

REPORT OF THE CONTROLLER OF AERONAUTICAL INSPECTION FOR THE YEAR ENDED 31st MARCH, 1940.

The Hon. the MINISTER OF DEFENCE.

I HAVE the honour to submit the following report on the work of the Aeronautical Inspection Division for the year ended 31st March, 1940.

AERONAUTICAL INSPECTION AND AIRCRAFT ACCIDENTS.

STAFF.

In November, 1939, the Chief Inspector of Aircraft, Mr. R. C. Kean, on completion of his tour of duty abroad, resumed his duties with the Department.

Mr. E. F. Carpenter, of the Aeronautical Inspection Directorate of the British Air Ministry, who had been on exchange with Mr. Kean, returned to England in August, 1939.

The Chief Inspector's work while away included investigation into such matters relating to Dominion aviation as the expansion of both Service and commercial aviation; the establishment of facilities for the manufacture of aircraft and aircraft parts; the development of the use of local materials for aeronautical purposes, and the consequential necessity that the Department should organize its Inspection Branch to care for its increased responsibility and its obligations as a signatory to the Air Convention.

REORGANIZATION.

The Aeronautical Inspection Branch, previously a section of the Civil Aviation Branch, has been reorganized as a separate branch of the Department and is now known as the Aeronautical Inspection Division (A.I.D.). The head of this Division has been designated Controller of Aeronautical Inspection. The responsibilities of this Division in relation to civil aviation remain the same. The additional duties to be carried out by the A.I.D. include the inspection of aeronautical supplies prior to acceptance for the Royal New Zealand Air Force, the development of the "approved firm" system for production and supply of aeronautical equipment within the Dominion, and the translation of the requirements of the Royal New Zealand Air Force for locally manufactured aeronautical equipment into technical specifications for issue to local manufacturers.

LOCAL MANUFACTURE.

The outbreak of the war hastened the Department's policy to utilize as fully as possible the facilities of commercial firms within the Dominion for the manufacture of aeronautical materials and parts for the Royal New Zealand Air Force. The complexity of requirement in respect of the manufacture and fabrication of material for embodiment in aircraft limits the number of firms capable of engaging in this work, but it is gratifying to report that there are a number of Dominion manufacturers with the plant and the willingness to meet the very exact requirements imposed upon all aeronautical material.

So as to provide that the basic requirements for safety will be satisfied, the "approved firm" system has been introduced. This, in effect, means that to ensure the use of correct materials and to establish that all aeronautical work complies with the required standards of quality and accuracy firms engaged in such work must employ an approved system of storage, recording, and inspection. The conditions laid down by the A.I.D. in this respect have been reduced to a level sufficient to provide "minimum danger" rather than the normal requirement of "maximum safety," but, owing to local firms' lack of experience in the field of aeronautical manufacture, it will still be necessary for the A.I.D. to exercise considerable supervision until the manufacturers become more conversant with the basic principles of aeronautical requirement.

During the period under review the de Havilland Aircraft Co., of England, established a factory at Rongotai for the manufacture of the training type of aircraft and for the repair and maintenance of all types of aircraft. The conditions in the United Kingdom since September last delayed the arrival of certain essential material and plant, but the progress that has been made with both equipment and personnel is such as to justify the expectation that production will commence in June of this year. An A.I.D. station has been established at this factory.

The local manufacture of dope and other necessary aircraft finishes is being investigated, and it is expected that at an early date sufficient of these materials will be produced to meet all Service and civil aviation needs.

The manufacture of batteries for the Royal New Zealand Air Force is now being carried out locally. Small quantities of both aircraft and engine replacement parts have been produced satisfactorily in the Dominion.

In an endeavour to utilize local timbers for aircraft purposes the co-operation of the Forestry Department was obtained, and specimens of tawa, white pine, and silver beech are being forwarded to the United Kingdom, where the Air Ministry have arranged for complete investigation into their suitability as substitutes for the present accepted timbers.

Arising out of this development of a local aeronautical industry, and the endeavour to utilize as much local material as possible, further specialized testing equipment is being obtained for the Department's test-house to enable accurate determination of the physical properties of local and commercial grade material to be made to ensure that their use for aircraft purposes will not adversely affect established safety factors.

FIELD INSPECTION.

In the period under review a total of six hundred and twenty-three field inspections covering aircraft was carried out by the Inspection staff of the Division. Supervision of the work of licensed ground engineers and the activities of approved firms was maintained during the year.