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Atlas of Formability

Inconel 600
UNS N06600
Flow Stress Curves



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13. ABSTRACT (Maximum 200 words)

In this investigation, flow behavior of Inconel 600 alloy was studied by conducting compression tests over a wide range of temperatures and strain rates. Stress-strain curves were recorded for each test condition. These data are essential in metalworking process design or finite element analysis of high temperature deformation.

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ATLAS OF FORMABILITY

INCONEL 600

by

Howard A. Kuhn

**National Center for Excellence in Metalworking Technology
1450 Scalp Avenue
Johnstown, PA 15904**

for

**Naval Industrial Resource Support Activity
Building 75-2, Naval Base
Philadelphia, PA 19112-5078**

February 25, 1991

The views, opinions, and/or findings contained in this report are those of the authors and should not be construed as an official Department of the Navy position, policy, or decision, unless so designated by other documentation

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Availability Codes	
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<i>A-1</i>	

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Inconel 600

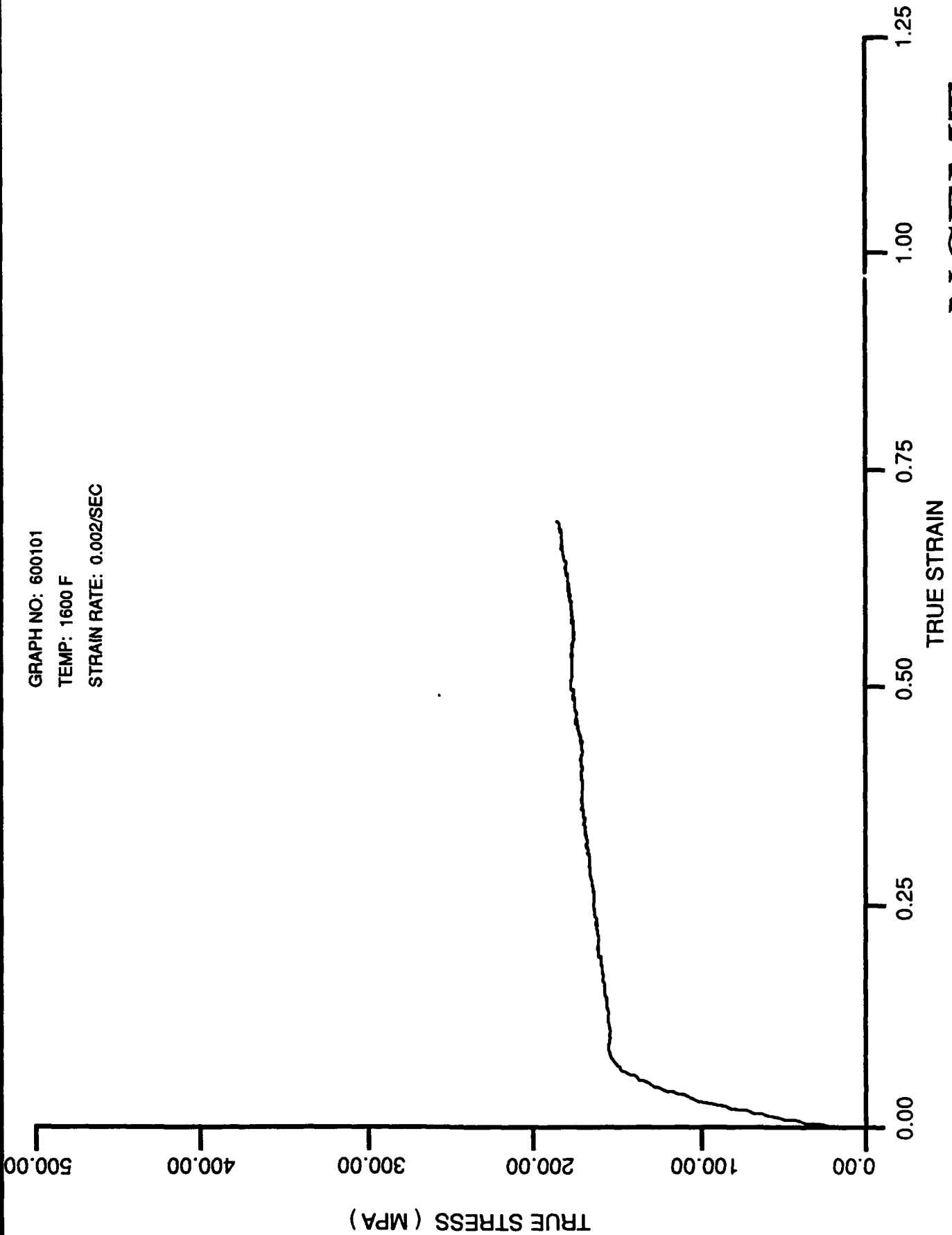
Composition:

C 0.15 MAX	Cr 14.00-17.00	Cu 0.50 MAX	Fe 6.00-10.00
Mn 1.00 MAX	Ni 72.00 MIN	S 0.015 MAX	Si 0.50 MAX

Testing Parameters

D _o (inch)	H _o (inch)	H _f (inch)	Strain Rate (1/sec.)	Temperature (deg. F)	Graph Number	Page Number
.500	.750	.373	0.002	1600	600101	2
.500	.750	.350	0.002	1700	600103	3
.500	.750	.325	0.002	1900	600105	4
.500	.750	.333	0.002	2100	600108	5
.500	.750	.353	0.002	2200	600110	6
-	-	-	0.002	Combination	600141	7
.500	.750	.385	0.020	1600	600111	8
.500	.750	.361	0.020	1700	600113	9
.500	.750	.371	0.020	1900	600115	10
.500	.750	.345	0.020	2100	600117	11
.500	.750	.309	0.020	2200	600119	12
-	-	-	0.020	Combination	600142	13
.500	.750	.383	0.200	1600	600121	14
.500	.750	.369	0.200	1700	600124	15
.500	.750	.363	0.200	1900	600126	16
.500	.750	.357	0.200	2100	600127	17
.500	.750	.341	0.200	2200	600130	18
-	-	-	0.200	Combination	600143	19
.500	.750	.360	0.002, 0.200	1600	600132	20
.500	.750	.297	0.002, 0.200	2200	600133	21

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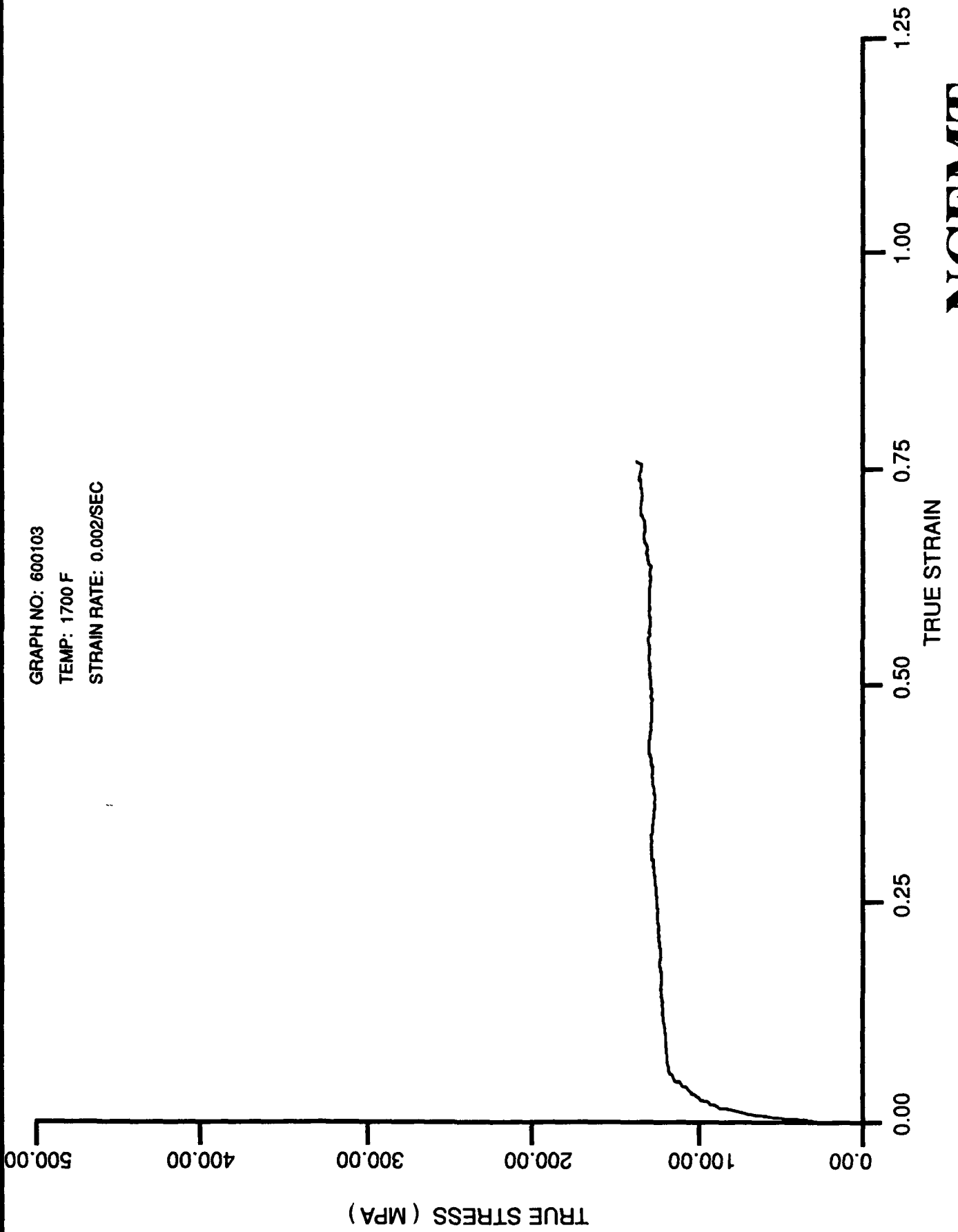


