

Jordan University of Science and Technology

Pressure transmission system for surface pressure measurements on a cylinder moving in a circular path in still air

Authors: Aldoss, T.K., Abou-Arab, T.W., Jarrah, M.A.

Abstract: A simple and inexpensive pressure transmission system was designed and constructed to measure the pressure distribution around a circular cylinder moving along a circular path. This system is used to measure surface pressure distribution, firstly for a cylinder rotating about an axis orthogonal to its own axis, and secondly for a cylinder rotating about an axis parallel to its axis. The results of these measurements are used to study the effect of rotation on pressure distribution. Forces due to radial rotation significantly affected the measured surface pressure distribution in both cases.