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Whitcomb, R. T.

Aerodynamics (2)
Wings and Airfoils (6)

Ailerons - Aerodynamics (03201); Wings
Swept-back - Aerodynamics (99305.2); Wings, Swept-for-
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RM LEA30a

A compilation of the pressures measured on a wing and aileron with various amounts of sweep in the Langley 8-foot high-speed tunnel

National Advisory Committee for Aeronautics, Washington, D. C.

U.S. Eng.

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tables, drwg

A compilation is presented, in tabular form, of pressures measured on the surface of a thin-high-aspect-ratio wing at high subsonic Mach numbers. The wings possessed no sweep and 30° and 45° of sweepback and sweepforward. Each table presents the pressure coefficients obtained for the upper and lower surfaces of the wing with a given sweep, aileron deflections, and angle of attack at the various test Mach numbers. Only the results relatively free of wind-tunnel choking effects have been included.

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RESEARCH MEMORANDUM

A COMPILATION OF THE PRESSURES MEASURED ON A WING
AND AILERON WITH VARIOUS AMOUNTS OF SWEEP
IN THE LANGLEY 8-FOOT HIGH-SPEED TUNNEL

By

Richard T. Whitcomb

Langley Memorial Aeronautical Laboratory
Langley Field, Va.

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**NATIONAL ADVISORY COMMITTEE
FOR AERONAUTICS**

WASHINGTON

April 13, 1948

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NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS

RESEARCH MEMORANDUM

A COMPILATION OF THE PRESSURES MEASURED ON A WING
AND AILERON WITH VARIOUS AMOUNTS OF SWEEP
IN THE LANGLEY 8-FOOT HIGH-SPEED TUNNEL

By Richard T. Whitcomb

SUMMARY

A compilation is made in tabular form of all the pressures measured on a thin high-aspect-ratio wing and aileron with no sweep and with 30° and 45° of sweepback and sweepforward at high subsonic Mach numbers in the Langley 8-foot high-speed tunnel.

INTRODUCTION

Very little detailed information as to the aerodynamic loads on swept wings at high subsonic speeds has been available until very recently. In order to obtain some information on such loads, as well as to develop a more complete understanding of the flow around swept wings in this speed range, extensive pressure measurements have been made on the surface of a thin high-aspect-ratio wing with no sweep and with 30° and 45° of sweepback and sweepforward and several aileron deflections in conjunction with a slender midwing fuselage in the Langley 8-foot high-speed tunnel.

From the pressure data obtained, normal-force, pitching-moment, bending-moment, and twisting-moment coefficients, spanwise variations of load and twisting moment, and ratios of the normal-force coefficients for the fuselage to those for the wing have been determined. These results are presented in references 1 and 2. The analyses presented in the references, being limited in extent, did not require reference to the large amount of detailed pressure data obtained during the investigation and none of these data are included in those reports. However, such data is useful in the prediction of the local aerodynamic loads on configurations similar to those investigated at high subsonic Mach numbers. Therefore, the pressure data that were measured on the wing during this investigation at all conditions for which over-all characteristics are given in references 1 and 2 are presented in tabular form herein. As in the case of the over-all characteristics, the data have not been corrected for the small tunnel-wall interference effects and only the results relatively free of wind-tunnel choking effects have been included. No attempt has been made to analyze any of the data presented.

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SYMBOLS

The symbols used are defined as follows:

- Λ sweep angle between line perpendicular to plane of symmetry and quarter-chord line of unswept wing, positive for sweepback, negative for sweepforward
- δ_{a_n} nominal aileron deflection, measured in plane perpendicular to aileron hinge axis; positive for down deflection
- α geometric angle of attack
- P pressure coefficient $\left(\frac{p - p_0}{\frac{1}{2} \rho V^2} \right)$
- p local static pressure
- p_0 static pressure in stream
- ρ mass density of stream
- V velocity of stream

APPARATUS

For the unswept condition the wing model has an NACA 65-210 airfoil section, no twist or dihedral, and exclusive of the fuselage, an aspect ratio of 9.0, and a taper ratio (root chord/tip chord) of 2.5. The 20-percent-chord straight-sided, plain aileron extends from the 60-percent-semispan station to the end of the straight part of the trailing edge as shown in figure 1. Approximately 20 static pressure orifices were placed at each of 8 stations along the semispan in lines perpendicular to the quarter-chord line of the unswept wing as shown in figure 1.

The model was supported in the tunnel by means of a vertical steel plate as described in reference 1. Swept configurations were obtained by rotating the model with respect to the support plate. Revised tips were added for each sweep. Plan forms of the wing outboard of the fuselage with the various amounts of sweep are presented in figure 1. The aspect ratios of the wings outboard of the fuselage are 8.5, 7.0, 4.7, 6.3, and 4.1 for 0° , 30° , 45° , -30° , and -45° of sweep, respectively. Other

dimensions for the various wing configurations and the dimensions of the fuselage are presented in reference 1.

RESULTS

All the pressures measured on the wing for the geometric conditions tabulated in the index preceding the table are presented in pressure coefficient form in tables 1 to 78. Each table presents the pressure coefficients obtained for the upper and lower surfaces of the wing with a given sweep, aileron deflection, and angle of attack at the various test Mach numbers. The data obtained at each of the eight chordwise measurement stations are placed in separate horizontal groups in each table. The designations of the chordwise stations at which the data in a given group were obtained is indicated in the upper left corner of each group in the tables. The spanwise locations of the designated stations from the plane of symmetry along the swept semispan in percent of the swept semispan for each of the sweep angles are indicated in figure 1 and the following table:

Station designation	$\Lambda = 0^\circ$	$\Lambda = 30^\circ$	$\Lambda = 45^\circ$	$\Lambda = -30^\circ$	$\Lambda = -45^\circ$
A	11.0	12.7	14.4	7.6	5.2
B	20.0	21.3	22.9	16.3	14.0
C	30.0	30.9	32.4	26.0	23.7
D	43.0	43.4	44.7	38.6	36.4
E	56.0	55.8	57.0	51.1	49.1
F	64.0	63.5	64.7	58.9	56.9
G	80.0	78.8	79.8	74.4	72.5
H	95.0	93.2	94.0	88.9	87.1

The chordwise locations of the orifice tubes at each of the measurement stations in percent of the local chord are indicated in tables 1 to 78.

In most cases the nominal aileron angles listed are the same as the aileron angles actually present during the tests. For the conditions at which they differ, the actual angles may be obtained from reference 2.

Langley Memorial Aeronautical Laboratory
National Advisory Committee for Aeronautics
Langley Field, Va.

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NACA RM No. 18A30a

REFERENCES

1. Whitcomb, Richard T.: An Investigation of the Effects of Sweep on the Characteristics of a High-Aspect-Ratio Wing in the Langley 8-Foot High-Speed Tunnel. NACA RM No. 16J01a, 1946.
2. Lucma, Arvo A., Bielat, Ralph P., and Whitcomb, Richard T.: High-Speed Wind-Tunnel Investigation of the Lateral-Control Characteristics of Plain Ailerons on a Wing with Various Amounts of Sweep. NACA RM No. 17I15, 1947.

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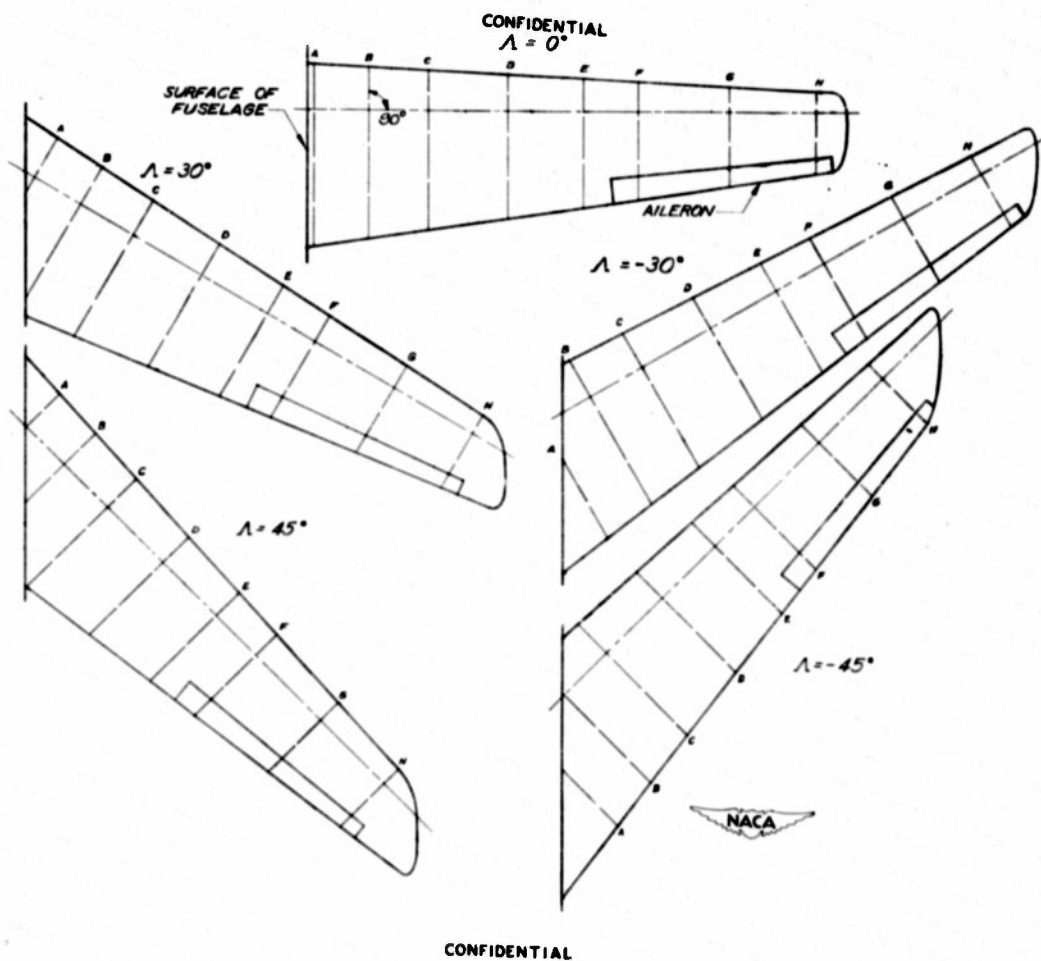


FIGURE 1.-LOCATION OF ORIFICE STATIONS.

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INDEX

[All values are in degrees]

Table	Λ	δ_{a_n}	α	Table	Λ	δ_{a_n}	α
1	0	0	-2	40	30	5.0	4
2	0	0	0	41	30	5.0	7
3	0	0	2	42	30	10.0	-2
4	0	0	4	43	30	10.0	0
5	0	0	7	44	30	10.0	2
6	0	0	10	45	30	10.0	4
7	30	0	-2	46	30	10.0	7
8	30	0	0	47	45	-9.4	-2
9	30	0	2	48	45	-9.4	2
10	30	0	4	49	45	-9.4	7
11	30	0	7	50	45	10.0	-2
12	30	0	10	51	45	10.0	2
13	45	0	-2	52	45	10.0	7
14	45	0	2	53	-30	-10.0	-2
15	45	0	7	54	-30	-10.0	0
16	45	0	10	55	-30	-10.0	2
17	-30	0	-2	56	-30	-10.0	4
18	-30	0	0	57	-30	-10.0	7
19	-30	0	2	58	-30	-5.0	-2
20	-30	0	4	59	-30	-5.0	0
21	-30	0	7	60	-30	-5.0	2
22	-30	0	10	61	-30	-5.0	4
23	-45	0	-2	62	-30	-5.0	7
24	-45	0	2	63	-30	5.0	-2
25	-45	0	7	64	-30	5.0	0
26	-45	0	10	65	-30	5.0	2
27	30	-10.0	-2	66	-30	5.0	4
28	30	-10.0	0	67	-30	5.0	7
29	30	-10.0	2	68	-30	10.0	-2
30	30	-10.0	4	69	-30	10.0	0
31	30	-10.0	7	70	-30	10.0	2
32	30	-5.1	-2	71	-30	10.0	4
33	30	-5.1	0	72	-30	10.0	7
34	30	-5.1	2	73	-45	-10.0	-2
35	30	-5.1	4	74	-45	-10.0	2
36	30	-5.1	7	75	-45	-10.0	7
37	30	5.0	-2	76	-45	9.8	-2
38	30	5.0	0	77	-45	9.8	2
39	30	5.0	2	78	-45	9.8	7

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TABLE 1

$$[A = 0^\circ, \delta_{in} = 0^\circ, \alpha = -\alpha^\circ]$$

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UPPER SURFACE					LOWER SURFACE				
Tube	Per- cent chord	Mesh Number			Tube	Per- cent chord	Mesh Number		
		0.60	0.75	0.90			0.60	0.75	0.90
A 1	2.0	0.430	0.475	0.490	86	3.0	-0.705	-0.800	-
2	6.0	.125	.160	.175	87	10.0	-	-	-
3	15.0	-.091	-.066	-.080	88	25.0	-	-	-
4	27.5	-.266	-.231	-.267	89	41.0	-.300	-.375	-.440
5	40.0	-.296	-.325	-.420	90	52.5	-.209	-.260	-.279
6	50.0	-.296	-.346	-.430	91	62.5	-.141	-.161	-.161
7	59.0	-.290	-.307	-.347	92	72.5	-.079	-.060	-.069
8	67.5	-	-	-	93	84.0	.065	.056	.065
9	77.5	-.066	-.060	-.064	94	94.0	.000	.077	.108
10	87.5	.008	.000	-.007					
11	96.0	.050	.070	-.080					
12									
13	2.0	.450	.300	-.500	95	3.0	-.652	-.900	-.795
14	6.0	.120	.162	-.182	96	10.0	-.408	-.576	-.760
15	15.0	-.101	-.107	-.091	97	25.0	-.368	-.440	-.540
16	27.5	-.290	-.297	-.305	98	41.0	-.341	-.440	-.545
17	40.0	-.300	-.431	-.466	99	52.5	-.268	-.326	-.311
18	50.0	-.355	-.440	-.500	100	62.5	-.170	-.191	-.182
19	59.0	-.306	-.370	-.430	101	72.5	-.090	-.047	-.030
20	67.5	-.264	-.330	-.337	102	84.0	.090	.110	.131
21	77.5	-.066	-.072	-.069	103	94.0	.165	.186	.209
22	87.5	.008	.074	.062					
23	96.0	.050	.167	.180					
24									
25	2.0	.454	.350	-.530	104	3.0	-.639	-.800	-.777
26	6.0	.120	.167	-.190	105	10.0	-.425	-.570	-.757
27	15.0	-.117	-.110	-.093	106	25.0	-.393	-.521	-.641
28	27.5	-.270	-.350	-.380	107	41.0	-.364	-.440	-.605
29	40.0	-.365	-.460	-.532	108	52.5	-.270	-.346	-.361
30	50.0	-.458	-.460	-.579	109	62.5	-.180	-.212	-.193
31	59.0	-.392	-.400	-.493	110	72.5	-.090	-.062	-.081
32	67.5	-.260	-.340	-.350	111	84.0	.090	.112	.135
33	77.5	-.067	-.078	-.072	112	94.0	.187	.211	.238
34	87.5	.061	.040	-.078					
35	96.0	.137	.159	.160					
36									
37	2.0	.456	.448	-.505	113	3.0	-.637	-.800	-.770
38	6.0	.120	.110	-.095	114	10.0	-.430	-.576	-.730
39	15.0	-.109	-.110	-.111	115	25.0	-.404	-.544	-.685
40	27.5	-.272	-.310	-.311	116	41.0	-.370	-.500	-.668
41	40.0	-.370	-.490	-.548	117	52.5	-.298	-.377	-.565
42	50.0	-.474	-.490	-.582	118	62.5	-.196	-.210	-.192
43	59.0	-.398	-.388	-.500	119	72.5	-.097	-.061	-.010
44	67.5	-.260	-.338	-.321	120	84.0	.110	.131	.153
45	77.5	-.064	-.076	-.074	121	94.0	.164	.194	.220
46	87.5	.013	.056	.072					
47	96.0	.129	.150	.169					
48									
49	2.0	.453	.494	-.502	122	3.0	-.678	-.714	-.758
50	6.0	.109	.147	-.172	123	10.0	-.420	-.542	-.690
51	15.0	-.126	-.126	-.108	124	25.0	-.393	-.540	-.640
52	27.5	-.272	-.360	-.399	125	41.0	-.358	-.474	-.621
53	40.0	-.366	-.480	-.541	126	52.5	-.270	-.365	-.435
54	50.0	-.469	-.477	-.611	127	62.5	-.190	-.193	-.260
55	59.0	-.315	-.400	-.582	128	72.5	-.091	-.045	-.030
56	67.5	-.193	-.351	-.438	129	84.0	.100	.132	.159
57	77.5	-.052	-.030	-.034	130	94.0	.181	.211	.230
58	87.5	.036	.110	.129					
59	96.0	.150	.178	.199					
60									
61	2.0	.459	.490	-.500	131	3.0	-.610	-.778	-.756
62	6.0	.110	.142	-.167	132	10.0	-.420	-.590	-.632
63	15.0	-.128	-.128	-.110	133	25.0	-.393	-.509	-.690
64	27.5	-.266	-.360	-.394	134	41.0	-.358	-.471	-.640
65	40.0	-.367	-.481	-.541	135	52.5	-.240	-.380	-.470
66	50.0	-.464	-.475	-.610	136	62.5	-.160	-.173	-.141
67	59.0	-.308	-.393	-.590	137	72.5	-.090	-.026	-.000
68	67.5	-.168	-.340	-.428	138	84.0	.079	.100	.125
69	77.5	-.040	-.072	-.078	139	94.0	.127	.154	.172
70	87.5	.030	.118	.133					
71	96.0	.120	.143	.159					
72									
73	2.0	.456	.500	-.530	141	3.0	-.562	-.698	-.710
74	6.0	.110	.143	-.170	142	10.0	-.421	-.540	-.674
75	15.0	-.120	-.120	-.106	143	25.0	-.390	-.518	-.632
76	27.5	-.262	-.317	-.321	144	41.0	-.341	-.454	-.590
77	40.0	-.363	-.470	-.511	145	52.5	-.278	-.374	-.493
78	50.0	-.460	-.471	-.590	146	62.5	-.175	-.192	-.191
79	59.0	-.297	-.382	-.504	147	72.5	-.098	-.012	-.009
80	67.5	-.160	-.346	-.473	148	84.0	.108	.130	.168
81	77.5	-.040	-.066	-.066	149	94.0	.113	.139	.162
82	87.5	.030	.111	-.400					
83	96.0	.036	.046	-.090					
84		.036	.046	-.090					
85	94.2	.036	.046	-.090					
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TABLE 6

$[\alpha = 0^\circ, \epsilon_{max} = 0^\circ, \alpha = 10^\circ]$

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UPPER SURFACE					LOWER SURFACE				
Tube	Per-cent chord	Mech Number			Tube	Per-cent chord	Mech Number		
		0.60	0.75	0.80			0.60	0.75	0.80
A 1	2.0	-0.988	-0.500	-0.780	86	3.0	0.830	0.780	0.840
4	6.0	-0.779	-0.593	-0.579	87	10.0	-	-	-
8	15.0	-0.579	-0.549	-0.565	88	25.0	0.169	0.150	0.180
12	27.5	-0.394	-0.590	-0.566	89	41.0	0.001	-0.008	-0.013
16	40.0	-0.620	-0.565	-0.580	90	54.5	-0.020	-0.034	-0.070
19	50.0	-0.638	-0.581	-0.597	91	62.5	-0.052	-0.069	-0.104
22	59.0	-0.638	-0.600	-0.611	92	72.5	-0.042	-0.050	-0.132
25	67.5	-0.660	-0.600	-0.601	93	84.0	-0.012	-0.100	-0.030
28	77.5	-0.569	-0.600	-0.601	94	94.0	-0.085	0.090	-0.075
31	87.5	-0.437	-0.572	-0.600					
34	94.0	-0.439	-0.542	-0.567					
612	2.0	-1.003	-0.590	-0.900	95	3.0	-0.811	-0.756	-0.820
13	6.0	-0.736	-0.543	-0.832	96	10.0	-0.508	-0.440	-0.510
14	15.0	-0.620	-0.542	-0.592	97	25.0	0.189	0.130	0.171
15	27.5	-0.620	-0.590	-0.570	98	41.0	0.000	-0.045	-0.048
18	40.0	-0.640	-0.570	-0.580	99	54.5	-0.066	-0.075	-0.130
17	50.0	-0.650	-0.591	-0.598	100	62.5	-0.070	-0.090	-0.130
18	59.0	-0.660	-0.600	-0.621	101	72.5	-0.042	-0.013	-0.080
19	67.5	-0.660	-0.611	-0.644	102	84.0	-0.020	-0.115	-0.020
20	77.5	-0.648	-0.600	-0.660	103	94.0	-0.080	0.130	-0.040
21	86.0	-0.596	-0.642	-0.660					
22	95.3	-0.532	-0.611	-0.647					
223	2.0	-1.008	-1.640	-1.345	104	3.0	-0.810	-0.750	-0.810
24	6.0	-1.134	-1.567	-1.368	105	10.0	-0.518	-0.422	-0.491
25	16.0	-1.290	-1.446	-1.267	106	25.0	-0.200	-0.130	-0.172
26	27.5	-0.906	-0.906	-1.128	107	41.0	0.013	-0.048	-0.050
27	40.0	-0.660	-0.660	-0.728	108	54.5	-0.050	-0.060	-0.137
28	50.0	-0.600	-0.629	-0.640	109	62.5	-0.058	-0.060	-0.111
29	59.0	-0.590	-0.618	-0.610	110	72.5	-0.012	-0.009	-0.069
30	67.5	-0.641	-0.591	-0.578	111	84.0	0.028	-0.110	-0.019
31	77.5	-0.650	-0.590	-0.588	112	94.0	0.044	0.160	0.061
32	86.0	-0.582	-0.571	-0.546					
33	95.3	-0.290	-0.467	-0.450					
254	2.0	-1.089	-1.634	-1.330	113	3.0	-0.808	-0.738	-0.800
55	6.0	-1.462	-1.445	-1.272	114	10.0	-0.532	-0.430	-0.491
56	15.0	-1.000	-1.190	-1.142	115	25.0	0.210	0.129	0.179
57	27.5	-0.700	-0.836	-0.829	116	41.0	0.030	-0.048	-0.050
58	40.0	-0.569	-0.681	-0.713	117	54.5	-0.030	-0.060	-0.130
59	50.0	-0.661	-0.710	-0.681	118	62.5	-0.036	-0.060	-0.130
60	59.0	-0.565	-0.688	-0.624	119	72.5	0.012	-0.005	-0.062
61	67.5	-0.524	-0.610	-0.560	120	84.0	0.078	0.130	0.009
62	77.5	-0.320	-0.429	-0.429	121	94.0	0.060	0.115	0.010
63	86.0	-0.330	-0.281	-0.440					
64	94.0	-0.330	-0.281	-0.440					
644	2.0	-1.800	-1.535	-1.376	122	3.0	-0.860	-0.765	-0.843
65	6.0	-1.634	-1.365	-1.360	123	10.0	-0.538	-0.435	-0.505
66	15.0	-1.138	-1.160	-1.180	124	25.0	0.200	0.140	0.190
67	27.5	-0.800	-0.909	-0.978	125	41.0	0.040	-0.032	-0.025
68	40.0	-0.727	-0.786	-0.776	126	54.5	-0.010	-0.051	-0.090
69	50.0	-0.570	-0.730	-0.726	127	62.5	-0.040	-0.070	-0.130
70	59.0	-0.469	-0.681	-0.569	128	72.5	0.000	-0.010	-0.079
71	67.5	-0.490	-0.632	-0.630	129	84.0	0.010	0.019	0.060
72	77.5	-0.330	-0.564	-0.590	130	94.0	0.040	0.099	0.029
73	86.0	-0.275	-0.490	-0.547					
74	94.0	-0.262	-0.433	-0.512					
755	2.0	-1.640	-1.560	-1.397	131	3.0	-0.873	-0.768	-0.820
56	6.0	-1.590	-1.489	-1.350	132	10.0	-0.538	-0.449	-0.505
57	15.0	-1.162	-1.302	-1.231	133	25.0	0.200	0.141	0.190
58	27.5	-0.800	-0.909	-0.978	134	41.0	0.040	-0.030	-0.020
59	40.0	-0.741	-0.800	-0.800	135	54.5	-0.030	-0.060	-0.113
60	50.0	-0.590	-0.717	-0.728	136	62.5	-0.030	-0.072	-0.109
61	59.0	-0.489	-0.640	-0.580	137	72.5	0.014	0.009	-0.060
62	67.5	-0.432	-0.590	-0.640	138	84.0	0.071	0.100	0.030
63	77.5	-0.297	-0.460	-0.520	139	94.0	-0.048	-0.004	-0.139
64	86.0	-0.246	-0.400	-0.508					
645	2.0	-1.588	-1.481	-1.327	141	3.0	-0.872	-0.760	-0.820
66	6.0	-1.560	-1.483	-1.341	142	10.0	-0.518	-0.415	-0.480
67	15.0	-1.192	-0.927	-1.121	143	25.0	0.210	0.125	0.169
68	27.5	-0.860	-0.961	-0.970	144	41.0	0.032	-0.070	-0.075
69	40.0	-0.777	-0.772	-0.781	145	54.5	-0.016	-0.082	-0.130
70	50.0	-0.608	-0.723	-0.692	146	62.5	0.030	-0.013	-0.110
71	59.0	-0.490	-0.679	-0.660	147	72.5	0.008	0.018	-0.069
72	67.5	-0.425	-0.639	-0.614	148	84.0	0.065	0.078	-0.020
73	77.5	-0.300	-0.582	-0.600	149	94.0	-0.013	-0.049	-0.110
74	87.2	-0.242	-0.504	-0.547					
76	96.6	-0.180	-0.408	-0.460					
776	2.0	-1.090	-1.608	-1.317	150	3.0	-0.829	-0.700	-0.765
77	6.0	-1.461	-1.481	-1.360	151	10.0	-0.434	-0.330	-0.395
78	15.0	-1.121	-1.410	-1.208	152	25.0	0.139	0.030	0.060
79	27.5	-0.800	-0.909	-0.978	153	41.0	-0.042	-0.021	-0.150
80	40.0	-0.698	-0.698	-0.811	154	54.5	-0.081	-0.145	-0.210
81	50.0	-0.546	-0.610	-0.707	155	62.5	-0.058	-0.069	-0.120
82	59.0	-0.430	-0.518	-0.641	156	72.5	-0.017	-0.013	-0.142
83	67.5	-0.345	-0.468	-0.521	157	84.0	0.004	0.090	-0.125
84	77.5	-0.198	-0.418	-0.450					
85	86.0	-0.083	-0.383	-0.426					



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TABLE 7

$$[\alpha = 90^\circ, \delta_{90} = 0^\circ, \alpha = 0^\circ]$$

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UPPER SURFACE					LOWER SURFACE						
Tube	Per-cent chord	Mach Number				Tube	Per-cent chord	Mach Number			
		0.60	0.90	0.95	0.99			0.60	0.80	0.85	0.89
A 1	2.0	0.310	0.302	0.295		86	3.0	-0.395	-0.364	-0.410	
2	6.0	-.104	-.140	-.160		87	10.0	-.	-.	-.	
3	15.0	-.008	-.005	-.015		88	15.0	-.230	-.250	-.283	
4	27.5	-.105	-.101	-.090		89	41.0	-.	-.	-.	
6	40.0	-.	-.	-.		90	52.5	-.	-.	-.	
7	50.0	-.	-.	-.		91	62.5	-.	-.	-.	
8	59.0	-.	-.	-.		92	72.5	-.	-.	-.	
9	67.5	-.	-.	-.		93	84.0	-.	-.	-.	
10	77.5	-.	-.	-.		94	94.0	-.	-.	-.	
11	96.0	-.	-.	-.							
B12	2.0	.308	.348	.370		95	3.0	-.455	-.508	-.519	
13	6.0	-.080	-.107	-.128		96	10.0	-.291	-.340	-.372	
14	15.0	-.078	-.070	-.051		97	15.0	-.272	-.342	-.371	
15	27.5	-.180	-.198	-.191		98	41.0	-.273	-.365	-.444	
16	40.0	-.253	-.301	-.318		99	52.5	-.230	-.308	-.411	
17	50.0	-.272	-.345	-.368		100	62.5	-.168	-.215	-.306	
18	59.0	-.261	-.340	-.365		101	72.5	-.190	-.195	-.261	
19	67.5	-.301	-.270	-.265		102	84.0	-.009	-.011	-.009	
20	77.5	-.140	-.190	-.218		103	94.5	-.	-.	-.	
21	86.0	-.023	-.032	-.050							
22	95.2	-.	-.	-.							
CC3	2.0	.310	.348	.360		104	3.0	-.484	-.571	-.605	
24	6.0	-.071	-.090	-.110		105	10.0	-.342	-.411	-.445	
25	15.0	-.100	-.105	-.091		106	25.0	-.305	-.390	-.435	
26	27.5	-.206	-.244	-.283		107	41.0	-.260	-.391	-.503	
27	40.0	-.280	-.360	-.394		108	52.5	-.241	-.302	-.405	
28	50.0	-.390	-.489	-.440		109	62.5	-.160	-.211	-.230	
29	59.0	-.362	-.441	-.495		110	72.5	-.160	-.075	-.081	
30	67.5	-.308	-.	-.		111	84.0	-.261	-.050	-.249	
31	77.5	-.100	-.140	-.140		112	94.6	-.130	-.150	-.140	
32	86.0	-.010	-.004	-.000							
33	95.5	-.090	-.081	-.100							
54	2.0	-.265	-.293	-.314		113	3.0	-.495	-.626	-.644	
35	6.0	-.104	-.120	-.114		114	10.0	-.311	-.428	-.485	
36	15.0	-.210	-.260	-.272		115	15.0	-.310	-.411	-.500	
37	27.5	-.281	-.374	-.430		116	41.0	-.	-.	-.	
38	40.0	-.385	-.481	-.441		117	52.5	-.280	-.301	-.390	
39	50.0	-.347	-.438	-.470		118	62.5	-.150	-.180	-.181	
40	57.5	-.200	-.260	-.241		119	72.5	-.041	-.049	-.042	
41	67.5	-.108	-.095	-.060		120	84.0	-.085	-.085	-.068	
42	87.5	-.030	-.040	-.048		121	94.6	-.128	-.139	-.141	
43	94.2	-.096	-.110	-.118							
44	2.0	-.374	-.379	-.387	-.390	122	3.0	-.491	-.610	-.705	-.719
45	6.0	-.080	-.095	-.100	-.100	123	10.0	-.385	-.430	-.500	-.512
46	15.0	-.098	-.102	-.108	-.108	124	25.0	-.300	-.380	-.470	-.505
47	27.5	-.192	-.248	-.268	-.268	125	41.0	-.268	-.338	-.400	-.480
48	40.0	-.264	-.335	-.358	-.411	126	52.5	-.204	-.264	-.293	-.479
49	50.0	-.270	-.342	-.400	-.418	127	62.5	-.147	-.160	-.171	-.121
50	59.0	-.294	-.369	-.441	-.450	128	72.5	-.019	-.011	-.010	-.020
51	67.5	-.188	-.244	-.261	-.218	129	84.0	-.019	-.015	-.040	-.075
52	77.5	-.040	-.013	-.041	-.030	130	94.6	-.097	-.120	-.128	-.150
53	86.5	-.160	-.158	-.160	-.170	131		-.151	-.180	-.188	-.205
54	95.5	-.127	-.148	-.151	-.170						
55	2.0	.330	.398	.460		132	3.0	-.517	-.644	-.751	-.750
56	6.0	-.090	-.098	-.102	-.110	133	10.0	-.348	-.441	-.510	-.545
57	15.0	-.081	-.100	-.105	-.110	134	25.0	-.268	-.378	-.442	-.578
58	27.5	-.190	-.250	-.281	-.270	135	41.0	-.262	-.330	-.400	-.578
59	40.0	-.261	-.335	-.381	-.418	136	52.5	-.210	-.295	-.276	-.407
60	50.0	-.261	-.335	-.381	-.479	137	62.5	-.159	-.134	-.138	-.080
61	59.0	-.298	-.383	-.422	-.421	138	72.5	-.019	-.010	-.004	-.068
62	67.5	-.190	-.261	-.291	-.180	139	84.0	-.060	-.050	-.054	-.180
63	86.5	-.	-.	-.	-.	140	94.0	-.110	-.136	-.141	-.160
64	94.5	-.	-.	-.	-.						
65	2.0	.390	.478	.551	.580	141	3.0	-.510	-.640	-.751	-.750
66	6.0	.098	.108	.110	.114	142	10.0	-.361	-.460	-.554	-.600
67	15.0	-.071	-.080	-.091	-.097	143	25.0	-.267	-.380	-.458	-.590
68	27.5	-.174	-.218	-.240	-.260	144	41.0	-.260	-.325	-.362	-.513
69	40.0	-.260	-.318	-.360	-.400	145	52.5	-.200	-.242	-.238	-.360
70	50.0	-.261	-.323	-.372	-.430	146	62.5	-.094	-.090	-.114	-.048
71	59.0	-.261	-.360	-.404	-.460	147	72.5	-.008	-.005	-.012	-.048
72	67.5	-.160	-.224	-.270	-.280	148	84.0	-.116	-.138	-.145	-.180
73	77.5	-.138	-.088	-.080	-.011	149	94.0	-.104	-.135	-.148	-.170
74	87.2	-.	-.	-.	-.						
75	96.8	-.118	-.135	-.130	-.150						
76	2.0	.390	.478	.551	.591	150	3.0	-.489	-.611	-.708	-.709
77	6.0	.044	.040	.044	.044	151	10.0	-.300	-.380	-.460	-.570
78	15.0	-.097	-.151	-.168	-.191	152	25.0	-.270	-.340	-.400	-.560
79	27.5	-.194	-.252	-.292	-.330	153	41.0	-.294	-.370	-.441	-.568
80	40.0	-.260	-.320	-.370	-.411	154	52.5	-.161	-.175	-.170	-.090
81	50.0	-.261	-.311	-.347	-.390	155	62.5	-.068	-.040	-.070	-.000
82	59.0	-.260	-.347	-.391	-.461	156	72.5	-.008	-.030	-.040	-.071
83	67.5	-.140	-.189	-.201	-.190	157	84.0	-.120	-.160	-.169	-.180
84	86.5	-.090	-.070	-.080	-.111						
85	94.2	-.089	-.111	-.128	-.152						

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TABLE 9

$\alpha = 30^\circ, \beta_{0.95} = 0^\circ, \alpha = 0^\circ$

UPPER SURFACE							LOWER SURFACE							
Tube	Percent chord	Mach Number					Tube	Percent chord	Mach Number					
		0.40	0.50	0.60	0.80	0.95			0.60	0.80	0.85	0.89	0.95	0.98
A 1	2.0	-0.460	-0.293	-0.175	-0.100	-0.060	0							
2	6.0	-0.510	-0.360	-0.240	-0.160	-0.100	87	10.0	-0.464	0.179	0.179	0.179	0.195	0.209
3	15.0	-0.580	-0.400	-0.280	-0.190	-0.130	88	20.0	-0.468	-0.041	-0.051	-0.060	-0.041	-0.000
4	27.5	-0.640	-0.450	-0.330	-0.230	-0.150	89	41.0	-	-	-	-	-	-
5	40.0	-	-	-	-	-	90	62.5	-	-	-	-	-	-
6	50.0	-	-	-	-	-	91	84.5	-	-	-	-	-	-
7	59.0	-	-	-	-	-	92	94.0	-	-	-	-	-	-
8	67.5	-	-	-	-	-	93		-	-	-	-	-	-
9	77.5	-	-	-	-	-	94		-	-	-	-	-	-
10	87.5	-	-	-	-	-		-	-	-	-	-	-	-
11	96.0	-	-	-	-	-		-	-	-	-	-	-	-
12	2.0	-0.51	-0.360	-0.240	-0.160	-0.100	95	3.0	-0.520	0.170	0.170	0.170	0.185	0.198
13	6.0	-0.561	-0.390	-0.270	-0.180	-0.120	96	10.0	-0.509	0.001	0.001	0.001	0.000	0.000
14	15.0	-0.611	-0.431	-0.310	-0.210	-0.140	97	25.0	-0.600	-0.111	-0.121	-0.130	-0.119	-0.079
15	27.5	-0.661	-0.481	-0.360	-0.260	-0.180	98	41.0	-0.640	-0.179	-0.201	-0.230	-0.230	-0.230
16	40.0	-	-	-	-	-	99	62.5	-0.680	-0.279	-0.311	-0.340	-0.340	-0.340
17	50.0	-	-	-	-	-	100	84.5	-0.720	-0.399	-0.440	-0.470	-0.470	-0.470
18	59.0	-	-	-	-	-	101	94.0	-0.760	-0.519	-0.570	-0.600	-0.600	-0.600
19	67.5	-	-	-	-	-	102	96.0	-0.780	-0.540	-0.600	-0.630	-0.630	-0.630
20	77.5	-	-	-	-	-	103	96.5	-0.800	-0.560	-0.620	-0.650	-0.650	-0.650
21	87.5	-	-	-	-	-		-	-	-	-	-	-	-
22	95.5	-	-	-	-	-		-	-	-	-	-	-	-
23	2.0	-0.460	-0.290	-0.170	-0.100	-0.060	104	3.0	-0.470	0.170	0.170	0.170	0.185	0.198
24	6.0	-0.510	-0.360	-0.240	-0.160	-0.100	105	10.0	-0.466	-0.067	-0.070	-0.071	-0.071	-0.071
25	15.0	-0.580	-0.400	-0.280	-0.190	-0.130	106	25.0	-0.607	-0.130	-0.151	-0.176	-0.176	-0.176
26	27.5	-0.640	-0.450	-0.330	-0.230	-0.150	107	41.0	-0.648	-0.219	-0.250	-0.280	-0.280	-0.280
27	40.0	-	-	-	-	-	108	62.5	-0.688	-0.320	-0.360	-0.390	-0.390	-0.390
28	50.0	-	-	-	-	-	109	84.5	-0.728	-0.420	-0.470	-0.500	-0.500	-0.500
29	59.0	-	-	-	-	-	110	94.0	-0.768	-0.520	-0.570	-0.600	-0.600	-0.600
30	67.5	-	-	-	-	-	111	95.1	-0.771	-0.521	-0.571	-0.601	-0.601	-0.601
31	77.5	-	-	-	-	-	112	94.0	-0.765	-0.519	-0.569	-0.599	-0.599	-0.599
32	87.5	-	-	-	-	-		-	-	-	-	-	-	-
33	95.5	-	-	-	-	-		-	-	-	-	-	-	-
34	2.0	-0.461	-0.291	-0.171	-0.100	-0.060	113	3.0	-0.461	0.171	0.171	0.171	0.185	0.198
35	6.0	-0.511	-0.361	-0.241	-0.160	-0.100	114	10.0	-0.461	-0.067	-0.070	-0.071	-0.071	-0.071
36	15.0	-0.581	-0.401	-0.281	-0.190	-0.130	115	25.0	-0.601	-0.130	-0.151	-0.176	-0.176	-0.176
37	27.5	-0.641	-0.451	-0.331	-0.230	-0.150	116	41.0	-0.641	-0.219	-0.250	-0.280	-0.280	-0.280
38	40.0	-	-	-	-	-	117	62.5	-0.681	-0.320	-0.360	-0.390	-0.390	-0.390
39	50.0	-	-	-	-	-	118	84.5	-0.721	-0.420	-0.470	-0.500	-0.500	-0.500
40	59.0	-	-	-	-	-	119	94.0	-0.761	-0.520	-0.570	-0.600	-0.600	-0.600
41	67.5	-	-	-	-	-	120	94.4	-0.761	-0.520	-0.570	-0.600	-0.600	-0.600
42	77.5	-	-	-	-	-	121	94.5	-0.761	-0.520	-0.570	-0.600	-0.600	-0.600
43	87.5	-	-	-	-	-		-	-	-	-	-	-	-
44	94.5	-	-	-	-	-		-	-	-	-	-	-	-
45	2.0	-0.461	-0.291	-0.171	-0.100	-0.060	122	3.0	-0.461	0.171	0.171	0.171	0.185	0.198
46	6.0	-0.511	-0.361	-0.241	-0.160	-0.100	123	10.0	-0.461	-0.067	-0.070	-0.071	-0.071	-0.071
47	15.0	-0.581	-0.401	-0.281	-0.190	-0.130	124	25.0	-0.601	-0.130	-0.151	-0.176	-0.176	-0.176
48	27.5	-0.641	-0.451	-0.331	-0.230	-0.150	125	41.0	-0.641	-0.219	-0.250	-0.280	-0.280	-0.280
49	40.0	-	-	-	-	-	126	62.5	-0.681	-0.320	-0.360	-0.390	-0.390	-0.390
50	50.0	-	-	-	-	-	127	84.5	-0.721	-0.420	-0.470	-0.500	-0.500	-0.500
51	59.0	-	-	-	-	-	128	94.0	-0.761	-0.520	-0.570	-0.600	-0.600	-0.600
52	67.5	-	-	-	-	-	129	94.0	-0.761	-0.520	-0.570	-0.600	-0.600	-0.600
53	77.5	-	-	-	-	-	130	95.5	-0.761	-0.520	-0.570	-0.600	-0.600	-0.600
54	87.5	-	-	-	-	-	131	94.1	-0.761	-0.520	-0.570	-0.600	-0.600	-0.600
55	94.5	-	-	-	-	-		-	-	-	-	-	-	-
56	2.0	-0.461	-0.291	-0.171	-0.100	-0.060	132	3.0	-0.461	0.171	0.171	0.171	0.185	0.198
57	6.0	-0.511	-0.361	-0.241	-0.160	-0.100	133	10.0	-0.461	-0.067	-0.070	-0.071	-0.071	-0.071
58	15.0	-0.581	-0.401	-0.281	-0.190	-0.130	134	25.0	-0.601	-0.130	-0.151	-0.176	-0.176	-0.176
59	27.5	-0.641	-0.451	-0.331	-0.230	-0.150	135	41.0	-0.641	-0.219	-0.250	-0.280	-0.280	-0.280
60	40.0	-	-	-	-	-	136	62.5	-0.681	-0.320	-0.360	-0.390	-0.390	-0.390
61	50.0	-	-	-	-	-	137	84.5	-0.721	-0.420	-0.470	-0.500	-0.500	-0.500
62	59.0	-	-	-	-	-	138	94.0	-0.761	-0.520	-0.570	-0.600	-0.600	-0.600
63	67.5	-	-	-	-	-	139	95.4	-0.761	-0.520	-0.570	-0.600	-0.600	-0.600
64	87.5	-	-	-	-	-	140	94.0	-0.761	-0.520	-0.570	-0.600	-0.600	-0.600
65	94.5	-	-	-	-	-		-	-	-	-	-	-	-
66	2.0	-0.461	-0.291	-0.171	-0.100	-0.060	141	3.0	-0.461	0.171	0.171	0.171	0.185	0.198
67	6.0	-0.511	-0.361	-0.241	-0.160	-0.100	142	10.0	-0.461	-0.067	-0.070	-0.071	-0.071	-0.071
68	15.0	-0.581	-0.401	-0.281	-0.190	-0.130	143	25.0	-0.601	-0.130	-0.151	-0.176	-0.176	-0.176
69	27.5	-0.641	-0.451	-0.331	-0.230	-0.150	144	41.0	-0.641	-0.219	-0.250	-0.280	-0.280	-0.280
70	40.0	-	-	-	-	-	145	62.5	-0.681	-0.320	-0.360	-0.390	-0.390	-0.390
71	50.0	-	-	-	-	-	146	84.5	-0.721	-0.420	-0.470	-0.500	-0.500	-0.500
72	59.0	-	-	-	-	-	147	94.0	-0.761	-0.520	-0.570	-0.600	-0.600	-0.600
73	67.5	-	-	-	-	-	148	94.0	-0.761	-0.520	-0.570	-0.600	-0.600	-0.600
74	77.5	-	-	-	-	-	149	94.0	-0.761	-0.520	-0.570	-0.600	-0.600	-0.600
75	87.5	-	-	-	-	-		-	-	-	-	-	-	-
76	94.5	-	-	-	-	-		-	-	-	-	-	-	-
77	2.0	-0.461	-0.291	-0.171	-0.100	-0.060	150	3.0	-0.461	0.171	0.171	0.171	0.185	0.198
78	6.0	-0.511	-0.361	-0.241	-0.160	-0.100	151	10.0	-0.461	-0.067	-0.070	-0.071	-0.071	-0.071
79	15.0	-0.581	-0.401	-0.281	-0.190	-0.130	152	25.0	-0.601	-0.130	-0.151	-0.176	-0.176	-0.176
80	27.5	-0.641	-0.451	-0.331	-0.230	-0.150	153	41.0	-0.641	-0.219	-0.250	-0.280	-0.280	-0.280
81	40.0	-	-	-	-	-	154	62.5	-0.681	-0.320	-0.360	-0.390	-0.390	-0.390
82	50.0	-	-	-	-	-	155	84.5	-0.721	-0.420	-0.470	-0.500	-0.500	-0.500
83	59.0	-	-	-	-	-	156	94.0	-0.761	-0.520	-0.570	-0.600	-0.600	-0.600
84	67.5	-	-	-	-	-	157	94.0	-0.761	-0.520	-0.570	-0.600	-0.600	-0.600
85	87.5	-	-	-	-	-		-	-	-	-	-	-	-
86	94.5	-	-	-	-	-		-	-	-	-	-	-	-

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TABLE 10

$$[\alpha = 30^\circ, \beta_{max} = 0^\circ, \alpha = 4^\circ]$$

CONFIDENTIAL

Tube	Per-cent chord	UPPER SURFACE					LOWER SURFACE				
		Mach Number					Mach Number				
		0.60	0.80	0.90	0.95	0.97	0.60	0.80	0.90	0.95	0.97
A 1	2.0	-0.790	-0.640	-0.571	-0.498	-0.471	-0.288				
2	6.0	-0.778	-0.620	-0.540	-0.480	-0.467	-0.292				
3	15.0	-0.765	-0.600	-0.520	-0.470	-0.458	-0.295				
4	27.5	-0.750	-0.580	-0.500	-0.460	-0.450	-0.298				
5	40.0	-0.735	-0.560	-0.480	-0.450	-0.445	-0.300				
6	50.0	-0.720	-0.540	-0.460	-0.440	-0.438	-0.302				
7	59.0	-0.705	-0.520	-0.440	-0.430	-0.430	-0.305				
8	67.5	-0.690	-0.500	-0.420	-0.420	-0.420	-0.308				
9	77.5	-0.675	-0.480	-0.400	-0.410	-0.410	-0.310				
11	87.5	-0.660	-0.460	-0.380	-0.400	-0.400	-0.312				
13	94.0	-0.645	-0.440	-0.360	-0.390	-0.390	-0.315				
86	3.0	-0.630	-0.420	-0.340	-0.370	-0.370	-0.318				
87	10.0	-0.615	-0.400	-0.320	-0.360	-0.360	-0.320				
88	25.0	-0.600	-0.380	-0.300	-0.350	-0.350	-0.322				
89	41.0	-0.585	-0.360	-0.280	-0.340	-0.340	-0.325				
90	52.5	-0.570	-0.340	-0.260	-0.330	-0.330	-0.328				
91	62.5	-0.555	-0.320	-0.240	-0.320	-0.320	-0.330				
92	72.5	-0.540	-0.300	-0.220	-0.310	-0.310	-0.332				
93	84.0	-0.525	-0.280	-0.200	-0.300	-0.300	-0.335				
94	94.0	-0.510	-0.260	-0.180	-0.290	-0.290	-0.338				
95	3.0	-0.495	-0.240	-0.160	-0.280	-0.280	-0.340				
96	10.0	-0.480	-0.220	-0.140	-0.270	-0.270	-0.342				
97	25.0	-0.465	-0.200	-0.120	-0.260	-0.260	-0.345				
98	41.0	-0.450	-0.180	-0.100	-0.250	-0.250	-0.348				
99	52.5	-0.435	-0.160	-0.080	-0.240	-0.240	-0.350				
100	62.5	-0.420	-0.140	-0.060	-0.230	-0.230	-0.352				
101	72.5	-0.405	-0.120	-0.040	-0.220	-0.220	-0.355				
102	84.0	-0.390	-0.100	-0.020	-0.210	-0.210	-0.358				
103	94.0	-0.375	-0.080	-0.000	-0.200	-0.200	-0.360				
95	3.0	-0.360	-0.060	-0.020	-0.190	-0.190	-0.362				
96	10.0	-0.345	-0.040	-0.000	-0.180	-0.180	-0.365				
97	25.0	-0.330	-0.020	-0.000	-0.170	-0.170	-0.368				
98	41.0	-0.315	-0.000	-0.000	-0.160	-0.160	-0.370				
99	52.5	-0.300	-0.000	-0.000	-0.150	-0.150	-0.372				
100	62.5	-0.285	-0.000	-0.000	-0.140	-0.140	-0.375				
101	72.5	-0.270	-0.000	-0.000	-0.130	-0.130	-0.378				
102	84.0	-0.255	-0.000	-0.000	-0.120	-0.120	-0.380				
103	94.0	-0.240	-0.000	-0.000	-0.110	-0.110	-0.382				
104	3.0	-0.225	-0.000	-0.000	-0.100	-0.100	-0.385				
105	10.0	-0.210	-0.000	-0.000	-0.090	-0.090	-0.388				
106	25.0	-0.195	-0.000	-0.000	-0.080	-0.080	-0.390				
107	41.0	-0.180	-0.000	-0.000	-0.070	-0.070	-0.392				
108	52.5	-0.165	-0.000	-0.000	-0.060	-0.060	-0.395				
109	62.5	-0.150	-0.000	-0.000	-0.050	-0.050	-0.398				
110	72.5	-0.135	-0.000	-0.000	-0.040	-0.040	-0.400				
111	84.0	-0.120	-0.000	-0.000	-0.030	-0.030	-0.402				
112	94.0	-0.105	-0.000	-0.000	-0.020	-0.020	-0.405				
113	3.0	-0.090	-0.000	-0.000	-0.010	-0.010	-0.408				
114	10.0	-0.075	-0.000	-0.000	-0.000	-0.000	-0.410				
115	25.0	-0.060	-0.000	-0.000	-0.000	-0.000	-0.412				
116	41.0	-0.045	-0.000	-0.000	-0.000	-0.000	-0.415				
117	52.5	-0.030	-0.000	-0.000	-0.000	-0.000	-0.418				
118	62.5	-0.015	-0.000	-0.000	-0.000	-0.000	-0.420				
119	72.5	-0.000	-0.000	-0.000	-0.000	-0.000	-0.422				
120	84.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.425				
121	94.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.428				
122	3.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.430				
123	10.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.432				
124	25.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.435				
125	41.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.438				
126	52.5	-0.000	-0.000	-0.000	-0.000	-0.000	-0.440				
127	62.5	-0.000	-0.000	-0.000	-0.000	-0.000	-0.442				
128	72.5	-0.000	-0.000	-0.000	-0.000	-0.000	-0.445				
129	84.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.448				
130	94.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.450				
131	3.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.452				
132	10.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.455				
133	25.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.458				
134	41.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.460				
135	52.5	-0.000	-0.000	-0.000	-0.000	-0.000	-0.462				
136	62.5	-0.000	-0.000	-0.000	-0.000	-0.000	-0.465				
137	72.5	-0.000	-0.000	-0.000	-0.000	-0.000	-0.468				
138	84.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.470				
139	94.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.472				
140	3.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.475				
141	10.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.478				
142	25.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.480				
143	41.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.482				
144	52.5	-0.000	-0.000	-0.000	-0.000	-0.000	-0.485				
145	62.5	-0.000	-0.000	-0.000	-0.000	-0.000	-0.488				
146	72.5	-0.000	-0.000	-0.000	-0.000	-0.000	-0.490				
147	84.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.492				
148	94.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.495				
149	3.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.498				
150	10.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.500				
151	25.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.502				
152	41.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.505				
153	52.5	-0.000	-0.000	-0.000	-0.000	-0.000	-0.508				
154	62.5	-0.000	-0.000	-0.000	-0.000	-0.000	-0.510				
155	72.5	-0.000	-0.000	-0.000	-0.000	-0.000	-0.512				
156	84.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.515				
157	94.0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.518				

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TABLE 11

$[A = 30^\circ, \delta_{max} = 0^\circ, \alpha = 7^\circ]$

CONFIDENTIAL

UPPER SURFACE							LOWER SURFACE								
Tube	Per-cent chord	Mach Number					Tube	Per-cent chord	Mach Number						
		0.60	0.80	0.85	0.85	0.925			0.925	0.80	0.85	0.85	0.925	0.925	
A 1	2.0	-1.290	-1.400	-1.150	-0.965	-0.885	-0.720	86	3.0	0.272	0.265	0.268	0.000		0.600
2	6.0	-1.290	-1.290	-1.290	-1.049	-0.905	-0.670	87	10.0	---	---	---	---	---	---
3	15.0	-1.290	-1.290	-1.290	-1.049	-0.905	-0.670	88	25.0	---	---	---	---	---	---
4	27.5	-1.290	-1.290	-1.290	-1.049	-0.905	-0.670	89	41.0	---	---	---	---	---	---
5	40.0	---	---	---	---	---	---	90	54.5	---	---	---	---	---	---
6	50.0	---	---	---	---	---	---	91	62.5	---	---	---	---	---	---
7	59.0	---	---	---	---	---	---	92	72.5	---	---	---	---	---	---
8	67.5	---	---	---	---	---	---	93	84.0	---	---	---	---	---	---
9	77.5	---	---	---	---	---	---	94	94.0	---	---	---	---	---	---
10	87.5	---	---	---	---	---	---								
11	96.0	---	---	---	---	---	---								
B12	2.0	-1.240	-1.450	-1.180	-1.000	-0.860	-0.710	95	3.0	---	---	---	---	---	---
13	6.0	-1.146	-1.345	-1.150	-1.001	-0.860	-0.710	96	10.0	---	---	---	---	---	---
14	15.0	-1.060	-1.260	-1.070	-0.921	-0.780	-0.630	97	25.0	---	---	---	---	---	---
15	27.5	-1.000	-1.200	-1.010	-0.861	-0.720	-0.570	98	41.0	---	---	---	---	---	---
16	40.0	-0.930	-1.140	-0.950	-0.810	-0.680	-0.540	99	54.5	---	---	---	---	---	---
17	50.0	-0.870	-1.080	-0.900	-0.770	-0.650	-0.510	100	62.5	---	---	---	---	---	---
18	59.0	-0.810	-1.020	-0.850	-0.730	-0.620	-0.480	101	72.5	---	---	---	---	---	---
19	67.5	-0.750	-0.960	-0.800	-0.690	-0.590	-0.450	102	84.0	---	---	---	---	---	---
20	77.5	-0.700	-0.910	-0.750	-0.650	-0.560	-0.420	103	94.0	---	---	---	---	---	---
21	87.5	-0.650	-0.860	-0.710	-0.620	-0.530	-0.390								
22	96.0	-0.610	-0.820	-0.680	-0.590	-0.510	-0.370								
C03	2.0	-1.090	-1.460	-1.170	-0.990	-0.850	-0.690	104	3.0	---	---	---	---	---	---
24	6.0	-1.111	-1.410	-1.180	-1.020	-0.880	-0.720	105	10.0	---	---	---	---	---	---
25	15.0	-1.030	-1.360	-1.140	-1.000	-0.860	-0.700	106	25.0	---	---	---	---	---	---
26	27.5	-0.960	-1.300	-1.090	-0.960	-0.820	-0.660	107	41.0	---	---	---	---	---	---
27	40.0	-0.900	-1.240	-1.050	-0.930	-0.790	-0.630	108	54.5	---	---	---	---	---	---
28	50.0	-0.850	-1.180	-1.000	-0.890	-0.750	-0.590	109	62.5	---	---	---	---	---	---
29	59.0	-0.800	-1.120	-0.950	-0.850	-0.710	-0.550	110	72.5	---	---	---	---	---	---
30	67.5	-0.760	-1.060	-0.900	-0.810	-0.670	-0.510	111	84.0	---	---	---	---	---	---
31	77.5	-0.720	-1.000	-0.850	-0.770	-0.630	-0.470	112	94.0	---	---	---	---	---	---
32	87.5	-0.680	-0.940	-0.800	-0.730	-0.590	-0.430								
33	96.0	-0.650	-0.880	-0.750	-0.680	-0.540	-0.380								
D04	2.0	-1.277	-1.480	-1.200	-0.990	-0.860	-0.700	113	3.0	---	---	---	---	---	---
35	6.0	-1.180	-1.430	-1.150	-1.010	-0.880	-0.720	114	10.0	---	---	---	---	---	---
36	15.0	-1.100	-1.380	-1.140	-1.020	-0.890	-0.730	115	25.0	---	---	---	---	---	---
37	27.5	-1.030	-1.320	-1.090	-0.980	-0.850	-0.690	116	41.0	---	---	---	---	---	---
38	40.0	-0.970	-1.260	-1.060	-0.960	-0.830	-0.670	117	54.5	---	---	---	---	---	---
39	50.0	-0.920	-1.200	-1.020	-0.930	-0.800	-0.640	118	62.5	---	---	---	---	---	---
40	59.0	-0.870	-1.140	-0.970	-0.890	-0.760	-0.600	119	72.5	---	---	---	---	---	---
41	67.5	-0.830	-1.080	-0.920	-0.850	-0.720	-0.560	120	84.0	---	---	---	---	---	---
42	77.5	-0.790	-1.020	-0.870	-0.810	-0.680	-0.520	121	94.0	---	---	---	---	---	---
43	87.5	-0.750	-0.960	-0.820	-0.770	-0.640	-0.480								
44	96.0	-0.720	-0.900	-0.780	-0.730	-0.600	-0.440								
E05	2.0	-1.230	-1.500	-1.220	-1.020	-0.870	-0.720	122	3.0	---	---	---	---	---	---
46	6.0	-1.130	-1.450	-1.200	-1.040	-0.900	-0.750	123	10.0	---	---	---	---	---	---
47	15.0	-1.050	-1.400	-1.160	-1.050	-0.920	-0.770	124	25.0	---	---	---	---	---	---
48	27.5	-0.980	-1.340	-1.100	-0.990	-0.860	-0.710	125	41.0	---	---	---	---	---	---
49	40.0	-0.920	-1.280	-1.050	-0.960	-0.830	-0.680	126	54.5	---	---	---	---	---	---
50	50.0	-0.870	-1.220	-1.000	-0.920	-0.790	-0.640	127	62.5	---	---	---	---	---	---
51	59.0	-0.820	-1.160	-0.950	-0.880	-0.750	-0.600	128	72.5	---	---	---	---	---	---
52	67.5	-0.780	-1.100	-0.910	-0.850	-0.720	-0.570	129	84.0	---	---	---	---	---	---
53	77.5	-0.740	-1.040	-0.870	-0.820	-0.690	-0.530	130	94.0	---	---	---	---	---	---
54	87.5	-0.700	-0.980	-0.830	-0.790	-0.660	-0.510								
55	96.0	-0.670	-0.920	-0.790	-0.750	-0.620	-0.470								
F06	2.0	-1.250	-1.520	-1.240	-1.040	-0.890	-0.740	131	3.0	---	---	---	---	---	---
57	6.0	-1.150	-1.470	-1.220	-1.060	-0.920	-0.770	132	10.0	---	---	---	---	---	---
58	15.0	-1.070	-1.420	-1.180	-1.080	-0.940	-0.790	133	25.0	---	---	---	---	---	---
59	27.5	-1.000	-1.360	-1.120	-1.010	-0.880	-0.730	134	41.0	---	---	---	---	---	---
60	40.0	-0.940	-1.300	-1.060	-0.970	-0.840	-0.690	135	54.5	---	---	---	---	---	---
61	50.0	-0.890	-1.240	-1.010	-0.930	-0.800	-0.650	136	62.5	---	---	---	---	---	---
62	59.0	-0.840	-1.180	-0.960	-0.900	-0.770	-0.620	137	72.5	---	---	---	---	---	---
63	67.5	-0.800	-1.120	-0.920	-0.870	-0.740	-0.590	138	84.0	---	---	---	---	---	---
64	77.5	-0.760	-1.060	-0.880	-0.840	-0.710	-0.560	139	94.0	---	---	---	---	---	---
65	87.5	-0.720	-1.000	-0.830	-0.800	-0.670	-0.530								
66	96.0	-0.690	-0.940	-0.790	-0.760	-0.630	-0.490								
G07	2.0	-1.220	-1.510	-1.230	-1.030	-0.880	-0.730	140	3.0	---	---	---	---	---	---
68	6.0	-1.120	-1.460	-1.200	-1.050	-0.910	-0.760	141	10.0	---	---	---	---	---	---
69	15.0	-1.040	-1.410	-1.160	-1.070	-0.940	-0.790	142	25.0	---	---	---	---	---	---
70	27.5	-0.970	-1.350	-1.100	-1.000	-0.870	-0.720	143	41.0	---	---	---	---	---	---
71	40.0	-0.910	-1.290	-1.040	-0.960	-0.830	-0.680	144	54.5	---	---	---	---	---	---
72	50.0	-0.860	-1.230	-0.990	-0.920	-0.790	-0.640	145	62.5	---	---	---	---	---	---
73	59.0	-0.810	-1.170	-0.940	-0.890	-0.760	-0.610	146	72.5	---	---	---	---	---	---
74	67.5	-0.770	-1.110	-0.910	-0.860	-0.730	-0.580	147	84.0	---	---	---	---	---	---
75	77.5	-0.730	-1.050	-0.860	-0.820	-0.690	-0.540	148	94.0	---	---	---	---	---	---
76	87.5	-0.690	-0.990	-0.820	-0.790	-0.660	-0.510	149	94.0	---	---	---	---	---	---
77	96.0	-0.660	-0.930	-0.780	-0.750	-0.620	-0.470								
H08	2.0	-1.260	-1.530	-1.250	-1.050	-0.900	-0.750	150	3.0	---	---	---	---	---	---
79	6.0	-1.160	-1.480	-1.220	-1.070	-0.930	-0.780	151	10.0	---	---	---	---	---	---
80	15.0	-1.080	-1.430	-1.180	-1.090	-0.960	-0.810	152	25.0	---	---	---	---	---	---
81	27.5	-1.010	-1.370	-1.120	-1.020	-0.890	-0.740	153	41.0	---	---	---	---	---	---
82	40.0	-0.950	-1.310	-1.060	-0.980	-0.850	-0.700	154	54.5	---	---	---	---	---	---
83	50.0	-0.900	-1.250	-1.010	-0.930	-0.800	-0.650	155	62.5	---	---	---	---	---	---
84	59.0	-0.850	-1.190	-0.960	-0.900	-0.770	-0.620	156	72.5	---	---	---	---	---	---
85	67.5	-0.810	-1.130	-0.920	-0.870	-0.740	-0.590	157	84.0	---	---	---	---	---	---
86	77.5	-0.770	-1.070	-0.880	-0.840	-0.710	-0.560								
87	87.5	-0.730	-1.010	-0.830	-0.800	-0.670	-0.530								
88	96.0	-0.700	-0.950	-0.790	-0.760	-0.630	-0.490								