NCENT

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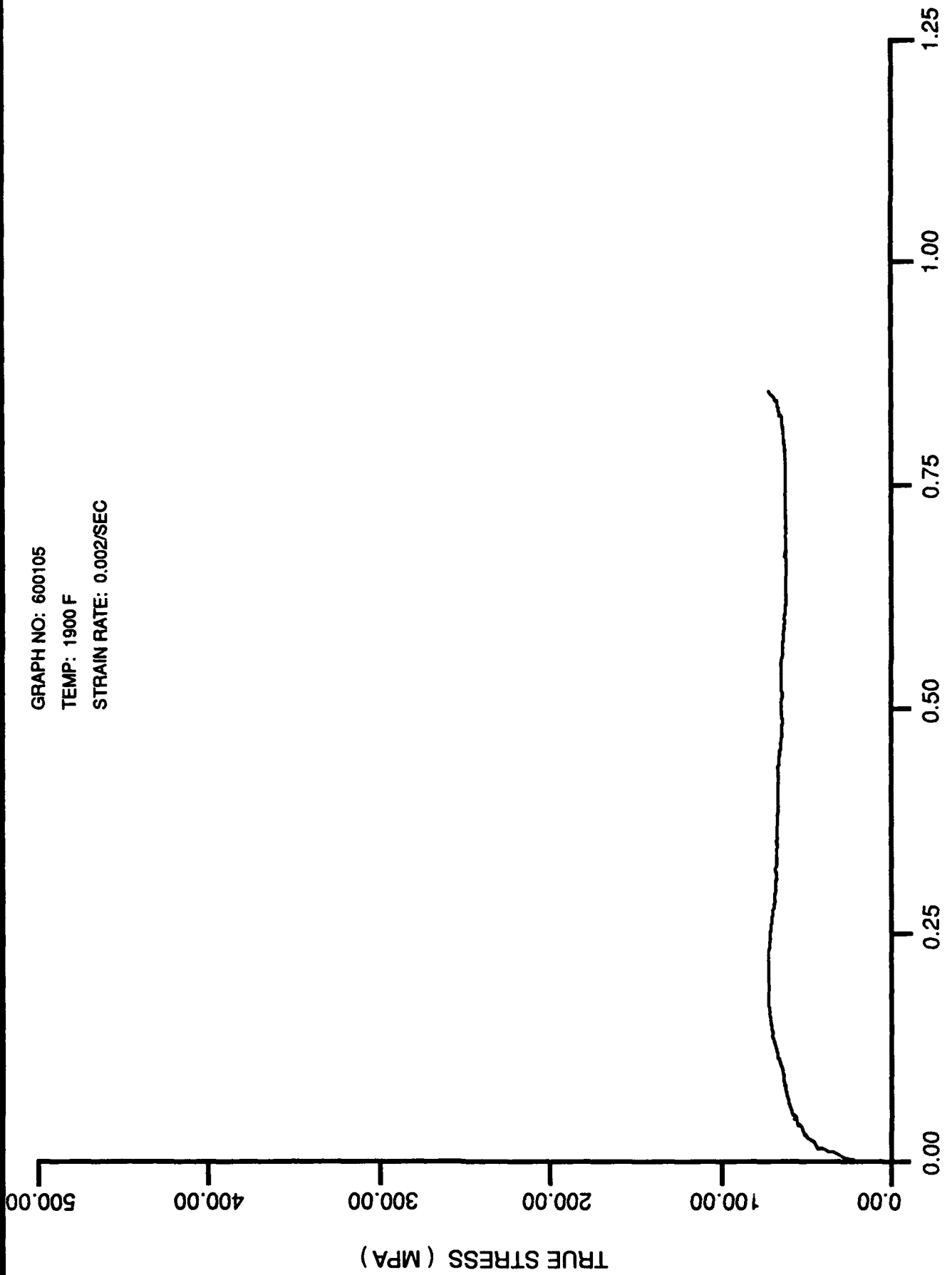


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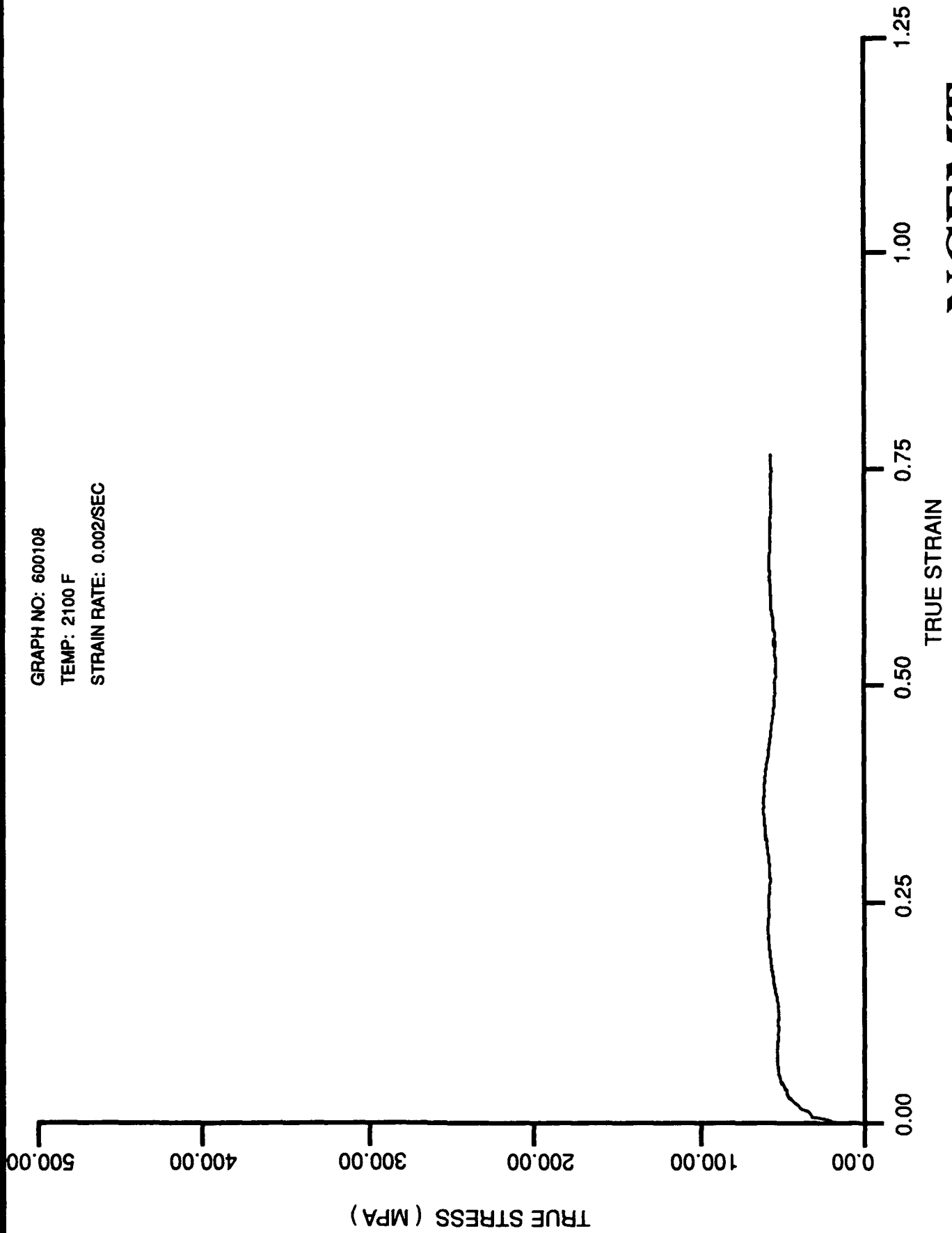
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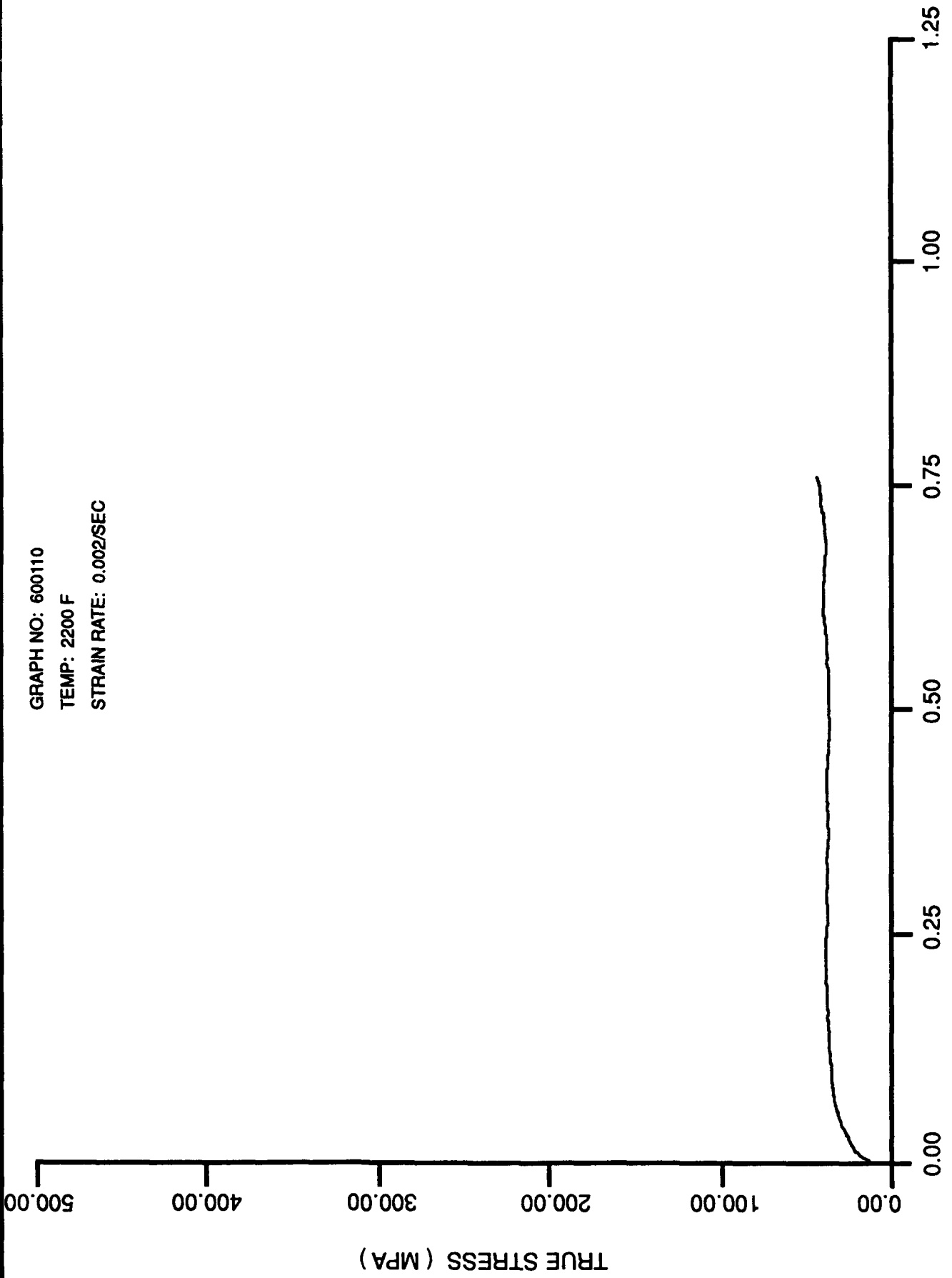
TRUE STRAIN

