Transport Canada Transports Canada

TP 15613E
(08/2024)

Guidance to Masters of Vessels Loading Timber on Deck

EDITION ONE
AUGUST 2024

Canada

Responsible Authority	**Approval**
The Executive Director Navigation Safety and Environmental Programs is responsible for this document, including any change, correction, or update.	**"Original signed by Naim Nazha"** Naim Nazha Executive Director Navigation Safety and Environmental Programs Marine Safety and Security **Date signed:** _____

Original Date Issued: August 30, 2024 **Date Revised:**

TP 15613E
(08/2024)

DOCUMENT INFORMATION

Title	**Guidance to Masters of Vessels Loading Timber on Deck**		
TP No.	15613E	**Edition**	**One** **RDIMS #19747000 v3**
Catalogue No.	T29-186/3-2024E-PDF	**ISBN**	978-0-660-73167-4

Originator	Navigation Safety and Environmental Programs (AMSE)	**Telephone**	1-855-859-3123 (Toll Free) or 613-991-3135
	Tower C, Place de Ville	**Fax**	
	330 Sparks Street, 11th Floor	**E-mail**	marinesafety-securitemaritime@tc.gc.ca
	Ottawa, Ontario K1A 0N8	**URL**	https://tc.canada.ca/en/marine-transportation

REVISIONS

Last Review

Next Review

Revision No.	Date of Issue	Affected Pages	Author(s)	Brief Description of Change

TABLE OF CONTENTS

1 INTRODUCTION

Safely loading, stowing and securing cargo is one of the most important factors in preparing a ship for a safe voyage. Cargoes like timber on deck present high risks because of the reasons explained below.

The risks of marine transportation of deck timber are further elevated due to the fact that in Canada these cargoes account for a significant part of Canadian exports in terms of quantity. To minimize these risks, a mandatory inspection program was established for ships loading timber on deck in Canadian ports.

This guidance is published to help ship Masters prepare for inspections in order to save as much time and effort as possible, while also successfully completing the inspection process.

In Canada, safe loading, stowing and securing of cargo is regulated by the *Cargo, Fumigation and Tackle Regulations* created under the *Canada Shipping Act, 2001*.

The master of a ship loading timber on an uncovered part of a freeboard or superstructure deck must make sure their ship meets the requirements of the Timber Code and any relevant parts of the SOLAS Convention (CFTR s. 132-133).

Section 140 of *Cargo, Fumigation and Tackle Regulations* requires that ships loading timber deck cargoes be inspected.

2 RISKS ASSOCIATED WITH MARINE CARRIAGE OF TIMBER ON DECK

2.1 Shifting and/or loss of deck cargo

Unless the timber deck cargo is compactly stowed, well-lashed, and the lashings tightened regularly throughout the voyage, there's a danger that the ship's motion will cause the deck cargo to move.

This danger increases if the ship has an unduly large G.M. (metacentric height), giving it a violent motion, or if the ship encounters heavy weather during which heavy seas may strike the deck load.

2.2 Absorption of moisture and loss of G.M

When loaded, timber contains a certain amount of moisture. However, during a voyage it can absorb moisture through heavy rain or seas, partial retention of sea water in void spaces within the load or by ice build-up.

All these factors increase the deck load's weight and leads to a loss of stability due to a reduction of the metacentric height. If the current G.M. isn't sufficient to cover this loss, a condition could occur where the ship would assume an angle of loll due to negative stability.

2.3 Compaction of the stow

During the loading process, there is always some loss of compactness due to modern loading methods. The sale of "custom cut" lumber is fairly common and as such the packages may be randomly sized with uneven ends. This situation leads to unevenness in the stow and therefore to much broken stowage.

As the voyage progresses and the stow becomes more compact aided by the motion of the ship, the lashings tend to become slack. It is necessary to check and tighten the lashings regularly, especially at the start of the voyage, when the ship proceeds into open water, or when you expect heavy weather.

2.4 Stressing of deck and hatch covers

With the high deck loads carried on modern timber carriers, the decks and hatch covers usually are strengthened to withstand such heavy weight. However, not all ships are designed for such loads, and this must be considered when planning the on-deck stowage. Loading manual restrictions and limitations should be observed at all-time to avoid serious consequences such as access of water into holds.

2.5 Problems with lashings and tightening devices

Problems are usually related to insufficient strength, damaged components, or poor condition of lashings. It’s essential that the number of lashings be sufficient for the proposed load and that they are in good condition and well placed so they can be easily tightened when the ship is at sea. Good access is key as is protecting the crew while they work on a deck load, especially in bad weather.

