JAPAN IN THE AIR

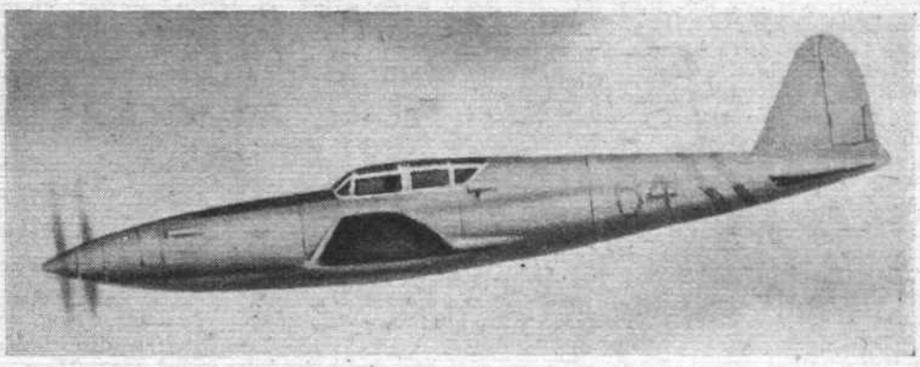
Her Aircraft Industry : 15 Aircraft Works and 9 Engine Factories : Some New Fighter Types

FROM previous articles in *Flight* our readers will know that there is no independent Japanese air force, but that the army and navy each has its own air arm. They will also have some idea of the types of aircraft likely to be still in service, although information concerning recent developments has been difficult to obtain. From German sources we have succeeded in digging out the following facts and views, which are of interest in helping to indicate modern trends and tendencies.

As mentioned in a previous article, Japan has mainly relied for her licence-built types on German, Italian and to a smaller extent American designers. Japanese air missions have spent much time in Germany, and as a result the following German types are now in service: In the Japanese army, the Junkers Ju 86 and 87, and the Heinkel 111 and 112. Italy is represented by Fiat C.R.42 fighters, and B.R.20 bombers. In addition the army has some Koolhoven F.K.58 fighters. Of American types mention must be made of the North American N.A.16 reconnaissance monoplane and the Lockheed 14. The rest of the equipment is of Japanese design, much of it based upon foreign prototypes.

The Japanese navy appears to have relied less on foreign and more on home-produced designs than the army. The rivalry between the two services has no doubt played a part in bringing about this distinction. The German source from which we quote estimates that the combined air strengths of the two services is in the neighbourhood of 3,000 aircraft. That statement was published last July, so that our own estimate, published last week, of 3,800 aircraft seems to have been fairly accurate.

To show the possible trend of modern Japanese design we publish drawings of two fighters. There is no confirmation that they have gone into service, but they do seem to indicate the lines on which Japanese designers are thinking. Both are twin-engined (tandem) types, with contra-rotating airscrews, but the layout differs according to the engine type. In the A.T.27 the pilot sits between the two steam-cooled V-12 engines of 1,250 h.p. each. It is claimed that in this position not only is the pilot on the centre of gravity, and, therefore, subjected to a minimum of acceleration, but that he is protected front and back by his engines, or alternatively two armour plates could be used as protection for pilot and engines alike. The wing area of the A.T.27 is given as 237 sq. ft. and the empty weight as 8,000lb. With a disposable load of 3,600lb. the all-up weight becomes 11,600lb., which would give a wing loading of 49 lb./sq.ft.! A range of 1,250 miles is claimed, and the top speed is said to be 410 m.p.h.



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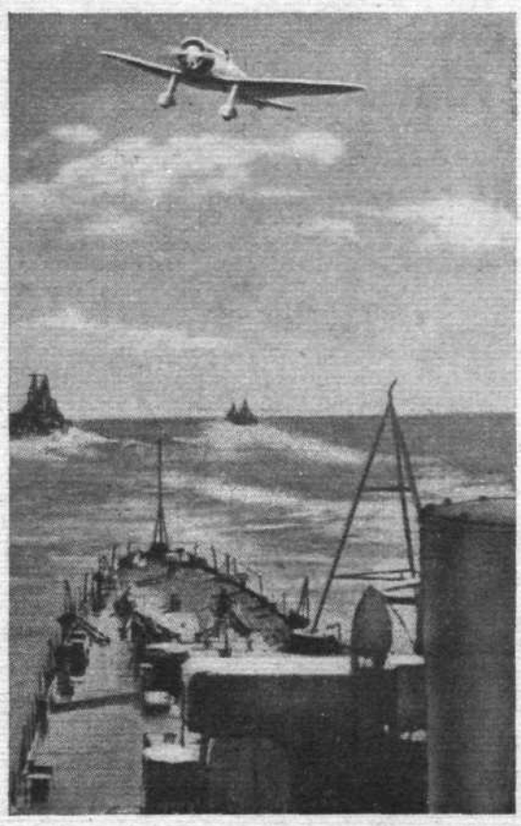
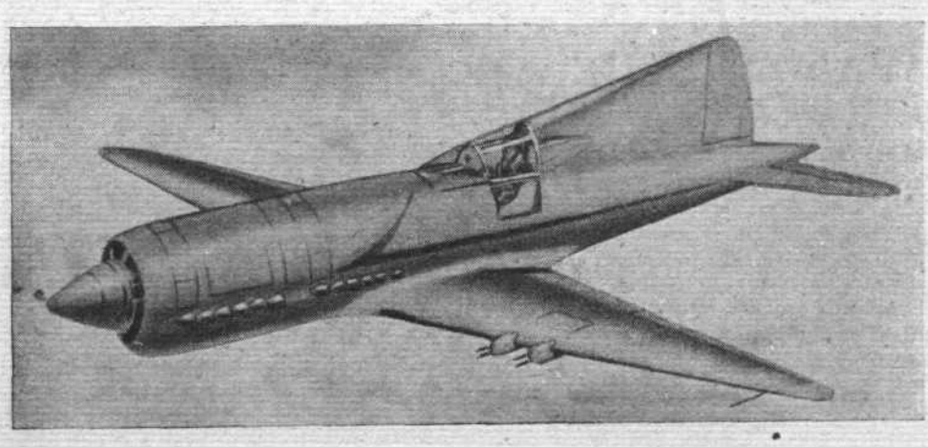


(Right) A Mitsubishi 96 co-operating with the Japanese Navy. (Below) The Suzukaze 20, which is said to have two air-cooled radials in tandem. The exhaust stubs do not appear to bear out this statement. A speed of 478 m.p.h. is claimed, but appears very unlikely.



The other new fighter design, the Suzukaze 20, is based on two radial air-cooled engines of 1,200 h.p. each. The short length of the radials has made it possible to keep the pilot behind the engines in a position somewhat reminiscent of the American Gee-Bee racer. It is a much smaller machine than the A.T.27, with a wing area of 144 sq. ft., a loaded weight of 6,300lb., a wing loading of 44 lb./sq. ft., and a claimed top speed of 478 m p.h.

Other new fighter designs of more orthodox conception are the T.K.4 and the T.K.19, the former a twin-engined twin-tail monoplane and the latter a single-engined machine of

(*Continued at foot of next page.*)