TRUE STRESS (MPA)

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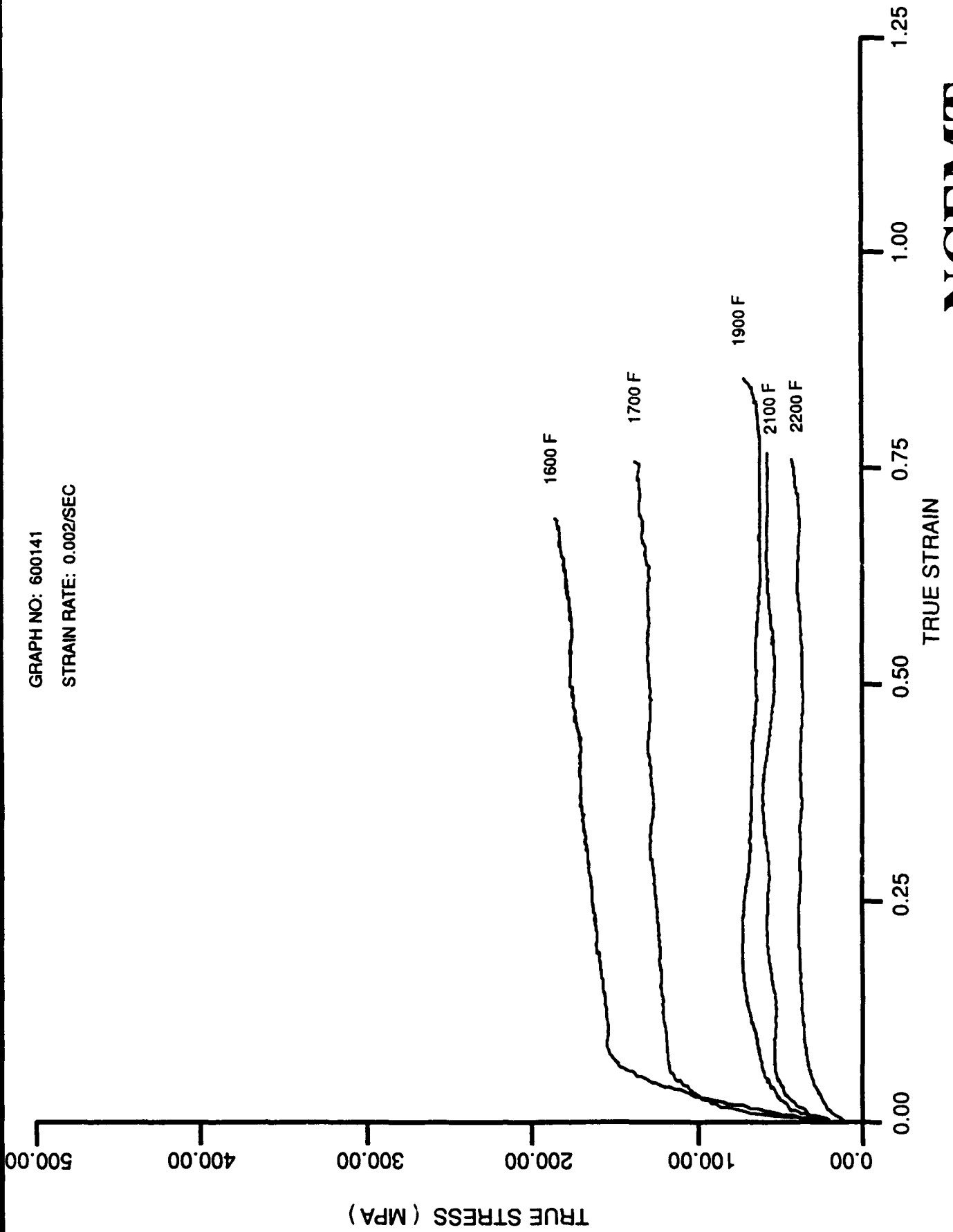
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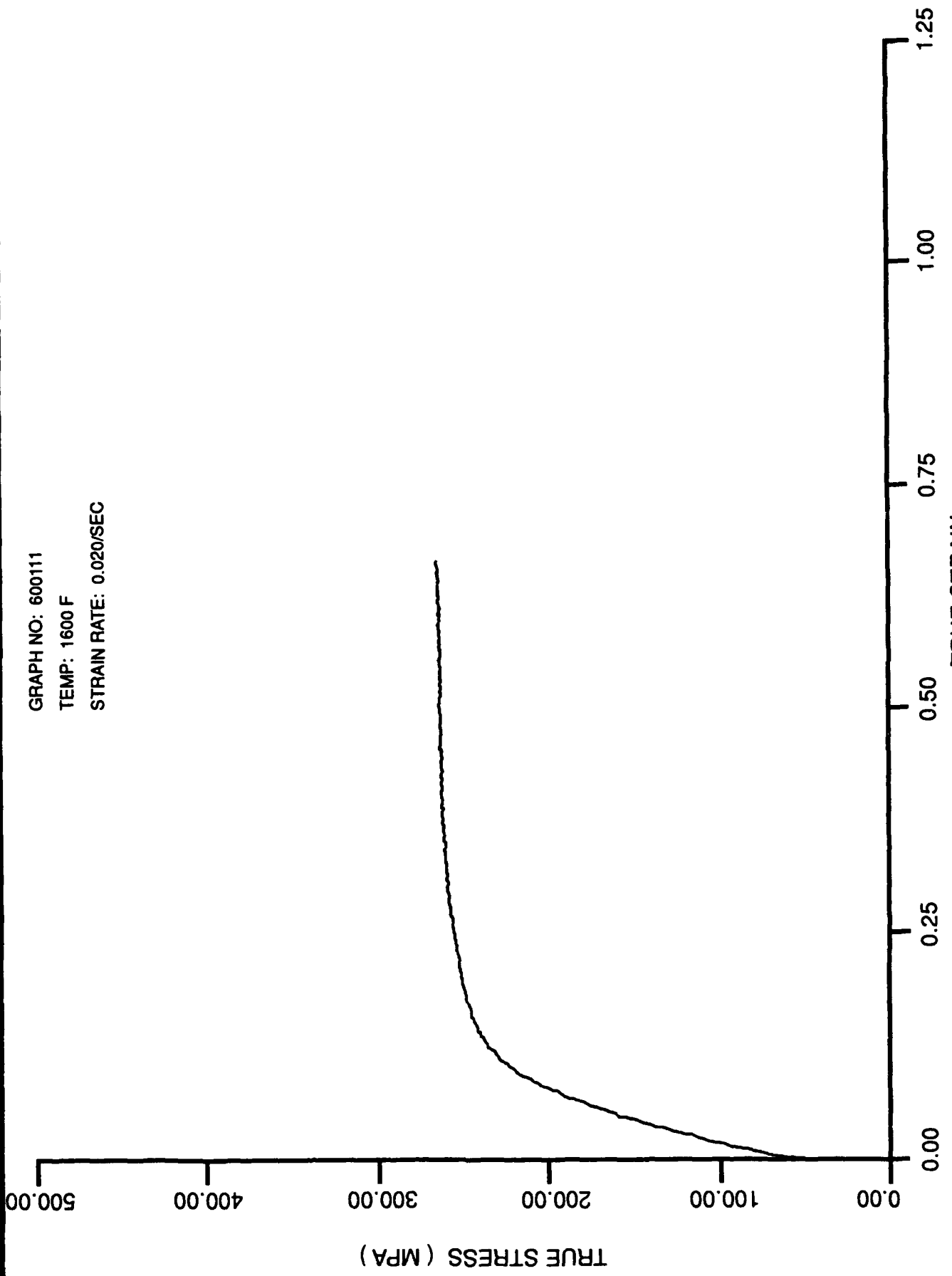
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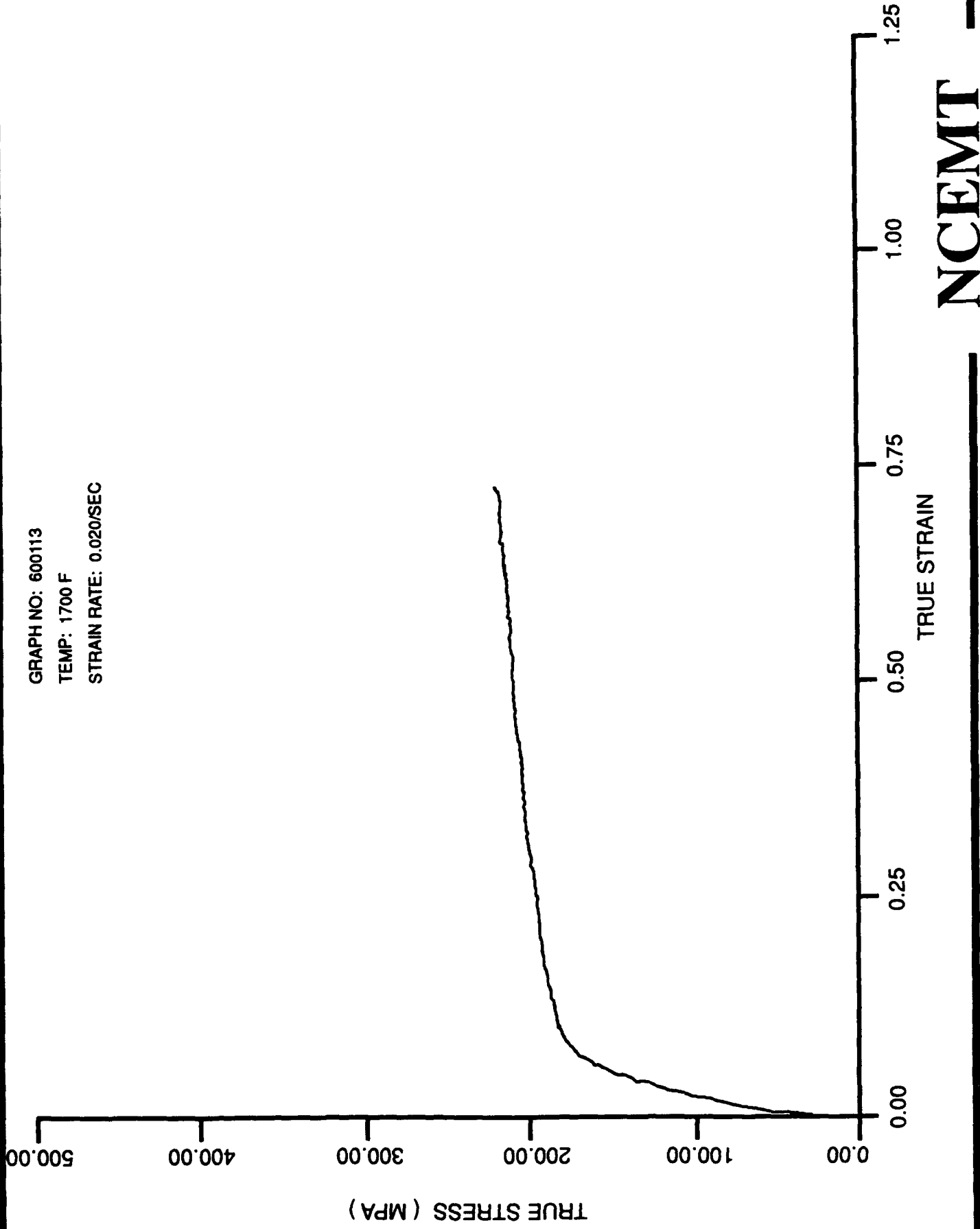
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TRUE STRAIN

