The Journal of

# THE HELICOPTER ASSOCIATION OF GREAT BRITAIN

LONDON
LONDONDERRY HOUSE,
19 PARK LANE LONDON W 1
Vol. 3. No. 3 OCT -NOV -DEC 1949

(Issued February 1950)



#### **HORDERN-RICHMOND LTD**

MANUFACTURERS OF



HYDULIGNUM WORKS HADDENHAM BUCKS ENGLAND Telephones AYLESBURY 1100 1102 Telegrams & Cables WINSTIX HADDENHAM BUCKS



## ALVIS Leonides

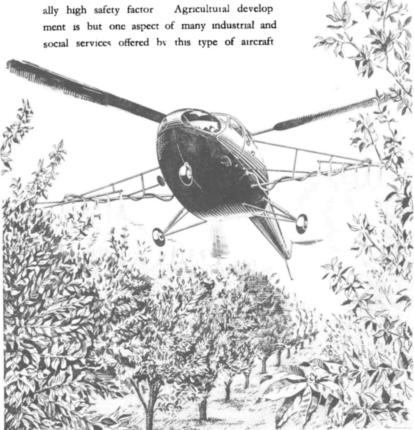
AIRCOOLED RADIAL ENGINES

ALVIS LIMITED. COVENTRY

# The helicopter's role in increased food production . . .

has been constructed and designed to give a fully versatile performance with an exception

Fundamental advantages of the helicopter for crop-spraying pestcontrol and fertiliser laying duties are (a) its great manœuvrability (b) its ability to fly low at slow speeds (c) simplicity of taking off and landing within confined spaces (d) its ability to cover large areas in a short time. The Bristol' Type 171 helicopter



THE BRISTOL AEROPLANE COMPANY LIMITED

#### The Journal of

### THE HELICOPTER ASSOCIATION

#### OF GREAT BRITAIN

| Editorial Offices | Londonderry | House, | 19 Park Lane, | London W 1 | Tel | Grosvenor 1771 |
|-------------------|-------------|--------|---------------|------------|-----|----------------|
|                   |             |        |               |            |     |                |

| VOL 3 No 3   | Oct —Nov —Dec 1949 PRICE   | 10/6        |
|--|--|-------------|
| President J G Weir C M G C B E F R Ae S THE COUNCIL Chairman H A Marsh, A F C A F R Ae S   | CONTENTS   |             |
| Vice Chairman  N J G Hill, A M I Mech E A R Ae S  J A J Bennett D Sc F R Ae S F F Crocombe B Sc F R Ae S F J Cable A F C A R Ae S G C Turner A F C                         | SOME ECONOMICS OF THE HELI-<br>COPTER—PRESENT AND FUTURE<br>By L S Wigdortchik, a f r ae s | PAGE<br>106 |
| J E Harper A F C R Hafner R N Liptrot C B E B A (Cantab) O L L Fitzwilliams B A (Eng) Cantab B H Arkell A R A e S A McClements A R T C A M I Mech E Major H O Nelson R T R | JET PROPULSION OF ROTOR BLADES  By A Stepan, dipl ing                                      | 141         |
| J S Shapiro Dipl Ing A F R Ae S L S Wigdortchik A F R Ae S  Hon Secretary  Major J W Richardson  | SOME SPECULATIONS ON THE AERO-<br>ELASTIC PROBLEMS OF ROTARY<br>WING SYSTEMS               |             |
| Asst Hon Secretary H Roberts B Sc Hon Treasurer G C Turner, A F C  | By Professor A R Collar, MA, DSC, FRACS  | 165         |
| Publications Committee  B H Arkell A R Ae S (Editor) J S Shapiro Dipl Ing A F R Ae S (Technical Editor) C Colin Cooper J S Fay   | THIRD ANNUAL DINNER OF THE ASSOCIATION   | 189         |
| Aset Secretary Miss Sheila MacPhee  Auditors Messrs W B Keen & Co  | GRADES OF MEMBERSHIP   | 190         |
| Offices Londonderry House 19 Park Lane, London W 1 Tel Grosvenor 1771  | •  |             |

#### OBJECTS OF THE ASSOCIATION

The objects of the Association are to collect compile and disseminate information of a technical and semi-technical nature pertaining to Helicopters and all other types of Rotating Wing Aircraft. The Association aims to work in close co-operation with existing Aeronautical Bodies on matters affecting its Objects and it may act as an Advisory Body in the promotion of legislation calculated to be of benefit to the development of Rotating Wing Aircraft