

The Concrete Steamship Faith's First Voyage.

The concrete steamship Faith, 320 ft. long, 44 ft. 5 in. wide, and 30 ft. deep moulded, left San Francisco on Wednesday, May 22, with a cargo of salt and copper ore, bound for Seattle and Tacoma, Wash., and Vancouver, B.C. The draft forward was 21 ft. 10 in. and aft 23 ft. After rounding Point Reyes in the afternoon she encountered strong head winds with considerable sea, to which she responded very well, although a good deal of water was shipped on deck. On Thursday afternoon the wind having increased in violence and the ship shipping seas all fore and aft and making about 2 knots an hour, the captain wore ship, running back to shelter cove until the storm abated.

Left shelter cove at 4 a.m. on Friday, and shortly afterwards ran into a gale; the ship was pitching heavily, but pounded rather hard, due probably to shape of forward under body. This continued all day and during the night, when the gale was at its height, and which the captain estimated to have a velocity of 60 miles an hour. During the day the vessel was taking seas over forecastle and all fore and aft, but responded well to these head seas, much in the manner of a steel vessel.

On Saturday the wind had fallen considerably and on the afternoon of that day the gale had subsided, which gave the opportunity of removing a hatch cover from holds 1, 2 and 3 and examining the vessel as far as the cargo permitted. It was then observed that the deck slab was cracked in several places in way of hatchways 1, 2 and 3 under the winch seatings, the cracks being more extensive in way of no. 2 hatchway. The cracks extended right through the slab, and evidence of slight leakage could be seen on underside, and were confined in extent to the area between the hatchways and under the winches. Small hair line cracks were also observed in the inside surface of the radius corners of all the hatchways, more particularly in no. 2. A certain amount of leakage also occurred through the fastening of the wooden deck houses and other deck fittings through the slab, and also from the fender bolts along the ship's side.

From Saturday afternoon until the arrival at Seattle on Tuesday, May 28, good weather prevailed. Draft on arrival: fore, 21 ft. 3 in.; aft, 22 ft. 8 in. During the voyage the bilges were sounded every hour, day and night, and except for port side no. 1 hold, which had about 5 in. on arrival, all other bilges were dry; this leakage only amounted to about a barrel full, and in my opinion was due entirely to seepage from cargo. After unloading part of cargo, left Seattle, Thursday, May 30, arriving Tacoma same day. Left Tacoma Saturday, June 1, arriving the following day at Vancouver, where remainder of cargo was discharged. On Friday afternoon, June 7, the vessel, being empty, was subjected to a thorough examination as far as possible, outside and inside. The outside inspection showed cracks on the paint running parallel to the outer layer of reinforcing rods, particularly over the midship portion of vessel and on the port bow, probably caused by a slight movement of the slab with the force of the seas. On the inside of vessel, in addition to the cracks in deck slab previously mentioned, hair cracks were observed in the walls between upper and second deck extending from about the middle of hold 1 to middle of hold 3. These are probably shrinkage cracks and

had been under observation before the ship left San Francisco. In the lower holds, at about the center of no. 2 and 3 hatchways, on both sides, hair-line cracks were observed in the shell slab and extending across one longitudinal. These cracks showed slight working and were the only ones seen below the second deck and were probably caused by straining when laboring in a cross sea. Apart from these minor failures, the ship, in my opinion, is a success; the failure of the deck slab is due to lack of sufficient reinforcement, and owing to the winches being bolted through the cement slab without any seatings.

The deck arrangements are only suitable, in my opinion, for coastwise trade, a wooden deck house bolted through the deck slab being the only protection for the engine and boiler openings, which, in my opinion, is not enough for transoceanic service. A concrete poop enclosing these openings would be a decided improvement. At the various ports of call the vessel was visited by large numbers of people representing the various shipping and shipbuilding interests, and their criticism on the whole was favorable to this type of construction.

On board the vessel also for the purpose of getting information were: Allan McDonald, the designer; Mr. Nicolsen, the builder; Prof. R. McMillan and his assistant; H. S. Loeffler, representing the Shipping Board; Charles C. Brush, Assistant Engineer, Bureau of Lighthouses.

