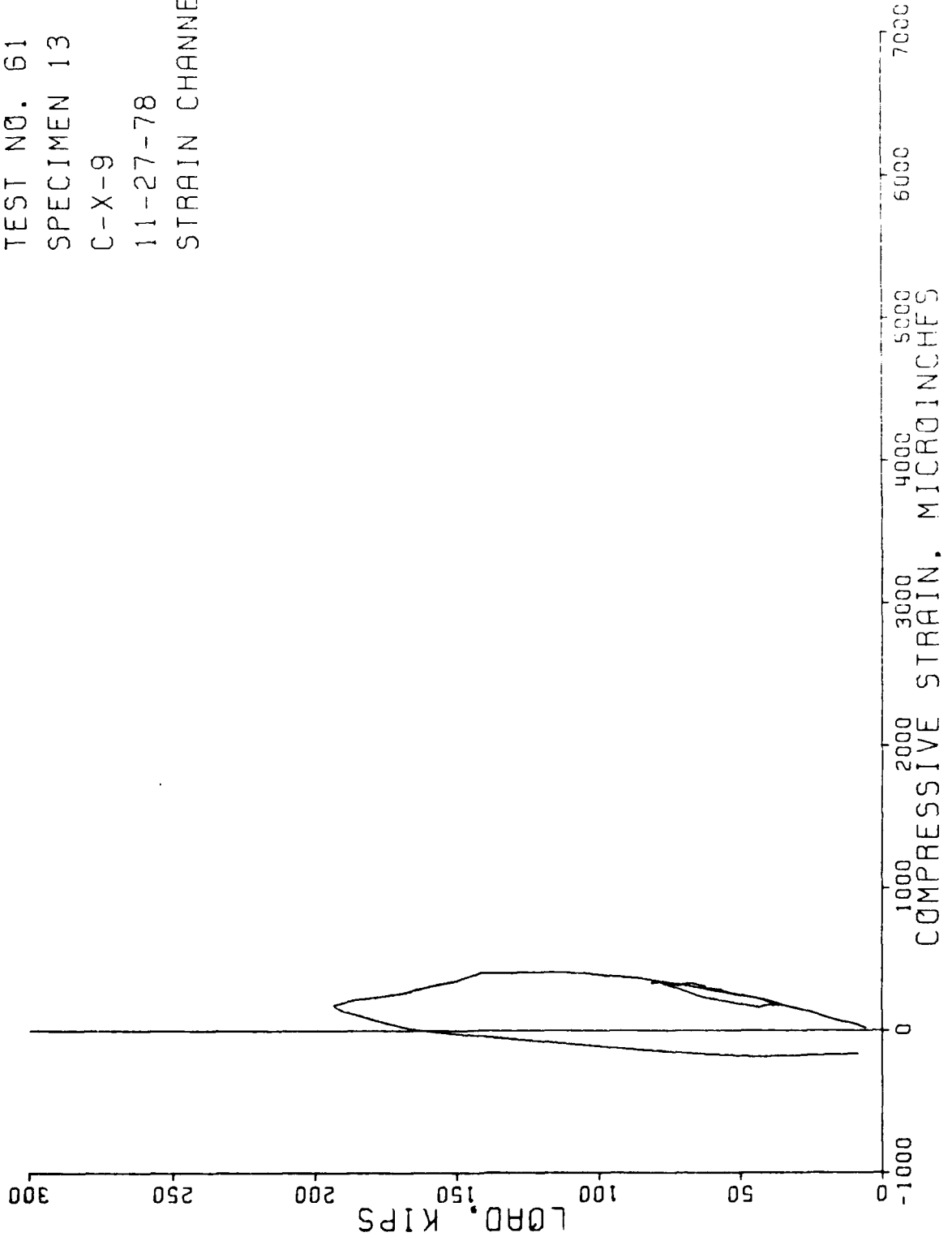
TEST NO. 61
SPECIMEN 13
C-X-9
11-27-78
STRAIN CHANNEL 36



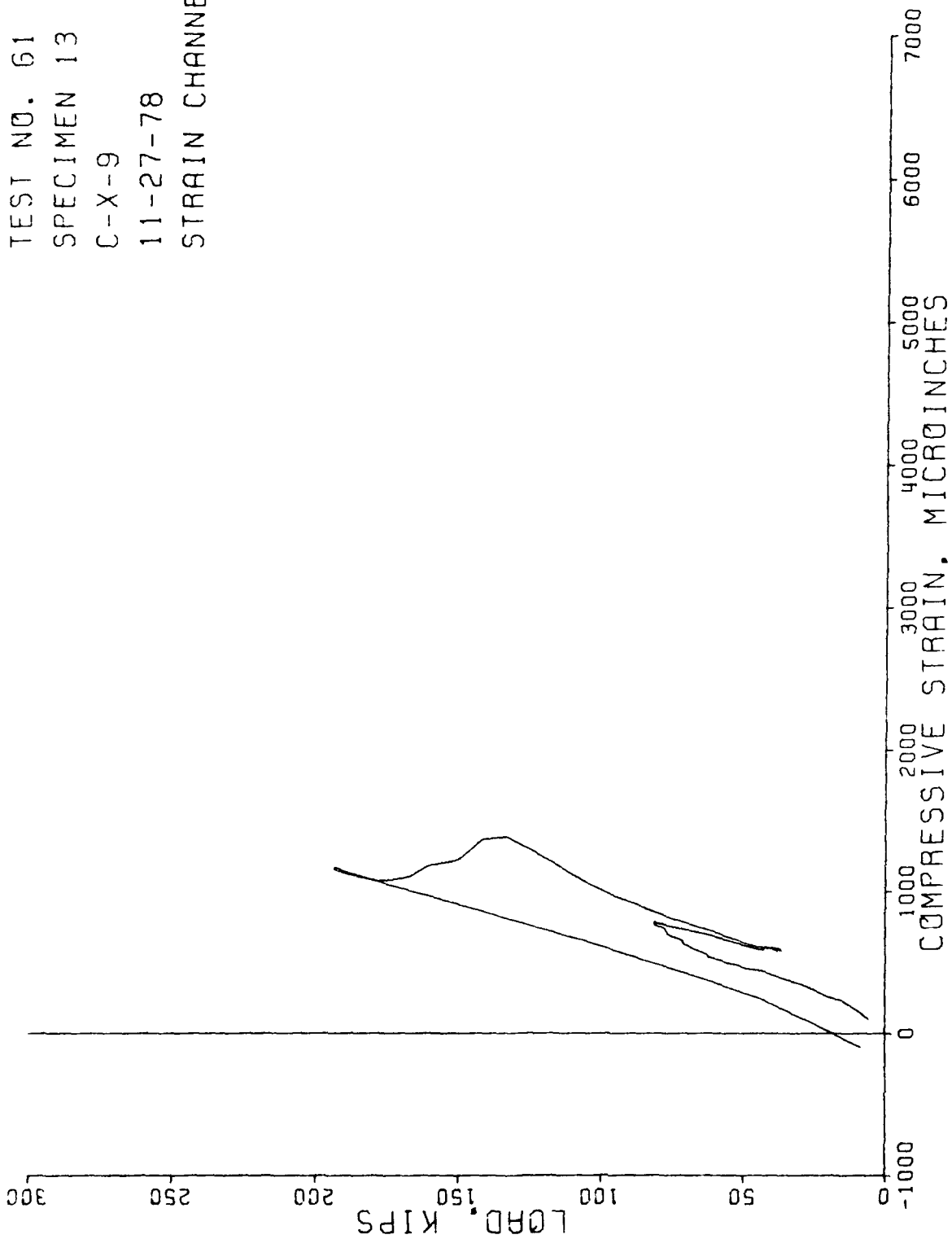
TEST NO. 61
SPECIMEN 13
C-X-9
11-27-78
STRAIN CHANNEL 37



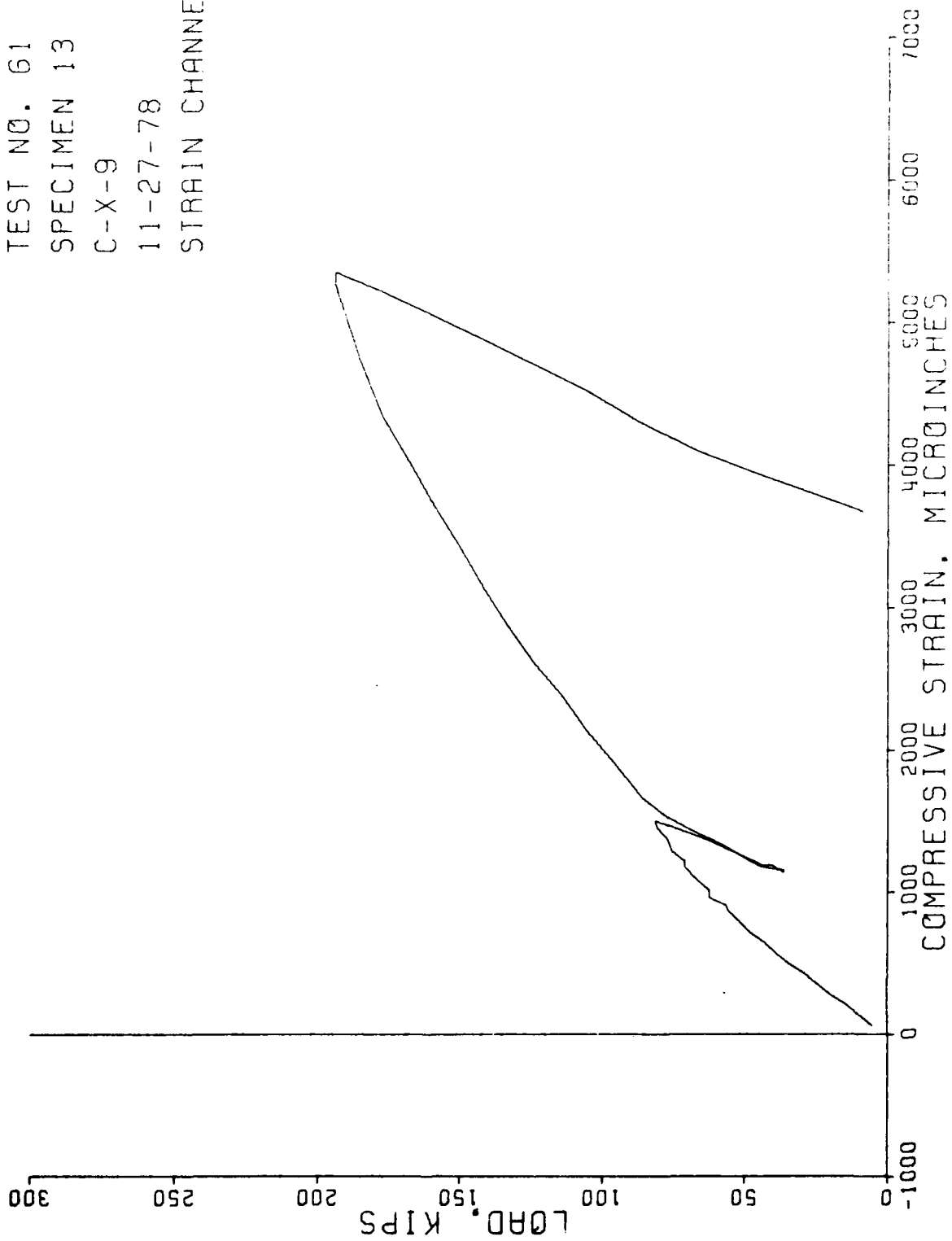
TEST NO. 61
SPECIMEN 13
C-X-9
11-27-78
STRAIN CHANNEL 38