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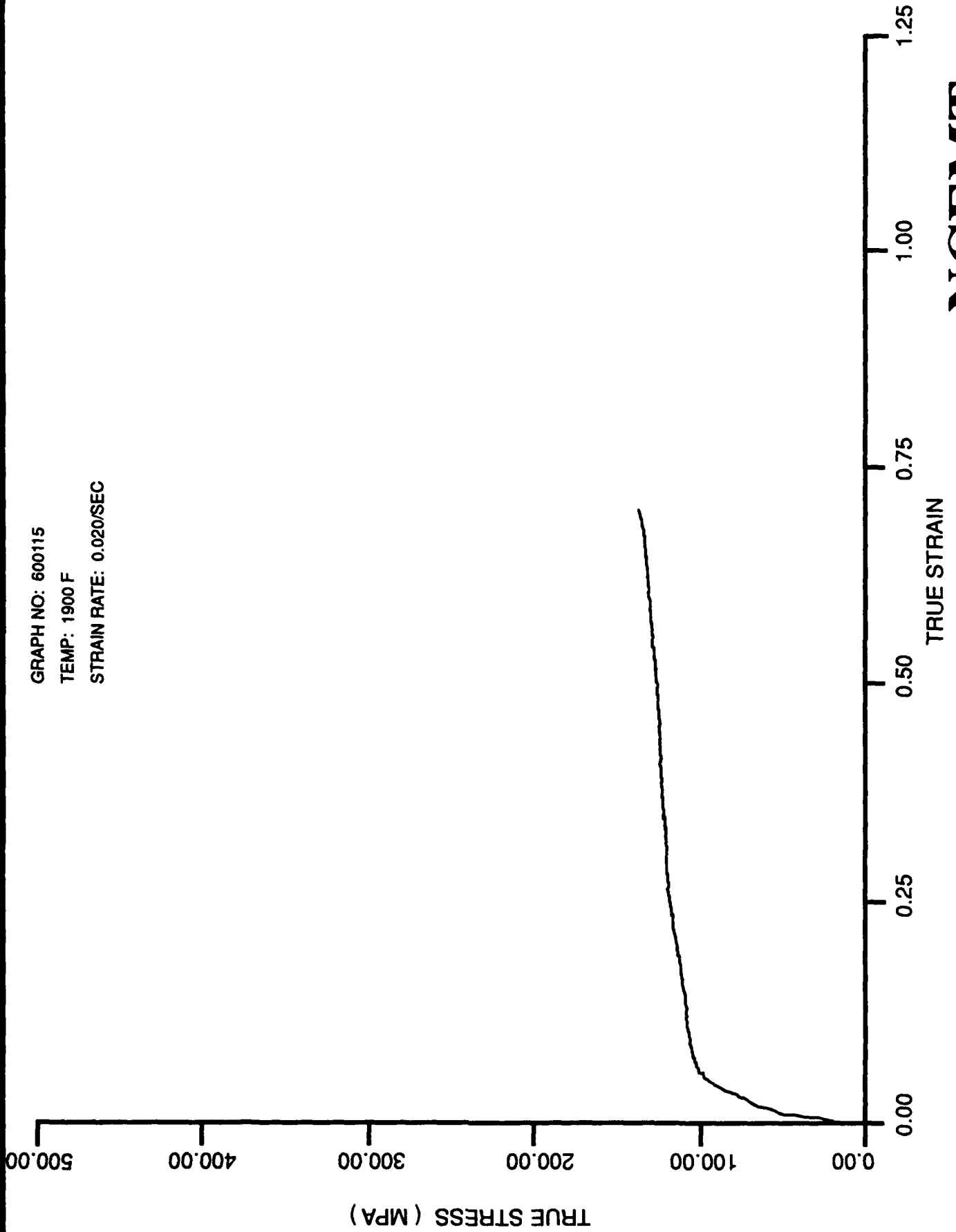


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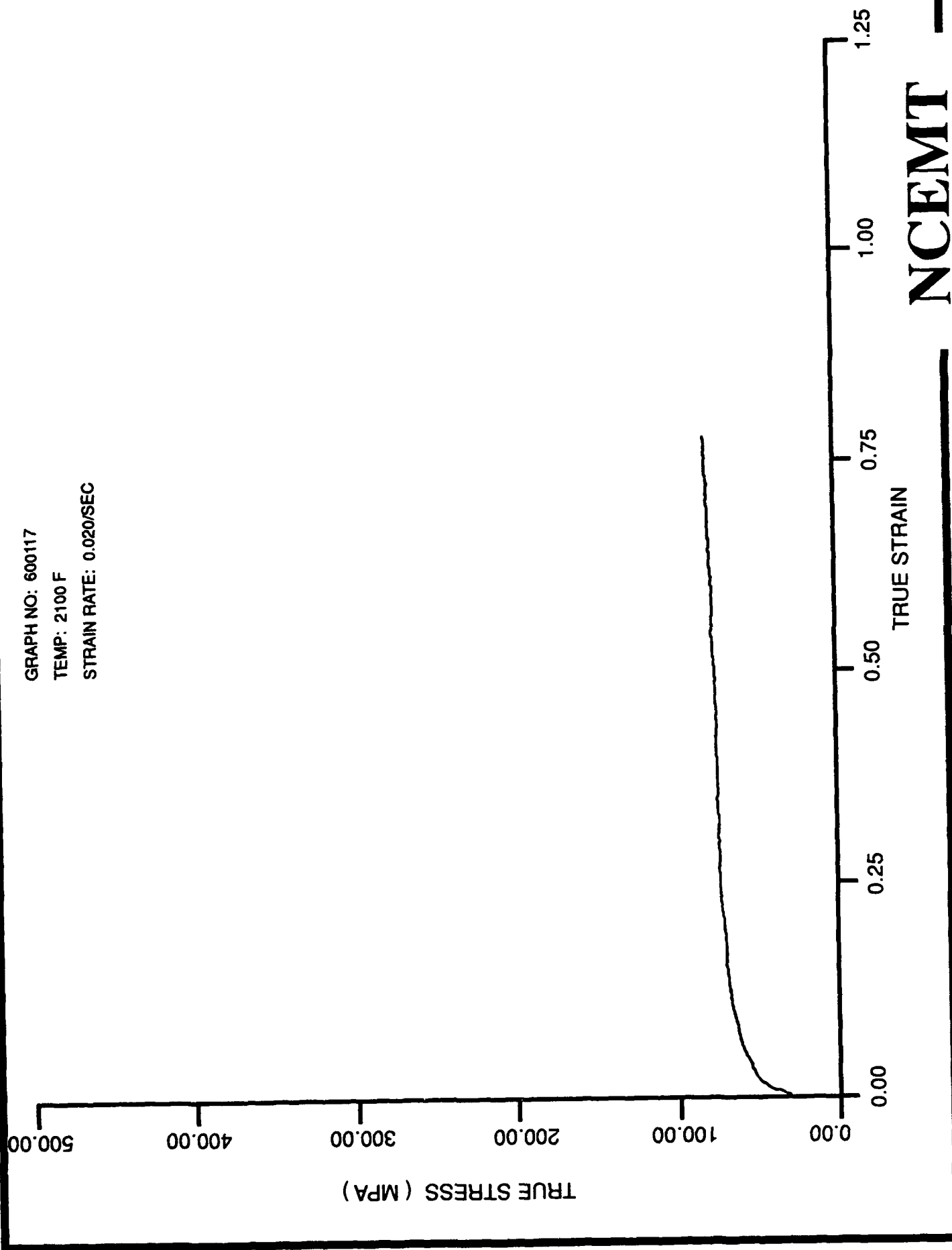


