

AIRSHIP AERODYNAMICS

TABLE V.—*Aerodynamic forces, shear, and bending moments in U. S. S. ZR-1 at 85 foot/seconds and 5° 42' pitch*

Station meters	Turning forces on hull	Unbalanced static weights	<i>L</i>	Load	Shear	Bending moment in pounds
			<i>Pounds</i>		<i>Pounds</i>	
0.....	— 820	— 57		— 877		0
10.....	— 1, 032	— 179	2, 300	1, 089	— 877	— 8, 770
20.....	— 1, 200	— 334	2, 300	766	212	— 6, 650
30.....	— 1, 228	— 500	3, 754	2, 026	978	3, 130
40.....	— 1, 180	— 665	4, 937	3, 092	3, 004	33, 170
50.....	— 985	— 816	2, 300	499	6, 096	94, 130
60.....	— 755	— 933		— 1, 688	6, 595	160, 080
70.....	— 494	— 1, 020		— 1, 514	4, 907	209, 150
80.....	— 151	— 1, 067		— 1, 218	3, 393	243, 080
90.....	— 55	— 1, 077		— 1, 132	2, 175	264, 830
100.....	0	— 1, 077		— 1, 077	1, 043	275, 260
110.....	0	— 1, 077		— 1, 077	— 34	274, 920
120.....	0	— 1, 077		— 1, 077	— 1, 111	263, 810
130.....	41	— 1, 077		— 1, 036	— 2, 188	241, 930
140.....	151	— 1, 067		— 916	— 3, 224	209, 690
150.....	494	— 1, 030		— 536	— 4, 140	168, 290
160.....	851	— 933		— 82	— 4, 676	121, 530
170.....	1, 346	— 783		563	— 4, 758	73, 950
180.....	1, 891	— 563		1, 328	— 4, 195	32, 000
188.....	1, 780	— 250		1, 530	— 2, 867	9, 020
194.75.....	1, 346	— 9		1, 337	— 1, 337	0
		— 15,591	15, 591	000		

j. To determine total shear or bending moment at any frame, it is necessary to add results obtained from static loading to those computed from aerodynamic forces.