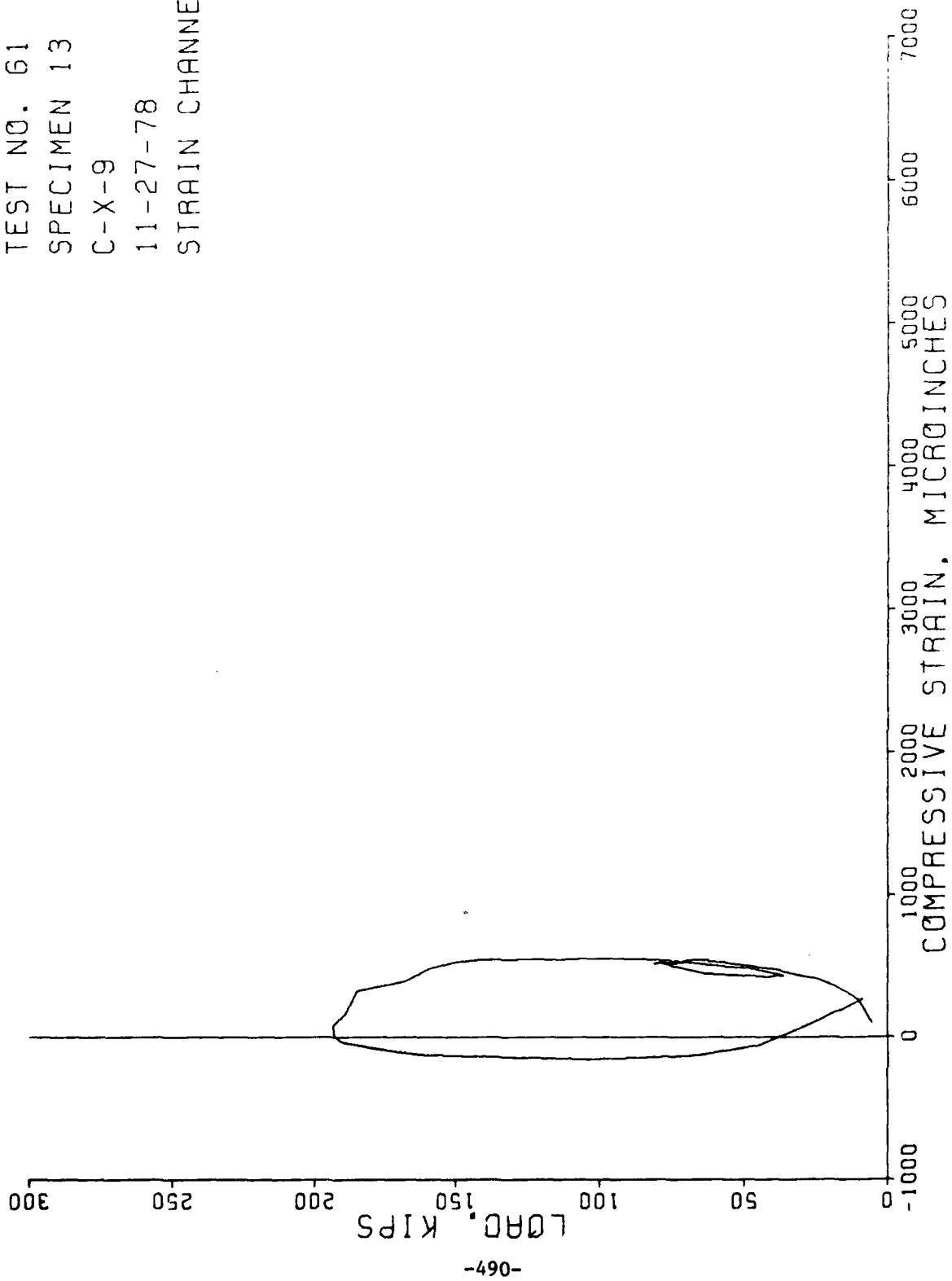
TEST NO. 61
SPECIMEN 13
C-X-9
11-27-78
STRAIN CHANNEL 39



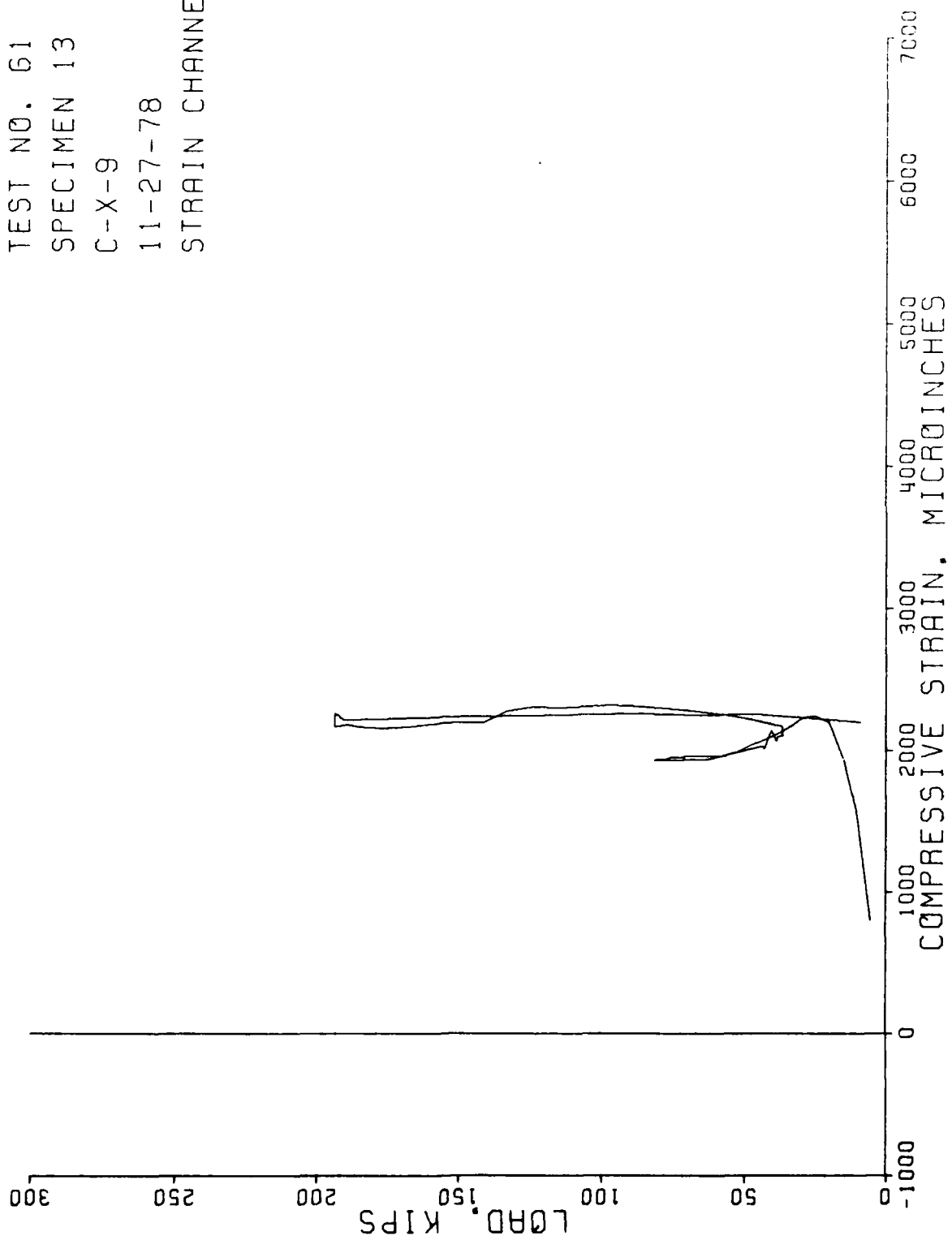
TEST NO. 61
SPECIMEN 13
C-X-9
11-27-78
STRAIN CHANNEL 40



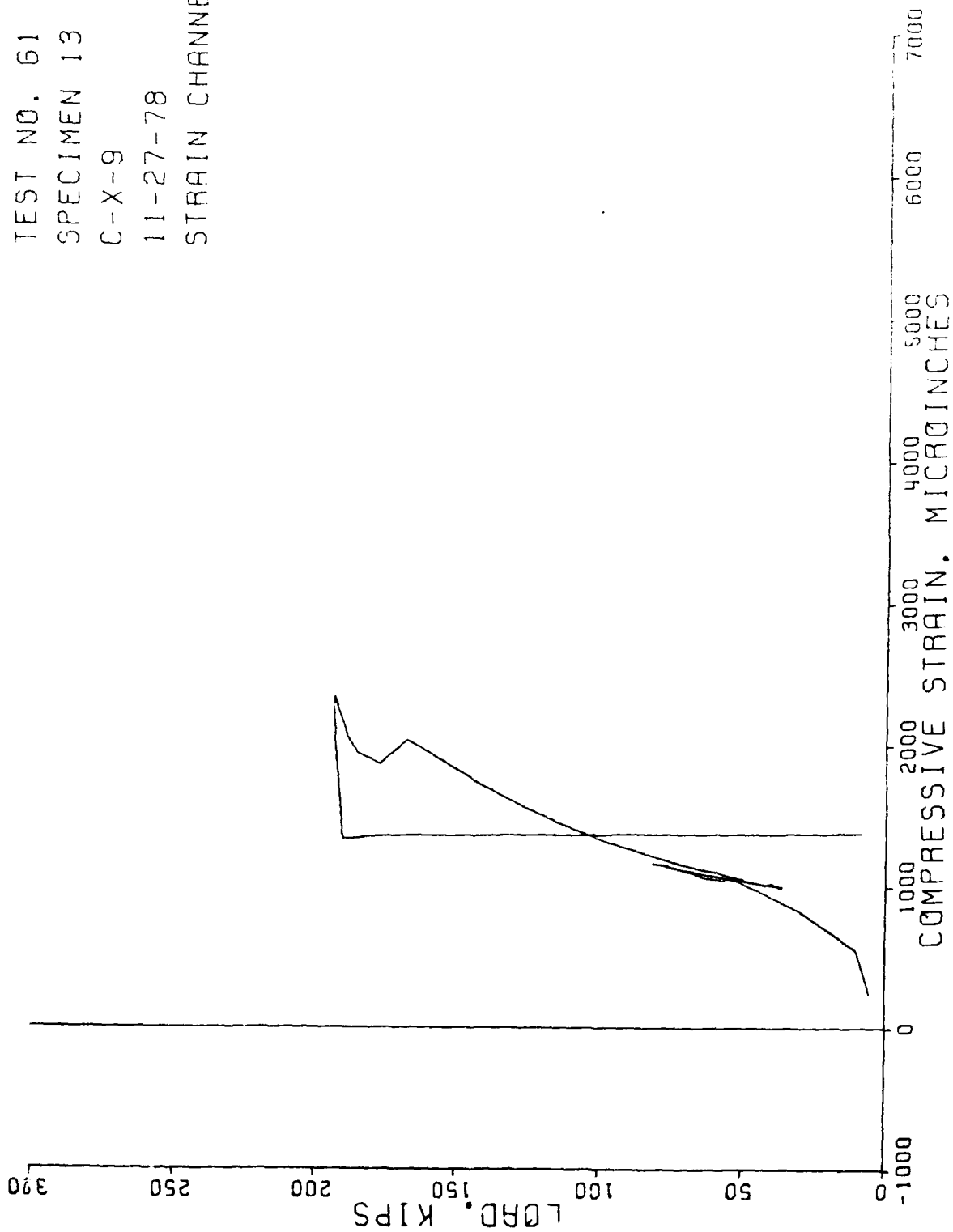
TEST NO. 61
SPECIMEN 13
C-X-9
11-27-78
STRAIN CHANNEL 41