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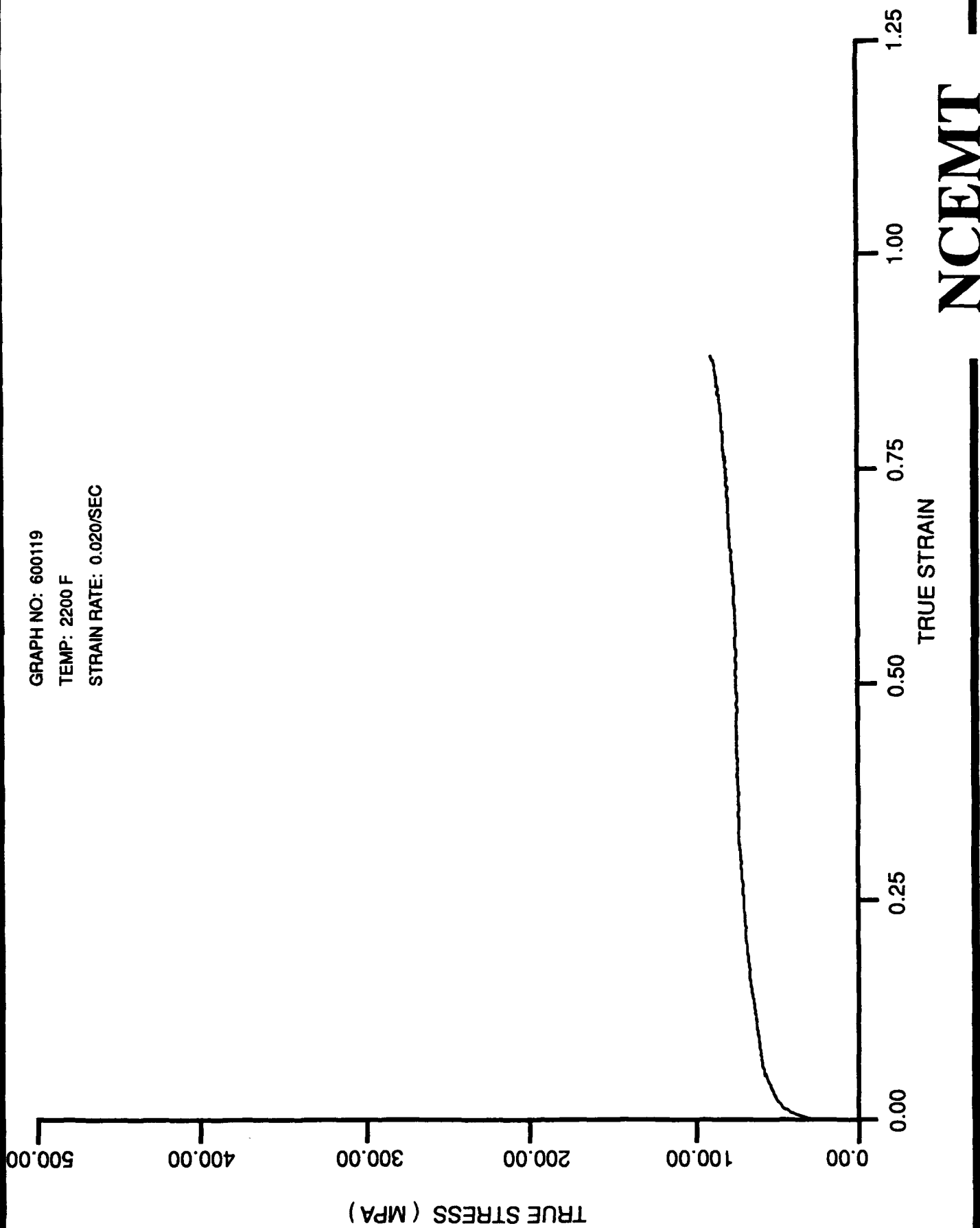


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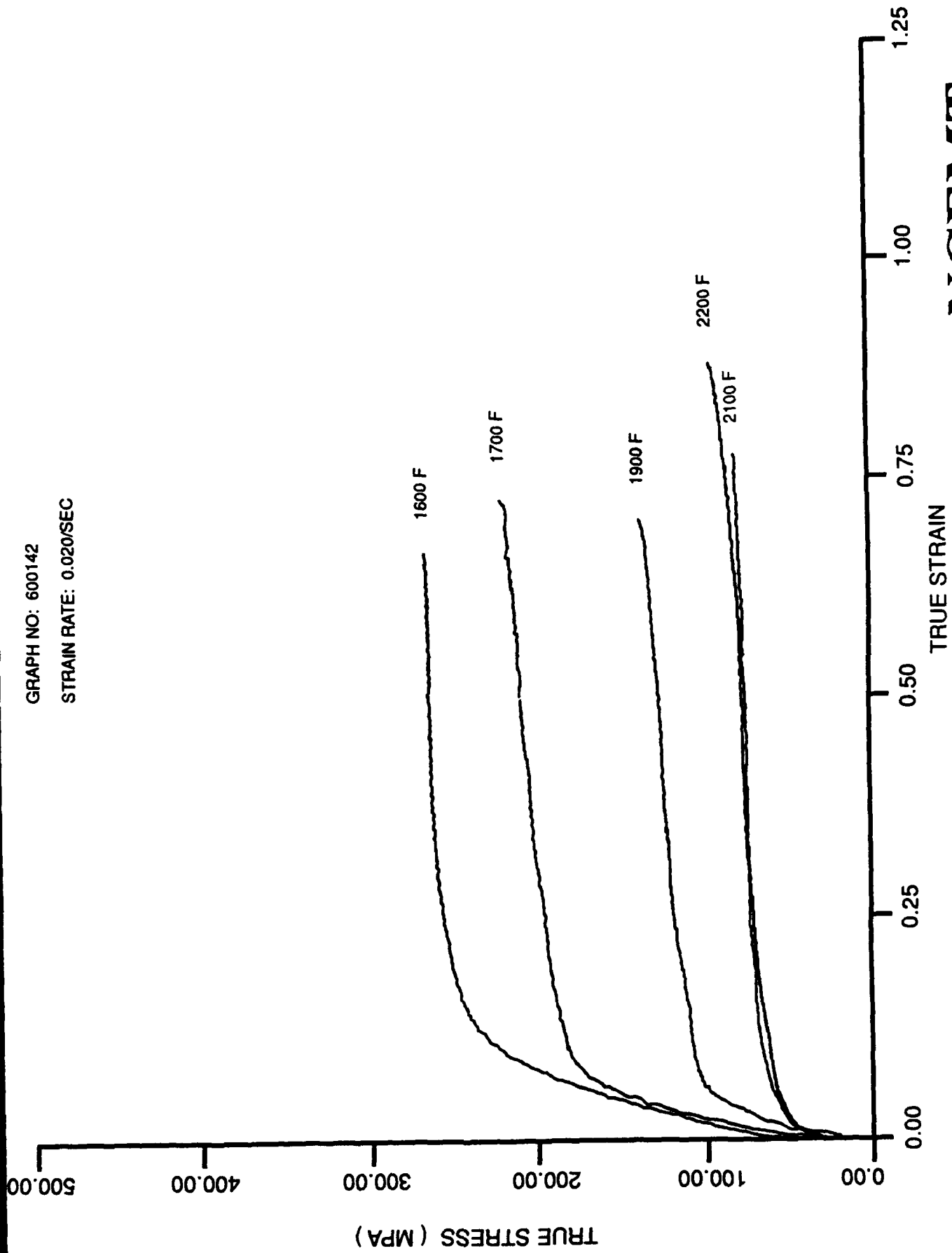
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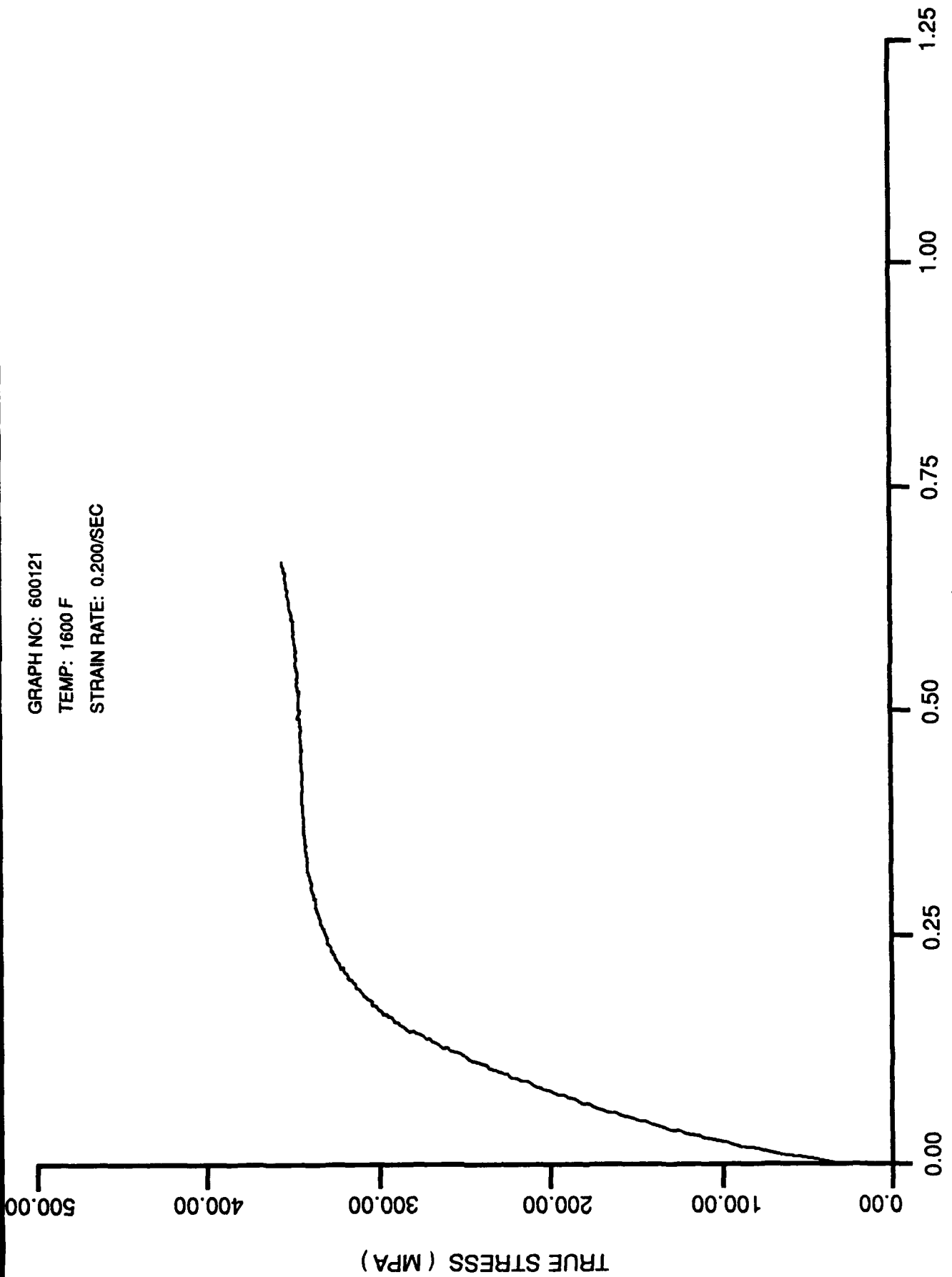