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TABLE 12

$A = 30^\circ, \delta_{min} = 0^\circ, \alpha = 10^\circ$

CONFIDENTIAL											
UPPER SURFACE						LOWER SURFACE					
Tube	Per-cent chord	Mach Number				Tube	Per-cent chord	Mach Number			
		0.60	0.80					0.60	0.80		
A 1	2.0	-0.177	-1.675			66	3.0	0.690	0.700		
2	6.0	-1.302	-1.590			67	10.0	--	--		
3	15.0	-0.717	-1.040			68	45.0	--	.260		
4	27.5	-0.670	--			69	41.0	--	--		
5	40.0	--	--			90	52.5	--	--		
6	50.0	--	--			91	62.5	--	--		
7	59.0	--	--			92	72.5	--	--		
8	67.5	--	--			93	84.0	--	--		
9	77.5	--	--			94	94.0	--	--		
10	87.5	--	--								
11	96.0	--	--								
12	2.0	-1.154	-1.670			95	3.0	.663	.660		
13	6.0	-1.421	-1.615			96	10.0	.670	.677		
14	15.0	-1.428	-1.562			97	25.0	.611	.619		
15	27.5	-.981	-1.055			98	41.0	.600	.607		
16	40.0	-.630	-.666			99	52.5	.608	.618		
17	50.0	-.600	-.680			100	62.5	.600	.613		
18	59.0	-.604	-.701			101	72.5	.600	.607		
19	67.5	-.611	-.650			102	84.0	.610	.612		
20	77.5	-.600	-.690			103	94.0	--	--		
21	87.5	-.600	-.683								
22	96.0	--	--								
23	2.0	-1.128	-1.670			104	3.0	.660	.662		
24	6.0	-1.119	-1.628			105	10.0	.611	.620		
25	15.0	-1.110	-1.500			106	25.0	.600	.600		
26	27.5	-1.060	-1.400			107	41.0	.605	.600		
27	40.0	-.980	-1.000			108	52.5	.600	.610		
28	50.0	-.756	-.748			109	62.5	.600	.600		
29	59.0	-.668	-.610			110	72.5	.605	.600		
30	67.5	--	--			111	84.0	.600	.606		
31	77.5	-.618	-.660			112	94.0	.610	.610		
32	87.5	-.617	-.645								
33	96.0	-.600	-.690								
34	2.0	-.964	-1.430			113	3.0	.631	.643		
35	6.0	-.948	-1.230			114	10.0	.600	.620		
36	15.0	-.880	-.938			115	25.0	.610	.614		
37	27.5	-.780	-.825			116	41.0	--	--		
38	40.0	-.700	-.708			117	52.5	-.000	-.015		
39	50.0	-.694	-.615			118	62.5	-.000	-.016		
40	60.0	-.660	-.660			119	72.5	.001	.001		
41	77.5	-.676	-.630			120	87.4	.000	.000		
42	87.5	-.660	-.610			121	94.0	.005	.018		
43	94.2	-.618	-.775								
44	2.0	-.771	-.838			122	3.0	.636	.650		
45	6.0	-.754	-.821			123	10.0	.632	.605		
46	15.0	-.754	-.803			124	25.0	.614	.614		
47	27.5	-.721	-.805			125	41.0	.600	.600		
48	40.0	-.642	-.766			126	52.5	-.010	-.013		
49	50.0	-.600	-.718			127	62.5	-.006	-.009		
50	59.0	-.584	-.668			128	72.5	-.008	-.011		
51	67.5	-.604	-.668			129	84.0	-.000	-.011		
52	77.5	-.660	-.641			130	94.0	.001	.000		
53	87.5	-.605	-.670			131	94.1	.041	-.043		
54	96.0	-.600	-.639								
55	2.0	-.621	-.660			132	3.0	.621	.640		
56	6.0	-.600	-.621			133	10.0	.607	.601		
57	15.0	-.660	-.650			134	25.0	.610	.610		
58	27.5	-.668	-.700			135	41.0	.600	.600		
59	40.0	-.670	-.614			136	52.5	-.004	-.004		
60	50.0	-.609	-.678			137	62.5	-.001	-.004		
61	59.0	-.600	-.623			138	72.5	-.009	-.009		
62	67.5	-.670	-.617			139	84.0	-.040	-.058		
63	86.5	--	--			140	94.0	-.149	-.165		
64	94.5	--	--								
65	2.0	-.606	-.756			141	3.0	-.596	-.617		
66	6.0	-.600	-.700			142	10.0	-.640	-.635		
67	15.0	-.668	-.678			143	25.0	-.625	-.610		
68	27.5	-.630	-.621			144	41.0	-.618	-.605		
69	40.0	-.685	-.659			145	52.5	-.605	-.609		
70	50.0	-.650	-.612			146	62.5	-.601	-.601		
71	59.0	-.608	-.608			147	72.5	-.601	-.609		
72	67.5	-.611	-.673			148	84.0	-.631	-.619		
73	77.5	-.606	-.651			149	94.0	-.614	-.615		
74	87.2	--	--								
75	96.8	-.674	-.613								
76	2.0	-.606	-.637			150	3.0	.600	.600		
77	6.0	-.600	-.604			151	10.0	-.605	-.603		
78	15.0	-.610	-.643			152	25.0	-.600	-.603		
79	27.5	-.661	-.650			153	41.0	-.600	-.611		
80	40.0	-.600	-.644			154	52.5	-.610	-.609		
81	50.0	-.600	-.630			155	62.5	-.600	-.613		
82	59.0	-.661	-.616			156	72.5	-.600	-.615		
83	67.5	-.639	-.600			157	84.0	-.617	-.617		
84	86.5	-.628	-.603								
85	94.2	-.621	-.639								



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TABLE 11

$\alpha = 4.5^\circ, \delta_{max} = 0^\circ, \beta = -0.0^\circ$

UPPER SURFACE						LOWER SURFACE							
Tube	Per-cent chord	Mach Number					Tube	Per-cent chord	Mach Number				
		0.60	0.80	0.90	0.995	0.96			0.60	0.80	0.90	0.995	0.96
A 1	2.0	0.290	0.291	0.290	0.270	0.275	86	3.0	-0.301	-0.300	-0.271	-0.261	-0.195
2	6.0	.089	.115	.120	.135	.135	87	10.0	-0.195	-0.195	-0.195	-0.195	-0.195
3	15.0	.008	.001	.000	.005	.005	88	25.0	-0.105	-0.105	-0.090	-0.085	-0.098
4	27.5	---	---	---	---	---	89	41.0	---	---	---	---	---
5	40.0	---	---	---	---	---	90	52.5	---	---	---	---	---
6	50.0	---	---	---	---	---	91	62.5	---	---	---	---	---
7	59.0	---	---	---	---	---	92	72.5	---	---	---	---	---
8	67.5	---	---	---	---	---	93	84.0	---	---	---	---	---
9	77.5	---	---	---	---	---	94	94.0	---	---	---	---	---
10	87.5	---	---	---	---	---							
11	96.0	---	---	---	---	---							
B12	2.0	---	---	---	---	---	95	3.0	-.360	-.360	-.360	-.360	-.290
13	6.0	---	---	---	---	---	97	10.0	-.290	-.290	-.290	-.290	-.290
14	15.0	-.031	-.091	-.095	-.095	-.090	98	25.0	-.290	-.290	-.290	-.290	-.290
15	27.5	-.105	-.105	-.100	-.090	-.090	99	41.0	-.290	-.290	-.290	-.290	-.290
16	40.0	-.160	-.171	-.171	-.161	-.160	100	52.5	-.290	-.290	-.290	-.290	-.290
17	50.0	-.160	-.171	-.171	-.161	-.160	101	62.5	-.290	-.290	-.290	-.290	-.290
18	59.0	-.168	-.151	-.171	-.170	-.170	102	72.5	---	---	---	---	---
19	67.5	---	---	---	---	---	103	84.0	---	---	---	---	---
20	77.5	---	---	---	---	---	104	94.0	---	---	---	---	---
21	87.5	---	---	---	---	---							
22	96.0	---	---	---	---	---							
C23	2.0	.290	.280	.295	.299	.291	104	3.0	-.401	-.394	-.368	-.365	-.271
24	6.0	.060	.070	.066	.069	.069	105	10.0	-.290	-.294	-.290	-.290	-.290
25	15.0	-.095	-.091	-.097	-.091	-.099	106	25.0	-.290	-.290	-.290	-.290	-.290
26	27.5	-.130	-.139	-.151	-.135	-.161	107	41.0	-.290	-.290	-.290	-.290	-.290
27	40.0	-.179	-.206	-.206	-.200	-.205	108	52.5	-.290	-.290	-.290	-.290	-.290
28	50.0	-.190	-.201	-.203	-.200	-.205	109	62.5	-.290	-.290	-.290	-.290	-.290
29	59.0	-.189	-.200	-.206	-.200	-.210	110	72.5	-.290	-.290	-.290	-.290	-.290
30	67.5	-.190	-.169	-.213	-.209	-.204	111	84.0	-.290	-.290	-.290	-.290	-.290
31	77.5	-.190	-.193	-.203	-.202	-.202	112	94.0	-.290	-.290	-.290	-.290	-.290
32	87.5	-.209	-.201	-.200	-.200	-.200							
33	96.0	-.068	-.045	-.099	-.099	-.131							
D34	2.0	.197	.205	.196	.185	.160	113	3.0	-.408	-.390	-.362	-.368	-.271
35	6.0	.066	.066	.060	.060	.061	114	10.0	-.290	-.290	-.290	-.290	-.290
36	15.0	-.130	-.149	-.141	-.109	-.101	115	25.0	-.290	-.290	-.290	-.290	-.290
37	27.5	-.181	-.210	-.200	-.205	-.201	116	41.0	-.290	-.290	-.290	-.290	-.290
38	40.0	-.210	-.210	-.210	-.210	-.210	117	52.5	-.290	-.290	-.290	-.290	-.290
39	50.0	-.210	-.210	-.210	-.210	-.210	118	62.5	-.290	-.290	-.290	-.290	-.290
40	59.0	-.210	-.210	-.210	-.210	-.210	119	72.5	-.290	-.290	-.290	-.290	-.290
41	67.5	-.210	-.210	-.210	-.210	-.210	120	84.0	-.290	-.290	-.290	-.290	-.290
42	77.5	-.210	-.210	-.210	-.210	-.210	121	94.0	-.290	-.290	-.290	-.290	-.290
43	87.5	-.210	-.210	-.210	-.210	-.210							
44	96.0	-.210	-.210	-.210	-.210	-.210							
E45	2.0	.285	.290	.290	.282	.270	122	3.0	-.395	-.419	-.407	-.395	-.300
46	6.0	.098	.094	.090	.080	.080	123	10.0	-.290	-.290	-.290	-.290	-.290
47	15.0	-.098	-.079	-.087	-.109	-.101	124	25.0	-.290	-.290	-.290	-.290	-.290
48	27.5	-.128	-.150	-.168	-.188	-.181	125	41.0	-.290	-.290	-.290	-.290	-.290
49	40.0	-.175	-.200	-.213	-.200	-.200	126	52.5	-.290	-.290	-.290	-.290	-.290
50	50.0	-.180	-.210	-.208	-.200	-.200	127	62.5	-.290	-.290	-.290	-.290	-.290
51	59.0	-.169	-.200	-.206	-.200	-.200	128	72.5	-.290	-.290	-.290	-.290	-.290
52	67.5	-.168	-.210	-.210	-.200	-.200	129	84.0	-.290	-.290	-.290	-.290	-.290
53	77.5	-.168	-.210	-.210	-.200	-.200	130	94.0	-.290	-.290	-.290	-.290	-.290
54	87.5	-.168	-.210	-.210	-.200	-.200							
55	96.0	-.168	-.210	-.210	-.200	-.200							
F56	2.0	.298	.295	.295	.282	.270	132	3.0	-.370	-.435	-.406	-.382	-.281
57	6.0	.095	.094	.090	.080	.080	133	10.0	-.294	-.285	-.297	-.298	-.297
58	15.0	-.099	-.098	-.090	-.090	-.090	134	25.0	-.290	-.290	-.290	-.290	-.290
59	27.5	-.120	-.140	-.169	-.170	-.211	135	41.0	-.290	-.290	-.290	-.290	-.290
60	40.0	-.170	-.200	-.200	-.200	-.200	136	52.5	-.290	-.290	-.290	-.290	-.290
61	50.0	-.165	-.198	-.207	-.200	-.200	137	62.5	-.290	-.290	-.290	-.290	-.290
62	59.0	-.165	-.179	-.190	-.201	-.200	138	72.5	-.290	-.290	-.290	-.290	-.290
63	67.5	-.165	-.191	-.190	-.190	-.190	139	84.0	-.290	-.290	-.290	-.290	-.290
64	77.5	---	---	---	---	---	140	94.0	-.078	-.070	-.071	-.070	-.081
65	87.5	---	---	---	---	---							
66	96.0	---	---	---	---	---							
G67	2.0	.290	.280	.285	.269	.268	141	3.0	-.387	-.473	-.430	-.436	-.306
68	6.0	.090	.090	.080	.080	.074	142	10.0	-.298	-.293	-.293	-.293	-.293
69	15.0	-.099	-.089	-.090	-.091	-.098	143	25.0	-.290	-.290	-.290	-.290	-.290
70	27.5	-.100	-.120	-.130	-.140	-.150	144	41.0	-.290	-.290	-.290	-.290	-.290
71	40.0	-.150	-.179	-.191	-.200	-.210	145	52.5	-.290	-.290	-.290	-.290	-.290
72	50.0	-.150	-.180	-.200	-.212	-.212	146	62.5	-.290	-.290	-.290	-.290	-.290
73	59.0	-.150	-.180	-.200	-.212	-.212	147	72.5	-.290	-.290	-.290	-.290	-.290
74	67.5	-.150	-.180	-.200	-.212	-.212	148	84.0	-.290	-.290	-.290	-.290	-.290
75	77.5	-.150	-.180	-.200	-.212	-.212	149	94.0	-.290	-.290	-.290	-.290	-.290
76	87.5	-.150	-.180	-.200	-.212	-.212							
77	96.0	-.150	-.180	-.200	-.212	-.212							
H78	2.0	.195	.198	.160	.167	.171	150	3.0	-.381	-.437	-.406	-.411	-.306
79	6.0	.010	.000	-.010	-.010	-.006	151	10.0	-.295	-.295	-.295	-.295	-.295
80	15.0	-.070	-.094	-.112	-.121	-.116	152	25.0	-.290	-.290	-.290	-.290	-.290
81	27.5	-.120	-.151	-.180	-.177	-.201	153	41.0	-.290	-.290	-.290	-.290	-.290
82	40.0	-.160	-.180	-.200	-.200	-.200	154	52.5	-.290	-.290	-.290	-.290	-.290
83	50.0	-.158	-.181	-.200	-.217	-.200	155	62.5	-.290	-.290	-.290	-.290	-.290
84	59.0	-.119	-.133	-.155	-.170	-.190	156	72.5	-.290	-.290	-.290	-.290	-.290
85	67.5	-.098	-.110	-.140	-.145	-.148	157	84.0	-.290	-.290	-.290	-.290	-.290
86	77.5	-.098	-.110	-.140	-.145	-.148							
87	87.5	-.098	-.110	-.140	-.145	-.148							
88	94.2	-.098	-.095	-.118	-.138	-.148							



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TABLE 15

$[A = 45^\circ, \alpha_{max} = 0^\circ, \alpha = 7^\circ]$

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UPPER SURFACE							LOWER SURFACE						
Tube	Per-cent chord	Mach Number					Tube	Per-cent chord	Mach Number				
		0.60	0.80	0.90	0.925	0.96			0.60	0.80	0.90	0.925	0.96
1	2.0	-1.155	-1.189	-1.000	-1.150	-0.761	86	3.0	0.408	0.410	0.410	0.416	0.428
2	6.0	-1.021	-1.022	-1.000	-1.000	-0.772	87	10.0	.170	.181	.185	.192	.203
3	15.0	-.840	-.830	-.800	-.825	-.810	88	25.0	.156	.163	.167	.175	.189
4	27.5	-.755	-.771	-.731	-.730	-.756	89	41.0	-.	-.	-.	-.	-.
5	40.0	-.	-.	-.	-.	-.	90	52.5	-.	-.	-.	-.	-.
6	50.0	-.	-.	-.	-.	-.	91	62.5	-.	-.	-.	-.	-.
7	59.0	-.	-.	-.	-.	-.	92	72.5	-.	-.	-.	-.	-.
8	67.5	-.	-.	-.	-.	-.	93	82.5	-.	-.	-.	-.	-.
9	77.5	-.	-.	-.	-.	-.	94	94.0	-.	-.	-.	-.	-.
10	87.5	-.	-.	-.	-.	-.							
11	96.0	-.	-.	-.	-.	-.							
12	2.0	-.	-.	-.	-.	-.	95	3.0	-.803	-.793	-.785	-.787	-.794
13	6.0	-.	-.	-.	-.	-.	96	10.0	-.285	-.287	-.285	-.287	-.294
14	15.0	-.515	-.539	-.495	-.511	-.490	97	25.0	-.116	-.110	-.106	-.107	-.117
15	27.5	-.450	-.450	-.465	-.455	-.463	98	41.0	-.044	-.039	-.033	-.033	-.043
16	40.0	-.411	-.408	-.405	-.408	-.410	99	52.5	-.003	-.007	-.006	-.003	-.009
17	50.0	-.395	-.380	-.380	-.381	-.380	100	62.5	-.	-.	-.	-.	-.
18	59.0	-.375	-.377	-.378	-.378	-.378	101	72.5	-.	-.	-.	-.	-.
19	67.5	-.360	-.357	-.358	-.358	-.358	102	82.5	-.	-.	-.	-.	-.
20	77.5	-.340	-.340	-.340	-.340	-.340	103	94.0	-.	-.	-.	-.	-.
21	87.5	-.320	-.320	-.320	-.320	-.320							
22	96.0	-.300	-.300	-.300	-.300	-.300							
23	2.0	-1.330	-1.401	-1.161	-1.300	-.950	104	3.0	-.408	-.390	-.376	-.367	-.368
24	6.0	-1.190	-1.168	-1.100	-1.215	-.850	105	10.0	-.238	-.231	-.226	-.226	-.230
25	15.0	-.995	-.994	-.969	-1.100	-.750	106	25.0	-.103	-.096	-.090	-.090	-.090
26	27.5	-.875	-.875	-.869	-.869	-.871	107	41.0	-.031	-.016	-.011	-.011	-.013
27	40.0	-.855	-.868	-.869	-.860	-.875	108	52.5	-.006	-.009	-.008	-.008	-.008
28	50.0	-.848	-.859	-.859	-.851	-.868	109	62.5	-.001	-.004	-.004	-.004	-.007
29	59.0	-.835	-.845	-.841	-.840	-.851	110	72.5	-.001	-.004	-.004	-.004	-.004
30	67.5	-.820	-.830	-.820	-.820	-.820	111	82.5	-.001	-.001	-.001	-.001	-.001
31	77.5	-.810	-.814	-.810	-.810	-.810	112	94.0	-.001	-.001	-.001	-.001	-.001
32	87.5	-.800	-.800	-.800	-.800	-.800							
33	96.0	-.790	-.790	-.790	-.790	-.790							
34	2.0	-1.300	-1.400	-1.254	-1.339	-1.000	113	3.0	-.417	-.399	-.374	-.368	-.350
35	6.0	-.999	-.972	-.891	-1.180	-.811	114	10.0	-.256	-.240	-.217	-.201	-.196
36	15.0	-.820	-.820	-.801	-1.077	-.705	115	25.0	-.113	-.097	-.076	-.056	-.050
37	27.5	-.740	-.745	-.740	-.760	-.630	116	41.0	-.044	-.019	-.016	-.016	-.019
38	40.0	-.711	-.711	-.711	-.711	-.711	117	52.5	-.010	-.008	-.008	-.008	-.008
39	50.0	-.690	-.690	-.690	-.690	-.690	118	62.5	-.001	-.001	-.001	-.001	-.001
40	59.0	-.675	-.675	-.675	-.675	-.675	119	72.5	-.001	-.001	-.001	-.001	-.001
41	67.5	-.660	-.660	-.660	-.660	-.660	120	82.5	-.001	-.001	-.001	-.001	-.001
42	77.5	-.650	-.650	-.650	-.650	-.650	121	94.0	-.001	-.001	-.001	-.001	-.001
43	87.5	-.640	-.640	-.640	-.640	-.640							
44	96.0	-.630	-.630	-.630	-.630	-.630							
45	2.0	-1.141	-1.275	-1.105	-1.200	-1.072	122	3.0	-.438	-.426	-.395	-.385	-.368
46	6.0	-1.088	-1.210	-1.074	-1.166	-1.021	123	10.0	-.267	-.256	-.224	-.210	-.198
47	15.0	-.928	-.939	-.878	-.993	-.813	124	25.0	-.132	-.119	-.090	-.076	-.060
48	27.5	-.800	-.800	-.775	-.860	-.680	125	41.0	-.057	-.044	-.031	-.020	-.009
49	40.0	-.775	-.775	-.775	-.775	-.775	126	52.5	-.011	-.007	-.007	-.007	-.007
50	50.0	-.760	-.760	-.760	-.760	-.760	127	62.5	-.001	-.001	-.001	-.001	-.001
51	59.0	-.745	-.745	-.745	-.745	-.745	128	72.5	-.001	-.001	-.001	-.001	-.001
52	67.5	-.730	-.730	-.730	-.730	-.730	129	82.5	-.001	-.001	-.001	-.001	-.001
53	77.5	-.720	-.720	-.720	-.720	-.720	130	94.0	-.001	-.001	-.001	-.001	-.001
54	87.5	-.710	-.710	-.710	-.710	-.710							
55	96.0	-.700	-.700	-.700	-.700	-.700							
56	2.0	-1.180	-1.350	-1.170	-1.242	-1.101	131	3.0	-.459	-.430	-.397	-.380	-.357
57	6.0	-1.110	-1.340	-1.100	-1.181	-1.058	132	10.0	-.276	-.265	-.232	-.214	-.198
58	15.0	-.959	-1.154	-1.044	-1.094	-.911	133	25.0	-.145	-.125	-.096	-.079	-.051
59	27.5	-.820	-.820	-.795	-.880	-.711	134	41.0	-.077	-.060	-.042	-.031	-.020
60	40.0	-.795	-.795	-.775	-.867	-.690	135	52.5	-.021	-.015	-.013	-.013	-.013
61	50.0	-.780	-.780	-.780	-.780	-.780	136	62.5	-.001	-.001	-.001	-.001	-.001
62	59.0	-.765	-.765	-.765	-.765	-.765	137	72.5	-.001	-.001	-.001	-.001	-.001
63	67.5	-.750	-.750	-.750	-.750	-.750	138	82.5	-.001	-.001	-.001	-.001	-.001
64	77.5	-.740	-.740	-.740	-.740	-.740	139	94.0	-.001	-.001	-.001	-.001	-.001
65	87.5	-.730	-.730	-.730	-.730	-.730							
66	96.0	-.720	-.720	-.720	-.720	-.720							
66	2.0	-.900	-.930	-1.243	-1.048	-1.068	140	3.0	-.438	-.435	-.404	-.380	-.353
67	6.0	-.860	-.901	-1.260	-1.158	-1.048	141	10.0	-.261	-.256	-.224	-.207	-.181
68	15.0	-.740	-.740	-1.200	-1.094	-.950	142	25.0	-.128	-.121	-.090	-.076	-.060
69	27.5	-.695	-.711	-.812	-.907	-.804	143	41.0	-.067	-.058	-.042	-.031	-.020
70	40.0	-.670	-.670	-.670	-.670	-.670	144	52.5	-.021	-.010	-.004	-.010	-.010
71	50.0	-.650	-.650	-.650	-.650	-.650	145	62.5	-.001	-.001	-.001	-.001	-.001
72	59.0	-.635	-.635	-.635	-.635	-.635	146	72.5	-.001	-.001	-.001	-.001	-.001
73	67.5	-.620	-.620	-.620	-.620	-.620	147	82.5	-.001	-.001	-.001	-.001	-.001
74	77.5	-.610	-.610	-.610	-.610	-.610	148	94.0	-.001	-.001	-.001	-.001	-.001
75	87.2	-.600	-.600	-.600	-.600	-.600	149	96.0	-.001	-.001	-.001	-.001	-.001
76	96.8	-.590	-.590	-.590	-.590	-.590							
77	2.0	-.970	-.968	-.830	-.830	-.830	150	3.0	-.410	-.411	-.376	-.371	-.350
78	6.0	-.924	-.930	-.805	-.805	-.808	151	10.0	-.256	-.249	-.211	-.194	-.186
79	15.0	-.810	-.810	-.775	-.810	-.690	152	25.0	-.128	-.121	-.090	-.076	-.060
80	27.5	-.740	-.740	-.740	-.740	-.740	153	41.0	-.067	-.058	-.042	-.031	-.020
81	40.0	-.710	-.710	-.710	-.710	-.710	154	52.5	-.021	-.010	-.004	-.010	-.010
82	50.0	-.690	-.690	-.690	-.690	-.690	155	62.5	-.001	-.001	-.001	-.001	-.001
83	59.0	-.675	-.675	-.675	-.675	-.675	156	72.5	-.001	-.001	-.001	-.001	-.001
84	67.5	-.660	-.660	-.660	-.660	-.660	157	82.5	-.001	-.001	-.001	-.001	-.001
85	77.5	-.650	-.650	-.650	-.650	-.650							
86	87.2	-.640	-.640	-.640	-.640	-.640							
87	96.8	-.630	-.630	-.630	-.630	-.630							

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TABLE 16

$[A = 45^\circ, \delta_{in} = 0^\circ, \alpha = 10^\circ]$

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UPPER SURFACE						LOWER SURFACE						
Tube	Per-cent chord	Mesh Number				Tube	Per-cent chord	Mesh Number				
		0,60	0,80	0,90	0,95			0,60	0,80	0,90	0,95	
1	2.0	-1.701	-1.436	-1.271	-1.041	86	5.0	0.307	0.591	0.519	0.267	0.535
2	4.0	-1.740	-1.330	-1.060	-0.809	87	10.0	.256	.461	.268	.291	.282
3	15.0	-.960	-.609	-.461	-.475	88	20.0	.292	.297	.268	.270	.280
4	27.5	-.489	-.313	-.260	-.290	89	41.0	-.	-.	-.	-.	-.
5	40.0	-.	-.	-.	-.	90	52.5	-.	-.	-.	-.	-.
6	50.0	-.	-.	-.	-.	91	52.5	-.	-.	-.	-.	-.
7	58.0	-.	-.	-.	-.	92	52.5	-.	-.	-.	-.	-.
8	67.5	-.	-.	-.	-.	93	54.0	-.	-.	-.	-.	-.
9	77.5	-.	-.	-.	-.	94	64.0	-.	-.	-.	-.	-.
10	87.5	-.	-.	-.	-.							
11	95.0	-.	-.	-.	-.							
102	2.0	-.	-.	-.	-.	95	3.0	.463	.477	.477	.480	.485
13	8.0	-.	-.	-.	-.	96	10.0	.327	.317	.311	.314	.318
14	15.0	-.410	-.177	-.020	-.601	97	20.0	.203	.199	.196	.196	.205
15	27.5	-.453	-.266	-.170	-.480	98	41.0	.120	.115	.112	.112	.117
16	40.0	-.480	-.601	-.560	-.476	99	52.5	.089	.083	.084	.072	.076
17	50.0	-.450	-.605	-.579	-.485	100	52.5	-.	-.	-.	-.	-.
18	58.0	-.395	-.550	-.544	-.466	101	52.5	-.	-.	-.	-.	-.
19	67.5	-.	-.	-.	-.	102	52.5	-.	-.	-.	-.	-.
20	77.5	-.	-.	-.	-.	103	64.5	-.	-.	-.	-.	-.
21	86.0	-.	-.	-.	-.							
22	95.0	-.	-.	-.	-.							
205	2.0	-1.085	-1.315	-1.374	-1.180	104	3.0	.477	.468	.459	.457	.455
24	8.0	-1.400	-1.331	-1.139	-1.103	105	10.0	.331	.315	.309	.286	.295
25	15.0	-1.780	-1.302	-1.012	-1.011	106	20.0	.192	.188	.189	.164	.162
26	27.5	-1.000	-1.102	-.831	-.682	107	41.0	.099	.089	.071	.066	.064
27	40.0	-.479	-.641	-.605	-.505	108	52.5	.066	.053	.057	.066	.064
28	50.0	-.480	-.570	-.680	-.591	109	52.5	.059	.047	.030	.019	.016
29	59.0	-.385	-.473	-.720	-.629	110	72.5	.073	.064	.046	.032	.032
30	67.5	-.348	-.375	-.686	-.560	111	85.1	.094	.074	.074	.063	.065
31	77.5	-.289	-.370	-.660	-.521	112	94.5	.109	.107	.072	.057	.066
32	86.0	-.141	-.169	-.440	-.319							
33	95.0	-.060	-.071	-.233	-.302							
204	2.0	-.995	-1.180	-1.179	-1.200	113	3.0	.474	.465	.447	.439	.439
35	15.0	-1.011	-1.205	-1.229	-1.065	114	10.0	.338	.328	.305	.293	.283
36	27.5	-1.095	-1.186	-.940	-.990	115	20.0	.186	.177	.155	.140	.132
37	40.0	-.640	-.840	-.807	-.702	116	41.0	.096	.088	.066	.041	.032
38	50.0	-.590	-.721	-.859	-.738	117	52.5	.077	.064	.018	.007	.015
39	59.0	-.479	-.575	-.711	-.713	118	62.5	.053	.041	.014	-.014	-.021
40	67.5	-.425	-.524	-.500	-.680	119	72.5	.073	.062	.037	.003	-.003
41	77.5	-.352	-.366	-.300	-.501	120	87.4	.104	.077	.066	.030	.013
42	87.5	-.269	-.266	-.170	-.341	121	94.5	.090	.071	.066	-.015	-.050
43	94.5	-.000	-.000	-.112	-.290							
404	2.0	-.840	-1.065	-1.146	-1.232	122	3.0	.487	.474	.460	.449	.436
45	8.0	-.885	-.866	-.842	-1.204	123	10.0	.348	.327	.309	.292	.283
46	15.0	-.870	-.866	-.813	-1.108	124	20.0	.202	.184	.166	.149	.143
47	27.5	-.860	-.840	-.803	-1.082	125	41.0	.117	.094	.073	.057	.051
48	40.0	-.802	-.797	-.803	-1.046	126	52.5	.090	.063	.037	.000	-.008
49	50.0	-.610	-.744	-.790	-.977	127	52.5	.060	.027	-.006	-.026	-.063
50	59.0	-.485	-.703	-.710	-.844	128	72.5	.080	.042	.006	-.011	-.047
51	67.5	-.402	-.708	-.681	-.741	129	78.0	.094	.051	.013	-.005	-.086
52	77.5	-.363	-.535	-.499	-.591	130	85.5	.123	.077	.037	.017	-.010
53	86.0	-.270	-.310	-.351	-.281	131	94.1	.126	.063	.005	-.040	-.039
54	95.0	-.098	-.090	-.222	-.281							
505	2.0	-.695	-.632	-.740	-.878	132	3.0	.479	.467	.456	.441	.411
55	8.0	-.698	-.640	-.730	-.840	133	10.0	.338	.328	.309	.290	.287
56	15.0	-.698	-.640	-.730	-.844	134	20.0	.190	.173	.161	.141	.132
57	27.5	-.679	-.645	-.708	-.844	135	41.0	.097	.076	.064	.044	.031
58	40.0	-.670	-.690	-.782	-.890	136	52.5	.054	.035	.007	-.012	-.040
59	50.0	-.680	-.642	-.708	-.760	137	62.5	.043	.005	-.009	-.031	-.052
60	59.0	-.693	-.632	-.678	-.731	138	72.5	.090	.066	-.004	-.005	-.037
61	67.5	-.680	-.602	-.607	-.711	139	85.4	-.	-.	-.	-.	-.
62	77.5	-.602	-.630	-.	-.	140	94.0	.010	-.110	-.108	-.143	-.123
63	86.0	-.	-.	-.	-.							
64	94.5	-.	-.	-.	-.							
606	2.0	-.374	-.322	-.360	-.430	141	3.0	.448	.437	.441	.429	.404
65	8.0	-.369	-.342	-.360	-.427	142	10.0	.289	.270	.271	.256	.216
66	15.0	-.372	-.390	-.370	-.432	143	20.0	.139	.122	.123	.108	.072
67	27.5	-.378	-.362	-.442	-.607	144	41.0	.031	.010	.005	-.007	-.031
68	40.0	-.390	-.370	-.422	-.622	145	52.5	-.013	-.034	-.036	-.051	-.048
69	50.0	-.414	-.384	-.430	-.609	146	62.5	-.017	-.042	-.039	-.058	-.060
70	59.0	-.410	-.395	-.450	-.603	147	72.5	-.042	-.068	-.074	-.087	-.101
71	59.0	-.410	-.395	-.450	-.603	148	84.0	-.036	-.051	-.048	-.057	-.066
72	67.5	-.415	-.402	-.462	-.602	149	92.0	-.	-.	-.	-.	-.
73	77.5	-.420	-.412	-.470	-.483							
74	87.2	-.	-.	-.	-.							
75	94.8	-.330	-.345	-.380	-.416							
776	2.0	-.209	-.238	-.284	-.320	150	3.0	.308	.291	.297	.298	.266
77	8.0	-.200	-.237	-.284	-.321	151	10.0	.156	.138	.140	.133	.128
78	15.0	-.201	-.240	-.286	-.320	152	20.0	.081	.040	-.001	-.031	-.046
79	27.5	-.200	-.240	-.283	-.310	153	41.0	-.	-.	-.	-.	-.
80	40.0	-.219	-.252	-.283	-.323	154	52.5	-.078	-.112	-.140	-.154	-.213
81	50.0	-.264	-.295	-.301	-.328	155	62.5	-.072	-.107	-.134	-.177	-.161
82	59.0	-.268	-.292	-.301	-.330	156	72.5	-.074	-.106	-.147	-.154	-.170
83	57.5	-.290	-.264	-.301	-.331	157	84.6	-.171	-.200	-.244	-.244	-.247
84	86.5	-.241	-.258	-.300	-.320							
85	64.2	-.249	-.250	-.300	-.320							



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TABLE 17

$[A = -30^\circ, \delta_{in} = 0^\circ, \alpha = -30^\circ]$

CONFIDENTIAL											
UPPER SURFACE					LOWER SURFACE						
Tube	Per-cent chord	Mach Number				Tube	Per-cent chord	Mach Number			
		0.60	0.80	0.95	0.99			0.60	0.80	0.95	0.99
A 1	2.0	---	---	---	---	86	5.0	---	---	---	---
2	6.0	---	---	---	---	87	10.0	---	---	---	---
3	15.0	---	---	---	---	88	25.0	---	---	---	---
4	27.5	---	---	---	---	89	41.0	---	---	---	---
5	40.0	---	---	---	---	90	54.5	-0.130	-0.104	-0.095	-0.095
6	50.0	-0.190	-0.200	-0.240	-0.280	91	62.6	-0.081	-0.061	-0.052	-0.051
7	59.0	-0.162	-0.180	-0.181	-0.181	92	72.5	-0.030	-0.005	0.000	0.034
8	67.5	-0.103	-0.087	-0.090	-0.075	93	84.0	---	---	---	---
9	77.5	---	---	---	---	94	94.0	---	---	---	---
10	87.6	---	---	---	---						
11	96.0	---	---	---	---						
12	2.0	.420	.445	.435	.430	95	5.0	-.961	-.711	1.020	-.900
13	6.0	.108	.120	.120	.128	96	10.0	-.431	-.711	-4.000	-.681
14	15.0	-.101	-.136	-.162	-.154	97	25.0	-.308	-.330	-.740	-.912
15	27.5	-.209	-.270	-.310	-.375	98	41.0	-.299	-.261	-.230	-.608
16	40.0	-.292	-.352	-.361	-.500	99	54.5	-.132	-.168	-.180	-.244
17	50.0	-.290	-.310	-.361	-.461	100	62.6	-.130	-.118	-.105	-.048
18	59.0	-.230	-.251	-.282	-.391	101	72.5	-.041	-.032	-.020	0.04
19	67.5	-.181	-.160	-.171	-.112	102	84.0	.046	.069	.072	.104
20	77.5	-.070	-.072	-.060	-.041	103	94.0	.102	.128	.128	.164
21	86.0	-.037	.046	.040	.099						
22	95.3	---	---	---	---						
23	2.0	-.898	-.650	-.480	-.430	104	5.0	-.618	-.711	-.511	-.710
24	6.0	.128	.160	.170	.186	105	10.0	-.392	-.580	-.325	-.758
25	15.0	-.068	-.061	-.061	-.050	106	25.0	-.328	-.450	-.559	-.620
26	27.5	-.188	-.202	-.241	-.244	107	41.0	-.262	-.330	-.430	-.594
27	40.0	-.292	-.352	-.376	-.432	108	54.5	-.230	-.261	-.278	-.520
28	50.0	-.230	-.262	-.282	-.372	109	62.6	-.160	-.171	-.163	-.251
29	59.0	-.222	-.271	-.318	-.416	110	72.5	-.094	-.050	-.041	-.094
30	67.5	-.165	-.215	-.260	-.331	111	84.0	-.030	-.045	-.040	-.077
31	77.5	-.076	-.078	-.081	-.079	112	94.0	.042	.109	.105	.138
32	86.0	-.034	-.040	-.032	-.047						
33	95.3	---	---	---	---						
34	2.0	-.340	-.394	-.396	-.415	113	5.0	-.560	-.711	-.793	-.690
35	6.0	-.068	-.098	-.094	-.047	114	10.0	-.399	-.478	-.600	-.613
36	15.0	-.170	-.196	-.210	-.211	115	25.0	-.312	-.415	-.490	-.587
37	27.5	-.264	-.300	-.343	-.364	116	41.0	-.281	-.362	-.446	-.579
38	40.0	-.352	-.310	-.374	-.402	117	54.5	-.206	-.282	-.315	-.381
39	50.0	-.180	-.180	-.310	-.352	118	62.6	-.150	-.176	-.217	-.231
40	59.0	---	---	---	---	119	72.5	-.060	-.070	-.040	-.119
41	67.5	-.118	-.070	-.060	-.091	120	84.0	.049	.090	.049	.042
42	77.5	.010	.005	-.008	-.020	121	94.0	.072	.080	.069	.093
43	86.0	.068	.070	.099	.052						
44	95.3	---	---	---	---						
45	2.0	-.350	-.398	-.400	-.420	122	5.0	-.450	-.551	-.620	-.620
46	6.0	.090	.120	.120	.122	123	10.0	-.319	-.399	-.435	-.435
47	15.0	-.096	-.090	-.080	-.080	124	25.0	-.291	-.361	-.449	-.449
48	27.5	-.188	-.208	-.230	-.230	125	41.0	-.261	-.340	-.430	-.430
49	40.0	-.290	-.313	-.340	-.340	126	54.5	-.204	-.261	-.301	-.301
50	50.0	-.290	-.311	-.340	-.340	127	62.6	-.144	-.170	-.181	-.181
51	59.0	-.218	-.269	-.294	-.340	128	72.5	-.080	-.080	-.099	-.099
52	67.5	-.170	-.205	-.205	-.231	129	84.0	-.018	-.059	-.059	-.059
53	77.5	-.123	-.115	-.082	-.082	130	94.0	.040	.031	.020	.020
54	86.0	.109	.109	.109	-.062	131	94.1	.080	.080	.071	.071
55	95.5	.078	.062	-.062	-.062						
56	2.0	-.370	-.400	-.401	-.420	132	5.0	-.461	-.565	-.620	-.620
57	6.0	.090	.120	.120	.120	133	10.0	-.311	-.380	-.430	-.430
58	15.0	-.090	-.090	-.071	-.071	134	25.0	-.272	-.350	-.430	-.430
59	27.5	-.180	-.215	-.238	-.238	135	41.0	-.252	-.329	-.400	-.400
60	40.0	-.265	-.310	-.331	-.331	136	54.5	-.210	-.270	-.319	-.319
61	50.0	-.260	-.308	-.331	-.331	137	62.6	-.141	-.160	-.164	-.164
62	59.0	-.208	-.260	-.281	-.320	138	72.5	-.040	-.052	-.069	-.069
63	67.5	-.167	-.200	-.200	-.220	139	84.0	.040	.037	.028	.028
64	77.5	-.100	-.110	-.068	-.068	140	94.0	.058	.060	.056	.056
65	86.0	.060	.040	-.048	-.048						
66	94.5	.048	.040	.038	-.038						
67	2.0	-.368	-.408	-.410	-.430	141	5.0	-.411	-.482	-.518	-.518
68	6.0	.098	.128	.130	.130	142	10.0	-.309	-.380	-.430	-.430
69	15.0	-.098	-.070	-.069	-.069	143	25.0	-.272	-.350	-.430	-.430
70	27.5	-.170	-.203	-.210	-.210	144	41.0	-.240	-.309	-.370	-.370
71	40.0	-.260	-.300	-.320	-.320	145	54.5	-.191	-.251	-.289	-.289
72	50.0	-.260	-.301	-.329	-.329	146	62.6	-.111	-.150	-.155	-.155
73	59.0	-.206	-.265	-.284	-.324	147	72.5	-.048	-.069	-.080	-.080
74	67.5	-.150	-.206	-.230	-.270	148	84.0	.038	.031	.025	.025
75	77.5	-.120	-.180	-.186	-.186	149	94.0	.066	.055	.050	.050
76	87.2	-.090	-.085	-.060	-.060						
77	96.8	-.060	-.050	-.060	-.060						
78	2.0	-.367	---	-.270	---	150	5.0	-.404	-.618	-.660	-.660
79	6.0	.070	-.060	-.060	-.060	151	10.0	-.217	-.290	-.360	-.360
80	15.0	-.061	-.060	-.068	---	152	25.0	-.218	-.360	-.431	-.431
81	27.5	-.169	-.195	-.195	---	153	41.0	-.230	-.300	-.370	-.370
82	40.0	-.222	-.274	-.290	---	154	54.5	-.104	-.251	-.298	-.298
83	50.0	-.260	-.299	-.300	---	155	62.6	-.113	-.159	-.181	-.181
84	59.0	-.180	-.261	-.264	---	156	72.5	-.030	-.052	-.062	-.062
85	67.5	-.140	-.172	-.189	---	157	84.0	.056	.042	.040	.040
86	77.5	-.006	-.015	---	---						
87	86.3	---	---	---	---						
88	94.2	---	---	---	---						

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TABLE 22
 $[\alpha = -30^\circ, \beta_{20} = 0^\circ, \alpha = 10^\circ]$

CONFIDENTIAL									
UPPER SURFACE					LOWER SURFACE				
Tube	Per-cent chord	Mach Number			Tube	Per-cent chord	Mach Number		
		0.60	0.80				0.60	0.80	
1	2.0	--	--		86	3.0	--	--	
2	6.0	--	--		87	10.0	--	--	
3	15.0	--	--		88	25.0	--	--	
4	27.5	--	--		89	41.0	--	--	
5	40.0	--	--		90	52.5	-0.060	-0.119	
6	50.0	-0.268	-0.318		91	58.5	-0.072	-0.113	
7	58.0	-0.341	-0.380		92	72.5	--	-0.114	
8	57.5	-0.334	-0.360		93	84.0	--	--	
9	77.5	--	--		94	84.0	--	--	
10	87.5	--	--						
11	86.0	--	--						
112	2.0	-0.218	-0.230		95	3.0	.800	.850	
13	6.0	-0.268	-0.285		96	10.0	.571	.590	
14	15.0	-0.268	-0.285		97	25.0	.161	.159	
15	27.5	-0.612	-0.620		98	41.0	.003	.030	
16	40.0	-0.580	-0.600		99	52.5	-0.050	-0.097	
17	50.0	-0.560	-0.560		100	52.5	-0.060	-0.104	
18	59.0	-0.580	-0.510		101	72.5	-0.068	-0.074	
19	57.5	-0.511	-0.465		102	86.5	-0.062	-0.069	
20	77.5	-0.427	-0.331		103	84.5	-0.072	-0.030	
21	86.0	-0.370	-0.308						
22	85.5	--	--						
223	2.0	-0.788	-0.802		104	3.0	.780	.815	
24	6.0	-0.780	-0.811		105	10.0	.501	.533	
25	15.0	-0.768	-0.800		106	25.0	.030	.065	
26	27.5	-0.700	-0.737		107	41.0	.060	.085	
27	40.0	-0.645	-0.670		108	52.5	-0.005	-0.039	
28	50.0	-0.590	-0.580		109	52.5	-0.009	-0.068	
29	59.0	-0.590	-0.508		110	72.5	-0.018	-0.048	
30	57.5	-0.542	-0.492		111	86.1	-0.000	-0.045	
31	77.5	-0.317	-0.170		112	84.6	-0.008	-0.035	
32	86.0	-0.111	-0.028						
33	85.3	--	--						
34	2.0	-0.262	-0.231		113	3.0	.770	.795	
35	6.0	-0.260	-0.239		114	10.0	.513	.539	
36	15.0	-0.262	-0.230		115	25.0	.257	.269	
37	27.5	-0.260	-0.268		116	41.0	.102	.091	
38	40.0	-0.281	-0.294		117	52.5	.060	.080	
39	50.0	-0.280	-0.270		118	62.5	.030	-0.015	
40	57.5	--	--		119	72.5	.068	.000	
41	77.5	-0.138	-0.082		120	87.4	.080	.009	
42	87.5	-0.100	-0.018		121	84.2	.080	-0.069	
43	84.2	-0.301	-0.470						
44	2.0	-0.370	-0.380		122	3.0	.780	.802	
45	6.0	-0.282	-0.299		123	10.0	.518	.560	
46	15.0	-0.370	-0.098		124	25.0	.265	.297	
47	27.5	-0.373	-0.261		125	41.0	.123	.130	
48	40.0	-0.266	-0.260		126	52.5	.080	.078	
49	50.0	-0.230	-0.280		127	52.5	.094	.030	
50	59.0	-0.269	-0.230		128	72.5	.060	.008	
51	57.5	-0.290	-0.280		129	78.9	.081	.009	
52	77.5	-0.260	-0.268		130	85.3	.096	.038	
53	86.5	-0.209	-0.209		131	86.1	.070	-0.021	
54	85.5	-0.280	-0.450						
55	2.0	-1.106	-1.439		132	3.0	.790	.808	
56	6.0	-1.139	-1.210		133	10.0	.530	.568	
57	15.0	-1.120	-1.180		134	25.0	.280	.301	
58	27.5	-1.125	-1.098		135	41.0	.181	.190	
59	40.0	-1.100	-0.869		136	52.5	.088	.080	
60	50.0	-1.034	-0.806		137	62.5	.075	.068	
61	58.0	-0.890	-0.755		138	72.5	.095	.076	
62	57.5	-0.720	-0.710		139	83.4	.139	.128	
63	87.5	-0.189	-0.089		140	84.0	.075	-0.008	
64	84.5	-0.067	-0.395						
65	2.0	-1.472	-1.720		141	3.0	.808	.838	
66	6.0	-1.519	-1.628		142	10.0	.538	.568	
67	15.0	-1.500	-1.593		143	25.0	.290	.319	
68	27.5	-1.400	-1.460		144	41.0	.181	.190	
69	40.0	-1.089	-1.110		145	52.5	.095	.098	
70	50.0	-0.637	-0.930		146	52.5	.085	.110	
71	59.0	-0.370	-0.720		147	72.5	.090	.092	
72	57.5	-0.251	-0.580		148	84.0	.129	.138	
73	77.5	-0.147	-0.288		149	82.0	.065	.072	
74	87.2	-0.070	-0.060						
75	86.8	-0.006	-0.015						
76	2.0	-0.900	-1.663		150	3.0	.880	.900	
77	6.0	-0.938	-1.600		151	10.0	.540	.566	
78	15.0	-0.934	-1.480		152	25.0	.279	.309	
79	27.5	-0.780	-1.280		153	41.0	.173	.110	
80	40.0	-0.598	-0.869		154	52.5	.088	.078	
81	50.0	-0.510	-0.756		155	62.5	.090	.080	
82	59.0	-0.409	-0.595		156	72.5	.080	.093	
83	57.5	-0.319	-0.410		157	84.0	.010	-0.008	
84	86.3	.174	-0.285						
85	84.6	--	--						

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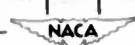