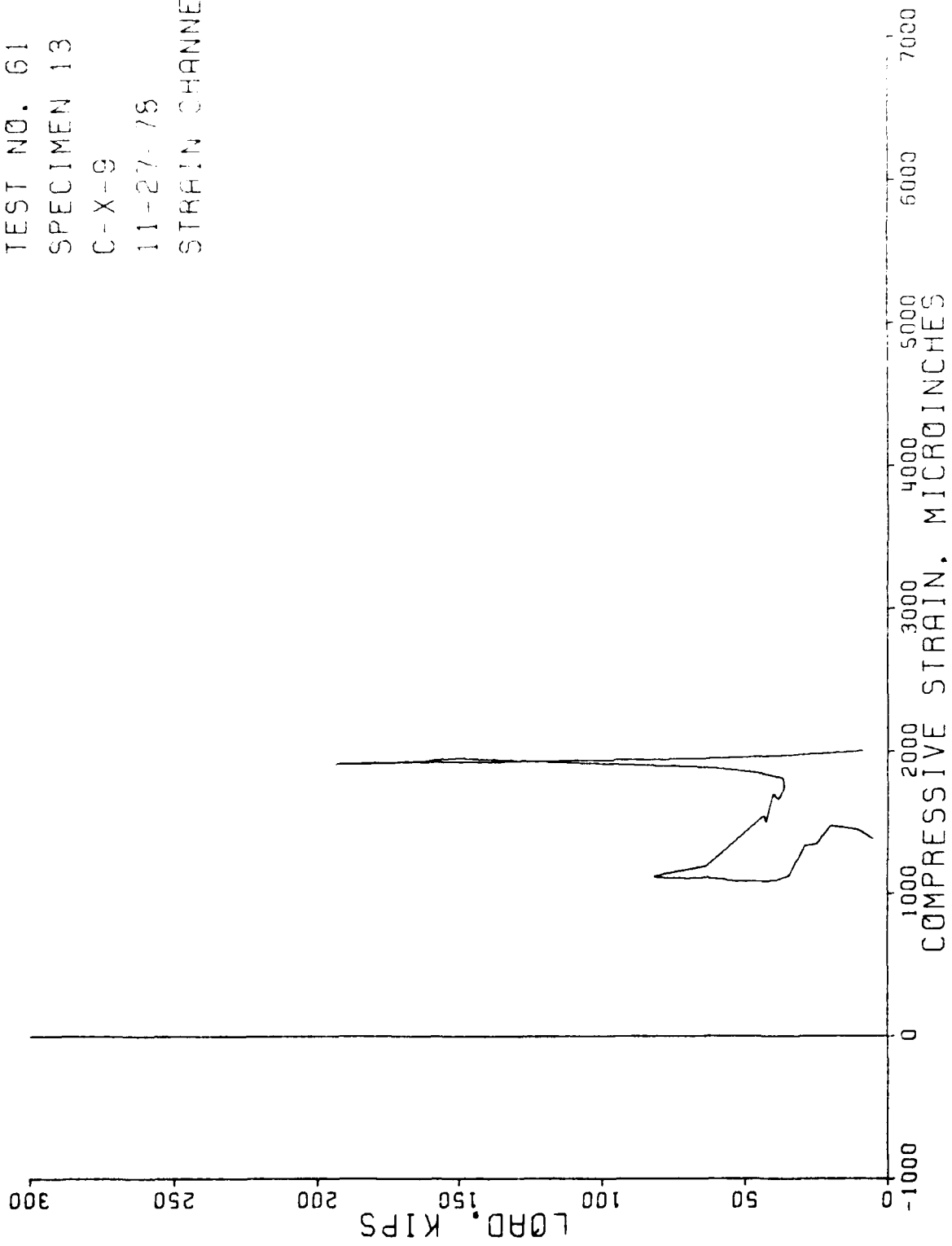
TEST NO. 61
SPECIMEN 13
C-X-9
11-27-78
STRAIN CHANNEL 42



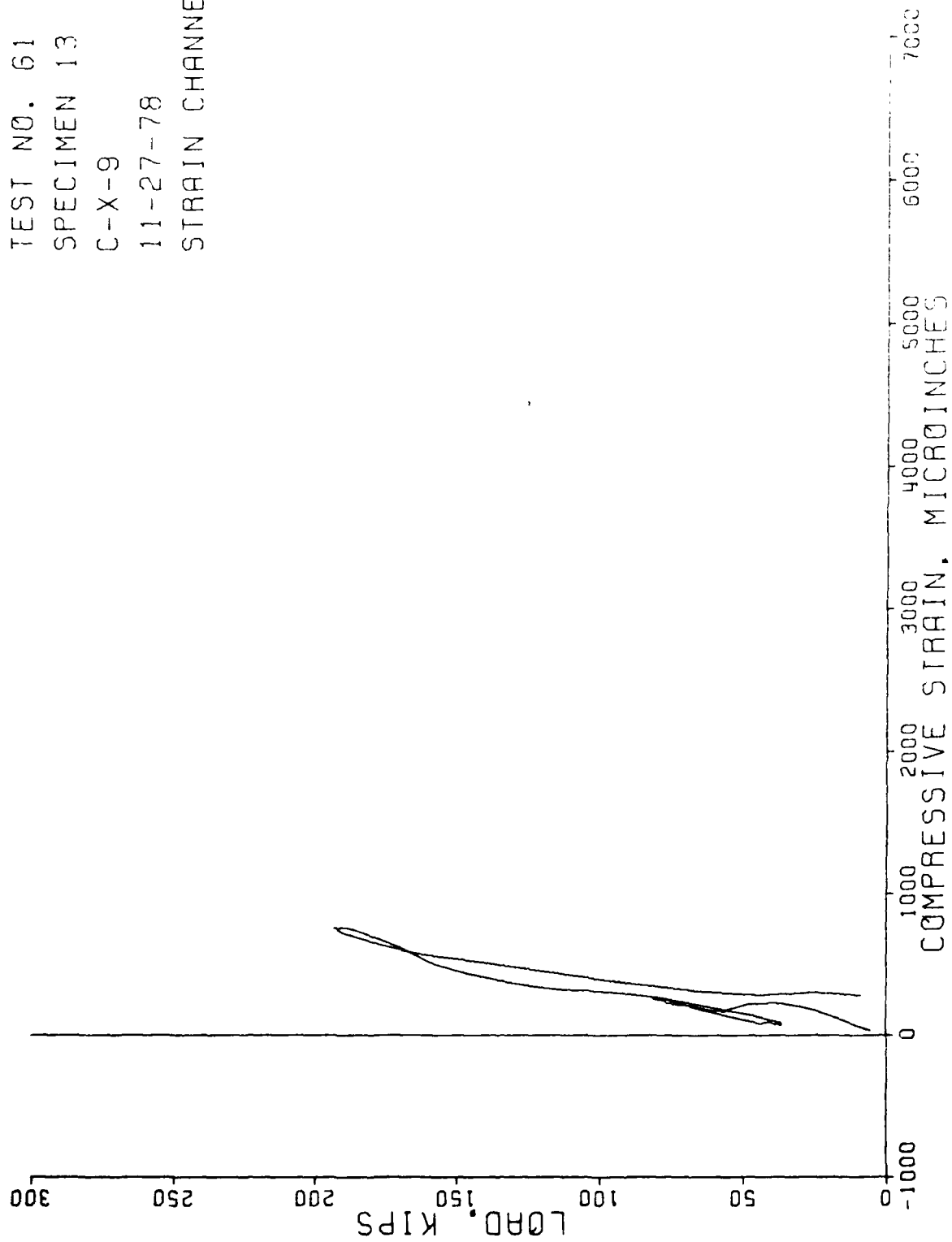
TEST NO. 61
SPECIMEN 13
C-X-9
11-27-78
STRAIN CHANNEL 43



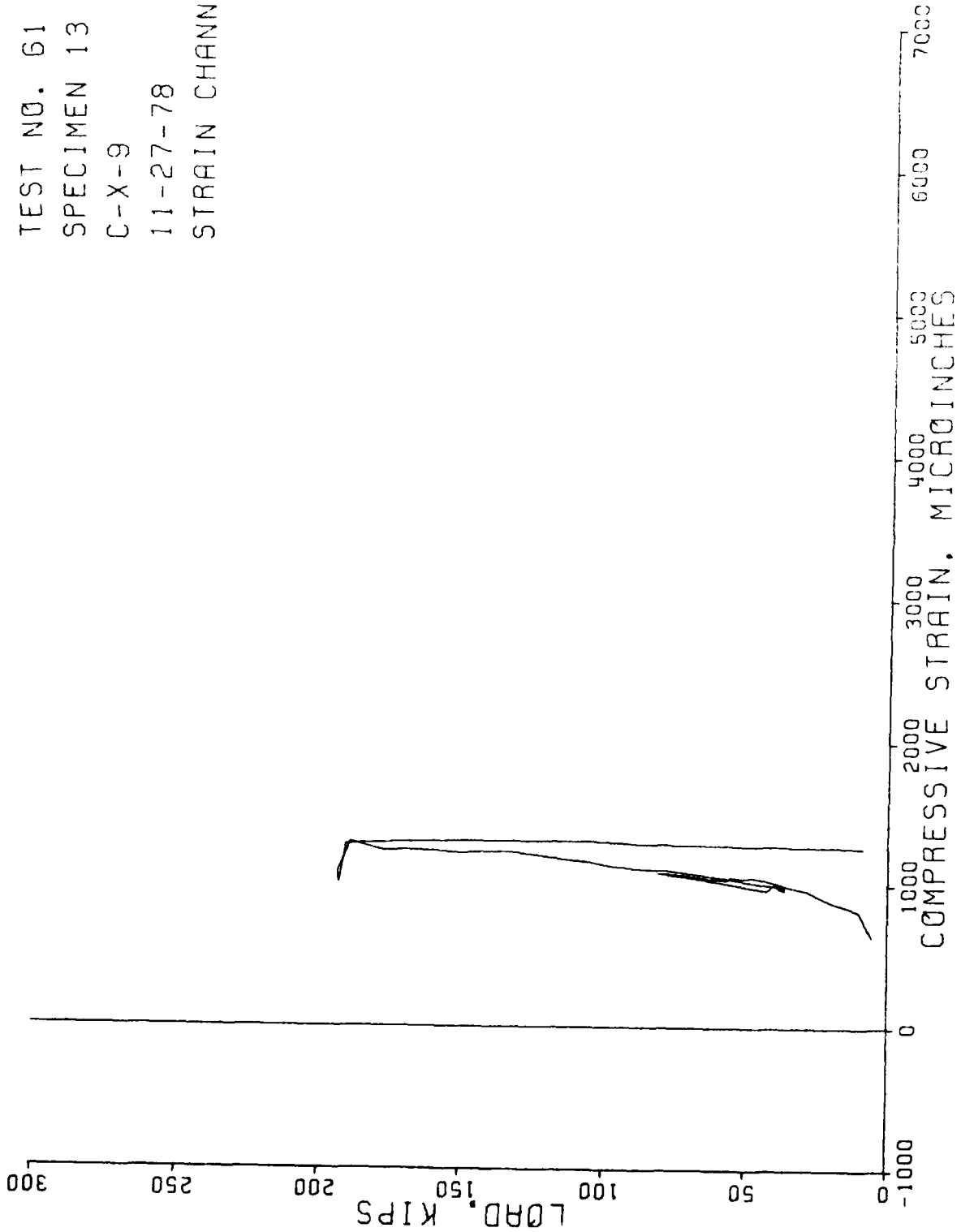
TEST NO. 61
SPECIMEN 13
C-X-9
11-27-78
STRAIN CHANNEL 46



