

The contractor shall assume all responsibility for injury to the workmen and the public, or to any individual; and in case of accident or suit he shall defend the suit in person and relieve the railway company from all costs and expenses, and pay any judgments that may be recovered thereon.

The contractor shall comply with the laws and ordinances affecting the manner of doing work; shall take out all necessary permits and comply with their requirements, and shall take such precaution as may be necessary to protect life and property.

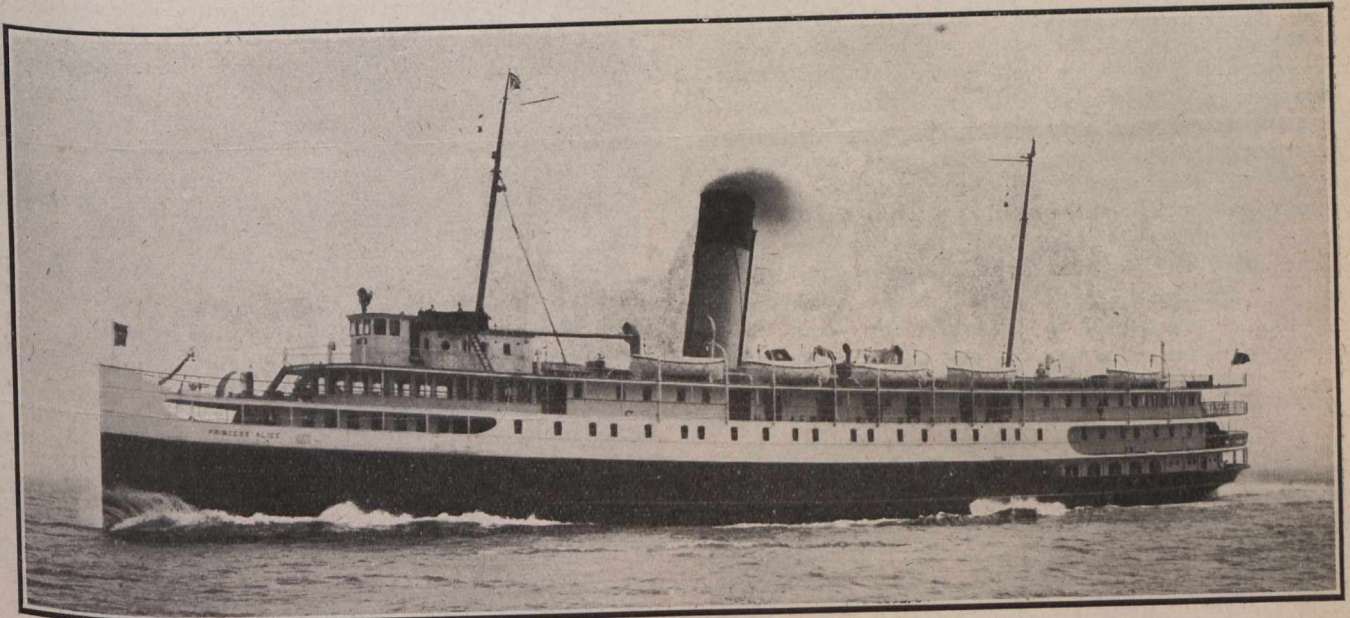
21. Insurance and Bond.—The contractor shall carry such liability insurance as is necessary to protect himself and the railway company against loss or damage caused by injuries to his men, and shall furnish the railway company a bond in form and of a surety acceptable to the railway company, providing for the faithful performance of the work and all matters pertaining thereto, in such sum as shall be specified in the contract.

22. Engineer.—The term "engineer," as used herein, shall be understood to mean the chief engineer of the railway company, or his accredited representative.

THE TWIN SCREW STEAMSHIP, "PRINCESS ALICE," FOR THE BRITISH COLUMBIA COASTAL SERVICE OF THE CANADIAN PACIFIC RAILWAY CO.

The twin screw steamship, "Princess Alice," illustrated in the photograph, has just recently been introduced into the British Columbia service of the Canadian Pacific Railway Co., and is now in regular operation between Vancouver, Victoria and Seattle. This vessel, which was constructed by

two l.p. cylinders, each 48½ in. in diameter, with a common stroke of 39 in. The first h.p. and i.p. cylinders are fitted with piston valves, and the l.p. cylinders are fitted with flat-slide valves having relief valves at the back. The engines are balanced on the Yarrow, Schlic and Tweedy system, and they are fitted with all the latest improvements, which include Brown's reversing engine and special lubricating arrangements suitable for the high speed at which they run. The condenser is of Weir's "Uniflux" type and Weir's "Dual" air pump is fitted, the circulating water being supplied by a centrifugal pump driven by an entirely enclosed engine. There are no pumps of any description worked from the main engines. The main feed pump consists of a pair of Weir's vertical pumps with float control. Duplicate pumps are provided for dealing with the various services of the ship—two for bilge purposes, a vertical ballast pump for fresh water, and a general service pump. An ash ejector is fitted in each stokehold, worked by a special duplex donkey. A Sentinel steam ash hoist is provided for port use. The evaporator and feed heater are of Weir's manufacture, and a feed water filter is also fitted. There are four boilers, 15 ft. 7 in. in diameter, by 12 ft. in length, each fitted with three furnaces and worked under forced draught on the enclosed stokehold system. An interesting feature of this ship is that she is the first of the Canadian Pacific Railway Company's fleet that has been specially built to carry oil fuel for raising steam in the boilers, although, of course, oil-burning apparatus has previously been installed into several of the older steamers of this company. The patented system of the Wallsend Slipway and Engineering Co., Ltd., was adopted and the installation is a very simple one. The oil is pumped from the liquid fuel bunkers through a heater and filter to the burners and is simply sprayed into the furnaces under pressure. The salient feature of this system



New Liner for Canadian Pacific Railway Co., S.S. "Princess Alice."

Swan, Hunter and Wigham Richardson, Ltd., of Wallsend-on-Tyne, has a length between perpendiculars of 290 ft., a moulded depth from the keel to the main deck at the side of 17 ft., and a beam of 46 ft. 2 in. She was built to the requirements of the Canadian Government for the Pacific Coast and channel service, and carries the highest class of Lloyd's Registry, and takes her passengers and cargo on a draught of 12 ft. 6 in. She is fitted with one set of four-cylinder triple-expansion engines, having one h.p. cylinder 27 in. in diameter, one i.p. cylinder 42 in. in diameter, and

is the method in which the air is brought into contact with the spray of liquid fuel, this being effected in such a manner as to secure perfect combustion within a very short distance from the mouth of the furnace. The method is so simple that it can be easily worked by an unskilled laborer after half an hour's instruction, as all that is necessary is to merely adjust the temperature and pressure to suit the quantity of oil which is required to be burned to obtain the requisite power. Another feature is the oil-spraying nozzle, which is so arranged that by simply changing the nozzle of