

H = 11 km

Parasitic drag, %Cdo

16
14
12
10
8
6
4
2
0

M = 0.8

M = 2.0

1

2

gaps

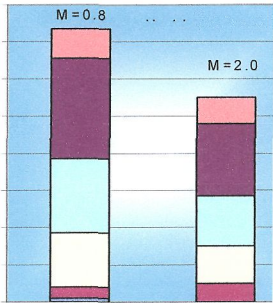
small parts, protruding into the flow

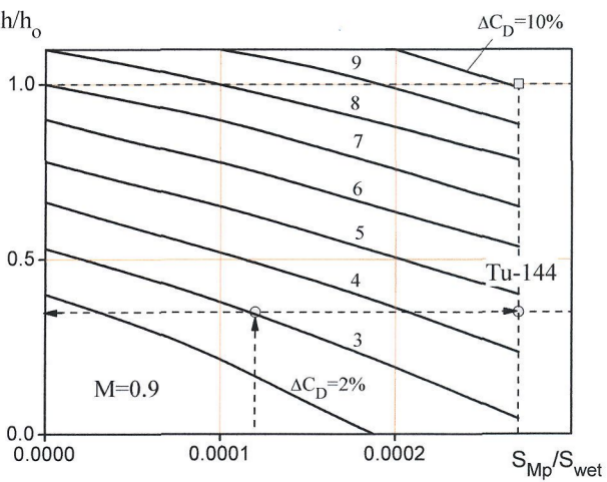
steps

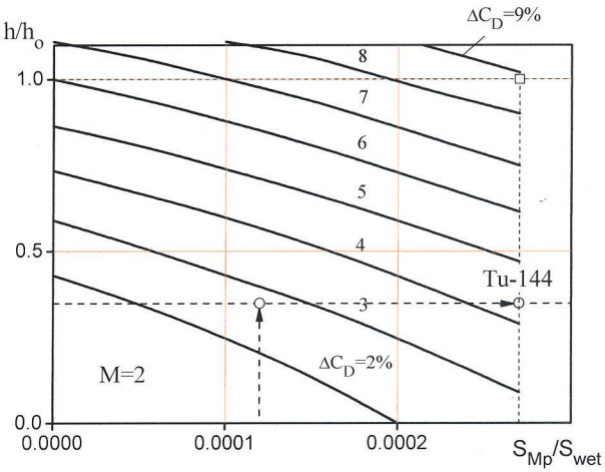
head rivets and screws

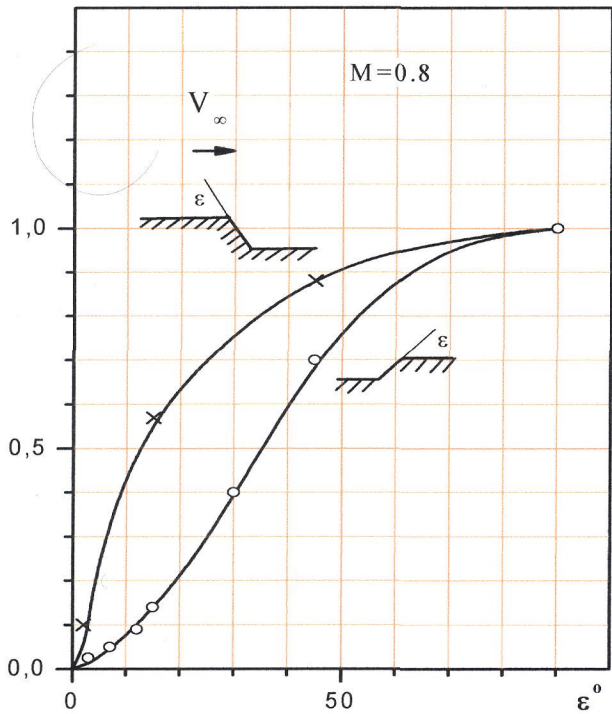
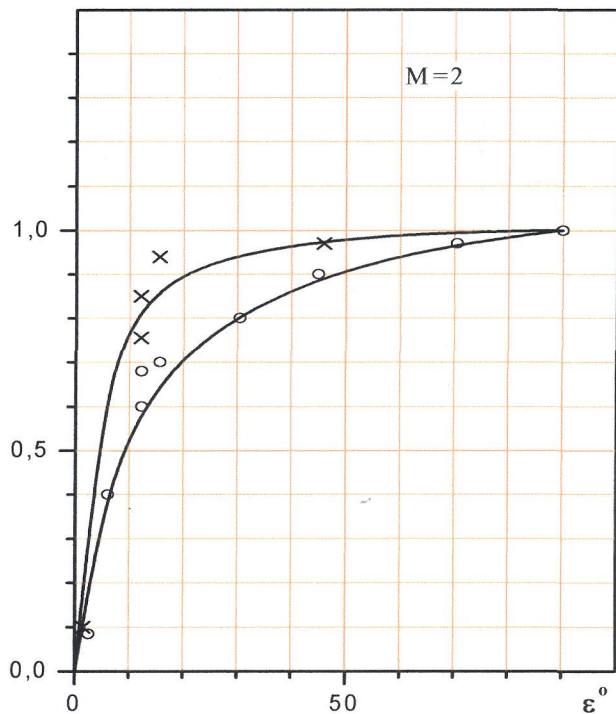
waviness