3 WHAT TO EXPECT DURING AN INSPECTION

The information in this section provides a general overview of the inspection process. It will be followed by a detailed description of inspection stages and the items that need to be verified to successfully obtain a Certificate of Readiness to Load (RTL) and Fitness to Proceed Certificate (FTP).

Commercial considerations do not affect inspection

Commercial considerations do not affect inspection - Transport Canada will conduct inspections pursuant to the CFTR. Any limitations imposed due to commercial considerations will not be regarded as an overriding factor for the process of assigning an Inspector and inspecting the ship. This applies as much to the issuing of the Readiness to Load Certificate, Fitness to Proceed, or written statement.

3.1 Main steps

- The ship Master or Agent informs the respective Transport Canada Center about the intended loading and applies for inspection for the purpose of receiving a Certificate of Readiness to Load
- Before the vessel's arrival, in order to minimize inspection time when boarding the ship, a Marine Safety Inspector contacts the ship and asks for electronic copies of the documents listed in the MASTER - CHECKLIST - – TIMBER DECK CARGO.
- The Inspector will also provide the MASTER - INSPECTION CHECKLIST – TIMBER DECK CARGO at the time of pre-arrival review. This tool will help the Master to prepare the ship for inspection
- At the agreed date and time, the Inspector will carry out the inspection for issuing a Certificate of Readiness to Load
- Once an inspection has been successfully completed, the Inspector will issue a Certificate of Readiness to Load
- Loading starts
- Once loading is complete, the ship Master or Agent will notify the respective Transport Canada Center and apply for an inspection for a Fitness to Proceed Certificate
- At an agreed date and time, the Inspector will carry out the inspection for issuing a Fitness to Proceed Certificate
- Once the inspection has been successfully completed, the Inspector will issue a Fitness to Proceed Certificate

3.2 Notification and request for the readiness to load inspection

Before a ship begins loading timber deck cargo in a Canadian port the *Cargo, Fumigation and Tackle Regulations* requires the Master or Agent to notify the respective Transport Canada Center and apply for a Certificate of Readiness to Load a ship.

The ship's agent will call the respective Transport Canada Centre, ask for a readiness to load inspection, and provide accurate information about the date, time, ship's name, and terminal.

Following the request, in preparation for inspection, an Inspector will contact the ship and ask for electronic copies of the documents listed in the MASTER – INSPECTION CHECKLIST – TIMBER DECK CARGO.

3.3 Start of inspection

An Inspector will inspect the ship at the agreed date and time and determine whether the ship complies with all applicable requirements of the regulations and can safely load, stow, and carry the intended cargo.

3.4 Safety of inspectors on board the ship

The ship Master must take all necessary steps to ensure safety of the Inspector while on board the ship. This includes providing safe access to the ship and decks. There must be proper lighting. Sufficient and competent crew shall be available to accompany the Inspector.

3.5 Readiness to load inspection process

The following paragraphs expand on what the Master must expect during the inspection for a Certificate of Readiness to Load.

The Master must make sure that the load line marks are clearly readable and marked according to the ship's Load Line Certificate. The Inspector will verify the marks and visually check the condition of the hull.

During the inspection process, the Inspector will ask the Master for copies of the ship's certificates and relevant documents approved by the ship's flag authority or a recognized organization (such as Classification Society) on behalf of the ship's flag authority.

The proposed loading and lashing plan will be verified against the ship's approved Cargo Securing Manual.

The stability of the ship will be verified for compliance with the ship's intact stability requirements.

Occasionally, a ship that has recently changed ownership and/or country of registration may arrive with approval documents issued by its former flag administration. The Inspector will not issue a Readiness to Load Certificate until the ship's present administration rectifies the situation.

After examining the documents and certificates, the Inspector will inspect the spaces on the uncovered part of a freeboard or superstructure deck where cargo will be loaded.

3.6 Issuance of the Certificate of Readiness to Load

If the ship is found compliant with all applicable requirements, the Inspector will issue a Certificate of Readiness to Load.

If some requirements have not been met, the Inspector will give the Master a written statement detailing the deficiencies to be rectified before a Certificate of Readiness to Load can be issued.

When the deficiencies are rectified and the ship is ready, the Master or Agent must notify the respective Transport Canada Center and re-apply for a Certificate of Readiness to Load.