TABLE 23

$[A = -45^\circ, \delta_{00} = 0^\circ, \alpha = -2^\circ]$

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UPPER SURFACE						LOWER SURFACE							
Tube	Per-cent chord	Mach Number					Tube	Per-cent chord	Mach Number				
		0.60	0.80	0.90	0.995	0.96			0.60	0.80	0.90	0.995	0.96
A 1	9.0	---	---	---	---	---	86	3.0	---	---	---	---	---
2	6.0	---	---	---	---	---	87	10.0	---	---	---	---	---
4	15.0	---	---	---	---	---	88	25.0	---	---	---	---	---
5	37.5	---	---	---	---	---	89	41.0	---	---	---	---	---
6	40.0	---	---	---	---	---	90	52.5	---	---	---	---	---
7	50.0	---	---	---	---	---	91	52.5	-0.046	-0.043	-0.029	-0.020	-0.029
8	67.5	-0.022	-0.100	-0.100	-0.094	-0.238	92	72.5	-0.015	-0.009	-0.006	-0.003	-0.006
9	67.5	-0.024	-0.095	-0.068	-0.090	-0.190	93	84.0	---	---	---	---	---
10	87.5	---	---	---	---	---	94	84.0	---	---	---	---	---
11	96.0	---	---	---	---	---							
112	9.0	---	---	---	---	---	95	3.0	---	---	---	---	---
13	6.0	---	---	---	---	---	96	10.0	---	---	---	---	---
14	15.0	---	---	---	---	---	97	25.0	-0.161	-0.138	-0.085	-0.075	-0.176
15	27.5	-0.136	-0.193	-0.250	-0.330	-0.333	98	41.0	-0.150	-0.111	-0.081	-0.161	-0.184
16	40.0	-0.171	-0.205	-0.249	-0.339	-0.304	99	52.5	-0.116	-0.118	-0.103	-0.080	-0.259
17	50.0	-0.164	-0.190	-0.229	-0.304	-0.275	100	62.5	-0.083	-0.083	-0.076	-0.058	-0.147
18	59.0	-0.140	-0.163	-0.174	-0.209	-0.220	101	72.5	-0.020	-0.029	-0.028	-0.010	-0.072
19	67.5	-0.100	-0.119	-0.124	-0.150	-0.130	102	84.0	-0.016	-0.016	-0.019	-0.027	-0.030
20	77.5	-0.051	-0.069	-0.070	-0.090	-0.084	103	94.0	-0.066	-0.065	-0.054	-0.060	-0.060
21	88.0	-0.018	-0.018	-0.018	-0.018	-0.018							
22	95.3	---	---	---	---	---							
223	2.0	.073	.075	.110	.130	.140	104	3.0	-0.022	-0.013	-0.009	-0.006	-0.011
24	6.0	.120	.129	.167	.176	.190	106	10.0	-0.374	-0.385	-0.339	-0.300	-0.444
25	15.0	-0.044	-0.043	-0.045	-0.041	-0.021	108	25.0	-0.259	-0.265	-0.255	-0.257	-0.254
26	27.5	-0.130	-0.158	-0.190	-0.200	-0.185	107	41.0	---	---	---	---	---
27	40.0	-0.170	-0.203	-0.260	-0.291	-0.283	109	62.5	---	---	---	---	---
28	50.0	-0.160	-0.186	-0.201	-0.240	-0.230	110	72.5	-0.116	-0.133	-0.144	-0.144	-0.383
29	59.0	-0.140	-0.160	-0.165	-0.211	-0.222	111	84.0	-0.049	-0.061	-0.068	-0.150	-0.315
30	67.5	-0.106	-0.126	-0.126	-0.161	-0.174	112	94.0	-0.002	-0.007	-0.017	-0.020	-0.213
31	77.5	-0.060	-0.080	-0.100	-0.124	-0.140							
32	88.0	-0.028	-0.028	-0.013	-0.043	-0.160							
33	95.3	---	---	---	---	---							
334	9.0	.068	.095	.126	.136	.154	113	3.0	-0.122	-0.127	-0.120	-0.120	-0.400
35	15.0	-0.078	-0.094	-0.098	-0.043	-0.050	114	10.0	-0.280	-0.310	-0.364	-0.466	-0.505
36	27.5	-0.107	-0.118	-0.138	-0.132	-0.142	115	25.0	-0.229	-0.225	-0.201	-0.201	-0.303
37	40.0	-0.158	-0.178	-0.200	-0.210	-0.217	116	41.0	-0.168	-0.266	-0.281	-0.281	-0.303
38	50.0	-0.160	-0.186	-0.210	-0.208	-0.217	117	52.5	-0.163	-0.202	-0.241	-0.244	-0.277
39	59.0	-0.117	-0.152	-0.159	-0.200	-0.200	118	62.5	---	---	---	---	---
40	67.5	---	---	---	---	---	119	72.5	-0.056	-0.079	-0.116	-0.138	-0.121
41	77.5	-0.020	-0.060	-0.100	-0.124	-0.120	120	84.0	-0.014	-0.005	-0.021	-0.050	-0.038
42	87.5	-0.002	-0.048	-0.080	-0.078	-0.078	121	94.0	0.008	0.011	-0.017	-0.022	-0.041
43	94.9	.058	.018	-0.009	-0.040	-0.036							
44	2.0	.071	.091	.120	.130	.140	122	3.0	-0.374	-0.444	-0.489	-0.518	-0.514
45	6.0	.060	.105	.100	.100	.070	123	10.0	-0.246	-0.287	-0.301	-0.358	-0.353
46	15.0	-0.037	-0.040	-0.078	-0.099	-0.100	124	25.0	-0.211	-0.248	-0.279	-0.295	-0.317
47	27.5	-0.107	-0.118	-0.135	-0.145	-0.149	125	41.0	-0.181	-0.214	-0.240	-0.261	-0.297
48	40.0	-0.131	-0.170	-0.198	-0.210	-0.210	126	52.5	-0.129	-0.155	-0.171	-0.171	-0.190
49	50.0	-0.151	-0.170	-0.198	-0.211	-0.260	127	62.5	-0.101	-0.126	-0.149	-0.149	-0.151
50	59.0	-0.136	-0.151	-0.180	-0.191	-0.230	128	72.5	-0.059	-0.078	-0.093	-0.100	-0.119
51	67.5	-0.110	-0.121	-0.148	-0.160	-0.200	129	84.0	-0.025	-0.040	-0.051	-0.050	-0.050
52	77.5	-0.051	-0.059	-0.099	-0.065	-0.092	130	94.0	0.008	0.004	0.016	-0.000	-0.001
53	88.0	-0.008	-0.010	-0.079	-0.073	-0.099	131	94.1	0.001	0.010	0.000	-0.007	-0.000
54	95.5	.010	-0.000	-0.001	-0.000	-0.005							
55	2.0	---	---	---	---	---	132	3.0	---	---	---	---	---
56	6.0	-0.01	-0.09	-0.105	-0.105	-0.070	133	10.0	-0.289	-0.271	-0.266	-0.303	-0.266
57	15.0	-0.035	-0.090	-0.041	-0.060	-0.084	134	25.0	-0.195	-0.209	-0.250	-0.287	-0.325
58	27.5	-0.109	-0.112	-0.130	-0.140	-0.181	135	41.0	-0.169	-0.200	-0.225	-0.242	-0.298
59	40.0	-0.148	-0.161	-0.180	-0.200	-0.285	136	52.5	-0.131	-0.164	-0.188	-0.192	-0.249
60	50.0	-0.149	-0.165	-0.185	-0.201	-0.249	137	62.5	-0.089	-0.109	-0.125	-0.134	-0.151
61	59.0	-0.131	-0.145	-0.161	-0.180	-0.220	138	72.5	-0.043	-0.058	-0.068	-0.076	-0.090
62	67.5	-0.103	-0.118	-0.140	-0.151	-0.196	139	84.0	-0.010	-0.001	-0.009	-0.012	-0.019
63	88.0	-0.005	-0.011	-0.005	-0.031	-0.031	140	94.0	0.007	0.016	0.008	0.002	-0.000
64	94.9	.005	.002	-0.010	-0.015	-0.045							
665	2.0	.302	.330	.335	.350	.315	141	3.0	-0.308	-0.371	-0.379	-0.375	-0.371
66	6.0	.115	.135	.136	.139	.112	142	10.0	-0.288	-0.262	-0.279	-0.278	-0.278
67	15.0	-0.010	-0.009	-0.012	-0.011	-0.040	143	25.0	-0.185	-0.215	-0.236	-0.253	-0.267
68	27.5	-0.081	-0.099	-0.101	-0.107	-0.140	144	41.0	-0.156	-0.181	-0.196	-0.200	-0.225
69	40.0	-0.130	-0.140	-0.160	-0.170	-0.202	145	52.5	-0.129	-0.145	-0.161	-0.169	-0.181
70	50.0	-0.134	-0.149	-0.171	-0.180	-0.219	146	62.5	-0.060	-0.086	-0.092	-0.099	-0.110
71	59.0	-0.110	-0.120	-0.141	-0.150	-0.189	147	72.5	-0.042	-0.057	-0.068	-0.076	-0.086
72	67.5	-0.061	-0.091	-0.113	-0.123	-0.161	148	84.0	-0.016	-0.004	-0.009	-0.006	-0.016
73	77.5	-0.005	-0.069	-0.081	-0.083	-0.120	149	94.0	0.033	0.066	-0.004	0.022	0.012
74	87.9	.035	.030	.009	.009	.004							
75	96.9	.061	.040	.029	.010	-0.020							
77	2.0	.298	.301	.310	.310	.295	150	3.0	-0.299	-0.334	-0.338	-0.337	-0.336
77	6.0	.090	.119	.120	.142	.120	151	10.0	-0.176	-0.186	-0.177	-0.162	-0.147
78	15.0	-0.010	0.000	0.000	0.010	-0.010	152	25.0	-0.225	-0.224	-0.218	-0.217	-0.240
79	27.5	-0.075	-0.071	-0.090	-0.079	-0.090	153	41.0	-0.159	-0.184	-0.208	-0.213	-0.221
80	40.0	-0.119	-0.121	-0.140	-0.140	-0.160	154	52.5	-0.130	-0.153	-0.173	-0.196	-0.206
81	50.0	-0.129	-0.141	-0.169	-0.170	-0.209	155	62.5	-0.092	-0.104	-0.104	-0.109	-0.148
82	59.0	-0.110	-0.122	-0.145	-0.151	-0.180	156	72.5	-0.029	-0.025	-0.027	-0.025	-0.027
83	67.5	-0.060	-0.095	-0.115	-0.124	-0.170	157	84.0	-0.027	-0.026	-0.027	-0.029	-0.030
84	88.3	-0.019	-0.020	-0.030	-0.030	-0.050							
85	94.2	.012	-0.011	.003	.006	-0.020							



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TABLE 24

$$\left[\alpha = 45^\circ, \theta_{max} = 0^\circ, \alpha = 20^\circ \right]$$

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		UPPER SURFACE					LOWER SURFACE						
Tube	Percent chord	Mach Number					Tube	Percent chord	Mach Number				
		0.60	0.80	0.89	0.995	0.96			0.60	0.80	0.89	0.995	0.96
A	2.0	--	--	--	--	--	86	5.0	--	--	--	--	--
E	6.0	--	--	--	--	--	87	10.0	--	--	--	--	--
3	15.0	--	--	--	--	--	88	25.0	--	--	--	--	--
4	27.5	--	--	--	--	--	89	41.0	--	--	--	--	--
6	40.0	--	--	--	--	--	90	56.5	--	--	--	--	--
7	50.0	--	--	--	--	--	91	62.5	-0.008	-0.028	-0.076	-0.075	-0.088
8	60.0	-0.103	-0.100	-0.080	-0.053	-0.123	92	72.5	-0.003	-0.025	-0.005	-0.005	-0.060
9	67.5	-0.076	-0.070	-0.058	-0.030	-0.065	93	84.0	--	--	--	--	--
10	77.5	--	--	--	--	--	94	94.0	--	--	--	--	--
11	96.0	--	--	--	--	--							
112	2.0	--	--	--	--	--	95	5.0	--	--	--	--	--
13	6.0	--	--	--	--	--	96	10.0	--	--	--	--	--
14	15.0	--	--	--	--	--	97	25.0	-0.005	-0.017	-0.136	-0.187	-0.239
15	27.5	-0.208	-0.231	-0.290	-0.501	-0.644	98	41.0	-0.008	-0.110	-0.139	-0.170	-0.268
16	40.0	-0.289	-0.241	-0.159	-0.500	-0.297	99	56.5	-0.009	-0.095	-0.196	-0.139	-0.235
17	50.0	-0.411	-0.358	-0.248	-0.300	-0.300	100	62.5	-0.005	-0.067	-0.079	-0.093	-0.131
18	60.0	-0.358	-0.263	-0.160	-0.261	-0.261	101	72.5	-0.013	-0.031	0.001	0.031	-0.073
19	67.5	-0.110	-0.124	-0.093	-0.094	-0.080	102	86.5	0.036	0.032	0.031	0.030	-0.065
20	77.5	-0.066	-0.068	-0.048	-0.003	-0.108	103	94.6	0.077	0.075	0.078	0.069	0.005
21	86.0	0.008	0.010	0.000	0.000	0.000							
22	96.3	--	--	--	--	--							
223	2.0	-0.680	-0.703	-0.563	-0.510	-0.430	104	5.0	0.260	0.270	0.260	0.263	0.261
24	6.0	-0.510	-0.509	-0.446	-0.510	-0.460	105	10.0	0.029	0.065	0.051	0.086	0.086
25	15.0	-0.318	-0.308	-0.248	-0.300	-0.260	106	25.0	-0.040	-0.060	-0.095	-0.120	-0.121
26	27.5	-0.358	-0.363	-0.300	-0.361	-0.361	107	41.0	--	--	--	--	--
27	40.0	-0.300	-0.268	-0.200	-0.270	-0.270	108	56.5	--	--	--	--	--
28	50.0	-0.260	-0.260	-0.225	-0.230	-0.231	109	62.5	-0.009	-0.093	-0.115	-0.165	-0.210
29	59.0	-0.210	-0.210	-0.111	-0.230	-0.260	110	72.5	-0.015	-0.039	-0.037	-0.079	-0.125
30	67.5	-0.147	-0.160	-0.120	-0.140	-0.130	111	85.1	0.023	0.025	0.009	0.025	-0.113
31	77.5	-0.090	-0.100	-0.070	-0.330	-0.170	112	94.6	0.061	0.055	0.069	0.010	-0.061
32	86.0	0.000	-0.004	0.017	-0.004	-0.251							
33	96.3	--	--	--	--	--							
334	2.0	-0.450	-0.481	-0.430	-0.308	-0.338	113	5.0	0.180	0.181	0.168	0.150	0.160
35	6.0	-0.318	-0.308	-0.248	-0.300	-0.260	114	10.0	0.060	0.093	0.063	0.091	0.091
36	15.0	-0.310	-0.370	-0.310	-0.340	-0.340	115	25.0	-0.030	-0.045	-0.090	-0.075	-0.079
37	27.5	-0.300	-0.370	-0.310	-0.330	-0.331	116	41.0	-0.008	-0.085	-0.106	-0.100	-0.100
38	40.0	-0.260	-0.308	-0.275	-0.277	-0.277	117	56.5	-0.008	-0.067	-0.108	-0.125	-0.129
39	50.0	-0.200	-0.240	-0.204	-0.225	-0.233	118	62.5	--	--	--	--	--
40	60.0	-0.150	-0.160	-0.110	-0.121	-0.121	119	72.5	-0.008	-0.035	-0.097	-0.077	-0.081
41	67.5	-0.093	-0.100	-0.064	-0.170	-0.171	120	87.4	0.050	0.034	0.034	0.027	-0.064
42	77.5	-0.030	-0.041	-0.053	-0.100	-0.093	121	94.2	0.067	0.030	0.009	-0.000	-0.005
43	86.0	0.015	0.000	-0.060	-0.060	-0.050							
44	2.0	-0.431	-0.451	-0.435	-0.285	-0.210	122	5.0	0.123	0.219	0.211	0.211	0.170
46	6.0	-0.358	-0.400	-0.310	-0.390	-0.281	123	10.0	0.093	0.068	0.060	0.068	0.030
47	15.0	-0.300	-0.370	-0.300	-0.300	-0.260	124	25.0	-0.040	-0.037	-0.049	-0.060	-0.080
48	27.5	-0.308	-0.370	-0.303	-0.300	-0.295	125	41.0	-0.079	-0.095	-0.090	-0.099	-0.117
49	40.0	-0.275	-0.348	-0.280	-0.300	-0.300	126	56.5	-0.063	-0.099	-0.071	-0.081	-0.098
50	50.0	-0.260	-0.300	-0.230	-0.230	-0.230	127	62.5	-0.050	-0.049	-0.050	-0.071	-0.066
51	59.0	-0.210	-0.250	-0.200	-0.211	-0.211	128	72.5	-0.038	-0.068	-0.040	-0.049	-0.064
52	67.5	-0.151	-0.173	-0.181	-0.200	-0.100	129	82.5	-0.019	-0.009	-0.015	-0.019	-0.026
53	77.5	-0.080	-0.093	-0.100	-0.110	-0.000	130	94.0	0.008	0.017	0.011	0.026	0.019
54	86.0	0.005	0.005	0.015	-0.000	0.160	131	94.1	0.066	0.030	0.009	0.017	0.010
54	96.3	0.000	0.005	-0.015	-0.000	-0.109							
55	2.0	--	--	--	--	--	132	5.0	--	--	--	--	--
56	6.0	-0.311	-0.370	-0.300	-0.260	-0.209	133	10.0	0.021	0.066	0.029	0.063	0.068
57	15.0	-0.300	-0.361	-0.375	-0.271	-0.230	134	25.0	-0.017	-0.043	-0.064	-0.095	-0.073
58	27.5	-0.296	-0.309	-0.265	-0.273	-0.250	135	41.0	-0.070	-0.071	-0.094	-0.106	-0.125
59	40.0	-0.279	-0.319	-0.258	-0.265	-0.260	136	56.5	-0.070	-0.070	-0.091	-0.090	-0.109
60	50.0	-0.250	-0.281	-0.210	-0.230	-0.264	137	62.5	-0.043	-0.041	-0.049	-0.077	-0.071
61	59.0	-0.210	-0.258	-0.220	-0.210	-0.168	138	72.5	-0.020	-0.019	-0.030	-0.041	-0.068
62	67.5	-0.160	-0.165	-0.200	-0.220	-0.168	139	82.5	0.011	0.066	0.062	0.060	0.066
63	86.5	-0.030	-0.035	-0.250	-0.095	0.081	140	94.0	0.011	0.034	0.005	0.021	0.008
64	94.5	0.000	-0.001	-0.011	-0.015	0.069							
665	2.0	-0.288	-0.300	-0.179	-0.211	-0.060	141	5.0	0.177	0.206	0.210	0.201	0.204
66	6.0	-0.271	-0.300	-0.281	-0.281	-0.130	142	10.0	0.036	0.094	0.090	0.060	0.037
67	15.0	-0.290	-0.280	-0.200	-0.220	-0.128	143	25.0	-0.083	-0.036	-0.042	-0.049	-0.058
68	27.5	-0.268	-0.275	-0.205	-0.171	-0.171	144	41.0	-0.070	-0.048	-0.076	-0.080	-0.090
69	40.0	-0.241	-0.275	-0.200	-0.200	-0.181	145	56.5	-0.068	-0.066	-0.075	-0.081	-0.090
70	50.0	-0.245	-0.270	-0.275	-0.170	-0.170	146	62.5	-0.046	-0.046	-0.055	-0.059	-0.070
71	59.0	-0.190	-0.215	-0.260	-0.250	-0.148	147	72.5	-0.085	-0.059	-0.051	-0.037	-0.050
72	67.5	-0.160	-0.185	-0.225	-0.240	-0.125	148	84.0	0.005	0.040	0.034	0.011	0.018
73	77.5	-0.079	-0.080	-0.060	-0.060	-0.115	149	94.0	0.040	0.017	0.033	0.011	0.021
74	87.5	0.000	-0.000	-0.010	-0.010	0.000							
75	96.8	0.025	0.011	0.018	0.010	0.105							
876	2.0	-0.283	-0.293	-0.205	-0.170	-0.110	150	5.0	0.153	0.166	0.200	0.200	0.207
77	6.0	-0.231	-0.249	-0.245	-0.229	-0.098	151	10.0	0.036	0.069	0.063	0.089	0.097
78	15.0	-0.200	-0.200	-0.200	-0.210	-0.075	152	25.0	0.086	0.163	0.110	0.087	0.053
79	27.5	-0.191	-0.211	-0.215	-0.208	-0.071	153	41.0	-0.068	-0.071	-0.116	-0.087	-0.116
80	40.0	-0.200	-0.215	-0.211	-0.220	-0.059	154	56.5	-0.060	-0.060	-0.100	-0.134	-0.178
81	50.0	-0.181	-0.203	-0.220	-0.220	-0.070	155	62.5	-0.057	-0.050	-0.070	-0.078	-0.090
82	59.0	-0.158	-0.161	-0.180	-0.181	-0.100	156	72.5	-0.007	-0.007	-0.008	-0.006	-0.006
83	67.5	-0.110	-0.123	-0.151	-0.140	-0.095	157	84.0	0.006	0.018	0.018	0.010	0.019
84	86.5	-0.030	-0.040	-0.040	-0.040	-0.019							
85	94.8	-0.001	-0.010	-0.018	-0.010	-0.081							

CONFIDENTIAL



TABLE 25

$$A = -4.5^\circ, \delta_{25} = 0^\circ, \alpha = 7^\circ$$

CONFIDENTIAL													
UPPER SURFACE					LOWER SURFACE								
Tube	Per-cent chord	Mach Number					Tube	Per-cent chord	Mach Number				
		0.60	0.80	0.99	0.925	0.96			0.60	0.80	0.89	0.925	0.96
1	2.0	---	---	---	---	---	86	3.0	---	---	---	---	---
2	6.0	---	---	---	---	---	87	10.0	---	---	---	---	---
3	15.0	---	---	---	---	---	88	25.0	---	---	---	---	---
4	27.5	---	---	---	---	---	89	41.0	---	---	---	---	---
5	40.0	---	---	---	---	---	90	52.5	---	---	---	---	---
6	50.0	---	---	---	---	---	91	62.5	---	---	---	---	---
7	59.0	-0.131	-0.139	-0.140	-0.138	-0.128	92	72.5	-0.028	-0.020	-0.103	-0.130	-0.159
8	67.5	-0.120	-0.129	-0.128	-0.128	-0.120	93	82.5	-0.028	-0.028	-0.088	-0.121	-0.164
9	77.5	---	---	---	---	---	94	94.0	---	---	---	---	---
10	87.5	---	---	---	---	---							
11	94.0	---	---	---	---	---							
12	2.0	---	---	---	---	---	95	3.0	---	---	---	---	---
13	8.0	---	---	---	---	---	96	10.0	---	---	---	---	---
14	15.0	---	---	---	---	---	97	25.0	-0.038	.000	-0.033	-0.044	-0.036
15	27.5	-0.079	-0.079	-0.080	-0.080	-0.079	98	41.0	-0.089	-0.093	-0.108	-0.115	-0.101
16	40.0	-0.080	-0.084	-0.088	-0.088	-0.080	99	52.5	-0.088	-0.079	-0.117	-0.121	-0.124
17	50.0	-0.100	-0.098	-0.098	-0.098	-0.100	100	62.5	-0.088	-0.079	-0.115	-0.129	-0.128
18	59.0	-0.098	-0.098	-0.098	-0.098	-0.098	101	72.5	-0.088	-0.088	-0.109	-0.109	-0.099
19	67.5	-0.098	-0.098	-0.098	-0.098	-0.098	102	82.5	-0.088	-0.088	-0.088	-0.088	-0.088
20	77.5	-0.098	-0.098	-0.098	-0.098	-0.098	103	94.0	-0.088	-0.088	-0.088	-0.088	-0.088
21	87.5	---	---	---	---	---							
22	94.0	---	---	---	---	---							
23	2.0	-0.000	-0.000	-0.000	-0.000	-0.000	104	3.0	.000	.000	.000	.000	.000
24	8.0	-0.010	-0.010	-0.010	-0.010	-0.010	105	10.0	.000	.000	.000	.000	.000
25	15.0	-0.010	-0.010	-0.010	-0.010	-0.010	106	25.0	-0.040	.000	.000	.000	.000
26	27.5	-0.010	-0.010	-0.010	-0.010	-0.010	107	41.0	-0.040	.000	.000	.000	.000
27	40.0	-0.010	-0.010	-0.010	-0.010	-0.010	108	52.5	-0.040	.000	.000	.000	.000
28	50.0	-0.010	-0.010	-0.010	-0.010	-0.010	109	62.5	-0.040	.000	.000	.000	.000
29	59.0	-0.010	-0.010	-0.010	-0.010	-0.010	110	72.5	-0.040	.000	.000	.000	.000
30	67.5	-0.010	-0.010	-0.010	-0.010	-0.010	111	82.5	-0.040	.000	.000	.000	.000
31	77.5	-0.010	-0.010	-0.010	-0.010	-0.010	112	94.0	-0.040	.000	.000	.000	.000
32	87.5	---	---	---	---	---							
33	94.0	---	---	---	---	---							
34	2.0	-1.000	-1.000	-1.000	-1.000	-1.000	113	3.0	.000	.000	.000	.000	.000
35	8.0	-0.980	-0.980	-0.980	-0.980	-0.980	114	10.0	.000	.000	.000	.000	.000
36	15.0	-0.960	-0.960	-0.960	-0.960	-0.960	115	25.0	.000	.000	.000	.000	.000
37	27.5	-0.940	-0.940	-0.940	-0.940	-0.940	116	41.0	.000	.000	.000	.000	.000
38	40.0	-0.920	-0.920	-0.920	-0.920	-0.920	117	52.5	.000	.000	.000	.000	.000
39	50.0	-0.900	-0.900	-0.900	-0.900	-0.900	118	62.5	.000	.000	.000	.000	.000
40	59.0	-0.880	-0.880	-0.880	-0.880	-0.880	119	72.5	.000	.000	.000	.000	.000
41	67.5	-0.860	-0.860	-0.860	-0.860	-0.860	120	82.5	.000	.000	.000	.000	.000
42	77.5	-0.840	-0.840	-0.840	-0.840	-0.840	121	94.0	.000	.000	.000	.000	.000
43	87.5	-0.820	-0.820	-0.820	-0.820	-0.820							
44	94.0	-0.800	-0.800	-0.800	-0.800	-0.800							
45	2.0	-1.000	-1.000	-1.000	-1.000	-1.000	122	3.0	.000	.000	.000	.000	.000
46	8.0	-0.980	-0.980	-0.980	-0.980	-0.980	123	10.0	.000	.000	.000	.000	.000
47	15.0	-0.960	-0.960	-0.960	-0.960	-0.960	124	25.0	.000	.000	.000	.000	.000
48	27.5	-0.940	-0.940	-0.940	-0.940	-0.940	125	41.0	.000	.000	.000	.000	.000
49	40.0	-0.920	-0.920	-0.920	-0.920	-0.920	126	52.5	.000	.000	.000	.000	.000
50	50.0	-0.900	-0.900	-0.900	-0.900	-0.900	127	62.5	.000	.000	.000	.000	.000
51	59.0	-0.880	-0.880	-0.880	-0.880	-0.880	128	72.5	.000	.000	.000	.000	.000
52	67.5	-0.860	-0.860	-0.860	-0.860	-0.860	129	82.5	.000	.000	.000	.000	.000
53	77.5	-0.840	-0.840	-0.840	-0.840	-0.840	130	94.0	.000	.000	.000	.000	.000
54	87.5	-0.820	-0.820	-0.820	-0.820	-0.820							
55	94.0	-0.800	-0.800	-0.800	-0.800	-0.800							
56	2.0	-1.000	-1.000	-1.000	-1.000	-1.000	131	3.0	.000	.000	.000	.000	.000
57	8.0	-0.980	-0.980	-0.980	-0.980	-0.980	132	10.0	.000	.000	.000	.000	.000
58	15.0	-0.960	-0.960	-0.960	-0.960	-0.960	133	25.0	.000	.000	.000	.000	.000
59	27.5	-0.940	-0.940	-0.940	-0.940	-0.940	134	41.0	.000	.000	.000	.000	.000
60	40.0	-0.920	-0.920	-0.920	-0.920	-0.920	135	52.5	.000	.000	.000	.000	.000
61	50.0	-0.900	-0.900	-0.900	-0.900	-0.900	136	62.5	.000	.000	.000	.000	.000
62	59.0	-0.880	-0.880	-0.880	-0.880	-0.880	137	72.5	.000	.000	.000	.000	.000
63	67.5	-0.860	-0.860	-0.860	-0.860	-0.860	138	82.5	.000	.000	.000	.000	.000
64	77.5	-0.840	-0.840	-0.840	-0.840	-0.840	139	94.0	.000	.000	.000	.000	.000
65	87.5	-0.820	-0.820	-0.820	-0.820	-0.820							
66	94.0	-0.800	-0.800	-0.800	-0.800	-0.800							
67	2.0	-1.000	-1.000	-1.000	-1.000	-1.000	140	3.0	.000	.000	.000	.000	.000
68	8.0	-0.980	-0.980	-0.980	-0.980	-0.980	141	10.0	.000	.000	.000	.000	.000
69	15.0	-0.960	-0.960	-0.960	-0.960	-0.960	142	25.0	.000	.000	.000	.000	.000
70	27.5	-0.940	-0.940	-0.940	-0.940	-0.940	143	41.0	.000	.000	.000	.000	.000
71	40.0	-0.920	-0.920	-0.920	-0.920	-0.920	144	52.5	.000	.000	.000	.000	.000
72	50.0	-0.900	-0.900	-0.900	-0.900	-0.900	145	62.5	.000	.000	.000	.000	.000
73	59.0	-0.880	-0.880	-0.880	-0.880	-0.880	146	72.5	.000	.000	.000	.000	.000
74	67.5	-0.860	-0.860	-0.860	-0.860	-0.860	147	82.5	.000	.000	.000	.000	.000
75	77.5	-0.840	-0.840	-0.840	-0.840	-0.840	148	94.0	.000	.000	.000	.000	.000
76	87.5	-0.820	-0.820	-0.820	-0.820	-0.820							
77	94.0	-0.800	-0.800	-0.800	-0.800	-0.800							
78	2.0	-1.000	-1.000	-1.000	-1.000	-1.000	149	3.0	.000	.000	.000	.000	.000
79	8.0	-0.980	-0.980	-0.980	-0.980	-0.980	150	10.0	.000	.000	.000	.000	.000
80	15.0	-0.960	-0.960	-0.960	-0.960	-0.960	151	25.0	.000	.000	.000	.000	.000
81	27.5	-0.940	-0.940	-0.940	-0.940	-0.940	152	41.0	.000	.000	.000	.000	.000
82	40.0	-0.920	-0.920	-0.920	-0.920	-0.920	153	52.5	.000	.000	.000	.000	.000
83	50.0	-0.900	-0.900	-0.900	-0.900	-0.900	154	62.5	.000	.000	.000	.000	.000
84	59.0	-0.880	-0.880	-0.880	-0.880	-0.880	155	72.5	.000	.000	.000	.000	.000
85	67.5	-0.860	-0.860	-0.860	-0.860	-0.860	156	82.5	.000	.000	.000	.000	.000
86	77.5	-0.840	-0.840	-0.840	-0.840	-0.840	157	94.0	.000	.000	.000	.000	.000
87	87.5	-0.820	-0.820	-0.820	-0.820	-0.820							
88	94.0	-0.800	-0.800	-0.800	-0.800	-0.800							

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TABLE 26
 $\alpha = -4.5^\circ, \beta_{max} = 0^\circ, \alpha = 10^\circ$

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UPPER SURFACE						LOWER SURFACE							
Tube	Percent chord	Mech Number					Tube	Percent chord	Mech Number				
		0.60	0.80	0.99	0.995	0.96			0.60	0.80	0.99	0.995	0.96
A 1	2.0	---	---	---	---	---	86	5.0	---	---	---	---	---
6	6.0	---	---	---	---	---	87	10.0	---	---	---	---	---
7	15.0	---	---	---	---	---	88	25.0	---	---	---	---	---
4	27.5	---	---	---	---	---	89	41.0	---	---	---	---	---
5	40.0	---	---	---	---	---	90	52.5	---	---	---	---	---
6	50.0	---	---	---	---	---	91	52.5	-0.003	-0.006	-0.111	-0.131	-0.155
7	56.0	-0.100	-0.110	-0.252	-0.220	-0.353	92	72.5	-0.022	-0.096	-0.120	-0.139	-0.167
8	57.5	-0.229	-0.350	---	---	---	93	84.0	---	---	---	---	---
9	77.5	---	---	---	---	---	94	84.0	---	---	---	---	---
10	87.5	---	---	---	---	---							
11	96.0	---	---	---	---	---							
012	2.0	---	---	---	---	---	95	5.0	---	---	---	---	---
15	6.0	---	---	---	---	---	96	10.0	---	---	---	---	---
14	15.0	---	---	---	---	---	97	25.0	0.097	0.063	0.049	0.041	0.046
16	27.5	-0.409	-0.583	---	-0.620	-0.783	98	41.0	0.030	-0.021	-0.042	-0.054	-0.052
18	40.0	-0.908	-1.451	-0.950	-1.515	-2.061	99	52.5	0.009	-0.042	-0.069	-0.092	-0.101
17	50.0	-0.900	-1.512	-1.061	-1.640	-2.180	100	52.5	-0.006	-0.060	-0.081	-0.107	-0.111
16	59.0	-0.772	-1.285	-0.975	-1.622	-2.193	101	72.5	0.015	-0.044	-0.061	-0.085	-0.095
13	57.5	-1.34	-2.000	-1.500	-2.098	-2.692	102	86.5	0.004	-0.069	-0.092	-0.105	-0.136
20	77.5	-0.86	-1.40	-1.007	-1.569	-2.084	103	84.0	-0.009	-0.103	-0.112	-0.126	-0.147
21	86.0	-0.270	-0.360	---	-0.442	-0.590							
22	95.3	---	---	---	---	---							
025	2.0	-0.780	-0.500	-0.608	-0.709	-0.799	104	5.0	0.731	0.769	0.804	0.810	0.813
24	6.0	-0.800	-0.700	-0.708	-0.702	-0.700	105	10.0	0.506	0.511	0.541	0.545	0.550
25	15.0	-0.791	-0.591	-0.703	-0.702	-0.702	106	25.0	0.261	0.215	0.240	0.253	0.263
26	27.5	-0.700	-0.611	-0.730	-0.702	-0.689	107	41.0	---	---	---	---	---
27	40.0	-0.702	-0.698	-0.702	-0.706	-0.681	108	52.5	---	---	---	---	---
28	50.0	-0.600	-0.666	-0.666	-0.666	-0.700	109	52.5	---	---	---	---	---
28	59.0	-0.546	-0.630	-0.662	-0.700	-0.750	110	72.5	0.050	0.070	0.061	0.048	0.052
30	57.5	-0.500	-0.600	-0.633	-0.602	-0.602	111	85.1	0.047	0.013	-0.003	-0.041	-0.057
31	77.5	-0.412	-0.508	-0.552	-0.594	-0.631	112	84.0	0.051	0.025	-0.009	-0.056	-0.070
32	86.0	-0.178	-0.262	-0.306	-0.354	-0.412							
33	95.3	---	---	---	---	---							
034	2.0	-1.143	-0.825	-1.131	-1.100	-1.208	115	5.0	0.611	0.620	0.675	0.681	0.685
35	6.0	-1.063	-0.971	-1.072	-1.061	-1.113	114	10.0	0.480	0.487	0.501	0.506	0.511
36	15.0	-0.960	-0.950	-1.050	-1.051	-1.041	115	25.0	0.279	0.266	0.268	0.303	0.314
37	27.5	-0.825	-0.829	-0.858	-0.802	-0.813	116	41.0	0.159	0.161	0.168	0.171	0.184
38	40.0	-0.828	-0.731	-0.773	-0.719	-0.664	117	52.5	0.104	0.101	0.099	0.100	0.112
39	50.0	-0.500	-0.751	-0.622	-0.519	-0.421	118	52.5	---	---	---	---	---
40	57.5	---	---	---	---	---	119	72.5	0.066	0.064	0.066	0.063	0.071
41	77.5	-0.172	-0.201	-0.240	-0.290	-0.340	120	87.4	0.094	0.092	0.086	0.085	0.089
42	87.5	-0.061	-0.039	-0.250	-0.389	-0.511	121	84.0	0.061	0.074	0.079	0.010	0.041
43	94.2	-0.008	0.048	-1.115	-0.290	-0.269							
44	2.0	-1.100	-1.000	-1.142	-1.100	-1.210	122	5.0	0.649	0.670	0.714	0.719	0.726
45	6.0	-1.195	-1.032	-1.199	-1.179	-1.279	125	10.0	0.470	0.487	0.487	0.491	0.496
46	15.0	-1.200	-1.023	-1.160	-1.122	-1.222	124	25.0	0.278	0.293	0.292	0.295	0.294
47	27.5	-1.110	-0.940	-1.081	-1.045	-1.145	125	41.0	0.166	0.179	0.178	0.181	0.177
48	40.0	-0.750	-0.990	-0.890	-0.900	-0.900	126	52.5	0.132	0.141	0.137	0.137	0.136
49	50.0	-0.644	-1.019	-0.844	-0.830	-0.830	127	52.5	0.091	0.100	0.096	0.085	0.084
50	59.0	-0.542	-0.821	-0.702	-0.651	-0.651	128	72.5	0.067	0.061	0.069	0.067	0.063
51	57.5	-0.130	-0.600	-0.464	-0.449	-0.449	129	84.0	0.090	0.097	0.071	0.076	0.070
52	77.5	-0.149	-0.041	-0.280	-0.31	-0.310	130	86.5	0.091	0.104	0.075	0.076	0.077
53	86.0	-0.030	0.090	-0.111	-0.230	-0.230	131	84.1	0.064	0.079	0.035	0.035	0.036
54	95.3	-0.060	-0.009	-1.118	-0.230	-0.230							
055	2.0	---	---	---	---	---	132	5.0	---	---	---	---	---
56	6.0	---	---	---	---	---	135	10.0	---	---	---	---	---
57	15.0	---	---	---	---	---	134	25.0	0.081	0.096	0.097	0.102	0.102
58	27.5	-1.012	-1.124	-1.200	-1.109	-1.209	135	41.0	0.167	0.179	0.178	0.181	0.181
59	40.0	-1.034	-1.100	-1.131	-1.045	-1.145	136	52.5	0.117	0.106	0.122	0.125	0.124
60	50.0	-0.661	-1.010	-0.811	-0.783	-0.783	137	52.5	0.102	0.106	0.096	0.100	0.102
61	59.0	-0.260	-0.790	-0.610	-0.602	-0.602	138	72.5	0.100	0.102	0.091	0.091	0.094
62	57.5	-0.173	-0.800	-0.694	-0.640	-0.640	139	84.0	0.100	0.104	0.090	0.093	0.095
63	86.0	-0.060	-0.059	-0.160	-0.130	-0.130	140	84.0	0.048	0.039	0.036	0.033	0.032
64	94.5	-0.052	-0.040	-1.111	-0.105	-0.105							
065	2.0	-1.298	-1.105	-1.434	-1.179	-1.279	141	5.0	0.648	0.672	0.681	0.680	0.694
66	6.0	-1.321	-1.139	-1.465	-1.241	-1.341	142	10.0	0.477	0.478	0.489	0.494	0.498
67	15.0	-1.361	-1.302	-1.495	-1.060	-1.060	145	25.0	0.272	0.291	0.300	0.309	0.313
68	27.5	-1.210	-1.160	-1.161	-0.981	-0.981	144	41.0	0.160	0.175	0.181	0.180	0.184
69	40.0	-0.890	-0.892	-0.710	-0.950	-0.950	145	52.5	0.114	0.127	0.131	0.136	0.143
70	50.0	-0.659	-0.900	-0.840	-0.630	-0.630	146	52.5	0.094	0.109	0.106	0.100	0.117
71	59.0	-0.665	-0.662	-0.330	-0.345	-0.345	147	72.5	0.061	0.069	0.069	0.095	0.097
72	57.5	-0.200	-0.200	-0.310	-0.271	-0.271	148	84.0	0.096	0.102	0.103	0.109	0.113
73	77.5	-0.115	-0.160	-0.170	-0.190	-0.190	149	84.0	0.090	0.048	0.044	0.046	0.051
74	87.5	-0.040	-0.115	-0.120	-0.115	-0.115							
75	96.8	-0.044	-0.090	-1.102	-0.090	-0.090							
076	2.0	-1.080	---	-1.390	-1.132	-1.132	150	5.0	0.659	0.665	0.703	0.717	0.722
77	6.0	-1.080	-1.280	-1.130	-1.072	-1.072	151	10.0	0.447	0.472	0.491	0.506	0.511
78	15.0	-0.605	-0.892	-1.130	-0.959	-0.959	152	25.0	-0.149	0.204	0.232	0.241	0.250
79	27.5	-0.411	-0.979	-0.605	-0.512	-0.512	153	41.0	0.120	0.134	0.146	0.152	0.165
80	40.0	-0.411	-0.570	-0.538	-0.490	-0.490	154	52.5	0.067	0.072	0.076	0.085	0.090
81	50.0	-0.359	-0.439	-0.439	-0.430	-0.430	155	52.5	0.068	0.068	0.071	0.078	0.081
82	59.0	-0.390	-0.394	-0.381	-0.370	-0.370	156	72.5	0.079	0.067	0.068	0.064	0.112
83	57.5	-0.275	-0.118	-0.130	-0.112	-0.112	157	84.0	-0.000	-0.007	-0.010	-0.005	0.002
84	86.5	-0.249	-0.240	-0.341	-0.336	-0.336							
85	94.0	-0.179	-0.210	-0.225	-0.231	-0.231							

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TABLE 27

$(\alpha = 30^\circ, \alpha_{20} = -10.0^\circ, \alpha = -0^\circ)$

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UPPER SURFACE					LOWER SURFACE						
Tube	Percent chord	Mech Number				Tube	Percent chord	Mech Number			
		0.60	0.80	0.85	0.89			0.60	0.80	0.85	0.89
A 1	2.0	0.266	0.379	0.378	0.390	86	3.0	-0.402	-0.448	-0.424	-0.384
2	6.0	.134	.157	.166	.181	87	10.0	---	---	---	---
4	15.0	-.020	-.007	-.007	-.030	88	25.0	-.218	-.279	-.259	-.256
6	27.6	-.099	-.089	-.079	-.069	89	41.0	---	---	---	---
8	40.0	---	---	---	---	90	62.5	---	---	---	---
10	50.0	---	---	---	---	91	82.5	---	---	---	---
12	60.0	---	---	---	---	92	94.0	---	---	---	---
14	67.5	---	---	---	---	93	94.0	---	---	---	---
16	77.5	---	---	---	---	94	94.0	---	---	---	---
18	86.0	---	---	---	---						
20	94.0	---	---	---	---						
22	96.0	---	---	---	---						
112	2.0	.300	.360	.368	.371	98	3.0	-.475	-.538	-.520	-.478
13	6.0	.093	.120	.130	.148	99	10.0	-.298	-.356	-.335	-.316
14	13.0	-.062	-.094	-.086	-.030	100	25.0	-.205	-.207	-.208	-.206
15	27.5	-.166	-.183	-.178	-.166	101	41.0	-.279	-.301	-.282	-.283
16	40.0	-.239	-.250	-.250	-.254	102	62.5	-.239	-.240	-.240	-.241
17	50.0	-.300	-.308	-.300	-.300	103	82.5	-.178	-.184	-.184	-.187
18	60.0	-.358	-.358	-.359	-.358	104	94.0	-.090	-.132	-.137	-.148
19	67.5	-.392	-.390	-.393	-.379	105	94.5	.006	.037	.024	-.059
20	77.5	-.399	-.390	-.390	-.369						
21	86.0	-.387	-.376	-.376	-.358						
22	94.0	---	---	---	---						
23	2.0	.318	.360	.373	.369	106	3.0	-.501	-.598	-.608	-.570
24	6.0	.081	.104	.104	.113	107	10.0	-.324	-.441	-.439	-.421
25	15.0	-.082	-.091	-.086	-.077	108	25.0	-.309	-.302	-.306	-.307
26	27.6	-.196	-.204	-.204	-.203	109	41.0	-.294	-.304	-.280	-.282
27	40.0	-.260	-.267	-.264	-.260	110	62.5	-.248	-.236	-.243	-.243
28	50.0	-.318	-.321	-.321	-.324	111	82.5	-.168	-.158	-.167	-.167
29	60.0	-.366	-.364	-.364	-.360	112	94.0	-.056	-.060	-.059	-.060
30	67.5	---	---	---	---						
31	77.5	-.083	-.103	-.111	-.139						
32	86.0	-.093	-.097	-.099	-.081						
33	94.0	.110	.119	.111	.123						
34	2.0	.277	.315	.314	.312	113	3.0	-.517	-.650	-.650	-.691
35	6.0	-.089	-.104	-.109	-.105	114	10.0	-.347	-.445	-.478	-.469
36	15.0	-.189	-.204	-.207	-.209	115	25.0	-.318	-.309	-.304	-.301
37	27.6	-.299	-.309	-.306	-.305	116	41.0	---	---	---	---
38	40.0	-.364	-.370	-.371	-.371	117	62.5	-.285	-.288	-.286	-.281
39	50.0	-.418	-.422	-.422	-.424	118	82.5	-.156	-.189	-.189	-.201
40	60.0	-.470	-.474	-.474	-.470	119	94.0	-.045	-.045	-.045	-.046
41	67.5	-.496	-.496	-.496	-.496	120	94.0	.066	.064	.062	.106
42	77.5	-.493	-.493	-.493	-.493	121	94.5	.129	.144	.148	.157
43	86.0	-.493	-.493	-.493	-.493						
44	94.0	.103	.120	.120	.121						
44	2.0	.393	.387	.386	.386	122	3.0	-.639	-.681	-.660	-.660
45	6.0	.127	.111	.108	.099	123	10.0	-.453	-.503	-.474	-.474
46	15.0	-.085	-.083	-.100	-.117	124	25.0	-.420	-.401	-.390	-.390
47	27.6	-.149	-.157	-.161	-.178	125	41.0	-.381	-.381	-.381	-.381
48	40.0	-.210	-.204	-.209	-.205	126	62.5	-.306	-.306	-.306	-.306
49	50.0	-.264	-.263	-.263	-.260	127	82.5	-.208	-.204	-.205	-.205
50	60.0	-.317	-.313	-.313	-.313	128	94.0	-.096	-.103	-.093	-.093
51	67.5	-.362	-.362	-.362	-.362	129	94.0	-.037	-.041	-.038	-.038
52	77.5	-.411	-.411	-.411	-.411	130	94.5	.093	.093	.093	.078
53	86.0	-.411	-.411	-.411	-.411	131	94.1	.133	.134	.140	.140
54	94.0	.152	.175	.183	.194						
55	2.0	.393	.376	.384	.383	132	3.0	-.695	-.744	-.714	-.714
56	6.0	.149	.127	.116	.094	133	10.0	-.481	-.535	-.500	-.500
57	15.0	-.086	-.069	-.090	-.119	134	25.0	-.433	-.401	-.371	-.371
58	27.5	-.119	-.108	-.107	-.109	135	41.0	-.400	-.474	-.464	-.464
59	40.0	-.174	-.174	-.174	-.174	136	62.5	-.375	-.375	-.375	-.375
60	50.0	-.204	-.204	-.204	-.204	137	82.5	-.287	-.287	-.287	-.287
61	60.0	-.260	-.260	-.260	-.260	138	94.0	-.231	-.231	-.231	-.231
62	67.5	-.317	-.317	-.317	-.317	139	94.0	-.097	-.098	-.094	-.094
63	77.5	-.362	-.362	-.362	-.362	140	94.0	-.001	.001	.019	.019
64	86.0	-.362	-.362	-.362	-.362						
65	94.0	---	---	---	---						
66	2.0	.440	.404	.409	.378	141	3.0	-.769	-.804	-.794	-.794
67	6.0	.196	.165	.144	.119	142	10.0	-.514	-.584	-.584	-.584
68	15.0	-.037	-.016	-.034	-.075	143	25.0	-.477	-.477	-.477	-.477
69	27.5	-.078	-.123	-.154	-.194	144	41.0	-.476	-.497	-.499	-.499
70	40.0	-.130	-.189	-.219	-.253	145	62.5	-.397	-.390	-.388	-.388
71	50.0	-.118	-.164	-.198	-.200	146	82.5	-.285	-.287	-.287	-.287
72	60.0	-.061	-.069	-.067	-.060	147	94.0	-.204	-.208	-.208	-.208
73	67.5	.008	.041	.041	.060	148	94.0	-.103	-.103	-.073	-.073
74	77.5	.089	.083	.083	.070	149	94.0	-.006	.001	.033	.033
75	86.0	---	---	---	---						
76	94.0	.129	.139	.136	.161						
77	2.0	.340	.383	.398	.404	150	3.0	-.860	-.949	-.936	-.936
78	6.0	.129	.110	.091	.066	151	10.0	-.600	-.675	-.666	-.666
79	15.0	-.093	-.087	-.084	-.121	152	25.0	-.425	-.425	-.425	-.425
80	27.5	-.118	-.174	-.204	-.260	153	41.0	-.378	-.378	-.378	-.378
81	40.0	-.160	-.214	-.241	-.289	154	62.5	-.279	-.279	-.279	-.279
82	50.0	-.210	-.276	-.304	-.344	155	82.5	-.171	-.164	-.176	-.176
83	60.0	-.260	-.323	-.351	-.388	156	94.0	-.114	-.114	-.094	-.094
84	67.5	-.306	-.369	-.396	-.437	157	94.0	-.069	-.076	-.076	-.076
85	77.5	-.354	-.417	-.444	-.491						
86	86.0	-.402	-.465	-.492	-.549						
87	94.0	.115	.124	.137	.163						

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TABLE 32

$[\alpha = 30^\circ, \delta_{max} = -5.1^\circ, \alpha = -\alpha^\circ]$

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UPPER SURFACE						LOWER SURFACE					
Tube	Per-cent chord	Mach Number				Tube	Per-cent chord	Mach Number			
		0.60	0.80	0.89	0.89			0.60	0.80	0.89	0.89
A 3	2.0	0.387	0.369	0.376	0.309	86	5.0	-0.408	-0.433	-0.404	-0.383
4	5.0	.110	.146	.169	.180	87	30.0	---	---	---	---
5	15.0	-.006	-.001	-.013	-.036	88	45.0	---	---	---	---
6	27.5	-.103	-.092	-.083	-.066	89	41.0	-.231	-.268	-.276	-.288
7	40.0	---	---	---	---	90	32.5	---	---	---	---
8	50.0	---	---	---	---	91	52.5	---	---	---	---
9	64.0	---	---	---	---	92	72.5	---	---	---	---
10	77.5	---	---	---	---	93	82.5	---	---	---	---
11	87.5	---	---	---	---	94	84.0	---	---	---	---
12	95.0	---	---	---	---						
B12	6.0	.168	.144	.156	.167	95	5.0	-.466	-.520	-.520	-.472
13	5.0	.086	.114	.129	.140	96	30.0	-.298	-.330	-.346	-.312
14	15.0	-.072	-.097	-.091	-.095	97	25.0	-.294	-.371	-.373	-.356
15	27.5	-.174	-.186	-.184	-.167	98	43.0	-.280	-.373	-.446	-.433
16	40.0	-.247	-.249	-.248	-.200	99	52.5	-.241	-.336	-.438	-.421
17	50.0	-.261	-.310	-.364	-.373	100	82.5	-.176	-.280	-.303	-.309
18	59.0	-.243	-.311	-.362	-.407	101	72.5	-.093	-.133	-.160	-.174
19	67.5	-.191	-.252	-.304	-.369	102	86.5	-.021	-.013	-.027	-.029
20	77.5	-.042	-.055	-.083	-.120	103	94.5	---	---	---	---
21	88.5	---	---	---	---						
22	95.3	---	---	---	---						
C23	2.0	.171	.140	.150	.160	104	5.0	-.487	-.581	-.601	-.579
24	6.0	.078	.096	.103	.117	105	30.0	-.350	-.428	-.456	-.420
25	15.0	-.091	-.090	-.090	-.077	106	25.0	-.307	-.397	-.438	-.437
26	27.5	-.199	-.208	-.217	-.227	107	43.0	-.294	-.397	-.428	-.437
27	40.0	-.317	-.317	-.317	-.277	108	52.5	-.251	-.359	-.417	-.403
28	50.0	-.267	-.319	-.400	-.473	109	82.5	-.170	-.214	-.228	-.272
29	59.0	-.254	-.307	-.399	-.436	110	72.5	-.086	-.081	-.089	-.100
30	67.5	-.189	-.241	-.293	-.348	111	86.5	.048	.060	.054	.048
31	77.5	-.040	-.079	-.113	-.156	112	94.5	.134	.149	.146	.145
32	88.5	.024	.033	.025	.030						
33	95.3	.108	.153	.115	.109						
D34	2.0	.274	.303	.308	.355	113	5.0	-.477	-.627	-.610	-.624
35	15.0	-.093	-.107	-.112	-.106	114	30.0	-.340	-.431	-.421	-.467
36	27.5	-.197	-.240	-.264	-.260	115	25.0	-.316	-.420	-.500	-.499
37	40.0	-.270	-.331	-.411	-.429	116	43.0	---	---	---	---
38	50.0	-.274	-.361	-.431	-.531	117	52.5	-.286	-.359	-.335	-.423
39	59.0	-.213	-.291	-.351	-.480	118	82.5	-.156	-.183	-.180	-.212
40	67.5	-.124	-.156	-.203	-.216	119	72.5	-.043	-.047	-.042	-.004
41	77.5	-.067	-.064	-.073	-.036	120	87.4	.096	.103	.098	.090
42	87.5	.028	.039	.040	.066	121	94.5	.126	.140	.143	.151
43	94.5	.093	.110	.115	.140						
E44	2.0	.376	.393	.391	.390	122	5.0	-.509	-.627	-.670	-.620
45	6.0	.110	.106	.097	.100	123	30.0	-.393	-.443	-.483	-.426
46	15.0	-.058	-.091	-.104	-.108	124	25.0	-.315	-.403	-.453	-.428
47	27.5	-.164	-.201	-.248	-.265	125	41.0	-.296	-.365	-.434	-.501
48	40.0	-.232	-.314	-.369	-.427	126	52.5	-.229	-.276	-.288	-.308
49	50.0	-.230	-.312	-.394	-.478	127	82.5	-.169	-.195	-.197	-.214
50	59.0	-.193	-.260	-.303	-.412	128	72.5	-.064	-.067	-.068	-.024
51	67.5	-.121	-.120	-.150	-.150	129	78.0	-.008	-.001	.006	-.032
52	77.5	.007	.008	.001	.020	130	85.5	.071	.088	.098	.111
53	88.5	.189	.201	.203	.215	131	94.5	.138	.157	.169	.174
54	95.5	.142	.166	.177	.194						
F55	2.0	.368	.367	.394	.399	132	5.0	-.570	-.664	-.727	-.703
55	5.0	.123	.116	.111	.106	133	30.0	-.374	-.463	-.518	-.548
56	15.0	-.092	-.083	-.099	-.110	134	25.0	-.307	-.402	-.472	-.577
57	27.5	-.190	-.207	-.238	-.264	135	43.0	-.296	-.378	-.429	-.429
58	40.0	-.219	-.291	-.343	-.402	136	52.5	-.258	-.316	-.350	-.397
59	50.0	-.203	-.273	-.315	-.321	137	82.5	-.181	-.209	-.217	-.189
60	59.0	-.197	-.266	-.293	-.342	138	72.5	-.110	-.116	-.116	-.097
61	67.5	-.169	-.198	-.206	-.246	139	85.4	-.030	-.002	.004	.011
62	87.5	---	---	---	---	140	94.0	.061	.080	.088	.092
63	86.5	---	---	---	---						
64	84.5	---	---	---	---						
G65	2.0	.401	.399	.390	.394	141	5.0	-.672	-.700	-.757	-.724
65	6.0	.143	.139	.128	.121	142	10.0	-.406	-.442	-.463	-.420
66	15.0	-.031	-.059	-.067	-.080	143	25.0	-.338	-.431	-.506	-.508
67	27.5	-.134	-.169	-.196	-.220	144	41.0	-.311	-.348	-.420	-.426
68	40.0	-.183	-.248	-.284	-.317	145	52.5	-.261	-.319	-.346	-.363
69	50.0	-.180	-.239	-.271	-.287	146	82.5	-.166	-.167	-.181	-.190
70	59.0	-.130	-.177	-.206	-.227	147	72.5	-.111	-.113	-.103	-.071
71	67.5	-.096	-.075	-.076	-.114	148	84.0	-.022	-.004	.009	.037
72	77.5	.106	.115	.120	.151	149	94.0	.048	.069	.083	.098
73	87.2	---	---	---	---						
74	87.2	---	---	---	---						
75	96.6	.119	.154	.151	.177						
H76	5.0	.350	.349	.346	.344	150	5.0	-.598	-.730	-.804	-.839
76	6.0	.098	.077	.070	.066	151	30.0	-.371	-.468	-.520	-.571
77	15.0	-.095	-.093	-.112	-.130	152	25.0	-.304	-.390	-.461	-.513
78	27.5	-.190	-.207	-.240	-.287	153	43.0	-.269	-.304	-.330	-.343
79	40.0	-.197	-.260	-.294	-.338	154	52.5	-.201	-.223	-.223	-.172
80	50.0	-.180	-.235	-.253	-.271	155	82.5	-.116	-.116	-.109	-.080
81	59.0	-.130	-.175	-.202	-.239	156	72.5	-.052	-.037	-.026	-.011
82	67.5	-.102	-.129	-.179	-.173	157	84.0	.102	.128	.140	.155
83	87.5	.119	.138	.150	.179						
84	86.5	.115	.134	.150	.177						



