

ELECTRIFICATION OF SUBURBAN LINES.

Much valuable material has been collected with regard to the electrification of certain suburban sections. The consensus of opinion has been that the time has not yet arrived to convert any of our lines from steam to electricity.

Public agitation continues in various localities, however, for the electrification of suburban sections, and in order to remove as far as possible all doubt as to the wisdom or otherwise of converting any particular section or sections the Government invited quotations for the cost of furnishing a report with regard to the suburban sections of the four main centres, and many leading firms have submitted prices either to the High Commissioner or directly to the Department. It has been decided to obtain a report from Messrs. Merz and McLellan, Consulting Engineers, London, who carried out the electrification of the Melbourne suburban system, and who are considered to be among the leading authorities of the world with regard to such questions. Information has already been supplied to the firm, and representatives will be in New Zealand in November of this year.

MOTOR-TRAINS.

It was fully anticipated that at least three motor-trains would have been in active commission ere this, but owing to various reasons I regret it is not possible for me to be able to furnish any useful information so far as actual experience of working on our own lines is concerned. Orders were placed in December last for one Sentinel steam-car, one Clayton steam-car, and a Leyland internal-combustion engine to be fitted to a car to be designed and constructed in the Department's own shops. The latter engine duly arrived in July, and the vehicle is at present under construction. With regard to the two steam-cars, owing to various points being raised by the Government's Consulting Engineers in England concerning the design and other matters, it is not anticipated that the cars will be available in the Dominion for use much before the end of October.

In addition, arrangements were made with Mr. E. B. Buckhurst, a motor engineer of Christchurch, to install a six-cylinder internal-combustion engine to a light type of railway-carriage. This car should be available towards the end of October.

The cars will be placed in commission immediately they are available, and so far as can be seen at present will be tried out on various sections throughout the Dominion, such as Wanganui-Marton, Penrose-Papakura, Wellington-Johnsonville, Wellington-Upper Hutt, Christchurch-Lyttelton, Christchurch-Templeton, Dunedin-Port Chalmers, Invercargill-Tuatapere, Invercargill-Lumsden, Gore-Switzers, Timaru-Fairlie, Woodville-Featherston, Napier-Waipukurau, Thames-Frankton, and others.

In order to secure practical expert knowledge of the motor-trains in use on the railways in the Australian States, Mr. S. H. Jenkinson, Chief Draughtsman, visited Australia, and has furnished a valuable report dealing with his observations.

Mr. Jenkinson closely inspected the design and construction of the various petrol rail motor-cars on the Australian railways (with the exception of Western Australia), and travelled on all the types in service at the time of his visit. He also examined the traffic conditions of the sections on which the cars were running, and travelled over sections representative of each type of service.

It will be clear from the portions of his report attached to this Statement that self-propelled cars are being successfully operated in some of the Australian States, and the results obtained are, in my opinion, sufficient justification for this class of vehicle to be adopted more extensively on some portions of our system.

In addition to the types already dealt with, inquiries are being made with regard to other kinds of self-propelled cars, such as electrical storage battery, and any other types that have been successful in other countries.

LEVEL CROSSINGS.

As is shown in the statement of the Signal Engineer, attached to the General Manager's report, a number of crossings have been fitted during the year with