

harbor. The entire capacity of the yard is limited to the construction of one ship of 8,800 tons and the simultaneous docking and repairing of two others, not exceeding 2,500 and 1,500 tons deadweight.

In J. Coughlan & Sons yards on False Creek six steel steamers aggregating 52,800 tons deadweight are in course of construction. The position is ideal, having a wide frontage on sufficiently deep and wide water with a bay and wharfage on the west side. The Great Northern Ry. tracks form the southern base. The building is carried on in the open, but one of the last ships laid down is to be covered in. The plant is arranged on three sides of a square, of which the ships may be said to form the fourth. The buildings facing the railway (see fig. 5) are 2 storied, with a through entrance separating the office block from the machine shops, which extend across the balance of the

front. Above the machine shops are the mold loft and template rooms. The whole of the west wing is devoted to the preparation of the plates, which are unloaded at the wharf on that side and placed in the racks by means of a narrow gauge railway, and distributed thence to the different boring, cutting and punching machines, by means of the same narrow gauge, which is continued around the building. A powerful travelling crane takes the prepared materials to the yard and then they are delivered by the overhead conveyors to the different ships. An extensive shaping floor and furnaces are included in this wing, where the ribs, bearers, beams and stanchions are bent to the templates. A 3-story boiler shop forms the eastern wing, for the engines and boilers are designed and built in the yards.—R. Mackay Fripp in Engineering News-Record.

not take a pilot, seems open to question. The fact of his having to pay the charges whether he takes a pilot or not, does not necessarily make him take one, on the ground that he has to pay for it anyway. He takes a pilot for safety. If the clause compelling payment of the charges in the event of a pilot not being taken were deleted, there is no ground for supposing that a master would take chances and navigate the vessel to port without a pilot. It is thought that the situation might be cleared by making the taking of a pilot compulsory; by improving the type of the men engaged in the service; and by strictly defining the pilot's duties, so that both he and the master of a vessel might understand their positions, and the responsibilities of each.

Responsibility for Damages in Marine Casualties.

In the course of the recent enquiry into pilotage at maritime ports, the chairman of the commission, Thos. Robb, is reported to have stated, in commenting on certain evidence, that "if the law compelled a master to take a pilot, the master was relieved of responsibility."

This is a question which seems to have exercised the minds of various persons who are, or have been, associated, either officially, or through misfortune, with marine casualties, for some time, and not alone on this side of the Atlantic Ocean. So far as one can judge after hunting for the needle of common sense in a haystack of legal verbiage, there are different rules applying in different territorial waters, but so far as Canada is concerned, there appears to be no ambiguity in the law governing the point.

The Canada Shipping Act, R.S.C. 1906, chap. 113, sec. 473, provides as follows:—"No owner or master of any ship shall, in any case, be compelled to employ or to give his ship into the charge of a pilot, either on the ground of his being compelled to pay pilotage dues to any person, or otherwise."

From this, it is clear that pilotage in Canadian territorial waters is not compulsory, even though the payment of pilotage dues may be.

Sec. 474 of the same act reads, as follows:—"Nothing in this part shall exempt any owner or master of any ship from liability for any loss or damage occasioned by his ship to any person or property, on the ground, either of such ship being in charge of a licensed pilot, or such loss or damage being occasioned by the act or default of a licensed pilot, or on any other ground."

It is also equally clear from this, that the master cannot divest himself of responsibility for any damage caused while the vessel may be in charge of a licensed pilot, even if such damage be caused by an act or default of the pilot.

We have been favored with the following extract from Marsden's Collisions at Sea, on the matter of compulsory pilotage:—"A pilot, whom the owner or master of a ship voluntarily employs to navigate the ship, is the servant of the owner for that purpose, and the owner is answerable for a collision caused by his fault or negligence. In some waters, and under certain circumstances, the law requires a ship to be placed in charge of, and navigated by, a qualified or licensed pilot, and in such cases, it is a statutory offence on the part of the owner or person

in charge of the ship, not to take a pilot on board. A pilot taken under these circumstances, called 'a compulsory pilot,' is held to be placed in charge of the ship by the law, and to supersede the master in the conduct of the ship so long as she is in pilotage waters. He is not the servant or the agent of the owners, and for a collision caused entirely by his negligence, neither is the owner answerable at law, nor the ship at Admiralty. In such cases the remedy of the injured person is against the pilot alone. Pilotage is held to be compulsory, so as to exempt owners from liability for the acts of the pilot in all British waters, and for all ships in, and for which the employment of a pilot is enforced by penalty, or where the pilotage charge can be recovered against the ship or her owners, whether the pilot is employed or not. In some foreign waters pilotage is compulsory in the sense that payment of the pilotage charge is compulsory, but the shipowner is nevertheless liable for the pilot's negligence."

