

# CIVIL AVIATION

The almost-completed Handley Page Herald prototype as it appeared after the "unveiling" at Woodley on June 29th. Four Alvis Leonides Major engines are in place, though the de Havilland airscrews have yet to be added, together with some minor airframe details.



## FIRST HERALD NEARS COMPLETION

ESSENTIALLY complete and only a few weeks away from its maiden flight, the first of two prototype Heralds was "unveiled" on June 29th at Woodley, where the aircraft was designed and will be produced by Handley Page (Reading), Ltd.

Introducing the Herald, Sir Frederick Handley Page said that it represented his company's attempt to provide the airlines with a "workhorse"—an aeroplane to go from point A to point B with security and regularity and at an economic price. They had tried not to be obsessed by the glamour of going at tremendously high speeds, for, Sir Frederick said—and here he re-echoed a sentiment expressed by the Duke of Edinburgh in the latter's memorable lecture on *Outback Aviation*—"if your only competitor is an ox wagon you do not need to go through the sound barrier to convince your potential passengers that it's better to go by air."

Handley Page's sales manager, G/C. R. C. M. Collard, stressed that while the Herald was intended to do work now done by DC-3s it should not be looked upon simply from a European standpoint—"in Europe practically nobody flies (of course, they fill the seats, but they are roughly the same people all the time)." The aircraft should be considered from the point of view of "the advanced air-minded Peruvian Indian rather than a pedestrian and largely earth-bound European." The Herald was a branch-liner, and Handley Page had found ample evidence that the branch-line operators as a whole felt that the aeroplane made sense.

Speaking for Alvis, Ltd., makers of the Herald's four Leonides Major piston engines, Mr. T. C. Wallace said his company were conscious of the problems faced by an aircraft constructor offering a new aircraft with new engines—of which operators were invariably suspicious. But Alvis did not think of the Major as new; it was a "bigger and better Leonides", having the same bore and stroke, and essentially similar pistons, cylinders and valve arrangements, as the smaller engine. Leonides serving with Flying Training Command alone had built up one million "cylinder hours"—a big advantage in the development of the Major, since the cylinder assembly was always one of the slow features. The Major, which had now completed some 50 hours' flying in the H.P.R.5 Marathon twin-engined test bed, had the remarkably low diameter of 38.9in. Translated into frontal area in a four-engined aeroplane, that meant 22.4 sq ft less than its nearest competitor.

Summing up for the Handley Page Board of directors, A. Cdre. A. V. Harvey paid tribute to the team who had built the Herald prototype "in just about twelve months," and introduced some of its senior members: Mr. G. R. Volkert, technical director; Mr. E. W. Pickston, manager; Mr. E. W. J. Gray, chief designer; Mr. J. Allen, assistant chief designer; and G/C. A. F. Bandidt, assistant sales manager.

"Bush" Bandidt, incidentally, has been appointed Handley Page representative for Australia, New Zealand and the Far East. From

the autumn of this year he will be based in his native Australia (at Melbourne). As the personal envoy of Sir Frederick Handley Page, G/C. Bandidt has in recent years travelled far and wide to conduct a sales-cum-market-research survey of the requirements of most of the world's short-haul airlines. The Herald is based on his findings.

The prototype, which it is hoped will fly next month (and is thus a likely starter for Farnborough) has been built with unusual speed. This programme to date is outlined by the manufacturers as follows:—

"Although a small project team began work on the Herald concept late in 1952, it was not until last year that detailed design of the aircraft began. . . Design of the fuselage aft-portion started in August of last year, of the centre-portion in September and of the nose-portion and centre wing in November. Work on inboard nacelles began last January, on the fin in February, on the flaps and outboard nacelles in March, on the rudder, tailplane, outer wings and petal cowlings for the engines in May, and on the elevators and ailerons during the past three or four weeks. Component assembly of the prototype started only in December 1954. In six months it has been completed, apart from a few small details."

Orders have been placed by three airlines for a total of 29 Heralds. The customers have been named as Australian National Airways, Queensland Airlines and Lloyd Aero Colombiano, though the actual numbers ordered by each have not been revealed.

One's first impression of the Herald is that it certainly possesses the qualities of spacious, sensible layout and robust construction so essential for "outback" operation. Access to the moderately pressurized cabin (3.35 lb differential) is by way of a large double loading door, one half of which may be kept closed—or omitted at the operator's discretion. The low-set floor is fully stressed for cargo, and a non-structural bulkhead may be so positioned to give a choice of passenger-freight combination loads. The special lightweight 9g double seat designed for the Herald will pick up at two points—one in the floor and the other on the cabin wall. Seats can be pitched at 33½in or 38in, giving maximum passenger capacities of 44 or 36 respectively in an all-passenger version. The flight deck, laid out for two-crew operation and at present based on B.E.A./B.O.A.C. recommendations, is extremely compact and offers excellent forward visibility from either seat.

Structurally, the Herald has several extremely interesting features, including the extensive use made of spot-welding—notably for joining fuselage skin to stringers. The wing has been designed for a long fatigue life and has no heavy spar booms; bending- and end-loads are carried by the sandwich skin panels of the centre-section, which has three lightly loaded web members to take shear loads. The method of attaching outer wings to centre-section is reminiscent of DC-3 practice, in that "a multiplicity of bolts" are employed.

### LORD BALFOUR JOINS B.E.A. BOARD

THE appointment of Lord Balfour of Inchrye, M.C., as a part-time member of the Board of British European Airways, effective from July 1st, is announced by the M.T.C.A. Lord Balfour, who is 57, served with the R.F.C., and later the R.A.F., from 1915-23. He was Parliamentary Under-Secretary for Air from 1938-44.

### PANAM'S 50,000th

THE Pan American World Airways DC-7B which, on June 28th-29th, made the airline's 50,000th crossing of the Atlantic, arrived at Orly, Paris, 10 min ahead of schedule. Carrying 67 tourist passengers, it covered the 3,625 miles from New York non-stop in 10 hr 50 min at an average speed of 335 m.p.h. The aircraft was one of seven DC-7Bs now entering service with PanAm (and illustrated for the first time on page 63).

Celebrations marking the 50,000th crossing included a reception

at the airline's Piccadilly, London, office, where a guest of honour was Capt. Charles Blair, one of PanAm's Stratocruiser captains on the North Atlantic. Capt. Blair has more transatlantic flights to his credit than any other pilot, having crossed the ocean 628 times. His flying hours total over 21,500.

### LEOPOLDVILLE'S LONG RUNWAY

CLAIMED by Sabena, its main users, to be "without doubt the longest in the world," a new runway of 15,420ft—nearly three miles—has recently been completed at Leopoldville, capital of the Belgian Congo. Previously, say Sabena, the longest runway was that at the American military base of Ben Guerir, Morocco (14,000ft), and the longest civil runway—13,100ft—was at Honolulu. Some of the longest of European civil runways are at Barajas, Madrid (10,006ft); London (9,570ft); Klotten, Zurich (8,520ft); Melsbroek, Brussels (8,040ft); and Schiphol, Amsterdam (7,050ft).