roughness

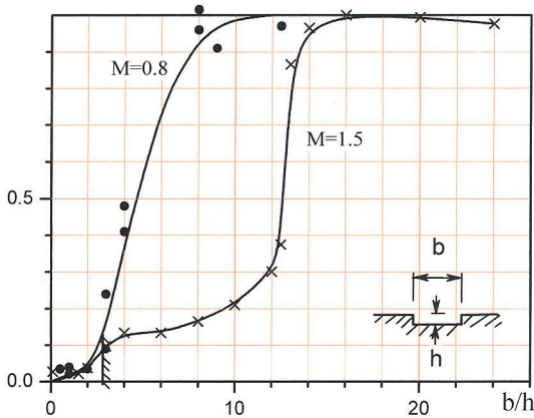


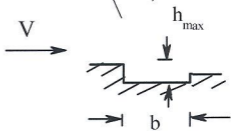
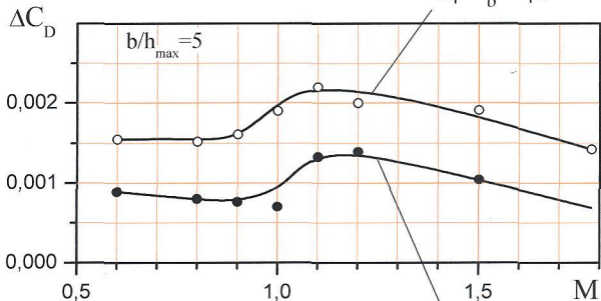
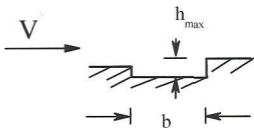




$C_{D\varepsilon\sim} / C_{D\varepsilon=90^\circ}$  $C_{D\varepsilon\sim} / C_{D\varepsilon=90^\circ}$ 

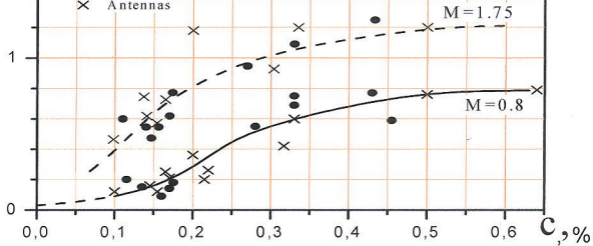
$$C_{D \text{ b/h}} / C_{D \text{ max}}$$





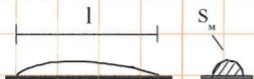
C_D

● Probes
× Antennas



C_D

Fairings



$$\lambda_{eqv} = \frac{l}{2} \sqrt{\frac{\pi}{2S_M}}$$

1

 $M=1.75$ $M=0.8$

0

0

2

4

 λ_{eqv}