Prof. McMillan had a number of his strainograph instruments placed around the midships of vessel, the cargo being so arranged that these were accessible at all times during the voyage, access to them being obtained through a ventilator to no. 2 hold. He informed me that the greatest stress registered during Friday's gale was only 8,000 lb. (that is, between hogging and sagging), on the indicators placed on the underside of deck, and the indicators on flat of bottom registered about three quarters of that amount.

Following is a copy of some of the observations made by Mr. Brush: "Established sight lines fore and aft, reading 0 in still water; passing out through Golden Gate vessel showed slight hog of $\frac{1}{4}$ in. port and $\frac{1}{2}$ in. starboard, and the greatest deflection taken during the voyage between extreme hogging and sagging was $\frac{3}{4}$ in., in a length of 180 ft., which is about one-third of what a steel ship would show under similar conditions."

Responsibility for Accidents in Panama Canal.—The rules for the operation and navigation of the Panama Canal have been amended providing that the master of a vessel in canal waters, except while the vessel is being passed through the locks, shall be charged with the safe handling and proper navigation of the vessel, the pilot being considered to be on board solely in an advisory capacity. Masters of vessels must abide by the canal rules as interpreted by the pilot. No claim against the Panama Canal for damages, on account of injury to a vessel or its cargo while in canal zone waters, arising from the operation of the canal, other than the passing of the vessels through the locks, shall be allowed unless it shall be determined by the Panama Canal Governor that such injury was due to negligence or want of care on the part of canal agents or employees, and there shall be an appropriation available for the payment of such claim.

Wreck Commissioner's Judgment.

Enquiry has been held, and judgment delivered in connection with the following casualty:—

Stranding of the s.s. Afghan Prince.

Held at Sydney, N.S., Sept. 12, before Capt. L. A. Demers, Dominion Wreck Commissioner, assisted by Lieut. H. C. Owen, R.N.R., and Capt. A. J. Morrison, as nautical assessors. The court came to the conclusion that the vessel was provided with all necessary instruments, and efficient compasses with little deviation, which were checked in a careful manner whenever opportunity offered. From the time the vessel left Hampton Roads, until she reached Canso, she was navigated carefully and frequent casts of the lead taken, and a chain established when off Canso, which was passed at a safe distance. The weather was fair as regards sea and winds, but was foggy at intervals. After leaving Canso, a course was set which would have led clear of all points of land, but which the court is of opinion was too fine, especially when the master was working on a large scale chart, and had never navigated these waters before. Though he recognized there was a westerly set, an allowance being made to offset its possible effect, the court feels that when he obtained a depth of 17 fathoms, ordinary prudence demanded that the vessel should have been turned seaward and her half speed brought to slow, and she should have been navigated carefully until 40 or 45 fathoms had been obtained, and then the former course resumed. From the evidence of the chief officer it was gathered that there was some nervousness on account of submarines, and that the hugging of the coast was due to this and caused the master to err gravely in judgment, and prevented him from exercising that prudence he had shown between Baltimore and Canso. The Admiralty orders may be to navigate close to the coast, but the court is under the impression that there is a proviso, viz.: consistent with safe navigation. In ordinary circumstances the court would have dealt with such a case in no lenient measure, but in view of conditions existing, the dread which must exist in one's mind of meeting with an enemy ship, which must upset somewhat those in command, it felt that in this instance, taking into consideration the care exercised in navigating up to Canso, and the neat method followed in entering details in the log books, the watchfulness of the actions of the compasses, some consideration was deserved, and it therefore reprimanded the master severely, and did not deal with his certificate, cautioning him as to the future. The court suggested that the Admiralty enclose within the folios handed to shipmasters, some sectional charts of the coast which they are to frequent, especially with those they are called upon to sail for the first time.

Lafayette Steamship Co., Ltd., has been incorporated under the Dominion Companies Act, with \$100,000 capital, and office at Montreal, to build, own, operate and deal in steam and other vessels of every description, and to carry on a general business as common carriers.

The U.S. Lake Survey reports the levels of the Great Lakes in feet above mean sea level, for August, as follows:—Superior, 602.42; Michigan and Huron, 581.79; St. Clair, 575.93; Erie, 572.64; Ontario, 246.43. Compared with the average August levels for the past ten years, Superior was 0.20 ft. below; Michigan and Huron 0.95 ft. above; Erie, 0.04 ft. below, and Ontario 0.22 ft. below.