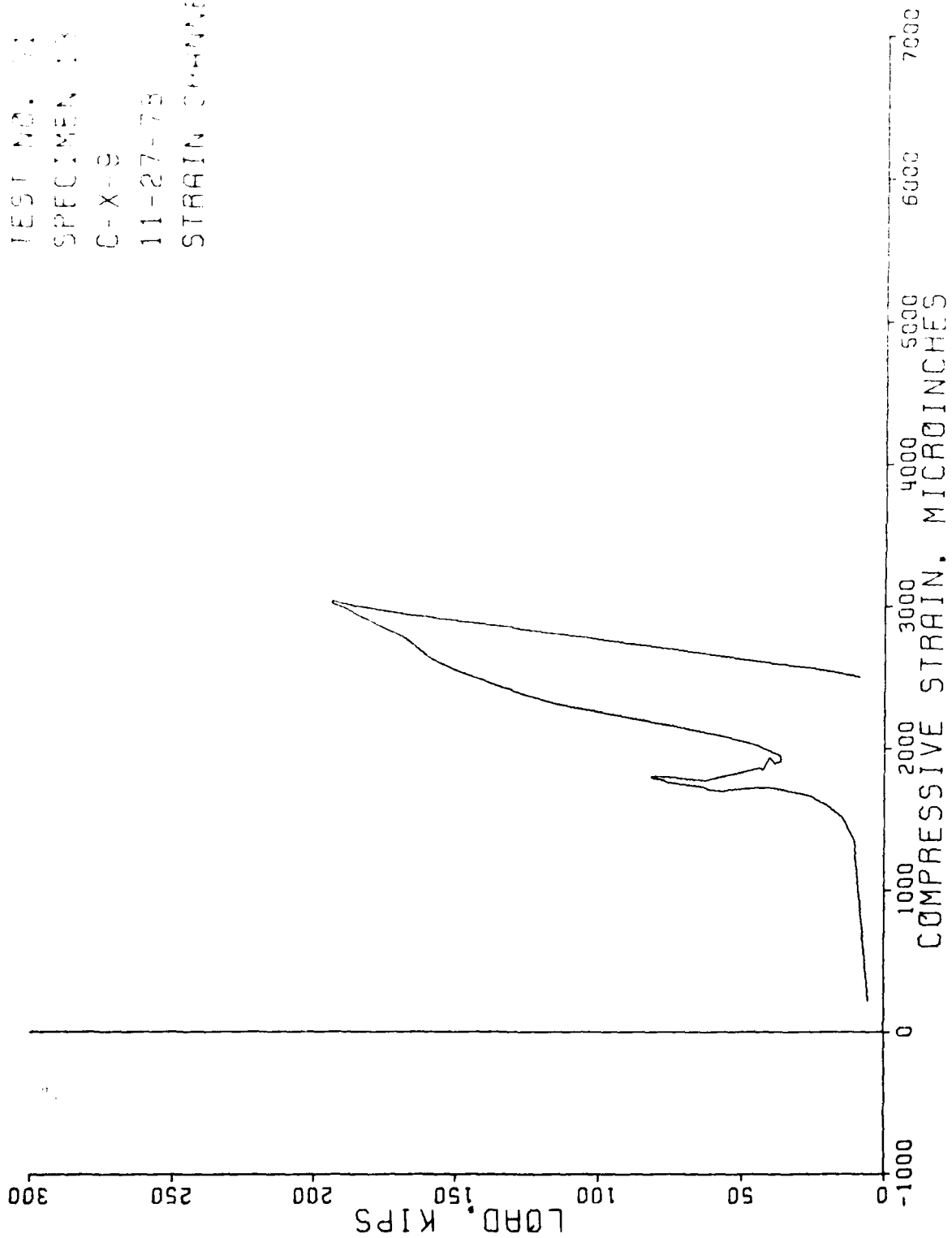
TEST NO. 61
SPECIMEN 13
C-X-9
11-27-78
STRAIN CHANNEL 47



TEST NO. 61
SPECIMEN 13
C-X-9
11-27-78
STRAIN CHANNEL 48



TEST NO. 11
SPECIMEN 18
C-X-9
11-27-78
STRAIN CHANGE 42



TEST NO. 61 SPECIMEN 17 C-X-9 12-27-78

NUMBER OF INCREMENTS= 71
NUMBER OF CHANNELS= 42
NUMBER OF STRAIN CHANNELS= 18
NUMBER OF DISPLACEMENT CHANNELS= 8
NUMBER OF LOAD CHANNELS= 8
NUMBER OF PRESSURE CHANNELS= 0
NUMBER OF RODS= 8

CHANNEL	ZEROSHIFT
57	0.0
56	0.0
55	0.0
54	0.0
53	0.0
52	0.0
51	0.0
50	0.0
49	0.0
48	0.0
47	0.0
46	0.0
45	0.0
44	0.0
43	0.0
42	0.0
41	0.0
40	0.0
39	0.0
38	0.0
37	0.0
36	0.0
35	0.0
34	0.0
33	0.0
32	0.0
31	0.0
30	0.0
29	0.0
28	0.0
27	0.0
26	0.0
25	0.0
24	0.0
23	0.0
22	0.0
21	0.0
20	0.0
19	0.0
18	0.0
17	0.0
16	0.0
15	0.0
14	0.0
13	0.0
12	0.0

STRAIN CHANNEL CALIBRATION

49	1.000
48	1.000
47	1.000
46	1.000
45	1.000
42	1.000
41	1.000
40	1.000
39	1.000
38	1.000
37	1.000
36	1.000
35	1.000
34	1.000
33	1.000
32	1.000
31	1.000
30	1.000

