The Journal of

THE HELICOPTER ASSOCIATION OF GREAT BRITAIN

CONTENTS include

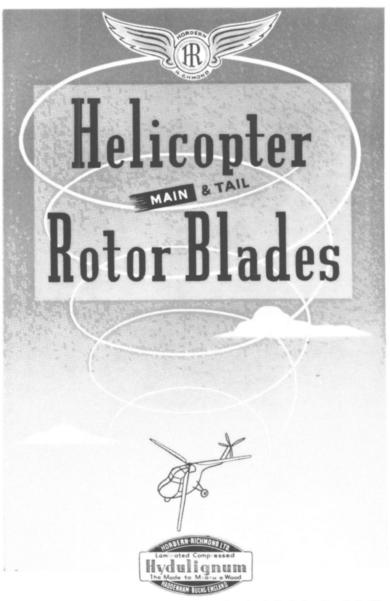
Design Development Production and Servicing of Rotor Blades by R. Allen Price and Frank L. Stulen

Annual Review of Helicopter Activities

The Ninth Annual Dinner of the Association

LONDON
4, THE SANCTUARY
WESTMINSTER, S W 1

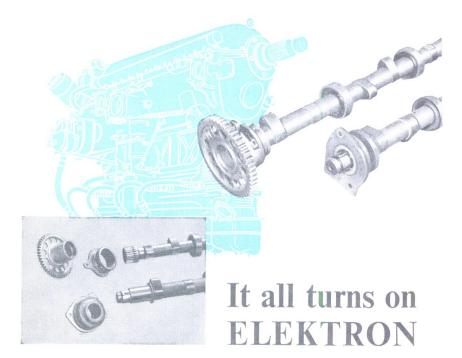
Vol. 9 No 2 OCTOBER, 1955



HORDERN-RICHMOND

LIMITED

HYDULIGNUM WORKS, HADDENHAM, BUCKS, ENGLAND TELEPHONE AYLESBURY 1100, 1102 TELEGRAMS WINSTIX HADDENHAM BUCKS



These camshafts 'turn' in cast Magnesium Elektron bearings in the celebrated Gipsy series of De Havilland engines Elektron was chosen for its good bearing properties under these conditions - and, of course for its ultra lightness Engines of this series have been in service for over 20 years, and the many Elektron components rarely need replacement during such lives - including the bearings!

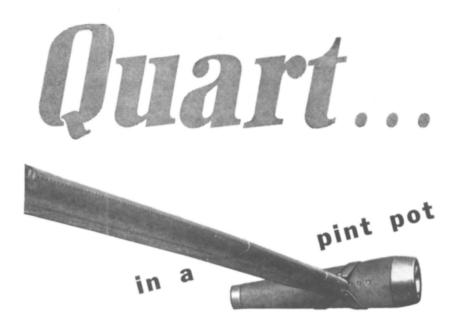
* About 40% of the components in the 'Major 10 Mk2 and Queen 70 Mk2 and about 80 of those in the Queen 30 Mk2 are of Llektron



Virile for our Mil booklet on "DESIGN"

Elektron

CLIFTON JUNCTION MANCHESTER London Office 21 St James's Square S W 1



Less than four feet in length, the pint-sized Saunders-Roe pulse jet engine packs a barrel-load of power Developed by the Saunders-Roe Helicopter Division, it is one of the simplest forms of power unit and, fixed to the tip of each helicopter rotor blade, provides a torque-free drive with a high overall power-to-weight ratio, virtually eliminates the heavy and costly transmission shafting and gearing and makes possible a greatly simplified and lighter airframe

