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Product Name :
Measurement Of Jet Forces

Product Code :
LBNY-0005-10300090



Description :

The force of the water jet is adjusted via the flow rate. Experiments study the influence of flow velocity and amount of flow rate as well as of different deflection angles. The forces are calculated using the momentum equation and compared with the measurements. The jet forces generated by the water jet are measured on the weight-loaded scale. During deceleration, acceleration and deflection of a flowing fluid, there is a change of velocity that leads to a change in momentum. In jet forces are generated and studied with the aid of a water jet that acts on an interchangeable deflector. The experimental unit includes a transparent tank, a nozzle, four interchangeable deflectors with different deflection angles and a weight-loaded scale. According to the momentum equation these changes result in forces. In practice, the motive forces are used to convert kinetic energy into work done, for example in a Pelton turbine. A water jet exits a nozzle vertically upwards, hits the deflector and is deflected.

Technical Specification :

Jet force can be adjusted via flow rate
Four different shaped deflectors: flat surface, oblique surface, semi-circular surface, conical surface
Investigation of jet forces and demonstration of the principle of linear momentum
Flow rate determined by base module
Water supply using base module or via laboratory supply
Tank made of transparent material for observing the experiments
Measurement of the jet forces via the weight-loaded scale
Nozzle for generating the water jet.



Laboratory Instrument India