

Faced with heavy traffic demands and the inability of New Zealand mines to supply our coal requirements, we endeavoured to secure coal from abroad. Supplies were not available from South Africa, and it was eventually decided to secure stocks from America.

Apart from a small consignment of 3,446 tons received in the "Pamir," four ship loads of American coal, totalling 32,052 tons, were received prior to 31st March, 1947. The coal was of good quality, and without these imports it would have been quite impossible to maintain the railway services on even a restricted schedule. The original order from America was 50,000 tons, but due to labour troubles on the Pacific coast the total consignment was not shipped until after the close of the financial year. In addition to the two consignments which comprised the balance of this order and which came to hand in May, it was necessary to secure a further three shipments totalling 27,000 tons.

Arising from the necessity of remedying the inadequate supplies of New Zealand coal for locomotive fuel, investigations were made as to the possibility of converting a number of locomotives to oil-burners. We were aware that a certain amount of conversion had been done in England and other places, but, as a conversion job is more complicated than one where the locomotive is constructed for oil-burning, it was realized that certain difficulties might arise.

In order to reduce these problems to a minimum, a considerable amount of research work was undertaken and we sought the advice of firms in other parts of the world who had had experience in the work of converting coal-fired locomotives to oil-burning. With our proposals more or less finalized, we endeavoured to import a number of the essential parts from overseas firms who had specialized in this work. Unfortunately, they were unable to undertake the work, but kindly placed at our disposal all information, together with particulars of difficulties which might arise in a work such as conversion.

As an experiment, work on two locomotives was commenced during 1946, and the first of these engines commenced its trial in October, 1946. At this point I deem it necessary to mention that the whole of the work of manufacture and installation of the oil equipment was performed by our own staff, and I desire to pay tribute to the manner in which the various staffs co-operated in an endeavour to turn out a first-class job. Certain adjustments were found to be necessary in the first two locomotives converted, and when these two engines were found to function quite satisfactorily in regular traffic, work was commenced on a programme for the conversion of a further twenty K and KA locomotives to oil. Satisfactory arrangements have been finalized for the manufacture of the various oil-burning equipment in the Dominion and, provided the work proceeds according to schedule, twenty-two oil-burning locomotives should be in service in the North Island by December, 1947. Plans have now been finalized for the conversion of a further twenty locomotives of modern type, and the supply of the necessary equipment has been arranged.

Apart from the conversion of the locomotives, it is necessary to make provision for fueling points and storage, heating of oil, and pumping from rail tank wagon to storage tanks and from storage tanks to locomotive.

The transport of fuel oil from the bulk depots to the fuelling points is done by rail tank wagons, and all arrangements have been completed for these to be constructed to fit in with the requirements for oil as the conversion programme proceeds.

The decision to concentrate on the provision of facilities for oil-burning locomotives in the southern part of the North Island is largely governed by the fact that under normal conditions the coal-supplies for this area are drawn from the west coast mines in the South Island, from which area supplies have been most irregular, necessitating at times a draw off from the Waikato area. The bulk of the supplies for Auckland and Frankton are drawn from the Waikato coal-fields, and North Auckland from Kamo and Hikurangi mines. Supplies from these areas have been maintained on a reasonable level.