

THE STORY OF THE VISCOUNT...

developed from the Wellington bomber. This 34,000 lb aeroplane, the VC-1 or V.491, became the Viking (with two 1,625 h.p. Bristol Hercules 634 engines) and was introduced into service by B.E.A. on September 1st, 1946.

The late Rex K. Pierson, then chief designer of Vickers-Armstrongs, Ltd., had appeared before the Second Brabazon Committee on December 20th, 1944. Discussion on that date about the VC-1 Viking had suggested that a turbojet short-haul aeroplane might be required as a Viking replacement. Mr. Pierson left the meeting to prepare a design study and to undertake a detailed examination of how best to meet the requirement. He eventually decided that the propeller-turbine offered greater promise in this application than the pure jet. The Brabazon Committee came to the same conclusion at its 56th meeting on January 3rd, 1945, when it considered (in paper No. 138) two



Prototype V.630 in the original colour-scheme. At 40,000 lb (later 43,000 lb) the aircraft was 20,000 lb lighter than today's Viscounts.



Modified styling is displayed by V.630 on an early B.E.A. proving flight.

short-range civil transports of 28-30,000 lb gross weight powered alternatively with two Rolls-Royce Merlin piston engines and two Rolls-Royce B.41 pure jets. The early Vickers studies of a turbine civil transport aeroplane bore the firm's drawing office designation V.453. This type number covered a range of projects examined in 1944 and also appears to have been used for the first propeller-turbine proposals of early 1945.

Thus it came about that, by the time of Lord Brabazon's letter to Lord Swinton in March 1945, discussions on the Brabazon IIB had crystallized to the point of associating the design very largely with Vickers-Armstrongs, Ltd., at Weybridge and especially with Mr. Rex Pierson. At a meeting between representatives of the Ministries of Aircraft Production and Civil Aviation and "the operators" on March 14th, the Controller of Research and Development at M.A.P., Air Marshal Sir Ralph Sorley (now managing director of de Havilland Propellers, Ltd.) stated that Vickers-Armstrongs would probably be given the contract. The airline representatives expressed their satisfaction.

In March 1945 Rex Pierson took the project a stage further when he submitted to the Ministry of Aircraft Production a design study (RKP/76072) for a VC-2 aeroplane powered with four propeller-turbine engines. It was set out in three forms as follows:—

VICKERS VC-2 PROPOSALS RKP/76072

Proposal	A	B	C
Pressurized or non-pressurized ...	Pressurized	Non-pressurized	Non-pressurized
Passenger capacity ...	24	24	27
Gross weight ...	34,200 lb	35,250 lb	38,600 lb
Wing area ...	855 sq ft	880 sq ft	965 sq ft
Wing span ...	87.5ft	89.0ft	93.0ft
Length ...	60.0ft	62.0ft	65.25ft
Cruising speed ...	296 m.p.h.	292 m.p.h.	284 m.p.h.
Cruising height ...	20,000ft	10,000ft	10,000ft
Still air range ...	1,000 st. mls	1,000 st. mls	1,000 st. mls

These proposals were considered by the British Ministries of Aircraft Production and Civil Aviation and on April 16th, 1945, Sir William Hildred (then Mr. W. P. Hildred, Director General at the newly formed Ministry of Civil Aviation and now Director General of I.A.T.A.) wrote to the Permanent Secretary of the Ministry of Aircraft Production (Sir Archibald Rowlands) to say that his Minister, Lord Swinton, endorsed the recommendations of the Brabazon Committee that the Type IIB should be developed.

On April 19th Sir Ralph Sorley instructed the Director of Technical Development, Mr. N. E. Rowe, to proceed with arrangements for the development of the Type IIB by Vickers-Armstrongs. At this time the M.A.P. considered that four prototypes should be ordered and that these should be closely spaced in time.

During April and May, 1945, there was much discussion between Vickers-Armstrongs and M.A.P. about the relative claims of pressurization and non-pressurization. A study (RKP/76323) handed by Rex Pierson to N. E. Rowe, during a visit by the latter to Weybridge on May 26th, finally swung the scales decisively in favour of pressurization and a cruising altitude of between 20 and 30,000ft. The aircraft was now visualized with a gross weight of 34,500 lb powered by four 1,000 b.h.p. propeller-turbines and with a cabin pressurized to a differential of 6½ lb/sq in to give an 8,000ft cabin altitude while cruising at 30,000ft.

An outline of users' requirements for the Brabazon IIB—which was described as a "24-seater general purpose transport aircraft"—was transmitted by the new Ministry of Civil Aviation to Vickers-Armstrongs on May 11th, 1945. The requirements were specified as follows:—

- The design was to be for an "all metal" civil aircraft powered by four propeller-turbines for short and medium range operation.
- It was to be pressurized to 6½ lb/sq in.
- It was to be a 24-seater with most of the seats forward facing and was to have one toilet and a galley of not less than 4ft x 3ft.
- It should have a freight capacity of 300 cu ft.
- It would have a crew of three and one steward but the possible conversion to a two-crew layout was to be considered.
- A low overall noise level was specified with a maximum propeller tip speed not exceeding 650 ft/sec.
- The cabin floor loading was to be 100 lb/sq ft and 150 lb/sq ft for all-freight flooring.
- The payload was to be not less than 7,500 lb with four crew and a still air range of 900 nautical miles at a cruising speed of 240 kt (277 m.p.h.) at 10,000ft.
- Tankage was to be for 1,200 nautical miles with provision for fuel jettisoning and the aircraft was to be capable of operating at 30,000ft.
- The rate of climb specified was 300ft/min with one engine out, flaps and wheels down; the landing run 1,200 yds; and a stalling speed of 70 kt.

Airline history in the making: V.630's departure from Northolt on the first scheduled turboprop service (July 29th, 1950).

