

File with Casualty rept. No 9084.

## THE "SHEAF BROOK"

Board of Trade Inquiry  
FindingsCRITICISMS WITH REGARD TO  
VESSEL'S LOADING

From Our Own Correspondent

SUNDERLAND, Friday. Judge Richardson, sitting as a Wreck Commissioner, gave his findings at Sunderland to-day, following the inquiry he held last week into the loss of the Newcastle steamer *Sheaf Brook* with all hands in the North Sea last November. The findings expressed the view that the loss of the vessel was due to the shifting of the coal cargo, causing a severe list, and the consequent entry of water into the machinery space. The Court discounted the theory that the *Sheaf Brook* got off her course and struck a submerged wreck on the Dogger Bank, but added a recommendation that all ship masters should be warned to avoid the South West Patch in winter or hard weather.

The previous proceedings were reported in LLOYD'S LIST of Apr. 22, 23, 24 and 25.

In the course of his findings, Judge RICHARDSON said that after the *Sheaf Brook* completed the loading of Nos. 2 and 3 holds at Dunston she had a list of from 7 to 8 deg. to port. Loading by gravity spouts, especially at low tide, the Judge stated, resulted in a varying density of stowage, and in the case of the *Sheaf Brook* her port side would be very much more closely packed in Nos. 2 and 3 holds than the starboard side. After pumping the water from her tanks while going down the river to Jarrow, where she loaded her Nos. 1 and 4 holds, the vessel had a list to port of 4 or 5 deg. In order to rectify this list her Nos. 1 and 4 holds were loaded with coal stowed largely on the starboard side. A big space was left on the port side and the surface of the coal was sloping. When the vessel arrived at Jarrow staiths to complete her loading both teeners and trimmers were confronted with the task of loading the balance of cargo in Nos. 1 and 4 holds in such a manner as to leave the ship upright when completed.

## THE COAL IN NOS. 1 AND 4 HOLDS

The evidence showed that in order to correct the list it was necessary to teen coal in Nos. 1 and 4 holds in such a manner that there was approximately some 50 or 60 tons more coal on the starboard side than on the port side. In addition to that unsymmetrical loading in the transverse direction, in those holds the coal also sloped steeply in a fore and aft direction and there were empty spaces of considerable magnitude on the port side of each hold and also at the after end of No. 4 hold and the forward end of No. 1 hold.

The Court was of opinion that the excess of coal to starboard in Nos. 1 and 4 holds, together with the empty spaces remaining in those holds after the vessel had completed loading did not constitute careful loading. The nature and extent of the surfaces of coal in those holds would render the coal particularly liable to shift when the vessel was in the seaway and would constitute a grave danger. In the event of the vessel taking a sudden lurch under the action of a steep sea, small coal as loaded to-day might be a dangerous cargo. In holds that were not full it should be trimmed level. There was no reason to find serious fault with the actual stowage of coal in Nos. 2 and 3 holds.

Small coal, while not a fluid cargo, was certainly not a solid cargo, and in the case of very small coal conditions were comparable with grain.

Dealing with the probable causes of the loss of the *Sheaf Brook*, Judge Richardson said the vessel would undoubtedly roll as well as pitch. In view of the fact that she would fall off her course a point or two each way after 1.35 p.m., with increasing wind and sea, though admittedly not a gale, the pitching and rolling motion of the vessel would increase with the increasing movement of the ship and there would be some amount of shifting of cargo. There was nothing in the design or construction of the *Sheaf Brook* to account for an initial list of any magnitude to port when in a light condition. It followed, therefore, that there should not be any necessity for the unsymmetrical loading of the coal.

It appeared from the evidence that the vessel usually arrived at the spouts with the water ballast tanks full or in process of being emptied. Since such water ballast was not necessary either for the purpose of trim or stability when the vessel was about to load, the Court recommended that all water ballast in coal-carrying ships should be completely pumped out before shipping any of the coal cargo. As time passed the movement of cargo would become of increasing magnitude with the increased motion of the ship and increase the list.

When the vessel reached the vicinity of the south-west patch of the Dogger Bank shallow water waves would be encountered. Those waves were much steeper and shorter than those found in deep water under the same intensity of weather. The action of the ship would consequently be quicker and more violent, and still further increase

the tendency of the cargo to shift. In those short and steep seas the water would continually be coming on board. Any water finding its way through air escape pipes and ventilators would enter the double bottom tanks and the machinery space, and the effect of the free surface of that water, together with the effect of water shipped on deck and the undoubted shifting of bunker coal on top of the bunker hatch, would together with the shifted cargo make the vessel exceedingly difficult to control and handle—she would be in a condition of grave danger. Moreover, the pitching movement of the vessel would undoubtedly contribute to the shifting of her cargo, still further increasing the list and jeopardising the vulnerability of the deck openings, particularly the doors to the funnel casing, the doors to the engine casing, and the hold ventilators.

It would appear probable that the *Sheaf Brook* received a number of severe blows from a series of very high broken waves and that she lurched heavily to port, causing a large shift of her cargo and resulting in a dangerous list. Incidentally, Judge Richardson said, the Court was of opinion that bunkers ought not to be loaded anywhere on deck in a loaded ship during the winter months. With the water coming in the vessel would then take a severe lurch, be overwhelmed and inevitably founder.

## CAUSE OF ENTRY OF WATER

Although it was, of course, impossible to ascertain what actually happened, there were grounds for suspecting that the shifting of the cargo in Nos. 1 and 4 holds was the cause of the entry of water into the machinery space and cross bunker. The Court did not think it was probable that the *Sheaf Brook* might have been off her course and struck a submerged wreck on the south-west patch of the Dogger Bank. The *Sheaf Brook* was fitted with echo-sounding gear, and her captain knew the south-west patch very well. There was no doubt, said the Judge, that the south-west patch should be given a wide berth in winter and in hard weather. That should be a recommendation to every shipmaster. The Court had also considered the possibility that the hatchways were stove in, but they were of opinion that that was not probable. It was probable that the vessel was overwhelmed before any attempt was made or opportunity occurred for launching the lifeboats.

Answering the questions submitted by the Board of Trade, the Court said that the *Sheaf Brook* was not so loaded as to be in a safe and seaworthy condition from the point of view of stability when she left the Tyne on her last voyage. There were certain circumstances in connection with the loading of the vessel which might have given rise to a shift of her cargo and thus cause loss of stability on the voyage.

The Court also found that there was no one authority responsible for the safe stowage of the coal cargo other than the master, whose responsibility could only be borne in a general way. They were of opinion that the control and supervision as carried out were not proper and sufficient. They added that they considered that the *Sheaf Brook* was in a good and seaworthy condition as regards hull and equipment when she left the Tyne, but they considered it unsatisfactory that her boats should have been examined and approved in dry dock and not tested in the water.