3.7 Changes to the approved loading plan

If, before the start or in the course of loading, the previously approved loading and/or lashing plan changes, the Master must notify the respective Transport Canada Center, prepare and submit a new loading and/or lashing plan to the Inspector for verification so that a new Certificate of Readiness to Load can be issued.

3.8 Notification and request for the Fitness to Proceed inspection

At the completion of loading timber deck cargo, the *Cargo, Fumigation and Tackle Regulations* require the Master or Agent to notify the respective Transport Canada Center and apply for a Fitness to Proceed Certificate.

The ship’s agent will contact the respective Transport Canada Centre and request a Fitness to Proceed inspection providing accurate information about the date, time, ship’s name and terminal.

3.9 Fitness to Proceed inspection process

An Inspector will inspect the ship at the agreed time and determine whether the stowage and securing of the cargo complies with all applicable requirements of the regulations and if the ship is fit to proceed to sea for the intended voyage.

The Inspector will verify that the loading and securing of the cargo was done according to the approved loading and lashing plan.

In addition to the calculation of ship’s metacentric height GM according to the instructions in the ship’s approved stability manual, a rolling period may be carried out when safe to do soto obtain an estimate value of the metacentric height GM.

3.10 Issuance of the Fitness to Proceed Certificate

Based on the positive results of the inspection, the Inspector will issue a Fitness to Proceed Certificate.

3.11 Deviations from the previously approved loading plan

If for any reason the ship is found to be overloaded or deviating from the conditions in the approved loading and/or lashing plan, the Inspector will not issue a Fitness to Proceed Certificate.

The Inspector will inform the Master of the outstanding requirements to be complied with before a Fitness to Proceed Certificate can be issued.

4 SPECIFIC REQUIREMENTS

4.1 Stability

The stability of the ship should be positive at all times. The ship's metacentric height GM must be calculated according to the instructions in the ship's approved stability manual taking into account possible water absorption by deck timber or ice building, including from freezing spray.

4.2 Cargo securing arrangements

Each arrangement intended to be used for securing timber deck cargoes must be tested by a competent person and the test results documented in the ship's approved Cargo Securing Manual as required by the Timber Code. Test certificates must be available upon request.

In case of chains, tests must demonstrate that their link welds are capable of a 90° cold bend without separation (CFTR s.135(1)(b)). Flexible steel wire ropes must be at least 16 mm in diameter (CFTR s.135(1)(c)).

4.3 Structural integrity

Prior to inspection, the Master must ensure that the structural integrity of the ship is maintained. The inspection of spaces on the uncovered part of a freeboard or superstructure deck includes, but is not limited to, the following items:

- safe means of access from the accommodation to all parts used in the necessary working of the ship to be provided (catwalks or alternative arrangements)
- weather deck (to be of adequate strength, free from objects that could block cargo stowage, and clean from snow and ice)
- condition and adequate strength of the structures on the weather deck in the way of deck timber storage area (deck houses, crane pedestals, etc.)
- condition and adequate strength of hatch coamings, hatch covers of openings to spaces below the weather deck in the way of deck timber storage area and their sealing and closing arrangements

- condition and protection of air pipes and ventilators (including their closing arrangements)
- condition of and access to sounding pipes
- condition of uprights and deck lashings
- condition of lashing securing points
- condition of friction-enhancing arrangements, where fitted

4.4 Stowage and securing of timber deck cargo

Once timber deck cargo is loaded, the Marine Safety Inspector will verify that all applicable requirements are met. In particular, the Inspector will check if:

- the cargo is properly secured by using appropriate types of lashing arrangements
- visibility requirements of SOLAS chapter V are complied with
- safe means of access are available from the accommodation to all parts of the ship used in the necessary working of the ship, including safe access to the top of, and across, the stowed deck timber to allow lashings tightening during the voyage
- adequate fencing or means of closing are available for all openings in the stow such as at mast houses, winches, etc.
- emergency escape routes are free and ready for use
- free access to ventilation ducts and valves is provided (where required)

4.5 The height of the timber deck cargo stow

The height of timber deck cargo above the weather deck measured from the base of the timber deck cargo stow to the highest part of the cargo must be as specified in the ship's approved Cargo Securing Manual.

In the case of a ship within a seasonal winter zone in winter, the height must not exceed one third of the extreme breadth of the ship (see the International Convention On Load Lines, 1966, Regulation 44 – Stowage, and also the Ship safety Bulletin 01/2019 - Height of timber deck cargoes above the ship's weather deck).