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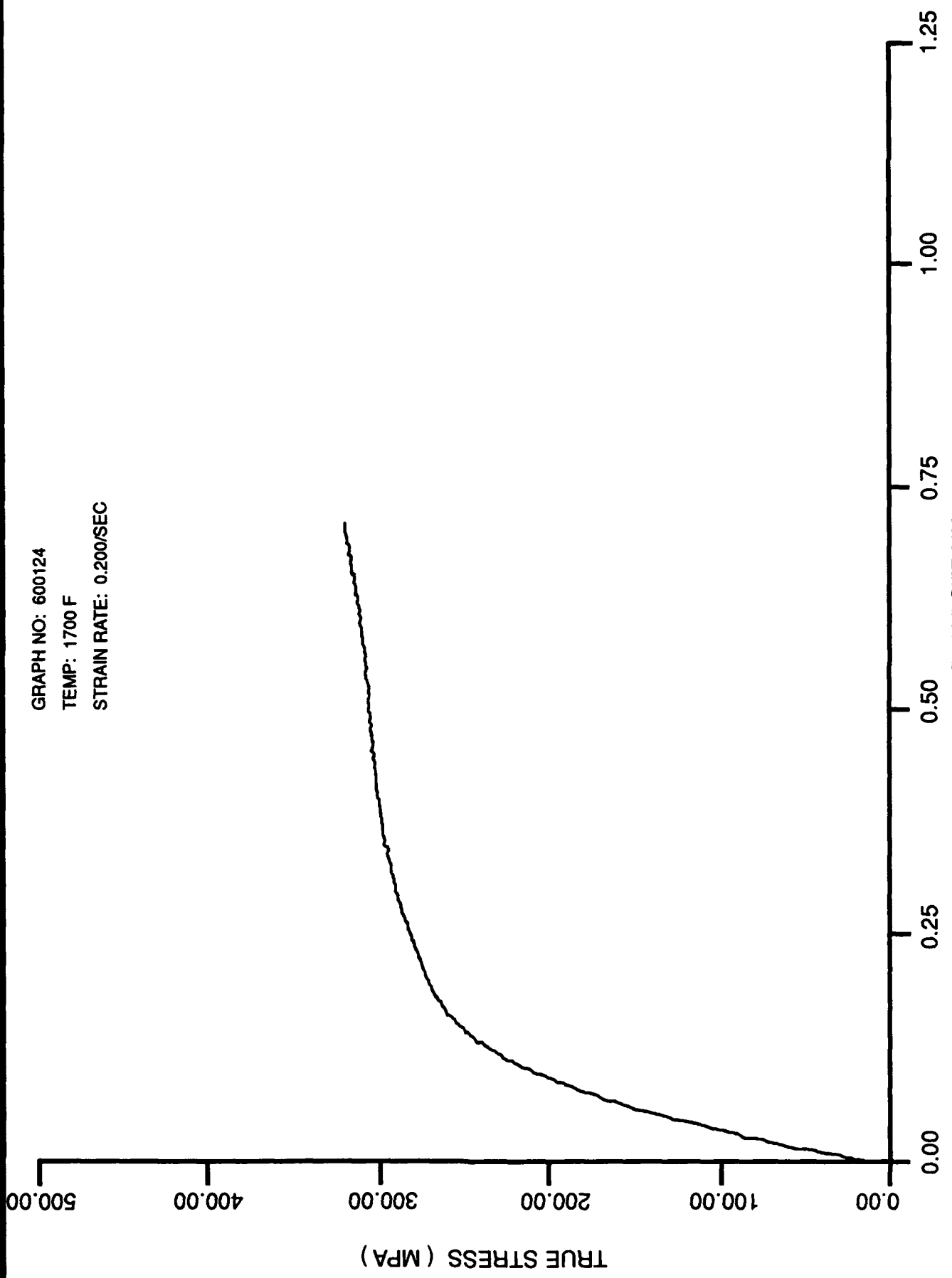
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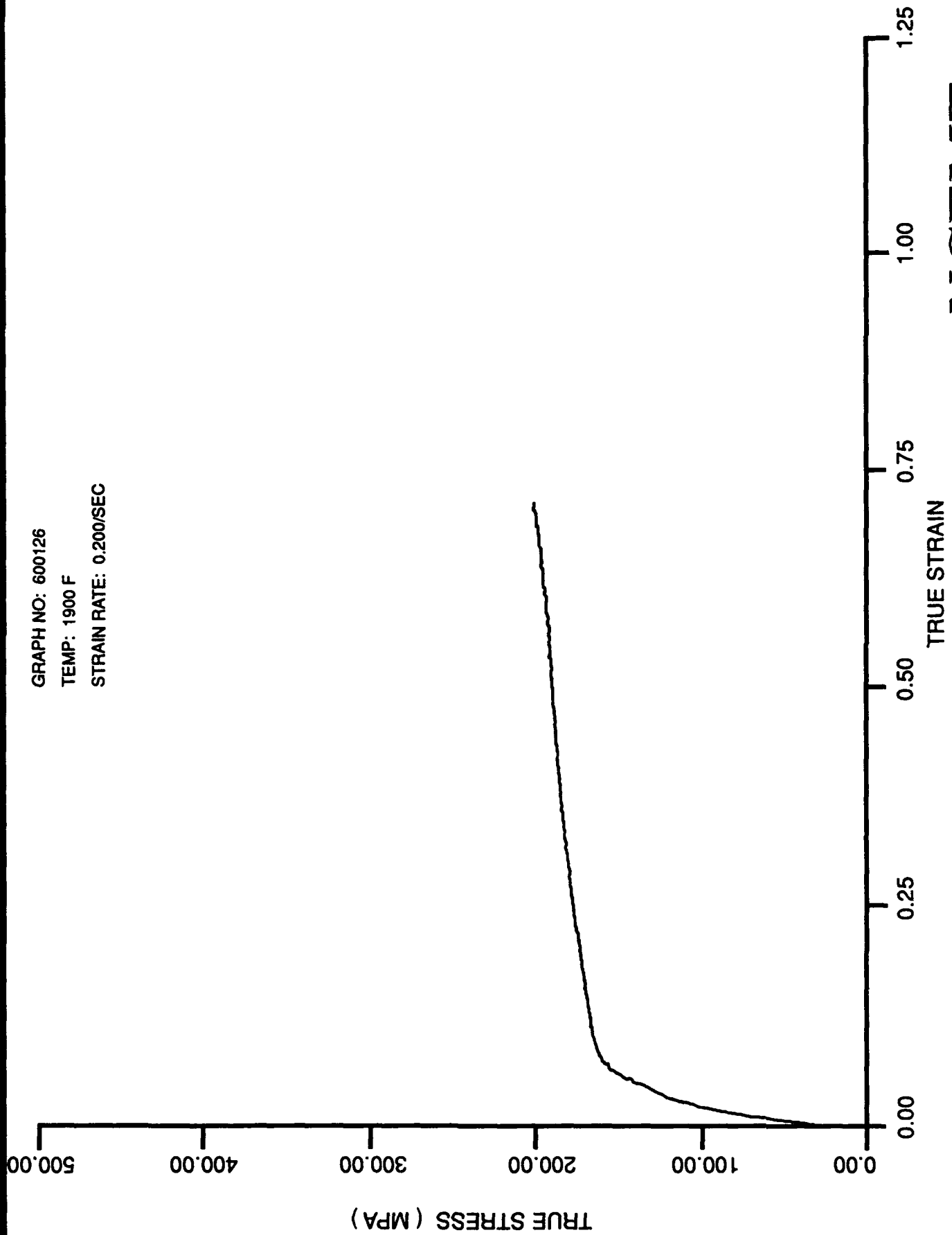
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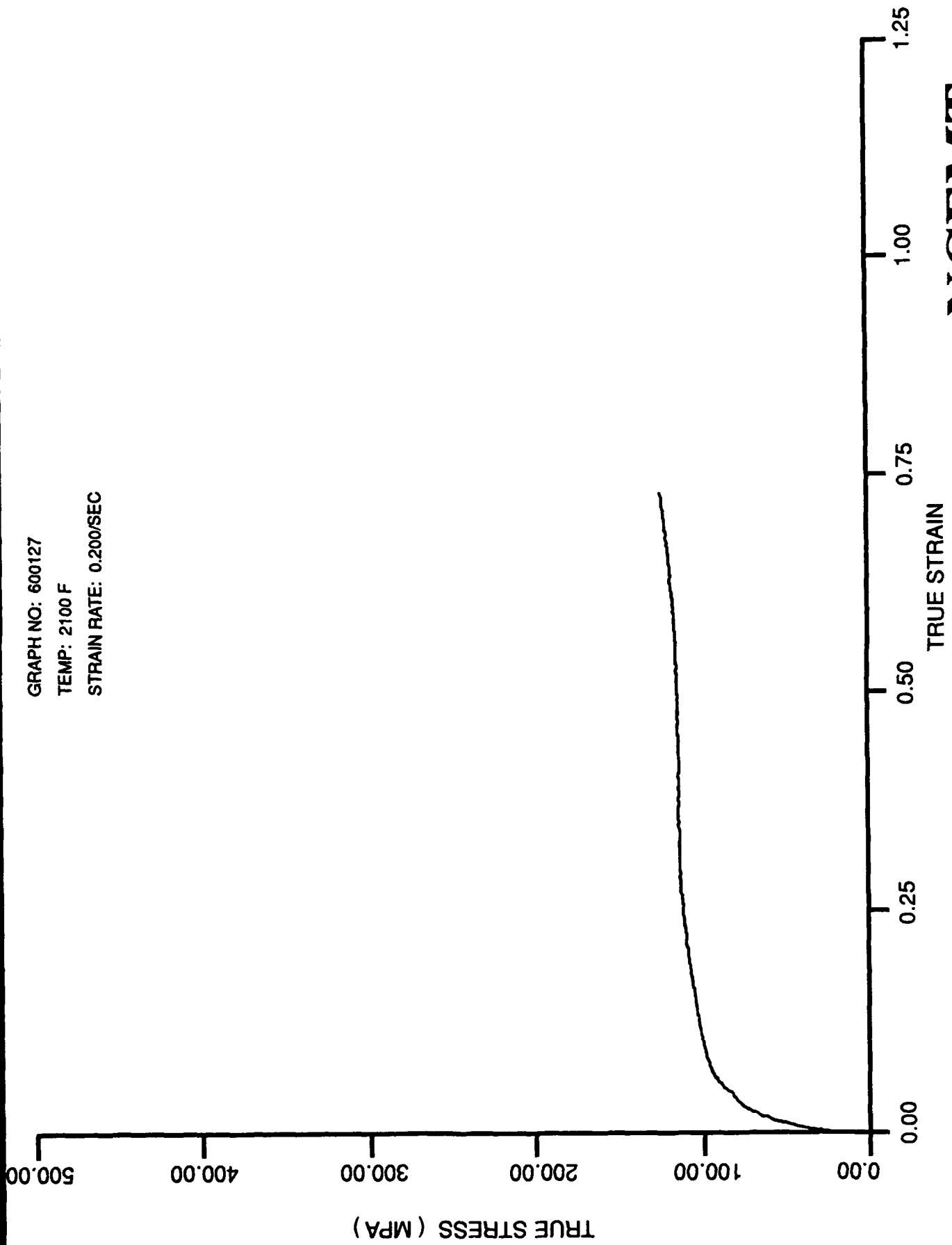
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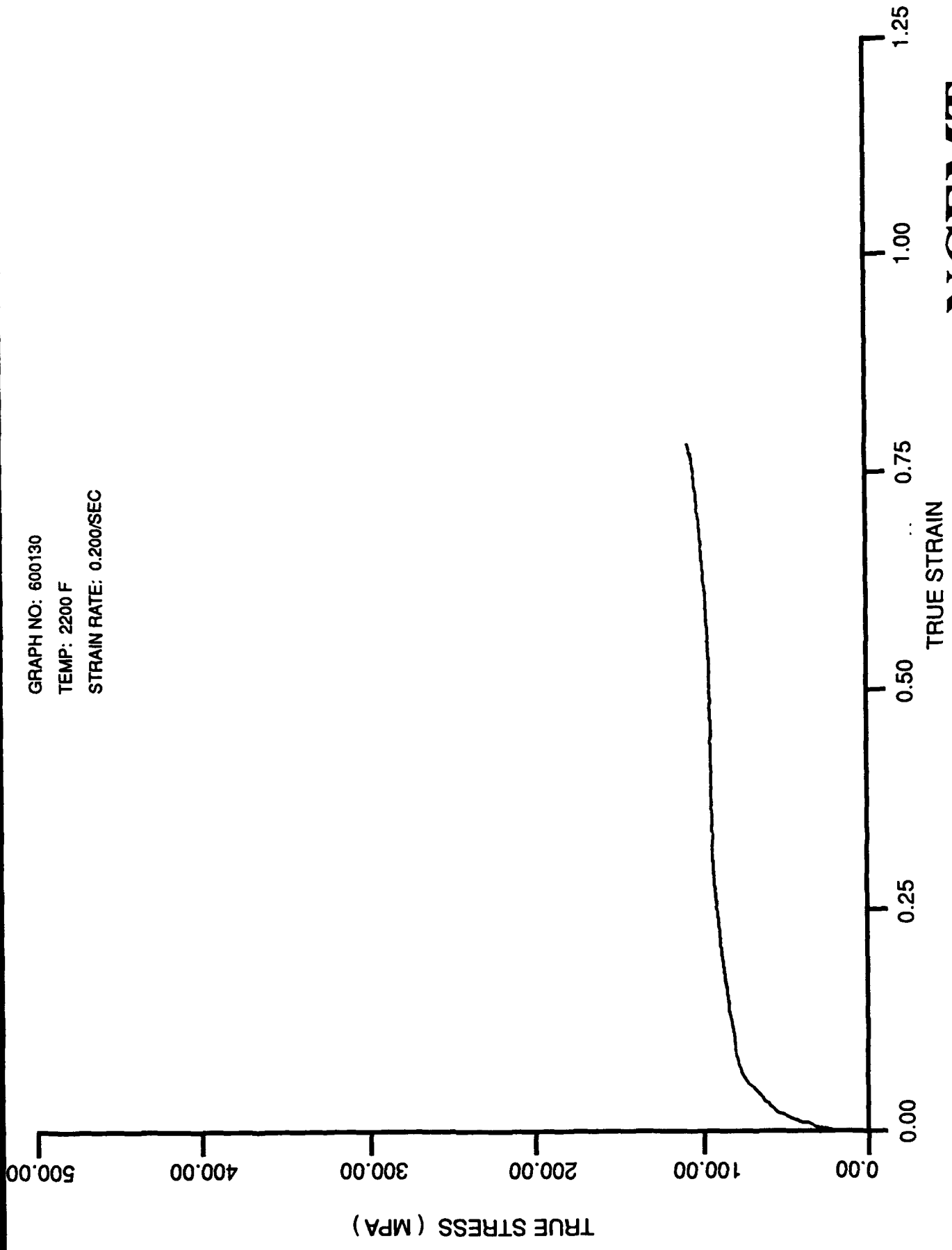
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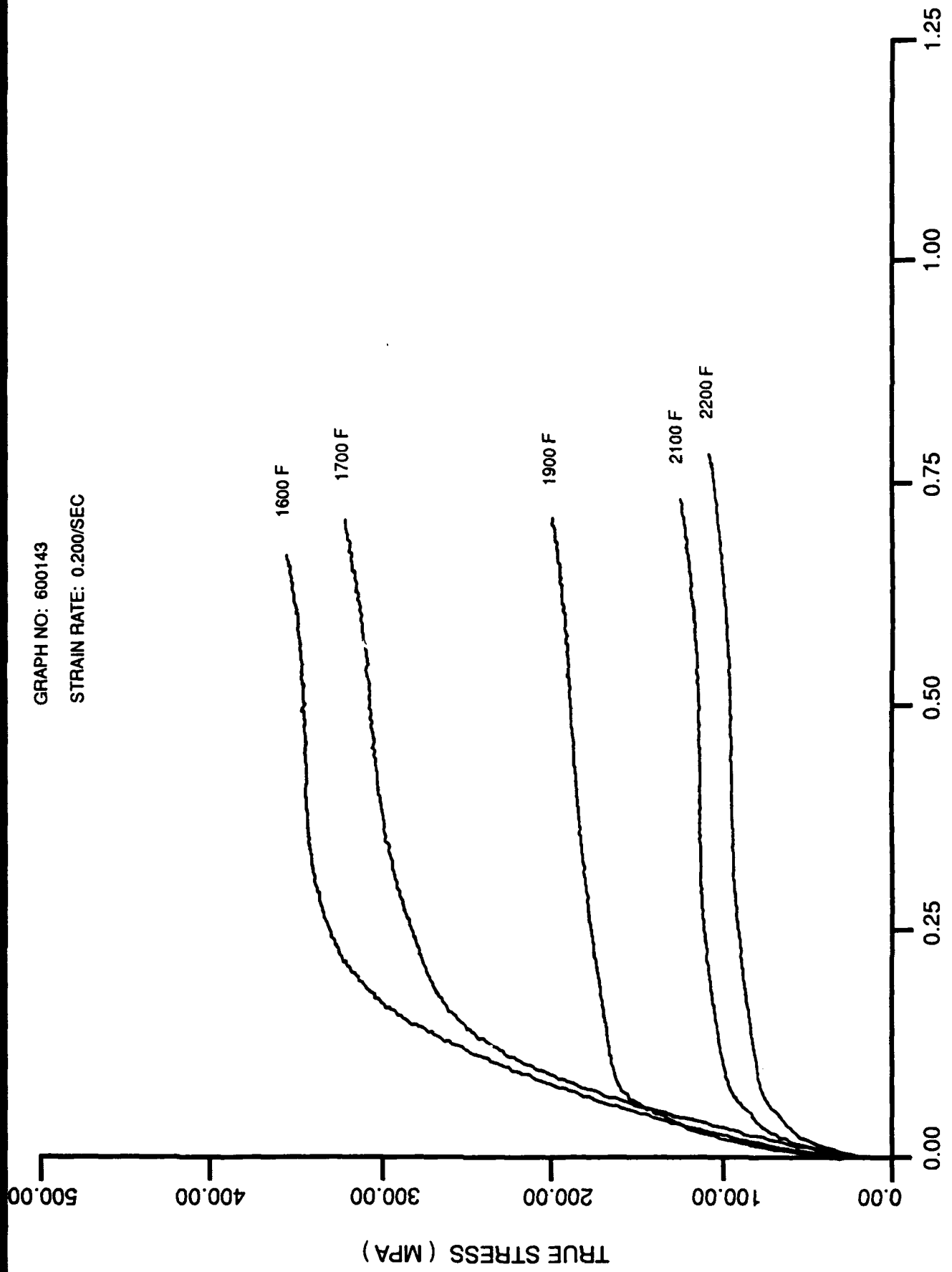