for helicopter development

look to (SAUNDERS-ROE



The new Westland Widgeon,

like its predecessor the Dragonfly,

is powered by

the Alvis Leonides engine

ALVIS LEONIDES



Keeping abreast of modern development

POWTY

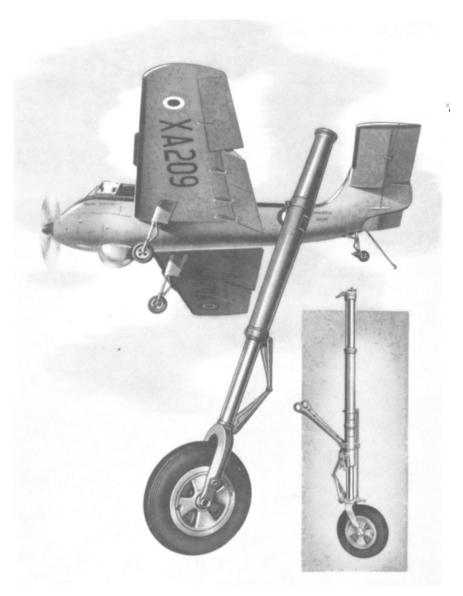
UNDERCARIAGES

HYDRAULIC AND ELECTRO HYDRAULIC COMPONENTS

ELECTRICAL EQUIPMENT

FUEL SYSTEMS

DOWTY EQUIPMENT LIMITED CHELTENHAM



BRITISH MESSIER

Landing Gear and 4000 ps i Hydrautic System
on the Short Seamew

TWIN ROTOR

HELICOPTER

The Royal Navy and Royal Air

Force are to be supplied with large
numbers of twin-engined tandem

rotor helicopters for anti-submarine

duty These specialized aircraft

are derivations of the Bristol

Type 173, a machine which

has demonstrated a new concept

in helicopter technology

The Journal of

HELICOPTER ASSOCIATION

OF GREAT BRITAIN

October 1955

4 The Sanctuary, Westminster, S W 1

VOL 9 No 2

Journal Hon Editors Administrative C Colin Cooper
Technical

D M Davies MA A F R Ae S
R H Whitby D I C A R C Sc
B Sc A F R Ae S

Auditors W B Keen & Co Tel Abbey 5160

PRICE 10/6

President The Rt Hon Lord Douglas of Kirtleside GCB MC DFC Past Presidents
Mensforth CBE MI Mech E FRAeS
MI PE CONTENTS J G Weir CMC CBF FRAcS Vice Presidents R A C Brie AFRAeS AFIAeS Norman Hill AMI Mech F ARAES MCAI THE COUNCIL Chairman
C S Hislop Ph D B Sc (I ng)
A R I C M I Mech E F R Ae S L STULEN DISCUSSION B H Arkell A R ACC J A J Bennett D Sc Ph D F R Ac S RAC Brie AFRAeS AFIAe S ACTIVITIES A Cameron Colin Cooper L L Fitzwilliams BA A I R Ae S F I Ae S A F I Ae S NINTH A F I Ae S Hafner F R Ae S THE ANNUAL OF THE HELICOPTER ASSOCIATION McClements ARTC M I Mech L T Meacock AFRAeS MCAI O Hara M A (Cantab) M A (Ldin) CBE, FRAes J W Richardson
H Roberts Ph D B Sc D I C
A F R Ae S A M I Mech L
R H Whitby D I C A R C Sc
B Sc A F R Ae S BOOK REVIEWS Hon Secretary
J W Richardson
Hon Treasurer
W G Leslie ACIS **Asst Secretaries** Miss P Chute Miss J St Ceorge Lecture Sub Committee J A J Bennett D Sc Ph D
F R Ae S (Chairman)
R A C Brie A F R Ae S AFIAeS M I Mech Ł Γ T Meacock AFRAeS MCAI

Page DESIGN, DEVELOPMENT, PRODUC-TION AND SERVICING OF ROTOR BLADES, by R ALLEN PRICE and FRANK 281 294 ANNUAL REVIEW OF HELICOPTER 302 DINNER 315 HONORARY MEMBERSHIP—J G WEIR, CMG, 317 318 GRADES OF MEMBERSHIP (As amended by Special Resolution passed 20th May, 1955)

OBJECTS OF THE ASSOCIATION

The objects of the Association are to collect compile and dis seminate 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



WESTLAND HELICOPTERS

IN SERVICE FROM THE ARCTIC TO THE TOPICS