

GRAND TRUNK PACIFIC EQUIPMENT FOR OIL FUEL.

SINCE the first conversion of a coal burner to an oil burner for regular service by the Southern Pacific in 1900, much attention has been given to the use of oil fuel in railway locomotives. This use has steadily increased until in the spring of 1913 oil-burning locomotives were operated exclusively upon considerably over 20,000 miles of line in the United States and on some 587 miles in Canada. They were further operated in conjunction with a proportion of coal-burning locomotives on 4,720 additional miles. In Canada the Great Northern Railway is the pioneer in this respect, embracing all lines in the vicinity of the Pacific coast.

During 1912 the Canadian Pacific Railway established oil-burners on its main line between Kamloops and Field,

before the end of June. Fuel oil will be furnished by the Imperial Oil Company, who are building a storage plant at Prince Rupert. The oil will be brought in oil steamers from Southern California. It will be taken through a 12-inch pipe carried on an approach incline trestle about 200 feet long, then on a bridge 710 feet long. From the end of this bridge the pipe runs on the ground to a pump house, and then to large storage tanks 115 ft. diameter by 35 feet high. The oil will be pumped from the storage tank to an oil delivery rack, six-car capacity, where the G.T.P. oil tank cars will be filled. The oil will also be delivered to a service tank of a capacity of 21,000 Imp. gal. (600 barrels) serving the outbound tracks, where engines coming from the roundhouse can be filled.

The bridge carrying the pipe is a wooden structure composed of spans 74 feet and 84 feet supported on frame bents. This bridge has been designed to carry two 12-inch

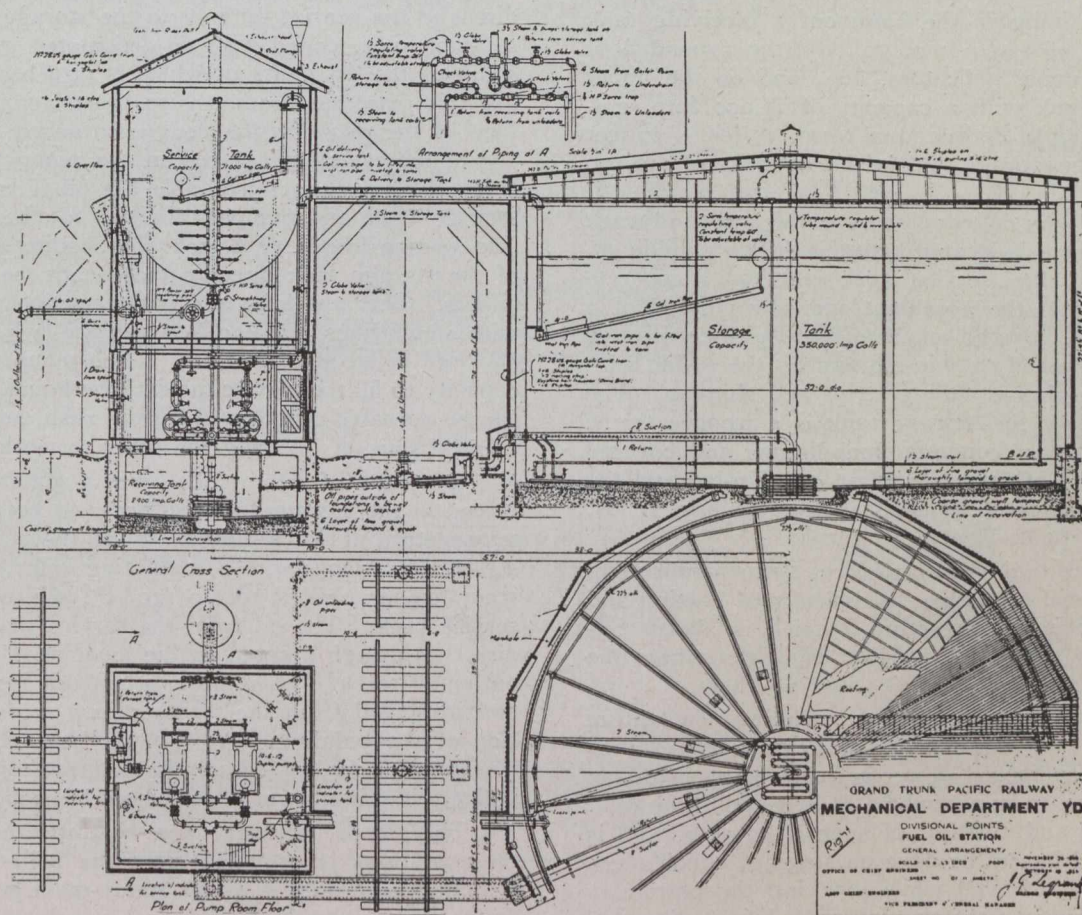


Fig. 1.—General Arrangement of Typical Fuel Oil Station.

B.C., and on the Arrow and Okanagan branches. There is reason to believe that eventually oil will be used on all of the main line of the C.P.R. west of Calgary, Alta., except in the long tunnels which are being constructed through the Rockies. Here electricity is to be the motive power.

The Esquimalt and Nanaimo Railway has installed oil on its 134 miles of line between Victoria and Alberni, on Vancouver Island.

The preparations now under way by the Grand Trunk Pacific for the use of oil fuel on all trains operating in British Columbia was the subject of a paper read in March to the Western Canada Railway Club and prepared by Mr. J. G. Legrand, bridge engineer of the Grand Trunk Pacific Railway. According to the writer, this oil fuel equipment will probably be completely installed for use

pipes, and three 8-inch pipes, through which different kinds of oil will be pumped. It is also designed as a foot bridge 4 feet wide to allow the men to cross the yard safely.

Special care has been taken to have the main fuel oil pipe protected from cold weather, the pipe being enclosed in wooden conduits in which steam pipes are located.

The oil tank cars belonging to the railway will be filled at the oil rack and forwarded to supply the fuel oil stations located at divisional points—Pacific, Smithers, Endako, Prince George, McBride and Jasper.

While oil has been used for locomotive fuel on other western roads for a number of years, it has not been used under as extreme climatic conditions, the nearest approach being the Canadian Pacific lines, from 300 to 500 miles south. Along the line of the Grand Trunk Pacific the