TABLE 3

$A = 30^\circ, \theta_{max} = -5.1^\circ, \alpha = 2^\circ$

		CONFIDENTIAL								CONFIDENTIAL					
		UPPER SURFACE								LOWER SURFACE					
Tube	Per- cent chord	Mach Number						Tube	Per- cent chord	Mach Number					
		0.60	0.80	0.85	0.90	0.925	0.96			0.60	0.80	0.85	0.90	0.925	0.96
1	2.0	-0.206	-0.206	-0.195	-0.191	-0.186	66	3.0	0.166	0.176	0.177	0.179	0.199		
2	8.0	-0.302	-0.296	-0.281	-0.276	-0.271	67	10.0	---	---	---	---	---		
3	15.0	-0.398	-0.393	-0.378	-0.373	-0.368	68	25.0	-0.068	-0.091	-0.090	-0.089	-0.088		
4	27.0	-0.494	-0.489	-0.474	-0.469	-0.464	69	41.0	---	---	---	---	---		
5	40.0	---	---	---	---	---	70	52.6	---	---	---	---	---		
6	50.0	---	---	---	---	---	71	62.6	---	---	---	---	---		
7	59.0	---	---	---	---	---	72	72.6	---	---	---	---	---		
8	67.5	---	---	---	---	---	73	84.0	---	---	---	---	---		
9	77.5	---	---	---	---	---	74	94.0	---	---	---	---	---		
10	87.6	---	---	---	---	---									
11	96.0	---	---	---	---	---									
12	2.0	-0.147	-0.147	-0.140	-0.140	-0.138	95	3.0	0.158	0.169	0.166	0.160	0.192		
13	8.0	-0.259	-0.257	-0.248	-0.246	-0.245	96	10.0	0.016	0.008	0.006	0.008	0.021		
14	15.0	-0.359	-0.357	-0.348	-0.346	-0.345	97	25.0	-0.096	-0.109	-0.117	-0.120	-0.110		
15	27.0	-0.455	-0.453	-0.444	-0.442	-0.441	98	41.0	-0.136	-0.177	-0.200	-0.202	-0.202		
16	40.0	-0.551	-0.549	-0.540	-0.538	-0.537	99	52.6	---	---	---	---	---		
17	50.0	-0.647	-0.645	-0.636	-0.634	-0.633	100	62.6	-0.094	-0.082	-0.106	-0.101	-0.109		
18	59.0	-0.743	-0.741	-0.732	-0.730	-0.729	101	72.6	-0.027	-0.022	-0.029	-0.024	-0.109		
19	67.5	-0.839	-0.837	-0.828	-0.826	-0.825	102	84.0	0.051	0.019	0.028	-0.022	-0.021		
20	77.5	-0.935	-0.933	-0.924	-0.922	-0.921	103	94.0	---	---	---	---	---		
21	87.6	-1.031	-1.029	-1.020	-1.018	-1.017									
22	96.0	-1.127	-1.125	-1.116	-1.114	-1.113									
23	2.0	-0.197	-0.197	-0.190	-0.190	-0.187	104	3.0	0.171	0.179	0.176	0.172	0.196		
24	8.0	-0.293	-0.291	-0.284	-0.284	-0.281	105	10.0	0.016	-0.001	-0.015	-0.021	-0.016		
25	15.0	-0.389	-0.387	-0.380	-0.380	-0.377	106	25.0	-0.094	-0.129	-0.149	-0.166	-0.165		
26	27.0	-0.485	-0.483	-0.476	-0.476	-0.473	107	41.0	-0.148	-0.196	-0.229	-0.273	-0.273		
27	40.0	-0.581	-0.579	-0.572	-0.572	-0.569	108	52.6	-0.138	-0.181	-0.214	-0.261	-0.261		
28	50.0	-0.677	-0.675	-0.668	-0.668	-0.665	109	62.6	-0.025	-0.025	-0.049	-0.107	-0.107		
29	59.0	-0.773	-0.771	-0.764	-0.764	-0.761	110	72.6	-0.028	-0.021	-0.033	-0.047	-0.101		
30	67.5	-0.869	-0.867	-0.860	-0.860	-0.857	111	84.0	0.029	0.017	0.015	0.011	0.016		
31	77.5	-0.965	-0.963	-0.956	-0.956	-0.953	112	94.0	0.165	0.190	0.201	0.191	0.162		
32	87.6	-1.061	-1.059	-1.052	-1.052	-1.049									
33	96.0	-1.157	-1.155	-1.148	-1.148	-1.145									
34	2.0	-0.241	-0.241	-0.234	-0.234	-0.231	113	3.0	0.186	0.190	---	0.104	0.098		
35	8.0	-0.337	-0.335	-0.328	-0.328	-0.325	114	10.0	0.044	0.016	-0.021	-0.025	-0.031		
36	15.0	-0.433	-0.431	-0.424	-0.424	-0.421	115	25.0	-0.061	-0.129	-0.177	-0.190	-0.213		
37	27.0	-0.529	-0.527	-0.520	-0.520	-0.517	116	41.0	---	---	---	---	---		
38	40.0	-0.625	-0.623	-0.616	-0.616	-0.613	117	52.6	-0.127	-0.161	-0.198	-0.214	-0.260		
39	50.0	-0.721	-0.719	-0.712	-0.712	-0.709	118	62.6	-0.078	-0.108	-0.135	-0.176	-0.176		
40	59.0	-0.817	-0.815	-0.808	-0.808	-0.805	119	72.6	-0.028	-0.021	-0.020	0.015	-0.041		
41	67.5	-0.913	-0.911	-0.904	-0.904	-0.901	120	84.0	0.127	0.147	0.149	0.131	0.089		
42	77.5	-1.009	-1.007	-1.000	-1.000	-0.997	121	94.0	0.152	0.173	0.174	0.130	0.079		
43	87.6	-1.105	-1.103	-1.096	-1.096	-1.093									
44	2.0	-0.285	-0.285	-0.278	-0.278	-0.275	122	3.0	0.194	0.199	0.164	0.127	0.104		
45	8.0	-0.381	-0.379	-0.372	-0.372	-0.369	123	10.0	0.000	-0.022	-0.044	-0.079	-0.069		
46	15.0	-0.477	-0.475	-0.468	-0.468	-0.465	124	25.0	-0.096	-0.146	-0.196	-0.229	-0.208		
47	27.0	-0.573	-0.571	-0.564	-0.564	-0.561	125	41.0	-0.132	-0.170	-0.194	-0.267	-0.273		
48	40.0	-0.669	-0.667	-0.660	-0.660	-0.657	126	52.6	-0.110	-0.140	-0.160	-0.211	-0.202		
49	50.0	-0.765	-0.763	-0.756	-0.756	-0.753	127	62.6	-0.086	-0.105	-0.129	-0.189	-0.189		
50	59.0	-0.861	-0.859	-0.852	-0.852	-0.849	128	72.6	-0.039	-0.071	-0.095	-0.146	-0.146		
51	67.5	-0.957	-0.955	-0.948	-0.948	-0.945	129	84.0	0.012	0.079	0.082	0.016	-0.012		
52	77.5	-1.053	-1.051	-1.044	-1.044	-1.041	130	94.0	0.134	0.146	0.142	0.084	0.013		
53	87.6	-1.149	-1.147	-1.140	-1.140	-1.137	131	94.0	0.168	0.189	0.181	0.106	0.057		
54	96.0	-1.245	-1.243	-1.236	-1.236	-1.233									
55	2.0	-0.329	-0.329	-0.322	-0.322	-0.319	132	3.0	0.183	0.181	0.160	0.117	0.094		
56	8.0	-0.425	-0.423	-0.416	-0.416	-0.413	133	10.0	0.028	0.014	-0.002	-0.017	-0.044		
57	15.0	-0.521	-0.519	-0.512	-0.512	-0.509	134	25.0	-0.093	-0.119	-0.136	-0.177	-0.211		
58	27.0	-0.617	-0.615	-0.608	-0.608	-0.605	135	41.0	-0.145	-0.182	-0.207	-0.261	-0.277		
59	40.0	-0.713	-0.711	-0.704	-0.704	-0.701	136	52.6	-0.146	-0.182	-0.205	-0.269	-0.277		
60	50.0	-0.809	-0.807	-0.800	-0.800	-0.797	137	62.6	-0.129	-0.132	-0.151	-0.211	-0.208		
61	59.0	-0.905	-0.903	-0.896	-0.896	-0.893	138	72.6	-0.060	-0.069	-0.075	-0.129	-0.171		
62	67.5	-1.001	-1.000	-0.993	-0.993	-0.990	139	84.0	0.068	0.013	0.007	-0.060	-0.128		
63	77.5	-1.097	-1.095	-1.088	-1.088	-1.085	140	94.0	0.076	0.091	0.087	0.032	-0.014		
64	87.6	-1.193	-1.191	-1.184	-1.184	-1.181									
65	96.0	-1.289	-1.287	-1.280	-1.280	-1.277									
66	2.0	-0.375	-0.375	-0.368	-0.368	-0.365	141	3.0	0.181	0.191	0.181	0.140	0.107		
67	8.0	-0.471	-0.469	-0.462	-0.462	-0.459	142	10.0	-0.002	-0.009	-0.021	-0.062	-0.090		
68	15.0	-0.567	-0.565	-0.558	-0.558	-0.555	143	25.0	-0.107	-0.139	-0.158	-0.205	-0.213		
69	27.0	-0.663	-0.661	-0.654	-0.654	-0.651	144	41.0	-0.161	-0.209	-0.238	-0.312	-0.300		
70	40.0	-0.759	-0.757	-0.750	-0.750	-0.747	145	52.6	-0.156	-0.196	-0.220	-0.290	-0.300		
71	50.0	-0.855	-0.853	-0.846	-0.846	-0.843	146	62.6	-0.153	-0.197	-0.181	-0.251	-0.266		
72	59.0	-0.951	-0.949	-0.942	-0.942	-0.939	147	72.6	-0.077	-0.105	-0.130	-0.200	-0.190		
73	67.5	-1.047	-1.045	-1.038	-1.038	-1.035	148	84.0	-0.049	-0.023	0.011	0.048	-0.017		
74	77.5	-1.143	-1.141	-1.134	-1.134	-1.131	149	94.0	0.070	0.086	0.086	0.089	0.021		
75	87.6	-1.239	-1.237	-1.230	-1.230	-1.227									
76	96.0	-1.335	-1.333	-1.326	-1.326	-1.323									
77	2.0	-0.421	-0.421	-0.414	-0.414	-0.411	150	3.0	0.131	0.141	0.136	0.092	0.064		
78	8.0	-0.517	-0.515	-0.508	-0.508	-0.505	151	10.0	-0.011	-0.050	-0.061	-0.102	-0.101		
79	15.0	-0.613	-0.611	-0.604	-0.604	-0.601	152	25.0	-0.135	-0.180	-0.211	-0.289	-0.312		
80	27.0	-0.709	-0.707	-0.700	-0.700	-0.697	153	41.0	-0.163	-0.214	-0.245	-0.310	-0.312		
81	40.0	-0.805	-0.803	-0.796	-0.796	-0.793	154	52.6	-0.159	-0.172	-0.199	-0.262	-0.266		
82	50.0	-0.901	-0.899	-0.892	-0.892	-0.889	155	62.6	-0.086	-0.111	-0.132	-0.204	-0.201		
83	59.0	-0.997	-0.995	-0.988	-0.988	-0.985	156	72.6	-0.038	-0.028	-0.035	-0.017	-0.095		
84	67.5	-1.093	-1.091	-1.084	-1.084	-1.081	157	84.0	0.108	0.139	0.149	0.134	0.085		
85	77.5	-1.189	-1.187	-1.180	-1.180	-1.177									
86	87.6	-1.285	-1.283	-1.276	-1.276	-1.273									
87	96.0	-1.381	-1.379	-1.372	-1.372	-1.369									



TABLE 37
 $[A = 30^\circ, \beta_{th} = 5.0^\circ, \alpha = -2^\circ]$

CONFIDENTIAL											
UPPER SURFACE					LOWER SURFACE						
Tube	Per-cent chord	Mech Number				Tube	Per-cent chord	Mech Number			
		0.60	0.80	0.95	0.99			0.60	0.80	0.95	0.99
1	2.0	0.114	0.389	0.363	0.376	86	3.0	-0.389	-0.408	-0.398	-0.359
2	6.0	.104	.135	.151	.165	87	10.0	---	---	---	---
3	15.0	-.029	-.007	.011	.027	88	25.0	-.233	-.271	-.270	-.258
4	27.6	-.106	-.101	-.092	-.075	89	41.0	---	---	---	---
5	40.0	---	---	---	---	90	62.5	---	---	---	---
6	50.0	---	---	---	---	91	82.5	---	---	---	---
7	59.0	---	---	---	---	92	72.5	---	---	---	---
8	67.5	---	---	---	---	93	84.0	---	---	---	---
9	77.5	---	---	---	---	94	94.0	---	---	---	---
10	87.5	---	---	---	---						
11	96.0	---	---	---	---						
12	2.0	.300	.334	.345	.359	95	3.0	-.442	-.496	-.494	-.494
13	6.0	.080	.105	.118	.131	96	10.0	-.295	-.345	-.356	-.333
14	15.0	-.078	-.068	-.077	-.082	97	25.0	-.278	-.344	-.363	-.352
15	27.6	-.177	-.193	-.189	-.179	98	41.0	-.270	-.305	-.305	-.311
16	40.0	-.269	-.299	-.311	-.301	99	62.5	-.233	-.268	-.262	-.278
17	50.0	-.365	-.377	-.385	-.367	100	82.5	-.169	-.237	-.248	-.237
18	59.0	-.464	-.428	-.397	-.324	101	72.5	-.087	-.128	-.153	-.153
19	67.5	-.591	-.472	-.343	-.201	102	86.5	.007	-.009	-.021	-.066
20	77.5	-.715	-.487	-.282	-.125	103	94.5	---	---	---	---
21	86.0	-.826	-.469	-.205	-.147						
22	96.5	---	---	---	---						
23	2.0	.303	.336	.345	.359	104	3.0	-.466	-.563	-.576	-.556
24	6.0	.070	.099	.099	.109	105	10.0	-.333	-.417	-.417	-.408
25	15.0	-.077	-.103	-.096	-.086	106	25.0	-.298	-.390	-.433	-.437
26	27.6	-.203	-.248	-.241	-.232	107	41.0	-.283	-.390	-.407	-.393
27	40.0	-.276	-.353	-.384	-.380	108	62.5	-.201	-.301	-.324	-.320
28	50.0	-.379	-.479	-.453	-.476	109	82.5	-.167	-.267	-.281	-.281
29	59.0	-.479	-.574	-.440	-.394	110	72.5	-.097	-.195	-.217	-.216
30	67.5	-.574	---	---	---	111	85.1	.053	.098	.062	.074
31	77.5	-.687	-.405	-.110	-.186	112	94.6	.189	.193	.193	.187
32	86.0	-.800	-.319	-.018	-.011						
33	96.5	.107	.110	.111	.117						
34	2.0	.294	.296	.295	.306	113	3.0	-.468	-.612	-.608	-.604
35	6.0	-.105	-.116	-.119	-.111	114	10.0	-.319	-.400	-.407	-.400
36	15.0	-.266	-.293	-.271	-.266	115	25.0	-.298	-.406	-.485	-.504
37	27.6	-.389	-.369	-.342	-.343	116	41.0	---	---	---	---
38	40.0	-.499	-.380	-.350	-.341	117	62.5	-.283	-.396	-.398	-.389
39	50.0	-.597	-.385	-.301	-.218	118	82.5	-.143	-.170	-.167	-.163
40	59.0	-.686	-.286	-.134	-.075	119	72.5	-.094	-.137	-.089	-.085
41	67.5	-.785	-.105	-.055	-.066	120	87.4	.094	.100	.115	.118
42	77.5	-.883	-.033	-.031	-.064	121	94.2	.134	.147	.155	.162
43	84.2	-.981	-.101	-.111	-.138						
44	2.0	.309	.377	.387	.399	122	3.0	-.464	-.636	-.609	-.627
45	6.0	.073	.095	.103	.108	123	10.0	-.329	-.438	-.401	-.395
46	15.0	-.096	-.102	-.103	-.103	124	25.0	-.282	-.380	-.445	-.464
47	27.6	-.204	-.240	-.256	-.266	125	41.0	-.246	-.318	-.309	-.301
48	40.0	-.279	-.355	-.397	-.389	126	62.5	-.177	-.235	-.217	-.217
49	50.0	-.385	-.365	-.321	-.355	127	82.5	-.112	-.133	-.135	-.087
50	59.0	-.497	-.332	-.176	-.109	128	72.5	-.005	-.021	-.008	-.004
51	67.5	-.604	-.266	-.066	-.080	129	78.0	.048	.066	.075	.111
52	77.5	-.709	-.076	-.077	-.064	130	86.5	.125	.146	.150	.184
53	86.5	-.815	-.145	-.133	-.146	131	94.1	.171	.186	.203	.201
54	96.5	-.919	-.136	-.142	-.152						
55	2.0	.313	.394	.383	.389	132	3.0	-.473	-.634	-.641	-.633
56	6.0	.074	.101	.113	.116	133	10.0	-.320	-.429	-.418	-.418
57	15.0	-.104	-.109	-.105	-.109	134	25.0	-.287	-.393	-.404	-.377
58	27.6	-.207	-.244	-.259	-.271	135	41.0	-.284	-.389	-.391	-.399
59	40.0	-.297	-.361	-.403	-.384	136	62.5	-.165	-.200	-.209	-.237
60	50.0	-.400	-.381	-.343	-.364	137	82.5	-.088	-.095	-.094	-.092
61	59.0	-.500	-.347	-.285	-.314	138	72.5	-.083	-.093	-.100	-.119
62	67.5	-.603	-.285	-.213	-.244	139	83.4	.193	.211	.219	.245
63	77.5	-.709	-.093	-.096	-.093	140	94.0	.145	.168	.176	.199
64	84.6	-.815	---	---	---						
65	2.0	.303	.398	.387	.393	141	3.0	-.414	-.577	-.600	-.626
66	6.0	.077	.090	.107	.114	142	10.0	-.308	-.419	-.404	-.418
67	15.0	-.107	-.109	-.105	-.109	143	25.0	-.264	-.326	-.308	-.307
68	27.6	-.216	-.253	-.261	-.272	144	41.0	-.268	-.350	-.367	-.365
69	40.0	-.300	-.378	-.415	-.381	145	62.5	-.136	-.144	-.145	-.089
70	50.0	-.400	-.313	-.277	-.282	146	82.5	-.018	-.011	-.003	-.005
71	59.0	-.500	-.369	-.284	-.231	147	72.5	.107	.123	.000	-.194
72	67.5	-.603	-.253	-.119	-.139	148	84.0	.241	.260	.260	.291
73	77.5	-.706	-.082	-.134	-.263	149	94.0	.175	.201	.214	.206
74	87.2	-.812	-.048	-.030	-.066						
75	94.8	-.917	-.124	-.136	-.139						
76	2.0	.309	.394	.384	.391	150	3.0	-.484	-.633	-.648	-.613
77	6.0	.084	.114	.121	.128	151	10.0	-.370	-.460	-.439	-.438
78	15.0	-.117	-.140	-.145	-.145	152	25.0	-.280	-.395	-.390	-.413
79	27.6	-.220	-.274	-.297	-.294	153	41.0	-.281	-.384	-.391	-.378
80	40.0	-.296	-.376	-.417	-.385	154	62.5	-.116	-.109	-.104	-.083
81	50.0	-.400	-.374	-.326	-.332	155	82.5	-.004	-.012	-.017	-.037
82	59.0	-.500	-.305	-.244	-.241	156	72.5	.103	.117	.128	.143
83	67.5	-.600	-.090	-.098	-.072	157	84.8	.137	.174	.186	.176
84	77.5	-.700	-.032	-.054	-.072						
85	84.2	-.806	-.076	-.101	-.122						

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TABLE 40
[$\alpha = 30^\circ$, $\beta_{max} = 5.0^\circ$, $\alpha = 40^\circ$]

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UPPER SURFACE							LOWER SURFACE						
Tube	Percent chord	Mech Number					Tube	Percent chord	Mech Number				
		0.60	0.80	0.85	0.89	0.905			0.96	0.60	0.80	0.85	0.89
A 1	2.0	-0.781	-0.631	-0.535	-0.441	-0.393	86	3.0	0.394	0.383	0.376	0.369	0.375
2	8.0	-0.570	-0.461	-0.404	-0.355	-0.325	87	10.0	---	---	---	---	---
4	15.0	-0.431	-0.439	-0.401	-0.361	-0.333	88	25.0	0.084	0.079	0.077	0.114	0.095
5	27.5	-0.399	-0.437	-0.403	-0.360	-0.335	89	41.0	---	---	---	---	---
6	40.0	---	---	---	---	---	90	52.5	---	---	---	---	---
7	50.0	---	---	---	---	---	91	62.5	---	---	---	---	---
8	57.5	---	---	---	---	---	92	72.5	---	---	---	---	---
9	77.5	---	---	---	---	---	93	84.0	---	---	---	---	---
10	87.5	---	---	---	---	---	94	94.0	---	---	---	---	---
11	96.0	---	---	---	---	---							
112	2.0	-0.893	-0.799	-0.633	-0.519	-0.415	95	3.0	0.379	0.363	0.365	0.337	0.334
13	8.0	-0.650	-0.487	-0.386	-0.323	-0.290	96	10.0	0.161	0.155	0.146	0.140	0.145
14	15.0	-0.519	-0.390	-0.307	-0.266	-0.235	97	25.0	0.011	0.000	-0.012	-0.044	-0.021
15	27.5	-0.480	-0.273	-0.243	-0.204	-0.181	98	41.0	---	---	---	---	---
16	40.0	-0.486	-0.606	-0.609	-0.575	-0.502	99	52.5	-0.070	-0.105	-0.110	-0.136	-0.144
17	50.0	-0.451	-0.276	-0.290	-0.270	-0.207	100	62.5	-0.091	-0.067	-0.103	-0.135	-0.131
18	57.5	-0.388	-0.278	-0.247	-0.220	-0.196	101	72.5	0.008	-0.003	-0.039	-0.095	-0.134
19	77.5	-0.300	-0.266	-0.295	-0.272	-0.211	102	84.0	0.160	0.060	0.041	-0.005	-0.045
20	87.5	-0.205	-0.309	-0.210	-0.277	-0.245							
21	96.0	-0.080	-0.136	-0.212	-0.295	-0.300							
22	96.0	---	---	---	---	---							
223	2.0	-0.940	-0.818	-0.697	-0.590	-0.419	104	3.0	0.399	0.367	0.364	0.328	0.312
24	8.0	-0.716	-0.584	-0.474	-0.393	-0.306	105	10.0	0.171	0.151	0.144	0.129	0.125
25	15.0	-0.573	-0.485	-0.398	-0.306	-0.258	106	25.0	0.008	-0.016	-0.036	-0.061	-0.059
26	27.5	-0.535	-0.395	-0.277	-0.248	-0.198	107	41.0	-0.071	-0.106	-0.137	-0.181	-0.200
27	40.0	-0.530	-0.736	-0.731	-0.677	-0.611	108	52.5	-0.086	-0.114	-0.149	-0.196	-0.212
28	50.0	-0.473	-0.286	-0.244	-0.212	-0.160	109	62.5	-0.046	-0.072	-0.103	-0.152	-0.168
29	57.5	-0.386	-0.207	-0.245	-0.211	-0.159	110	72.5	0.000	-0.008	-0.012	-0.026	-0.028
30	77.5	-0.316	-0.277	-0.285	-0.260	-0.202	111	84.0	0.088	0.110	0.086	0.054	0.019
31	87.5	-0.203	-0.201	-0.235	-0.260	-0.262	112	94.0	0.165	0.177	0.172	0.143	0.106
32	96.0	-0.061	-0.099	-0.063	-0.086	-0.047							
33	96.0	---	---	---	---	---							
344	2.0	-1.062	-0.916	-0.701	-0.567	-0.442	113	3.0	0.410	0.377	0.363	0.306	0.284
35	8.0	-0.606	-0.480	-0.368	-0.294	-0.219	114	10.0	0.197	0.180	0.145	0.133	0.101
37	15.0	-0.595	-0.783	-0.780	-0.690	-0.611	115	25.0	0.021	-0.008	-0.045	-0.071	-0.123
38	27.5	-0.543	-0.843	-0.809	-0.743	-0.689	116	41.0	---	---	---	---	---
39	40.0	-0.400	-0.625	-0.701	-0.701	-0.629	117	52.5	-0.064	-0.092	-0.131	-0.195	-0.260
40	50.0	-0.395	-0.673	-0.680	-0.624	-0.528	118	62.5	-0.009	-0.045	-0.050	-0.140	-0.210
41	57.5	-0.241	-0.381	-0.390	-0.389	-0.305	119	72.5	0.031	0.047	0.000	-0.021	-0.069
42	77.5	-0.211	-0.195	-0.211	-0.220	-0.243	120	84.0	0.139	0.158	0.136	0.080	0.058
43	87.5	-0.060	-0.100	-0.037	-0.079	-0.079	121	94.0	0.144	0.181	0.138	0.047	0.008
44	96.0	---	---	---	---	---							
44	2.0	-1.117	-1.009	-0.771	-0.594	-0.449	122	3.0	0.443	0.410	0.372	0.309	0.282
45	8.0	-0.801	-0.631	-0.465	-0.344	-0.260	123	10.0	0.203	0.186	0.153	0.114	0.091
46	15.0	-0.613	-0.803	-0.804	-0.660	-0.496	124	25.0	0.044	0.022	-0.013	-0.059	-0.091
47	27.5	-0.559	-0.803	-0.774	-0.611	-0.465	125	41.0	-0.023	-0.047	-0.086	-0.071	-0.111
48	40.0	-0.543	-0.899	-0.807	-0.737	-0.659	126	52.5	-0.016	-0.030	-0.071	-0.140	-0.268
49	50.0	-0.475	-0.433	-0.680	-0.694	-0.602	127	62.5	0.001	0.000	0.041	-0.100	-0.193
50	57.5	-0.382	-0.304	-0.499	-0.511	-0.528	128	72.5	0.090	0.041	-0.001	-0.061	-0.112
51	77.5	-0.280	-0.283	-0.499	-0.511	-0.528	129	84.0	0.208	0.103	0.037	-0.043	-0.072
52	87.5	-0.140	-0.117	-0.243	-0.248	-0.261	130	94.0	0.184	0.202	0.142	0.074	0.006
53	96.0	-0.031	-0.065	-0.105	-0.174	-0.215	131	94.1	0.194	0.233	0.176	0.112	0.010
54	96.0	-0.063	-0.110	-0.047	-0.234	-0.339							
55	2.0	-1.350	-1.050	-0.813	-0.606	-0.489	132	3.0	0.450	0.417	0.372	0.301	0.261
56	8.0	-0.960	-0.760	-0.566	-0.400	-0.300	133	10.0	0.219	0.198	0.162	0.117	0.081
57	15.0	-0.630	-0.874	-0.804	-0.699	-0.598	134	25.0	0.057	0.046	-0.001	-0.052	-0.090
58	27.5	-0.575	-0.886	-0.794	-0.719	-0.648	135	41.0	-0.006	-0.026	-0.073	-0.139	-0.268
59	40.0	-0.551	-0.879	-0.811	-0.746	-0.676	136	52.5	-0.003	-0.016	-0.062	-0.127	-0.275
60	50.0	-0.493	-0.800	-0.697	-0.779	-0.701	137	62.5	0.047	0.041	-0.009	-0.060	-0.121
61	57.5	-0.409	-0.438	-0.701	-0.701	-0.703	138	72.5	0.111	0.041	0.000	0.006	0.000
62	77.5	-0.289	-0.320	-0.560	-0.566	-0.593	139	84.0	0.244	0.276	0.250	0.222	0.211
63	87.5	-0.096	-0.099	-0.191	-0.249	-0.280	140	94.0	0.141	0.177	0.120	0.058	0.021
64	96.0	-0.047	-0.025	-0.139	-0.276	-0.339							
65	96.0	---	---	---	---	---							
655	2.0	-1.266	-1.112	-0.830	-0.635	-0.494	141	3.0	0.479	0.450	0.404	0.348	0.299
66	8.0	-0.877	-1.137	-0.809	-0.700	-0.611	142	10.0	0.223	0.206	0.163	0.111	0.070
67	15.0	-0.640	-1.000	-0.877	-0.795	-0.640	143	25.0	0.065	0.054	0.006	-0.047	-0.090
68	27.5	-0.573	-0.895	-0.865	-0.730	-0.667	144	41.0	0.003	0.008	-0.059	-0.126	-0.287
69	40.0	-0.555	-0.961	-0.799	-0.698	-0.608	145	52.5	0.017	0.018	-0.032	-0.094	-0.193
70	50.0	-0.466	-0.765	-0.700	-0.631	-0.603	146	62.5	0.066	0.063	-0.042	-0.097	-0.157
71	57.5	-0.409	-0.389	-0.536	-0.501	-0.521	147	72.5	0.087	0.112	0.095	0.009	0.077
72	77.5	-0.316	-0.285	-0.394	-0.427	-0.457	148	84.0	0.271	0.302	0.282	0.251	0.241
73	87.5	-0.099	-0.099	-0.191	-0.249	-0.280	149	94.0	0.160	0.214	0.140	0.077	0.036
74	96.0	-0.047	-0.020	-0.139	-0.276	-0.339							
75	96.0	---	---	---	---	---							
770	2.0	-1.116	-1.170	-0.889	-0.674	-0.515	150	3.0	0.430	0.414	0.360	0.308	0.268
77	8.0	-0.824	-1.169	-0.869	-0.749	-0.604	151	10.0	0.164	0.148	0.103	0.060	0.021
78	15.0	-0.546	-0.977	-0.866	-0.696	-0.549	152	25.0	0.003	-0.022	-0.080	-0.146	-0.193
79	27.5	-0.479	-0.744	-0.840	-0.696	-0.549	153	41.0	-0.043	-0.068	-0.126	-0.209	-0.309
80	40.0	-0.471	-0.774	-0.736	-0.640	-0.581	154	52.5	-0.023	-0.030	-0.080	-0.150	-0.260
81	50.0	-0.430	-0.606	-0.669	-0.640	-0.568	155	62.5	0.006	0.018	-0.040	-0.112	-0.200
82	57.5	-0.305	-0.344	-0.587	-0.568	-0.568	156	72.5	0.040	0.040	0.006	0.009	0.009
83	77.5	-0.215	-0.214	-0.493	-0.493	-0.470	157	84.0	0.087	0.139	0.097	0.001	-0.044
84	87.5	-0.016	-0.044	-0.049	-0.166	-0.253							
85	94.0	-0.027	-0.074	-0.081	-0.243	-0.366							

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TABLE 42
 $A = 30^\circ, \theta_{in} = 10.0^\circ, \alpha = -0^\circ$

CONFIDENTIAL

UPPER SURFACE						LOWER SURFACE					
Tube	Per-cent chord	Mach Number				Tube	Per-cent chord	Mach Number			
		0.60	0.80	0.85	0.90			0.60	0.80	0.85	0.90
A 1	2.0	0.304	0.346	0.369	0.376	86	3.0	-0.380	-0.397	-0.387	-0.392
2	6.0	.099	.133	.151	.169	87	10.0	---	---	---	---
3	15.0	-.031	-.094	-.040	-.008	88	25.0	-.225	-.260	-.268	-.269
4	27.5	-.139	-.101	-.089	-.072	89	41.0	---	---	---	---
5	40.0	---	---	---	---	90	52.6	---	---	---	---
6	50.0	---	---	---	---	91	62.5	---	---	---	---
7	59.0	---	---	---	---	92	72.5	---	---	---	---
8	67.5	---	---	---	---	93	84.0	---	---	---	---
9	77.5	---	---	---	---	94	94.0	---	---	---	---
10	87.5	---	---	---	---						
11	96.0	---	---	---	---						
B12	2.0	.094	.111	.145	.157	95	3.0	-.432	-.440	-.451	-.446
13	6.0	.071	.102	.118	.131	96	10.0	-.294	-.319	-.349	-.300
14	15.0	-.086	-.068	-.055	-.031	97	25.0	-.275	-.318	-.360	-.349
15	27.5	-.181	-.189	-.181	-.168	98	41.0	-.268	-.318	-.326	-.346
16	40.0	-.251	-.284	-.289	-.277	99	52.6	-.211	-.213	-.214	-.214
17	50.0	-.271	-.271	-.277	-.277	100	62.5	-.168	-.211	-.269	-.269
18	59.0	-.260	-.251	-.242	-.246	101	72.5	-.096	-.126	-.149	-.176
19	67.5	-.214	-.200	-.182	-.167	102	84.0	.007	-.009	-.021	-.061
20	77.5	-.159	-.147	-.129	-.121	103	94.0	---	---	---	---
21	87.5	-.086	-.080	-.080	-.127						
22	96.0	---	---	---	---						
C23	2.0	.295	.311	.342	.374	104	3.0	-.453	-.465	-.469	-.466
24	6.0	.061	.087	.101	.115	105	10.0	-.321	-.349	-.377	-.367
25	15.0	-.101	-.101	-.091	-.079	106	25.0	-.291	-.322	-.348	-.342
26	27.5	-.210	-.260	-.239	-.225	107	41.0	-.280	-.321	-.334	-.328
27	40.0	-.266	-.254	-.239	-.242	108	52.6	-.237	-.243	-.240	-.247
28	50.0	-.248	-.259	-.246	-.241	109	62.5	-.159	-.204	-.219	-.245
29	59.0	-.265	-.244	-.240	-.237	110	72.5	-.096	-.166	-.177	-.110
30	67.5	---	---	---	---	111	84.0	.094	-.038	.060	.057
31	77.5	-.048	-.120	-.101	-.104	112	94.0	.140	.053	.151	.149
32	87.5	.018	.018	.018	.028						
33	96.0	.091	.114	.101	.111						
D34	2.0	.266	.298	.302	.311	113	3.0	-.452	-.491	-.498	-.460
35	6.0	-.113	-.123	-.118	-.107	114	10.0	-.308	-.307	-.340	-.355
36	15.0	-.218	-.228	-.226	-.262	115	25.0	-.291	-.297	-.378	-.301
37	27.5	-.294	-.378	-.428	-.439	116	41.0	---	---	---	---
38	40.0	-.297	-.396	-.455	-.442	117	52.6	-.224	-.298	-.311	-.378
39	50.0	-.277	-.301	-.290	-.329	118	62.5	-.138	-.160	-.158	-.320
40	59.0	-.215	-.268	-.255	-.286	119	72.5	-.085	-.128	-.121	-.018
41	67.5	-.106	-.097	-.061	-.081	120	84.0	.096	.106	.111	.127
42	77.5	.008	.020	.017	.068	121	94.0	.134	.150	.158	.168
43	87.5	.094	.110	.119	.135						
44	2.0	.384	.372	.392	.396	122	3.0	-.498	-.602	-.705	-.747
45	6.0	.042	.091	.109	.116	123	10.0	-.314	-.420	-.505	-.530
46	15.0	-.126	-.110	-.102	-.098	124	25.0	-.279	-.360	-.431	-.466
47	27.5	-.231	-.250	-.261	-.262	125	41.0	-.290	-.296	-.327	-.345
48	40.0	-.310	-.366	-.402	-.434	126	52.6	-.164	-.191	-.189	-.248
49	50.0	-.317	-.384	-.434	-.442	127	62.5	-.081	-.101	-.104	-.031
50	59.0	-.291	-.346	-.386	-.432	128	72.5	.007	.021	.035	.073
51	67.5	-.239	-.290	-.297	-.339	129	84.0	.064	.091	.102	.131
52	77.5	-.179	-.139	-.096	-.092	130	94.0	.148	.171	.179	.207
53	87.5	-.111	-.111	-.121	-.121	131	94.0	-.179	.204	.211	.231
54	96.0	.100	.116	.120	.128						
E55	2.0	.361	.340	.371	.371	132	3.0	-.430	-.611	-.751	-.791
56	6.0	.035	.094	.114	.121	133	10.0	-.290	-.410	-.521	-.540
57	15.0	-.117	-.117	-.105	-.101	134	25.0	-.282	-.328	-.372	-.376
58	27.5	-.289	-.262	-.262	-.266	135	41.0	-.192	-.250	-.275	-.346
59	40.0	-.196	-.294	-.317	-.341	136	52.6	-.121	-.145	-.152	-.092
60	50.0	-.196	-.424	-.468	-.460	137	62.5	.022	.022	.017	.026
61	59.0	-.348	-.402	-.440	-.517	138	72.5	.163	.182	.187	.201
62	67.5	-.301	-.370	-.334	-.421	139	84.0	.201	.201	.201	.209
63	77.5	-.129	-.124	-.124	-.129	140	94.0	.188	.201	.212	.221
64	87.5	---	---	---	---						
65	96.0	---	---	---	---						
F66	2.0	.293	.339	.371	.387	141	3.0	-.341	-.617	-.698	-.771
66	6.0	.094	.072	.101	.118	142	10.0	-.258	-.381	-.478	-.465
67	15.0	-.124	-.136	-.110	-.098	143	25.0	-.208	-.287	-.334	-.345
68	27.5	-.267	-.280	-.276	-.269	144	41.0	-.152	-.199	-.212	-.173
69	40.0	-.361	-.424	-.441	-.439	145	52.6	-.090	-.081	-.084	-.066
70	50.0	-.399	-.471	-.549	-.521	146	62.5	.076	.062	.040	.061
71	59.0	-.396	-.434	-.512	-.466	147	72.5	.191	.202	.207	.207
72	67.5	-.346	-.397	-.457	-.445	148	84.0	.314	.314	.309	.318
73	77.5	-.154	-.363	-.425	-.436	149	94.0	.201	.210	.227	.232
74	87.5	-.188	-.234	-.211	-.071						
75	96.0	.094	.093	.091	.071						
G76	2.0	.170	---	-.302	.306	150	3.0	-.311	-.470	-.591	-.704
76	6.0	-.091	-.011	.012	.042	151	10.0	-.215	-.335	-.480	-.555
77	15.0	-.170	-.181	-.179	-.160	152	25.0	-.215	-.262	-.295	-.310
78	27.5	-.271	-.290	-.315	-.279	153	41.0	-.150	-.178	-.184	-.142
79	40.0	-.194	-.418	-.403	-.501	154	52.6	-.091	-.072	-.063	-.068
80	50.0	-.351	-.456	-.519	-.495	155	62.5	.058	.064	.069	.066
81	59.0	-.310	-.376	-.456	-.472	156	72.5	.178	.191	.195	.191
82	67.5	-.261	-.319	-.408	-.377	157	84.0	.169	.169	.191	.198
83	77.5	-.104	-.061	.051	.026						
84	87.5	.028	.027	.108	.026						
85	94.2	.028	.027	.108	.026						

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TABLE 44
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[A = 30°, S_h = 10.0°, α = 0°]

Table with columns for Tube, Percent chord, Mach Number, and Upper/Lower Surface. It contains data for various tube diameters (e.g., 1.0, 1.5, 2.0, 3.0, 4.0, 5.0, 6.0, 7.5, 10.0, 12.5, 15.0, 17.5, 20.0, 25.0, 30.0, 35.0, 40.0, 45.0, 50.0, 55.0, 60.0, 65.0, 70.0, 75.0, 80.0, 85.0, 90.0, 94.2) and Mach numbers (0.50, 0.60, 0.70, 0.80, 0.90, 0.95, 0.96). The table is organized into two main sections: UPPER SURFACE and LOWER SURFACE, each with a sub-section for Mach Number.

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TABLE 47
 $[A = 45^\circ, \delta_{max} = -0.4^\circ, \delta = -2^\circ]$

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Tube	Per-cent chord	UPPER SURFACE					Tube	Per-cent chord	LOWER SURFACE				
		Mach Number							Mach Number				
		0.60	0.80	0.89	0.925	0.96			0.60	0.80	0.89	0.925	0.96
1	2.0	0.297	0.266	0.255	0.267	0.264	86	3.0	-0.303	-0.292	-0.281	-0.272	-0.191
2	6.0	-.004	-.110	-.190	-.134	-.154	87	10.0	-.105	-.096	-.078	-.066	-0.035
3	15.0	-.008	-.008	-.031	-.045	-.064	88	25.0	-.156	-.164	-.156	-.130	-.105
4	27.5	-.019	-.008	-.001	-.018	-.040	89	41.0	---	---	---	---	---
5	40.0	---	---	---	---	---	90	52.5	---	---	---	---	---
6	50.0	---	---	---	---	---	91	62.5	---	---	---	---	---
7	59.0	---	---	---	---	---	92	72.5	---	---	---	---	---
8	67.5	---	---	---	---	---	93	84.0	---	---	---	---	---
9	77.5	---	---	---	---	---	94	94.0	---	---	---	---	---
10	87.5	---	---	---	---	---							
11	96.0	---	---	---	---	---							
12	98.5	---	---	---	---	---							
13	2.0	---	---	---	---	---	95	5.0	-.366	-.386	-.353	-.327	-.280
14	6.0	---	---	---	---	---	96	10.0	-.243	-.246	-.201	-.166	-.149
15	15.0	-.009	-.025	-.024	-.031	-.038	97	25.0	-.205	-.229	-.246	-.231	-.205
16	27.5	-.027	-.029	-.098	-.087	-.066	98	41.0	-.200	-.228	-.265	-.257	-.231
17	40.0	-.141	-.151	-.161	-.158	-.137	99	52.5	-.191	-.225	-.260	-.260	-.267
18	50.0	-.128	-.168	-.189	-.191	-.178	100	62.5	---	---	---	---	---
19	59.0	-.119	-.136	-.152	-.150	-.134	101	72.5	---	---	---	---	---
20	67.5	---	---	---	---	---	102	84.0	---	---	---	---	---
21	77.5	---	---	---	---	---	103	94.0	---	---	---	---	---
22	88.0	---	---	---	---	---							
23	98.5	---	---	---	---	---							
24	2.0	-.231	-.252	-.225	-.228	-.236	104	5.0	-.400	-.437	-.431	-.410	-.361
25	6.0	-.067	-.066	-.059	-.064	-.075	105	10.0	-.263	-.294	-.311	-.297	-.268
26	15.0	-.048	-.057	-.068	-.064	-.050	106	25.0	-.208	-.266	-.300	-.303	-.278
27	27.5	-.089	-.115	-.126	-.126	-.111	107	41.0	-.223	-.285	-.314	-.315	-.283
28	40.0	-.174	-.198	-.190	-.194	-.183	108	52.5	-.195	-.239	-.304	-.308	-.285
29	50.0	-.177	-.199	-.207	-.207	-.197	109	62.5	-.251	-.186	-.234	-.239	-.261
30	59.0	-.178	-.215	-.265	-.266	-.269	110	72.5	-.291	-.118	-.151	-.231	-.212
31	67.5	-.181	-.167	-.113	-.093	-.071	111	84.0	-.300	-.032	-.086	-.086	-.156
32	77.5	-.183	-.125	-.058	-.068	-.093	112	94.0	-.284	-.025	-.090	-.090	-.111
33	88.0	-.185	-.091	-.084	-.111	-.181							
34	98.5	-.187	-.093	-.084	-.111	-.184							
35	2.0	-.315	-.301	-.286	-.280	-.280	113	5.0	-.405	-.479	-.512	-.507	-.449
36	6.0	-.088	-.068	-.092	-.103	-.101	114	10.0	-.256	-.280	-.314	-.355	-.373
37	15.0	-.121	-.145	-.180	-.203	-.200	115	25.0	-.211	-.274	-.310	-.360	-.344
38	27.5	-.154	-.169	-.150	-.159	-.143	116	41.0	-.200	-.259	-.307	-.325	-.345
39	40.0	-.189	-.215	-.206	-.204	-.189	117	52.5	-.186	-.237	-.284	-.306	-.348
40	50.0	-.195	-.251	-.284	-.275	-.175	118	62.5	-.198	-.149	-.164	-.170	-.186
41	59.0	-.197	-.185	-.145	-.125	-.119	119	72.5	-.056	-.064	-.075	-.068	-.173
42	67.5	-.205	-.093	-.098	-.098	-.107	120	84.0	-.013	-.036	-.028	-.013	-.012
43	77.5	-.207	-.064	-.071	-.070	-.070	121	94.0	-.053	-.054	-.050	-.066	-.019
44	88.0	-.209	-.067	-.063	-.068	-.077							
45	98.5	-.211	-.069	-.064	-.068	-.077							
46	2.0	-.086	-.091	-.081	-.073	-.074	122	5.0	-.403	-.475	-.468	-.494	-.470
47	6.0	-.092	-.064	-.064	-.077	-.079	123	10.0	-.274	-.299	-.308	-.347	-.350
48	15.0	-.032	-.063	-.084	-.100	-.126	124	25.0	-.208	-.256	-.276	-.323	-.308
49	27.5	-.096	-.135	-.163	-.181	-.204	125	41.0	-.214	-.248	-.251	-.268	-.400
50	40.0	-.141	-.184	-.200	-.217	-.212	126	52.5	-.187	-.203	-.212	-.186	-.259
51	50.0	-.174	-.179	-.159	-.156	-.141	127	62.5	-.194	-.168	-.174	-.170	-.147
52	59.0	-.178	-.149	-.124	-.120	-.109	128	72.5	-.075	-.084	-.088	-.079	-.055
53	67.5	-.081	-.084	-.105	-.108	-.101	129	84.0	-.098	-.040	-.043	-.034	-.010
54	77.5	-.084	-.017	-.019	-.014	-.009	130	94.0	-.015	-.013	-.011	-.000	-.038
55	88.0	-.172	-.161	-.125	-.127	-.182	131	5.0	-.404	-.463	-.460	-.464	-.080
56	98.5	-.099	-.101	-.104	-.110	-.109							
57	2.0	-.366	-.264	-.295	-.292	-.261	132	5.0	-.409	-.461	-.475	-.501	-.507
58	6.0	-.104	-.079	-.084	-.093	-.077	133	10.0	-.284	-.306	-.317	-.354	-.377
59	15.0	-.015	-.044	-.070	-.079	-.102	134	25.0	-.243	-.267	-.265	-.264	-.381
60	27.5	-.075	-.112	-.139	-.153	-.201	135	41.0	-.211	-.250	-.279	-.266	-.321
61	40.0	-.111	-.152	-.180	-.200	-.209	136	52.5	-.212	-.240	-.256	-.250	-.233
62	50.0	-.098	-.129	-.153	-.156	-.178	137	62.5	-.181	-.206	-.230	-.221	-.167
63	59.0	-.090	-.079	-.084	-.081	-.085	138	72.5	-.158	-.161	-.214	-.207	-.172
64	67.5	-.064	-.017	-.014	-.017	-.039	139	84.0	---	---	---	---	---
65	77.5	---	---	---	---	---	140	94.0	---	---	---	---	---
66	88.0	---	---	---	---	---							
67	98.5	---	---	---	---	---							
68	2.0	-.305	-.283	-.286	-.278	-.271	141	5.0	-.511	-.638	-.656	-.640	-.550
69	6.0	-.137	-.118	-.107	-.105	-.101	142	10.0	-.329	-.369	-.348	-.329	-.335
70	15.0	-.073	-.061	-.012	-.017	-.018	143	25.0	-.267	-.302	-.368	-.381	-.358
71	27.5	-.079	-.060	-.077	-.081	-.080	144	41.0	-.244	-.280	-.310	-.302	-.360
72	40.0	-.072	-.068	-.113	-.118	-.116	145	52.5	-.200	-.249	-.283	-.289	-.364
73	50.0	-.065	-.098	-.102	-.109	-.103	146	62.5	-.165	-.186	-.199	-.173	-.235
74	59.0	-.062	-.087	-.081	-.084	-.094	147	72.5	-.140	-.190	-.150	-.138	-.141
75	67.5	-.069	-.064	-.018	-.022	-.013	148	84.0	-.071	-.085	-.055	-.039	-.017
76	77.5	-.169	-.169	-.166	-.174	-.175	149	94.0	---	---	---	---	---
77	87.2	---	---	---	---	---							
78	96.8	-.090	-.098	-.081	-.089	-.098							
79	2.0	-.278	-.261	-.194	-.194	-.196	150	5.0	-.531	-.601	-.670	-.663	-.666
80	6.0	-.094	-.098	-.094	-.090	-.091	151	10.0	-.283	-.313	-.368	-.356	-.389
81	15.0	-.064	-.051	-.070	-.077	-.080	152	25.0	-.292	-.270	-.301	-.333	-.303
82	27.5	-.079	-.105	-.124	-.133	-.137	153	41.0	---	---	---	---	---
83	40.0	-.166	-.132	-.126	-.121	-.120	154	52.5	-.158	-.167	-.160	-.136	-.111
84	50.0	-.096	-.114	-.123	-.129	-.130	155	62.5	-.102	-.102	-.085	-.066	-.033
85	59.0	-.094	-.077	-.087	-.090	-.097	156	72.5	-.073	-.066	-.043	-.029	-.068
86	67.5	-.072	-.013	-.015	-.003	-.018	157	84.0	-.060	-.068	-.080	-.104	-.104
87	77.5	-.136	-.115	-.130	-.144	-.162							
88	87.2	---	---	---	---	---							
89	96.8	-.095	-.101	-.116	-.123	-.136							

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TABLE 43

$[A = 45^\circ, \theta_{max} = -0.4^\circ, \alpha = 2^\circ]$

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UPPER SURFACE						LOWER SURFACE							
Tube	Per-cent chord	Mech Number					Tube	Per-cent chord	Mech Number				
		0.60	0.80	0.89	0.925	0.96			0.60	0.80	0.89	0.925	0.96
A 1	2.0	-0.177	-0.138	-0.108	-0.077	-0.031	86	5.0	0.103	0.111	0.123	0.128	0.136
2	6.0	-0.184	-0.164	-0.142	-0.066	-0.075	87	15.0	0.014	0.033	0.033	0.041	0.056
3	15.0	-0.175	-0.166	-0.150	-0.123	-0.092	88	40.0	-0.015	-0.013	-0.004	0.003	0.081
4	27.5	-0.161	-0.158	-0.145	-0.119	-0.093	89	41.0	---	---	---	---	---
5	40.0	---	---	---	---	---	90	52.5	---	---	---	---	---
6	50.0	---	---	---	---	---	91	62.5	---	---	---	---	---
7	59.0	---	---	---	---	---	92	72.5	---	---	---	---	---
8	67.5	---	---	---	---	---	93	84.0	---	---	---	---	---
9	77.5	---	---	---	---	---	94	94.0	---	---	---	---	---
10	87.5	---	---	---	---	---							
11	96.0	---	---	---	---	---							
012	2.0	---	---	---	---	---	95	5.0	0.094	0.094	0.097	0.097	0.110
13	6.0	---	---	---	---	---	96	15.0	-0.012	-0.018	-0.014	-0.011	0.006
14	15.0	-0.230	-0.233	-0.205	-0.196	-0.207	97	40.0	-0.060	-0.067	-0.072	-0.072	-0.058
15	27.5	-0.244	-0.261	-0.255	-0.205	-0.192	99	41.0	-0.096	-0.112	-0.121	-0.126	-0.116
16	40.0	-0.228	-0.290	-0.307	-0.281	-0.260	99	52.5	-0.095	-0.115	-0.135	-0.148	-0.144
17	50.0	-0.287	-0.291	-0.302	-0.300	-0.270	100	62.5	---	---	---	---	---
18	59.0	-0.212	-0.260	-0.302	-0.300	-0.270	101	72.5	---	---	---	---	---
19	67.5	---	---	---	---	---	102	86.5	---	---	---	---	---
20	77.5	---	---	---	---	---	103	94.5	---	---	---	---	---
21	86.0	---	---	---	---	---							
22	95.5	---	---	---	---	---							
023	2.0	-0.230	-0.255	-0.295	-0.175	-0.129	104	5.0	0.099	0.080	0.114	0.095	0.071
24	6.0	-0.269	-0.273	-0.263	-0.202	-0.180	105	10.0	-0.009	-0.021	-0.034	-0.036	-0.035
25	15.0	-0.270	-0.294	-0.301	-0.259	-0.248	106	25.0	-0.079	-0.093	-0.108	-0.128	-0.119
26	27.5	-0.281	-0.301	-0.346	-0.300	-0.284	107	41.0	-0.108	-0.130	-0.156	-0.179	-0.190
27	40.0	-0.287	-0.345	-0.404	-0.307	-0.304	108	52.5	-0.105	-0.131	-0.159	-0.188	-0.213
28	50.0	-0.276	-0.334	-0.421	-0.403	-0.381	109	62.5	-0.091	-0.101	-0.125	-0.153	-0.184
29	59.0	-0.227	-0.311	-0.421	-0.403	-0.407	110	72.5	-0.075	-0.095	-0.075	-0.101	-0.141
30	67.5	-0.280	-0.273	-0.369	-0.315	-0.307	111	86.5	-0.017	-0.012	-0.005	-0.026	-0.060
31	77.5	-0.139	-0.183	-0.277	-0.305	-0.306	112	94.5	0.060	0.096	0.041	0.013	-0.019
32	86.0	-0.069	-0.084	-0.138	-0.217	-0.280							
33	95.5	-0.005	-0.013	-0.093	-0.101	-0.157							
034	2.0	-0.195	-0.244	-0.309	-0.368	-0.215	113	5.0	0.117	0.105	0.083	0.053	0.036
35	15.0	-0.290	-0.353	-0.371	-0.346	-0.311	114	10.0	0.014	0.021	-0.015	-0.077	-0.047
36	27.5	-0.290	-0.344	-0.414	-0.388	-0.354	115	15.0	-0.069	-0.080	-0.109	-0.139	-0.153
37	40.0	-0.304	-0.365	-0.431	-0.401	-0.366	116	41.0	-0.106	-0.129	-0.151	-0.179	-0.204
38	50.0	-0.298	-0.340	-0.438	-0.333	-0.301	117	52.5	-0.098	-0.128	-0.140	-0.145	-0.213
39	59.0	-0.230	-0.283	-0.377	-0.425	-0.406	118	62.5	-0.066	-0.075	-0.090	-0.106	-0.157
40	67.5	-0.280	-0.283	-0.367	-0.461	-0.479	119	72.5	-0.059	-0.011	-0.017	-0.018	-0.037
41	77.5	-0.098	-0.062	-0.075	-0.202	-0.253	120	87.4	-0.063	0.068	0.069	0.067	0.096
42	87.5	-0.012	-0.013	-0.004	-0.004	-0.004	121	94.2	0.074	0.079	0.082	0.094	0.065
43	94.2	0.048	0.052	0.057	0.054	-0.009							
044	2.0	-0.343	-0.398	-0.444	-0.394	-0.307	122	5.0	0.141	0.150	0.141	0.121	0.099
45	6.0	-0.307	-0.365	-0.415	-0.395	-0.311	123	10.0	0.011	0.011	-0.003	-0.018	-0.036
46	15.0	-0.283	-0.343	-0.421	-0.409	-0.363	124	25.0	-0.064	-0.067	-0.079	-0.090	-0.108
47	27.5	-0.271	-0.330	-0.439	-0.429	-0.393	125	41.0	-0.096	-0.104	-0.111	-0.118	-0.133
48	40.0	-0.271	-0.333	-0.438	-0.429	-0.393	126	52.5	-0.077	-0.104	-0.109	-0.107	-0.103
49	50.0	-0.240	-0.297	-0.374	-0.493	-0.504	127	62.5	-0.088	-0.092	-0.104	-0.101	-0.104
50	59.0	-0.204	-0.260	-0.308	-0.461	-0.512	128	72.5	-0.047	-0.035	-0.026	-0.024	-0.024
51	67.5	-0.139	-0.147	-0.113	-0.168	-0.194	129	78.0	0.006	0.002	0.002	0.010	0.009
52	77.5	-0.034	-0.026	-0.027	-0.027	-0.149	130	86.5	0.053	0.094	0.095	0.065	0.066
53	86.5	-0.058	-0.050	-0.052	-0.052	-0.052	131	94.1	0.094	0.093	0.090	0.108	0.103
54	95.5	0.102	0.113	0.119	0.114	0.077							
055	2.0	-0.341	-0.411	-0.482	-0.447	-0.377	132	5.0	0.131	0.146	0.148	0.130	0.103
56	6.0	-0.290	-0.358	-0.432	-0.429	-0.369	133	10.0	0.008	0.015	0.010	-0.001	-0.021
57	15.0	-0.269	-0.335	-0.415	-0.405	-0.353	134	25.0	-0.073	-0.073	-0.076	-0.081	-0.089
58	27.5	-0.251	-0.313	-0.399	-0.405	-0.467	135	41.0	-0.116	-0.121	-0.126	-0.126	-0.135
59	40.0	-0.243	-0.330	-0.390	-0.495	-0.504	136	52.5	-0.130	-0.140	-0.149	-0.145	-0.146
60	50.0	-0.198	-0.277	-0.344	-0.464	-0.513	137	62.5	-0.123	-0.132	-0.146	-0.143	-0.135
61	59.0	-0.119	-0.141	-0.137	-0.137	-0.102	138	72.5	-0.120	-0.134	-0.153	-0.155	-0.146
62	67.5	-0.028	-0.026	-0.015	-0.006	-0.157	139	85.4	---	---	---	---	---
63	86.5	---	---	---	---	---	140	94.0	---	---	---	---	---
64	94.5	---	---	---	---	---							
065	2.0	-0.280	-0.359	-0.455	-0.513	-0.460	141	5.0	0.114	0.143	0.163	0.168	0.144
66	6.0	-0.258	-0.324	-0.400	-0.473	-0.481	142	10.0	-0.021	-0.014	-0.014	-0.012	-0.014
67	15.0	-0.285	-0.298	-0.336	-0.350	-0.444	143	25.0	-0.096	-0.096	-0.104	-0.106	-0.100
68	27.5	-0.267	-0.291	-0.301	-0.310	-0.428	144	41.0	-0.136	-0.150	-0.169	-0.167	-0.190
69	40.0	-0.191	-0.207	-0.203	-0.208	-0.371	145	52.5	-0.143	-0.136	-0.170	-0.170	-0.194
70	50.0	-0.126	-0.184	-0.219	-0.175	-0.212	146	62.5	-0.126	-0.140	-0.154	-0.148	-0.159
71	59.0	-0.107	-0.124	-0.090	-0.075	-0.095	147	72.5	-0.116	-0.124	-0.134	-0.131	-0.118
72	67.5	0.001	0.006	0.077	0.080	0.045	148	84.0	-0.129	-0.103	-0.098	-0.076	-0.051
73	77.5	0.135	0.140	0.143	0.144	0.088	149	92.0	---	---	---	---	---
74	87.2	---	---	---	---	---							
75	96.8	0.115	0.122	0.127	0.139	0.167							
076	2.0	-0.297	-0.380	-0.425	-0.445	-0.475	150	5.0	0.097	0.109	0.119	0.127	0.143
76	6.0	-0.233	-0.294	-0.368	-0.409	-0.447	151	10.0	-0.049	-0.055	-0.069	-0.096	-0.082
77	15.0	-0.203	-0.244	-0.292	-0.337	-0.365	152	25.0	-0.111	-0.115	-0.125	-0.170	-0.177
78	27.5	-0.189	-0.201	-0.202	-0.202	-0.281	153	41.0	---	---	---	---	---
79	40.0	-0.180	-0.204	-0.206	-0.240	-0.216	154	52.5	-0.114	-0.127	-0.141	-0.148	-0.161
80	50.0	-0.147	-0.165	-0.169	-0.189	-0.127	155	62.5	-0.071	-0.080	-0.097	-0.109	-0.116
81	59.0	-0.119	-0.144	-0.095	-0.075	-0.099	156	72.5	-0.067	-0.062	-0.064	-0.048	-0.080
82	67.5	-0.048	-0.054	0.066	0.075	0.083	157	84.9	0.077	0.093	0.117	0.131	0.148
83	87.5	0.109	0.143	0.185	0.184	0.144							
84	94.2	0.100	0.139	0.173	---	0.187							