DISPLACEMENT CHANNEL

CALIBRATION

19	0.001
18	0.001
17	0.001
16	0.002
15	0.002
14	0.002
13	0.002
12	0.002

-OAD CHANNEL

CALIBRATION

29	10.000
28	10.000
27	10.000
26	10.000
25	10.000
22	10.000
21	10.000
20	10.000

ROD CHANNEL

CALIBRATION

57	1.000
56	1.000
55	1.000
54	1.000
53	1.000
52	1.000
51	1.000
50	1.000

STRAIN CHANNELS

	TIME	CH. 49	CH. 48	CH. 47	CH. 46	CH. 43	CH. 42	CH. 41	CH. 40
1.	9:10:38:45	-218.000	-642.000	-35.000	-1384.000	-242.000	-800.000	-94.000	-59.000
2.	9:10:39:45	-1352.000	-822.000	-72.000	-1452.000	-553.000	-1559.000	-261.000	-138.000
3.	9:10:40:45	-1516.000	-850.000	-103.000	-1463.000	-615.000	-1918.000	-318.000	-207.000
4.	9:10:41:45	-1606.000	-884.000	-143.000	-1480.000	-688.000	-2199.000	-372.000	-281.000
5.	9:10:42:45	-1659.000	-932.000	-178.000	-1348.000	-756.000	-2247.000	-409.000	-358.000
6.	9:10:43:45	-1684.000	-965.000	-199.000	-1342.000	-814.000	-2233.000	-427.000	-426.000
7.	9:10:44:45	-1707.000	-992.000	-218.000	-1132.000	-864.000	-2162.000	-450.000	-494.000
8.	9:10:45:45	-1724.000	-1015.000	-231.000	-1097.000	-913.000	-2108.000	-474.000	-569.000
9.	9:10:46:45	-1724.000	-1036.000	-224.000	-1091.000	-957.000	-2074.000	-483.000	-645.000
10.	9:10:47:45	-1721.000	-1053.000	-218.000	-1091.000	-998.000	-2037.000	-501.000	-714.000
11.	9:10:48:45	-1713.000	-1047.000	-199.000	-1090.000	-1039.000	-1989.000	-512.000	-798.000
12.	9:10:49:45	-1705.000	-1053.000	-182.000	-1096.000	-1060.000	-1971.000	-522.000	-872.000
13.	9:10:51:45	-1700.000	-1041.000	-170.000	-1102.000	-1048.000	-1962.000	-524.000	-897.000
14.	9:10:53:45	-1701.000	-1035.000	-168.000	-1106.000	-1043.000	-1959.000	-524.000	-910.000
15.	9:10:54:45	-1714.000	-1043.000	-178.000	-1111.000	-1061.000	-1962.000	-530.000	-962.000
16.	9:10:56:45	-1722.000	-1042.000	-185.000	-1115.000	-1060.000	-1963.000	-538.000	-999.000
17.	9:10:58:45	-1723.000	-1041.000	-186.000	-1120.000	-1062.000	-1962.000	-538.000	-1017.000
18.	9:10:59:45	-1719.000	-1054.000	-204.000	-1113.000	-1088.000	-1962.000	-545.000	-1092.000
19.	9:11:0:45	-1749.000	-1064.000	-217.000	-1110.000	-1113.000	-1958.000	-533.000	-1176.000
20.	9:11:2:45	-1749.000	-1065.000	-211.000	-1113.000	-1119.000	-1951.000	-518.000	-1216.000
21.	9:11:4:45	-1762.000	-1074.000	-227.000	-1113.000	-1141.000	-1950.000	-516.000	-1292.000
22.	9:11:6:45	-1764.000	-1074.000	-225.000	-1116.000	-1142.000	-1946.000	-509.000	-1332.000
23.	9:11:8:45	-1780.000	-1080.000	-245.000	-1115.000	-1155.000	-1937.000	-522.000	-1382.000
24.	9:11:10:45	-1785.000	-1078.000	-250.000	-1118.000	-1156.000	-1934.000	-521.000	-1412.000
25.	9:11:12:45	-1790.000	-1080.000	-252.000	-1119.000	-1161.000	-1933.000	-516.000	-1447.000
26.	9:11:14:45	-1795.000	-1081.000	-254.000	-1122.000	-1166.000	-1932.000	-512.000	-1479.000
27.	9:11:16:45	-1800.000	-1086.000	-257.000	-1124.000	-1165.000	-1930.000	-512.000	-1492.000
28.	9:11:18:45	-1802.000	-1079.000	-260.000	-1128.000	-1164.000	-1931.000	-512.000	-1499.000
29.	9:11:20:45	-1804.000	-1079.000	-259.000	-1131.000	-1164.000	-1931.000	-512.000	-1503.000
30.	9:11:22:45	-1805.000	-1076.000	-266.000	-1134.000	-1157.000	-1932.000	-516.000	-1487.000
31.	9:11:24:45	-1806.000	-1074.000	-266.000	-1137.000	-1154.000	-1932.000	-516.000	-1483.000
32.	9:11:25:45	-1806.000	-1074.000	-266.000	-1138.000	-1154.000	-1932.000	-515.000	-1484.000
33.	9:12:56:17	-1775.000	-1028.000	-177.000	-1202.000	-1087.000	-1933.000	-439.000	-1370.000
34.	13:10:34:54	-1867.000	-965.000	-81.000	-1555.000	-1013.000	-2029.000	-421.000	-1186.000
35.	14:9:21:38	-1849.000	-959.000	-90.000	-1507.000	-1006.000	-2011.000	-416.000	-1191.000
36.	17:13:58:49	-1919.000	-1004.000	-94.000	-1711.000	-1023.000	-2144.000	-420.000	-1190.000
37.	20:8:50:34	-1895.000	-974.000	-73.000	-1669.000	-1000.000	-2067.000	-429.000	-1155.000
38.	22:13:57:37	-1903.000	-976.000	-84.000	-1686.000	-998.000	-2101.000	-425.000	-1164.000
39.	27:8:55:39	-1911.000	-966.000	-72.000	-1740.000	-990.000	-2105.000	-429.000	-1139.000
40.	27:14:21:13	-1980.000	-987.000	-84.000	-1815.000	-1001.000	-2171.000	-423.000	-1154.000
41.	27:14:34:14	-2018.000	-1004.000	-129.000	-1849.000	-1016.000	-2207.000	-466.000	-1181.000
42.	27:14:35:14	-2049.000	-1019.000	-149.000	-1863.000	-1041.000	-2225.000	-478.000	-1229.000
43.	27:14:37:14	-2097.000	-1049.000	-185.000	-1887.000	-1093.000	-2255.000	-497.000	-1333.000
44.	27:14:39:14	-2136.000	-1075.000	-225.000	-1898.000	-1141.000	-2279.000	-520.000	-1432.000
45.	27:14:41:14	-2169.000	-1101.000	-254.000	-1906.000	-1191.000	-2295.000	-534.000	-1530.000
46.	27:14:43:14	-2206.000	-1103.000	-280.000	-1912.000	-1245.000	-2309.000	-544.000	-1665.000
47.	27:14:45:14	-2226.000	-1126.000	-303.000	-1921.000	-1311.000	-2319.000	-549.000	-1935.000
48.	27:14:47:14	-2274.000	-1155.000	-315.000	-1926.000	-1374.000	-2309.000	-548.000	-2137.000
49.	27:14:49:14	-2311.000	-1177.000	-322.000	-1935.000	-1450.000	-2302.000	-542.000	-2390.000
50.	27:14:51:14	-2353.000	-1205.000	-347.000	-1940.000	-1539.000	-2304.000	-545.000	-2622.000
51.	27:14:53:14	-2419.000	-1227.000	-375.000	-1949.000	-1629.000	-2276.000	-542.000	-2874.000
52.	27:14:55:14	-2480.000	-1226.000	-412.000	-1954.000	-1716.000	-2197.000	-538.000	-3130.000
53.	27:14:57:14	-2544.000	-1217.000	-451.000	-1964.000	-1827.000	-2197.000	-527.000	-3431.000
54.	27:14:59:14	-2642.000	-1228.000	-517.000	-1947.000	-1944.000	-2183.000	-475.000	-3743.000

55.	27:15: 1:14	-2770.000	-1930.000	-2035.000	-2167.000	-391.000	-4024.000
56.	27:15: 3:14	-2859.000	-1927.000	-1863.000	-2156.000	-352.000	-4345.000
57.	27:15: 5:14	-2942.000	-1922.000	-1941.000	-2164.000	-322.000	-4750.000
58.	27:15: 6:14	-2980.000	-1920.000	-2062.000	-2179.000	-165.000	-4982.000
59.	27:15: 7:14	-3016.000	-1918.000	-2042.000	-2166.000	-78.000	-5263.000
60.	27:15: 8:14	-3034.000	-1921.000	-2053.000	-2261.000	-2.000	-5348.000
61.	27:15: 9:14	-3017.000	-1924.000	-1328.000	-2217.000	40.000	-5326.000
62.	27:15: 11:14	-2969.000	-1930.000	-1356.000	-2221.000	92.000	-5222.000
63.	27:15: 12:29	-2928.000	-1933.000	-1360.000	-2230.000	125.000	-5099.000
64.	27:15: 13:29	-2880.000	-1935.000	-1361.000	-2241.000	141.000	-4905.000
65.	27:15: 14:29	-2832.000	-1939.000	-1364.000	-2247.000	150.000	-4713.000
66.	27:15: 15:29	-2779.000	-1945.000	-1366.000	-2255.000	150.000	-4510.000
67.	27:15: 16:29	-2729.000	-1950.000	-1368.000	-2261.000	150.000	-4297.000
68.	27:15: 17:29	-2673.000	-1957.000	-1369.000	-2268.000	128.000	-4091.000
69.	27:15: 18:29	-2616.000	-1969.000	-1372.000	-2259.000	59.000	-3932.000
70.	27:15: 19:29	-2566.000	-1988.000	-1376.000	-2223.000	-109.000	-3787.000
71.	27:15: 20:29	-2504.000	-2009.000	-1378.000	-2200.000	-265.000	-3671.000

STRAIN CHANNELS

	TIME	CH.39	CH.38	CH.37	CH.36	CH.35	CH.34	CH.33	CH.32
1.	9:10:38:45	-101.000	-16.000	-223.000	-54.000	-16.000	-77.000	-24.000	-47.000
2.	9:10:39:45	-232.000	-50.000	-340.000	-115.000	-71.000	-161.000	-75.000	-109.000
3.	9:10:40:45	-261.000	-67.000	-395.000	-158.000	-95.000	-229.000	-109.000	-152.000
4.	9:10:41:45	-309.000	-97.000	-442.000	-204.000	-140.000	-288.000	-140.000	-193.000
5.	9:10:42:45	-347.000	-128.000	-484.000	-251.000	-179.000	-349.000	-174.000	-245.000
6.	9:10:43:45	-380.000	-149.000	-516.000	-290.000	-197.000	-410.000	-202.000	-281.000
7.	9:10:44:45	-411.000	-175.000	-545.000	-323.000	-223.000	-465.000	-230.000	-321.000
8.	9:10:45:45	-440.000	-206.000	-573.000	-376.000	-251.000	-520.000	-258.000	-365.000
9.	9:10:46:45	-454.000	-220.000	-592.000	-410.000	-258.000	-579.000	-282.000	-399.000
10.	9:10:47:45	-485.000	-241.000	-604.000	-445.000	-271.000	-626.000	-302.000	-435.000
11.	9:10:48:45	-502.000	-276.000	-621.000	-478.000	-285.000	-681.000	-322.000	-472.000
12.	9:10:49:45	-507.000	-282.000	-618.000	-503.000	-294.000	-729.000	-342.000	-499.000
13.	9:10:51:45	-512.000	-286.000	-621.000	-508.000	-296.000	-740.000	-348.000	-506.000
14.	9:10:53:45	-551.000	-291.000	-638.000	-512.000	-297.000	-748.000	-351.000	-509.000
15.	9:10:54:45	-551.000	-310.000	-644.000	-554.000	-310.000	-790.000	-369.000	-543.000
16.	9:10:56:45	-551.000	-310.000	-644.000	-554.000	-310.000	-790.000	-369.000	-543.000
17.	9:10:58:45	-597.000	-328.000	-670.000	-560.000	-318.000	-820.000	-379.000	-552.000
18.	9:10:59:45	-637.000	-324.000	-685.000	-597.000	-332.000	-878.000	-401.000	-588.000
19.	9:11:0:45	-655.000	-314.000	-685.000	-624.000	-330.000	-944.000	-415.000	-615.000
20.	9:11:2:45	-655.000	-324.000	-685.000	-624.000	-330.000	-944.000	-415.000	-615.000
21.	9:11:4:45	-696.000	-323.000	-676.000	-658.000	-305.000	-1058.000	-441.000	-648.000
22.	9:11:6:45	-709.000	-322.000	-680.000	-659.000	-298.000	-1111.000	-446.000	-649.000
23.	9:11:8:45	-738.000	-339.000	-698.000	-691.000	-321.000	-1175.000	-465.000	-680.000
24.	9:11:10:45	-748.000	-339.000	-701.000	-695.000	-321.000	-1214.000	-468.000	-683.000
25.	9:11:12:45	-762.000	-334.000	-707.000	-701.000	-318.000	-1255.000	-473.000	-687.000
26.	9:11:14:45	-773.000	-331.000	-710.000	-704.000	-315.000	-1292.000	-475.000	-690.000
27.	9:11:16:45	-775.000	-333.000	-712.000	-704.000	-316.000	-1306.000	-476.000	-691.000
28.	9:11:18:45	-777.000	-333.000	-714.000	-706.000	-317.000	-1318.000	-476.000	-691.000
29.	9:11:20:45	-779.000	-332.000	-714.000	-705.000	-318.000	-1322.000	-476.000	-692.000
30.	9:11:22:45	-770.000	-339.000	-711.000	-703.000	-324.000	-1307.000	-473.000	-690.000
31.	9:11:24:45	-768.000	-336.000	-710.000	-703.000	-325.000	-1304.000	-472.000	-689.000
32.	9:11:25:45	-769.000	-338.000	-711.000	-703.000	-325.000	-1306.000	-472.000	-689.000
33.	9:12:56:17	-699.000	-229.000	-649.000	-567.000	-241.000	-1189.000	-392.000	-629.000
34.	13:10:34:54	-587.000	-162.000	-514.000	-429.000	-145.000	-1033.000	-364.000	-531.000
35.	14:9:21:38	-599.000	-168.000	-533.000	-429.000	-155.000	-1026.000	-360.000	-455.000
36.	17:13:58:49	-607.000	-182.000	-556.000	-422.000	-173.000	-1014.000	-352.000	-442.000
37.	20:8:50:34	-577.000	-173.000	-515.000	-399.000	-151.000	-997.000	-349.000	-423.000
38.	22:13:57:37	-593.000	-179.000	-541.000	-399.000	-165.000	-989.000	-341.000	-426.000
39.	27:8:55:39	-578.000	-173.000	-521.000	-377.000	-155.000	-969.000	-336.000	-414.000
40.	27:14:21:3	-595.000	-182.000	-546.000	-387.000	-171.000	-973.000	-350.000	-423.000
41.	27:14:34:14	-612.000	-230.000	-552.000	-454.000	-217.000	-1003.000	-395.000	-439.000
42.	27:14:35:14	-642.000	-246.000	-571.000	-486.000	-234.000	-1057.000	-417.000	-463.000
43.	27:14:37:14	-707.000	-275.000	-612.000	-555.000	-258.000	-1160.000	-460.000	-525.000
44.	27:14:39:14	-768.000	-313.000	-663.000	-626.000	-283.000	-1257.000	-503.000	-593.000
45.	27:14:41:14	-831.000	-340.000	-693.000	-690.000	-307.000	-1357.000	-545.000	-646.000
46.	27:14:43:14	-900.000	-368.000	-737.000	-754.000	-322.000	-1518.000	-583.000	-718.000
47.	27:14:45:14	-986.000	-385.000	-789.000	-822.000	-339.000	-1872.000	-643.000	-780.000
48.	27:14:47:14	-1069.000	-404.000	-838.000	-879.000	-354.000	-2143.000	-692.000	-834.000
49.	27:14:49:14	-1180.000	-409.000	-894.000	-935.000	-353.000	-2461.000	-737.000	-831.000
50.	27:14:51:14	-1289.000	-410.000	-942.000	-991.000	-348.000	-2753.000	-820.000	-921.000
51.	27:14:53:14	-1387.000	-407.000	-972.000	-1037.000	-333.000	-3008.000	-834.000	-971.000
52.	27:14:55:14	-1365.000	-405.000	-959.000	-1076.000	-287.000	-3224.000	-822.000	-987.000
53.	27:14:57:14	-1220.000	-352.000	-661.000	-1010.000	-209.000	-3377.000	-810.000	-905.000
54.	27:14:59:14	-1179.000	-309.000	-616.000	-994.000	-163.000	-3629.000	-859.000	-833.000

