



Two-Dimensional Low-Turbulence Pressure Tunnel

Description:

- Test Section - 3 by 7½ foot rectangular, closed throat
- Power - 2000 horsepower
- Speed - 290 mph at 1 atmosphere, 150 mph at 10 atmospheres
- Pressure - Up to 10 atmospheres

Purpose of equipment:

To develop improved airfoil sections, high-lift devices, and control surfaces.

Research Projects:

- a) To make the final determination of the effects of the basic variables of shape, camber, and surface condition on airfoil, flap, and control-surface characteristics.
- b) To determine and improve the characteristics of ideal and practical-construction airfoils, flaps, and control surfaces for specific airplanes.
- c) To determine wing-body interference for various arrangements of airfoils, nacelles, propellers, and jets.

Illustrations:

1. Ideal-construction low-drag airfoil model.
2. Airfoil-nacelle model for the XB-36 airplane.
3. Model for development of high-lift device for low-drag airfoil on the XP-60 airplane.
4. Airfoil model with nacelle and pusher propellers, general investigation for design of XB-35 airplane.

