

Generally abroad, projects of this magnitude, even when carefully prepared by the most competent authorities, are subject to scrutiny by a panel of independent consulting engineers. In construction work of such a highly technical nature and of such importance this precaution is extremely advisable. The cost of obtaining an independent expression of opinion is, in relation to the cost of the schemes, quite negligible. Whilst we have the fullest confidence in our own technical officers, it is hoped that in future opportunities will be given for them to discuss their problems with engineers who in their particular field have world-wide recognition. We had discussions on this aspect of the matter with both the General Manager of the State Hydro-electric Department and the Engineer-in-Chief before I left for overseas, and it is now proposed to ask Mr. J. L. Savage, late of the United States Bureau of Reclamation, to come to New Zealand for the purpose of discussing with the Engineer-in-Chief, the General Manager, and their principal officers certain technical problems arising in regard to both the design and construction of the major projects proposed by the Government.

When I left we were very much embarrassed by lack of steel for our new transmission-line system. Inquiries were prosecuted in Great Britain, Europe, Canada, and the United States with only limited results. Since then, however, the position has considerably improved and it seems that for a period ahead supplies are assured.

In all countries I visited there were power restrictions some of them severe. Shortages were being overcome by several means, but in countries with a potential of water-power this form of development was being vigorously prosecuted. Particular attention was being given everywhere to the demands of industry, and in view of future developments in this country, I made special inquiries regarding industries related to or based upon the supply of cheap power. The examination of these was extremely interesting and much detailed and valuable information was obtained.

HIGHWAYS, ROADS, AND BRIDGES

Deterioration of the main highway system due to lack of maintenance during the war years is causing considerable concern and the Government is now faced with very heavy expenditure in maintaining running surfaces and progressively improving these to meet the ever-increasing demands of transport operators. Even with the utmost use of mechanized equipment, essential maintenance is much less than it should be, and during the years immediately ahead steps must be taken to overcome what otherwise would result in a heavy capital loss. Of particular concern is the number of bridges on main and secondary roads which are long past their useful life and the replacement of which by modern structures should be undertaken as soon as possible. A programme of essential bridge renewal has been prepared and a start made on the most urgent of these works. Some of the bridges required are major works requiring considerable quantities of steel and cement and the attention of specialist designing staff, who at present are not available to the Department in adequate numbers.

Whilst overseas I also gave attention to the operation of trucking companies, particularly in the United States. This form of road transport has advantages in regard to certain classes of goods and is highly competitive with rail transport. The topography of New Zealand, however, is such that a very heavy expenditure would be involved if we attempted to adapt the roading system generally to this form of transport. However, a substantial capital outlay in the immediate future on our main roading system is inevitable to meet the ever-increasing traffic demands, and this work cannot be deferred indefinitely.