

SELF TRIMMING COLLIERS.

IS THE HATCHWAY PROTECTION
ADEQUATE?

THE CASE OF THE HARTLEY.

THE loss of the steamer Hartley, a self-trimming collier, draws attention again to the fact that casualties to this type of vessel have been unpleasantly frequent of recent years. The inquiry just concluded by the Board of Trade brought to light no peculiar circumstances which may have contributed to the foundering of this particular vessel, but there would appear to be reason for special attention being again directed to the question of hatch coverings in this type of ship.

It is, of course, well known that self-trimmers are the outcome of the continual striving of owners and designers to produce craft which will afford means of transporting coal at a very low figure. There are many factors which tend to render the job of loading coal and at the same time trimming it by hand, an operation involving considerable expense, and one necessitating the taking of some appreciable risk by the trimmers. To design a craft which would allow of coal being dumped on board with great rapidity and in considerable quantity at each discharge, and further one in which the coal would distribute itself in the hold with a minimum of assistance from trimmers, it was necessary to arrange for very large hatchways, and these hatchways have to extend over the greater part of the width and length of the hold which they serve.

Now the problem of devising means for covering these hatchways in a watertight and weathertight fashion is one which is in the very nature of the case a matter of great difficulty. In the first place, of course, these hatchways are individually very large, and they have to be subdivided by heavy hatch beams. These beams are long and cumbersome, and even though they be substantial and well constructed, they are difficult to handle, and liable to distortion if not properly slung and carefully unshipped and shipped again after the cargo has been loaded.

DIFFICULTY OF MANIPULATION.

When these beams are in thoroughly sound condition and properly shipped they subdivide the hatchway into two, four, six, or more sections, these sections being rectangular and provided with landings all round, on which rest the wooden hatch covers themselves. These wooden hatch covers are usually made of 11 by 3 deals; two deals are placed side by side, through bolted and fitted with flush handholds. The length of these hatch covers is usually from 8 to 10

or 11 feet, and they are quite sufficiently large and heavy to render it not too easy a matter to handle them. It is arranged that the hatch covers are numbered in consecutive sequences with the idea that the covers should always be replaced each in a particular position.

There are generally from 50 to 100 covers to each hatchway, and the clear deck area is so small that it is impossible to stack the covers in a manner calculated to result in there being no difficulty in replacing them in their proper order.

Assuming that the covers are kept in reasonably good condition, it will be found generally that when they are in position they do not fit tightly; in fact it is impossible to provide that they should fit tightly; if they did it would not be possible to lift them by hand. Before the tarpaulins are put on, therefore, the hatch is covered by from 50 to 100 slabs of wood loosely fitting in the several rectangles formed by the hatchway itself and the heavy hatch beams. To hold these covers in place tarpaulins are stretched over the hatch, these tarpaulins being retained in position by steel hatch bars jamming the tarpaulins to the sides of the hatch coming, and possibly with the addition of lashings, generally of rope.

ARE PRESENT METHODS SUFFICIENT?

This method of covering hatchways has been followed for very many years, and until comparatively recently no great fears have been entertained for vessels proceeding to sea with such hatch-closing arrangements, even when they have been going through bad weather. It must be seriously considered now, however, whether the loss of several vessels of this type can be entirely dissociated from the question of the method adopted for covering the hatches, and this point was stressed in the finding of the Court in the case of the Hartley.

The fact that the hatches have relatively little camber, i.e., that they are not far removed from a plane surface, is bound to result in it being extremely difficult to grip them with a tarpaulin or similar cover, though this be secured by locking bars or even with the aid of wire rope lashings. If the hatchways were well curved in an athwartship direction, i.e., if the end coamings and the intermediate athwartship hatch beams were designed and built with a well-rounded upper profile, i.e., a big camber, it would be possible, by fitting the hatch covers with their

lengths in a fore and aft direction, to ensure that when the tarpaulin covers were drawn tight to the fore and aft hatch coamings they pressed fairly tightly on the whole of the hatch covers.

There would be disadvantages to this method of working; the wooden covers would be a little awkward to ship into position, for instance, and it would be difficult to avoid wrinkling of the tarpaulin, but it is certain that something requires to be done to ensure that a solid resistant diaphragm shall be provided over the top of the hatchway to resist the onslaught of heavy seas in bad weather.

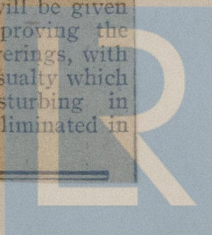
There are several special forms of hatchway coverings which have claims to mention as being of a very efficient type, and it would undoubtedly tend to relieve the minds of those responsible for the safety of vessels having low freeboard and large hatchways if one or other of these hatch coverings were fitted. It is true that many of these require power lifting appliances or some other provision of a similar nature, and that their initial cost is greater than that of the ordinary hatch covering arrangements, but these objections should be far outweighed by the greater security offered in bad weather.

The loss of three or four colliers does not seem to be a matter of pure coincidence, and while in one case overloading and lack of sufficient stability were decided to have been contributory causes to the disaster, one cannot feel happy as to the safety of other vessels of similar type provided with only ordinary wood hatch covers, even though these be covered with two or three tarpaulins, the latter drawn as tight and secured as well as is possible.

SAFETY FIRST.

It is, of course, difficult to provide good facilities on a small vessel for stowing relatively large covers, as the area of clear deck is very restricted, but where the eventual safety of the vessel is concerned, it appears to be imperative that either one of the really efficient patent covers now on the market should be adopted, or else steps taken to so arrange the shape of the hatch and its camber that the adding of the tarpaulins and the proper securing of same will result in each separate small wooden hatch cover being held firmly in place.

The primary cause of the loss of the Hartley was stated by the Court to be the shipping of water in No. 3 hold and thence into No. 4 hold. The Court also considered that if steel watertight bulkheads had been fitted instead of wooden "non-watertight" bulkheads, the water would have been confined to No. 3 hold, and the loss of the vessel might thus have been prevented. But it was the defects in the hatchways that allowed water to get in at all, so that the hatchway is the point where remedial measures should commence. While the requirement of the coal trade may prevent the adoption of special type covers, no doubt due consideration will be given other suggestions for improving the solidity of large hatch coverings, with the hope that a class of casualty which has been somewhat disturbing in frequency lately will be eliminated in the future.



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