

C.P. No. 400

A.R.C. Technical Report

C.P. No. 400

A.R.C. Technical Report



MINISTRY OF SUPPLY

AERONAUTICAL RESEARCH COUNCIL

CURRENT PAPERS

**LIST OF CURRENT PAPERS PUBLISHED FOR
THE AERONAUTICAL RESEARCH COUNCIL**

Nos. 351-400

LONDON : HER MAJESTY'S STATIONERY OFFICE

1958

PRICE 1s 3d NET

List of Current Papers

published for

THE AERONAUTICAL RESEARCH COUNCIL
(Numbers 351-400)

C.P. No.	Council No.	Title	Author(s)
351	18,306	Investigation of high length/beam ratio seaplane hulls with high beam loadings. Hydrodynamic stability Part 14. The effect of a tailored afterbody on stability and spray characteristics with test data on Model J. (October, 1955).	Ridland, D. M.
352	18,304	Investigation of high length/beam ratio seaplane hulls with high beam loadings. Hydrodynamic stability Part 19. The interaction of the effects of forebody warp, afterbody length and afterbody angle on longitudinal stability characteristics. (September, 1955).	Friswell, J. K.
353	18,461	Direct stress fatigue tests on redux-bonded and riveted double strap joints in 10 S.W.G. aluminium alloy sheet. (May, 1956).	Kelsey, S. Spooner, J. B.
354	19,403	Effects of elevator circuit stiffness on the loading conditions in longitudinal manoeuvres. (March, 1957).	Puttock, D. R.
355	17,870	The flow through short straight pipes in a compressible viscous stream. (April, 1955).	Seddon, J.
356	18,874	Ultrasonic relaxation and attenuation in Freons, in relation to their use in supersonic wind tunnels. (November, 1956).	Miyahara, Y. Richardson, E. G.
357	19,488	An experimental verification of the theoretical conclusions of R.A.E. Technical Note No. Structures 156 (C.P. 286) "A constructional method for minimising the hazard of catastrophic failure in a pressure cabin" with further comments on its implications. (May, 1957).	Williams, D.

C.P. No.	Council No.	Title	Author(s)
358	19,054	Curves suitable for families of aerofoils with variable maximum thickness position, nose radius, camber and nose droop. (February, 1957).	Tanner, L. H.
359	17,949	Preliminary analysis for a jet flap system in two-dimensional inviscid flow. (June, 1955).	Maskell, E. C. Gates, S. B.
360	18,567	Formulae and approximations for aerodynamic heating rates in high speed flight. (October, 1955). Corrigenda and Addendum (March, 1956).	Monaghan, R. J.
361	17,683	The calculation of the paths of vortices from a system of vortex generators, and a comparison with experiment. (March, 1955).	Jones, J. P.
362	18,531	Assessment of the possibility of using suction to inhibit cavitation on cylindrical sections. (May, 1956).	Thomas, G. E.
363	19,480	Fatigue loadings in flight. Loads in the tailplane of a Comet I. (March, 1957).	Burns, Anne
364	19,467	A note on some integrals in aerodynamics. (May, 1957).	Williams, D. E.
365	19,531	A geared flywheel balance arrangement for the prevention of control surface flutter. (June, 1957).	Molyneux, W. G.
366	18,373	Turbulence measurements in supersonic flow with the hot-wire anemometer. (December, 1955).	Wise, B. Schultz, D. L.
367	18,998	Experimental investigation of the pressure distribution at the centre-section of a swept-back wing at high subsonic speeds. (August, 1955).	Bateman, T. E. B. Lawrence, A. J.
368	19,583	Some proposals regarding the definitions of terms relating to various flow régimes of a gas. (October, 1957).	Warren, C. H. E. Young, A. D.
369	19,276	Report of the Definitions Panel on definitions to be used in the description and analysis of drag. (May, 1957).	-