55.	27:15:1:14	-1096.000	-269.000	-559.000	-986.000	-144.000	-3941.000	-683.000	-879.000
56.	27:15:3:14	-1069.000	-242.000	-540.000	-999.000	-107.000	-4312.000	-921.000	-854.000
57.	27:15:5:14	-1107.000	-219.000	-552.000	-1007.000	-87.000	-4752.000	-960.000	-890.000
58.	27:15:6:14	-1126.000	-207.000	-558.000	-1016.000	-86.000	-5013.000	-984.000	-897.000
59.	27:15:7:14	-1156.000	-181.000	-524.000	-1020.000	-69.000	-5322.000	-1008.000	-924.000
60.	27:15:8:14	-1168.000	-169.000	-498.000	-1020.000	-59.000	-5440.000	-1013.000	-911.000
61.	27:15:9:14	-1158.000	-142.000	-431.000	-987.000	-45.000	-5448.000	-980.000	-864.000
62.	27:15:11:14	-1064.000	-64.000	-345.000	-872.000	6.000	-5339.000	-904.000	-753.000
63.	27:15:12:29	-988.000	-5.000	-285.000	-776.000	28.000	-5190.000	-827.000	-667.000
64.	27:15:13:29	-855.000	34.000	-225.000	-666.000	42.000	-4998.000	-743.000	-553.000
65.	27:15:14:29	-761.000	68.000	-163.000	-528.000	49.000	-4796.000	-661.000	-440.000
66.	27:15:15:29	-646.000	107.000	-100.000	-404.000	50.000	-4592.000	-578.000	-322.000
67.	27:15:16:29	-4.000	136.000	-37.000	-285.000	51.000	-4396.000	-495.000	-207.000
68.	27:15:17:29	-394.000	164.000	34.000	-172.000	44.000	-4219.000	-405.000	-78.000
69.	27:15:18:29	-249.000	184.000	111.000	-81.000	17.000	-4075.000	-306.000	50.000
70.	27:15:19:29	-59.000	177.000	172.000	-61.000	-39.000	-3520.000	-202.000	96.000
71.	27:15:20:29	100.000	164.000	179.000	-54.000	-81.000	-3814.000	-97.000	92.000

STRAIN CHANNELS

	TIME	CH. 31	CH. 30	CH.
1.	9:10:38:45	-169.000	-25.000	
2.	9:10:39:45	-306.000	-66.000	
3.	9:10:40:45	-374.000	-87.000	
4.	9:10:41:45	-421.000	-117.000	
5.	9:10:42:45	-465.000	-148.000	
6.	9:10:43:45	-508.000	-167.000	
7.	9:10:44:45	-547.000	-191.000	
8.	9:10:45:45	-585.000	-220.000	
9.	9:10:46:45	-624.000	-234.000	
10.	9:10:47:45	-650.000	-255.000	
11.	9:10:48:45	-676.000	-273.000	
12.	9:10:49:45	-701.000	-293.000	
13.	9:10:51:45	-712.000	-297.000	
14.	9:10:53:45	-718.000	-298.000	
15.	9:10:54:45	-747.000	-304.000	
16.	9:10:56:45	-755.000	-320.000	
17.	9:10:58:45	-763.000	-319.000	
18.	9:10:59:45	-795.000	-336.000	
19.	9:11:00:45	-830.000	-332.000	
20.	9:11:02:45	-840.000	-323.000	
21.	9:11:04:45	-875.000	-332.000	
22.	9:11:06:45	-883.000	-331.000	
23.	9:11:08:45	-907.000	-349.000	
24.	9:11:10:45	-915.000	-348.000	
25.	9:11:12:45	-925.000	-344.000	
26.	9:11:14:45	-934.000	-342.000	
27.	9:11:16:45	-935.000	-343.000	
28.	9:11:18:45	-936.000	-344.000	
29.	9:11:20:45	-937.000	-344.000	
30.	9:11:22:45	-928.000	-350.000	
31.	9:11:24:45	-927.000	-349.000	
32.	9:11:25:45	-928.000	-350.000	
33.	9:12:56:17	-857.000	-244.000	
34.	13:10:34:54	-741.000	-158.000	
35.	14:09:21:38	-753.000	-172.000	
36.	17:13:58:49	-755.000	-192.000	
37.	20:08:50:34	-723.000	-162.000	
38.	22:13:57:37	-740.000	-183.000	
39.	27:08:55:39	-723.000	-172.000	
40.	27:14:21:03	-740.000	-191.000	
41.	27:14:34:14	-753.000	-241.000	
42.	27:14:35:14	-783.000	-256.000	
43.	27:14:37:14	-844.000	-285.000	
44.	27:14:39:14	-902.000	-321.000	
45.	27:14:41:14	-962.000	-348.000	
46.	27:14:43:14	-1028.000	-376.000	
47.	27:14:45:14	-1106.000	-394.000	
48.	27:14:47:14	-1178.000	-417.000	
49.	27:14:49:14	-1274.000	-422.000	
50.	27:14:51:14	-1356.000	-424.000	
51.	27:14:53:14	-1406.000	-421.000	
52.	27:14:55:14	-1412.000	-415.000	
53.	27:14:57:14	-1196.000	-373.000	
54.	27:14:59:14	-1168.000	-328.000	
55.	27:15:01:14	-1156.000	-282.000	

56.	27:15: 3:14	-1156.000	-250.000
57.	27:15: 5:14	-1190.000	-230.000
58.	27:15: 6:14	-1224.000	-223.000
59.	27:15: 7:14	-1329.000	-207.000
60.	27:15: 8:14	-1401.000	-220.000
61.	27:15: 9:14	-1413.000	-205.000
62.	27:15:11:14	-1350.000	-129.000
63.	27:15:12:29	-1266.000	-63.000
64.	27:15:13:29	-1147.000	-32.000
65.	27:15:14:29	-1023.000	6.000
66.	27:15:15:29	-893.000	46.000
67.	27:15:16:29	-752.000	78.000
68.	27:15:17:29	-595.000	117.300
69.	27:15:18:29	-420.000	167.000
70.	27:15:19:29	-187.000	185.300
71.	27:15:20:29	30.000	185.000