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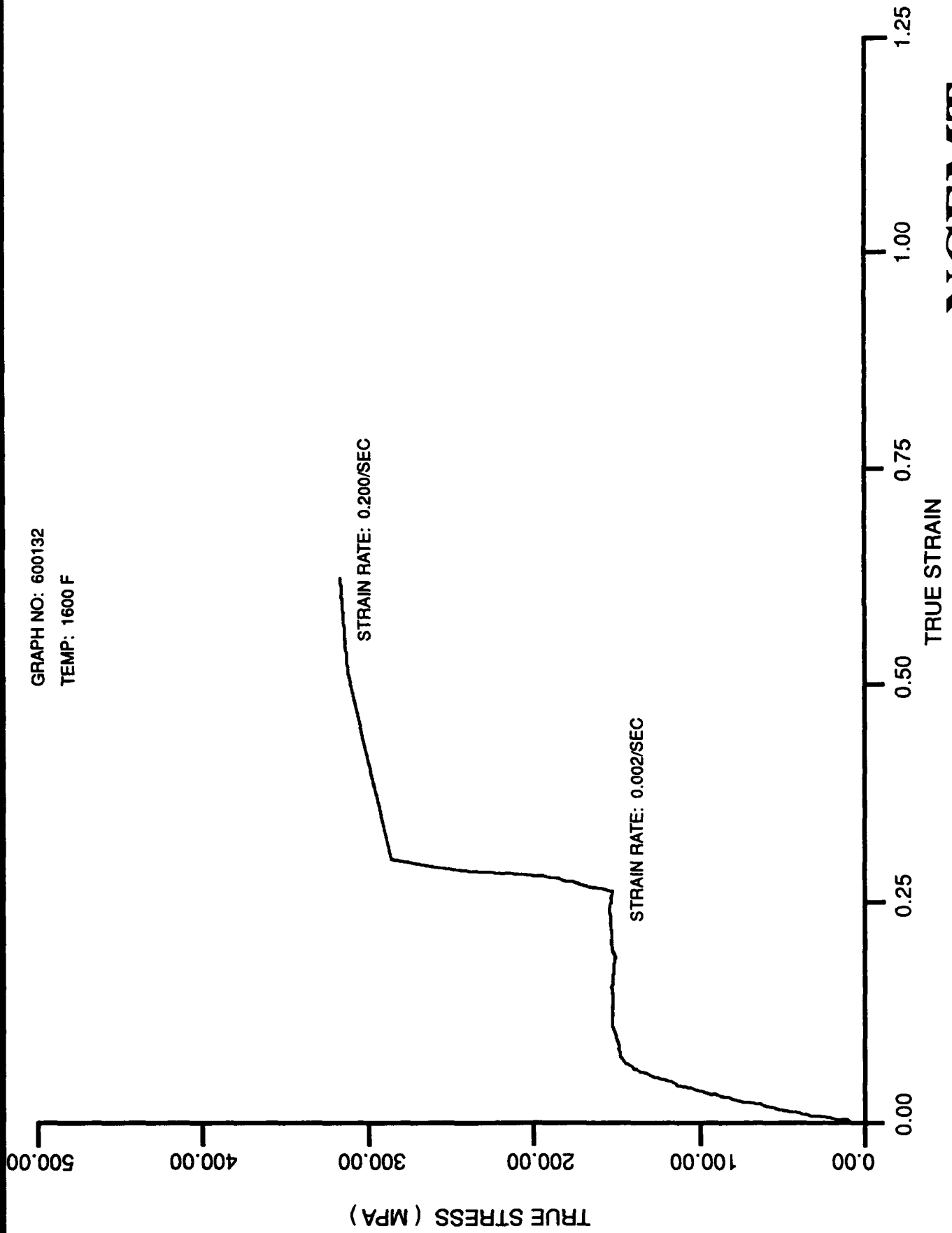


