

## BRITAIN'S OVERSEAS AIR SERVICES

weight. Economy in operation, simplicity in servicing and maintenance, low ton/miles per gallon of fuel—these and other fundamental criteria are even more important in India than in some other regions. (There will also be a field for small feeder and charter aircraft—say, 5 to 8-seaters of reasonably low first cost and economical to operate.)

Main line air fares may be pegged at about 3 annas per mile, which compares with first-class railway fares ranging from 1.85 to 2.45 annas. All who have experienced the discomfort of long-distance rail journeys inside India will probably agree without further argument that the extra cost is well worth while, without counting the saving in time. Employing aircraft of the class contemplated, the total transport effected on the main Indian network would amount to 12½ million ton/miles a year—or 15 times the pre-war annual average.

Capital cost of the fleet required to run the essential services is estimated at 150 lakhs of rupees (approximately, £1,125,000). Annual cost of operation is estimated at Rs.2.53 crores (say, £1,900,000), falling to Rs.1.90 crores (£1,425,000) in the fifth year. It is expected that by the fifth year the services will earn a profit of about 13 lakhs of rupees (approximately, £100,000).

The report of the Posts and Air Department leaves open the vexed question of State operation by a single "chosen instrument," or dependence on private enterprise. It simply suggests that the services may be established and operated either by the State, a statutory corporation, a single monopoly company or a limited number of companies. The Government of India must decide.

Precise details of the network under consideration in the "five-year plan" may not be disclosed. It may be said, however, that it covers the main centres of population in every part of the country, provides adequate connections with the trans-continental and world air routes which touch India, and is associated with a skeleton system of feeder services which is well apportioned to likely needs in the first few years after the war. Finally, the plan is sufficiently flexible—and the ground organisation available sufficiently elaborate and well-manned—for great extension and augmentation of the services contemplated, immediately the need shall arise. India will well repay the attention of the aircraft constructor who is prepared to cope with the peculiar needs which India shares with other tropical and climatically difficult regions.

### Egypt and the Middle East

Cairo is already one of the chief junctions and regional headquarters along British Overseas Airways and Transport Command routes. It will soon be the base of as many B.O.A.C. aircraft as comprised the whole of the Corporation's fleet before the war. Cairo is, indeed, a natural Charing Cross of airway operation, and is as plainly destined for large expansion as a traffic centre.

As in India, the needs of war have greatly augmented the ground facilities available in Egypt and the nearby countries for airline operation. Large and well-equipped airfields have been laid down, enabling the biggest present-day transport aircraft to land and take off in safety and with expedition. Existing airfields, such as Almaza (Cairo), have been enlarged and their control, radio, weather and navigational equipment multiplied.

Again as in India, the Egyptian business community is deeply concerned that the advantages of air transportation shall be fully secured by a bold and imaginative government policy of expansion and the encouragement of free enterprise. The chief Egyptian air line company, Misr Airlines, has a good record of safe and regular operation, using in the main British aircraft. Egyptian mechanics and flying personnel have done well, and they will doubtless learn to cope with the more modern and more elaborate aircraft which will go into service in the near future.

No one in touch with Egyptian national aspirations will

be surprised if the Government's plans for post-war airline expansion include a "prestige" service operated by an Egyptian company all of the way from Cairo to London, as well as greatly extended services across the Mediterranean to Greece, Italy, Turkey, and to Iraq, Persia, the Sudan, East Africa and Rhodesia. Services along the North African coast are also contemplated.

### Price Considerations

Egypt, therefore, will need a limited number of main-line, ultra-modern aircraft. My guess is that the preference will be shown for twin-engined "improved DC-3" aircraft, rather than for the larger four-engined types. It must be remembered that companies such as Misr Airlines have been able to buy efficient twin-engined biplane transports at prices in the neighbourhood of £5,000. From £5,000 to £20,000—a reasonable price for a completely equipped twin-engined "mainliner"—is a large jump: to the first cost of four-engined aircraft of some 60,000 lb. all-up weight a much larger jump still. The greater complexity of the larger aircraft will also mitigate, in my view, against their adoption where it is desired, for nationalist as well as economic reasons, to employ the maximum of native labour on operation and maintenance. I have the impression that the Egyptians see their way clear to operation of the twin-engined types; in general, they do not, as yet, look so far ahead as the larger types. Nevertheless, politics and prestige might support more ambitious purchases; much would then depend on the scale of technical and engineering help which the aircraft manufacturer could make available, and on the availability of competent air crews.

So much for the main, extra-regional connections. There is also great scope in the region, which may be considered for the purpose of this survey to extend as far south as East Africa and even Rhodesia, for "bread and butter" or "bush" services. Before the war, many small companies had been launched, which depended for their existence on extremely low costs of operation, marked simplicity of upkeep, utter reliability, and adaptability of their aircraft to all kinds of difficult and roughly prepared flying fields.

Experts with whom I discussed this field agreed that there would be a considerable market for "utilitarian" aircraft, suitable for operation by modestly financed and thinly staffed companies. It was suggested to me that the companies already in the field—and others who might enter it—would favour operation, as at present, with a one-man crew and radio telephony. Slow landing speed was essential. Tyre pressure must be light. Fixed wheels were preferable, and should not be fitted with spats, which tend to gum up with mud in the rainy seasons. High-wing construction was thought to be most important, because—as in larger types—it provides a measure of shade for passengers and for loading operations, as well as a better view downwards.

There is no need, for these "bush flying" services, to provide the pilot-crew with a separate compartment. Experts with considerable first-hand experience in East Africa and elsewhere assured me that passengers like to be on friendly terms with the pilot and to watch him while he drives the machine and talks on the radio.

In general, metal aircraft were considered more serviceable, but it should be remembered that it is much easier "out back" to find a carpenter who can undertake make-shift repairs than it is to find a metal worker. Probably, as was suggested to me both in Egypt and West Africa, aircraft built of the modern improved and impregnated woods and plastic bonding materials will prove much more resistant to extremes of heat and humidity than the ordinary wooden aircraft, and much of the objection to the use of wood in the tropics may disappear.

One broad lesson may be derived from my talks in the Middle East. Undoubtedly the grand trunk routes of the world will demand the most extreme elaboration in equip-