C.P. No.	Council No.	Title	Author(s)
370	19,046	A simplified form of the auxiliary equation for use in the calculation of turbulent boundary layers. (February, 1957).	Black, T. J.
371	18,726	Experimental correlation between the endurance of a wing spar joint and the ratio between 0.1 per cent proof and ultimate tensile strengths of the material. (May, 1956).	Fisher, W. A. P.
372	15,910	Tests on a two-dimensional slotted-wall wind tunnel with lateral obstructions behind the slots. (May, 1953).	Chinneck, A. Berry, C. J. Peggs, P. J.
373	18,413	Flutter predictions in practice. (February, 1956).	Broadbont, E. G.
374	19,098	An analogue computer for convective heating problems. (October, 1956).	Robinson, H. G. R.
375	19,463	Nozzle and contraction shapes of the R.A.E. 3 ft \times 3 ft supersonic wind tunnel. (February, 1957).	Stanbrook, A.
376	18,107	Records of static pressure tests on pressure cabins. (August, 1955).	Hovell, P. B. Butler, A. R.
377	18,936	Some tests in a slotted-wall tunnel with various slot-entry shapes. (January, 1957).	Chinneck, A. North, Mrs. N.A.
378	19,472	The effect on weather minima of approach speed, cockpit cut-off angle and type of approach coupler for a given landing success rate and level of safety. (January, 1957).	Calvert, E. S. Sparko, J. W.
379	18,845	Regularities in creep and hot-fatigue data (Part I). (December, 1956).	Graham, A. Wallcs, K. F. A.
380	18,846	Regularities in creep and hot-fatigue data (Part II). (December, 1956).	Wallcs, K. F. A. Graham, A.
381	19,836	Measurements of the effect of surface cooling on boundary-layer transition on a 15-deg cone. Part I. Tests at $M = 2$ and 3 in an 8-in. \times 9-in. wind tunnel at R.A.E. Bedford. (Sept. 1957).	Browning, A. C. Crane, J. F. W. Monaghan, R. J.

C.P. No.	Council No.	Title	Author(s)
382	19,866	Tables of aerodynamic flutter derivatives for thin wings and control surfaces in two-dimensional supersonic flow. (October, 1957).	Minhinnick, I. T. Woodcock, D. L.
383	19,548	The geometry of wing surfaces generated by straight lines and with a high rate of thickness taper at the root. (May, 1957).	Peckham, D.
384	19,635	The calibration at transonic speeds of a Mk. 9A pitot static head with and without flow through the static slots. (March, 1957).	Mabey, D. G.
385	18,755	Calculation of the shape of a thin slender wing for a given load distribution and plan-form. (January, 1956).	Smith, J. H. B.
386	19,478	Some results of an investigation into the use of air injection in a model of the diffuser for the A.R.A. supersonic tunnel. (August, 1957).	Carter, E. C. Tucker, K. F.
387	18,084	High Reynolds number tests on a 70° L.E. sweepback delta wing and body (H.P. 100) in the compressed air tunnel. (December, 1955).	Gould, R. W. F. Cowdrey, C. F.
388	16,452 17,563 18,980	Some contributions to jet-flap theory and to the theory of source-flow from aerofoils. (January, 1953). Appendix I. (April, 1955). Appendix II. (November, 1956).	Woods, L. C.
389	19,281	Multi-channel slip rings for stress and temperature measurement. (December, 1956).	Chaplin, R.
390	19,663	Development and flight tests of an instrument flight director for helicopters. (August, 1957).	Brotherhood, P.
391	19,130	Some details of the quintic profile, for use in the Pohlhausen-type of boundary-layer calculation. (March, 1957).	Curlo, N.

C.P. No.	Council No.	Title	Author(s)
392	19,458	A shock-expansion theory applicable to wings with attached shock waves. (January, 1957).	Sheppard, L. M. Thomson, K. D.
393	18,748	Complex variable applications to certain coupled systems. (February, 1957). (An abridged version.)	Jenkins, D. P.
394	19,485	A technique for improving the predictions of linearised theory on the drag of straight-edged wings. (January, 1957).	Randall, D. G.
395	20,297	The influence of a model on plenum chamber indication of Mach number in a slotted wall wind tunnel. (February, 1958).	Squire, L. C. Stanbrook, A.
396	20,071	The longitudinal response of an aircraft with autopilot, including an incidence term in the height control equation. (November, 1957).	Watts, M. R. Fry, D. E.
397	19,547	Some methods of evaluating imperfect gas effects in aerodynamic problems. (January, 1957).	Bird, G. A.
398	19,268	Numerical aspects of unsteady lifting-surface theory at supersonic speeds. (May, 1957).	Garner, H. C.
399	19,954	Automatic data reduction equipment for wind tunnels. (May, 1957).	Rowley, G. C.
400	-	List of Current Papers published for the Aeronautical Research Council. (Nos. 351-400.)	-



© Crown copyright 1958

Printed and published by
HER MAJESTY'S STATIONERY OFFICE

To be purchased from
York House, Kingsway, London w.c.2
423 Oxford Street, London w.1
13A Castle Street, Edinburgh 2
109 St Mary Street, Cardiff
39 King Street, Manchester 2
Tower Lane, Bristol 1
2 Edmund Street, Birmingham 3
80 Chichester Street, Belfast
or through any bookseller

Printed in Great Britain