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TABLE 40

$\alpha = 4.5^\circ, \delta_{max} = -0.4^\circ, \alpha = 7^\circ$

		UPPER SURFACE					LOWER SURFACE						
Tube	Percent chord	Mach Number					Tube	Percent chord	Mach Number				
		0.60	0.80	0.89	0.995	0.96			0.60	0.80	0.89	0.995	0.96
A 1	2.0	-1.121	-1.159	-0.998	-0.877	-0.789	86	5.0	0.407	0.439	0.448	0.459	0.468
2	6.0	-0.609	-0.608	-0.540	-0.315	-0.181	87	10.0	0.166	0.178	0.185	0.194	0.206
3	15.0	-0.426	-0.432	-0.394	-0.197	-0.110	88	15.0	0.193	0.161	0.187	0.179	0.194
4	27.5	-0.369	-0.365	-0.311	-0.199	-0.266	89	41.0	---	---	---	---	---
5	40.0	---	---	---	---	---	90	62.5	---	---	---	---	---
6	50.0	---	---	---	---	---	91	82.5	---	---	---	---	---
7	59.0	---	---	---	---	---	92	94.0	---	---	---	---	---
8	67.5	---	---	---	---	---	93	94.0	---	---	---	---	---
9	77.5	---	---	---	---	---	94	94.0	---	---	---	---	---
13	87.5	---	---	---	---	---							
17	96.0	---	---	---	---	---							
B12	2.0	---	---	---	---	---	95	5.0	0.400	0.393	0.388	0.391	0.400
15	6.0	---	---	---	---	---	96	10.0	0.290	0.291	0.292	0.296	0.296
16	15.0	-0.311	-0.311	-0.267	-0.151	-0.113	97	25.0	0.111	0.119	0.126	0.126	0.132
17.5	27.5	-0.436	-0.481	-0.461	-0.225	-0.240	98	41.0	0.041	0.048	0.048	0.047	0.047
18	40.0	-0.400	-0.481	-0.461	-0.228	-0.291	99	62.5	0.000	0.017	0.000	0.006	0.013
17	50.0	-0.387	-0.471	-0.478	-0.248	-0.318	100	82.5	---	---	---	---	---
16	59.0	-0.395	-0.430	-0.478	-0.239	-0.310	101	94.0	---	---	---	---	---
19	67.5	---	---	---	---	---	102	94.0	---	---	---	---	---
20	77.5	---	---	---	---	---	103	94.0	---	---	---	---	---
21	86.0	---	---	---	---	---							
22	95.3	---	---	---	---	---							
C23	2.0	-1.400	-1.420	-1.158	-1.021	-0.870	104	3.0	0.407	0.391	0.378	0.373	0.378
24	6.0	-1.076	-1.135	-1.125	-1.007	-0.801	105	10.0	0.239	0.200	0.207	0.204	0.207
25	15.0	-0.771	-0.744	-0.569	-0.506	-0.456	106	25.0	0.100	0.091	0.079	0.078	0.078
26	27.5	-0.480	-0.480	-0.370	-0.277	-0.186	107	41.0	0.000	0.015	0.001	-0.010	-0.007
27	40.0	-0.446	-0.569	-0.520	-0.544	-0.593	108	62.5	0.001	-0.010	-0.010	-0.010	-0.010
28	50.0	-0.473	-0.481	-0.566	-0.573	-0.536	109	82.5	0.000	-0.004	-0.005	-0.006	-0.010
29	59.0	-0.439	-0.427	-0.441	-0.600	-0.540	110	94.0	0.000	0.001	-0.001	-0.017	-0.016
30	67.5	-0.360	-0.341	-0.380	-0.500	-0.516	111	94.0	0.001	0.003	0.003	0.000	0.001
31	77.5	-0.339	-0.326	-0.310	-0.348	-0.317	112	94.0	0.003	0.003	0.003	0.000	0.001
32	86.0	-0.118	-0.139	-0.279	-0.119	-0.127							
33	95.3	-0.158	-0.012	-0.005	-0.000	-0.230							
D4	2.0	-1.298	-1.451	-1.267	-1.135	-1.077	113	3.0	0.414	0.398	0.376	0.363	0.377
55	15.0	-0.767	-0.800	-0.604	-0.517	-0.400	114	10.0	0.290	0.240	0.248	0.207	0.203
56	27.5	-0.476	-0.601	-0.607	-0.411	-0.371	115	25.0	0.106	0.095	0.074	0.060	0.056
57	40.0	-0.430	-0.525	-0.734	-0.684	-0.636	116	41.0	0.008	0.016	-0.008	-0.007	-0.014
58	50.0	-0.373	-0.413	-0.738	-0.713	-0.680	117	62.5	0.003	0.011	-0.016	-0.019	-0.019
59	59.0	-0.428	-0.401	-0.506	-0.684	-0.684	118	82.5	0.007	-0.008	-0.005	-0.006	-0.006
60	67.5	-0.201	-0.249	-0.360	-0.685	-0.686	119	94.0	0.038	0.031	0.011	-0.019	-0.006
61	77.5	-0.139	-0.155	-0.217	-0.464	-0.437	120	94.0	0.037	0.029	0.023	0.006	0.003
62	87.5	-0.046	-0.093	-0.121	-0.211	-0.211	121	94.0	0.063	0.057	0.008	-0.001	-0.013
63	94.0	-0.006	-0.014	-0.008	-0.186	-0.211							
F44	2.0	-1.104	-1.267	---	-1.198	-1.077	122	3.0	0.427	0.420	0.396	0.385	0.385
45	6.0	-0.970	-1.165	---	-1.166	-1.077	123	10.0	0.287	0.246	0.208	0.208	0.208
46	15.0	-0.746	-0.764	-1.164	-1.091	-0.977	124	25.0	0.116	0.110	0.090	0.073	0.073
47	27.5	-0.501	-0.594	-0.908	-0.713	-0.600	125	41.0	0.036	0.029	0.013	-0.008	-0.008
48	40.0	-0.361	-0.411	-0.798	-0.713	-0.607	126	62.5	0.003	0.003	-0.013	-0.016	-0.016
49	50.0	-0.303	-0.339	-0.500	-0.601	-0.573	127	82.5	-0.018	-0.044	-0.044	-0.073	-0.073
50	59.0	-0.236	-0.259	-0.261	-0.255	-0.233	128	94.0	0.015	0.010	-0.008	-0.005	-0.005
51	67.5	-0.157	-0.178	-0.193	-0.301	-0.274	129	94.0	0.008	0.003	0.005	-0.010	-0.010
52	77.5	-0.071	-0.087	-0.145	-0.245	-0.206	130	94.0	0.063	0.057	0.017	0.011	0.011
53	86.0	0.013	0.000	-0.044	-0.200	-0.204	131	94.0	0.076	0.067	0.046	0.001	0.001
54	95.3	0.044	0.003	-0.066	-0.163	-0.250							
F55	2.0	-1.103	-1.284	---	-1.246	-1.126	132	3.0	0.427	0.420	0.394	0.377	0.377
56	6.0	-0.976	-1.263	---	-1.186	-1.077	133	10.0	0.287	0.251	0.207	0.208	0.208
57	15.0	-0.766	-0.795	-1.193	-1.094	-0.987	134	25.0	0.119	0.105	0.080	0.068	0.068
58	27.5	-0.546	-0.535	-0.968	-0.768	-0.680	135	41.0	0.024	0.017	0.000	-0.002	-0.002
59	40.0	-0.385	-0.437	-0.800	-0.678	-0.578	136	62.5	-0.018	-0.031	-0.048	-0.079	-0.079
60	50.0	-0.273	-0.315	-0.505	-0.606	-0.544	137	82.5	-0.040	-0.054	-0.074	-0.102	-0.102
61	59.0	-0.177	-0.184	-0.161	-0.246	-0.240	138	94.0	-0.061	-0.077	-0.100	-0.132	-0.132
62	67.5	-0.080	-0.089	-0.111	-0.205	-0.205	139	94.0	---	---	---	---	---
63	86.0	---	---	---	---	---							
64	94.0	---	---	---	---	---							
G65	2.0	-0.894	-0.988	-1.199	-1.040	-1.117	141	3.0	0.417	0.418	0.398	0.376	0.376
66	6.0	-0.811	-0.980	-1.169	-1.150	-1.095	142	10.0	0.232	0.211	0.166	0.184	0.184
67	15.0	-0.754	-0.911	-1.019	-1.068	-0.980	143	25.0	0.080	0.085	0.070	0.069	0.069
68	27.5	-0.534	-0.501	-0.749	-0.605	-0.563	144	41.0	-0.005	-0.014	-0.029	-0.028	-0.028
69	40.0	-0.359	-0.372	-0.518	-0.601	-0.600	145	62.5	-0.042	-0.051	-0.084	-0.093	-0.093
70	50.0	-0.244	-0.318	-0.393	-0.508	-0.500	146	82.5	-0.046	-0.064	-0.099	-0.087	-0.087
71	59.0	-0.163	-0.208	-0.190	-0.290	-0.288	147	94.0	-0.066	-0.081	-0.066	-0.111	-0.111
72	67.5	-0.098	-0.126	-0.132	-0.171	-0.190	148	94.0	-0.093	-0.071	-0.068	-0.095	-0.095
73	77.5	-0.013	-0.048	-0.091	-0.179	-0.135	149	94.0	---	---	---	---	---
74	87.5	---	---	---	---	---							
75	96.0	0.066	0.042	0.005	0.000	-0.017							
H76	2.0	-0.603	-0.569	-0.409	-0.299	-0.201	150	3.0	0.405	0.395	0.350	0.300	0.300
77	6.0	-0.559	-0.479	-0.473	-0.388	-0.311	151	10.0	0.177	0.173	0.134	0.121	0.121
78	15.0	-0.519	-0.409	-0.410	-0.386	-0.346	152	25.0	0.010	-0.010	-0.004	-0.004	-0.004
79	27.5	-0.411	-0.377	-0.333	-0.333	-0.302	153	41.0	---	---	---	---	---
80	40.0	-0.305	-0.298	-0.301	-0.300	-0.270	154	62.5	-0.065	-0.092	-0.123	-0.153	-0.153
81	50.0	-0.201	-0.184	-0.184	-0.184	-0.171	155	82.5	-0.078	-0.078	-0.098	-0.111	-0.111
82	59.0	-0.158	-0.136	-0.131	-0.171	-0.140	156	94.0	-0.072	-0.060	-0.104	-0.144	-0.144
83	67.5	-0.105	-0.134	-0.164	-0.164	-0.130	157	94.0	0.005	0.002	-0.017	-0.075	-0.075
84	86.0	-0.010	-0.000	-0.017	-0.163	-0.168							
85	94.0	0.008	-0.000	-0.128	-0.169	-0.167							

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TABLE 50

$\alpha = 45^\circ, \theta_{max} = 10.0^\circ, \epsilon = -20^\circ$

		CONFIDENTIAL											
		UPPER SURFACE					LOWER SURFACE						
Tube	Per-cent chord	Mach Number					Tube	Per-cent chord	Mach Number				
		0.60	0.80	0.89	0.95	0.96			0.60	0.80	0.89	0.95	0.96
A 1	2.0		0.245	0.253	0.263	0.273	86	3.0	-0.287	-0.259	-0.234	-0.181	
2	6.0		.107	.116	.132	.150	87	10.0	-.096	-.079	-.059	-.035	
3	15.0		.019	.031	.044	.065	88	25.0	-.162	-.155	-.135	-.104	
4	27.5		-.009	.002	.017	.039	89	41.0	---	---	---	---	
5	40.0		---	---	---	---	90	56.5	---	---	---	---	
6	50.0		---	---	---	---	91	62.5	---	---	---	---	
7	59.0		---	---	---	---	92	72.5	---	---	---	---	
8	67.5		---	---	---	---	93	84.0	---	---	---	---	
9	77.5		---	---	---	---	94	94.0	---	---	---	---	
10	87.5		---	---	---	---							
11	96.0		---	---	---	---							
12	2.0		---	---	---	---	95	3.0	-.378	-.351	-.327	-.277	
13	6.0		---	---	---	---	96	10.0	-.242	-.202	-.165	-.120	
14	15.0		-.096	-.091	-.013	.002	97	25.0	-.226	-.217	-.209	-.200	
15	27.5		-.130	-.097	-.066	-.065	98	41.0	-.238	-.224	-.225	-.224	
16	40.0		-.156	-.165	-.140	-.140	99	56.5	-.225	-.208	-.209	-.206	
17	50.0		-.174	-.140	-.136	-.175	100	62.5	---	---	---	---	
18	59.0		-.160	-.171	-.162	-.145	101	72.5	---	---	---	---	
19	67.5		---	---	---	---	102	84.0	---	---	---	---	
20	77.5		---	---	---	---	103	94.0	---	---	---	---	
21	88.0		---	---	---	---							
22	96.0		---	---	---	---							
23	2.0		.231	.230	.230	.236	104	3.0	-.435	-.440	-.410	-.360	
24	6.0		.066	.063	.066	.078	105	10.0	-.259	-.310	-.294	-.266	
25	15.0		-.028	-.067	-.063	-.049	106	25.0	-.263	-.303	-.302	-.274	
26	27.5		-.139	-.154	-.152	-.136	107	41.0	-.258	-.330	-.338	-.324	
27	40.0		-.202	-.211	-.211	-.219	108	56.5	-.213	-.301	-.316	-.304	
28	50.0		-.211	-.200	-.202	-.200	109	62.5	-.179	-.210	-.215	-.200	
29	59.0		-.219	-.266	-.300	-.295	110	72.5	-.112	-.146	-.204	-.305	
30	67.5		-.169	-.212	-.253	-.268	111	84.0	-.087	-.051	-.077	-.162	
31	77.5		-.125	-.163	-.208	-.248	112	94.0	.009	.012	-.009	-.076	
32	88.0		-.047	-.077	-.103	-.172							
33	96.0		.021	-.018	-.042	-.109							
34	2.0		.134	.130	.131	.131	113	3.0	-.426	-.514	-.516	-.467	
35	6.0		-.069	-.068	-.066	-.095	114	10.0	-.275	-.356	-.330	-.300	
36	15.0		-.148	-.178	-.199	-.196	115	25.0	-.267	-.311	-.361	-.344	
37	27.5		-.211	-.253	-.293	-.307	116	41.0	-.250	-.301	-.421	-.430	
38	40.0		-.225	-.261	-.317	-.360	117	56.5	-.206	-.262	-.318	-.427	
39	50.0		-.166	-.213	-.257	-.273	118	62.5	-.135	-.158	-.163	-.160	
40	59.0		-.144	-.173	-.173	-.168	119	72.5	-.056	-.062	-.060	-.144	
41	67.5		-.092	-.102	-.097	-.164	120	84.0	.041	.035	.049	.020	
42	77.5		-.028	-.015	-.006	-.015	121	94.0	.060	.055	.064	.038	
43	88.0		.047	.044	.051	.030							
44	2.0	0.224	.251	.260	.256	.241	122	3.0	-.350	-.425	-.508	-.535	
45	6.0	.033	.056	.061	.077	.062	123	10.0	-.230	-.261	-.290	-.354	
46	15.0	-.074	-.073	-.077	-.087	-.107	124	25.0	-.178	-.225	-.297	-.400	
47	27.5	-.147	-.156	-.167	-.176	-.211	125	41.0	-.149	-.188	-.282	-.419	
48	40.0	-.209	-.200	-.217	-.241	-.299	126	56.5	-.048	-.129	-.153	-.236	
49	50.0	-.212	-.230	-.247	-.243	-.221	127	62.5	-.057	-.090	-.096	-.097	
50	59.0	-.199	-.240	-.227	-.222	-.259	128	72.5	.002	.006	.003	.005	
51	67.5	-.169	-.176	-.176	-.164	-.164	129	84.0	.057	.055	.053	.056	
52	77.5	-.126	-.097	-.099	-.090	-.085	130	94.0	.111	.110	.109	.110	
53	88.0	.101	.081	.075	.082	.109	131		.125	.122	.120	.121	
54	96.0	.059	.051	.049	.056	.073							
55	2.0	.138	.232	.246	.255	.238	132	3.0	-.312	-.417	-.538	-.581	
56	6.0	.036	.045	.049	.075	.050	133	10.0	-.208	-.261	-.297	-.400	
57	15.0	-.054	-.079	-.076	-.076	-.108	134	25.0	-.158	-.200	-.234	-.306	
58	27.5	-.159	-.166	-.169	-.167	-.202	135	41.0	-.116	-.148	-.178	-.225	
59	40.0	-.221	-.239	-.249	-.247	-.277	136	56.5	-.067	-.067	-.100	-.101	
60	50.0	-.231	-.254	-.264	-.263	-.278	137	62.5	.000	.012	.009	.007	
61	59.0	-.234	-.259	-.264	-.243	-.240	138	72.5	.131	.125	.124	.124	
62	67.5	-.233	-.260	-.277	-.252	-.214	139	84.0	---	---	---	---	
63	77.5	---	---	---	---	---	140	94.0	.138	.137	.132	.147	
64	88.0	---	---	---	---	---							
65	96.0	---	---	---	---	---							
66	2.0	.178	.221	.246	.263	.269	141	3.0	-.247	-.341	-.443	-.508	
67	6.0	.017	.041	.056	.070	.079	142	10.0	-.189	-.245	-.273	-.295	
68	15.0	-.060	-.086	-.094	-.078	-.070	143	25.0	-.131	-.156	-.186	-.231	
69	27.5	-.166	-.175	-.185	-.186	-.213	144	41.0	-.087	-.102	-.120	-.123	
70	40.0	-.231	-.254	-.274	-.296	-.278	145	56.5	-.031	-.034	-.041	-.031	
71	50.0	-.276	-.296	-.313	-.341	-.346	146	62.5	.066	.063	.060	.068	
72	59.0	-.287	-.276	-.284	-.283	-.293	147	72.5	.136	.149	.146	.143	
73	67.5	-.240	-.265	-.287	-.269	-.234	148	84.0	-.029	-.025	-.017	-.013	
74	77.5	-.263	-.284	-.297	-.297	-.243	149	94.0	---	---	---	---	
75	88.0	---	---	---	---	---							
76	96.0	.086	.084	.083	.074	.059							
77	2.0	.063	.106	.117	.134	.157	150	3.0	.005	-.264	-.390	-.436	
78	6.0	-.048	-.049	-.052	-.045	-.037	151	10.0	-.163	-.202	-.218	-.204	
79	15.0	-.120	-.139	-.163	-.162	-.190	152	25.0	-.111	-.154	-.175	-.209	
80	27.5	-.179	-.210	-.251	-.245	-.267	153	41.0	---	---	---	---	
81	40.0	-.291	-.297	-.308	-.347	-.366	154	56.5	-.045	-.029	-.024	-.017	
82	50.0	-.268	-.297	-.336	-.364	-.364	155	62.5	.060	.056	.066	.070	
83	59.0	-.199	-.212	-.249	-.263	-.261	156	72.5	.132	.133	.140	.145	
84	67.5	-.162	-.173	-.203	-.205	-.245	157	84.0	.102	.110	.130	.134	
85	88.0	-.096	-.067	-.019	.052	.083							
86	94.2	-.018	.010	.075	.097	.111							

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TABLE 51

$\lambda = 45^\circ, \delta_{max} = 10.0^\circ, \alpha = 2^\circ$

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UPPER SURFACE						LOWER SURFACE							
Tube	Per-cent chord	Mach Number					Tube	Per-cent chord	Mach Number				
		0.60	0.80	0.85	0.905	0.96			0.60	0.80	0.85	0.905	0.96
A 1	2.0	-.0180	-.0150	-.0101	0.0096	-0.0460	86	5.0	0.109	0.118	0.117	0.136	0.151
2	6.0	-.189	-.173	-.136	-.116	-.080	87	10.0	.018	.007	.033	.066	.064
3	15.0	-.179	-.171	-.146	-.105	-.075	88	25.0	-.019	-.009	-.005	-.005	-.038
4	27.5	-.166	-.161	-.141	-.100	-.068	89	41.0	--	--	--	--	--
5	40.0	--	--	--	--	--	90	52.5	--	--	--	--	--
6	50.0	--	--	--	--	--	91	62.5	--	--	--	--	--
7	59.0	--	--	--	--	--	92	72.5	--	--	--	--	--
8	67.5	--	--	--	--	--	93	84.0	--	--	--	--	--
9	77.5	--	--	--	--	--	94	94.0	--	--	--	--	--
10	87.5	--	--	--	--	--							
11	96.0	--	--	--	--	--							
612	2.0	--	--	--	--	--	96	5.0	.102	.099	.089	.100	.119
13	6.0	--	--	--	--	--	97	10.0	-.007	-.011	-.001	.007	.007
14	15.0	-.232	-.231	-.219	-.199	-.165	98	25.0	-.096	-.085	-.076	-.071	-.098
15	27.5	-.266	-.264	-.241	-.208	-.141	99	41.0	-.092	-.108	-.126	-.125	-.116
16	40.0	-.264	-.266	-.246	-.201	-.148	99	52.5	-.009	-.110	-.136	-.142	-.141
17	50.0	-.251	-.257	-.219	-.166	-.120	100	62.5	--	--	--	--	--
18	59.0	-.239	-.256	-.205	-.146	-.105	101	72.5	--	--	--	--	--
19	67.5	--	--	--	--	--	102	84.0	--	--	--	--	--
20	77.5	--	--	--	--	--	103	94.0	--	--	--	--	--
21	87.5	--	--	--	--	--							
22	96.0	--	--	--	--	--							
23	96.5	--	--	--	--	--							
24	2.0	-.201	-.261	-.201	-.171	-.126	104	5.0	.107	.092	.084	.086	.082
24	6.0	-.271	-.275	-.245	-.205	-.153	105	10.0	-.002	-.017	-.064	-.091	-.077
25	15.0	-.276	-.299	-.251	-.206	-.158	106	25.0	-.069	-.086	-.116	-.132	-.120
26	27.5	-.310	-.308	-.281	-.229	-.161	107	41.0	-.108	-.127	-.161	-.177	-.195
27	40.0	-.301	-.306	-.282	-.227	-.161	108	52.5	-.094	-.125	-.161	-.176	-.194
28	50.0	-.276	-.281	-.241	-.199	-.148	109	62.5	-.071	-.096	-.126	-.147	-.170
29	59.0	-.264	-.288	-.245	-.199	-.148	110	72.5	-.051	-.071	-.078	-.096	-.141
30	67.5	-.257	-.280	-.241	-.197	-.148	111	84.0	-.058	-.068	-.072	-.089	-.068
31	77.5	-.242	-.259	-.206	-.166	-.116	112	94.0	.094	.074	.055	.010	-.051
32	87.5	-.205	-.079	-.123	-.217	-.280							
33	96.5	.005	-.007	-.035	-.243								
34	2.0	-.151	-.150	-.177	-.260	-.301	115	5.0	.127	.105	.091	.087	.081
35	6.0	-.301	-.317	-.256	-.240	-.205	114	10.0	.084	.005	-.008	-.081	-.074
36	15.0	-.301	-.309	-.264	-.206	-.154	115	25.0	-.056	-.092	-.116	-.134	-.158
37	27.5	-.319	-.316	-.269	-.206	-.156	116	41.0	-.071	-.120	-.155	-.176	-.199
38	40.0	-.306	-.304	-.259	-.199	-.146	117	52.5	-.054	-.085	-.114	-.131	-.157
39	50.0	-.285	-.282	-.236	-.181	-.131	118	62.5	-.051	-.089	-.100	-.111	-.161
40	59.0	-.264	-.266	-.216	-.166	-.116	119	72.5	-.004	-.008	-.007	.002	-.017
41	67.5	-.255	-.261	-.201	-.151	-.101	120	84.0	.067	.072	.071	.071	.054
42	77.5	-.217	-.218	-.165	-.115	-.065	121	94.0	.080	.081	.082	.089	.082
43	87.5	-.166	-.086	-.078	-.083	-.083							
44	94.2	--	--	--	--	--							
44	2.0	-.429	-.420	-.375	-.320	-.274	122	5.0	.190	.157	.124	.101	.066
45	6.0	-.471	-.471	-.421	-.361	-.315	123	10.0	.094	.022	-.009	-.088	-.077
46	15.0	-.435	-.461	-.401	-.341	-.297	124	25.0	-.055	-.084	-.094	-.089	-.124
47	27.5	-.399	-.407	-.346	-.286	-.242	125	41.0	-.039	-.065	-.091	-.101	-.136
48	40.0	-.339	-.366	-.305	-.245	-.201	126	52.5	-.025	-.036	-.058	-.060	-.085
49	50.0	-.318	-.350	-.289	-.229	-.185	127	62.5	.000	-.015	-.031	-.036	-.051
50	59.0	-.297	-.327	-.267	-.207	-.163	128	72.5	-.062	-.082	-.090	-.091	-.082
51	67.5	-.256	-.285	-.225	-.165	-.121	129	84.0	.105	.086	.092	.097	.094
52	77.5	-.211	-.211	-.161	-.116	-.070	130	94.0	.149	.152	.151	.169	.163
53	87.5	-.096	-.083	-.082	-.081	-.081	131	94.1	.148	.159	.160	.172	.171
54	96.5	-.051	-.050	-.050	-.072	-.080							
55	2.0	-.482	-.437	-.377	-.316	-.272	132	5.0	.004	.179	.141	.116	.067
56	6.0	-.457	-.431	-.371	-.310	-.266	135	10.0	.078	.048	.080	.082	-.037
57	15.0	-.455	-.450	-.390	-.329	-.285	134	25.0	-.048	-.016	-.041	-.054	-.081
58	27.5	-.460	-.438	-.378	-.317	-.273	135	41.0	-.008	-.009	-.051	-.060	-.080
59	40.0	-.477	-.439	-.379	-.318	-.274	136	52.5	.011	-.006	-.051	-.058	-.081
60	50.0	-.465	-.441	-.381	-.320	-.276	137	62.5	.056	.062	.072	.084	.074
61	59.0	-.481	-.477	-.417	-.356	-.312	138	72.5	.174	.151	.151	.154	.155
62	67.5	-.456	-.456	-.396	-.335	-.291	139	84.0	--	--	--	--	--
63	77.5	--	--	--	--	--	140	94.0	.152	.160	.154	.149	.133
64	87.5	--	--	--	--	--							
64	94.5	--	--	--	--	--							
165	2.0	-.521	-.509	-.450	-.389	-.345	141	5.0	.251	.229	.208	.201	.161
66	6.0	-.457	-.470	-.412	-.351	-.307	142	10.0	.098	.075	.094	.087	.014
67	15.0	-.478	-.448	-.389	-.328	-.284	143	25.0	.013	.017	.061	-.002	-.026
68	27.5	-.460	-.432	-.373	-.312	-.268	144	41.0	.018	.010	-.001	-.009	-.016
69	40.0	-.477	-.439	-.380	-.319	-.275	145	52.5	.044	.042	.035	.031	.000
70	50.0	-.471	-.439	-.380	-.319	-.275	146	62.5	.074	.063	.063	.063	.064
71	59.0	-.431	-.406	-.347	-.286	-.242	147	72.5	.148	.140	.140	.142	.141
72	67.5	-.390	-.390	-.331	-.270	-.226	148	84.0	-.268	.287	.296	.302	.300
73	77.5	-.356	-.350	-.291	-.230	-.186	149	94.0	--	--	--	--	--
74	87.5	--	--	--	--	--							
75	96.8	.061	-.068	.054	.056	.030							
76	2.0	-.568	-.561	-.502	-.441	-.397	150	5.0	.191	.145	.141	.151	.147
77	6.0	-.417	-.441	-.381	-.320	-.276	151	10.0	.046	.053	.017	.017	.007
78	15.0	-.455	-.491	-.431	-.370	-.326	152	25.0	-.005	-.036	-.097	-.085	-.085
79	27.5	-.459	-.435	-.375	-.314	-.270	153	41.0	--	--	--	--	--
80	40.0	-.481	-.441	-.381	-.320	-.276	154	52.5	.007	.007	.009	.000	-.001
81	50.0	-.494	-.454	-.394	-.333	-.289	156	62.5	.011	.021	.019	.014	-.009
82	59.0	-.461	-.410	-.350	-.289	-.245	157	72.5	.161	.172	.181	.181	.178
83	67.5	-.402	-.398	-.338	-.277	-.233	157	84.0	.086	.110	.111	.137	.091
84	77.5	-.374	-.374	-.314	-.253	-.209							
85	87.5	-.339	-.339	-.279	-.218	-.174							
85	94.8	-.081	-.094	-.081	-.098	-.069							

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TABLE 52

$[A = 45^\circ, \theta_{max} = 10.0^\circ, \alpha = 7^\circ]$

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UPPER SURFACE						LOWER SURFACE							
Tube	Per-cent chord	Mesh Number				Tube	Per-cent chord	Mesh Number					
		0.60	0.80	0.89	0.96			0.60	0.80	0.89	0.96		
1	2.0	-1.069	-1.172	-1.009	-0.981	-0.779	66	3.0	0.411	0.413	0.414	0.413	0.429
2	6.0	-1.615	-1.617	-1.553	-1.525	-1.421	67	10.0	.171	.182	.188	.193	.203
3	15.0	-1.935	-1.971	-1.946	-1.879	-1.816	68	25.0	.198	.194	.170	.176	.188
4	27.5	---	---	---	---	---	69	41.0	---	---	---	---	---
5	40.0	---	---	---	---	---	70	52.5	---	---	---	---	---
6	50.0	---	---	---	---	---	71	62.5	---	---	---	---	---
7	59.0	---	---	---	---	---	72	72.5	---	---	---	---	---
8	67.5	---	---	---	---	---	73	84.0	---	---	---	---	---
9	77.5	---	---	---	---	---	74	94.0	---	---	---	---	---
10	87.5	---	---	---	---	---							
11	96.0	---	---	---	---	---							
12	2.0	---	---	---	---	---	95	3.0	.404	.395	.399	.388	.391
13	6.0	---	---	---	---	---	96	10.0	.287	.217	.213	.213	.220
14	15.0	-.508	-.528	-.487	-.451	-.420	97	25.0	.118	.113	.106	.107	.117
15	27.5	-.434	-.456	-.477	-.428	-.428	98	41.0	.044	.042	.037	.031	.040
16	40.0	-.406	-.428	-.424	-.426	-.422	99	52.5	.026	.020	.020	.021	.020
17	50.0	-.387	-.426	-.426	-.426	-.426	100	62.5	---	---	---	---	---
18	59.0	-.330	-.425	-.429	-.429	-.429	101	72.5	---	---	---	---	---
19	67.5	---	---	---	---	---	102	84.0	---	---	---	---	---
20	77.5	---	---	---	---	---	103	94.0	---	---	---	---	---
21	87.5	---	---	---	---	---							
22	95.3	---	---	---	---	---							
23	2.0	-1.381	-1.418	-1.158	-1.051	-.960	104	3.0	.407	.391	.374	.368	.367
24	6.0	-.982	-1.121	-1.118	-.996	-.985	105	10.0	.238	.221	.205	.198	.199
25	15.0	-.921	-.854	-.854	-.907	-.852	106	25.0	.106	.093	.077	.068	.069
26	27.5	-.841	-.869	-.868	-.825	-.879	107	41.0	.031	.020	.021	.017	.016
27	40.0	-.844	-.859	-.869	-.841	-.813	108	52.5	.018	.007	.011	.008	.009
28	50.0	-.804	-.847	-.840	-.875	-.828	109	62.5	.011	.001	.006	.004	.005
29	59.0	-.844	-.831	-.841	-.800	-.853	110	72.5	.034	.024	.023	.021	.022
30	67.5	-.823	-.826	-.821	-.847	-.809	111	84.0	.027	.027	.038	.014	.016
31	77.5	-.846	-.842	-.832	-.849	-.809	112	94.0	.038	.030	.042	.003	.009
32	87.5	-.813	-.811	-.808	-.826	-.819							
33	95.3	-.811	-.817	-.811	-.817	-.817							
34	2.0	-1.212	-1.219	-1.264	-1.124	-1.011	113	3.0	.422	.420	.372	.374	.365
35	6.0	-.846	-.866	-.866	-.868	-.877	114	10.0	.265	.244	.225	.200	.192
36	15.0	-.818	-.828	-.860	-.899	-.840	115	25.0	.117	.100	.073	.093	.046
37	27.5	-.846	-.846	-.846	-.846	-.846	116	41.0	.040	.021	.006	.034	.042
38	40.0	-.806	-.842	-.842	-.842	-.842	117	52.5	.014	.002	.006	.006	.009
39	50.0	-.841	-.841	-.841	-.841	-.841	118	62.5	.003	.003	.003	.003	.003
40	59.0	-.841	-.841	-.841	-.841	-.841	119	72.5	.047	.039	.011	.022	.031
41	67.5	-.846	-.846	-.846	-.846	-.846	120	87.4	.070	.093	.066	.020	.021
42	77.5	-.846	-.846	-.846	-.846	-.846	121	94.0	.027	.027	.021	.021	.036
43	87.5	-.846	-.846	-.846	-.846	-.846							
44	94.2	-.846	-.846	-.846	-.846	-.846							
44	2.0	-1.189	-1.289	-1.404	-1.175	-1.052	122	3.0	.443	.433	.422	.396	.367
45	6.0	-1.149	-1.322	-1.293	-1.145	-1.037	123	10.0	.279	.265	.249	.211	.190
46	15.0	-1.051	-1.142	-1.137	-1.024	-.924	124	25.0	.144	.134	.122	.082	.082
47	27.5	-.991	-.912	-.912	-.941	-.816	125	41.0	.080	.067	.057	.011	.015
48	40.0	-.928	-.880	-.878	-.810	-.652	126	52.5	.070	.056	.045	.002	.032
49	50.0	-.877	-.812	-.811	-.805	-.743	127	62.5	.061	.043	.043	.018	.007
50	59.0	-.805	-.832	-.842	-.829	-.782	128	72.5	.093	.078	.077	.031	.021
51	67.5	-.847	-.826	-.826	-.826	-.826	129	84.0	.112	.109	.109	.061	.031
52	77.5	-.846	-.846	-.846	-.846	-.846	130	94.0	.145	.145	.148	.107	.083
53	87.5	-.846	-.846	-.846	-.846	-.846	131	94.1	.123	.121	.130	.076	.053
54	95.3	-.846	-.846	-.846	-.846	-.846							
55	2.0	-1.204	-1.199	-1.375	-1.221	-1.097	132	3.0	.450	.439	.427	.386	.361
56	6.0	-1.222	-1.207	-1.291	-1.167	-1.049	133	10.0	.293	.283	.265	.225	.196
57	15.0	-1.002	-1.138	-1.160	-1.059	-.960	134	25.0	.162	.151	.143	.100	.071
58	27.5	-.952	-.841	-.850	-.879	-.844	135	41.0	.104	.096	.089	.045	.014
59	40.0	-.940	-.842	-.842	-.842	-.842	136	52.5	.090	.080	.079	.037	.028
60	50.0	-.801	-.814	-.859	-.836	-.820	137	62.5	.118	.109	.114	.079	.054
61	59.0	-.831	-.836	-.873	-.832	-.801	138	72.5	.128	.127	.128	.127	.147
62	67.5	-.846	-.846	-.846	-.846	-.846	139	84.0	---	---	---	---	---
63	87.5	-.846	-.846	-.846	-.846	-.846	140	94.0	.119	.112	.107	.063	.017
64	94.2	-.846	-.846	-.846	-.846	-.846							
65	2.0	-1.011	-.898	-1.380	-1.054	-1.137	141	3.0	.454	.443	.446	.409	.378
66	6.0	-.846	-.846	-1.293	-1.134	-1.089	142	10.0	.296	.290	.273	.233	.198
67	15.0	-.948	-.839	-1.215	-1.090	-1.001	143	25.0	.168	.158	.160	.120	.085
68	27.5	-.812	-.774	-1.065	-1.008	-.855	144	41.0	.102	.094	.102	.057	.024
69	40.0	-.842	-.802	-.807	-.803	-.809	145	52.5	.095	.089	.102	.056	.024
70	50.0	-.812	-.801	-.853	-.811	-.829	146	62.5	.120	.107	.119	.101	.061
71	59.0	-.817	-.814	-.804	-.804	-.804	147	72.5	.174	.175	.180	.154	.128
72	67.5	-.846	-.846	-.846	-.846	-.846	148	84.0	.239	.250	.270	.240	.218
73	77.5	-.846	-.846	-.846	-.846	-.846	149	94.0	---	---	---	---	---
74	87.5	-.846	-.846	-.846	-.846	-.846							
75	96.8	-.846	-.846	-.846	-.846	-.846							
76	2.0	-.847	-1.066	-.849	-.840	-.846	150	3.0	.287	.267	.262	.228	.217
77	6.0	-.827	-.806	-.840	-.840	-.840	151	10.0	.174	.150	.187	.153	.129
78	15.0	-.808	-.822	-.829	-.829	-.829	152	25.0	.096	.086	.092	.045	.016
79	27.5	-.846	-.846	-.846	-.846	-.846	153	41.0	---	---	---	---	---
80	40.0	-.846	-.846	-.846	-.846	-.846	154	52.5	.017	.016	.009	.031	.059
81	50.0	-.846	-.846	-.846	-.846	-.846	155	62.5	.044	.046	.044	.005	.020
82	59.0	-.846	-.846	-.846	-.846	-.846	156	72.5	.082	.070	.104	.070	.053
83	67.5	-.846	-.846	-.846	-.846	-.846	157	84.0	.000	.007	.043	.002	.126
84	87.5	-.846	-.846	-.846	-.846	-.846							
85	94.2	-.846	-.846	-.846	-.846	-.846							

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TABLE 53

$\Delta = -30^\circ, \theta_{a_0} = -10.0^\circ, \alpha = 0^\circ$

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		UPPER SURFACE					LOWER SURFACE						
Tube	Percent chord	Mach Number					Tube	Percent chord	Mach Number				
		0.60	0.80	0.85	0.89				0.60	0.80	0.85	0.89	
1	2.0	---	---	---	---	---	66	3.0	---	---	---	---	
2	6.0	---	---	---	---	---	67	10.0	---	---	---	---	
3	15.0	---	---	---	---	---	68	25.0	---	---	---	---	
4	27.5	---	---	---	---	---	69	41.0	---	---	---	---	
5	40.0	---	---	---	---	---	70	50.0	---	---	---	---	
6	50.0	-0.181	-0.201	-0.239	-0.239	---	71	52.6	-0.096	-0.113	-0.100	---	
7	59.0	-0.150	-0.176	-0.180	-0.187	---	72	52.6	-0.068	-0.081	-0.039	---	
8	67.5	-0.099	-0.084	0.084	-0.078	---	73	72.6	-0.015	-0.008	0.004	---	
9	77.5	---	---	---	---	---	74	94.0	---	---	---	---	
10	87.5	---	---	---	---	---	75	94.0	---	---	---	---	
11	96.0	---	---	---	---	---	76	94.0	---	---	---	---	
12	2.0	.476	.509	.504	.487	---	77	3.0	---	---	---	---	
13	6.0	.196	.193	.173	.160	---	78	10.0	-1.038	-.981	-.984	---	
14	15.0	-.063	-.063	-.109	-.130	---	79	25.0	-.941	-.609	-.976	---	
15	27.5	-.177	-.230	-.277	-.307	---	80	41.0	-.316	-.483	-.819	---	
16	40.0	-.289	-.299	-.360	-.464	---	81	50.0	-.212	-.270	-.371	---	
17	50.0	-.287	-.280	-.340	-.443	---	82	52.6	-1.246	-1.159	-1.131	---	
18	59.0	-.187	-.244	-.277	-.389	---	83	52.6	-0.093	-0.049	-.088	---	
19	67.5	-.130	-.167	-.170	-.180	---	84	72.6	.097	.056	.089	---	
20	77.5	-.089	-.064	-.068	-.047	---	85	94.0	.112	.120	.170	---	
21	87.5	-.094	-.095	-.040	-.063	---	86	94.0	---	---	---	---	
22	96.0	---	---	---	---	---	87	94.0	---	---	---	---	
23	2.0	.456	.503	.508	.501	---	88	3.0	-1.044	-.930	-.770	---	
24	6.0	.172	.213	.201	.218	---	89	10.0	-.750	-.683	-.767	---	
25	15.0	-.068	-.077	-.139	-.211	---	90	25.0	-.373	-.508	-.707	---	
26	27.5	-.179	-.279	-.331	-.378	---	91	41.0	-.329	-.476	-.619	---	
27	40.0	-.291	-.299	-.358	-.447	---	92	50.0	-.190	-.208	-.289	---	
28	50.0	-.291	-.290	-.340	-.443	---	93	52.6	-0.067	-0.078	-.030	---	
29	59.0	-.185	-.240	-.273	-.385	---	94	52.6	-.030	-.008	-.060	---	
30	67.5	-.129	-.166	-.169	-.180	---	95	72.6	.093	.052	.089	---	
31	77.5	-.088	-.078	-.080	-.062	---	96	94.0	.066	.099	.136	---	
32	87.5	-.043	-.049	-.033	-.042	---	97	94.0	---	---	---	---	
33	96.0	---	---	---	---	---	98	94.0	---	---	---	---	
34	2.0	.436	.494	.490	.492	---	99	3.0	-.940	-.908	-.754	---	
35	6.0	.180	.209	.203	.209	---	100	10.0	-.689	-.644	-.708	---	
36	15.0	-.080	-.095	-.158	-.210	---	101	25.0	-.340	-.494	-.678	---	
37	27.5	-.179	-.279	-.331	-.378	---	102	41.0	-.329	-.476	-.619	---	
38	40.0	-.291	-.299	-.358	-.447	---	103	50.0	-.190	-.208	-.289	---	
39	50.0	-.291	-.290	-.340	-.443	---	104	52.6	-0.067	-0.078	-.030	---	
40	59.0	-.185	-.240	-.273	-.385	---	105	52.6	-.030	-.008	-.060	---	
41	67.5	-.129	-.166	-.169	-.180	---	106	72.6	.093	.052	.089	---	
42	77.5	-.088	-.078	-.080	-.062	---	107	94.0	.066	.099	.136	---	
43	87.5	-.043	-.049	-.033	-.042	---	108	94.0	---	---	---	---	
44	94.2	---	---	---	---	---	109	94.0	---	---	---	---	
45	2.0	.456	.513	.512	.516	---	110	3.0	-0.967	-.880	-.808	---	
46	6.0	.187	.229	.235	.244	---	111	10.0	-.737	-.680	-.671	---	
47	15.0	-.067	-.099	-.162	-.235	---	112	25.0	-.390	-.568	-.671	---	
48	27.5	-.179	-.283	-.331	-.378	---	113	41.0	-.312	-.430	-.594	---	
49	40.0	-.289	-.298	-.350	-.439	---	114	50.0	-.182	-.214	-.330	---	
50	50.0	-.289	-.287	-.340	-.439	---	115	52.6	-0.189	-.244	-.300	---	
51	59.0	-.186	-.240	-.273	-.385	---	116	52.6	-0.068	-.085	-.101	---	
52	67.5	-.129	-.166	-.169	-.180	---	117	72.6	.093	.052	.089	---	
53	77.5	-.088	-.078	-.080	-.062	---	118	94.0	.066	.099	.136	---	
54	87.5	-.043	-.049	-.033	-.042	---	119	94.0	---	---	---	---	
55	94.2	---	---	---	---	---	120	94.0	---	---	---	---	
56	2.0	.474	.503	.500	.503	---	121	3.0	-.673	-.630	-.670	---	
57	6.0	.200	.239	.244	.250	---	122	10.0	-.401	-.345	-.362	---	
58	15.0	.010	.007	.007	.030	---	123	25.0	-.304	-.474	-.563	---	
59	27.5	-.109	-.107	-.110	-.111	---	124	41.0	-.302	-.439	-.538	---	
60	40.0	-.193	-.186	-.190	-.196	---	125	50.0	-.284	-.371	-.442	---	
61	50.0	-.180	-.173	-.131	-.191	---	126	52.6	-.284	-.371	-.442	---	
62	59.0	-.099	-.120	-.113	-.137	---	127	52.6	-.219	-.271	-.293	---	
63	67.5	-.069	-.100	-.101	-.120	---	128	72.6	-.173	-.207	-.221	---	
64	87.5	-.017	-.115	-.115	-.104	---	129	94.0	-.103	-.110	-.119	---	
65	94.5	.097	.046	.046	.099	---	130	94.0	.070	.067	.069	---	
66	2.0	.484	.506	.504	.509	---	131	3.0	-.680	-.679	-.700	---	
67	6.0	.209	.239	.246	.259	---	132	10.0	-.404	-.380	-.393	---	
68	15.0	.086	.034	.047	.040	---	133	25.0	-.351	-.489	-.580	---	
69	27.5	-.076	-.096	-.140	-.104	---	134	41.0	-.308	-.436	-.505	---	
70	40.0	-.129	-.132	-.160	-.171	---	135	50.0	-.280	-.366	-.436	---	
71	50.0	-.118	-.108	-.109	-.116	---	136	52.6	-.280	-.366	-.436	---	
72	59.0	-.063	-.093	-.109	-.116	---	137	52.6	-.219	-.271	-.293	---	
73	67.5	-.039	-.076	-.093	-.106	---	138	72.6	-.173	-.207	-.221	---	
74	77.5	.280	.238	.241	.245	---	139	94.0	-.103	-.110	-.119	---	
75	87.5	---	---	---	---	---	140	94.0	.068	.016	.016	---	
76	96.0	.073	.059	.053	.061	---	141	3.0	-.680	-.679	-.700	---	
77	2.0	.408	.437	.463	.476	---	142	10.0	-.404	-.380	-.393	---	
78	6.0	.193	.184	.199	.215	---	143	25.0	-.351	-.489	-.580	---	
79	15.0	.001	.010	.017	.028	---	144	41.0	-.308	-.436	-.505	---	
80	27.5	-.100	-.103	-.127	-.126	---	145	50.0	-.280	-.366	-.436	---	
81	40.0	-.191	-.195	-.211	-.203	---	146	52.6	-.280	-.366	-.436	---	
82	50.0	-.193	-.196	-.208	-.200	---	147	52.6	-.219	-.271	-.293	---	
83	59.0	-.100	-.134	-.160	-.177	---	148	72.6	-.173	-.207	-.221	---	
84	67.5	-.080	-.030	-.049	-.050	---	149	94.0	-.133	-.159	-.176	---	
85	87.5	-.017	.088	.084	.085	---	150	3.0	-.667	-.669	-.677	---	
86	94.2	---	---	---	---	---	151	10.0	-.405	-.371	-.386	---	
87	2.0	.408	.437	.463	.476	---	152	25.0	-.351	-.489	-.580	---	
88	6.0	.193	.184	.199	.215	---	153	41.0	-.308	-.436	-.505	---	
89	15.0	.001	.010	.017	.028	---	154	50.0	-.280	-.366	-.436	---	
90	27.5	-.100	-.103	-.127	-.126	---	155	52.6	-.280	-.366	-.436	---	
91	40.0	-.191	-.195	-.211	-.203	---	156	52.6	-.219	-.271	-.293	---	
92	50.0	-.193	-.196	-.208	-.200	---	157	72.6	-.173	-.207	-.221	---	
93	59.0	-.100	-.134	-.160	-.177	---	158	94.0	-.133	-.159	-.176	---	
94	67.5	-.080	-.030	-.049	-.050	---	159	94.0	-.039	-.036	-.050	---	
95	87.5	-.017	.088	.084	.085	---							
96	94.2	---	---	---	---	---							



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TABLE 5A

$\alpha = -30^\circ, \beta_{max} = -10.0^\circ, \alpha = 0^\circ$

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UPPER SURFACE							LOWER SURFACE						
Tube	Per-cent chord	Mach Number					Tube	Per-cent chord	Mach Number				
		0.60	0.80	0.89	0.95	0.96			0.60	0.80	0.89	0.95	0.96
1	2.0	---	---	---	---	---	66	3.0	---	---	---	---	---
2	8.0	---	---	---	---	---	67	10.0	---	---	---	---	---
3	15.0	---	---	---	---	---	68	27.5	---	---	---	---	---
4	27.5	---	---	---	---	---	69	41.0	---	---	---	---	---
5	45.0	---	---	---	---	---	70	52.5	-0.114	-0.131	-0.134	-0.112	-0.061
6	50.0	-0.210	-0.240	-0.236	-0.239	-0.694	71	56.5	-0.060	-0.070	-0.069	-0.053	-0.070
7	50.0	-0.171	-0.176	-0.158	-0.407	-0.769	72	72.5	-0.018	-0.033	-0.032	0.004	0.012
8	67.5	-0.101	-0.100	-0.061	-0.199	-0.679	73	84.0	---	---	---	---	---
9	77.5	---	---	---	---	---	74	94.0	---	---	---	---	---
10	87.5	---	---	---	---	---							
11	96.0	---	---	---	---	---							
12	2.0	-0.007	0.094	0.093	0.104	0.106	85	3.0	-0.202	-0.446	-0.495	-0.466	-0.393
13	6.0	-0.178	-0.195	-0.180	-0.143	-0.077	86	10.0	-0.214	-0.307	-0.490	-0.376	-0.394
14	15.0	-0.344	-0.318	-0.307	-0.234	-0.106	87	27.5	-0.203	-0.307	-0.390	-0.260	-0.219
15	27.5	-0.289	-0.301	-0.302	-0.209	-0.104	88	41.0	-0.214	-0.307	-0.293	-0.490	-0.641
16	40.0	-0.299	-0.379	-0.456	-0.641	-0.604	89	52.5	-0.214	-0.277	-0.290	-0.490	-0.641
17	50.0	-0.276	-0.333	-0.395	-0.693	-0.694	90	62.5	-0.106	-0.117	-0.124	-0.080	-0.343
18	50.0	-0.234	-0.279	-0.285	-0.715	-0.758	91	72.5	-0.083	-0.083	-0.086	-0.076	-0.311
19	67.5	-0.190	-0.166	-0.159	-0.067	-0.284	92	84.0	0.061	0.069	0.072	0.099	0.090
20	77.5	-0.075	-0.072	-0.068	0.031	-0.156	93	94.0	0.129	0.140	0.139	0.075	0.007
21	87.5	---	---	---	---	---							
22	96.0	---	---	---	---	---							
23	2.0	-0.089	0.157	0.140	0.203	0.290	104	3.0	-0.202	-0.277	-0.395	-0.296	-0.256
24	6.0	-0.095	-0.070	-0.048	-0.001	0.009	105	10.0	-0.211	-0.277	-0.395	-0.296	-0.256
25	15.0	-0.221	-0.198	-0.234	-0.216	-0.156	106	27.5	-0.209	-0.300	-0.398	-0.443	-0.437
26	27.5	-0.280	-0.301	-0.378	-0.380	-0.306	107	41.0	-0.216	-0.290	-0.351	-0.490	-0.591
27	40.0	-0.309	-0.400	-0.494	-0.777	-0.612	108	52.5	-0.216	-0.290	-0.351	-0.490	-0.591
28	50.0	-0.264	-0.329	-0.415	-0.777	-0.612	109	62.5	-0.104	-0.104	-0.104	-0.080	-0.343
29	50.0	-0.249	-0.314	-0.400	-0.715	-0.700	110	72.5	-0.083	-0.083	-0.086	-0.076	-0.311
30	67.5	-0.193	-0.159	-0.157	-0.067	-0.284	111	84.0	0.061	0.069	0.072	0.099	0.090
31	77.5	-0.079	-0.064	-0.066	0.031	-0.156	112	94.0	0.113	0.114	0.113	0.066	0.007
32	87.5	---	---	---	---	---							
33	96.0	---	---	---	---	---							
34	2.0	-0.100	0.162	0.187	0.201	0.288	115	3.0	-0.214	-0.289	-0.311	-0.248	-0.253
35	6.0	-0.188	-0.202	-0.201	-0.193	-0.176	116	10.0	-0.214	-0.289	-0.311	-0.248	-0.253
36	15.0	-0.290	-0.300	-0.319	-0.331	-0.306	117	27.5	-0.216	-0.290	-0.351	-0.490	-0.591
37	27.5	-0.299	-0.379	-0.459	-0.777	-0.612	118	41.0	-0.216	-0.290	-0.351	-0.490	-0.591
38	40.0	-0.289	-0.359	-0.415	-0.777	-0.612	119	52.5	-0.104	-0.104	-0.104	-0.080	-0.343
39	50.0	-0.198	-0.141	-0.146	-0.067	-0.284	120	62.5	0.061	0.069	0.072	0.099	0.090
40	67.5	---	---	---	---	---	121	72.5	0.086	0.081	0.078	0.066	0.012
41	77.5	-0.049	-0.058	-0.074	-0.104	-0.154							
42	87.5	-0.208	0.001	-0.008	-0.037	-0.080							
43	94.2	0.070	0.067	0.056	0.036	-0.017							
44	2.0	-0.144	0.010	0.039	0.078	0.075	122	3.0	-0.191	-0.235	-0.291	-0.245	-0.200
45	6.0	-0.247	-0.199	0.000	0.080	0.046	123	10.0	-0.191	-0.244	-0.265	-0.263	-0.241
46	15.0	-0.264	-0.179	0.170	-0.164	-0.157	124	27.5	-0.209	-0.309	-0.360	-0.387	-0.384
47	27.5	-0.284	-0.262	-0.275	-0.278	-0.293	125	41.0	-0.216	-0.290	-0.351	-0.490	-0.591
48	40.0	-0.260	-0.314	-0.339	-0.354	-0.379	126	52.5	-0.104	-0.104	-0.104	-0.080	-0.343
49	50.0	-0.241	-0.288	-0.313	-0.329	-0.346	127	62.5	0.061	0.069	0.072	0.099	0.090
50	50.0	-0.199	-0.243	-0.264	-0.260	-0.260	128	72.5	-0.083	-0.083	-0.086	-0.076	-0.311
51	67.5	-0.166	-0.215	-0.245	-0.281	-0.330	129	84.0	0.061	0.069	0.072	0.099	0.090
52	77.5	-0.094	-0.090	-0.065	-0.093	-0.111	130	94.0	0.087	0.087	0.086	0.075	0.036
53	87.5	-0.111	0.104	0.096	0.095	0.093	131	94.1	0.090	0.094	0.096	0.100	0.089
54	96.0	-0.064	0.067	0.058	0.056	0.037							
55	2.0	-0.168	0.001	0.045	0.069	0.076	132	3.0	-0.214	-0.289	-0.311	-0.248	-0.253
56	6.0	-0.084	-0.004	0.009	0.020	0.030	133	10.0	-0.206	-0.246	-0.260	-0.261	-0.250
57	15.0	-0.143	-0.159	-0.156	-0.150	-0.146	134	27.5	-0.214	-0.312	-0.390	-0.375	-0.379
58	27.5	-0.197	-0.235	-0.231	-0.259	-0.273	135	41.0	-0.207	-0.337	-0.391	-0.451	-0.475
59	40.0	-0.206	-0.276	-0.301	-0.317	-0.340	136	52.5	-0.214	-0.290	-0.351	-0.490	-0.591
60	50.0	-0.197	-0.234	-0.253	-0.264	-0.286	137	62.5	-0.104	-0.104	-0.104	-0.080	-0.343
61	50.0	-0.149	-0.191	-0.215	-0.230	-0.259	138	72.5	-0.083	-0.083	-0.086	-0.076	-0.311
62	67.5	-0.129	-0.154	-0.156	-0.067	-0.284	139	84.0	0.061	0.069	0.072	0.099	0.090
63	86.5	0.107	0.113	0.109	0.111	0.099	140	94.0	0.097	0.093	0.094	0.097	0.096
64	94.5	0.070	0.068	0.064	0.061	0.040							
65	2.0	-0.201	0.037	0.055	0.073	0.089	141	3.0	-0.214	-0.289	-0.311	-0.248	-0.253
66	6.0	-0.064	0.009	0.016	0.046	0.066	142	10.0	-0.200	-0.249	-0.296	-0.290	-0.288
67	15.0	-0.113	-0.136	-0.136	-0.139	-0.120	143	27.5	-0.214	-0.289	-0.311	-0.248	-0.253
68	27.5	-0.173	-0.215	-0.234	-0.261	-0.297	144	41.0	-0.214	-0.289	-0.311	-0.248	-0.253
69	40.0	-0.197	-0.250	-0.275	-0.297	-0.309	145	52.5	-0.214	-0.290	-0.351	-0.490	-0.591
70	50.0	-0.166	-0.209	-0.222	-0.236	-0.268	146	62.5	-0.104	-0.104	-0.104	-0.080	-0.343
71	59.0	-0.111	-0.160	-0.187	-0.206	-0.243	147	72.5	-0.083	-0.083	-0.086	-0.076	-0.311
72	67.5	-0.097	-0.159	-0.176	-0.189	-0.207	148	84.0	0.061	0.069	0.072	0.099	0.090
73	77.5	0.087	0.097	0.093	0.097	0.090	149	94.0	-0.003	-0.007	-0.004	-0.004	-0.004
74	87.5	---	---	---	---	---							
75	96.0	0.090	0.087	0.089	0.090	0.096							
76	2.0	-0.147	0.011	0.017	0.040	0.069	150	3.0	-0.199	-0.200	-0.200	-0.177	-0.180
77	6.0	-0.039	-0.006	-0.009	0.013	0.010	151	10.0	-0.169	-0.173	-0.169	-0.159	-0.139
78	15.0	-0.117	-0.131	-0.130	-0.130	-0.130	152	27.5	-0.194	-0.217	-0.213	-0.216	-0.190
79	27.5	-0.181	-0.221	-0.236	-0.240	-0.240	153	41.0	-0.214	-0.290	-0.351	-0.490	-0.591
80	40.0	-0.186	-0.261	-0.290	-0.310	-0.310	154	52.5	-0.214	-0.290	-0.351	-0.490	-0.591
81	50.0	-0.193	-0.241	-0.261	-0.261	-0.261	155	62.5	-0.104	-0.104	-0.104	-0.080	-0.343
82	67.5	-0.161	-0.213	-0.231	-0.231	-0.231	156	72.5	-0.083	-0.083	-0.086	-0.076	-0.311
83	87.5	-0.092	-0.093	-0.064	-0.071	-0.079	157	84.0	0.061	0.069	0.072	0.099	0.090
84	96.3	0.083	0.079	0.075	0.075	0.095							
85	94.2	---	---	---	---	---							

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TABLE 56

$\alpha = -30^\circ, \beta_{th} = -10.0^\circ, \alpha = 10^\circ$

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Table with columns for Tube, Percent chord, Mach Number (0.60, 0.80, 0.85, 0.90, 0.925, 0.96) for UPPER SURFACE and LOWER SURFACE. Rows include tube numbers 1, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200.

