APPENDIX

Contents:

GENERAL ANALYSIS OF LIFTING SCREWS QUALITY. POWER RECOVERY THROUGH FLOW EMPLOYMENT

by G. SERRAGLI.

The Author points out at first in what a manner, own to the induction generated from a screw working at fixed point, this is less appropriated than an ordinary wing to provide lifting force. It seems therefore to be preferable for the independent lifting, to adopt a helicogiro, i.e. a screw of large diameter and with a low angular speed, in order to obtain that the interaction between screw blades may be properly reduced.

The Author goes on, further, to a summary study of the lifting screw, of which he gives the definition of the so called quality, as well as of the influence which screw pitch and effective incidence may have on said quality. The already previously mentioned conclusion is that the experimental quality is much lower than the maximum theoretical quality.

For a further improvement, the usefulness of power recovery means through flow utilisation is showed. The cases of coaxial screws with inverted motion of rotation and of the Da Rios ringed screw a. s. o. are analysed. At the end, the Author’s own experiences, already described in this Magazine, are indicated and after a short analysis of same the Author reaches the conclusion that it is possible to recover the so called slip stream divergence. He concludes stating that the recovery means only are useful in the case of a screw working at fixed point.
ITALIAN PLANE ON THE NORTH ATLANTIC OCEAN.
THE «POLONIA» FLIGHT

BY C. DE RYSKY.

No attempt of overflying Atlantic from East to West, contrary to the West-East flights, had up to date any satisfactory success. That may be stated from the Bremen attempt, which could not be carried through, as well as also from the Graf Zeppelin flight, which was so difficult and so rich in emotional contingencies. The air stream direction and the meteorological difficulties seriously oppose to its successful attainment.

A new attempt is actually under way from side of two Polish aviators: Mssrs Klisz and Kowalczyk, civil pilot the first and army pilot the second one, who have chosen for their flight an Italian aeroplane: the Caproni Ca 73 B. C.

Only a few changes have been brought to the known Italian machine; the most important of which is the substitution of the two Isotta Fraschini Asso 500 HP engines with four Isotta Fraschini Semi Asso 200 HP engines, with the aim of increasing safety through a convenient repartition of power available. Further the plane has been provided with numerous board and avigation devices, which also allow to fly through the fog.

Some other improvements are the following ones:

a) handing gear reinforcement

b) fuselage enlargement

c) convenient location of the 14 tanks which are necessary for containing the fuel etc.

The Author describes the craft and the engines (also illustrated with photographic views) and gives a hint of the Blessing and Christening ceremony made from Poland Primate H. Em. Cardinal Hlond, who gave to the craft the name Polonia.