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Letters of application giving details of age, qualifications and experience, together with the names of two referees should be forwarded to Professor R. S. Benson, Department of Mechanical Engineering, U.M.I.S.T., PO Box 88, Manchester M60 1QD.

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Engineers or Scientists with a relevant degree or Service equivalent are invited to write or telephone for an application form, quoting Ref. 1485, to:—

Eric Buckmaster,
1485 Personnel Department,
British Aircraft Corporation,
Guided Weapons Division,
Stevenage, Herts. Tel: Stevenage 2422

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The Aeronautical Journal RAeS November 1969

WEIR, R. H.

Propulsion Prospects

This tribute to an eminent aeronautical pioneer attempts to catch the spirit of Barnwell's work and times by introducing a measure of speculation, in the hope of promoting the constructive controversy on which progress is largely based.

The paper deals mainly with powerplants for subsonic flight, but includes a passing reference to Concorde and suggests that the Mach 1·15 aircraft is worth reappraisal with modern powerplants.

No insuperable barrier is foreseen in the evolution and development of second and third generation advanced technology engines. Attention is drawn to the lightweight Rostat turbine design as a contender for serious design consideration for higher bypass ratio engines, despite the formidable mechanical design problems presented. In the same context of increasing bypass ratio, the claims of the variable stagger fan are advanced for serious consideration, extended to include the turbo-prop of yesteryear with a modern conformal gearbox and Hyfil propeller.

Aircraft designers are invited to contribute, by investigating the positioning of powerplants to maximise noise attention and minimise foreign body ingestion, and by considering unconventional installations.

The Aeronautical Journal RAeS November 1969

SMITH, J. P.

The Development of the Trident Series

This paper was written in early 1967, before the Trident 2 had flown and while discussions with BEA on the Trident 3 and 3B were still proceeding. BEA finally decided that all their Trident 3's should be to the 3B standard, with boost engines, and placed an order in August 1968 for delivery commencing early 1971.

The stretching of the Trident through the 1E, 2E and 3B over the period 1959-1966 is reviewed against the background of engine thrust growth and wage escalation, and the launching costs of each variant. The effect of escalating costs on the DOC's of each type is indicated. Details are given of the design changes and refinements to increase the range and size of the original Trident 1 from 1000 st m to 2000 st m in the Trident 2, and from 75 seats to 150 seats in the Trident 3.

Brief mention is also made of the 160 seat HS. 132 and 185 seat HS. 134 variants which could not be proceeded with because of the political decision to launch such projects only in conjunction with other European countries, and because of the decision not to proceed with the Rolls-Royce RB. 178, which was also proposed for development of the VC. 10.

The Aeronautical Journal RAeS November 1969

BROWN, AIR CDRE. SIR VERNON

Flying and Accidents During and Between the Two Wars

The author tells of some of his flying experiences from the middle of 1915 until the end of 1945. Part of the story of the early experimental flying work at Upavon under the direction of Sir Henry Tizard is told. Reference is made to the first attempts in this country to "loop the loop" and to the first half dozen or so airmen who carried out intentional spinning, the first in 1914 and the others all between September and December 1915. Mention is also made of the 1912-1913 Accident Investigation Team of the Royal Aero Club and, in the military sphere, of the part played by the Aeronautical Inspection Department. Some statistics of the second war AIB effort are given to show the important part the organisation played in 1939-1945. Some of the work of the early 1920s at the Instrument Design Establishment at Biggin Hill is mentioned, including the development of the Queen Bee.

The Aeronautical Journal RAeS November 1969

OPENSHAW, P. R.

Electric Propulsion Development
Part II. Micro-Thruster Investigation and Development

In Part I of this series of papers (published in October AJRAeS*) the development was described of a ½ kW ion thruster for use as one of a set of primary propulsion units to be used for executing an orbit transfer manoeuvre. Both during the expansion phase and when the final orbit is attained, micro-thrusters are necessary to provide attitude and position control of the satellite. This paper describes two types of micro-thruster, each of which has particular merits and areas of use, so that the choice of thruster for a particular mission depends upon a fairly detailed specification of the mission. This consideration and broader system concepts will be dealt with in the final paper of the series (Part III).*

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(During, say, last two years)

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QUALIFICATIONS .....

Return to:

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