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TABLE 56

$[A = -30^\circ, \alpha = -5.0^\circ, \beta = -2^\circ]$

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UPPER SURFACE						LOWER SURFACE							
Tube	Per-cent chord	Mesh Number					Tube	Per-cent chord	Mesh Number				
		0.60	0.80	0.95	0.99				0.60	0.80	0.95	0.99	
A 1	2.0	---	---	---	---		86	5.0	---	---	---	---	
2	6.0	---	---	---	---		87	10.0	---	---	---	---	
3	15.0	---	---	---	---		88	25.0	---	---	---	---	
4	27.5	---	---	---	---		89	41.0	---	---	---	---	
5	40.0	---	---	---	---		90	62.5	---	---	---	---	
6	50.0	-0.181	-0.201	-0.196	-0.228		91	62.6	-0.063	-0.068	-0.040	-0.014	
7	59.0	-0.153	-0.170	-0.173	-0.181		92	72.5	-0.023	-0.013	-0.005	0.036	
8	67.5	-0.100	-0.083	---	-0.071		93	84.0	---	---	---	---	
9	77.5	---	---	---	---		94	94.0	---	---	---	---	
10	87.6	---	---	---	---								
11	96.0	---	---	---	---								
B12	2.0	.451	.485	.477	.476		95	5.0	-1.098	-0.911	-0.759	-0.571	
13	6.0	.133	.152	.150	.151		96	10.0	-0.778	-0.709	-0.608	-0.506	
14	15.0	-0.073	-0.105	-0.134	-0.135		97	25.0	-0.317	-0.304	-0.265	-0.249	
15	27.5	-0.184	-0.250	-0.293	-0.334		98	41.0	-0.263	-0.206	-0.133	-0.173	
16	40.0	-0.236	-0.309	-0.369	-0.403		99	62.5	-0.126	-0.075	-0.075	-0.287	
17	50.0	-0.296	-0.390	-0.480	---		100	62.5	-0.117	-0.123	-0.116	-0.042	
18	59.0	-0.300	-0.346	-0.376	---		101	72.5	-0.041	-0.030	-0.021	0.029	
19	67.5	-0.184	-0.157	-0.199	-0.105		102	86.5	0.047	0.051	0.070	0.110	
20	77.5	-0.062	-0.067	-0.063	-0.035		103	94.5	0.104	0.117	0.128	0.169	
21	86.0	0.047	0.046	0.049	0.077								
22	95.3	---	---	---	---								
C25	2.0	.435	.479	.484	.491		104	5.0	-0.679	---	-0.666	-0.739	
24	6.0	.125	.141	.148	.148		105	10.0	-0.411	-0.413	-0.404	-0.417	
25	15.0	-0.039	-0.036	-0.036	-0.025		106	25.0	-0.398	-0.421	-0.404	-0.420	
26	27.5	-0.163	-0.168	-0.166	-0.159		107	41.0	-0.270	-0.304	-0.368	-0.444	
27	40.0	-0.238	-0.297	-0.345	-0.380		108	62.5	-0.233	-0.280	-0.300	-0.448	
28	50.0	-0.238	-0.257	-0.245	-0.246		109	62.5	-0.161	-0.180	-0.179	-0.266	
29	59.0	-0.207	-0.228	-0.229	-0.213		110	72.5	-0.056	-0.059	-0.034	0.028	
30	67.5	-0.150	-0.159	-0.241	-0.206		111	85.1	0.094	0.038	-0.041	0.076	
31	77.5	-0.069	-0.074	-0.076	-0.076		112	94.6	0.077	0.068	0.104	0.123	
32	86.0	0.037	0.044	0.040	0.061								
33	95.3	---	---	---	---								
D44	2.0	.373	.440	.448	.440		113	5.0	-0.601	-0.640	-0.640	-0.721	
35	6.0	-0.098	-0.080	-0.089	-0.017		114	10.0	-0.384	-0.368	-0.340	-0.366	
36	15.0	-0.147	-0.171	-0.180	-0.156		115	25.0	-0.308	-0.351	-0.343	-0.335	
37	27.5	-0.289	-0.272	-0.303	-0.306		116	41.0	-0.204	-0.236	-0.275	-0.271	
38	40.0	-0.289	-0.286	-0.304	-0.307		117	62.5	-0.236	-0.303	-0.347	-0.313	
39	50.0	-0.186	-0.186	-0.273	-0.303		118	62.5	-0.153	-0.187	-0.213	-0.209	
40	67.5	---	---	---	---		119	72.5	-0.064	-0.060	-0.090	-0.112	
41	77.5	-0.105	-0.100	-0.079	-0.060		120	87.4	0.048	0.050	0.068	0.088	
42	87.5	0.018	0.014	0.005	-0.063		121	94.2	0.076	0.071	0.069	0.043	
43	94.2	0.074	0.074	0.068	0.061								
E44	2.0	.398	.454	.463	.475		122	5.0	-0.535	-0.703	-0.601	-0.709	
45	6.0	.137	.170	.191	.200		123	10.0	-0.358	-0.456	-0.347	-0.380	
46	15.0	-0.050	-0.040	-0.036	-0.020		124	25.0	-0.320	-0.430	-0.312	-0.363	
47	27.5	-0.149	-0.169	-0.176	-0.173		125	41.0	-0.290	-0.394	-0.467	-0.366	
48	40.0	-0.214	-0.257	-0.279	-0.264		126	62.5	-0.201	-0.280	-0.335	-0.446	
49	50.0	-0.213	-0.259	-0.285	-0.302		127	62.5	-0.160	-0.197	-0.214	-0.179	
50	59.0	-0.184	-0.204	-0.245	-0.261		128	72.5	-0.081	-0.103	-0.116	-0.111	
51	67.5	-0.141	-0.183	-0.209	-0.206		129	79.0	-0.059	-0.041	-0.050	-0.042	
52	77.5	-0.090	-0.071	-0.071	-0.070		130	85.3	0.031	0.024	0.020	0.022	
53	86.5	0.134	0.136	0.131	0.123		131	94.1	0.000	0.073	0.071	0.076	
54	95.5	0.068	0.070	0.075	0.063								
F58	2.0	.410	.468	.473	.478		132	5.0	-0.557	0.727	-0.753	-0.678	
56	6.0	.146	.180	.193	.203		133	10.0	-0.323	0.465	-0.321	-0.364	
57	15.0	-0.036	-0.027	-0.022	-0.015		134	25.0	-0.316	-0.414	-0.302	-0.366	
58	27.5	-0.137	-0.156	-0.163	-0.166		135	41.0	-0.287	-0.390	-0.449	-0.360	
59	40.0	-0.200	-0.230	-0.260	-0.278		136	62.5	-0.247	-0.312	-0.363	-0.465	
60	50.0	-0.191	-0.232	-0.255	-0.272		137	62.5	-0.180	-0.214	-0.237	-0.244	
61	59.0	-0.154	-0.185	-0.205	-0.215		138	72.5	-0.111	-0.137	-0.152	-0.152	
62	67.5	-0.113	-0.153	-0.175	-0.190		139	83.4	-0.043	-0.054	-0.062	-0.061	
63	86.5	0.067	0.067	0.097	0.071		140	94.0	0.046	0.044	0.042	0.041	
64	94.5	0.091	0.086	0.081	0.043								
G65	2.0	.400	.466	.468	.484		141	5.0	-0.500	-0.626	-0.660	-0.610	
66	6.0	.154	.187	.199	.211		142	10.0	-0.363	-0.439	-0.430	-0.475	
67	15.0	-0.050	-0.042	-0.049	-0.031		143	25.0	-0.310	-0.401	-0.469	-0.391	
68	27.5	-0.151	-0.143	-0.154	-0.152		144	41.0	-0.287	-0.366	-0.439	-0.404	
69	40.0	-0.180	-0.205	-0.220	-0.269		145	62.5	-0.240	-0.308	-0.350	-0.429	
70	50.0	-0.177	-0.218	-0.243	-0.258		146	62.6	-0.170	-0.191	-0.243	-0.269	
71	59.0	-0.154	-0.157	-0.181	-0.196		147	72.5	-0.123	-0.151	-0.176	-0.169	
72	67.5	-0.090	-0.125	-0.177	-0.178		148	84.0	-0.050	-0.073	-0.085	-0.089	
73	77.5	0.021	0.010	0.017	0.011		149	94.0	0.018	0.012	0.007	0.007	
74	87.2	0.097	0.098	0.086	0.090								
75	96.8	0.078	0.089	0.066	0.065								
H77	2.0	.380	.468	.463	.481		150	5.0	-0.477	-0.567	-0.615	-0.663	
77	6.0	.111	.145	.164	.183		151	10.0	-0.296	-0.345	-0.387	-0.408	
78	15.0	-0.030	-0.011	-0.014	-0.001		152	25.0	-0.249	-0.327	-0.371	-0.301	
79	27.5	-0.131	-0.143	-0.157	-0.153		153	41.0	-0.293	-0.330	-0.389	-0.390	
80	40.0	-0.166	-0.208	-0.250	-0.256		154	62.5	-0.229	-0.290	-0.340	-0.416	
81	60.0	-0.194	-0.245	-0.277	-0.303		155	62.5	-0.154	-0.195	-0.225	-0.256	
82	59.0	-0.151	-0.195	-0.225	-0.247		156	72.5	-0.097	-0.118	-0.135	-0.145	
83	67.5	-0.043	-0.077	-0.125	-0.170		157	84.5	0.037	0.026	0.015	-0.070	
84	86.3	0.036	0.016	0.018	0.017								
85	94.2	---	---	---	---								

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TABLE 99

$\Delta = -30^\circ, \delta_{\infty} = -5.0^\circ, \alpha = 0^\circ$

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Tube	Per-cent chord	UPPER SURFACE						LOWER SURFACE					
		Mach Number						Mach Number					
		0.60	0.80	0.95	0.99	0.995	0.96	0.60	0.80	0.95	0.99	0.995	0.96
A 1	6.0							86	5.0				
4	6.0							87	10.0				
5	10.0							88	10.0				
6	27.5							89	41.0				
7	40.0							90	84.0	-0.102	-0.123	-0.123	-0.106
8	60.0	-0.012	-0.237	-0.230	-0.214	-0.209	-0.697	91	62.6	-0.063	-0.062	-0.060	-0.047
9	86.0	-0.171	-0.175	-0.171	-0.159	-0.157	-0.699	92	72.5	-0.013	-0.006	-0.002	0.010
10	97.5	-0.103	-0.100	-0.095	-0.091	-0.116	-1.495	93	84.0				
11	97.6							94	94.0				
11	96.0												
12	6.0							95	5.0	-0.221	-0.268	-0.268	-0.274
13	6.0							96	10.0	-0.184	-0.263	-0.270	-0.261
14	15.0							97	25.0	-0.207	-0.285	-0.260	-0.261
15	27.0							98	41.0	-0.208	-0.296	-0.290	-0.266
16	40.0	-0.310	-0.306	-0.270	-0.262	-0.269	-0.993	99	62.6	-0.166	-0.205	-0.213	-0.201
17	50.0	-0.284	-0.280	-0.262	-0.240	-0.275	-0.880	100	84.0	-0.101	-0.109	-0.102	-0.086
18	60.0	-0.238	-0.278	-0.232	-0.225	-0.213	-0.747	101	94.0	-0.017	-0.016	-0.014	0.001
19	67.5	-0.149	-0.165	-0.151	-0.150	-0.107	-0.712	102	84.0	0.063	0.074	0.080	0.094
20	77.5	-0.076	-0.071	-0.068	-0.062	-0.091	-1.390	103	64.0	0.122	0.144	0.148	0.159
21	86.0	-0.017	-0.042										
22	85.5												
23	4.0							104	5.0	-0.149	-0.211	-0.222	-0.229
24	6.0							105	10.0	-0.181	-0.275	-0.287	-0.283
25	15.0							106	25.0	-0.208	-0.290	-0.265	-0.263
26	27.0							107	41.0	-0.200	-0.268	-0.268	-0.270
27	40.0	-0.296	-0.273	-0.210	-0.205	-0.212	-0.822	108	62.6	-0.179	-0.211	-0.206	-0.178
28	50.0	-0.268	-0.267	-0.213	-0.208	-0.211	-0.682	109	84.0	-0.132	-0.159	-0.166	-0.159
29	60.0	-0.255	-0.234	-0.224	-0.205	-0.198	-0.709	110	94.0	-0.006	-0.018	-0.020	-0.002
30	67.5	-0.201	-0.213	-0.184	-0.182	-0.151	-0.625	111	84.0	0.031	0.054	0.057	0.071
31	77.0	-0.083	-0.086	-0.081	-0.080	-0.090	-0.299	112	64.0	0.120	0.140	0.143	0.148
32	86.0	-0.028	-0.033	-0.036	-0.049	-0.111	-1.194						
33	85.5												
34	2.0							113	5.0	-0.198	-0.219	-0.229	-0.242
35	6.0							114	10.0	-0.158	-0.216	-0.232	-0.243
36	15.0							115	25.0	-0.207	-0.281	-0.282	-0.269
37	27.0							116	41.0	-0.212	-0.286	-0.286	-0.279
38	40.0	-0.316	-0.307	-0.240	-0.235	-0.242	-0.997	117	62.6	-0.181	-0.210	-0.216	-0.199
39	50.0	-0.288	-0.273	-0.212	-0.207	-0.214	-0.825	118	84.0	-0.121	-0.168	-0.166	-0.161
40	60.0	-0.260	-0.259	-0.212	-0.201	-0.197	-0.745	119	94.0	-0.012	-0.049	-0.056	-0.078
41	67.5							120	84.0	0.060	0.097	0.097	0.117
42	77.5	-0.076	-0.076	-0.081	-0.085	-0.165	-1.098	121	64.0	0.090	0.090	0.087	0.083
43	86.0	-0.005	0.000	-0.006	-0.029	-0.060	-0.076						
44	84.2	0.070	0.068	0.062	0.045	0.010	-0.002						
45	2.0							122	5.0	-0.193	-0.206	-0.225	-0.237
46	6.0							123	10.0	-0.143	-0.178	-0.189	-0.202
47	15.0							124	25.0	-0.196	-0.276	-0.291	-0.295
48	27.0							125	41.0	-0.210	-0.281	-0.281	-0.274
49	40.0	-0.301	-0.297	-0.231	-0.226	-0.236	-0.992	126	62.6	-0.168	-0.214	-0.214	-0.201
50	50.0	-0.278	-0.268	-0.210	-0.205	-0.212	-0.822	127	84.0	-0.120	-0.169	-0.169	-0.161
51	60.0	-0.231	-0.232	-0.182	-0.178	-0.180	-0.745	128	94.0	-0.077	-0.069	-0.061	-0.045
52	67.5	-0.175	-0.175	-0.159	-0.152	-0.112	-0.672	129	76.0	0.006	-0.001	-0.005	-0.006
53	77.5	-0.044	-0.049	-0.076	-0.081	-0.102	-0.362	130	64.0	0.060	0.099	0.097	0.099
54	86.0	0.013	0.008	0.000	0.013	0.044	0.049	131	64.0	0.097	0.100	0.096	0.099
54	85.5	0.067	0.060	0.056	0.055	0.049	-0.002						
55	2.0							132	5.0	-0.194	-0.215	-0.221	-0.238
56	6.0							133	10.0	-0.148	-0.175	-0.187	-0.190
57	15.0							134	25.0	-0.203	-0.282	-0.293	-0.297
58	27.0							135	41.0	-0.231	-0.276	-0.281	-0.278
59	40.0	-0.280	-0.271	-0.211	-0.206	-0.215	-0.991	136	62.6	-0.175	-0.214	-0.217	-0.207
60	50.0	-0.251	-0.240	-0.182	-0.178	-0.186	-0.822	137	84.0	-0.148	-0.195	-0.194	-0.186
61	60.0	-0.204	-0.213	-0.182	-0.180	-0.146	-0.745	138	94.0	-0.114	-0.157	-0.154	-0.165
62	67.5	-0.175	-0.184	-0.180	-0.178	-0.128	-0.712	139	84.0	0.030	0.026	0.032	0.029
63	77.5	-0.046	-0.055	0.004	0.004	0.040	-0.060	140	64.0	0.098	0.096	0.095	0.094
64	86.0	0.011	0.013	0.015	0.014	0.040	-0.060						
64	84.3	0.051	0.053	0.045	0.044	0.040	-0.002						
65	2.0							141	5.0	-0.117	-0.113	-0.108	-0.107
66	6.0							142	10.0	-0.163	-0.189	-0.199	-0.182
67	15.0							143	25.0	-0.205	-0.282	-0.277	-0.299
68	27.0							144	41.0	-0.220	-0.271	-0.280	-0.285
69	40.0	-0.294	-0.280	-0.210	-0.205	-0.212	-0.997	145	62.6	-0.197	-0.242	-0.270	-0.291
70	50.0	-0.268	-0.261	-0.214	-0.212	-0.187	-0.822	146	84.0	-0.157	-0.200	-0.229	-0.255
71	60.0	-0.211	-0.210	-0.169	-0.168	-0.146	-0.745	147	94.0	-0.124	-0.171	-0.169	-0.160
72	67.5	-0.150	-0.168	-0.162	-0.161	-0.132	-0.672	148	84.0	0.017	-0.017	-0.021	-0.022
73	77.0	0.091	0.096	0.092	0.099	0.096	0.096	149	64.0	0.017	0.017	0.017	0.017
74	87.2	0.076	0.081	0.074	0.085	0.084	0.084	150	5.0	-0.131	-0.189	-0.131	-0.132
75	96.0	0.050	0.062	0.058	0.058	0.077	0.071	151	10.0	-0.131	-0.134	-0.118	-0.107
77	2.0							152	25.0	-0.167	-0.213	-0.208	-0.195
78	10.0							153	41.0	-0.215	-0.284	-0.295	-0.315
79	27.0							154	62.6	-0.195	-0.247	-0.264	-0.270
80	40.0							155	84.0	-0.131	-0.167	-0.188	-0.205
81	50.0							156	94.0	-0.067	-0.104	-0.117	-0.128
82	60.0							157	64.0	0.046	0.087	0.086	0.088
83	67.5												
84	76.5												
84	94.2												
85	94.2												

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TABLE 63

$$[A = -30^\circ, \beta_{00} = 5.0^\circ, \alpha = -2^\circ]$$

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		UPPER SURFACE				LOWER SURFACE					
Tube	Per-cent chord	Mach Number				Tube	Per-cent chord	Mach Number			
		0.60	0.80	0.85	0.89			0.60	0.80	0.85	0.89
A 1	2.0	---	---	---	---	86	3.0	---	---	---	---
2	6.0	---	---	---	---	87	10.0	---	---	---	---
3	15.0	---	---	---	---	88	25.0	---	---	---	---
4	27.5	---	---	---	---	89	41.0	---	---	---	---
5	40.0	---	---	---	---	90	52.5	-0.108	-0.104	-0.054	-0.150
6	50.0	-0.191	-0.225	-0.235	-0.228	91	52.5	-0.079	-0.068	-0.066	-0.060
7	58.0	-0.157	-0.171	-0.171	-0.174	92	72.5	-0.023	-0.048	0.000	0.025
8	67.5	-0.048	-0.094	-0.092	-0.069	93	84.0	---	---	---	---
9	77.5	---	---	---	---	94	84.0	---	---	---	---
13	87.6	---	---	---	---						
11	96.0	---	---	---	---						
12	2.0	.087	.118	.129	.145	95	3.0	-.842	-1.009	-1.000	-.864
13	6.0	.086	.099	.091	.078	96	10.0	-.392	-.698	-.993	-.942
14	15.0	-.112	-.137	-.180	-.189	97	25.0	-.260	-.377	-.619	-.653
15	27.5	-.008	-.090	-.149	-.194	98	41.0	-.249	-.277	-.211	-.639
16	40.0	-.052	-.113	-.134	-.134	99	52.5	-.187	-.197	-.178	-.087
17	50.0	-.044	-.111	-.149	-.199	100	52.5	-.192	-.130	-.104	-.014
18	59.0	-.008	-.059	-.100	-.149	101	72.5	-.038	-.026	-.016	-.032
19	67.5	-.137	-.129	-.129	-.065	102	86.5	.053	.048	.078	.168
20	77.5	-.046	-.094	-.095	-.023	103	84.0	.115	.108	.136	.163
21	88.0	.053	.057	.062	.074						
22	95.5	---	---	---	---						
23	2.0	.376	.423	.433	.442	104	3.0	-.934	-.734	-.752	-.696
24	6.0	.107	.140	.151	.162	105	10.0	-.394	-.590	-.580	-.648
25	15.0	-.080	-.086	-.097	-.080	106	25.0	-.310	-.435	-.546	-.572
26	27.5	-.193	-.140	-.162	-.172	107	41.0	-.247	-.308	-.444	-.537
27	40.0	-.056	-.137	-.195	-.234	108	52.5	-.203	-.259	-.251	-.245
28	50.0	-.024	-.121	-.195	-.234	109	52.5	-.148	-.167	-.193	-.274
29	59.0	-.021	-.080	-.126	-.164	110	72.5	-.048	-.050	-.037	-.019
30	67.5	-.144	-.126	-.126	-.030	111	88.1	.037	.044	.051	.075
31	77.5	-.071	-.071	-.062	-.089	112	94.6	.099	.107	.111	.122
32	88.0	.038	.038	.040	.048						
33	95.5	---	---	---	---						
34	9.0	.323	.375	.392	.398	113	3.0	-.434	-.647	-.698	-.627
35	15.0	-.082	-.081	-.079	-.072	114	10.0	-.333	-.467	-.483	-.565
36	27.5	-.184	-.200	-.234	-.244	115	25.0	-.300	-.346	-.447	-.530
37	40.0	-.056	-.134	-.194	-.244	116	41.0	-.269	-.351	-.409	-.486
38	50.0	-.027	-.129	-.194	-.246	117	52.5	-.214	-.270	-.317	-.371
39	59.0	-.168	-.165	-.131	-.130	118	52.5	-.138	-.172	-.197	-.282
40	67.5	---	---	---	---	119	72.5	-.052	-.075	-.079	-.119
41	77.5	-.074	-.054	-.060	-.096	120	87.4	.063	.047	-.044	.026
42	87.5	-.010	.043	-.003	-.028	121	94.2	.079	.033	-.073	.050
43	94.2	.079	.070	.066	.086						
44	2.0	.083	.130	.150	.170	122	3.0	-.352	-.441	-.451	-.471
45	6.0	.044	.068	.086	.104	123	10.0	-.246	-.336	-.349	-.370
46	15.0	-.117	-.111	-.117	-.119	124	25.0	-.297	-.327	-.368	-.408
47	27.5	-.212	-.263	-.277	-.278	125	41.0	-.245	-.280	-.318	-.354
48	40.0	-.273	-.356	-.349	-.346	126	52.5	-.175	-.225	-.252	-.289
49	50.0	-.276	-.355	-.342	-.330	127	52.5	-.123	-.141	-.148	-.149
50	59.0	-.239	-.307	-.345	-.343	128	72.5	-.043	-.062	-.072	-.087
51	67.5	-.187	-.262	-.309	-.380	129	78.0	-.003	-.013	-.012	-.031
52	77.5	-.125	-.078	-.047	-.062	130	85.5	.051	.047	.041	.032
53	88.0	.123	.122	.118	.109	131	94.1	.088	.088	.085	.077
54	95.5	.070	.067	.067	.062						
55	2.0	.079	.108	.151	.171	132	3.0	-.356	-.432	-.471	-.478
56	6.0	.041	.067	.087	.107	133	10.0	-.253	-.314	-.339	-.357
57	15.0	-.117	-.136	-.119	-.106	134	25.0	-.239	-.305	-.340	-.394
58	27.5	-.215	-.260	-.270	-.268	135	41.0	-.179	-.270	-.302	-.330
59	40.0	-.282	-.362	-.348	-.349	136	52.5	-.163	-.214	-.243	-.274
60	50.0	-.281	-.367	-.343	-.346	137	52.5	-.095	-.078	-.074	-.074
61	59.0	-.259	-.329	-.345	-.343	138	72.5	-.036	-.030	-.008	-.006
62	67.5	-.222	-.286	-.325	-.382	139	83.4	.126	.131	.130	.129
63	77.5	-.060	-.064	-.053	-.049	140	94.0	.086	.083	.078	.071
64	84.6	.040	.043	.042	.042						
65	2.0	.096	.130	.173	.193	141	3.0	-.309	-.376	-.399	-.386
66	6.0	.047	.082	.103	.123	142	10.0	-.267	-.316	-.348	-.368
67	15.0	-.105	-.103	-.094	-.072	143	25.0	-.200	-.292	-.311	-.352
68	27.5	-.207	-.261	-.247	-.243	144	41.0	-.187	-.245	-.274	-.303
69	40.0	-.278	-.343	-.371	-.351	145	52.5	-.140	-.192	-.220	-.252
70	50.0	-.289	-.364	-.364	-.360	146	52.5	-.070	-.069	-.059	-.055
71	59.0	-.256	-.319	-.354	-.364	147	72.5	.003	.043	.039	.037
72	67.5	-.222	-.275	-.305	-.346	148	84.0	.141	.142	.144	.143
73	77.5	-.179	-.230	-.243	-.255	149	94.0	.104	.104	.103	.100
74	87.5	-.152	-.172	-.179	-.096						
75	96.6	.077	-.119	.051	.045						
76	2.0	.061	.115	.137	.160	150	3.0	-.350	-.413	-.437	-.443
77	6.0	.041	.077	.095	.117	151	10.0	-.209	-.253	-.266	-.266
78	15.0	-.081	-.078	-.067	-.054	152	25.0	-.185	-.232	-.246	-.247
79	27.5	-.195	-.203	-.203	-.200	153	41.0	-.139	-.209	-.212	-.249
80	40.0	-.242	-.294	-.296	-.301	154	52.5	-.157	-.215	-.247	-.306
81	50.0	-.255	-.311	-.317	-.305	155	52.5	-.067	-.100	-.104	-.111
82	59.0	-.217	-.246	-.285	-.306	156	72.5	.044	.032	.046	.080
83	67.5	-.169	-.207	-.225	-.247	157	84.0	.090	.045	.038	.033
84	88.0	-.052	-.075	-.086	-.096						
85	94.9	---	---	---	---						

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TABLE 65

[$\alpha = -10^\circ$, $\alpha_{h1} = 5.0^\circ$, $\alpha = 2^\circ$]

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		UPPER SURFACE						LOWER SURFACE							
Tube	Per-cent chord	Mach Number						Tube	Per-cent chord	Mach Number					
		0.60	0.80	0.85	0.89	0.925	0.96			0.60	0.80	0.85	0.89	0.925	0.96
A 1	2.0	---	---	---	---	---	---								
2	6.0	---	---	---	---	---	---								
3	15.0	---	---	---	---	---	---								
4	27.5	---	---	---	---	---	---								
5	40.0	---	---	---	---	---	---								
6	50.0	-0.283	-0.293	-0.296	-0.305	-0.315	-0.325								
7	59.0	-0.181	-0.181	-0.181	-0.181	-0.181	-0.181								
8	67.5	-0.108	-0.108	-0.108	-0.108	-0.108	-0.108								
9	77.5	---	---	---	---	---	---								
13	87.5	---	---	---	---	---	---								
11	95.0	---	---	---	---	---	---								
812	2.0	-1.150	-0.991	-0.908	-0.853	-0.807	-0.761								
14	6.0	-0.770	-1.048	-0.881	-0.803	-0.757	-0.711								
15	15.0	-0.907	-1.093	-0.944	-0.818	-0.768	-0.722								
16	27.5	-0.937	-1.070	-0.896	-0.807	-0.757	-0.711								
17	40.0	-0.993	-1.069	-0.900	-0.803	-0.753	-0.707								
18	50.0	-0.981	-1.077	-0.910	-0.813	-0.763	-0.717								
19	59.0	-0.978	-1.081	-0.910	-0.813	-0.763	-0.717								
20	67.5	-0.988	-1.085	-0.910	-0.813	-0.763	-0.717								
21	77.5	-0.998	-1.089	-0.910	-0.813	-0.763	-0.717								
22	87.5	-0.998	-1.089	-0.910	-0.813	-0.763	-0.717								
23	95.0	-0.998	-1.089	-0.910	-0.813	-0.763	-0.717								
24	2.0	-0.693	-0.611	-0.579	-0.553	-0.527	-0.501								
25	6.0	-0.944	-0.644	-0.571	-0.547	-0.521	-0.495								
26	15.0	-0.901	-0.676	-0.617	-0.593	-0.567	-0.541								
27	27.5	-0.869	-0.784	-0.731	-0.707	-0.681	-0.655								
28	40.0	-0.843	-0.686	-0.641	-0.617	-0.591	-0.565								
29	50.0	-0.817	-0.621	-0.579	-0.555	-0.529	-0.503								
30	59.0	-0.817	-0.621	-0.579	-0.555	-0.529	-0.503								
31	67.5	-0.817	-0.621	-0.579	-0.555	-0.529	-0.503								
32	77.5	-0.817	-0.621	-0.579	-0.555	-0.529	-0.503								
33	87.5	-0.817	-0.621	-0.579	-0.555	-0.529	-0.503								
34	95.0	-0.817	-0.621	-0.579	-0.555	-0.529	-0.503								
35	2.0	-0.599	-0.577	-0.548	-0.519	-0.491	-0.462								
36	6.0	-0.846	-0.630	-0.574	-0.548	-0.522	-0.496								
37	15.0	-0.868	-0.661	-0.611	-0.585	-0.559	-0.533								
38	27.5	-0.848	-0.663	-0.611	-0.585	-0.559	-0.533								
39	40.0	-0.848	-0.663	-0.611	-0.585	-0.559	-0.533								
40	50.0	-0.848	-0.663	-0.611	-0.585	-0.559	-0.533								
41	59.0	-0.848	-0.663	-0.611	-0.585	-0.559	-0.533								
42	67.5	-0.848	-0.663	-0.611	-0.585	-0.559	-0.533								
43	77.5	-0.848	-0.663	-0.611	-0.585	-0.559	-0.533								
44	87.5	-0.848	-0.663	-0.611	-0.585	-0.559	-0.533								
45	95.0	-0.848	-0.663	-0.611	-0.585	-0.559	-0.533								
46	2.0	-0.690	-0.685	-0.681	-0.676	-0.671	-0.666								
47	6.0	-0.971	-0.709	-0.697	-0.694	-0.691	-0.688								
48	15.0	-0.954	-0.666	-0.616	-0.591	-0.565	-0.539								
49	27.5	-0.927	-0.681	-0.619	-0.595	-0.569	-0.543								
50	40.0	-0.907	-0.698	-0.628	-0.603	-0.577	-0.551								
51	50.0	-0.880	-0.691	-0.634	-0.609	-0.583	-0.557								
52	59.0	-0.865	-0.741	-0.659	-0.634	-0.608	-0.582								
53	67.5	-0.851	-0.759	-0.659	-0.634	-0.608	-0.582								
54	77.5	-0.837	-0.777	-0.659	-0.634	-0.608	-0.582								
55	87.5	-0.823	-0.794	-0.659	-0.634	-0.608	-0.582								
56	95.0	-0.809	-0.810	-0.659	-0.634	-0.608	-0.582								
57	2.0	-0.683	-0.660	-0.630	-0.601	-0.572	-0.543								
58	6.0	-0.941	-0.681	-0.608	-0.583	-0.557	-0.531								
59	15.0	-0.904	-0.690	-0.608	-0.583	-0.557	-0.531								
60	27.5	-0.873	-0.690	-0.608	-0.583	-0.557	-0.531								
61	40.0	-0.847	-0.690	-0.608	-0.583	-0.557	-0.531								
62	50.0	-0.820	-0.690	-0.608	-0.583	-0.557	-0.531								
63	59.0	-0.820	-0.690	-0.608	-0.583	-0.557	-0.531								
64	67.5	-0.820	-0.690	-0.608	-0.583	-0.557	-0.531								
65	77.5	-0.820	-0.690	-0.608	-0.583	-0.557	-0.531								
66	87.5	-0.820	-0.690	-0.608	-0.583	-0.557	-0.531								
67	95.0	-0.820	-0.690	-0.608	-0.583	-0.557	-0.531								
68	2.0	-0.599	-0.560	-0.536	-0.510	-0.484	-0.458								
69	6.0	-0.916	-0.659	-0.598	-0.573	-0.547	-0.521								
70	15.0	-0.880	-0.666	-0.616	-0.591	-0.565	-0.539								
71	27.5	-0.841	-0.667	-0.616	-0.591	-0.565	-0.539								
72	40.0	-0.815	-0.687	-0.616	-0.591	-0.565	-0.539								
73	50.0	-0.788	-0.696	-0.616	-0.591	-0.565	-0.539								
74	59.0	-0.762	-0.705	-0.616	-0.591	-0.565	-0.539								
75	67.5	-0.736	-0.728	-0.616	-0.591	-0.565	-0.539								
76	77.5	-0.710	-0.741	-0.616	-0.591	-0.565	-0.539								
77	87.5	-0.684	-0.759	-0.616	-0.591	-0.565	-0.539								
78	95.0	-0.658	-0.787	-0.616	-0.591	-0.565	-0.539								
79	2.0	-0.550	-0.480	-0.461	-0.447	-0.433	-0.419								
80	6.0	-0.808	-0.480	-0.431	-0.417	-0.403	-0.389								
81	15.0	-0.769	-0.480	-0.417	-0.403	-0.389	-0.375								
82	27.5	-0.730	-0.480	-0.417	-0.403	-0.389	-0.375								
83	40.0	-0.691	-0.480	-0.417	-0.403	-0.389	-0.375								
84	50.0	-0.652	-0.480	-0.417	-0.403	-0.389	-0.375								
85	59.0	-0.613	-0.480	-0.417	-0.403	-0.389	-0.375								
86	67.5	-0.574	-0.480	-0.417	-0.403	-0.389	-0.375								
87	77.5	-0.535	-0.480	-0.417	-0.403	-0.389	-0.375								
88	87.5	-0.496	-0.480	-0.417	-0.403	-0.389	-0.375								
89	95.0	-0.457	-0.480	-0.417	-0.403	-0.389	-0.375								
89	3.0	---	---	---	---	---	---								
90	10.0	---	---	---	---	---	---								
91	15.0	---	---	---	---	---	---								
92	27.5	---	---	---	---	---	---								
93	40.0	---	---	---	---	---	---								
94	50.0	---	---	---	---	---	---								
95	59.0	---	---	---	---	---	---								
96	67.5	---	---	---	---	---	---								
97	77.5	---	---	---	---	---	---								
98	87.5	---	---	---	---	---	---								
99	95.0	---	---	---	---	---	---								
100	2.0	0.194	0.327	0.386	0.433	0.470	0.507								
101	6.0	0.096	0.066	0.096	0.119	0.144	0.168								
102	15.0	-0.099	-0.104	-0.136	-0.161	-0.186	-0.211								
103	27.5	-0.119	-0.159	-0.187	-0.211	-0.236	-0.260								
104	40.0	-0.109	-0.137	-0.158	-0.182	-0.206	-0.230								
105	50.0	-0.069	-0.077	-0.084	-0.091	-0.098	-0.105								
106	59.0	0.007	0.007	0.008	0.007	0.007	0.007								
107	67.5	0.080	0.090	0.087	0.085	0.083	0.081								
108	77.5	0.137	0.151	0.159	0.166	0.173	0.180								
109	87.5	0.201	0.206	0.204	0.205	0.205	0.205								
110	95.0	0.265	0.260	0.257	0.258	0.258	0.258								
111	2.0	-0.501	-0.437	-0.417	-0.391	-0.365	-0.339								
112	6.0	-0.759	-0.437	-0.391	-0.365	-0.339	-0.313								
113	15.0	-0.810	-0.437	-0.391	-0.365	-0.339	-0.313								
114	27.5	-0.861	-0.437	-0.391	-0.365	-0.339	-0.313								
115	40.0	-0.912	-0.437	-0.391	-0.365	-0.339	-0.313								
116	50.0	-0.963	-0.437	-0.391	-0.365	-0.339	-0.313								
117	59.0	-0.963	-0.437	-0.391	-0.365	-0.339	-0.313								
118	67.5	-0.963	-0.437	-0.391	-0.365	-0.339	-0.313								
119	77.5	-0.963	-0.437	-0.391	-0.365	-0.339	-0.313								
120	87.5	-0.963	-0.437	-0.391	-0.365	-0.339	-0.313								
121	95.0	-0.963	-0.437	-0.391	-0.365	-0.339	-0.313								
122	2.0	0.132	0.375	0.433	0.480	0.527	0.574								
123	6.0	0.152	0.158	0.146	0.159	0.171	0.183								
124	15.0	0.001	0.013	0.008	0.019	0.030	0.041								
125	27.5	-0.070	-0.083	-0.100	-0.121	-0.142	-0.163								
126	40.0	-0.092	-0.091	-0.077	-0.094	-0.116	-0.138								
127	50.0	-0.030	-0.038	-0.050	-0.067	-0.084	-0.101								
128	59.0	0.013	0.009	0.006	0.006	0.006	0.006								
129	67.5	0.066	0.068	0.065	0.065	0.065	0.065								
130	77.5	0.101	0.104	0.095	0.094	0.094	0.094								
131	87.5	0.117	0.122	0.111	0.093	0.085	0.085								
132	95.0	0.138	0.140	0.146	0.138	0.130	0.130								
133	2.0	0.139	0.159	0.166	0.131	0.114	0.101								
134	6.0	0.005	0.005	0.000	0.000	0.000	0.000								
135	15.0	0.082	0.066	0.083	0.104	0.113	0.113								
136	27.5	0.061	0.050	0.007	0.083	0.104	0.113								
137	40.0	0.064	0.003	0.018	0.031	0.048	0.065								
138	50.0	0.066	0.019	0.010	0.002	0.007	0.014								
139	59.0	0.116	0.101	0.104	0.106	0.106	0.106								
140	67.5	0.106	0.105	0.095	0.089	0.089	0.089								
141	2.0	0.133	0.160	0.169	0.107	0.101	0.101								
142	6.0	0.023	0.036	0.029	0.045	0.045	0.045								
143	15.0	-0.006	-0.013	-0.008	-0.019	-0.030	-0.041								
144	27.5	-0.049	-0.007	-0.084	-0.100	-0.125	-0.146								
145	40.0	-0.092	-0.085	-0.091	-0.075	-0.060	-0.045								
146	50.0	0.086	0.089	0.089	0.084	0.084	0.084								
147	59.0	0.088	0.089	0.089	0.084	0.084	0.084								
148	67.5	0.086	0.086	0.086	0.084	0.084	0.084								
149	77.5	0.086	0.086	0.086	0.084	0.084	0.084								
150	87.5	0.086	0.086	0.086	0.084	0.084	0.084								
151	95.0	0.086	0.086	0.086	0.084	0.084	0.084								
152	2.0	0.295	0.304	0.290	0.265	0.240	0.215								
153	6.0	0.101	0.107	0.107	0.119	0.119	0.119								

TABLE 66

$\alpha = -3.0^\circ$, $\beta_{min} = 5.0^\circ$, $\alpha = 4^\circ$

CONFIDENTIAL												
Tube	Per-cent chord	UPPER SURFACE					LOWER SURFACE					
		Mach Number					Mach Number					
		0.60	0.80	0.85	0.89	0.925	0.60	0.80	0.85	0.89	0.925	0.96
1	2.0	---	---	---	---	---	---	---	---	---	---	---
2	8.0	---	---	---	---	---	---	---	---	---	---	---
3	15.0	---	---	---	---	---	---	---	---	---	---	---
4	27.5	---	---	---	---	---	---	---	---	---	---	---
5	40.0	---	---	---	---	---	---	---	---	---	---	---
6	50.0	-0.099	-0.368	-0.548	-0.594	-0.569	-0.769	-0.920	-1.006	-1.107	-1.189	-1.254
7	55.0	-0.102	-0.364	-0.501	-0.541	-0.502	-0.702	-0.853	-0.939	-1.040	-1.122	-1.187
8	57.5	-0.130	-0.364	-0.462	-0.502	-0.507	-0.707	-0.858	-0.944	-1.045	-1.127	-1.192
9	57.5	---	---	---	---	---	---	---	---	---	---	---
10	57.5	---	---	---	---	---	---	---	---	---	---	---
11	56.0	---	---	---	---	---	---	---	---	---	---	---
12	2.0	-1.184	-1.213	-1.079	-0.999	-0.789	-0.696	---	---	---	---	---
13	6.0	-1.169	-1.177	-1.009	-0.949	-0.760	-0.647	---	---	---	---	---
14	15.0	-0.931	-0.910	-0.682	-0.702	-0.611	-0.616	---	---	---	---	---
15	27.5	-0.618	-0.595	-0.547	-0.563	-0.504	-0.465	---	---	---	---	---
16	40.0	-0.496	-0.589	-0.516	-0.599	-0.718	-0.806	---	---	---	---	---
17	50.0	-0.376	-0.533	-0.497	-0.598	-0.698	-0.866	---	---	---	---	---
18	50.0	-0.366	-0.479	-0.490	-0.498	-0.577	-0.690	---	---	---	---	---
19	57.5	-0.393	-0.493	-0.508	-0.518	-0.598	-0.709	---	---	---	---	---
20	57.5	-0.096	-0.180	-0.247	-0.268	-0.268	-0.269	---	---	---	---	---
21	56.0	-0.010	-0.093	-0.196	-0.200	-0.206	-0.201	---	---	---	---	---
22	55.5	---	---	---	---	---	---	---	---	---	---	---
23	2.0	-1.453	-1.072	-0.831	-0.643	-0.493	-0.378	---	---	---	---	---
24	6.0	-0.931	-1.147	-0.949	-0.780	-0.647	-0.536	---	---	---	---	---
25	15.0	-0.708	-1.132	-0.921	-0.809	-0.689	-0.609	---	---	---	---	---
26	27.5	-0.606	-0.948	-0.801	-0.864	-0.763	-0.668	---	---	---	---	---
27	40.0	-0.531	-0.918	-0.877	-0.811	-0.761	-0.703	---	---	---	---	---
28	50.0	-0.436	-0.826	-0.826	-0.737	-0.777	-0.703	---	---	---	---	---
29	50.0	-0.390	-0.776	-0.808	-0.686	-0.808	-0.729	---	---	---	---	---
30	57.5	-0.380	-0.796	-0.777	-0.649	-0.791	-0.701	---	---	---	---	---
31	57.5	-0.227	-0.191	-0.190	-0.287	-0.311	-0.280	---	---	---	---	---
32	56.0	-0.013	-0.041	-0.089	-0.089	-0.089	-0.089	---	---	---	---	---
33	55.5	---	---	---	---	---	---	---	---	---	---	---
34	2.0	-1.017	-1.000	-0.789	-0.609	-0.476	-0.372	---	---	---	---	---
35	6.0	-0.695	-1.005	-0.893	-0.760	-0.646	-0.547	---	---	---	---	---
36	15.0	-0.569	-0.801	-0.804	-0.682	-0.605	-0.547	---	---	---	---	---
37	27.5	-0.508	-0.668	-0.664	-0.608	-0.618	-0.573	---	---	---	---	---
38	40.0	-0.473	-0.648	-0.615	-0.577	-0.581	-0.541	---	---	---	---	---
39	50.0	-0.390	-0.430	-0.413	-0.477	-0.500	-0.500	---	---	---	---	---
40	57.5	-0.140	-0.136	-0.120	-0.163	-0.205	-0.205	---	---	---	---	---
41	57.5	-0.033	-0.028	-0.029	-0.087	-0.133	-0.133	---	---	---	---	---
42	57.5	-0.013	-0.016	-0.029	-0.087	-0.133	-0.133	---	---	---	---	---
43	56.0	---	---	---	---	---	---	---	---	---	---	---
44	2.0	-1.071	-1.119	-0.779	-0.699	-0.597	---	---	---	---	---	---
45	6.0	-0.679	-1.117	-0.972	-0.880	-0.779	---	---	---	---	---	---
46	15.0	-0.686	-1.051	-0.921	-0.800	-0.688	---	---	---	---	---	---
47	27.5	-0.596	-0.904	-0.809	-0.684	-0.577	---	---	---	---	---	---
48	40.0	-0.538	-0.789	-0.699	-0.578	-0.469	---	---	---	---	---	---
49	50.0	-0.453	-0.656	-0.553	-0.442	-0.326	---	---	---	---	---	---
50	50.0	-0.366	-0.599	-0.484	-0.333	-0.449	---	---	---	---	---	---
51	57.5	-0.360	-0.577	-0.478	-0.329	-0.450	---	---	---	---	---	---
52	57.5	-0.137	-0.136	-0.116	-0.160	-0.200	---	---	---	---	---	---
53	56.0	-0.007	-0.034	-0.033	-0.105	-0.141	---	---	---	---	---	---
54	55.5	-0.018	-0.044	-0.043	-0.130	-0.197	---	---	---	---	---	---
55	2.0	-1.453	-1.114	-0.871	-0.697	-0.540	---	---	---	---	---	---
56	6.0	-0.875	-1.136	-0.943	-0.777	-0.630	---	---	---	---	---	---
57	15.0	-0.673	-1.071	-0.889	-0.717	-0.571	---	---	---	---	---	---
58	27.5	-0.580	-0.905	-0.746	-0.586	-0.461	---	---	---	---	---	---
59	40.0	-0.503	-0.803	-0.606	-0.404	-0.290	---	---	---	---	---	---
60	50.0	-0.445	-0.680	-0.490	-0.303	-0.200	---	---	---	---	---	---
61	50.0	-0.373	-0.604	-0.413	-0.224	-0.168	---	---	---	---	---	---
62	57.5	-0.280	-0.519	-0.363	-0.197	-0.104	---	---	---	---	---	---
63	56.8	-0.068	-0.061	-0.098	-0.308	-0.568	---	---	---	---	---	---
64	56.0	-0.000	-0.011	-0.010	-0.160	-0.434	---	---	---	---	---	---
65	2.0	-1.240	-0.888	-0.604	-0.485	-0.409	---	---	---	---	---	---
66	6.0	-0.909	-1.080	-0.806	-0.708	-0.637	---	---	---	---	---	---
67	15.0	-0.696	-0.907	-0.673	-0.563	-0.451	---	---	---	---	---	---
68	27.5	-0.547	-0.765	-0.579	-0.466	-0.356	---	---	---	---	---	---
69	40.0	-0.513	-0.717	-0.521	-0.413	-0.303	---	---	---	---	---	---
70	50.0	-0.409	-0.608	-0.409	-0.307	-0.207	---	---	---	---	---	---
71	50.0	-0.305	-0.503	-0.305	-0.203	-0.103	---	---	---	---	---	---
72	57.5	-0.201	-0.300	-0.201	-0.100	-0.061	---	---	---	---	---	---
73	57.5	-0.099	-0.099	-0.097	-0.199	-0.299	---	---	---	---	---	---
74	57.2	-0.061	-0.099	-0.100	-0.198	-0.298	---	---	---	---	---	---
75	56.8	-0.017	-0.082	-0.080	-0.090	-0.014	---	---	---	---	---	---
76	2.0	-0.847	-0.891	-0.784	-0.585	-0.500	---	---	---	---	---	---
77	6.0	-0.709	-0.809	-0.707	-0.477	-0.417	---	---	---	---	---	---
78	15.0	-0.510	-0.616	-0.497	-0.399	-0.313	---	---	---	---	---	---
79	27.5	-0.403	-0.507	-0.390	-0.293	-0.200	---	---	---	---	---	---
80	40.0	-0.303	-0.407	-0.291	-0.193	-0.101	---	---	---	---	---	---
81	50.0	-0.206	-0.309	-0.206	-0.106	-0.061	---	---	---	---	---	---
82	50.0	-0.111	-0.205	-0.105	-0.061	-0.030	---	---	---	---	---	---
83	57.5	-0.099	-0.103	-0.098	-0.199	-0.299	---	---	---	---	---	---
84	56.3	-0.011	-0.171	-0.095	-0.268	-0.408	---	---	---	---	---	---
85	2.0	-0.847	-0.891	-0.784	-0.585	-0.500	---	---	---	---	---	---
86	6.0	-0.709	-0.809	-0.707	-0.477	-0.417	---	---	---	---	---	---
87	15.0	-0.510	-0.616	-0.497	-0.399	-0.313	---	---	---	---	---	---
88	27.5	-0.403	-0.507	-0.390	-0.293	-0.200	---	---	---	---	---	---
89	40.0	-0.303	-0.407	-0.291	-0.193	-0.101	---	---	---	---	---	---
90	50.0	-0.206	-0.309	-0.206	-0.106	-0.061	---	---	---	---	---	---
91	50.0	-0.111	-0.205	-0.105	-0.061	-0.030	---	---	---	---	---	---
92	57.5	-0.099	-0.103	-0.098	-0.199	-0.299	---	---	---	---	---	---
93	56.3	-0.011	-0.171	-0.095	-0.268	-0.408	---	---	---	---	---	---
94	2.0	-0.847	-0.891	-0.784	-0.585	-0.500	---	---	---	---	---	---
95	3.0	-0.977	-0.968	-0.949	-0.899	-0.869	---	---	---	---	---	---
96	10.0	-0.771	-0.758	-0.735	-0.715	-0.700	---	---	---	---	---	---
97	15.0	-0.611	-0.611	-0.600	-0.590	-0.570	---	---	---	---	---	---
98	41.0	-0.460	-0.460	-0.460	-0.460	-0.460	---	---	---	---	---	---
99	41.0	-0.460	-0.460	-0.460	-0.460	-0.460	---	---	---	---	---	---
100	52.8	-0.067	-0.106	-0.143	-0.180	-0.200	---	---	---	---	---	---
101	52.8	-0.050	-0.062	-0.062	-0.062	-0.062	---	---	---	---	---	---
102	72.5	-0.063	-0.043	-0.077	-0.103	-0.110	---	---	---	---	---	---
103	84.0	-0.050	-0.046	-0.046	-0.046	-0.046	---	---	---	---	---	---
104	2.0	-0.995	-0.940	-0.905	-0.895	-0.895	---	---	---	---	---	---
105	10.0	-0.771	-0.758	-0.735	-0.715	-0.700	---	---	---	---	---	---
106	25.0	-0.648	-0.648	-0.648	-0.648	-0.648	---	---	---	---	---	---
107	41.0	-0.460	-0.460	-0.460	-0.460	-0.460	---	---	---	---	---	---
108	52.8	-0.067	-0.106	-0.143	-0.180	-0.200	---	---	---	---	---	---
109	52.8	-0.050	-0.062	-0.062	-0.062	-0.062	---	---	---	---	---	---
110	72.5	-0.063	-0.043	-0.077	-0.103	-0.110	---	---	---	---	---	---
111	84.0	-0.050	-0.046	-0.046	-0.046	-0.046	---	---	---	---	---	---
112	94.0	-0.046	-0.046	-0.046	-0.046	-0.046	---	---	---	---	---	---
113	3.0	-0.933	-0.908	-0.891	-0.841	-0.840	---	---	---	---	---	---
114	10.0	-0.761	-0.770	-0.762	-0.742	-0.742	---	---	---	---	---	---
115	15.0	-0.611	-0.611	-0.611	-0.611	-0.611	---	---	---	---	---	---
116	27.5	-0.460	-0.460	-0.460	-0.460	-0.460	---	---	---	---	---	---
117	41.0	-0.309	-0.309	-0.309	-0.309	-0.309	---	---	---	---	---	---
118	50.0	-0.213	-0.213	-0.213	-0.213	-0.213	---	---	---	---	---	---
119	52.8	-0.067	-0.106	-0.143	-0.180	-0.200	---	---	---	---	---	---
120	72.5	-0.063	-0.043	-0.077	-0.103	-0.110	---	---	---	---	---	---

TABLE 67

$[\alpha = -10^\circ, \delta_n = 5.0^\circ, a = 7^\circ]$

		UPPER SURFACE						LOWER SURFACE							
Tube	Percent chord	Mech Number						Tube	Percent chord	Mech Number					
		0.60	0.80	0.95	0.99	0.995	0.96			0.60	0.80	0.95	0.99	0.995	0.96
1	2.0	---	---	---	---	---	---	86	3.0	---	---	---	---	---	---
2	6.0	---	---	---	---	---	---	87	10.0	---	---	---	---	---	---
3	15.0	---	---	---	---	---	---	88	25.0	---	---	---	---	---	---
4	27.5	---	---	---	---	---	---	89	41.0	---	---	---	---	---	---
5	47.5	---	---	---	---	---	---	90	54.5	-0.016	-0.079	-0.129	-0.169	-0.205	-0.239
6	50.0	-0.307	-0.497	-0.594	-0.679	-0.759	-0.843	91	64.5	-0.019	-0.090	-0.143	-0.183	-0.219	-0.253
7	54.0	-0.425	-0.585	-0.599	-0.597	-0.605	-0.742	92	72.5	-0.019	-0.061	-0.117	-0.157	-0.191	-0.221
8	57.5	-0.398	-0.538	-0.591	-0.591	-0.604	-0.771	93	84.0	---	---	---	---	---	---
9	57.5	---	---	---	---	---	---	94	94.0	---	---	---	---	---	---
10	57.5	---	---	---	---	---	---								
11	56.0	---	---	---	---	---	---								
12	56.0	---	---	---	---	---	---								
13	2.0	-0.111	-0.246	-0.245	-0.246	-0.007	-0.997	95	3.0	0.746	0.711	0.716	0.704	0.698	0.698
14	6.0	-0.644	-0.268	-0.262	-0.264	-0.066	-0.989	96	10.0	0.406	0.410	0.389	0.374	0.368	0.378
15	15.0	-0.617	-0.256	-0.260	-0.259	-0.244	-0.892	97	25.0	0.117	0.096	0.070	0.048	0.038	0.025
16	27.5	-0.696	-0.248	-0.261	-0.254	-0.243	-0.811	98	41.0	-0.012	-0.096	-0.091	-0.127	-0.154	-0.184
17	47.5	-0.661	-0.118	-0.100	-0.066	-0.086	-0.851	99	54.5	-0.045	-0.066	-0.115	-0.166	-0.206	-0.250
18	50.0	-0.207	-0.207	-0.611	-0.704	-0.771	-0.791	100	64.5	-0.011	-0.094	-0.120	-0.148	-0.179	-0.229
19	54.0	-0.207	-0.609	-0.617	-0.576	-0.569	-0.633	101	72.5	0.004	-0.042	-0.072	-0.088	-0.090	-0.119
20	57.5	-0.208	-0.562	-0.604	-0.569	-0.508	-0.599	102	84.0	0.018	-0.021	-0.021	0.027	-0.055	-0.061
21	57.5	-0.188	-0.367	-0.430	-0.407	-0.333	-0.641	103	94.0	0.041	-0.043	-0.076	0.009	-0.061	-0.075
22	55.3	---	---	---	---	---	---								
23	2.0	-1.189	-1.395	-1.284	-1.041	-0.661	-0.768	104	3.0	0.797	0.792	0.793	0.697	0.681	0.684
24	6.0	-0.273	-1.108	-1.164	-1.019	-0.595	-0.815	105	10.0	0.439	0.435	0.416	0.406	0.401	0.414
25	15.0	-0.991	-1.048	-1.075	-1.017	-0.933	-0.827	106	25.0	0.174	0.191	0.191	0.137	0.135	0.154
26	27.5	-0.687	-0.760	-0.785	-0.957	-0.908	-0.867	107	41.0	0.011	0.013	-0.016	-0.040	-0.051	-0.060
27	47.5	-0.296	-0.579	-0.609	-0.762	-0.836	-0.896	108	54.5	0.000	-0.048	-0.081	-0.119	-0.149	-0.182
28	50.0	-0.184	-0.268	-0.235	-0.119	-0.060	-0.840	109	64.5	0.001	-0.046	-0.079	-0.114	-0.150	-0.179
29	54.0	-0.409	-0.436	-0.448	-0.506	-0.611	-0.847	110	72.5	0.004	-0.001	-0.011	-0.034	-0.046	-0.048
30	57.5	-0.297	-0.263	-0.176	-0.118	-0.109	-0.803	111	84.0	0.006	0.027	0.004	-0.005	-0.014	-0.045
31	57.5	-0.296	-0.121	-0.199	-0.188	-0.188	-0.768	112	94.0	0.000	0.040	0.019	0.024	0.019	-0.015
32	55.3	-0.189	-0.252	-0.117	-0.101	-0.459	-0.632								
33	55.3	---	---	---	---	---	---								
34	2.0	-1.434	-1.417	-1.161	-0.964	-0.813	-0.696	113	3.0	0.727	0.692	0.674	0.696	0.648	0.651
35	6.0	-0.662	-1.311	-1.292	-1.019	-0.805	-0.796	114	10.0	0.435	0.435	0.421	0.408	0.407	0.417
36	15.0	-0.660	-1.292	-1.087	-0.914	-0.810	-0.829	115	25.0	0.184	0.186	0.171	0.151	0.151	0.169
37	27.5	-0.268	-0.814	-0.806	-1.004	-0.975	-0.880	116	41.0	0.006	0.046	0.021	-0.004	-0.014	-0.004
38	50.0	-0.465	-0.626	-0.709	-0.942	-0.948	-0.897	117	54.5	0.017	0.002	-0.028	-0.062	-0.079	-0.064
39	54.0	-0.172	-0.470	-0.701	-0.946	-0.903	-0.845	118	64.5	0.016	0.001	-0.011	-0.072	-0.067	-0.084
40	57.5	-0.160	-0.197	-0.451	-0.710	-0.604	-0.868	119	72.5	0.016	0.040	0.004	-0.032	-0.055	-0.045
41	57.5	-0.156	-0.135	-0.198	-0.311	-0.508	-0.741	120	84.0	0.006	0.111	0.064	0.021	0.007	0.013
42	57.5	-0.079	-0.063	-0.130	-0.124	-0.277	-0.569	121	94.0	0.073	0.064	0.040	0.004	-0.024	-0.010
43	54.2	-0.050	-0.136	-0.112	-0.189	-0.248	-0.296								
44	2.0	-1.810	-1.506	-1.291	-1.068	-0.907	-0.800	122	3.0	0.794	0.731	0.714	0.709	0.700	0.701
45	6.0	-1.661	-1.439	-1.272	-1.112	-0.964	-0.815	123	10.0	0.444	0.467	0.454	0.448	0.441	0.441
46	15.0	-1.219	-1.395	-1.196	-1.004	-0.945	-0.895	124	25.0	0.211	0.204	0.211	0.204	0.197	0.197
47	27.5	-0.748	-1.308	-1.120	-1.009	-0.904	-0.862	125	41.0	0.086	0.111	0.075	0.061	0.041	0.041
48	47.5	-0.561	-0.910	-0.807	-0.712	-0.610	-0.602	126	54.5	0.008	0.009	0.006	0.010	0.014	0.014
49	50.0	-0.451	-0.747	-0.761	-0.718	-0.710	-0.710	127	64.5	0.041	0.047	0.022	0.000	0.001	0.001
50	54.0	-0.394	-0.607	-0.628	-0.642	-0.647	-0.647	128	72.5	0.000	0.061	0.028	0.002	0.002	0.002
51	57.5	-0.297	-0.409	-0.608	-0.602	-0.611	-0.611	129	84.0	0.066	0.075	0.035	0.001	-0.037	-0.037
52	57.5	-0.160	-0.197	-0.451	-0.710	-0.604	-0.868	130	94.0	0.093	0.107	0.068	0.016	0.000	0.000
53	55.3	-0.063	-0.103	-0.171	-0.270	-0.415	-0.515	131	94.0	0.060	0.101	0.013	0.002	0.002	0.000
54	55.3	-0.049	-0.096	-0.106	-0.107	-0.107	-0.107								
55	2.0	-1.819	-1.543	-1.261	-1.078	-0.913	-0.811	132	3.0	0.735	0.638	0.731	0.702	0.701	0.701
56	6.0	-1.759	-1.486	-1.296	-1.049	-0.844	-0.744	133	10.0	0.437	0.472	0.463	0.457	0.451	0.451
57	15.0	-1.165	-1.404	-1.199	-1.005	-0.936	-0.886	134	25.0	0.218	0.236	0.206	0.200	0.194	0.194
58	27.5	-0.712	-1.301	-1.111	-1.007	-0.917	-0.867	135	41.0	0.104	0.111	0.099	0.099	0.076	0.076
59	47.5	-0.570	-1.094	-1.077	-1.004	-0.901	-0.891	136	54.5	0.066	0.073	0.069	0.069	0.050	0.050
60	50.0	-0.471	-0.758	-0.811	-0.909	-0.819	-0.819	137	64.5	0.081	0.095	0.046	0.016	0.000	0.000
61	54.0	-0.378	-0.601	-0.700	-0.766	-0.810	-0.810	138	72.5	0.128	0.140	0.128	0.114	0.066	0.066
62	57.5	-0.278	-0.468	-0.659	-0.714	-0.743	-0.743	139	84.0	0.201	0.204	0.250	0.248	0.213	0.213
63	57.5	-0.100	-0.186	-0.200	-0.203	-0.203	-0.203	140	94.0	0.071	0.101	0.061	0.021	0.030	0.030
64	54.2	-0.093	-0.099	-0.064	-0.064	-0.064	-0.064								
65	2.0	-1.970	-1.509	-1.211	-1.050	-0.891	-0.891	141	3.0	0.794	0.737	0.726	0.719	0.713	0.713
66	6.0	-1.698	-1.479	-1.295	-1.078	-0.905	-0.805	142	10.0	0.445	0.468	0.454	0.450	0.448	0.448
67	15.0	-1.090	-1.381	-1.179	-1.040	-0.912	-0.862	143	25.0	0.218	0.236	0.206	0.201	0.194	0.194
68	27.5	-0.681	-1.267	-1.171	-1.050	-0.911	-0.861	144	41.0	0.104	0.111	0.101	0.090	0.066	0.066
69	40.0	-0.581	-1.099	-1.112	-1.072	-0.975	-0.975	145	54.5	0.078	0.081	0.072	0.065	0.056	0.056
70	50.0	-0.491	-0.779	-0.891	-1.001	-0.962	-0.962	146	64.5	0.100	0.109	0.077	0.060	0.060	0.060
71	54.0	-0.398	-0.604	-0.804	-1.004	-0.982	-0.982	147	72.5	0.140	0.147	0.140	0.139	0.129	0.129
72	57.5	-0.301	-0.411	-0.670	-0.948	-0.940	-0.940	148	84.0	0.228	0.240	0.270	0.270	0.237	0.237
73	57.5	-0.104	-0.216	-0.280	-0.463	-0.761	-0.761	149	94.0	0.106	0.119	0.121	0.121	0.121	0.121
74	57.5	-0.094	-0.110	-0.096	-0.117	-0.201	-0.201								
75	55.8	-0.044	-0.061	-0.036	-0.036	-0.036	-0.036								
76	2.0	-1.803	-1.399	-1.140	-0.968	-0.830	-0.830	150	3.0	0.709	0.717	0.707	0.701	0.699	0.699
77	6.0	-1.489	-1.462	-1.134	-0.979	-0.842	-0.842	151	10.0	0.418	0.447	0.449	0.442	0.447	0.447
78	15.0	-0.715	-1.264	-1.072	-0.911	-0.842	-0.842	152	25.0	0.187	0.213	0.209	0.211	0.215	0.215
79	27.5	-0.596	-0.766	-0.916	-0.991	-0.916	-0.916	153	41.0	0.087	0.085	0.011	0.006	0.009	0.009
80	40.0	-0.518	-0.626	-0.728	-0.744	-0.676	-0.676	154	54.5	0.017	-0.001	-0.020	-0.030	-0.018	-0.018
81	50.0	-0.497	-0.621	-0.648	-0.697	-0.697									

