

# THE AERONAUTICAL QUARTERLY

A JOURNAL DEVOTED TO AERONAUTICS AND THE ALLIED SCIENCES

Vol.XXXI

NOVEMBER 1980 Part 4

# CONTENTS

An Investigation of Turbulent Boundary Layer of a Flat Plate with a Small Step Change in Surface Roughness	n P.A.Aswath Narayana	221
Non-Equilibrium Flow of an Ideal Dissociating Gas Behind an Attached Shock Wave	V.D.Sharma	238
A Simplified Theory of Oscillating Aerofoils in Transonic Flow: Review and Extension	E.H.Dowell	252
The Influence of Aspect Ratio on Incompressible Turbulent Flows from Rectangular Slots	G.F.Marsters and J.Fotheringham	285

ROYAL AERONAUTICAL SOCIETY 4 HAMILTON PLACE, W1V 0BQ LONDON

# THE AERONAUTICAL QUARTERLY

### **Editorial Board**

Professor W A Mair, CBE, MA, FRAeS (Chairman)
Sir Arnold Hall, MA, FRS, HonFRAeS, HonFAIAA
Dr J H Horlock, MA, PhD, FRS, FRAeS
Lord Kings Norton, DSc, DIC, PhD, HonFRAeS, FAIAA
Sir Alfred Pugsley, OBE, DSc, FRS, HonFRAes
Professor S C Redshaw, DSc, PhD, FRAeS, FICE, FIStructE
Sir Owen Saunders, FRS, FRAeS
Professor W H Wittrick, ScD, PhD, FRAeS

Editor — Prof. L.F.Crabtree Queen's Building University Walk Bristol BS8 1TR

### **Editorial Referees**

It has been decided to omit the full list of referees, previously appearing on this page, and instead to acknowledge from time to time the help of those referees who have advised the editor during the previous year. A list of these appeared in the November 1979 issue.