



Carefully to Carry

Stowing and securing steel slabs

The Committee has noted that losses of ships laden with steel cargoes continue to be reported. Some of these losses involve steel slab cargoes. In some instances, such cargoes have been known to shift in relatively moderate weather conditions, putting at risk the safety of the ship and her crew. Not infrequently, cases arise involving heavy plates or steel slabs, where the methods of stowage are criticised.

The correct and safest method of carrying steel slabs, and heavy steel plates, is to stow with the longitudinal axis athwartships. This entails winging the stow out to the ship's sides and results in overlapping of horizontal layer ends. In the case of slabs, this method of stowage entails handling each slab individually in the hatch, using a forklift truck. Similarly, steel plates, depending on their weight per unit, can only be handled a few at a time.

The two Figures 1 and 2 show two satisfactory methods of stowage. Fig 1 shows all slabs stowed athwartships.

In Fig 2 a variation of 1 is shown, which is useful when the complete tank top area is not to be utilised. Slab 1 is stowed athwartships. Slabs 2, 3 and 4 are stowed longitudinally in order to prevent movement of the stow.

It is essential that wooden dunnage be placed between plates or slabs, in order to correct any tendency to shift. In some cases, consideration may be given to the lashing of such stows with steel wires, preferably attached to steel eyepads. This applies particularly in the upper decks of tween deck vessels.

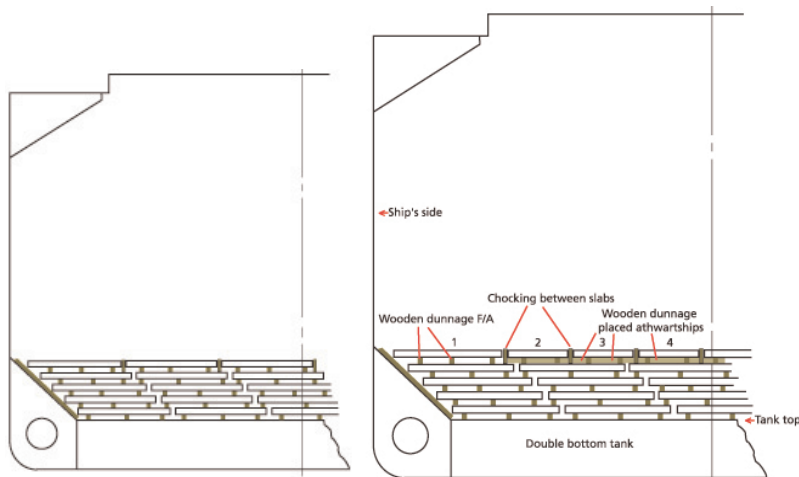


Fig 1

Fig 2



"The carrier shall properly and carefully load, handle, stow, carry, keep, care for and discharge the goods carried."

Hague Rules,
Articles iii, Rule 2

Carefully to Carry Advisory Committee

This report was produced by the Carefully to Carry Committee – the UK P&I Club's advisory committee on cargo matters. The aim of the Carefully to Carry Committee is to reduce claims through contemporaneous advice to the Club's Members through the most efficient means available.

The committee was established in 1961 and has produced many articles on cargoes that cause claims and other cargo related issues such as hold washing, cargo securing, and ventilation.

The quality of advice given has established Carefully to Carry as a key source of guidance for shipowners and ships' officers. In addition, the articles have frequently been the source of expertise in negotiations over the settlement of claims and have also been relied on in court hearings.

In 2002 all articles were revised and published in book form as well as on disk. All articles are also available to Members on the Club website. Visit the Carefully to Carry section in the Loss Prevention area of the Club website www.ukpandi.com for more information, or contact the Loss Prevention Department.



Photo 1. Correct stowage of plate steel

In recent years, other methods of stowage have been devised with the aim of speeding up the turnaround of ships and reducing expenses. The Committee is highly sceptical of some of these practices and advises caution before they are adopted. One such system involves a series of heavy lifts into the ship. Each lift comprises a block of slabs or plates weighing in total as much as thirty-six tonnes or more. Each lift is landed in a convenient position and succeeding lifts are landed adjacent to each other, in the square of the hatch, where all the cargo is stowed. No dunnage is used between the individual stacks and there is a huge gap between the cargo and the ship's side, both to port and starboard. Sometimes flimsy timber framings are erected to fill these gaps (see Photo 2). Metal strapping bands are sometimes used to secure each stack but, due to the sinkage of whatever wooden dunnage may be placed between slabs, are often slack before the ship sails. Such strapping bands should not, in the view of the Committee, be used with these cargoes and are to be discouraged as dangerous.

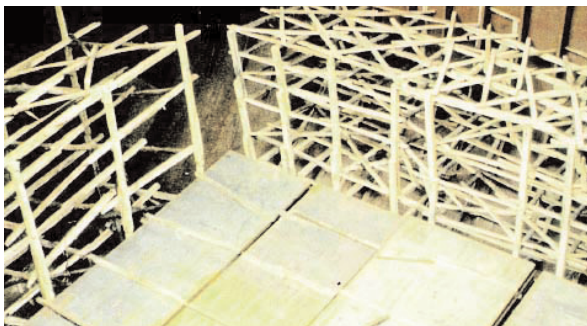


Photo 2. Flimsy timber framing

The Committee is concerned that methods of stowage continue to be used which they consider to be unsatisfactory. The main criticism concerns block stowage of bundles of steel slabs by direct loading into the hatch squares of bulk carriers leaving the space above the sloping lower wing

tanks free of cargo. Whatever lashing or securing is used in these circumstances there is still the potential for a shift of cargo which could have unfortunate consequences. Although some variations to the method of stowage previously recommended could be accepted it is of paramount importance that the stowage extends out to the ship's sides and that the top of the stowage is level. The only alternative would be to construct, and weld in position, substantial steel framing between the ship's side and the cargo above the sloping lower wing tanks. There is no objection to using block stowage methods in ships with box-shaped holds as long as the stowage extends to the full width of the ship and again the top of the stowage is level.

One of the most common forms of block stow encountered is the 'California block stow' devised by California Steel industries. This method of stowage has been in use for a number of years and the Committee is not aware of any accidents occurring when this stow has been used. However, they still consider it to be unsuitable for use in normal bulk carriers with sloping bottom wing tanks. The use of this method, or similar methods, may be stipulated in charterparties. Owners should be aware of the potential implications if they sign charterparties containing clauses mentioning methods of stowage not suitable for their ships.

The Committee wishes to advise masters to be on guard against situations where steel plates may be presented for shipment which are too large to fit the hatch opening dimensions.

Attempts may be made to persuade the master to carry such plates on hatchcovers or weather-decks. If steel plate is loaded on deck, care should be taken to ensure that the plates are individually stowed, dunnaged, chocked and lashed. There should be no plate-on-plate interfaces. It is also important, in such circumstances, to clause mate's receipts appropriately in order to reflect stowage on deck.