

# 安全な木材輸送のために

—木材運搬船の海難防止のためのチェックポイント—

FOR SAFE TRANSPORTATION BY TIMBER CARRIERS

“Points to be checked for preventing marine accidents”



発行：海上保安庁交通部安全課

Navigation Safety Division, Maritime Traffic Department  
Japan Coast Guard



In the Japanese coastal waters, there have been a lot of casualties caused by timber carriers for the last several years, and many human lives and properties were lost.

In many cases a lot of timber floated out from the carries have been threat to safe navigation for other vessels. For instance, some of fishing boats and/or other ordinary ships happened to collide with scattered timbers at sea. Furthermore, there might be additional apprehension that the timbers drifted by wind and/or current gave the serious influence to fishery and/or coastal environment.

For the purpose of preventing the accidents caused by timber carriers, the Japan Coast Guard (JCG) has summed up a fundamental hints, in this brochure. We hope that you will confirm followings by yourself and make efforts for safe navigation.

## 1. PREVENTION OF FLOODING

- (1) Deck openings located in the timber cargo deck shall be securely closed and battened down.

Above all, tight closure of hatch openings is the most vital requirement. This closure must be such that they are free from damage either by loading operation of timber cargo or by movement of timbers during the navigation. For that purpose, the following measures should be done.

- (a) The pontoon type steel hatch covers should be covered with three sheets of tarpaulin. Of these three sheets, the inner-most one has not been repair whereas other two sheets i.e. the intermediate one and the outer-most one may be of second-hand materials, but they must be ones fully redressed for all defects and torn portions to ensure their water-proofing functions.
- (b) These hatch tarpaulin should be pressed their upper surface by the securing bars with their periphery being battened down and wedged up.
- (c) Plywood, rubber mats, scraps of conveyor belts, dunnages, old hatchboards etc., should be spread over the hatch covers for protecting them from damages due to cargo loading operations and shifts of the stow.
- (d) Then, rope nets should be put overall on top of these setups.

- (e) Particular attention should be paid to hatch wings which are highly liable to get damaged by hauled-in cargo in the courses of loading/unloading operations. In this connection, these areas must be provided with additional protections by such as thin and long timber and the like.
- (2) Ventilators and air pipes on deck should be effectively protected from damage by the timber
- (3) In case of flooding, keeping bilge pumps in repair, cleaning bilge hats and rose plates etc., should be carried out to pump out water in the stow anytime.
- (4) From the view points of complete closure of hatches and prevention of flooding in holds, the bottom portion of bulkheads, hatch coamings, pontoon hatch covers and piping etc., should be inspected and maintained for preventing rust etc.
- (5) From the view points of detection of flooding, bilge in holds should be sounded every morning.

## **2. PREVENTION OF DISINTEGRATION OF DECK CARGO**

In the Japanese coastal waters, vessels often come across heavy weather, and rolling and/or pitching of herself causes snaps of lashing wire and timber to float out to sea. Therefore, it is important for you to keep followings for preventing collapse of cargo piles on deck in heavy weather in the Japanese coastal waters.

- (1) When timber deck cargo is loaded to a height than that on bulwark, uprights with sufficient strength shall be fitted to the stringer plate and bulwark securely at intervals not exceeding 3.00 meters.
- (2) Maintenance and inspection of appliances for lashing should constantly be carried out with care, and these items of work would be done in particular on the ballast voyage with sufficient time.
- (3) On-deck the timber should be loaded solidly as much as possible.

For such objective, precaution must be taken on the following points ;

- (a) While paying due regard to the stowed location on deck each one end of the timber should be loaded solidly at the house front or the mast house walls.
- (b) Every loading operation should be carried out so as to ensure sufficient contacts between each timber, timber and hull structure under the same principle as above.
- (c) The heavier timber (sinker) should be loaded under the lighter ones (floaters).

- (d) On-deck timber shall, under no circumstances, be loaded in the transverse direction.
- (e) Desirable final shape of the top surface of the loaded cargoes is crowned one.
- (4) Hog lashings should be always carried out while paying due regard to levelling the top surface of the cargoes which is loaded to a scheduled height of the hog lashing for ensuring proper tension of lashing wires.
- (5) On-deck cargo should be secured with lashing of sufficient strength at appropriate intervals not more than 3.00 meters.
- (6) Lashing with combination of chains and wires should be done as much as possible.
- (7) Lashings should be kept taut at all times during your navigation, and every morning inspections should be carried out for this purpose.

Vibration and rocking of the vessel during navigation will cause the timber deck cargo to settle or compact, especially at the beginning of her voyage.

As that will slacken the lashing and makes them chafe a precaution must be taken on it.
- (8) Entries of all inspections and tightening of lashings should be made in the vessel's log book.

### **3. PREVENTION OF CAPSIZING**

- (1) On-deck timber shall be stowed so as to maintain safe stability of the vessel at all stages of her voyage, giving to increase of weight of timber due to absorption of water and to decrease of weight of fuel and stores due to consumption.

It should be taken into consideration that, in general, the necessary metacentric height obtained by subtracting the virtual rise of the vertical position of the centre of gravity due to free water surface in various tanks is said to be greater than "30 centimeters" throughout the voyage.
- (2) While loading timber on deck, the vessel shall be kept as uprightly as possible.

Particulaly, shifting ballast water or ballasting/deballasting for correcting vessel's heel right before the completion of the cargo loading should be carried out with extreme care.
- (3) The height of on-deck timber should not exceed one-third of the breadth of the vessel.



