

American 2 ins. tubes 14 ft. long, at least $\frac{3}{4}$ in. apart.

All plates are of steel of required tensile strength to pass Government inspection.

There is a steam drum 30 ins. diam. & 10 ft. long.

The smoke stack is 24 ins. diam., 8 ft. above smoke box, then 34 ins. diam. for rest of length.

The boiler is built for a working pressure of 175 lbs., subject to Government inspection.

THE ENGINES are 1 pair high pressure non-condensing type, 16 ins. bore, 72 ins. stroke, with double piston valves, all parts designed for a working pressure of 175 lbs. to the sq. in. The steel shaft is of sufficient length to allow for a wheel having 18 or 19 ft. buckets. Four wheel flanges are provided for shaft, also an iron wheel rim & 8 wheel stirrups for each of the 17 buckets.

Two outside packed plunger Blake pumps no. 6 are furnished, entirely interchangeable, for feeding boiler, or flushing spark arrester, & fire service.

The vessel to be modelled & constructed with a view not to exceed a draft of $14\frac{1}{2}$ ft., with all equipments on board, steam up, & 50 tons of coal in the bunkers. The vessel to be tried on the measured mile & over a series of 4 consecutive runs to attain an average speed of $15\frac{1}{2}$ knots an hour.

To be rigged with 2 pole masts of pitch pine formed in one piece. To have one suit of sails, mutton leg fore sail & main stay sail, jib & main sail.

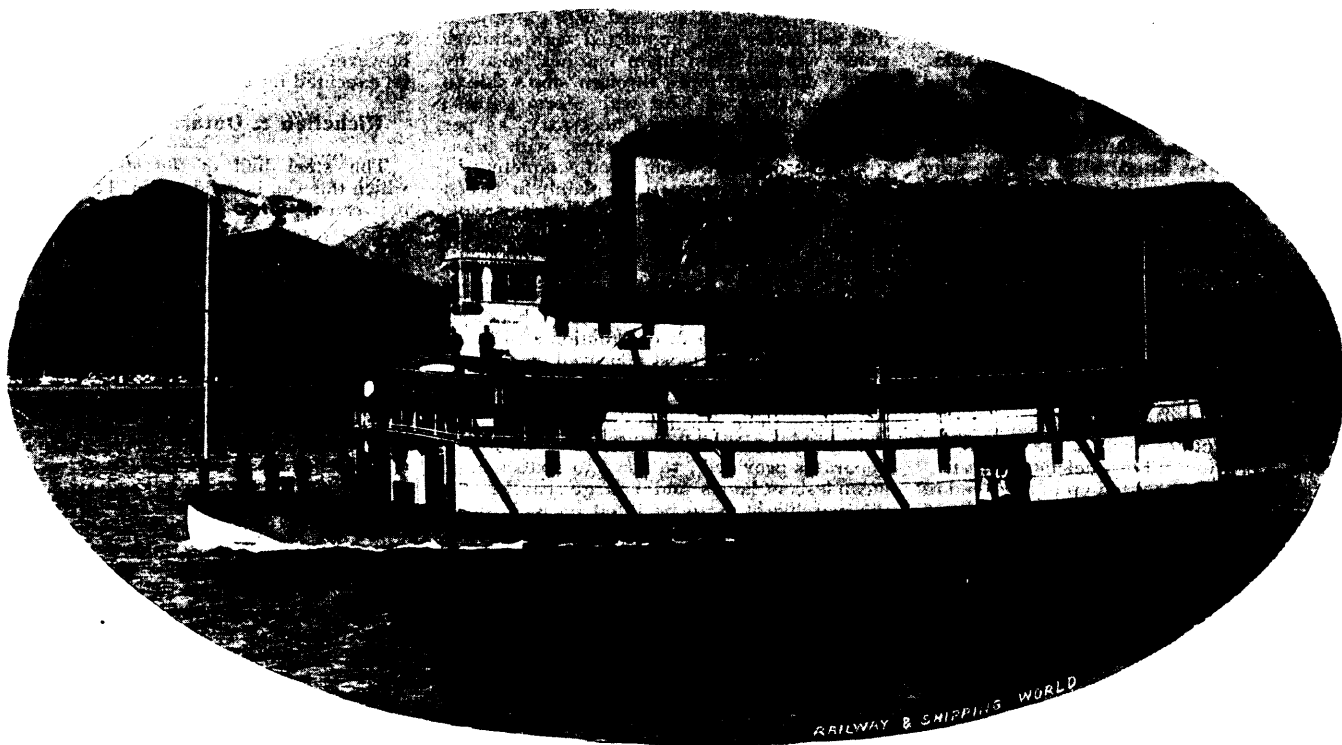
As the vessel is to be built for the purpose of crushing her way through heavy ice fields where the pressure is sometimes very great, the scantlings of the keel, stern, stern-frame keelson, & stringer plates must be increased in proportion as required to give the necessary strength; the stern, stern-frame, & rudder post to be at least $\frac{1}{2}$ heavier than required by Lloyd's rules. The frames, reversed frames, bulkheads, & pillars to be heavier where required. The spacings of frames to be, forward & in bluff of bow, not more than 15 ins., & widening to 18 & 20 ins. at sides, & 22 ins.