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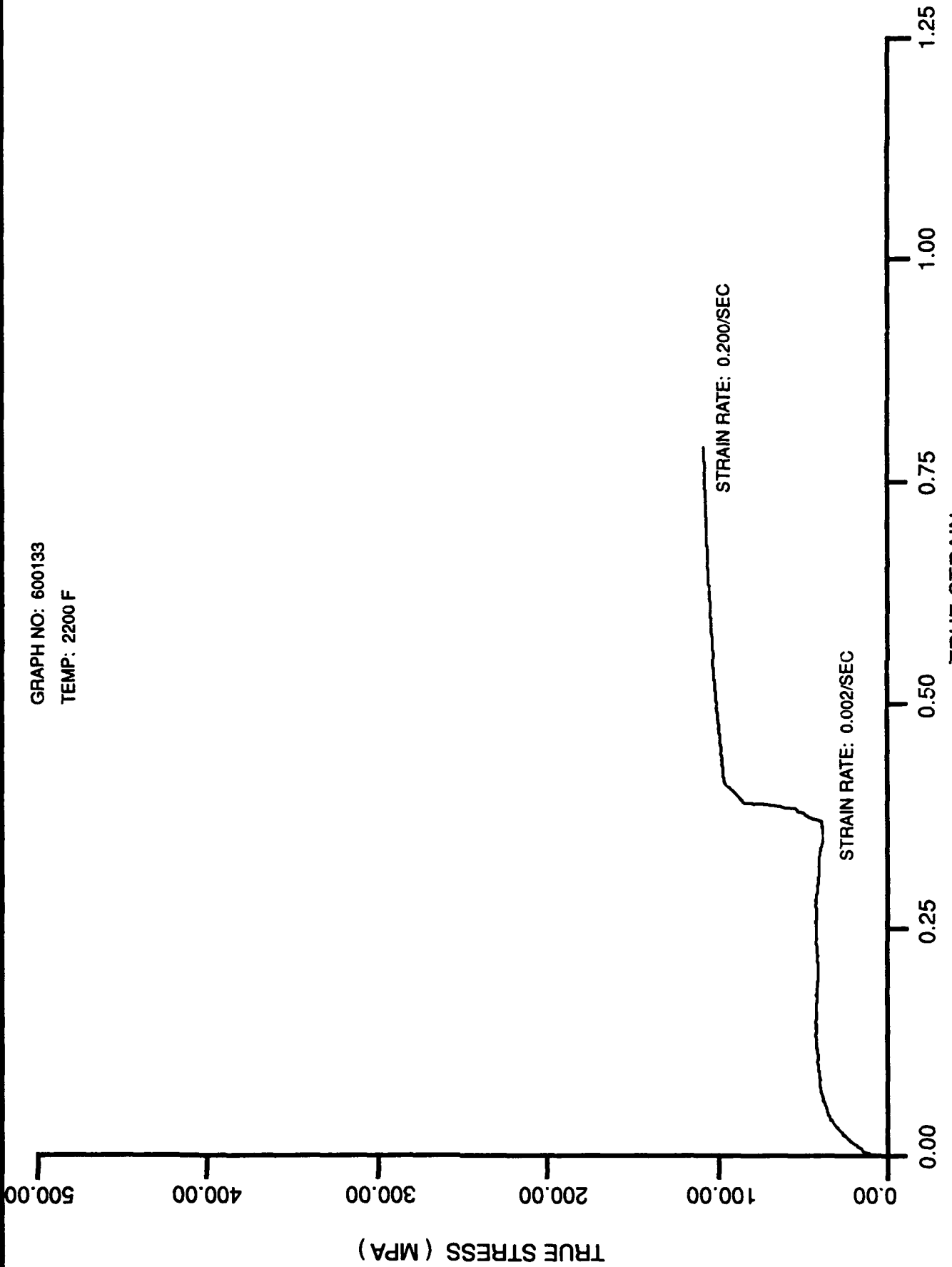
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