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# Formal Enquiry into the loss of the S.S. "Sutton"

The Guildhall. Cardiff

2<sup>nd</sup> Day's Proceedings. Commencing at 10 am.

Mr Perry - the representative of the British Metal Corp<sup>y</sup> Ltd present at Aberystwyth during loading operations continued his evidence. -

A slight list was made to Port, at the Captain's request, when loaded, to enable the coal in the cross bunkers on the Port Side being used first.

The last parcel of zinc concentrates appeared to be slimy and unable to stand up in conical formation.

Vessel touched the ground at the forefoot on the opposite bank to the berth, came down river stern first and in slewing at the pier she touched ground at the sternpost. No apparent damage.

It was raining during the two days of loading.

Hatches were placed in position and tarpaulins wedged but locking bars were not seen in position before vessel sailed.

The method of loading the "Marali" was again referred to (The "Sutton" and the "Marali" cannot be separated at this enquiry)

It was stated by Mr Perry that the



Concentrates were trimmed in the "Marali" but not in the "Sutton", because a full cargo for the former vessel was received and not for the latter (20 tons were left behind)

Personal Observation. S.W.B.

The "Marali" cargo was not trimmed fore and aft, only athwartship at the peak of the large parcel of zinc concentrates under the after end of No 1 Hatch

When the "Marali" arrived at Milford Haven in a helpless condition, the cargo appeared to have "settled" down six feet, and a quantity of water was on the upper surface.

The master reported at Milford Haven having withdrawn about 40 baskets of water from the surface of the cargo. He could not account for water getting into the hold.

Personal Observation. S.W.B.

Mr Perry was under examination for two hours and his evidence was very conflicting. Mr Bucknill (Solicitor for the Board of Trade) was very persistent in trying to come to a definite conclusion as to the "fluidity" of these concentrates and the examination of the various witnesses was continued throughout the day with this object in view.



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Mr Little of Messrs Roscoe & Little, Liverpool the designers of the "Sutton" was next examined.

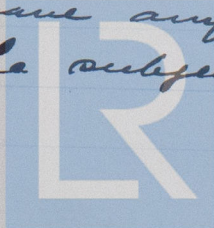
He stated that he had made calculations on certain assumptions of loading to find the C.M. (Distance between the centre of gravity of the ship and the metacentre), also assuming the density of the cargo being 16 cwt to the ton and the centre of gravity of the cargo being 3.5 feet above the ceiling. With these assumptions he estimated the C.M. to be 2.4 feet

Personal Observation S.W.B.

The Board of Trade officials possessed information of the actual loading and they made independent calculations with the result that their estimate of the C.M. was 2.9 feet. Provided the cargo did not shift the stability of the ship is not questioned by the Board of Trade

Mr Alexander, Naval Architect one of the Assessors questioned Mr Little as to the method of making his calculation when inclining the ship (S.S. Weston).

It was understood that the position of the metacentre was calculated in relation to the bottom of keel on a mean draught, and that no allowance was made for the difference of trim by stern. A discussion of a technical nature took place which did not seem to have any particular bearing ~~on~~ on the subject then under discussion.





Mr Little gave a description of the hatch supports and battering-down arrangements.

His evidence confirmed the opinion of the Board of Trade that the dimensions and other qualities of the vessel were such as to ensure sufficient stability under ordinary conditions of loading.

He was questioned as to whether the ship would sink if the cargo shifted and he stated that the ship would heel until her hatchways came into contact with water and it was his opinion that water would find its way through the hatches in spite of the latter being battered down.

Mr Brennan, the manager of the Ore Mines gave evidence of the parcels of concentrates sent down to the Warehouses at Aberystwyth and also the methods employed in producing the various grades of ore (The question of the degree of moisture was again of importance in the examination)

Mr Francis, Principal Officer of Customs, stated that before the "Sutton" left the Quay he saw that all hatches were in position on both hatchways and were battered down.

Mr J. H. Thomas, the Pilot of the Sutton stated that he steered the ship over the bar and also kept in the loading of the "Sutton" and the "Marali". The cargo of the "Marali" was distinctly denser than that of the "Sutton".



He also stated he had ~~said~~ sailed from "Australia" with cargoes of concentrates which were much drier than those from the Cambrian mines and the cargo was always battened off (shipping boards).

The President brought out the statement that the cargo referred to above was carried in sailing ships & the object of confining the ore to the centre of the ship was, ~~possibly~~ probably, to raise the centre of gravity of the cargo to assist the ship and thus reduce stresses on the masts.

The Pilot also stated that the "Sutton" touched the ground on several occasions before crossing the bar at Aberystwyth.

Mr James, the ferryman who took the pilot ashore and who assisted in the loading also gave evidence but nothing of importance was given.

Mr Thomas Jones, the chemist at the mines described the process of ~~the~~ obtaining the concentrates and the difference between the "floatation" and "jigger" processes of sifting the ~~material~~ ore. The former contains water and produces the slime or softer quality of concentrate. A great deal of time was taken in the examination of the methods of obtaining the quantity of moisture present in the various ore concentrates.

Mr John King, Senior Surveyor at the



Consultative officer of the Board of Trade stated he inspected the berth of the "Sutton" at Aberystwyth and there was nothing to indicate the possibility of damage to the vessel during her passage from the berth to the open sea. He was satisfied that the construction of the ship was sufficient to stand the stresses of loading aground <sup>with</sup> the particular type of cargo carried.

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J. W. Blockhouse

21-4-26.



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