best manner, diagonal stringers riveted to beams as required, on main deck beams, so placed as to give resistance to twisting pressure from side to side.

To have extra hold beams built & fitted where required at & near the load-water line & greatest pressure from the ice. To have centre line & quarter pillars where required.

Plating to be all of the best Siemens-Martin ship steel, & where not otherwise specified to be according to Lloyd's rules, doubled on the bows & under bottom 70 ft. from stern, & to have a belt of doubled plating all 7 ft. deep placed $\frac{1}{2}$ above & $\frac{1}{2}$ below the line of deepest draft when after-ballast tank is filled. Oak chocks to be fitted between the side plating & the deep draft stringer, or some other device, if approved, to support the plating at the centre between the frames where required.

To have a cellular double bottom, to run from the forward bulkhead in fore hold under boilers & engines to after bulkhead of engine-room, & to be made 6 ins. deeper than is usual to give better room for cleaning.



THE C.P.R. CO'S STIKINE RIVER STEAMER OGILVIE IN VANCOUVER HARBOR.

New Winter Steamer for P.E.I.

As announced in our June issue, Capt. McElhinney, Nautical Adviser to the Dominion Department of Marine, went to Glasgow, Scotland, some time since in connection with the construction of a steamer to perform the winter service between Prince Edward Island & the Mainland, in place of the Stanley, which is inadequate for the work. Parliament has voted \$180,000 for a steamer & tenders have been invited, but it is not probable that the vessel will be constructed till next year.

The specifications call for a single screw steamer, length between perpendiculars 225 ft., breadth moulded $32\frac{1}{2}$ ft., depth moulded 21 ft. Following are some extracts from the specifications which will be found of interest.

The vessel to be built under special survey of Lloyd's Register of British & Foreign Shipping, & to be fitted & equipped in all respects to the Board of Trade regulations, & to class in English Lloyd's Register A1. 100. To be constructed throughout of Siemens-Martin ship steel, unless otherwise stated.

aft, as may be required by the Nautical Adviser; scantlings of frames to be increased to get more strength where required.

To have a bar keel. To be a straight stem, forged of best selected scrap iron, size at least $\frac{1}{2}$ larger than given in the rules, the scarf to keel must be carried well aft under the forefoot. To have a heavy shield or cutter fitted over face of stem & ends of plates, as directed, securely riveted.

Stern-frame & rudder post of best selected scrap iron forged in one piece, with the propeller space of sufficient size. The bosses for rudder pintles to be forged on, as also the lugs at sides & upper end, to support the rudder stock & pintles when backing into ice, & to have a strong bearing on it for heel of rudder; pintles & bosses to be bushed with gun metal.

Stringers & keelsons to be fitted with extra stringer plates, knees, braces, girders, & stanchions where required, extra stringer at line of deepest draft with braces where required.

Deck beams to be of bulb plate, spaced as in Lloyd's rules, knees fitted & riveted in the

To have the usually fitted ballast tanks in bottom & under boilers, & to have large trimming tanks aft & forward as required, all to have longitudinal midships partition for trimming to either side, & all necessary filling & emptying pipes, pumps, & attachments.

To have a large fresh water tank constructed with the ship, placed just forward of forward cross bunker, & to have 3 divisions to make it 4 separate tanks. Capacity in all 5,000 gallons.

Main deck to be of steel covered with pitch pine $3\frac{1}{2} \times 3\frac{1}{2}$ ins. thick, to have teak or oak bindings. Tween decks to be steel, all hatches, manholes, coal shutes, & openings of whatever kind in tween decks to lower hold to be fitted water-tight & strongly secured to compare with the water-tight bulkheads.

To have 2 cargo ports at forward end of tween decks, 1 on each side, open space 6 ft. high by 3 ft. wide, to close with 2 doors strongly made, & hung with proportionately strong hinges, & protected by heavy guards outside, strong fastenings.

Water-tight bulkheads, 1 collision, 1 fore