TABLE 68

$[A = -30^\circ, \theta_{max} = 10.0^\circ, \alpha = -6^\circ]$

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Tube	Per-cent chord	UPPER SURFACE				Tube	Per-cent chord	LOWER SURFACE			
		0.60	0.80	0.85	0.89			0.60	0.80	0.85	0.89
1	2.0	---	---	---	---	86	3.0	---	---	---	---
2	6.0	---	---	---	---	87	10.0	---	---	---	---
3	15.0	---	---	---	---	88	25.0	---	---	---	---
4	27.5	---	---	---	---	89	41.0	---	---	---	---
5	40.0	---	---	---	---	90	52.5	-0.198	-0.101	-0.102	-0.061
6	50.0	-0.198	-0.223	-0.223	-0.193	91	62.5	-0.380	-0.264	-0.264	-0.229
7	59.0	-0.167	-0.181	-0.170	-0.129	92	72.5	-0.606	-0.409	-0.409	-0.320
8	67.5	-0.106	-0.086	-0.086	-0.065	93	84.0	---	---	---	---
9	77.5	---	---	---	---	94	94.0	---	---	---	---
10	87.5	---	---	---	---						
11	96.0	---	---	---	---						
112	2.0	.159	.391	.400	.401	95	3.0	-.759	---	-.961	-.839
13	6.0	-.047	-.065	-.070	-.079	96	10.0	-.367	-.644	-.951	-.993
14	15.0	-.141	-.186	-.203	-.209	97	25.0	-.289	-.396	-.469	-.511
15	27.5	-.290	-.300	-.359	-.416	98	41.0	-.296	-.281	-.218	-.414
16	40.0	-.269	-.341	-.407	-.344	99	52.5	-.195	-.195	-.180	-.054
17	50.0	-.261	-.318	-.357	-.406	100	62.5	-.121	-.118	-.109	-.036
18	59.0	-.201	-.261	-.301	-.454	101	72.5	-.039	-.025	-.034	-.019
19	67.5	-.170	-.227	-.145	-.064	102	84.0	-.051	-.073	-.061	-.102
20	77.5	-.059	-.051	-.055	-.026	103	94.0	.114	.133	.142	.162
21	87.5	.044	.057	.061	.074						
22	96.0	---	---	---	---						
23	2.0	.137	.178	.144	.129	104	3.0	-.504	-.641	-.691	-.619
24	6.0	-.068	-.111	-.131	-.141	105	10.0	-.344	-.489	-.569	-.564
25	15.0	-.111	-.111	-.090	-.091	106	25.0	-.301	-.408	-.498	-.523
26	27.5	-.216	-.208	-.278	-.298	107	41.0	-.209	-.300	-.419	-.306
27	40.0	-.275	-.315	-.413	-.473	108	52.5	-.203	-.244	-.261	-.303
28	50.0	-.254	-.315	-.394	-.341	109	62.5	-.141	-.198	-.146	-.200
29	59.0	-.238	-.287	-.317	-.381	110	72.5	-.044	-.042	-.032	-.006
30	67.5	-.180	-.212	-.265	-.287	111	84.0	-.034	-.047	-.046	-.071
31	77.5	-.091	-.081	-.081	-.089	112	94.0	.096	.110	.113	.125
32	87.5	.030	.037	.041	.049						
33	96.0	---	---	---	---						
34	2.0	-.268	-.335	-.362	-.379	113	3.0	-.439	-.560	-.606	-.581
35	6.0	-.113	-.105	-.097	-.090	114	10.0	-.308	-.396	-.427	-.439
36	15.0	-.209	-.241	-.273	-.260	115	25.0	-.298	-.365	-.416	-.447
37	27.5	-.275	-.245	-.304	-.315	116	41.0	-.261	-.330	-.398	-.349
38	40.0	-.279	-.245	-.317	-.304	117	52.5	-.201	-.254	-.296	-.347
39	50.0	-.209	-.278	-.311	-.447	118	62.5	-.134	-.161	-.190	-.230
40	59.0	---	---	---	---	119	72.5	-.034	-.058	-.071	-.104
41	67.5	-.106	-.051	-.071	-.110	120	84.0	-.053	-.073	-.063	-.037
42	77.5	-.001	-.014	-.029	-.030	121	94.0	.074	.089	.078	.062
43	87.5	.064	.071	.067	.095						
44	2.0	-.092	-.095	-.093	-.131	122	3.0	-.261	-.310	-.340	-.372
45	6.0	-.069	-.016	-.029	-.074	123	10.0	-.215	-.292	-.297	-.301
46	15.0	-.157	-.176	-.169	-.145	124	25.0	-.201	-.277	-.311	-.347
47	27.5	-.232	-.205	-.290	-.306	125	41.0	-.201	-.266	-.271	-.294
48	40.0	-.269	-.407	-.469	-.473	126	52.5	-.149	-.129	-.204	-.232
49	50.0	-.306	-.402	-.470	-.502	127	62.5	-.106	-.129	-.184	-.146
50	59.0	-.270	-.349	-.409	-.418	128	72.5	-.036	-.055	-.068	-.066
51	67.5	-.217	-.301	-.366	-.480	129	84.0	.001	-.012	-.022	-.017
52	77.5	-.108	-.071	-.046	-.079	130	94.0	.050	.044	.036	.025
53	87.5	.103	.101	.100	.044						
54	96.0	.070	.069	.070	.071						
55	2.0	-.209	-.266	-.301	-.339	131	3.0	-.261	-.323	-.360	-.394
56	6.0	-.017	-.035	.043	-.079	132	10.0	-.199	-.248	-.275	-.297
57	15.0	-.164	-.171	-.199	-.132	133	25.0	-.197	-.290	-.282	-.318
58	27.5	-.257	-.201	-.310	-.294	134	41.0	-.167	-.211	-.239	-.266
59	40.0	-.327	-.414	-.460	-.462	135	52.5	-.118	-.158	-.199	-.211
60	50.0	-.194	-.439	-.491	-.470	136	62.5	-.040	-.007	-.004	-.009
61	59.0	-.311	-.391	-.436	-.509	137	72.5	.100	.103	.101	.101
62	67.5	-.294	-.351	-.395	-.474	138	84.0	.106	.209	.200	.209
63	87.5	-.114	-.123	-.211	-.164	139	94.0	.102	.094	.089	.078
64	94.0	.021	.024	.044	.031						
65	2.0	.218	.292	.308	.363	140	3.0	-.200	-.282	-.314	-.337
66	6.0	.080	.039	.069	.102	141	10.0	-.191	-.254	-.290	-.320
67	15.0	-.173	-.148	-.129	-.098	142	25.0	-.177	-.237	-.271	-.312
68	27.5	-.294	-.278	-.276	-.260	143	41.0	-.136	-.189	-.210	-.238
69	40.0	-.327	-.390	-.415	-.410	144	52.5	-.088	-.139	-.161	-.192
70	50.0	-.347	-.429	-.463	-.511	145	62.5	.001	.011	.021	.027
71	59.0	-.304	-.389	-.417	-.459	146	72.5	.132	.127	.120	.117
72	67.5	-.301	-.347	-.376	-.408	147	84.0	.202	.208	.202	.203
73	77.5	-.297	-.310	-.308	-.361	148	94.0	.139	.132	.126	.116
74	87.2	-.268	-.297	-.301	-.298						
75	96.0	-.048	-.066	-.041	-.044						
76	2.0	.219	.295	.314	.340	149	3.0	-.278	-.342	-.380	-.407
77	6.0	.003	.045	.074	.101	150	10.0	-.185	-.229	-.249	-.292
78	15.0	-.114	-.101	-.089	-.069	151	25.0	-.167	-.214	-.235	-.248
79	27.5	-.211	-.222	-.220	-.210	152	41.0	-.171	-.211	-.270	-.312
80	40.0	-.276	-.316	-.314	-.308	153	52.5	-.132	-.169	-.196	-.206
81	50.0	-.290	-.342	-.362	-.378	154	62.5	-.080	-.040	-.051	-.065
82	59.0	-.264	-.306	-.327	-.335	155	72.5	.106	.121	.117	.112
83	67.5	-.238	-.266	-.278	-.290	156	84.0	.097	.079	.071	.065
84	87.5	-.139	-.167	-.181	-.201	157	94.0	---	---	---	---
85	94.2	---	---	---	---						

NACA

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TABLE 6

$$[\Lambda = -30^\circ, \theta_{in} = 10.0^\circ, \alpha = 0^\circ]$$

CONFIDENTIAL

Tube	Percent chord	UPPER SURFACE						LOWER SURFACE						
		Mach Number						Mach Number						
		0.60	0.80	0.85	0.89	0.925	0.96	0.60	0.80	0.85	0.89	0.925	0.96	
1	2.0	--	--	--	--	--	--	--	--	--	--	--	--	--
2	6.0	--	--	--	--	--	--	--	--	--	--	--	--	--
4	15.0	--	--	--	--	--	--	--	--	--	--	--	--	--
6	27.5	--	--	--	--	--	--	--	--	--	--	--	--	--
8	40.0	--	--	--	--	--	--	--	--	--	--	--	--	--
6	50.0	-0.233	-0.280	-0.330	-0.330	-0.433	-0.612	-0.077	-0.090	-0.093	-0.100	-0.077	-0.521	
7	66.0	-0.189	-0.189	-0.169	-0.139	-0.11	-0.673	-0.060	-0.048	-0.044	-0.043	-0.025	-0.368	
8	87.5	-0.123	-0.111	-0.084	-0.065	--	-1.08	-0.009	-0.001	0.007	0.009	0.025	-0.058	
10	97.5	--	--	--	--	--	--	--	--	--	--	--	--	
11	96.0	--	--	--	--	--	--	--	--	--	--	--	--	
12	2.0	-0.265	-0.275	-0.278	-0.248	-0.26	-1.277	-0.086	-0.109	-0.133	-0.119	-0.226	-0.219	
13	6.0	-0.340	-0.346	-0.334	-0.298	-0.272	-1.205	-0.126	-0.162	-0.201	-0.205	-0.237	-0.346	
14	15.0	-0.343	-0.300	-0.250	-0.195	-0.136	-0.956	-0.182	-0.226	-0.263	-0.257	-0.405	-0.412	
15	27.5	-0.393	-0.346	-0.245	-0.131	-0.073	-0.694	-0.190	-0.220	-0.243	-0.299	-0.465	-0.513	
16	40.0	-0.390	-0.286	-0.176	-0.061	-0.004	-0.694	-0.197	-0.178	-0.183	-0.185	-0.358	-0.375	
17	50.0	-0.318	-0.175	-0.11	-0.039	-0.008	-0.660	-0.100	-0.093	-0.093	-0.087	0.01	-0.292	
18	62.0	-0.273	-0.11	-0.179	-0.470	-0.643	-0.764	-0.017	0.001	0.004	0.000	0.029	-0.219	
19	67.5	-0.207	-0.148	-0.137	-0.309	-0.501	-0.700	0.066	0.066	0.046	0.096	0.102	-0.083	
20	77.5	-0.086	-0.075	-0.098	-0.095	-0.293	-0.64	1.08	1.08	1.194	1.160	1.166	0.077	
21	88.0	-0.034	-0.049	-0.041	-0.04	-0.29	-0.34	--	--	--	--	--	--	
22	95.5	--	--	--	--	--	--	--	--	--	--	--	--	
23	2.0	-0.099	-0.094	-0.04	-0.04	-0.48	-0.222	-0.036	-0.029	-0.040	-0.070	-0.066	-0.24	
24	6.0	-0.233	-0.24	-0.177	-0.133	-0.076	-0.000	-0.117	-0.137	-0.154	-0.146	-0.186	-0.173	
26	15.0	-0.316	-0.276	-0.241	-0.110	-0.056	-0.200	-0.174	-0.211	-0.241	-0.244	-0.302	-0.295	
28	27.5	-0.266	-0.177	-0.100	-0.074	-0.004	-0.204	-0.170	-0.211	-0.241	-0.244	-0.302	-0.295	
29	40.0	-0.177	-0.101	-0.046	-0.000	-0.000	-0.207	-0.105	-0.123	-0.133	-0.074	-0.199	-0.175	
30	60.0	-0.131	-0.080	-0.041	-0.011	-0.000	-0.496	-0.116	-0.125	-0.133	-0.094	-0.117	-0.420	
32	59.0	-0.246	-0.206	-0.101	-0.009	-0.000	-0.704	-0.019	-0.017	-0.019	0.020	0.014	-0.263	
33	87.5	-0.242	-0.178	-0.143	-0.249	-0.681	-0.677	0.093	0.044	0.067	0.041	0.094	-0.098	
31	77.5	-0.104	-0.100	-0.081	-0.077	-0.109	-0.297	1.20	1.19	1.141	1.159	0.951	-0.063	
32	88.0	-0.031	-0.029	-0.041	-0.010	-0.000	-0.189	--	--	--	--	--	--	
35	95.5	--	--	--	--	--	--	--	--	--	--	--	--	
36	2.0	-0.120	-0.073	-0.000	-0.007	-0.10	-0.196	-0.006	-0.029	-0.044	-0.073	-0.079	-0.093	
37	15.0	-0.243	-0.243	-0.334	-0.293	-0.243	-0.179	-0.095	-0.095	-0.107	-0.126	-0.126	-0.225	
38	27.5	-0.244	-0.136	-0.060	-0.030	-0.000	-0.307	-0.163	-0.193	-0.219	-0.202	-0.261	-0.280	
39	40.0	-0.282	-0.100	-0.049	-0.000	-0.000	-0.474	-0.180	-0.218	-0.244	-0.246	-0.302	-0.340	
40	60.0	-0.299	-0.194	-0.144	-0.000	-0.000	-0.691	-0.152	-0.189	-0.206	-0.209	-0.307	-0.330	
42	59.0	-0.293	-0.174	-0.056	-0.000	-0.000	-0.293	-0.108	-0.123	-0.139	-0.143	-0.194	-0.237	
43	87.5	-0.099	-0.107	-0.116	-0.174	-0.440	-0.348	-0.017	-0.027	-0.033	-0.094	-0.067	-0.118	
42	87.5	-0.017	-0.014	-0.005	-0.012	-0.142	-0.149	0.078	0.066	0.038	0.029	0.034	0.032	
43	94.2	-0.057	-0.06	-0.047	-0.014	-0.146	--	--	--	--	--	--	--	
44	2.0	-0.214	-0.175	-0.144	-0.018	-0.078	--	--	--	--	--	--	--	
45	6.0	-0.226	-0.216	-0.280	-0.203	-0.120	--	--	--	--	--	--	--	
46	15.0	-0.247	-0.216	-0.216	-0.209	-0.293	--	--	--	--	--	--	--	
47	27.5	-0.275	-0.21	-0.203	-0.202	-0.243	--	--	--	--	--	--	--	
48	40.0	-0.207	-0.166	-0.164	-0.17	-0.299	--	--	--	--	--	--	--	
49	50.0	-0.180	-0.131	-0.100	-0.095	-0.000	--	--	--	--	--	--	--	
50	59.0	-0.148	-0.144	-0.077	-0.043	-0.068	--	--	--	--	--	--	--	
51	67.5	-0.180	-0.14	-0.118	-0.112	-0.138	--	--	--	--	--	--	--	
52	77.5	-0.089	-0.09	-0.091	-0.06	-0.105	--	--	--	--	--	--	--	
53	88.0	-0.077	-0.076	-0.079	-0.099	-0.114	--	--	--	--	--	--	--	
54	95.5	-0.061	-0.06	-0.060	-0.050	-0.130	--	--	--	--	--	--	--	
55	2.0	-0.089	-0.166	-0.109	-0.010	-0.080		1.06	1.10	1.01	0.909	0.960	0.041	
56	6.0	-0.203	-0.207	-0.271	-0.201	-0.126		1.000	-0.001	-0.009	-0.031	-0.049	-0.069	
57	15.0	-0.246	-0.209	-0.191	-0.141	-0.079		0.080	-0.101	-0.113	-0.119	-0.149	-0.164	
58	27.5	-0.296	-0.208	-0.204	-0.143	-0.077		-0.089	-0.113	-0.127	-0.149	-0.177	-0.177	
59	40.0	-0.243	-0.200	-0.165	-0.107	-0.043		-0.24	-0.268	-0.277	-0.261	-0.319	-0.319	
60	50.0	-0.207	-0.141	-0.104	-0.074	-0.000		-0.080	-0.080	-0.090	-0.090	-0.074	-0.104	
61	59.0	-0.168	-0.149	-0.080	-0.067	-0.007		1.144	1.126	1.159	1.158	1.131	1.131	
62	67.5	-0.130	-0.134	-0.094	-0.092	-0.098		0.283	0.240	0.246	0.246	0.246	0.246	
63	88.0	-0.104	-0.095	-0.080	-0.104	-0.104		0.114	0.111	0.107	0.094	0.084	0.084	
64	94.2	--	--	--	--	--		--	--	--	--	--	--	
65	2.0	-0.186	-0.101	-0.046	-0.040	-0.116		1.118	1.113	1.110	0.963	0.964	0.064	
66	6.0	-0.276	-0.293	-0.280	-0.158	-0.093		-0.086	-0.083	-0.090	-0.090	-0.090	-0.070	
67	15.0	-0.300	-0.266	-0.333	-0.291	-0.240		-0.069	-0.101	-0.116	-0.142	-0.169	-0.169	
68	27.5	-0.370	-0.230	-0.141	-0.105	-0.060		-0.067	-0.097	-0.113	-0.130	-0.156	-0.156	
69	40.0	-0.413	-0.219	-0.109	-0.075	-0.000		-0.206	-0.206	-0.206	-0.074	-0.074	-0.100	
70	50.0	-0.411	-0.200	-0.066	-0.000	-0.000		-0.208	-0.208	-0.208	-0.074	-0.074	-0.100	
71	59.0	-0.371	-0.162	-0.041	-0.000	-0.000		1.175	1.177	1.177	1.174	1.161	1.161	
72	67.5	-0.336	-0.103	-0.000	-0.000	-0.000		0.243	0.256	0.257	0.250	0.249	0.249	
73	77.5	-0.306	-0.200	-0.150	-0.193	-0.200		0.190	0.190	0.190	0.190	0.190	0.190	
74	87.5	-0.240	-0.240	-0.240	-0.240	-0.240		0.175	0.175	0.175	0.175	0.175	0.175	
75	96.0	-0.041	-0.043	-0.011	-0.008	-0.006		--	--	--	--	--	--	
76	2.0	-0.107	-0.035	-0.009	-0.069	-0.129		0.036	0.031	0.030	0.016	0.008	0.008	
77	6.0	-0.217	-0.195	-0.168	-0.124	-0.075		-0.050	-0.096	-0.136	-0.161	-0.189	-0.189	
78	15.0	-0.291	-0.256	-0.207	-0.200	-0.179		-0.081	-0.119	-0.151	-0.175	-0.198	-0.198	
79	27.5	-0.303	-0.136	-0.000	-0.011	-0.000		-0.120	-0.164	-0.194	-0.225	-0.261	-0.261	
80	40.0	-0.394	-0.195	-0.000	-0.000	-0.000		-0.083	-0.134	-0.165	-0.175	-0.175	-0.175	
81	60.0	-0.337	-0.001	-0.000	-0.000	-0.000		-0.204	-0.261	-0.279	-0.279	-0.279	-0.279	
82	59.0	-0.243	-0.187	-0.175	-0.207	-0.200		1.184	1.184	1.184	1.184	1.184	1.184	
83	87.5	-0.071	-0.089	-0.116	-0.104	-0.107		0.081	0.073	0.069	0.064	0.064	0.064	
84	88.5	-0.136	--	--	--	--		--	--	--	--	--	--	
85	94.2	--	--	--	--	--		--	--	--	--	--	--	



CONFIDENTIAL

TABLE 70
 $\alpha = -30^\circ, \beta_n = 10.0^\circ, \alpha = 2^\circ$

CONFIDENTIAL

Tube	Per-cent chord	UPPER SURFACE						LOWER SURFACE						
		Mach Number						Mach Number						
		0.60	0.80	0.85	0.89	0.925	0.96	0.60	0.80	0.85	0.89	0.925	0.96	
1	2.0													
2	4.0													
3	15.0													
4	27.5													
5	45.0													
0	50.0	-0.283	-0.284	-0.168	-0.287	-0.489	-0.628							
7	66.0	-.202	-.202	-.129	-.191	-.351	-.470							
8	87.5	-.136	-.105	-.067	-.109	-.234	-.311							
9	77.5													
13	87.5													
11	96.0													
12	2.0	-.291	-.104	-.790	-.610	-.426	-.290							
15	6.0	-.937	-.109	-.909	-.747	-.575	-.447							
16	15.0	-.935	-.104	-.909	-.747	-.575	-.447							
17	27.5	-.455	-.967	-.1016	-.951	-.634	-.488							
18	40.0	-.412	-.904	-.907	-.913	-.674	-.481							
19	50.0	-.396	-.818	-.430	-.897	-.690	-.516							
20	59.0	-.275	-.297	-.296	-.489	-.609	-.568							
21	67.5	-.146	-.170	-.157	-.337	-.487	-.512							
22	77.5	-.104	-.075	-.050	-.261	-.326	-.355							
23	85.0	-.080	-.046	-.070	-.097	-.081	-.050							
24	85.5													
25	2.0	-.732	-.681	-.495	-.377	-.260	-.096							
26	5.0	-.601	-.697	-.606	-.468	-.373	-.250							
27	15.0	-.515	-.703	-.616	-.394	-.300	-.196							
28	27.5	-.492	-.760	-.758	-.606	-.506	-.313							
29	40.0	-.441	-.706	-.634	-.576	-.469	-.294							
30	50.0	-.390	-.611	-.551	-.492	-.399	-.251							
31	59.0	-.331	-.487	-.426	-.366	-.269	-.166							
32	67.5	-.275	-.347	-.294	-.234	-.137	-.032							
33	77.5	-.226	-.262	-.218	-.158	-.060	-.032							
34	85.0	-.166	-.190	-.145	-.085	-.018	-.000							
35	85.5													
36	2.0	-.681	-.644	-.436	-.356	-.261	-.113							
37	5.0	-.504	-.619	-.500	-.367	-.240	-.083							
38	15.0	-.478	-.675	-.561	-.430	-.300	-.145							
39	27.5	-.476	-.671	-.582	-.444	-.310	-.152							
40	40.0	-.425	-.599	-.510	-.372	-.240	-.084							
41	50.0	-.351	-.447	-.366	-.266	-.169	-.061							
42	60.0	-.281	-.351	-.270	-.170	-.070	-.032							
43	67.5	-.229	-.284	-.201	-.107	-.019	-.041							
44	77.5	-.166	-.204	-.121	-.028	-.017	-.059							
45	85.0	-.095	-.054	-.051	-.058	-.017	-.259							
46	85.5													
47	2.0	-.585	-.781	-.567	-.418	-.285	-.113							
48	6.0	-.480	-.640	-.510	-.340	-.207	-.047							
49	15.0	-.354	-.705	-.563	-.407	-.261	-.094							
50	27.5	-.314	-.761	-.578	-.409	-.265	-.124							
51	40.0	-.261	-.778	-.582	-.407	-.261	-.124							
52	50.0	-.195	-.701	-.510	-.340	-.207	-.047							
53	60.0	-.120	-.581	-.366	-.170	-.070	-.032							
54	67.5	-.059	-.447	-.201	-.028	-.019	-.041							
55	77.5	-.019	-.284	-.021	-.028	-.019	-.041							
56	85.0	-.054	-.094	-.017	-.017	-.017	-.059							
57	85.5													
58	2.0	-.585	-.711	-.500	-.408	-.290	-.124							
59	6.0	-.497	-.601	-.478	-.330	-.200	-.047							
60	15.0	-.350	-.666	-.519	-.340	-.207	-.047							
61	27.5	-.217	-.719	-.508	-.320	-.187	-.032							
62	40.0	-.154	-.763	-.519	-.300	-.169	-.021							
63	50.0	-.075	-.640	-.366	-.170	-.061	-.017							
64	60.0	-.010	-.487	-.170	-.028	-.017	-.041							
65	67.5	-.031	-.339	-.021	-.028	-.017	-.041							
66	77.5	-.109	-.209	-.021	-.028	-.017	-.041							
67	85.0	-.100	-.094	-.006	-.028	-.017	-.041							
68	85.5													
69	2.0	-.731	-.676	-.451	-.355	-.215	-.015							
70	6.0	-.599	-.604	-.479	-.346	-.215	-.015							
71	15.0	-.507	-.668	-.508	-.345	-.207	-.015							
72	27.5	-.436	-.667	-.505	-.326	-.186	-.015							
73	40.0	-.377	-.607	-.437	-.285	-.160	-.015							
74	50.0	-.305	-.569	-.377	-.244	-.124	-.015							
75	60.0	-.228	-.476	-.270	-.176	-.084	-.015							
76	67.5	-.151	-.359	-.140	-.084	-.047	-.015							
77	77.5	-.075	-.227	-.036	-.047	-.015	-.041							
78	87.5	-.011	-.007	-.012	-.046	-.015	-.041							
79	85.0													
80	2.0	-.588	-.605	-.454	-.320	-.163	-.015							
81	6.0	-.478	-.620	-.466	-.300	-.160	-.015							
82	15.0	-.395	-.646	-.471	-.277	-.116	-.015							
83	27.5	-.315	-.663	-.414	-.230	-.068	-.015							
84	40.0	-.237	-.678	-.344	-.176	-.016	-.015							
85	50.0	-.165	-.646	-.243	-.101	-.015	-.015							
86	60.0	-.090	-.511	-.144	-.034	-.015	-.015							
87	67.5	-.019	-.389	-.037	-.040	-.015	-.015							
88	77.5	-.051	-.258	-.026	-.040	-.015	-.015							
89	87.5	-.161	-.105	-.033	-.040	-.015	-.015							
90	85.0													
91	3.0													
92	10.0	.124	.106	.078	.045	-.008	-.202							
93	25.0	-.047	-.040	-.121	-.170	-.235	-.288							
94	41.0	-.127	-.146	-.174	-.226	-.300	-.400							
95	62.0	-.046	-.061	-.073	-.101	-.118	-.164							
96	82.0	-.039	-.032	-.034	-.044	-.053	-.071							
97	94.0													
98	3.0	-.389	-.361	-.315	-.271	-.203	-.174							
99	10.0	-.124	-.106	-.078	-.045	-.008	-.202							
100	25.0	-.047	-.040	-.121	-.170	-.235	-.288							
101	41.0	-.127	-.146	-.174	-.226	-.300	-.400							
102	62.0	-.046	-.061	-.073	-.101	-.118	-.164							
103	82.0	-.039	-.032	-.034	-.044	-.053	-.071							
104	94.0													
105	3.0	-.387	-.342	-.318	-.290	-.249	-.238							
106	10.0	-.124	-.106	-.078	-.045	-.008	-.202							
107	25.0	-.047	-.040	-.121	-.170	-.235	-.288							
108	41.0	-.127	-.146	-.174	-.226	-.300	-.400							
109	62.0	-.046	-.061	-.073	-.101	-.118	-.164							
110	82.0	-.039	-.032	-.034	-.044	-.053	-.071							
111	94.0													
112	94.6	.130	.146	.149	.087	-.034	-.063							
113	5.0	-.304	-.314	-.292	-.269	-.231	-.213							
114	10.0	-.103	-.115	-.100	-.077	-.073	-.073							
115	25.0	-.035	-.042	-.046	-.058	-.059	-.061							
116	41.0	-.093	-.119	-.144	-.189	-.249	-.313							
117	62.0	-.068	-.109	-.130	-.169	-.221	-.285							
118	82.0	-.057	-.070	-.090	-.124	-.172	-.238							
119	94.0	.067	.060	.068	-.069	-.067	-.115							
120	5.0	-.067	-.091	-.085	-.071	-.049	-.030							
121	94.2	.106	.101	.112	.087	-.034	-.063							
122	3.0	-.408	-.428	-.402	-.384	-.329	-.289							
123	10.0	-.173	-.200	-.183	-.157	-.134	-.104							
124	25.0	-.027	-.024	-.006	-.017	-.04								

TABLE 71

$[A = -30^\circ, \delta_{max} = 10.0^\circ, \alpha = 0^\circ]$

CONFIDENTIAL

UPPER SURFACE							LOWER SURFACE							
Tube	Per-cent chord	Mach Number					Tube	Per-cent chord	Mach Number					
		0.60	0.80	0.85	0.89	0.925			0.60	0.80	0.85	0.89	0.925	0.96
A1	2.0	--	--	--	--	--	86	3.0	--	--	--	--	--	--
2	5.0	--	--	--	--	--	87	10.0	--	--	--	--	--	--
3	15.0	--	--	--	--	--	88	25.0	--	--	--	--	--	--
4	27.5	--	--	--	--	--	89	41.0	--	--	--	--	--	--
5	40.0	--	--	--	--	--	90	52.5	--	--	--	--	--	--
6	50.0	-0.201	-0.481	-0.508	-0.522	-0.536	91	54.5	-0.021	-0.067	-0.109	-0.140	-0.176	-0.209
7	59.0	-0.181	-0.462	-0.546	-0.565	-0.585	92	72.5	-0.025	-0.094	-0.098	-0.111	-0.128	-0.146
8	67.5	-0.135	-0.387	-0.502	-0.511	-0.540	93	84.0	0.011	-0.022	-0.058	-0.080	-0.081	-0.107
9	77.5	--	--	--	--	--	94	94.0	--	--	--	--	--	--
10	87.5	--	--	--	--	--								
11	96.0	--	--	--	--	--								
012	2.0	-1.165	-0.695	-0.560	-0.782	-0.787	95	3.0	.606	.968	.947	.507	.475	.463
13	8.0	-1.173	-0.938	-0.758	-0.738	-0.746	96	10.0	.778	.958	.949	.507	.475	.463
14	15.0	-1.011	-0.603	-0.518	-0.648	-0.674	97	25.0	.094	.958	.950	.513	.492	.496
15	27.5	-0.648	-0.631	-0.531	-0.572	-0.604	98	41.0	-0.041	-0.005	-0.005	-0.044	-0.095	-0.092
16	40.0	-0.74	-0.609	-0.501	-0.570	-0.603	99	52.5	-0.068	-0.111	-0.144	-0.189	-0.200	-0.229
17	50.0	-0.81	-0.721	-0.553	-0.570	-0.636	100	54.5	-0.096	-0.071	-0.100	-0.131	-0.186	-0.246
18	59.0	-0.890	-0.712	-0.541	-0.535	-0.654	101	72.5	0.017	-0.006	-0.004	-0.051	-0.095	-0.182
19	67.5	-1.098	-0.440	-0.499	-0.435	-0.597	102	86.3	0.076	0.084	0.088	0.000	0.003	-0.117
20	77.5	-1.03	-0.318	-0.390	-0.380	-0.461	103	94.5	.121	.083	.090	.006	.016	-0.039
21	87.5	--	--	--	--	--								
22	95.3	--	--	--	--	--								
023	2.0	-1.485	-1.087	-0.859	-0.693	-0.744	104	3.0	.514	.948	.932	.504	.484	.481
24	8.0	-0.895	-1.158	-0.995	-0.792	-0.668	105	10.0	.278	.975	.965	.504	.484	.481
25	15.0	-0.790	-1.060	-0.968	-0.818	-0.708	106	25.0	.048	.957	.944	.515	.502	.508
26	27.5	-0.618	-0.925	-0.911	-0.822	-0.721	107	41.0	-0.011	-0.022	-0.041	-0.059	-0.089	-0.090
27	40.0	-0.741	-0.931	-0.838	-0.811	-0.809	108	52.5	-0.056	-0.077	-0.077	-0.116	-0.151	-0.194
28	50.0	-0.846	-0.799	-0.738	-0.698	-0.781	109	54.5	-0.086	-0.066	-0.114	-0.162	-0.205	-0.253
29	59.0	-0.959	-0.771	-0.695	-0.639	-0.775	110	72.5	0.015	-0.002	-0.006	-0.065	-0.107	-0.168
30	67.5	-1.040	-0.821	-0.663	-0.515	-0.659	111	84.0	0.077	0.073	0.063	0.008	0.018	-0.046
31	77.5	-1.138	-0.689	-0.568	-0.484	-0.597	112	94.6	.123	.123	.101	.105	.061	-0.029
32	87.5	-1.09	-0.64	-0.479	-0.384	-0.474								
33	95.3	--	--	--	--	--								
034	2.0	-1.284	-1.030	-0.811	-0.697	-0.501	113	3.0	.528	.916	.905	.476	.459	.454
35	15.0	-0.687	-1.094	-0.913	-0.779	-0.608	114	10.0	.260	.980	.975	.476	.459	.454
36	27.5	-0.588	-0.958	-0.843	-0.806	-0.733	115	25.0	0.070	.968	.959	.499	.484	.490
37	40.0	-0.641	-0.908	-0.803	-0.810	-0.777	116	41.0	-0.029	-0.037	-0.050	-0.089	-0.119	-0.145
38	50.0	-0.749	-0.806	-0.701	-0.709	-0.714	117	52.5	-0.049	-0.022	-0.022	-0.059	-0.089	-0.115
39	59.0	-0.851	-0.695	-0.601	-0.589	-0.657	118	54.5	-0.098	-0.054	-0.071	-0.120	-0.158	-0.167
40	67.5	-1.048	-0.517	-0.422	-0.386	-0.544	119	72.5	0.044	0.015	-0.046	-0.077	-0.141	-0.162
41	77.5	-1.048	-0.377	-0.329	-0.284	-0.408	120	84.0	0.078	.104	.102	.068	.022	-0.091
42	87.5	-0.939	-0.289	-0.241	-0.204	-0.329	121	94.2	.097	.112	.107	.061	.020	-0.031
43	94.2	-0.81	-0.241	-0.204	-0.161	-0.289								
44	2.0	-1.797	-1.126	-0.917	-0.738	-0.546	122	3.0	.590	.960	.970	.546	.518	.518
45	8.0	-0.980	-1.095	-0.993	-0.836	-0.685	123	10.0	.312	.938	.919	.490	.481	.481
46	15.0	-0.799	-1.153	-0.975	-0.848	-0.701	124	25.0	.111	.911	.890	.499	.479	.481
47	27.5	-0.617	-1.068	-0.913	-0.876	-0.761	125	41.0	0.002	.902	.882	.499	.479	.481
48	40.0	-0.743	-0.925	-0.808	-0.810	-0.737	126	52.5	0.014	.919	.911	.499	.479	.481
49	50.0	-0.877	-0.695	-0.601	-0.614	-0.705	127	54.5	0.014	.919	.911	.499	.479	.481
50	59.0	-0.980	-0.589	-0.505	-0.514	-0.608	128	72.5	0.040	.944	.935	.499	.479	.481
51	67.5	-1.075	-0.469	-0.420	-0.384	-0.506	129	84.0	0.097	.960	.945	.499	.479	.481
52	77.5	-1.171	-0.351	-0.311	-0.274	-0.398	130	94.5	.081	.102	.104	.061	.021	-0.031
53	87.5	-1.075	-0.259	-0.218	-0.181	-0.298	131	94.1	.097	.126	.123	.070	.030	-0.021
54	95.5	-0.910	-0.21	-0.171	-0.134	-0.259								
55	2.0	-1.698	-1.183	-0.910	-0.719	-0.551	132	3.0	.581	.936	.927	.543	.514	.514
56	8.0	-0.813	-1.151	-0.959	-0.811	-0.655	133	10.0	.318	.937	.927	.510	.490	.490
57	15.0	-0.713	-1.123	-0.923	-0.811	-0.671	134	25.0	.121	.913	.917	.510	.490	.490
58	27.5	-0.618	-1.037	-0.870	-0.800	-0.744	135	41.0	0.046	.946	.941	.500	.481	.481
59	40.0	-0.771	-0.948	-0.837	-0.813	-0.780	136	52.5	0.040	.946	.941	.500	.481	.481
60	50.0	-0.894	-0.777	-0.676	-0.651	-0.738	137	54.5	0.081	.969	.961	.500	.481	.481
61	59.0	-0.981	-0.668	-0.566	-0.553	-0.648	138	72.5	0.099	.999	.991	.500	.481	.481
62	67.5	-1.075	-0.541	-0.440	-0.427	-0.522	139	84.0	0.152	.999	.991	.500	.481	.481
63	77.5	-1.171	-0.420	-0.318	-0.305	-0.400	140	94.0	.094	.126	.123	.070	.030	-0.021
64	87.5	-1.075	-0.318	-0.216	-0.203	-0.305								
65	94.5	-0.910	-0.216	-0.114	-0.101	-0.203								
065	2.0	-1.387	-1.109	-0.839	-0.665	-0.509	141	3.0	.575	.964	.966	.548	.524	.524
66	8.0	-0.954	-1.136	-0.986	-0.781	-0.640	142	10.0	.309	.938	.930	.527	.507	.507
67	15.0	-0.856	-0.977	-0.895	-0.776	-0.633	143	25.0	0.126	.913	.917	.527	.507	.507
68	27.5	-0.687	-0.944	-0.811	-0.811	-0.748	144	41.0	0.094	.952	.941	.527	.507	.507
69	40.0	-0.857	-0.787	-0.695	-0.678	-0.765	145	52.5	0.060	.960	.953	.527	.507	.507
70	50.0	-0.904	-0.694	-0.603	-0.607	-0.701	146	54.5	0.109	.980	.973	.527	.507	.507
71	59.0	-0.980	-0.589	-0.505	-0.514	-0.608	147	72.5	0.159	.989	.981	.527	.507	.507
72	67.5	-1.075	-0.469	-0.420	-0.384	-0.498	148	84.0	0.266	.996	.991	.527	.507	.507
73	77.5	-1.171	-0.351	-0.311	-0.274	-0.398	149	94.0	.131	.130	.123	.070	.030	-0.021
74	87.5	-1.075	-0.259	-0.218	-0.181	-0.298								
75	98.8	-0.87	-0.170	-0.130	-0.093	-0.216								
076	2.0	-1.099	-0.992	-0.719	-0.592	-0.451	150	3.0	.509	.932	.916	.501	.486	.486
76	8.0	-0.759	-0.906	-0.780	-0.684	-0.548	151	10.0	.292	.985	.976	.501	.486	.486
77	15.0	-0.534	-0.605	-0.517	-0.604	-0.511	152	25.0	0.080	.926	.926	.501	.486	.486
78	27.5	-0.480	-0.778	-0.677	-0.663	-0.606	153	41.0	-0.012	-0.020	-0.048	-0.082	-0.079	-0.079
79	40.0	-0.579	-0.595	-0.500	-0.506	-0.506	154	52.5	-0.039	-0.039	-0.094	-0.102	-0.102	-0.102
80	50.0	-0.621	-0.432	-0.379	-0.379	-0.473	155	54.5	0.093	.943	.931	.501	.486	.486
81	59.0	-0.705	-0.398	-0.347	-0.347	-0.441	156	72.5	0.186	.930	.924	.501	.486	.486
82	67.5	-0.805	-0.284	-0.232	-0.232	-0.326	157	84.0	0.263	.945	.938	.501	.486	.486
83	77.5	-0.905	-0.170	-0.118	-0.118	-0.216								
84	87.5	-0.905	-0.068	-0.016	-0.016	-0.118								
85	94.2	--	--	--	--	--								

CONFIDENTIAL



TABLE 72

$$[\alpha = -30^\circ, \theta_{in} = 10.0^\circ, \alpha = 7^\circ]$$

CONFIDENTIAL															
UPPER SURFACE							LOWER SURFACE								
Tube	Per- cent chord	Mach Number						Tube	Per- cent chord	Mach Number					
		0.60	0.80	0.85	0.90	0.925	0.95			0.60	0.80	0.85	0.90	0.925	0.95
A 1	2.0	---	---	---	---	---	---	86	3.0	---	---	---	---	---	---
2	6.0	---	---	---	---	---	---	87	10.0	---	---	---	---	---	---
3	15.0	---	---	---	---	---	---	88	25.0	---	---	---	---	---	---
4	27.5	---	---	---	---	---	---	89	41.0	---	---	---	---	---	---
5	40.0	---	---	---	---	---	---	90	58.5	-0.022	-0.086	-0.128	-0.164	-0.206	-0.277
6	50.0	-0.508	-0.968	-0.760	-0.660	-0.572	-0.648	91	62.5	-0.041	-0.093	-0.128	-0.152	-0.169	-0.239
7	58.0	-0.439	-0.900	-0.601	-0.601	-0.611	-0.621	92	72.5	-0.027	-0.095	-0.117	-0.141	-0.140	-0.223
8	67.5	-0.361	-0.757	-0.571	-0.581	-0.611	-0.594	93	84.0	---	---	---	---	---	---
9	77.5	---	---	---	---	---	---	94	94.0	---	---	---	---	---	---
10	87.5	---	---	---	---	---	---								
11	96.0	---	---	---	---	---	---								
12	2.0	-0.682	-0.943	-0.997	-0.992	-0.981	-0.973	95	3.0	-0.739	-0.705	-0.732	-0.700	-0.696	-0.702
13	6.0	-0.670	-0.957	-0.974	-0.971	-0.967	-0.967	96	10.0	-0.399	-0.424	-0.395	-0.375	-0.369	-0.387
14	15.0	-0.677	-0.949	-0.956	-0.947	-0.968	-0.947	97	25.0	-0.110	-0.088	-0.071	-0.066	-0.036	-0.062
15	27.5	-0.730	-0.979	-0.987	-0.961	-0.971	-0.960	98	41.0	-0.021	-0.054	-0.060	-0.050	-0.059	-0.136
16	40.0	-0.703	-0.908	-0.900	-0.871	-0.901	-0.881	99	58.5	-0.068	-0.061	-0.066	-0.061	-0.062	-0.087
17	50.0	-0.696	-0.616	-0.618	-0.577	-0.589	-0.618	100	62.5	-0.041	-0.097	-0.122	-0.153	-0.197	-0.202
18	59.0	-0.846	-0.611	-0.605	-0.603	-0.594	-0.594	101	72.5	-0.027	-0.047	-0.075	-0.095	-0.113	-0.155
19	67.5	-0.753	-0.586	-0.600	-0.592	-0.599	-0.598	102	84.0	0.028	-0.030	-0.066	-0.066	-0.065	-0.086
20	77.5	-0.844	-0.517	-0.567	-0.581	-0.595	-0.588	103	94.0	0.028	-0.051	-0.081	-0.083	-0.078	-0.076
21	86.0	-0.927	-0.402	-0.440	-0.452	-0.452	-0.452								
22	95.3	---	---	---	---	---	---								
23	2.0	-1.104	-1.410	-1.289	-1.096	-1.090	-0.790	104	3.0	-0.701	-0.706	-0.706	-0.699	-0.681	-0.681
24	6.0	-1.040	-1.377	-1.163	-1.065	-0.939	-0.811	105	10.0	-0.406	-0.439	-0.429	-0.411	-0.406	-0.420
25	15.0	-0.969	-1.079	-1.066	-0.993	-0.921	-0.812	106	25.0	-0.169	-0.177	-0.157	-0.141	-0.136	-0.163
26	27.5	-0.681	-0.789	-0.778	-0.644	-0.609	-0.609	107	41.0	0.028	0.016	-0.012	-0.017	-0.054	-0.010
27	40.0	-0.566	-0.646	-0.610	-0.506	-0.494	-0.489	108	58.5	-0.005	-0.085	-0.081	-0.090	-0.104	-0.134
28	50.0	-0.908	-0.601	-0.610	-0.603	-0.598	-0.598	109	62.5	-0.004	-0.085	-0.081	-0.081	-0.081	-0.081
29	59.0	-0.820	-0.426	-0.454	-0.467	-0.468	-0.473	110	72.5	0.017	-0.066	-0.056	-0.070	-0.106	-0.110
30	67.5	-0.325	-0.360	-0.391	-0.370	-0.400	-0.375	111	84.0	0.047	-0.020	0.000	-0.015	-0.043	-0.068
31	77.5	-0.213	-0.198	-0.172	-0.165	-0.166	-0.163	112	94.0	0.066	0.009	0.012	0.009	0.005	-0.022
32	86.0	-0.129	-0.263	-0.338	-0.329	-0.390	-0.625								
33	95.3	---	---	---	---	---	---								
34	2.0	-1.906	-1.441	-1.182	-0.981	-0.825	-0.693	113	3.0	-0.713	-0.680	-0.679	-0.663	-0.654	-0.665
35	15.0	-1.027	-1.115	-1.124	-1.006	-0.892	-0.788	114	10.0	-0.406	-0.434	-0.427	-0.415	-0.411	-0.430
36	27.5	-0.679	-0.708	-0.610	-0.618	-0.608	-0.611	115	25.0	-0.182	-0.185	-0.177	-0.162	-0.158	-0.183
37	40.0	-0.567	-0.608	-0.613	-0.581	-0.585	-0.584	116	41.0	0.026	0.025	0.005	-0.007	-0.019	---
38	50.0	-0.473	-0.631	-0.605	-0.593	-0.613	-0.595	117	58.5	0.015	0.010	-0.002	-0.054	-0.083	-0.091
39	59.0	-0.375	-0.496	-0.564	-0.591	-0.571	-0.584	118	62.5	0.011	0.012	-0.012	-0.048	-0.097	-0.076
40	67.5	---	---	---	---	---	---	119	72.5	0.040	0.041	0.003	-0.015	-0.062	-0.040
41	77.5	-0.178	-0.193	-0.190	-0.115	-0.108	-0.104	120	84.0	0.097	0.096	0.082	0.091	-0.015	-0.007
42	87.5	-0.097	-0.108	-0.177	-0.262	-0.303	-0.342	121	94.0	0.063	0.067	0.018	-0.066	-0.096	-0.045
43	94.2	-0.056	-0.078	-0.160	-0.247	-0.309	-0.323								
44	2.0	-1.917	-1.450	-1.275	-1.092	-0.917	-0.767	122	3.0	-0.701	-0.706	-0.711	-0.703	-0.710	-0.710
45	6.0	-1.029	-1.102	-1.096	-1.131	-0.974	-0.974	123	10.0	-0.472	-0.438	-0.469	-0.463	-0.454	-0.454
46	15.0	-0.761	-0.796	-0.704	-0.706	-0.693	-0.693	124	25.0	-0.267	-0.243	-0.268	-0.292	-0.213	-0.213
47	27.5	-0.705	-0.781	-0.730	-0.619	-0.612	-0.612	125	41.0	-0.194	-0.114	0.006	0.063	0.070	0.070
48	40.0	-0.581	-0.592	-0.590	-0.561	-0.572	-0.572	126	58.5	0.076	0.082	0.067	0.048	-0.035	---
49	50.0	-0.487	-0.747	-0.715	-0.715	-0.703	-0.703	127	62.5	0.096	0.097	0.041	0.014	-0.005	---
50	60.0	-0.388	-0.630	-0.672	-0.671	-0.675	-0.675	128	72.5	0.069	0.078	0.039	-0.004	-0.036	---
51	67.5	-0.290	-0.503	-0.623	-0.634	-0.642	-0.642	129	84.0	0.071	0.084	0.044	-0.009	-0.047	---
52	77.5	-0.198	-0.313	-0.532	-0.609	-0.627	-0.604	130	94.0	0.084	0.114	0.061	0.006	-0.032	---
53	86.0	-0.098	-0.160	-0.487	-0.592	-0.612	-0.612	131	94.1	0.084	0.083	0.003	-0.049	-0.059	---
54	95.5	-0.066	-0.118	-0.410	-0.509	-0.547	-0.547								
55	2.0	-1.654	-1.468	-1.294	-1.102	-0.908	-0.768	132	3.0	-0.704	-0.708	-0.714	-0.706	-0.713	-0.713
56	6.0	-1.094	-1.118	-1.061	-1.116	-0.954	-0.954	133	10.0	-0.475	-0.491	-0.478	-0.474	-0.465	-0.465
57	15.0	-0.783	-0.818	-0.816	-0.804	-0.804	-0.804	134	25.0	-0.262	-0.248	-0.248	-0.243	-0.234	-0.234
58	27.5	-0.843	-0.877	-0.844	-0.844	-0.844	-0.844	135	41.0	-0.131	-0.146	-0.131	-0.121	-0.108	-0.108
59	40.0	-0.618	-0.714	-0.686	-0.612	-0.602	-0.602	136	58.5	-0.101	-0.117	-0.104	-0.091	-0.077	-0.077
60	50.0	-0.447	-0.702	-0.669	-0.599	-0.587	-0.587	137	62.5	-0.124	-0.131	-0.140	-0.126	-0.113	-0.113
61	59.0	-0.305	-0.672	-0.780	-0.811	-0.823	-0.823	138	72.5	-0.164	-0.184	-0.170	-0.156	-0.142	-0.142
62	67.5	-0.214	-0.643	-0.797	-0.767	-0.761	-0.761	139	84.0	-0.275	-0.310	-0.303	-0.307	-0.298	-0.298
63	77.5	-0.119	-0.514	-0.614	-0.609	-0.736	-0.693	140	94.0	-0.093	-0.122	-0.105	-0.032	-0.004	-0.004
64	84.2	-0.073	-0.396	-0.453	-0.627	-0.693	-0.693								
65	2.0	-1.977	-1.517	-1.256	-1.078	-0.902	-0.762	141	3.0	-0.751	-0.744	-0.739	-0.735	-0.736	-0.736
66	6.0	-1.120	-1.052	-1.054	-1.041	-0.932	-0.932	142	10.0	-0.471	-0.496	-0.473	-0.471	-0.464	-0.464
67	15.0	-0.848	-0.909	-0.888	-0.809	-0.808	-0.808	143	25.0	-0.269	-0.269	-0.250	-0.250	-0.244	-0.244
68	27.5	-0.739	-0.790	-0.790	-0.695	-0.696	-0.696	144	41.0	-0.143	-0.152	-0.138	-0.133	-0.126	-0.126
69	40.0	-0.614	-0.767	-0.800	-0.698	-0.698	-0.698	145	58.5	-0.127	-0.135	-0.124	-0.119	-0.114	-0.114
70	50.0	-0.514	-0.605	-0.714	-0.665	-0.668	-0.668	146	62.5	-0.156	-0.166	-0.164	-0.159	-0.154	-0.154
71	59.0	-0.377	-0.650	-0.761	-0.661	-0.661	-0.661	147	72.5	-0.197	-0.207	-0.193	-0.186	-0.176	-0.176
72	67.5	-0.268	-0.594	-0.650	-0.644	-0.677	-0.677	148	84.0	-0.302	-0.340	-0.350	-0.351	-0.350	-0.350
73	77.5	-0.262	-0.271	-0.303	-0.600	-0.627	-0.627	149	94.0	-0.162	-0.162	-0.150	-0.153	-0.154	-0.154
74	87.5	-0.192	-0.174	-0.170	-0.216	-0.359	-0.359								
75	96.0	-0.092	-0.145	-0.146	-0.204	-0.204	-0.204								
76	2.0	-1.901	-1.480	-1.152	-0.990	-0.823	-0.683	150	3.0	-0.706	-0.704	-0.700	-0.700	-0.712	-0.712
77	6.0	-1.161	-1.198	-1.161	-1.015	-0.871	-0.871	151	10.0	-0.400	-0.403	-0.445	-0.448	-0.448	-0.448
78	15.0	-0.739	-0.817	-0.811	-0.783	-0.823	-0.823	152	25.0	-0.296	-0.297	-0.244	-0.219	-0.201	-0.201
79	27.5	-0.667	-0.760	-0.804	-0.777	-0.766	-0.766	153	41.0	-0.077	0.074	-0.057	-0.064	-0.064	-0.064
80	40.0	-0.594	-0.674	-0.716	-0.716	-0.716	-0.716	154	58.5	-0.097	-0.044	0.003	0.017	0.010	0.010
81	50.0	-0.501	-0.629	-0.662	-0.616	-0.627	-0.627								