This argument, in conjunction with the two sections of the Canada Shipping Act, quoted above, leaves the situation thus:—A master is not compelled to take a pilot on board his vessel; he is compelled to pay the pilotage dues, whether he takes a pilot or not; and neither the master, nor the owners, are relieved from responsibility for damages through any act or default of the pilot, should one be taken on board to navigate the vessel.

A well known shipping authority, in giving Canadian Railway and Marine World his opinion, says: "If the law compels the master to take a pilot, the master is relieved of the responsibility, but I would mention that this would only apply in cases where pilotage is compulsory. Here in Canada, a vessel is not obliged to take a pilot, though the master or owner, whether he does or not, is obliged to pay the pilotage dues. This system, I contend, tends to do away with what is the principal consideration, i.e., safety."

Whatever may be the case in other waters, vessels entering Canadian waters are under Canadian laws, and when a pilot is taken on board, he is there merely in an advisory capacity, owing to his presumed knowledge of local conditions, the sole control of the vessel remaining with the master. Though the master is not compelled to take a pilot, it is always advisable for him to do so, and, as a matter of fact it is always done by ocean going vessels; but whether he should be compelled to pay pilotage charges should he

s.s. Calgarian Torpedoed.—The Canadian Pacific Ocean Services' s.s. Calgarian was reported to have been torpedoed and sunk off the coast of Ireland, Mar. 1. She was built at Glasgow, Scotland, in 1913, for the Allan Line Steamship Co., now absorbed by C.P.O.S., Ltd., and was of the cruiser stern type, equipped with quadruple screw, triple expansion arrangement of turbines. Her dimensions were: length 600 ft., breadth 72 ft., moulded depth 54 ft.; gross tonnage, 18,500. She had accommodation for 220 first class passengers, 500 second class, and 1,000 third class, and quarters for a crew of 470. Since the early stages of the war, she has been used as an auxiliary cruiser and for transport work, but latterly for cruiser work only. It has been suggested that vessels of this type should not be used for auxiliary cruiser operations, as they are stated not to be fitted for the work, and could be used otherwise to better advantage.

The Unsinkable Ship.—The Ship Protection Committee of the U. S. Shipping Board, received a number of suggestions recently for making ships practically unsinkable, and has selected several of the devices for tests and experiments.

Telegraph, Telephone and Cable Matters.

The Public Works Department received tenders during March for the supply of 30,000 lb. of galvanized iron telegraph wire, for early delivery at Nelson, B.C., for the Dominion Government Telegraph Service.

The Great North Western Telegraph Co. has opened offices at St. Prime, Que., Athens, Ont., Dropmore and Hvas, Man., Kelsey, Alta., and has closed its office at Perthuis, Que. The name of the office at Methors Mills, Que., has been changed to Dosquet.

The Public Works Department will receive tenders to Apr. 15, for 12 knots of single conductor submarine telegraph cable, 107 lb. copper and 150 lb. gutta percha per knot, with sheathing of 12 no. 8 s.w.g. iron wires, for delivery at Halifax, N.S., within 8 weeks after placing of order, and also for 5 reels of same on several reels for distribution, to be delivered at Vancouver, B.C.

The Maritime Telegraph & Telephone Co.'s report for 1917 shows receipts of \$813,483.52, and expenses of \$683,978.53. The dividends paid, including one paid Jan. 1, 1918, were \$111,000, leaving a surplus of \$18,504.99. The directors for this year are: S. M. Brookfield, O. E. Smith, G. E. Faulkner, L. B. MacFarlane, C. F. Sise, Jr., G. F. Pearson, A. Mackinlay, J. H. Winfield, and E. L. Macdonald.