DISPLACEMENT CHANNELS

	TIME	CH.19	CH.18	CH.17	CH.16	CH.15	CH.14	CH.13	CH.12
1.	9:10:38:45	0.001	-0.001	0.032	0.002	0.006	0.004	0.020	0.006
2.	9:10:39:45	0.001	-0.001	0.061	0.001	0.010	0.014	0.048	0.006
3.	9:10:40:45	0.001	-0.001	0.061	0.016	0.008	0.022	0.048	0.008
4.	9:10:41:45	0.001	-0.001	0.090	0.028	0.010	0.032	0.078	0.008
5.	9:10:42:45	0.001	-0.001	0.123	0.028	0.012	0.022	0.022	0.006
6.	9:10:43:45	0.001	-0.001	0.178	0.028	0.012	0.022	0.103	0.006
7.	9:10:44:45	0.001	-0.001	0.210	0.028	0.012	0.022	0.136	0.008
8.	9:10:45:45	0.001	-0.001	0.298	0.028	0.012	0.022	0.166	0.008
9.	9:10:46:45	0.001	-0.001	0.357	0.028	0.032	0.022	0.194	0.006
10.	9:10:47:45	0.001	-0.001	0.447	0.028	0.042	0.022	0.224	0.006
11.	9:10:48:45	0.0	-0.001	0.625	0.028	0.042	0.022	0.252	0.006
12.	9:10:49:45	0.0	-0.001	0.832	0.028	0.044	0.022	0.312	0.006
13.	9:10:51:45	0.0	-0.001	1.157	0.028	0.046	0.022	0.340	0.006
14.	9:10:53:45	0.0	-0.001	1.335	0.028	0.046	0.022	0.354	0.008
15.	9:10:54:45	0.0	-0.001	1.454	0.028	0.046	0.022	0.370	0.008
16.	9:10:56:45	0.0	-0.001	1.692	0.028	0.046	0.022	0.400	0.008
17.	9:10:58:45	0.0	-0.001	1.811	0.028	0.046	0.024	0.430	0.006
18.	9:10:59:45	0.0	-0.001	1.900	0.028	0.048	0.024	0.456	0.006
19.	9:11:0:45	0.0	-0.001	2.017	0.028	0.048	0.030	0.516	0.006
20.	9:11:2:45	0.0	-0.001	2.137	0.028	0.048	0.030	0.628	0.008
21.	9:11:4:45	0.0	-0.001	2.227	0.028	0.050	0.034	0.742	0.006
22.	9:11:6:45	0.0	-0.001	2.285	0.028	0.050	0.036	0.858	0.006
23.	9:11:8:45	0.0	-0.001	2.316	0.028	0.050	0.036	1.034	0.008
24.	9:11:10:45	0.0	-0.001	2.461	0.028	0.052	0.036	1.156	0.008
25.	9:11:12:45	0.0	-0.001	2.394	0.028	0.052	0.036	1.216	0.006
26.	9:11:14:45	0.001	-0.001	2.403	0.028	0.052	0.036	1.274	0.006
27.	9:11:16:45	0.001	-0.001	2.432	0.028	0.054	0.036	1.302	0.008
28.	9:11:18:45	0.001	-0.001	2.432	0.030	0.054	0.036	1.352	0.006
29.	9:11:20:45	0.002	-0.001	2.462	0.030	0.056	0.034	1.364	0.003
30.	9:11:22:45	0.002	-0.001	2.462	0.030	0.056	0.034	1.364	0.008
31.	9:11:24:45	0.002	-0.001	2.462	0.030	0.056	0.036	1.392	0.008
32.	9:11:25:45	0.002	-0.001	2.463	0.032	0.056	0.036	1.394	0.006
33.	9:11:26:17	0.008	0.0	2.495	0.030	0.064	0.034	1.424	0.008
34.	13:10:34:54	-0.018	-0.001	2.623	0.022	-0.055	0.022	1.394	0.116
35.	14:9:21:38	-0.018	-0.001	2.649	0.022	-0.070	0.024	1.396	0.136
36.	17:13:58:49	-0.019	-0.001	2.744	0.024	-0.052	0.024	1.394	0.192
37.	20:8:50:34	-0.019	-0.001	2.834	0.024	-0.034	0.024	1.376	0.266
38.	22:13:57:37	-0.023	-0.001	2.895	0.024	-0.032	0.024	1.366	0.318
39.	27:8:55:39	-0.023	-0.001	2.998	0.024	-0.130	0.022	1.352	0.372
40.	27:14:21:3	-0.023	0.0	3.007	0.028	-0.102	0.026	1.354	0.374
41.	27:14:34:14	-0.023	0.0	3.008	0.028	-0.102	0.026	1.386	0.374
42.	27:14:35:14	-0.023	0.0	3.012	0.028	-0.102	0.028	1.384	0.376
43.	27:14:37:14	-0.023	0.0	3.037	0.030	-0.102	0.028	1.386	0.376
44.	27:14:39:14	-0.023	0.0	3.037	0.028	-0.102	0.030	1.416	0.376
45.	27:14:41:14	-0.023	0.0	3.026	0.036	-0.102	0.038	1.414	0.376
46.	27:14:43:14	-0.023	0.0	3.066	0.040	-0.100	0.042	1.442	0.376
47.	27:14:45:14	-0.023	0.0	3.096	0.060	-0.070	0.044	1.476	0.376
48.	27:14:47:14	-0.023	0.0	3.095	0.060	-0.070	0.044	1.622	0.376
49.	27:14:49:14	-0.028	0.0	3.125	0.060	-0.070	0.044	1.914	0.376
50.	27:14:51:14	-0.028	0.0	3.125	0.060	-0.070	0.044	2.128	0.376
51.	27:14:53:14	-0.028	0.0	3.243	0.064	-0.052	0.044	2.298	0.376
52.	27:14:55:14	-0.028	0.0	3.301	0.090	-0.038	0.044	2.318	0.376
53.	27:14:57:14	-0.028	0.0	3.391	0.068	-0.038	0.044	2.506	0.376
54.	27:14:59:14	-0.029	0.0	3.450	0.050	-0.038	0.044	2.514	0.376

55.	27:15: 1:14	-0.029	0.014	3.538	0.092	-0.006	0.078	2.654	0.346
56.	27:15: 3:14	-0.029	-0.029	3.626	0.118	-0.006	0.102	2.746	0.376
57.	27:15: 5:14	-0.029	-0.028	3.626	0.118	-0.006	0.104	2.772	0.376
58.	27:15: 6:14	-0.029	-0.029	3.658	0.118	-0.006	0.104	2.800	0.356
59.	27:15: 7:14	-0.053	-0.029	3.698	0.118	0.024	0.102	2.830	0.356
60.	27:15: 8:14	-0.057	-0.029	3.716	0.118	0.026	0.110	2.844	0.354
61.	27:15: 9:14	-0.057	-0.028	3.715	0.118	0.026	0.110	2.860	0.354
62.	27:15: 11:14	-0.057	-0.028	4.001	0.118	0.022	0.110	2.860	0.346
63.	27:15: 12:29	-0.057	-0.029	3.754	0.118	0.010	0.160	2.860	0.346
64.	27:15: 13:29	-0.057	-0.029	3.715	0.118	-0.006	0.104	2.856	0.346
65.	27:15: 14:29	-0.057	-0.029	3.716	0.096	-0.004	0.102	2.850	0.346
66.	27:15: 15:29	-0.057	-0.028	3.685	0.090	-0.002	0.102	2.830	0.346
67.	27:15: 16:29	-0.057	-0.029	3.656	0.096	-0.004	0.074	2.828	0.346
68.	27:15: 17:29	-0.058	-0.029	3.626	0.090	-0.004	0.074	2.800	0.346
69.	27:15: 18:29	-0.057	-0.028	3.593	0.064	-0.032	0.072	2.770	0.354
70.	27:15: 19:29	-0.029	-0.028	3.593	0.064	-0.032	0.072	2.770	0.354
71.	27:15: 20:29	-0.029	-0.014	3.508	0.060	-0.042	0.048	2.684	0.376

LOAD CHANNELS

	CH. 29	CH. 28	CH. 27	CH. 25	CH. 22	CH. 21	CH. 20
1.	9:10:38.45	3620.000	4620.000	4870.000	5420.000	4440.000	3900.000
2.	9:10:39.45	7130.000	9060.000	10160.000	10520.000	8440.000	7830.000
3.	9:10:40.45	10150.000	12530.000	15110.000	14780.000	1250.000	1020.000
4.	9:10:41.45	13500.000	16930.000	19080.000	20160.000	16450.000	14030.000
5.	9:10:42.45	16840.000	20470.000	24220.000	25230.000	19910.000	18180.000
6.	9:10:43.45	19840.000	24100.000	28920.000	29240.000	23850.000	20970.000
7.	9:10:44.45	23320.000	27860.000	33100.000	34880.000	27900.000	24420.000
8.	9:10:45.45	26880.000	31570.000	38430.000	39220.000	31760.000	28380.000
9.	9:10:46.45	30090.000	35480.000	43230.000	43230.000	35440.000	31180.000
10.	9:10:47.45	33440.000	39610.000	46980.000	48160.000	39140.000	34370.000
11.	9:10:48.45	36690.000	43310.000	51950.000	52550.000	42200.000	37690.000
12.	9:10:49.45	39620.000	47610.000	55930.000	55930.000	46000.000	39990.000
13.	9:10:51.45	40400.000	48190.000	56610.000	56610.000	46470.000	40320.000
14.	9:10:53.45	40830.000	48510.000	56970.000	56970.000	46440.000	40640.000
15.	9:10:54.45	43790.000	49740.000	60810.000	62420.000	47840.000	43380.000
16.	9:10:56.45	44930.000	52780.000	61250.000	62360.000	51110.000	44570.000
17.	9:10:58.45	45540.000	53110.000	61670.000	62350.000	51640.000	45200.000
18.	9:10:59.45	48710.000	56380.000	66240.000	67120.000	55050.000	49000.000
19.	9:11:01.45	51230.000	57730.000	70460.000	71020.000	56700.000	51330.000
20.	9:11:02.45	50220.000	56050.000	70400.000	71050.000	57820.000	51200.000
21.	9:11:04.45	52790.000	60630.000	74200.000	75840.000	60100.000	55140.000
22.	9:11:06.45	52350.000	61490.000	74260.000	76460.000	61480.000	55290.000
23.	9:11:08.45	54600.000	61540.000	80040.000	82410.000	61860.000	59630.000
24.	9:11:10.45	55020.000	62650.000	79630.000	80450.000	63130.000	59300.000
25.	9:11:12.45	55240.000	63840.000	79690.000	81620.000	64450.000	59690.000
26.	9:11:14.45	55370.000	64650.000	79730.000	81620.000	65400.000	59750.000
27.	9:11:16.45	55440.000	64680.000	79740.000	81480.000	65520.000	59780.000
28.	9:11:18.45	55510.000	64510.000	79720.000	81380.000	65580.000	59790.000
29.	9:11:20.45	55520.000	64210.000	79700.000	81350.000	65120.000	59810.000
30.	9:11:22.45	55570.000	63320.000	79610.000	81350.000	65120.000	59810.000
31.	9:11:24.45	55460.000	61900.000	79450.000	78320.000	62330.000	57600.000
32.	9:11:26.45	55480.000	61830.000	79590.000	78770.000	62830.000	58000.000
33.	9:12:56.17	40320.000	47570.000	62210.000	63460.000	47860.000	43840.000
34.	13:10:34.54	28390.000	34800.000	43300.000	48390.000	33360.000	31830.000
35.	14:09:21.38	28050.000	34470.000	46680.000	42430.000	33270.000	31550.000
36.	17:13:58.49	26800.000	33520.000	45270.000	40070.000	30550.000	31150.000
37.	20:08:50.34	25340.000	32310.000	44760.000	38310.000	28700.000	30390.000
38.	22:13:57.37	25340.000	32310.000	44550.000	37160.000	28560.000	30080.000
39.	27:08:55.59	23980.000	31100.000	43250.000	36130.000	28560.000	29300.000
40.	27:14:21.13	24190.000	31320.000	43510.000	36400.000	27190.000	29490.000
41.	27:14:36.14	30770.000	37290.000	43500.000	43590.000	37890.000	31760.000
42.	27:14:35.14	34250.000	41000.000	47880.000	49660.000	46880.000	35460.000
43.	27:14:37.14	40430.000	48960.000	57720.000	58320.000	49760.000	42490.000
44.	27:14:39.14	46860.000	57390.000	66670.000	68260.000	57830.000	50180.000
45.	27:14:41.14	53290.000	64970.000	75500.000	77130.000	65720.000	55550.000
46.	27:14:43.14	59240.000	73530.000	84910.000	86160.000	73650.000	61150.000
47.	27:14:45.14	66070.000	80680.000	94650.000	96790.000	81260.000	70950.000
48.	27:14:47.14	73120.000	87810.000	105490.000	105450.000	89220.000	7660.000
49.	27:14:49.14	80500.000	94920.000	114800.000	115720.000	92290.000	84880.000
50.	27:14:51.14	84730.000	102210.000	122350.000	125130.000	105020.000	92370.000
51.	27:14:53.14	90920.000	110430.000	133400.000	133410.000	113390.000	98430.000
52.	27:14:55.14	96700.000	117860.000	141500.000	143150.000	120560.000	10440.000
53.	27:14:57.14	103040.000	125330.000	149370.000	152440.000	128370.000	112150.000
54.	27:14:59.14	110580.000	134090.000	159160.000	162420.000	137220.000	116930.000