TABLE 73

$[A = -4.5^\circ, b_{max} = -10.0^\circ, a = -2^\circ]$

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Tube	Per-cent chord	UPPER SURFACE					LOWER SURFACE				
		Mach Number					Mach Number				
		0.60	0.80	0.90	0.95	0.96	0.60	0.80	0.90	0.95	0.96
A 1	2.0	---	---	---	---	---					
6	6.0	---	---	---	---	---					
3	15.0	---	---	---	---	---					
4	27.5	---	---	---	---	---					
5	40.0	---	---	---	---	---					
6	50.0	---	---	---	---	---					
7	59.0	-0.080	-0.093	-0.096	-0.090	-0.181					
8	67.5	-0.095	-0.095	-0.060	-0.056	-0.083					
9	77.5	---	---	---	---	---					
10	87.5	---	---	---	---	---					
11	96.0	---	---	---	---	---					
612	6.0	---	---	---	---	---					
13	15.0	---	---	---	---	---					
14	27.5	-0.135	-0.176	-0.205	-0.277	-0.297					
15	40.0	-0.154	-0.184	-0.239	-0.304	-0.362					
16	50.0	-0.151	-0.192	-0.260	-0.307	-0.378					
17	59.0	-0.129	-0.152	-0.182	-0.207	-0.260					
18	67.5	-0.096	-0.110	-0.123	-0.120	-0.299					
19	77.5	-0.046	-0.059	-0.065	-0.059	-0.166					
20	87.5	-0.023	-0.015	-0.012	-0.016	-0.053					
21	96.0	---	---	---	---	---					
22	96.0	---	---	---	---	---					
225	2.0	.438	.452	.463	.473	.478					
24	6.0	.375	.388	.398	.408	.415					
25	15.0	.303	.303	.303	.306	.317					
26	27.5	.103	.130	.156	.159	.153					
27	40.0	.146	.186	.233	.255	.253					
28	50.0	.141	.176	.232	.250	.256					
29	59.0	.138	.164	.207	.219	.246					
30	67.5	.091	.115	.147	.150	.203					
31	77.5	.050	.075	.100	.113	.201					
32	87.5	.028	.005	-.014	-.036	.138					
33	96.0	---	---	---	---	---					
34	2.0	.325	.344	.347	.348	.342					
35	15.0	.003	.001	.001	.002	.001					
36	27.5	-.078	-.068	-.094	-.095	-.101					
37	40.0	-.131	-.151	-.165	-.170	-.181					
38	50.0	-.139	-.163	-.183	-.191	-.191					
39	59.0	-.101	-.125	-.161	-.190	-.191					
40	67.5	---	---	---	---	---					
41	77.5	-.069	-.066	-.087	-.101	-.101					
42	87.5	.000	-.019	-.041	-.063	-.068					
43	94.2	.038	.027	-.004	-.028	-.027					
44	2.0	.331	.347	.347	.347	.351					
45	6.0	.180	.182	.187	.190	.195					
46	15.0	.000	.001	-.007	-.005	-.003					
47	27.5	-.072	-.080	-.089	-.089	-.104					
48	40.0	-.118	-.131	-.146	-.149	-.164					
49	50.0	-.132	-.138	-.139	-.138	-.169					
50	59.0	-.108	-.125	-.144	-.150	-.159					
51	67.5	-.085	-.101	-.124	-.136	-.164					
52	77.5	-.049	-.061	-.070	-.073	-.111					
53	87.5	-.089	-.098	-.072	-.072	-.064					
54	96.0	.015	.011	.002	.000	-.006					
55	2.0	---	---	---	---	---					
56	6.0	.350	.359	.357	.366	.363					
57	15.0	.014	.014	.001	.006	-.009					
58	27.5	-.098	-.064	-.075	-.077	-.046					
59	40.0	-.097	-.108	-.123	-.126	-.154					
60	50.0	-.099	-.104	-.117	-.121	-.138					
61	59.0	-.068	-.079	-.090	-.091	-.108					
62	67.5	-.045	-.054	-.068	-.070	-.087					
63	86.5	.007	.007	.022	.023	.016					
64	94.6	.017	.007	-.005	-.008	-.019					
65	2.0	.357	.370	.371	.380	.370					
66	6.0	.162	.171	.169	.177	.168					
67	15.0	.036	.017	.034	.036	.027					
68	27.5	-.035	-.040	-.051	-.050	-.041					
69	40.0	-.074	-.084	-.095	-.096	-.113					
70	50.0	-.068	-.077	-.089	-.092	-.105					
71	59.0	-.035	-.041	-.053	-.055	-.069					
72	67.5	-.013	-.025	-.041	-.042	-.055					
73	77.5	.145	.154	.152	.149	.137					
74	87.2	-.039	-.044	-.054	-.054	-.080					
75	96.8	.040	.069	.089	.085	.066					
76	2.0	.305	.323	.333	.342	.348					
77	6.0	.127	.141	.148	.161	.164					
78	15.0	.018	.004	.027	.036	.038					
79	27.5	-.043	-.047	-.059	-.047	-.047					
80	40.0	-.079	-.093	-.106	-.106	-.115					
81	50.0	-.086	-.102	-.117	-.121	-.137					
82	59.0	-.098	-.068	-.081	-.082	-.040					
83	67.5	-.016	-.000	-.029	-.029	-.030					
84	86.5	.091	.070	.046	.047	.077					
85	94.2	.043	.041	.037	.039	.000					
86	5.0	---	---	---	---	---					
87	10.0	---	---	---	---	---					
88	25.0	---	---	---	---	---					
89	41.0	---	---	---	---	---					
90	52.5	---	---	---	---	---					
91	62.5	-0.048	-0.037	-0.035	0.000	-0.040					
92	72.5	-.016	-.011	.001	.015	-.007					
93	84.0	---	---	---	---	---					
94	94.0	---	---	---	---	---					
95	5.0	---	---	---	---	---					
96	10.0	---	---	---	---	---					
97	25.0	-.141	-.211	-.441	-.394	-.632					
98	41.0	-.198	-.180	-.199	-.277	-.416					
99	52.5	-.119	-.115	-.115	-.136	-.265					
100	62.5	-.085	-.089	-.075	-.075	-.172					
101	72.5	-.032	-.033	-.036	-.023	-.080					
102	86.5	.014	.015	.019	.024	-.001					
103	94.5	.054	.050	.053	.058	.019					
104	5.0	-.605	-1.027	-.927	-.914	-.882					
105	10.0	-.446	-.494	-.445	-.713	-.731					
106	25.0	-.293	-.397	-.427	-.406	-.460					
107	41.0	---	---	---	---	---					
108	52.5	---	---	---	---	---					
109	62.5	-.105	-.128	-.165	-.289	-.303					
110	72.5	-.095	-.068	-.083	-.134	-.255					
111	85.1	-.064	-.015	-.026	-.040	-.172					
112	94.6	.043	.028	.018	.006	-.117					
113	3.0	-.598	-.766	-.798	-.791	-.780					
114	10.0	-.316	-.363	-.365	-.610	-.601					
115	49.0	-.260	-.318	-.345	-.401	-.429					
116	41.0	-.294	-.273	-.307	-.314	-.312					
117	52.5	-.181	-.202	-.256	-.290	-.271					
118	62.5	---	---	---	---	---					
119	72.5	-.065	-.089	-.119	-.129	-.132					
120	87.4	.007	-.015	-.045	-.040	-.045					
121	94.2	.004	.009	-.017	-.034	-.035					
122	5.0	-.478	-.679	-.695	-.621	-.667					
123	10.0	-.299	-.345	-.321	-.421	-.469					
124	25.0	-.250	-.300	-.359	-.381	-.401					
125	41.0	-.214	-.254	-.300	-.333	-.360					
126	52.5	-.167	-.194	-.215	-.234	-.232					
127	62.5	-.130	-.150	-.169	-.167	-.205					
128	72.5	-.089	-.101	-.119	-.101	-.135					
129	78.0	-.049	-.097	-.079	-.076	-.089					
130	88.5	-.007	-.029	-.035	-.037	-.021					
131	94.1	.014	.024	-.000	-.014	-.020					
132	5.0	---	---	---	---	---					
133	10.0	-.287	-.356	-.380	-.341	-.415					
134	25.0	-.206	-.266	-.304	-.308	-.307					
135	41.0	-.161	-.206	-.264	-.236	-.304					
136	52.5	-.101	-.108	-.160	-.206	-.261					
137	62.5	-.101	-.177	-.215	-.225	-.260					
138	72.5	-.120	-.143	-.167	-.154	-.240					
139	83.4	-.065	-.076	-.064	-.069	-.124					
140	94.0	.007	-.009	-.019	-.044	-.047					
141	3.0	-.478	-.616	-.605	-.486	-.448					
142	10.0	-.277	-.397	-.411	-.304	-.314					
143	25.0	-.234	-.265	-.282	-.304	-.327					
144	41.0	-.206	-.239	-.277	-.270	-.300					
145	52.5	-.159	-.199	-.231	-.253	-.287					
146	62.5	-.145	-.156	-.186	-.187	-.191					
147	72.5	-.132	-.160	-.183	-.194	-.201					
148	84.0	-.046	-.107	-.123	-.128	-.154					
149	96.0	-.025	-.039	-.042	-.045	-.057					
150	5.0	-.366	-.395	-.399	-.400	-.386					
151	10.0	-.213	-.215	-.229	-.197	-.184					
152	25.0	.337	.319	-.181	-.131	-.105					
153	41.0	-.297	-.317	-.287	-.284	-.290					
154	52.5	-.178	-.208	-.206	-.235	-.260					
155	62.5	-.132	-.160	-.179	-.187	-.205					
156	72.5	-.105	-.141	-.157	-.162	-.186					
157	84.0	-.010	-.019	-.038	-.044	-.048					

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TABLE 76

$[A = -4.5^\circ, \delta_{in} = -10.0^\circ, \alpha = 2^\circ]$

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UPPER SURFACE						LOWER SURFACE							
Tube	Per-cent chord	Mach Number					Tube	Per-cent chord	Mach Number				
		0.60	0.80	0.90	0.925	0.96			0.60	0.80	0.90	0.925	0.96
1	2.0	---	---	---	---	---	86	3.0	---	---	---	---	---
2	6.0	---	---	---	---	---	87	10.0	---	---	---	---	---
3	15.0	---	---	---	---	---	88	25.0	---	---	---	---	---
4	27.5	---	---	---	---	---	89	41.0	---	---	---	---	---
5	45.0	---	---	---	---	---	90	58.5	---	---	---	---	---
6	50.0	---	---	---	---	---	91	62.5	-0.031	-0.031	-0.032	-0.029	-0.049
7	59.0	-0.036	-0.031	-0.030	-0.028	-0.066	92	72.5	-0.008	-0.005	-0.004	0.000	-0.012
8	67.5	-0.067	-0.062	-0.061	-0.057	-0.082	93	84.0	---	---	---	---	---
9	77.5	---	---	---	---	---	94	94.0	---	---	---	---	---
10	87.6	---	---	---	---	---							
11	96.0	---	---	---	---	---							
112	2.0	---	---	---	---	---	95	3.0	---	---	---	---	---
13	6.0	---	---	---	---	---	96	10.0	---	---	---	---	---
14	15.0	---	---	---	---	---	97	25.0	-0.075	-0.105	-0.141	-0.175	-0.245
15	27.5	-0.237	-0.250	-0.285	-0.316	-0.349	98	41.0	-0.095	-0.117	-0.140	-0.159	-0.261
16	40.0	-0.327	-0.334	-0.369	-0.400	-0.433	99	58.5	-0.086	-0.098	-0.109	-0.126	-0.214
17	50.0	-0.398	-0.398	-0.463	-0.514	-0.565	100	62.5	-0.058	-0.071	-0.081	-0.080	-0.175
18	59.0	-0.465	-0.472	-0.542	-0.595	-0.646	101	72.5	-0.033	-0.036	-0.030	-0.025	-0.078
19	67.5	-0.501	-0.516	-0.599	-0.64	-0.691	102	82.5	0.027	0.033	0.033	0.033	0.003
20	77.5	-0.560	-0.579	-0.687	-0.740	-0.791	103	94.0	0.077	0.079	0.080	0.089	0.060
21	86.0	-0.617	-0.617	-0.760	-0.813	-0.864							
22	95.3	---	---	---	---	---							
23	2.0	-0.253	-0.259	-0.331	-0.378	-0.426	104	3.0	0.210	0.216	0.204	0.190	0.196
24	6.0	-0.436	-0.439	-0.544	-0.597	-0.649	105	10.0	0.088	0.093	0.077	0.064	0.066
25	15.0	-0.564	-0.566	-0.689	-0.742	-0.794	106	25.0	-0.365	-0.386	-0.419	-0.442	-0.547
26	27.5	-0.712	-0.703	-0.834	-0.904	-0.966	107	41.0	---	---	---	---	---
27	40.0	-0.777	-0.767	-0.905	-0.981	-1.042	108	58.5	---	---	---	---	---
28	50.0	-0.821	-0.811	-0.956	-1.037	-1.097	109	62.5	-0.025	-0.021	-0.028	-0.032	-0.196
29	59.0	-0.891	-0.870	-1.030	-1.117	-1.177	110	72.5	-0.026	-0.023	-0.027	-0.021	-0.149
30	67.5	-0.933	-0.912	-1.083	-1.179	-1.239	111	82.5	0.020	0.016	0.024	0.014	-0.096
31	77.5	-0.983	-0.960	-1.144	-1.240	-1.300	112	94.0	0.063	0.058	0.051	0.037	-0.066
32	86.0	-1.012	-0.977	-1.175	-1.271	-1.331							
33	95.3	---	---	---	---	---							
34	2.0	-0.352	-0.354	-0.434	-0.487	-0.539	113	3.0	0.132	0.129	0.114	0.103	0.087
35	6.0	-0.537	-0.539	-0.639	-0.702	-0.764	114	10.0	0.084	0.079	0.077	0.069	0.041
36	15.0	-0.722	-0.724	-0.834	-0.904	-0.966	115	25.0	-0.086	-0.091	-0.080	-0.096	-0.104
37	27.5	-0.897	-0.899	-1.019	-1.094	-1.156	116	41.0	-0.093	-0.109	-0.128	-0.137	-0.196
38	40.0	-0.962	-0.964	-1.094	-1.179	-1.241	117	58.5	-0.090	-0.106	-0.126	-0.136	-0.205
39	50.0	-1.016	-1.018	-1.156	-1.241	-1.303	118	62.5	---	---	---	---	---
40	59.0	-1.060	-1.062	-1.209	-1.294	-1.356	119	72.5	---	---	---	---	---
41	67.5	-1.094	-1.096	-1.252	-1.337	-1.399	120	87.4	-0.031	-0.042	-0.041	-0.075	-0.072
42	77.5	-1.128	-1.130	-1.286	-1.371	-1.433	121	94.2	0.043	0.033	0.019	0.003	-0.005
43	86.0	-1.162	-1.164	-1.320	-1.405	-1.467							
44	94.2	-1.196	-1.198	-1.384	-1.469	-1.531							
45	---	---	---	---	---	---							
46	2.0	-0.307	-0.310	-0.384	-0.437	-0.489	122	3.0	0.152	0.152	0.145	0.128	0.109
47	6.0	-0.492	-0.494	-0.584	-0.647	-0.709	123	10.0	0.086	0.089	0.069	0.068	0.064
48	15.0	-0.677	-0.679	-0.779	-0.842	-0.904	124	25.0	-0.060	-0.076	-0.096	-0.114	-0.140
49	27.5	-0.862	-0.864	-0.964	-1.027	-1.089	125	41.0	-0.082	-0.110	-0.133	-0.152	-0.181
50	40.0	-0.927	-0.929	-1.029	-1.092	-1.154	126	58.5	-0.075	-0.093	-0.111	-0.124	-0.146
51	50.0	-0.981	-0.983	-1.083	-1.146	-1.208	127	62.5	-0.062	-0.076	-0.092	-0.103	-0.128
52	59.0	-1.035	-1.037	-1.137	-1.200	-1.262	128	72.5	-0.038	-0.053	-0.065	-0.075	-0.069
53	67.5	-1.089	-1.091	-1.191	-1.254	-1.316	129	82.5	-0.015	-0.020	-0.017	-0.013	0.001
54	77.5	-1.143	-1.145	-1.243	-1.306	-1.368	130	90.3	0.037	0.042	0.034	0.000	0.004
55	86.0	-1.197	-1.199	-1.297	-1.360	-1.422	131	94.1	0.063	0.060	0.051	0.034	0.019
56	94.1	-1.251	-1.253	-1.351	-1.414	-1.476							
57	---	---	---	---	---	---							
58	2.0	-0.294	-0.297	-0.374	-0.427	-0.479	132	3.0	0.080	0.076	0.077	0.068	0.044
59	6.0	-0.479	-0.481	-0.558	-0.611	-0.663	133	10.0	-0.066	-0.081	-0.096	-0.111	-0.137
60	15.0	-0.664	-0.666	-0.743	-0.796	-0.848	134	25.0	-0.102	-0.122	-0.145	-0.163	-0.191
61	27.5	-0.849	-0.851	-0.928	-0.981	-1.033	135	41.0	-0.109	-0.131	-0.152	-0.169	-0.196
62	40.0	-0.934	-0.936	-1.013	-1.066	-1.118	136	58.5	-0.109	-0.131	-0.152	-0.169	-0.196
63	50.0	-0.988	-0.990	-1.067	-1.120	-1.172	137	62.5	-0.092	-0.111	-0.133	-0.147	-0.170
64	59.0	-1.042	-1.044	-1.121	-1.174	-1.226	138	72.5	-0.083	-0.101	-0.119	-0.134	-0.157
65	67.5	-1.096	-1.098	-1.173	-1.226	-1.278	139	82.5	-0.081	-0.104	-0.126	-0.146	-0.176
66	77.5	-1.150	-1.152	-1.225	-1.278	-1.330	140	94.0	0.086	0.074	0.068	0.077	0.064
67	86.0	-1.204	-1.206	-1.277	-1.330	-1.382							
68	94.0	-1.258	-1.260	-1.329	-1.382	-1.434							
69	---	---	---	---	---	---							
70	2.0	-0.190	-0.193	-0.266	-0.319	-0.371	141	3.0	0.130	0.149	0.159	0.152	0.152
71	6.0	-0.375	-0.378	-0.451	-0.504	-0.556	142	10.0	0.085	0.088	0.089	0.088	0.081
72	15.0	-0.560	-0.563	-0.636	-0.689	-0.741	143	25.0	-0.072	-0.080	-0.087	-0.095	-0.104
73	27.5	-0.745	-0.748	-0.821	-0.874	-0.926	144	41.0	-0.109	-0.122	-0.133	-0.140	-0.147
74	40.0	-0.830	-0.833	-0.906	-0.959	-1.011	145	58.5	-0.118	-0.130	-0.143	-0.151	-0.156
75	50.0	-0.884	-0.887	-0.960	-1.013	-1.065	146	62.5	-0.109	-0.121	-0.127	-0.140	-0.152
76	59.0	-0.938	-0.941	-1.014	-1.067	-1.119	147	72.5	-0.115	-0.129	-0.144	-0.153	-0.166
77	67.5	-0.992	-0.995	-1.068	-1.121	-1.173	148	84.0	-0.095	-0.110	-0.126	-0.140	-0.173
78	77.5	-1.046	-1.049	-1.122	-1.175	-1.227	149	92.0	-0.010	-0.018	-0.029	-0.035	-0.052
79	87.2	-1.100	-1.103	-1.176	-1.229	-1.281							
80	96.8	-1.154	-1.157	-1.230	-1.283	-1.335							
81	---	---	---	---	---	---							
82	2.0	-0.160	-0.163	-0.236	-0.289	-0.341	150	3.0	0.134	0.158	0.177	0.179	0.185
83	6.0	-0.345	-0.348	-0.421	-0.474	-0.526	151	10.0	0.088	0.086	0.085	0.075	0.084
84	15.0	-0.530	-0.533	-0.606	-0.659	-0.711	152	25.0	-0.091	-0.091	-0.092	-0.081	-0.086
85	27.5	-0.715	-0.718	-0.791	-0.844	-0.896	153	41.0	-0.119	-0.134	-0.147	-0.159	-0.179
86	40.0	-0.800	-0.803	-0.876	-0.929	-0.981	154	58.5	-0.116	-0.146	-0.165	-0.181	-0.214
87	50.0	-0.854	-0.857	-0.930	-0.983	-1.035	155	62.5	-0.106	-0.121	-0.136	-0.144	-0.159
88	59.0	-0.908	-0.911	-0.984	-1.037	-1.089	156	72.5	-0.105	-0.118	-0.130	-0.134	-0.141
89	67.5	-0.962	-0.965	-1.038	-1.091	-1.143	157	84.0	0.010	0.011	0.014	0.019	0.021
90	77.5	-1.016	-1.019	-1.092	-1.145	-1.197							
91	87.2	-1.070	-1.073	-1.146	-1.199	-1.251							
92	96.8	-1.124	-1.127	-1.200	-1.253	-1.305							

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TABLE 75

$[\alpha = -4.5^\circ, \delta_{max} = -10.0^\circ, \alpha = 7^\circ]$

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UPPER SURFACE						LOWER SURFACE							
Tube	Per-cent chord	Mech Number					Tube	Per-cent chord	Mech Number				
		0.60	0.80	0.80	0.995	0.96			0.60	0.80	0.80	0.995	0.96
A 1	2.0	---	---	---	---	---	66	3.0	---	---	---	---	---
2	6.0	---	---	---	---	---	67	10.0	---	---	---	---	---
3	15.0	---	---	---	---	---	68	25.0	---	---	---	---	---
4	27.5	---	---	---	---	---	69	41.0	---	---	---	---	---
5	40.0	---	---	---	---	---	70	52.5	---	---	---	---	---
6	50.0	---	---	---	---	---	71	62.5	---	---	---	---	---
7	59.0	---	---	---	---	---	72	72.5	-0.008	-0.007	-0.109	-0.158	---
8	67.5	-0.015	-0.015	-0.023	-0.179	-0.259	73	82.5	.007	---	-.045	---	-0.150
9	77.5	---	---	---	---	---	74	94.0	---	---	---	---	---
10	87.5	---	---	---	---	---							
11	96.0	---	---	---	---	---							
612	2.0	---	---	---	---	---	98	3.0	---	---	---	---	---
13	6.0	---	---	---	---	---	99	10.0	---	---	---	---	---
14	15.0	---	---	---	---	---	97	25.0	.094	-.006	-.045	-.069	---
15	27.5	-.069	-.064	-.075	-.061	-.076	98	41.0	-.006	-.008	-.111	-.136	---
16	40.0	-.066	-.064	-.075	-.061	-.076	99	52.5	-.006	-.008	-.111	-.136	---
17	50.0	-.064	-.066	-.077	-.059	-.078	100	62.5	-.006	-.008	-.111	-.136	---
18	59.0	-.064	-.066	-.077	-.059	-.078	101	72.5	.000	-.046	-.079	-.101	---
19	67.5	-.064	-.066	-.077	-.059	-.078	102	82.5	.014	-.038	-.079	-.101	---
20	77.5	-.064	-.066	-.077	-.059	-.078	103	94.0	.006	-.139	-.077	-.114	---
21	87.5	---	---	---	---	---							
22	96.0	---	---	---	---	---							
253	2.0	-.001	-.001	-.001	-.001	-.001	104	3.0	.038	.045	.070	.070	---
24	6.0	-.011	-.008	-.008	-.008	-.010	105	10.0	.070	.061	.091	.091	---
25	15.0	-.073	-.077	-.077	-.073	-.074	106	25.0	.117	.130	.166	.166	---
26	27.5	-.068	-.068	-.064	-.064	-.064	107	41.0	---	---	---	---	---
27	40.0	-.068	-.068	-.064	-.064	-.064	108	52.5	---	---	---	---	---
28	50.0	-.068	-.068	-.064	-.064	-.064	109	62.5	---	---	---	---	---
29	59.0	-.068	-.068	-.064	-.064	-.064	110	72.5	.010	-.008	-.058	-.076	---
30	67.5	-.067	-.067	-.064	-.064	-.064	111	82.5	.011	-.008	-.058	-.076	---
31	77.5	-.067	-.067	-.064	-.064	-.064	112	94.0	.015	-.008	-.058	-.076	---
32	87.5	-.067	-.067	-.064	-.064	-.064							
33	96.0	-.067	-.067	-.064	-.064	-.064							
34	2.0	---	---	---	---	---	113	3.0	.048	.043	.039	.037	---
35	6.0	-1.009	-1.009	-1.009	-1.009	-1.009	114	10.0	.048	.043	.039	.037	---
36	15.0	-.067	-.067	-.064	-.064	-.064	115	25.0	.048	.043	.039	.037	---
37	27.5	-.067	-.067	-.064	-.064	-.064	116	41.0	.048	.043	.039	.037	---
38	40.0	-.067	-.067	-.064	-.064	-.064	117	52.5	.048	.043	.039	.037	---
39	50.0	-.067	-.067	-.064	-.064	-.064	118	62.5	.048	.043	.039	.037	---
40	59.0	-.067	-.067	-.064	-.064	-.064	119	72.5	.048	.043	.039	.037	---
41	67.5	-.067	-.067	-.064	-.064	-.064	120	82.5	.048	.043	.039	.037	---
42	77.5	-.067	-.067	-.064	-.064	-.064	121	94.0	.048	.043	.039	.037	---
43	87.5	-.067	-.067	-.064	-.064	-.064							
44	96.0	-.067	-.067	-.064	-.064	-.064							
45	2.0	-1.000	-1.000	-1.000	-1.000	-1.000	122	3.0	.039	.048	.045	.043	0.036
46	6.0	-1.000	-1.000	-1.000	-1.000	-1.000	123	10.0	.039	.048	.045	.043	0.036
47	15.0	-.067	-.067	-.064	-.064	-.064	124	25.0	.039	.048	.045	.043	0.036
48	27.5	-.067	-.067	-.064	-.064	-.064	125	41.0	.039	.048	.045	.043	0.036
49	40.0	-.067	-.067	-.064	-.064	-.064	126	52.5	.039	.048	.045	.043	0.036
50	50.0	-.067	-.067	-.064	-.064	-.064	127	62.5	.039	.048	.045	.043	0.036
51	59.0	-.067	-.067	-.064	-.064	-.064	128	72.5	.039	.048	.045	.043	0.036
52	67.5	-.067	-.067	-.064	-.064	-.064	129	82.5	.039	.048	.045	.043	0.036
53	77.5	-.067	-.067	-.064	-.064	-.064	130	94.0	.039	.048	.045	.043	0.036
54	87.5	-.067	-.067	-.064	-.064	-.064							
55	96.0	-.067	-.067	-.064	-.064	-.064							
56	2.0	---	---	---	---	---	131	3.0	---	---	---	---	---
57	6.0	-1.007	-1.007	-1.007	-1.007	-1.007	132	10.0	---	---	---	---	---
58	15.0	-.067	-.067	-.064	-.064	-.064	133	25.0	---	---	---	---	---
59	27.5	-.067	-.067	-.064	-.064	-.064	134	41.0	---	---	---	---	---
60	40.0	-.067	-.067	-.064	-.064	-.064	135	52.5	---	---	---	---	---
61	50.0	-.067	-.067	-.064	-.064	-.064	136	62.5	---	---	---	---	---
62	59.0	-.067	-.067	-.064	-.064	-.064	137	72.5	---	---	---	---	---
63	67.5	-.067	-.067	-.064	-.064	-.064	138	82.5	---	---	---	---	---
64	77.5	-.067	-.067	-.064	-.064	-.064	139	94.0	---	---	---	---	---
65	87.5	-.067	-.067	-.064	-.064	-.064							
66	96.0	-.067	-.067	-.064	-.064	-.064							
67	2.0	-1.003	-1.003	-1.003	-1.003	-1.003	140	3.0	---	---	---	---	---
68	6.0	-.067	-.067	-.064	-.064	-.064	141	10.0	---	---	---	---	---
69	15.0	-.067	-.067	-.064	-.064	-.064	142	25.0	---	---	---	---	---
70	27.5	-.067	-.067	-.064	-.064	-.064	143	41.0	---	---	---	---	---
71	40.0	-.067	-.067	-.064	-.064	-.064	144	52.5	---	---	---	---	---
72	50.0	-.067	-.067	-.064	-.064	-.064	145	62.5	---	---	---	---	---
73	59.0	-.067	-.067	-.064	-.064	-.064	146	72.5	---	---	---	---	---
74	67.5	-.067	-.067	-.064	-.064	-.064	147	82.5	---	---	---	---	---
75	77.5	-.067	-.067	-.064	-.064	-.064	148	94.0	---	---	---	---	---
76	87.5	-.067	-.067	-.064	-.064	-.064							
77	96.0	-.067	-.067	-.064	-.064	-.064							
78	2.0	-1.007	-1.007	-1.007	-1.007	-1.007	149	3.0	.037	.048	.045	.043	0.036
79	6.0	-.067	-.067	-.064	-.064	-.064	150	10.0	.037	.048	.045	.043	0.036
80	15.0	-.067	-.067	-.064	-.064	-.064	151	25.0	.037	.048	.045	.043	0.036
81	27.5	-.067	-.067	-.064	-.064	-.064	152	41.0	.037	.048	.045	.043	0.036
82	40.0	-.067	-.067	-.064	-.064	-.064	153	52.5	.037	.048	.045	.043	0.036
83	50.0	-.067	-.067	-.064	-.064	-.064	154	62.5	.037	.048	.045	.043	0.036
84	59.0	-.067	-.067	-.064	-.064	-.064	155	72.5	.037	.048	.045	.043	0.036
85	67.5	-.067	-.067	-.064	-.064	-.064	156	82.5	.037	.048	.045	.043	0.036
86	77.5	-.067	-.067	-.064	-.064	-.064	157	94.0	.037	.048	.045	.043	0.036
87	87.5	-.067	-.067	-.064	-.064	-.064							
88	96.0	-.067	-.067	-.064	-.064	-.064							

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TABLE 76

$\alpha = -45^\circ, \beta_{\text{max}} = 9.6^\circ, \epsilon = -2^\circ$

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UPPER SURFACE							LOWER SURFACE						
Tube	Per-cent chord	Mech Number					Tube	Per-cent chord	Mech Number				
		0.60	0.80	0.89	0.925	0.96			0.60	0.80	0.89	0.925	0.96
A 1	2.0	---	---	---	---	---	88	3.0	---	---	---	---	---
2	8.0	---	---	---	---	---	87	10.0	---	---	---	---	---
3	15.0	---	---	---	---	---	86	15.0	---	---	---	---	---
4	27.6	---	---	---	---	---	89	41.0	---	---	---	---	---
5	40.0	---	---	---	---	---	90	82.5	---	---	---	---	---
6	50.0	---	---	---	---	---	91	82.5	-0.042	-0.038	-0.031	-0.023	-0.056
7	59.0	-0.096	-0.103	-0.102	-0.092	-0.231	92	72.5	-0.013	-0.008	-0.003	-0.000	-0.019
8	87.5	-0.082	-0.064	---	---	---	93	94.0	---	---	---	---	---
9	77.5	---	---	---	---	---	94	94.0	---	---	---	---	---
10	87.6	---	---	---	---	---							
11	96.0	---	---	---	---	---							
B12	2.0	---	---	---	---	---	95	3.0	---	---	---	---	---
13	8.0	---	---	---	---	---	96	10.0	---	---	---	---	---
14	15.0	---	---	---	---	---	97	25.0	-0.160	-0.157	-0.170	-0.262	-0.366
15	27.6	-0.150	-0.201	-0.261	-0.341	-0.433	98	41.0	-0.150	-0.153	-0.196	-0.318	-0.449
16	40.0	-0.176	-0.210	-0.259	-0.328	-0.404	99	82.5	-0.114	-0.119	-0.110	-0.080	-0.266
17	50.0	-0.169	-0.197	-0.238	-0.304	-0.416	100	82.5	-0.090	-0.083	-0.079	-0.051	-0.160
18	59.0	-0.145	-0.166	-0.189	-0.213	-0.400	101	72.5	-0.094	-0.097	-0.083	-0.012	-0.077
19	87.5	-0.098	-0.118	-0.128	-0.101	-0.135	102	82.5	-0.017	-0.019	-0.021	-0.009	-0.029
20	77.5	-0.052	-0.064	-0.066	-0.050	-0.035	103	94.5	-0.057	-0.058	-0.059	-0.061	-0.007
21	86.0	-0.021	-0.016	-0.016	-0.001	-0.076							
22	95.3	---	---	---	---	---							
C23	2.0	-0.111	-0.138	-0.185	-0.256	-0.368	104	3.0	-0.595	-0.604	-0.647	-0.649	-0.630
24	8.0	-0.095	-0.098	-0.106	-0.116	-0.130	105	10.0	-0.556	-0.536	-0.551	-0.553	-0.555
25	15.0	-0.085	-0.071	-0.083	-0.076	-0.080	106	25.0	-0.237	-0.300	-0.336	-0.426	-0.407
26	27.6	-0.145	-0.179	-0.225	-0.274	-0.312	107	41.0	---	---	---	---	---
27	40.0	-0.152	-0.211	-0.259	-0.317	-0.366	108	82.5	---	---	---	---	---
28	50.0	-0.159	-0.205	-0.267	-0.328	-0.376	109	82.5	-0.113	-0.128	-0.131	-0.082	-0.306
29	59.0	-0.156	-0.187	-0.213	-0.221	-0.189	110	72.5	-0.065	-0.096	-0.092	-0.092	-0.100
30	87.5	-0.108	-0.129	-0.160	-0.160	-0.207	111	85.1	-0.000	-0.006	-0.011	-0.028	-0.211
31	77.5	-0.061	-0.081	-0.106	-0.100	-0.256	112	94.5	-0.049	-0.019	-0.030	-0.026	-0.135
32	86.0	-0.027	-0.012	-0.009	-0.041	-0.160							
33	95.3	---	---	---	---	---							
D24	2.0	-0.258	-0.250	-0.254	-0.259	-0.250	113	3.0	-0.378	-0.449	-0.495	-0.522	-0.441
35	15.0	-0.064	-0.068	-0.077	-0.091	-0.091	114	10.0	-0.251	-0.301	-0.327	-0.340	-0.371
36	27.6	-0.127	-0.146	-0.171	-0.201	-0.201	115	25.0	-0.208	-0.252	-0.272	-0.279	-0.279
37	40.0	-0.175	-0.200	-0.236	-0.266	-0.270	116	41.0	-0.179	-0.221	-0.254	-0.259	-0.261
38	50.0	-0.176	-0.203	-0.246	-0.288	-0.288	117	82.5	-0.150	-0.165	-0.202	-0.234	-0.208
39	59.0	-0.119	-0.165	-0.199	-0.232	-0.221	118	82.5	---	---	---	---	---
40	87.5	---	---	---	---	---	119	72.5	-0.049	-0.069	-0.100	-0.126	-0.207
41	77.5	-0.077	-0.083	-0.103	-0.126	-0.175	120	87.4	-0.020	-0.074	-0.096	-0.094	-0.035
42	87.5	-0.023	-0.025	-0.030	-0.071	-0.071	121	94.5	-0.027	-0.014	-0.012	-0.055	-0.041
43	94.2	-0.031	-0.016	-0.006	-0.036	-0.034							
E44	2.0	-0.212	-0.217	-0.214	-0.211	-0.211	122	3.0	-0.303	-0.329	-0.336	-0.370	-0.370
45	8.0	-0.075	-0.081	-0.089	-0.098	-0.098	123	10.0	-0.229	-0.282	-0.296	-0.292	-0.297
46	15.0	-0.098	-0.115	-0.123	-0.136	-0.136	124	25.0	-0.207	-0.227	-0.229	-0.229	-0.239
47	27.6	-0.159	-0.186	-0.201	-0.219	-0.219	125	41.0	-0.100	-0.109	-0.104	-0.102	-0.102
48	40.0	-0.210	-0.249	-0.269	-0.300	-0.300	126	82.5	-0.134	-0.152	-0.148	-0.144	-0.144
49	50.0	-0.205	-0.242	-0.270	-0.296	-0.296	127	82.5	-0.115	-0.144	-0.156	-0.153	-0.153
50	59.0	-0.182	-0.211	-0.229	-0.274	-0.274	128	72.5	-0.051	-0.113	-0.140	-0.159	-0.159
51	87.5	-0.135	-0.154	-0.153	-0.169	-0.169	129	78.0	-0.044	-0.066	-0.078	-0.101	-0.101
52	77.5	-0.076	-0.081	-0.080	-0.095	-0.095	130	85.3	-0.004	-0.000	-0.005	-0.041	-0.041
53	88.5	-0.051	-0.036	-0.035	-0.025	-0.025	131	94.1	-0.018	-0.007	-0.006	-0.006	-0.006
54	95.5	-0.011	-0.002	-0.002	-0.008	-0.008							
F55	2.0	---	---	---	---	---	132	3.0	---	---	---	---	---
56	8.0	-0.062	-0.040	-0.039	-0.034	-0.034	133	10.0	-0.196	-0.219	-0.214	-0.211	-0.211
57	15.0	-0.095	-0.097	-0.101	-0.114	-0.114	134	25.0	-0.131	-0.160	-0.167	-0.167	-0.167
58	27.6	-0.161	-0.196	-0.194	-0.211	-0.211	135	41.0	-0.148	-0.167	-0.166	-0.166	-0.166
59	40.0	-0.215	-0.248	-0.264	-0.292	-0.292	136	82.5	-0.113	-0.127	-0.128	-0.141	-0.141
60	50.0	-0.203	-0.229	-0.272	-0.309	-0.309	137	82.5	-0.011	-0.039	-0.041	-0.041	-0.041
61	59.0	-0.176	-0.205	-0.206	-0.206	-0.206	138	72.5	-0.013	-0.032	-0.040	-0.041	-0.041
62	87.5	-0.100	-0.094	-0.085	-0.061	-0.061	139	85.4	-0.028	-0.039	-0.037	-0.037	-0.037
63	86.5	-0.086	-0.110	-0.121	-0.122	-0.122	140	94.0	-0.040	-0.031	-0.033	-0.034	-0.034
64	94.0	-0.020	-0.009	-0.003	-0.008	-0.008							
G65	2.0	-0.256	-0.269	-0.271	-0.278	-0.278	141	3.0	-0.256	-0.273	-0.283	-0.299	-0.299
66	8.0	-0.069	-0.077	-0.080	-0.083	-0.083	142	10.0	-0.199	-0.221	-0.219	-0.214	-0.214
67	15.0	-0.092	-0.097	-0.098	-0.081	-0.081	143	25.0	-0.164	-0.174	-0.180	-0.211	-0.211
68	27.6	-0.134	-0.147	-0.150	-0.163	-0.163	144	41.0	-0.123	-0.141	-0.141	-0.141	-0.141
69	40.0	-0.094	-0.119	-0.122	-0.130	-0.130	145	82.5	-0.091	-0.107	-0.112	-0.124	-0.124
70	50.0	-0.211	-0.236	-0.247	-0.251	-0.251	146	82.5	-0.009	-0.006	-0.004	-0.004	-0.004
71	59.0	-0.201	-0.225	-0.235	-0.251	-0.251	147	72.5	-0.019	-0.042	-0.043	-0.035	-0.035
72	87.5	-0.132	-0.133	-0.129	-0.140	-0.140	148	94.0	-0.118	-0.118	-0.118	-0.115	-0.115
73	77.5	-0.117	-0.126	-0.126	-0.129	-0.129	149	94.0	-0.072	-0.069	-0.069	-0.062	-0.062
74	87.2	-0.093	-0.129	-0.135	-0.150	-0.150							
75	98.8	-0.028	-0.013	-0.007	-0.006	-0.006							
H76	2.0	-0.254	-0.275	-0.280	-0.285	-0.285	150	3.0	-0.265	-0.278	-0.286	-0.286	-0.286
77	8.0	-0.094	-0.098	-0.105	-0.112	-0.112	151	10.0	-0.191	-0.148	-0.130	-0.111	-0.111
78	15.0	-0.083	-0.016	-0.006	-0.002	-0.002	152	25.0	-0.046	-0.076	-0.046	-0.051	-0.051
79	27.6	-0.086	-0.094	-0.096	-0.077	-0.077	153	41.0	-0.147	-0.174	-0.191	-0.207	-0.207
80	40.0	-0.148	-0.177	-0.151	-0.162	-0.162	154	82.5	-0.105	-0.125	-0.130	-0.140	-0.140
81	50.0	-0.179	-0.194	-0.189	-0.180	-0.180	155	82.5	-0.097	-0.092	-0.087	-0.086	-0.086
82	59.0	-0.169	-0.176	-0.171	-0.162	-0.162	156	72.5	-0.021	-0.034	-0.047	-0.100	-0.100
83	87.5	-0.105	-0.113	-0.111	-0.106	-0.106	157	84.0	-0.031	-0.032	-0.031	-0.031	-0.031
84	88.3	-0.105	-0.106	-0.105	-0.117	-0.117							
85	94.2	-0.042	-0.025	-0.028	-0.026	-0.026							

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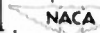


TABLE 77

$$\alpha = -4.5^\circ, \delta_{max} = 0.8^\circ, \epsilon = 2^\circ$$

		UPPER SURFACE					LOWER SURFACE						
Tube	Per-cent chord	Mach Number					Tube	Per-cent chord	Mach Number				
		0.60	0.80	0.89	0.925	0.96			0.60	0.80	0.89	0.925	0.96
A 1	2.0	---	---	---	---	---	86	3.0	---	---	---	---	---
2	6.0	---	---	---	---	---	87	10.0	---	---	---	---	---
4	15.0	---	---	---	---	---	88	25.0	---	---	---	---	---
5	27.5	---	---	---	---	---	89	41.0	---	---	---	---	---
6	40.0	---	---	---	---	---	90	58.5	---	---	---	---	---
7	59.0	---	---	---	---	---	91	82.5	-0.028	-0.027	-0.029	-0.028	-0.028
8	67.5	-0.107	-0.094	-0.064	-0.044	-0.145	92	72.5	.090	-.001	-.001	.009	-.035
9	77.5	-.074	-.067	-.046	-.021	-.078	93	64.0	---	---	---	---	---
10	86.0	---	---	---	---	---	94	94.0	---	---	---	---	---
11	96.0	---	---	---	---	---							
B12	2.0	---	---	---	---	---	95	3.0	---	---	---	---	---
13	6.0	---	---	---	---	---	96	10.0	---	---	---	---	---
14	15.0	---	---	---	---	---	97	25.0	-.096	-.089	-.123	-.158	-.222
15	27.5	-.274	-.283	-.429	-.648	-.709	98	41.0	-.081	-.100	-.126	-.154	-.231
16	40.0	-.238	-.231	-.210	-.148	-.040	99	58.5	-.081	-.077	-.199	-.181	-.215
17	50.0	-.215	-.213	-.152	-.174	-.044	100	82.5	-.040	-.059	-.112	-.092	-.194
18	59.0	-.173	-.170	-.123	-.046	-.424	101	72.5	-.011	-.002	-.005	-.005	-.121
19	67.5	-.110	-.100	-.089	-.018	-.203	102	86.5	.040	.033	.011	.035	-.056
20	77.5	-.068	-.062	-.042	-.004	-.095	103	94.5	.074	.071	.075	.044	.080
21	86.0	-.011	.014	.020	.041	-.021							
22	96.0	---	---	---	---	---							
C23	2.0	-.815	-.801	-.738	-.638	-.504	104	3.0	.081	.135	.188	.117	.095
24	6.0	-.644	-.644	-.676	-.615	-.561	105	10.0	.107	.110	.100	.094	.078
25	15.0	-.444	-.444	-.489	-.421	-.367	106	25.0	-.021	-.015	-.063	-.079	-.093
26	27.5	-.359	-.368	-.406	-.311	-.268	107	41.0	---	---	---	---	---
27	40.0	-.313	-.313	-.368	-.261	-.228	108	58.5	---	---	---	---	---
28	50.0	-.253	-.251	-.261	-.247	-.276	109	82.5	-.059	-.073	-.108	-.136	-.197
29	59.0	-.215	-.213	-.245	-.204	-.233	110	72.5	-.021	-.008	-.013	-.061	-.142
30	67.5	-.150	-.162	-.193	-.147	-.167	111	86.5	.007	.017	.008	.028	-.003
31	77.5	-.093	-.104	-.077	-.115	-.175	112	94.5	.063	.058	.047	.019	-.026
32	86.0	-.003	-.008	-.001	-.001	-.052							
33	96.0	---	---	---	---	---							
D34	2.0	-.593	-.640	-.764	-.704	-.430	113	3.0	.234	.243	.289	.281	.189
35	6.0	-.490	-.450	-.475	-.436	-.446	114	10.0	.075	.096	.087	.089	.068
36	15.0	-.335	-.312	-.368	-.311	-.304	115	25.0	-.009	.015	-.008	-.034	-.047
37	27.5	-.283	-.283	-.358	-.214	-.204	116	41.0	-.047	-.060	-.078	-.089	-.046
38	40.0	-.288	-.245	-.312	-.159	-.178	117	58.5	-.054	-.087	-.087	-.097	-.107
39	50.0	-.208	-.246	-.301	-.157	-.136	118	82.5	---	---	---	---	---
40	67.5	---	---	---	---	---	119	72.5	-.080	-.019	-.018	-.051	-.065
41	77.5	-.104	-.120	-.170	-.170	-.176	120	87.4	.027	.043	.004	.004	.003
42	87.5	-.034	-.046	-.049	-.047	-.039	121	94.5	.047	.034	.006	-.009	-.022
43	94.2	.012	.000	-.041	-.050	-.051							
E44	2.0	-.585	-.608	-.680	-.570	-.473	122	3.0	.271	.230	.272	.273	.244
45	6.0	-.437	-.487	-.544	-.434	-.404	123	10.0	.197	.124	.110	.110	.089
46	15.0	-.273	-.429	-.462	-.458	-.476	124	25.0	.007	.009	-.004	-.005	-.022
47	27.5	-.131	-.113	-.177	-.100	-.106	125	41.0	-.014	-.015	-.048	-.050	-.065
48	40.0	-.083	-.094	-.174	-.105	-.101	126	58.5	-.025	-.023	-.041	-.045	-.057
49	50.0	-.081	-.151	-.119	-.107	-.146	127	82.5	-.002	-.010	-.042	-.056	-.075
50	59.0	-.230	-.265	-.357	-.149	-.144	128	72.5	-.009	-.020	-.044	-.057	-.102
51	67.5	-.167	-.134	-.198	-.106	-.134	129	86.5	.015	.036	-.014	-.012	-.062
52	77.5	-.101	-.111	-.130	-.130	-.146	130	94.5	.047	.043	.010	.027	.009
53	86.5	.013	.022	.014	.016	-.003	131	94.1	.050	.043	.040	.041	.024
54	96.5	.000	.001	.007	-.007	-.011							
F55	2.0	---	---	---	---	---	132	3.0	---	---	---	---	---
56	6.0	-.417	-.495	-.499	-.489	-.429	133	10.0	.117	.129	.114	.119	.091
57	15.0	-.356	-.421	-.450	-.450	-.439	134	25.0	.018	.024	.009	.009	-.010
58	27.5	-.330	-.337	-.444	-.437	-.473	135	41.0	-.012	-.009	-.004	-.005	-.041
59	40.0	-.313	-.395	-.441	-.413	-.406	136	58.5	-.006	-.006	-.012	-.012	-.024
60	50.0	-.244	-.356	-.408	-.411	-.402	137	82.5	.028	.027	.017	.009	.036
61	59.0	-.264	-.302	-.394	-.407	-.413	138	72.5	.071	.046	.016	.000	.013
62	67.5	-.210	-.254	-.339	-.379	-.414	139	86.4	.147	.158	.108	.114	.157
63	86.5	-.040	-.054	-.056	-.032	-.129	140	94.0	.007	.061	.034	.050	.033
64	94.5	.038	.023	.017	-.003	-.011							
G65	2.0	-.413	-.450	-.577	-.577	-.283	141	3.0	.061	.060	.070	.075	.054
66	6.0	-.341	-.346	-.391	-.391	-.317	142	10.0	.104	.114	.105	.107	.094
67	15.0	-.240	-.344	-.356	-.397	-.317	143	25.0	.021	.023	.012	.012	.020
68	27.5	-.274	-.332	-.340	-.370	-.345	144	41.0	-.002	-.001	-.011	-.011	-.020
69	40.0	-.264	-.330	-.366	-.375	-.410	145	58.5	.010	.009	.001	.002	-.000
70	50.0	-.264	-.310	-.350	-.349	-.390	146	82.5	.033	.031	.026	.026	.016
71	59.0	-.268	-.280	-.313	-.325	-.343	147	72.5	.080	.086	.074	.074	.074
72	67.5	-.212	-.267	-.306	-.300	-.343	148	84.0	.135	.116	.100	.110	.154
73	77.5	-.173	-.187	-.260	-.206	-.214	149	94.0	.089	.080	.082	.083	.076
74	87.2	-.013	-.024	-.070	-.072	-.080							
75	96.8	-.060	-.003	-.014	-.080	-.011							
H76	2.0	-.267	-.305	-.263	-.243	-.189	150	3.0	.020	.044	.045	.057	.053
77	6.0	-.267	-.327	-.269	-.271	-.219	151	10.0	.090	.100	.110	.105	.105
78	15.0	-.234	-.340	-.240	-.240	-.202	152	25.0	-.009	-.014	-.026	-.024	-.030
79	27.5	-.268	-.241	-.257	-.281	-.238	153	41.0	-.040	-.061	-.066	-.066	-.101
80	40.0	-.287	-.244	-.245	-.245	-.200	154	58.5	-.013	-.046	-.040	-.040	-.061
81	50.0	-.201	-.244	-.254	-.234	-.230	155	82.5	.013	.019	.014	.017	.017
82	59.0	-.194	-.210	-.200	-.211	-.209	156	72.5	.013	.028	.015	.015	.014
83	67.5	-.178	-.201	-.205	-.217	-.214	157	84.0	.031	.033	.029	.030	.031
84	86.3	-.140	-.174	-.202	-.169	-.174							
85	94.2	-.073	-.100	-.101	-.120	-.135							

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TABLE 78

$$A = -4.5^\circ, B_{max} = 9.6^\circ, n = 7^\circ$$

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UPPER SURFACE						LOWER SURFACE							
Tube	Percent chord	Mach Number					Tube	Percent chord	Mach Number				
		0.60	0.80	0.89	0.925	0.96			0.60	0.80	0.89	0.925	0.96
1	2.0	---	---	---	---	---	86	5.0	---	---	---	---	---
2	6.0	---	---	---	---	---	87	10.0	---	---	---	---	---
3	15.0	---	---	---	---	---	88	25.0	---	---	---	---	---
4	27.5	---	---	---	---	---	89	41.0	---	---	---	---	---
5	40.0	---	---	---	---	---	90	58.5	---	---	---	---	---
6	50.0	---	---	---	---	---	91	62.5	-0.081	-0.098	-0.079	-0.136	-0.195
7	59.0	-0.165	-0.262	-0.359	-0.436	-0.517	92	72.5	-0.009	-0.046	-0.071	-0.129	-0.194
8	67.5	-0.136	-0.264	-0.363	-0.448	-0.532	93	84.0	---	---	---	---	---
9	77.5	---	---	---	---	---	94	94.0	---	---	---	---	---
10	87.5	---	---	---	---	---							
11	96.0	---	---	---	---	---							
12	2.0	---	---	---	---	---	95	5.0	---	---	---	---	---
13	6.0	---	---	---	---	---	96	10.0	---	---	---	---	---
14	15.0	---	---	---	---	---	97	25.0	0.040	0.009	-0.066	-0.098	-0.090
15	27.5	-0.668	-0.646	-0.626	-0.607	-0.712	98	41.0	-0.019	-0.096	-0.075	-0.113	-0.104
16	40.0	-0.611	-0.640	-0.640	-0.647	-0.789	99	58.5	-0.021	-0.064	-0.040	-0.137	-0.137
17	50.0	-0.501	-0.604	-0.621	-0.628	-0.726	100	62.5	-0.028	-0.069	-0.040	-0.139	-0.124
18	59.0	-0.388	-0.521	-0.572	-0.628	-0.654	101	72.5	0.004	-0.038	-0.094	-0.099	-0.099
19	67.5	-0.298	-0.447	-0.518	-0.560	-0.628	102	84.0	0.005	-0.036	-0.049	-0.104	-0.121
20	77.5	-0.202	-0.361	-0.444	-0.511	-0.589	103	94.0	0.011	-0.037	-0.051	-0.104	-0.117
21	86.0	-0.120	-0.235	-0.303	-0.353	-0.409							
22	95.3	---	---	---	---	---							
23	2.0	-0.296	-0.991	-0.992	-0.797	-0.793	104	5.0	0.502	0.699	0.782	0.709	0.707
24	6.0	-0.351	-0.981	-0.966	-0.740	-0.746	105	10.0	0.364	0.523	0.447	0.428	0.436
25	15.0	-0.765	-0.865	-0.845	-0.721	-0.763	106	25.0	0.005	0.161	0.177	0.156	0.167
26	27.5	-0.671	-0.685	-0.743	-0.715	-0.740	107	41.0	---	---	---	---	---
27	40.0	-0.588	-0.777	-0.627	-0.695	-0.736	108	58.5	---	---	---	---	---
28	50.0	-0.439	-0.747	-0.564	-0.621	-0.696	109	62.5	-0.013	-0.042	-0.094	-0.082	-0.073
29	59.0	-0.362	-0.630	-0.494	-0.574	-0.641	110	72.5	-0.017	-0.016	-0.008	-0.093	-0.040
30	67.5	-0.297	-0.508	-0.405	-0.508	-0.547	111	84.0	0.011	-0.004	-0.011	-0.061	-0.093
31	77.5	-0.238	-0.397	-0.343	-0.417	-0.387	112	94.0	0.020	-0.020	-0.026	-0.061	-0.093
32	86.0	-0.140	-0.296	-0.196	-0.295	-0.298							
33	95.3	---	---	---	---	---							
34	2.0	-1.477	-1.184	-1.135	-1.164	-1.077	113	5.0	0.501	0.581	0.597	0.574	0.582
35	6.0	-0.655	-1.050	-0.946	-1.076	-0.996	114	10.0	0.382	0.532	0.410	0.470	0.348
36	15.0	-0.513	-0.696	-0.638	-0.903	-0.772	115	25.0	0.194	0.301	0.221	0.302	0.213
37	27.5	-0.404	-0.601	-0.575	-0.832	-0.733	116	41.0	0.082	0.094	0.132	0.092	0.105
38	40.0	-0.401	-0.492	-0.451	-0.599	-0.666	117	58.5	0.046	0.048	0.065	0.038	0.048
39	50.0	-0.285	-0.395	-0.300	-0.323	-0.413	118	62.5	---	---	---	---	---
40	59.0	-0.199	-0.329	-0.249	-0.264	-0.349	119	72.5	0.046	0.032	0.042	0.004	0.033
41	67.5	-0.167	-0.204	-0.176	-0.176	-0.249	120	84.0	0.099	0.038	0.050	0.047	0.066
42	77.5	-0.108	-0.150	-0.117	-0.084	-0.077	121	94.0	0.081	0.001	0.004	0.000	0.005
43	86.0	-0.078	-0.114	-0.113	-0.093	-0.083							
44	95.3	---	---	---	---	---							
45	2.0	-1.431	-1.029	-1.136	-1.199	-1.119	122	5.0	0.501	0.504	0.504	0.505	0.481
46	6.0	-0.432	-0.472	-0.492	-0.459	-0.409	123	10.0	0.382	0.591	0.591	0.591	0.508
47	15.0	-1.124	-1.266	-1.196	-1.090	-0.987	124	25.0	0.204	0.281	0.213	0.213	0.213
48	27.5	-0.493	-0.675	-0.605	-0.709	-0.670	125	41.0	0.108	0.119	0.117	0.116	0.116
49	40.0	-0.410	-0.470	-0.400	-0.495	-0.412	126	58.5	0.081	0.087	0.084	0.085	0.084
50	50.0	-0.353	-0.387	-0.474	-0.411	-0.389	127	62.5	0.097	0.051	0.047	0.041	0.046
51	59.0	-0.296	-0.305	-0.217	-0.297	-0.240	128	72.5	0.094	0.041	0.032	0.032	0.004
52	67.5	-0.281	-0.245	-0.171	-0.210	-0.234	129	84.0	0.060	0.049	0.044	0.006	0.025
53	77.5	-0.199	-0.172	-0.131	-0.140	-0.209	130	94.0	0.070	0.064	0.062	0.058	0.051
54	86.0	-0.040	-0.105	-0.082	-0.126	-0.142	131	94.1	0.040	0.039	0.039	0.017	0.031
55	95.3	-0.062	-0.101	-0.096	-0.112	-0.135							
56	2.0	---	---	---	---	---	132	5.0	---	---	---	---	---
57	6.0	-1.396	-1.472	-1.279	-1.247	-1.041	133	10.0	0.382	0.596	0.599	0.599	0.596
58	15.0	-0.777	-1.176	-1.181	-1.067	-0.970	134	25.0	0.218	0.281	0.225	0.226	0.227
59	27.5	-0.595	-0.705	-0.604	-0.684	-0.640	135	41.0	0.124	0.135	0.135	0.137	0.135
60	40.0	-0.498	-0.595	-0.479	-0.531	-0.604	136	58.5	0.094	0.102	0.103	0.104	0.104
61	50.0	-0.360	-0.416	-0.461	-0.404	-0.495	137	62.5	0.068	0.100	0.111	0.113	0.117
62	59.0	-0.297	-0.330	-0.259	-0.309	-0.441	138	72.5	0.134	0.145	0.151	0.153	0.157
63	67.5	-0.206	-0.266	-0.271	-0.316	-0.332	139	84.0	0.177	0.160	0.177	0.199	0.204
64	86.0	-0.083	-0.122	-0.146	-0.166	-0.180	140	94.0	0.097	0.050	0.040	0.032	0.031
65	94.8	-0.052	-0.090	-0.129	-0.155	-0.158							
66	2.0	-1.399	-1.342	-1.297	-1.162	-1.049	141	5.0	0.575	0.582	0.601	0.605	0.608
67	6.0	-0.448	-0.522	-0.489	-0.404	-0.404	142	10.0	0.388	0.397	0.394	0.400	0.401
68	15.0	-0.841	-1.031	-1.121	-0.991	-0.893	143	25.0	0.208	0.288	0.232	0.235	0.241
69	27.5	-0.490	-0.701	-0.691	-0.789	-0.616	144	41.0	0.131	0.143	0.149	0.153	0.158
70	40.0	-0.400	-0.490	-0.606	-0.564	-0.425	145	58.5	0.101	0.117	0.122	0.126	0.132
71	50.0	-0.361	-0.411	-0.515	-0.594	-0.543	146	62.5	0.099	0.142	0.143	0.140	0.152
72	59.0	-0.247	-0.341	-0.395	-0.442	-0.495	147	72.5	0.147	0.167	0.171	0.178	0.180
73	67.5	-0.173	-0.281	-0.322	-0.347	-0.400	148	84.0	0.194	0.209	0.215	0.222	0.224
74	77.5	-0.100	-0.204	-0.231	-0.259	-0.257	149	94.0	0.099	0.104	0.101	0.104	0.110
75	87.2	-0.153	-0.115	-0.161	-0.175	-0.160							
76	96.8	-0.150	-0.071	-0.133	-0.151	-0.138							
77	2.0	-1.599	-1.363	-1.209	-1.079	-0.971	150	5.0	0.568	0.598	0.607	0.612	0.617
78	6.0	-0.634	-0.999	-1.070	-0.946	-0.877	151	10.0	0.347	0.574	0.590	0.601	0.610
79	15.0	-0.515	-0.710	-0.729	-0.732	-0.723	152	25.0	0.041	0.047	0.057	0.040	0.053
80	27.5	-0.441	-0.441	-0.447	-0.470	-0.462	153	41.0	0.093	0.088	0.070	0.099	0.109
81	40.0	-0.356	-0.394	-0.387	-0.367	-0.378	154	58.5	0.060	0.067	0.060	0.072	0.074
82	50.0	-0.304	-0.307	-0.347	-0.319	-0.302	155	62.5	0.097	0.108	0.115	0.123	0.131
83	59.0	-0.293	-0.196	-0.110	-0.200	-0.228	156	72.5	0.178	0.200	0.210	0.251	0.251
84	67.5	-0.199	-0.285	-0.315	-0.370	-0.337	157	84.0	0.021	0.019	0.042	0.053	0.069
85	86.0	-0.091	-0.169	-0.114	-0.170	-0.170							
86	94.8	-0.291	-0.279	-0.301	-0.286	-0.285							



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1.9.1.1

A Compilation of the Pressures Measured on a
Wing and Aileron with Various Amounts of Sweep
in the Langley 8-Foot High-Speed Tunnel.

By Richard T. Whitcomb

NACA RM No. L8A30a
April 1948

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1.2.2.6

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<p style="text-align: center;">CONFIDENTIAL</p> <p style="text-align: center;"><u>Abstract</u></p> <p>A compilation is made in tabular form of all the pressures measured on a thin high-aspect-ratio wing and aileron with no sweep and with 30° and 45° of sweepback and sweepforward at high subsonic Mach numbers in the Langley 8-foot high-speed tunnel.</p> <p style="text-align: center;">CONFIDENTIAL</p>	<p style="text-align: center;">CONFIDENTIAL</p> <p style="text-align: center;"><u>Abstract</u></p> <p>A compilation is made in tabular form of all the pressures measured on a thin high-aspect-ratio wing and aileron with no sweep and with 30° and 45° of sweepback and sweepforward at high subsonic Mach numbers in the Langley 8-foot high-speed tunnel.</p> <p style="text-align: center;">CONFIDENTIAL</p>

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Whitcomb, R. T.

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 SECTION: Wings and Airfoils (6)
 CROSS REFERENCES: Ailerons - Aerodynamics (03201); Wings
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* Pressurs - Measurement (73564)

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② P1/1, P1/3

②③ * swept forward wings
~~* swept back wings~~

* Ailerons

Wind Tunnels