

7. Developments in the field of the gas turbine locomotive continue to be watched with interest. Some progress has been made with the oil-fired gas turbine in the United States and Europe, where a few units are being tested in service. Coal-fired gas turbines are still the subject of considerable experimentation in the United States and Canada, though no locomotive is yet in operation. Tests are being conducted at McGill University in this field, and have been followed with particular interest by the Company's technical officers, who have lent assistance wherever possible.

8. Developments in other types of motive power, such as the diesel mechanical-drive locomotive, are also being carefully observed.

9. The programme of converting steam locomotives on the Western Region from coal to oil-burning was deferred during the year because of some uncertainty respecting future supplies of bunker "C" oil. The supply position having been made secure, it is expected that 42 locomotives will be converted to oil-burning in 1952.

Freight Equipment

10. Consideration is being given to the use of light-weight metals in the construction of freight cars. An aluminum-sheeted box car and an aluminum hopper car were obtained on loan for test purposes, and experience with the the latter unit has led to the purchase of 5 aluminum hopper cars to permit of more extensive tests in actual service.

11. Continued study is being made of the various components and materials used in freight equipment with a view to achieving economies through greater durability, lighter weight and reduced maintenance expense consistent with safety in operation.

Passenger Equipment.

12. Substantial progress was made during the year in a continuing programme of reconditioning passenger equipment. The major part of the work consisted of air-conditioning 22 coaches, converting 14 units to combination passenger-baggage cars, and the modernization of 12 sleepers, 5 parlour cars and 3 other units of passenger equipment.

13. Further study was made of the possibilities of diesel railcars for use in short passenger runs where traffic is relatively light. Tests were conducted with a new streamlined stainless steel unit of American design, and useful data on performance was obtained under varying conditions of operation. These units though capable of combination into short trains, are not designed to haul trailer coaches. Diesel railcars with matching trailers have been in use on the System for over 25 years; during 1951 one set of this equipment was completely modernized and its performance in actual service will determine policy with respect to future conversions. Delivery of 6 new light-weight electric cars and 12 matching trailers for suburban services through the Mount Royal Tunnel was originally scheduled for the summer of 1951 but is not now expected until mid-summer of 1952.

Signalling and Track Equipment.

14. Installations of Centralized Traffic Control signals on two strategic sections of main line were proceeded with during the year. On the 148 miles of line between Foleyet and Hornepayne, Ontario, where 4 transcontinental passenger trains and as many as 21 other passenger and freight trains meet