

Concrete Steel Barge
"ST. ANNE".

Dimensions:- 107.5' x 25' x 10.5'

Class:- A "Barge", "For river and harbour service on the Thames",
"Experimental".

This vessel, which is a Thames barge of normal type, was built on the concrete-steel system designed by Sir Owen Williams, and is the first of six at present under construction.

While the barge was fully loaded with about 400 tons of cement clinker, a tug came into collision with it and pierced a hole about 2'0" x 6" - the top being 2' below the deck - in the ship's side in way of the after peak, with the result that the ship sank in shallow water. To raise the vessel the fore peak was pumped out, and in this condition the fore peak bulkhead would be subjected to a pressure head of about 8', with the result that when the vessel was raised a few days later it was found that this bulkhead was bulged forward and the concrete cracked.

The hole in the ship's side has been repaired, and the Designers suggest that, beyond a precautionary coat of paint, nothing further is necessary to make the barge seaworthy.

Mr. Colley, the Society's Consultant for Concrete Construction, has examined the barge, and recommends that the damaged concrete in the bulkhead should be removed and replaced by new. He also reports that diagonal cracks have appeared on the hull at the fore and after ends of the hatch. These he considers are not of structural importance, but he recommends the application of two coats of paint externally and one internally. He adds that it is more than likely that many similar cracks have developed that are not visible, and it would be advisable to paint the whole of the barge inside and outside.

It is submitted the Designers be informed of Mr. Colley's recommendation.

30th September, 1943.

Mr. Colley points out that, if the bulkheads are to be regarded as watertight, some additional strengthening should be provided. It is to be noted, however, that these bulkheads are divisional watertight bulkheads only, and do not form the boundaries of ballast tanks, and it is considered the scantlings already provided are suitable for the purpose for which the bulkheads are normally intended.

It might be added that the Designers have arranged, with a view to minimising risk of the type of damage which has been sustained, that in the later series of these ships two additional half round protecting bars be fitted below the gunwale. Further, as the filling of the after peak causes a large change of trim, involving a rapid sinking of the after end, the Designers propose in these later ships to connect the forward and the after peak by a pipe passing through the hold to maintain a uniform trim, with the object of delaying sinking, ~~and~~ (to fit additional reinforcement to the peak bulkheads.

It is also proposed

Ltr. Lon.Surs. 1/10
p.c. Mr.Perris
Ltr. Mr.Stocks 1/10
p.c. Lon.Surs. & Mr.Perris

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