- (4) Even if contracted weight of cargoes has not been reached, yet loading of the cargo in excess of the limit dictated by the stability criteria should be refused and the entire cargo loading operation should be terminated in a decisive manner with brave.
- (5) When the vessels are rolling regularly at sea, the vessel's condition (ex. GM, general loading conditions of the cargo etc.) should be checked by measuring rolling period etc.

## 4. SAFE NAVIGATION IN HEAVY WEATHER

- (1) Effort should be dedicated to collect weather information for proper weather prediction while your navigation.

In many case, vessels navigating around Japan are likely to encounter heavy weather.

Particular attention should be paid to the information on typhoons, tropical low pressures generated in the vicinity of Formosa developing into the course of North East, and seasonal westerly wind when the vessels navigate around Japan.

- (2) By receiving weather maps and wave maps, the course of the vessel should be taken to a calmer sea-area.

The ways to receive weather forecast maps and wave prediction maps by facsimile are as follows;

- (a) Broadcasting station

JMH (3622.5kHz)      JMH2 (7795kHz)  
 JMH4 (13988.5kHz)

- (b) Index of cooperation; 576

(c) Kind of maps and the time	(UTC)	(JST)	
Surface analysis (ASAS)	0240	1140	
	0320	1220	(Retransmission)
	0840	1740	
	0920	1820	(Retransmission)
	1440	2340	
	1520	0020	(Retransmission)
	2040	0540	
Surface prognosis (FSAS)	2120	0620	(Retransmission)
	0548	1448	
	1040	1940	(Retransmission)
Wave analysis (AWPN)	1930	0430	
	2300	0800	(Retransmission)
	0421	1321	
Wave prognosis (FWPN)	1100	2000	(Retransmission)
	0651	1551	
	1140	2040	(Retransmission)

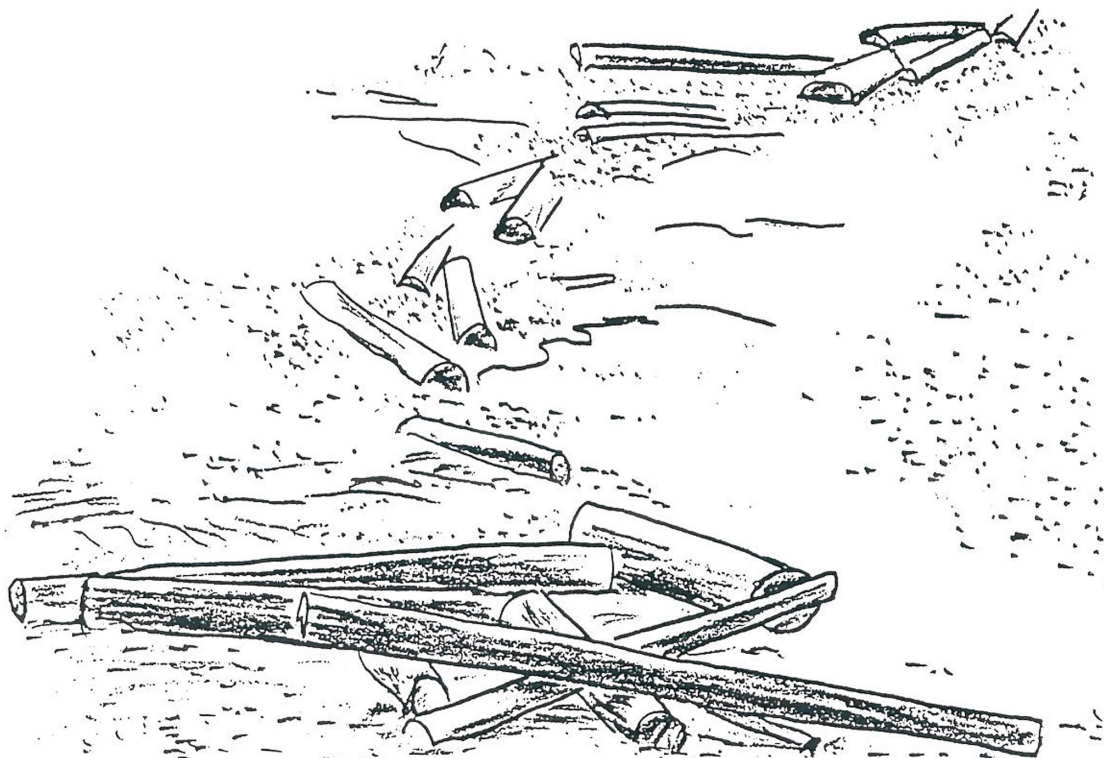
- (3) When you navigate in heavy weather you should check out carefully lashings and flooding.
- (4) For reducing the impact of ocean wave as much as possible, reducing her speed, altering her course etc. should be carried out.
- (5) By shifting fuel and fresh water etc., adjustment of trim, and security of proper GM should be carried out.

## 5. REPORT ON FLOATED-OUT TIMBERS

As above, timbers floated out may cause damage to fishing facilities and/or collide with other ships. To minimize second disaster, we are responsible for informing the situation of ships navigating in the vicinity.

Therefore, when you floated timbers out, please report following items to the nearest JCG's offices.

- (1) Date and Location of the scene.
- (2) Kinds and, Amount of the timbers floated out, type of packing etc.
- (3) Situation of the timbers floated out (Drifting Direction etc.)
- (4) Weather on the scene.
- (5) Other concerns (Names and addresses of shipping agents, consignors etc.)



# MF AND VHF COAST RADIO STATIONS

※Calling Frequency  
156.8MHz(ch16)  
2,187.5kHz(DSC)