55.	27:15: 1:14	110320.000	119260.000	141330.000	168570.000	167790.000	172010.000	144470.000	125660.000
56.	27:15: 3:14	122610.000	126200.000	148590.000	177510.000	177180.000	181130.000	151790.000	132950.000
57.	27:15: 5:14	128880.000	132140.000	156700.000	185780.000	185230.000	189420.000	159910.000	139130.000
58.	27:15: 6:14	132010.000	135470.000	160550.000	190450.000	189000.000	194160.000	163840.000	142660.000
59.	27:15: 7:14	134690.000	138120.000	164740.000	194780.000	193490.000	198800.000	168100.000	145640.000
60.	27:15: 8:14	134930.000	138000.000	164420.000	195060.000	192990.000	199340.000	168060.000	145820.000
61.	27:15: 9:14	130930.000	132910.000	157330.000	187690.000	190170.000	187990.000	162810.000	139280.000
62.	27:15: 11:14	116190.000	119000.000	147070.000	170050.000	177440.000	171300.000	149440.000	126870.000
63.	27:15: 12:29	103300.000	107360.000	134390.000	153390.000	164640.000	154130.000	132030.000	115680.000
64.	27:15: 13:29	91310.000	94830.000	122110.000	134580.000	144130.000	134640.000	117490.000	101200.000
65.	27:15: 14:29	78490.000	82910.000	106990.000	116460.000	124950.000	116140.000	102100.000	87750.000
66.	27:15: 15:29	65940.000	70250.000	89760.000	98730.000	104550.000	98250.000	84860.000	73560.000
67.	27:15: 16:29	53760.000	58560.000	74110.000	79560.000	86240.000	79640.000	69570.000	60230.000
68.	27:15: 17:29	41070.000	45260.000	57390.000	61000.000	65400.000	60900.000	53480.000	45590.000
69.	27:15: 18:29	27990.000	31720.000	39570.000	42230.000	44750.000	42400.000	36370.000	31580.000
70.	27:15: 19:29	15280.000	18510.000	22910.000	22710.000	24520.000	22829.000	20510.000	17760.000
71.	27:15: 20:29	5350.000	6600.000	9230.000	7410.000	8430.000	7190.000	7440.000	5960.000

ROD CHANNELS

	TIME	CH.57	CH.56	CH.55	CH.54	CH.53	CH.52	CH.51	CH.50
1.	9:10:38:45	25.624	12.812	-12.812	-64.059	12.812	25.624	64.059	25.624
2.	9:10:39:45	12.812	-12.812	-25.624	-204.989	12.812	76.871	140.930	51.247
3.	9:10:40:45	25.624	12.812	-38.435	-307.483	0.0	25.624	230.612	76.871
4.	9:10:41:45	25.624	12.812	-38.435	-307.483	-12.812	0.0	333.107	153.742
5.	9:10:42:45	25.624	12.812	-12.812	-256.236	-25.624	-12.812	345.918	128.118
6.	9:10:43:45	25.624	140.930	12.812	-115.306	-38.435	-64.059	254.671	76.871
7.	9:10:44:45	51.247	243.424	12.812	-51.247	-51.247	-76.871	256.236	25.624
8.	9:10:45:45	51.247	294.671	25.624	12.812	12.812	-38.435	204.989	0.0
9.	9:10:46:45	76.871	345.918	38.435	12.812	12.812	25.624	140.930	-12.812
10.	9:10:47:45	89.683	371.542	38.435	12.812	12.812	38.435	115.306	-12.812
11.	9:10:48:45	115.306	397.166	38.435	12.812	89.683	166.553	115.306	0.0
12.	9:10:49:45	140.930	461.225	38.435	12.812	192.177	307.483	128.118	0.0
13.	9:10:50:45	204.989	512.472	38.435	89.683	281.859	384.354	128.118	-12.812
14.	9:10:51:45	243.424	563.719	38.435	140.930	307.483	397.166	128.118	0.0
15.	9:10:52:45	269.048	589.343	38.435	192.177	333.107	448.413	115.306	12.812
16.	9:10:53:45	338.730	679.025	51.247	333.107	371.542	486.848	115.306	0.0
17.	9:10:54:45	435.601	730.272	64.059	512.472	422.789	538.095	76.871	0.0
18.	9:10:55:45	499.660	781.520	64.059	781.520	486.848	640.590	38.435	12.812
19.	9:11:0:45	589.343	781.520	269.048	1101.814	576.571	763.708	12.812	12.812
20.	9:11:1:45	717.461	819.955	691.837	1550.238	602.154	845.579	25.624	0.0
21.	9:11:2:45	781.520	794.331	1165.874	2062.699	589.343	819.955	12.812	-192.177
22.	9:11:3:45	832.767	781.520	1563.039	2434.281	563.719	743.024	25.624	-627.778
23.	9:11:4:45	922.449	781.520	2049.888	2933.902	550.907	653.402	25.624	-1178.685
24.	9:11:5:45	960.885	768.708	2126.758	2959.555	538.095	602.154	25.624	-1268.368
25.	9:11:6:45	1012.132	794.331	2139.570	2933.922	538.095	576.531	12.812	-1242.744
26.	9:11:7:45	1037.756	794.331	2139.570	2908.228	525.284	550.907	12.812	-1217.121
27.	9:11:8:45	1037.756	794.331	2165.194	2921.030	499.660	538.095	25.624	-1229.933
28.	9:11:9:45	1037.756	781.520	2190.817	2921.030	512.472	550.907	12.812	-1242.744
29.	9:11:10:45	1037.756	768.708	2216.441	2921.030	499.660	538.095	12.812	-1255.556
30.	9:11:11:45	1012.132	763.708	2242.064	2946.713	486.848	512.472	12.812	-1306.803
31.	9:11:12:45	1012.132	743.084	2229.253	2933.902	486.848	499.660	12.812	-1293.991
32.	9:11:13:45	1012.132	743.084	2229.253	2921.030	486.848	384.354	12.812	-1306.803
33.	9:12:56:17	871.202	627.778	1973.017	2485.439	422.789	384.354	12.812	-1050.567
34.	13:10:34:54	717.461	525.284	1678.345	1960.295	345.918	261.839	12.812	-832.767
35.	14:9:21:38	717.461	512.472	1678.345	1934.581	345.918	243.424	25.624	-832.767
36.	17:13:58:49	730.272	512.472	1614.286	1670.322	307.483	243.424	-12.812	-768.708
37.	20:8:50:34	730.272	538.095	1601.475	1819.275	294.671	230.612	-12.812	-755.896
38.	22:13:57:37	730.272	525.284	1537.416	1768.028	281.859	256.236	0.0	-717.461
39.	27:8:55:39	717.461	525.284	1498.980	1703.969	269.048	204.989	0.0	-679.025
40.	27:14:21:3	730.272	525.284	1473.357	1703.969	269.048	294.671	0.0	-666.213
41.	27:14:34:14	704.649	512.472	1550.228	1819.275	333.107	384.354	0.0	-717.461
42.	27:14:35:14	743.084	538.095	1601.475	1921.770	358.730	422.789	0.0	-743.084
43.	27:14:37:14	832.767	614.966	1742.405	2139.570	384.354	461.225	0.0	-832.767
44.	27:14:39:14	909.637	679.025	1819.275	2357.371	435.601	525.284	12.812	-871.202
45.	27:14:41:14	986.508	743.084	1960.205	2523.934	461.225	589.343	0.0	-973.697
46.	27:14:43:14	1050.567	807.143	2049.888	2677.664	499.660	653.402	12.812	-999.320
47.	27:14:45:14	1127.438	871.202	2318.935	3010.772	550.907	743.084	12.812	-1178.685
48.	27:14:47:14	1063.379	819.955	2382.994	3100.455	563.719	743.084	12.812	-1076.191
49.	27:14:49:14	918.073	691.837	2357.371	3113.267	614.966	794.331	25.624	-807.143
50.	27:14:51:14	858.390	602.154	2421.430	3126.079	730.272	922.449	12.812	-768.708
51.	27:14:53:14	819.955	563.719	2575.171	3279.809	832.767	1050.567	12.812	-960.885
52.	27:14:55:14	707.143	602.154	2703.289	3446.374	896.848	1127.438	12.812	-1165.874
53.	27:14:57:14	894.331	589.343	2780.160	3600.115	986.508	1242.744	0.0	-1281.870
54.	27:14:59:14	781.520	614.966	2780.160	3741.045	1063.379	1319.615	0.0	-1370.852

55.	27:15:	1:14	807.143	2780.160	3907.570	1127.438	1396.486	12.812	-1460.755
56.	27:15:	3:14	819.955	2754.536	4074.152	1165.874	1447.733	0.0	-1524.604
57.	27:15:	5:14	819.955	2792.972	4240.703	1229.933	1524.604	0.0	-1627.098
58.	27:15:	6:14	819.955	2805.784	4330.387	1288.368	1563.039	0.0	-1665.534
59.	27:15:	7:14	794.331	2895.466	4471.316	1306.803	1588.663	0.0	-1627.098
60.	27:15:	8:14	717.461	2997.961	4586.621	1332.427	1563.039	-25.624	-1678.345
61.	27:15:	9:14	743.084	2869.843	4343.199	1345.239	1537.416	-12.812	-1627.098
62.	27:15:	11:14	704.649	2575.171	3933.222	1306.803	1409.298	0.0	-1217.121
63.	27:15:	12:29	755.896	2203.629	3433.562	1165.874	1165.874	-12.812	-768.708
64.	27:15:	13:29	845.579	1780.840	2831.407	948.073	794.331	0.0	-371.542
65.	27:15:	14:29	755.896	1370.862	2242.064	819.955	538.095	-12.812	-89.683
66.	27:15:	15:29	832.767	832.767	1486.168	704.649	358.730	0.0	38.435
67.	27:15:	16:29	730.272	461.225	832.767	614.966	269.048	-12.812	12.812
68.	27:15:	17:29	589.343	128.118	192.177	538.095	204.989	0.0	25.624
69.	27:15:	18:29	384.354	25.624	12.812	461.225	153.742	0.0	38.435
70.	27:15:	19:29	243.424	12.812	0.0	320.295	76.871	-12.812	38.435
71.	27:15:	20:29	307.433	12.812	0.0	76.871	51.247	333.107	38.435

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1.	6398.750
2.	8707.500
3.	12621.250
4.	16578.750
5.	20786.250
6.	24455.000
7.	28418.750
8.	32681.250
9.	36415.000
10.	40147.500
11.	44015.000
12.	47381.250
13.	49337.500
14.	48250.000
15.	51383.750
16.	52590.000
17.	53056.250
18.	56981.250
19.	59878.750
20.	59980.000
21.	63343.750
22.	63651.250
23.	66568.750
24.	67.13.750
25.	67.90.000
26.	67991.250
27.	68000.000
28.	67947.500
29.	67877.500
30.	67091.250
31.	66922.500
32.	66925.000
33.	5161.250
34.	37061.250
35.	36620.000
36.	35231.250
37.	33926.250
38.	33555.000
39.	32055.000
40.	3292.500
41.	37322.500
42.	41427.500
43.	49517.500
44.	5712.500
45.	63393.750
46.	73262.500
47.	81666.250
48.	89206.250
49.	97368.750
50.	105482.500
51.	113231.250
52.	120582.500
53.	128412.500
54.	136920.000
55.	144426.250
56.	152245.000
57.	159648.750

58.	16351.500
59.	167295.000
60.	167327.500
61.	161138.750
62.	147170.000
63.	133177.500
64.	117536.250
65.	101973.750
66.	85735.000
67.	70258.750
68.	53761.250
69.	37073.750
70.	20627.500
71.	7207.500

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