

MSC Guidelines for the Review of Chemical Tankship Structural Fire Protection

Procedure Number: C1-26

Revision Date: May 2, 2012



R. J. LECHNER, CDR, Tank Vessel and Offshore Division

Purpose

To establish a process for reviewing structural fire protection plans submitted for a U.S. flag chemical tankship operating on U.S. waters and/or on international voyages regulated under Subchapters O and/or D.

References

- a. 46 CFR Subchapter O
 - b. 46 CFR Subchapter D
 - c. International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk, 1994 (IBC)
 - d. International Convention for the Safety of Life at Sea, 1974, and its Protocol of 1978 (SOLAS)
 - e. IMO MSC circular 847: Interpretations of vague expressions and other vague wording in SOLAS chapter II-2, June 12, 1998
 - f. Navigation and Vessel Inspection Circular (NVIC) 9-97, Ch-1; Guide to Structural Fire Protection
 - g. Marine Safety Manual, Volume II, Chapter 9 & 27
 - h. International Code for Application of Fire Test Procedures (FTP Code), IMO Resolution MSC.61(67), 1998.
-

Contact Information

If you have any questions or comments concerning this document, please contact the Marine Safety Center (MSC) by email or phone. Please refer to the Procedure Number C1-26.

Email: MSC@uscg.mil

Phone: 202-475-3403

Website: <http://homeport.uscg.mil/msc>

Responsibilities

Using applicable portions of references (a) through (h), the submitter shall provide sufficient documentation and plans to indicate compliance with the

MSC Guidelines for Review of Chemical Tankship Structural Fire Protection

Procedure Number: C1-26

Revision Date: May 2, 2012

applicable requirements. The submission shall be made electronically to the above email address or, if paper, in triplicate to the MSC's address found on the above website. To facilitate plan review and project management, all plans and information specified in these guidelines should be submitted as one complete package through a single point of contact for the project.

General Guidance

- ❑ If the vessel is new and not a sister vessel, has the Application for Inspection submitted? In general no plan review may occur until receipt of a copy of the Application.
- ❑ Is it clearly stated what is desired from the MSC? Are all plans requiring Coast Guard review and/or approval submitted in triplicate? Are there any special or unusual requests involved?
- ❑ Are all spaces identified and designated on the plan?
- ❑ Are the cargoes to be carried permitted for bulk transport in the U.S.? If no, then specific Commandant approval will be required. (46 CFR 153.1)
- ❑ Per 46 CFR 32.56-1, a SOLAS certificated vessel may be considered equivalent to the SFP requirements in 46 CFR Subchapter D Part 32.56. Verify the applicable regulations the structural fire protection plans have been designed to meet before beginning review:
 - Determine whether the vessel is operating on an international voyage (see definitions section). If **yes**, then SOLAS and/or the IBC code will apply. If **not** on an international voyage, then apply the requirements from 46 CFR Subchapter D.
 - Determine if the ship will only be carrying cargoes listed in Chapter **18** of the IBC Code and if so, then the IBC Code **will not** apply. If the IBC Code does not apply, then SOLAS or 46 CFR Subchapter D will apply (see above guidance). If the cargo is listed in Chapter **17**, then the IBC Code **will** apply. If the IBC Code applies, see Section 11.1.1 for application of the SOLAS requirements.
 - The **only** difference between a chemical tankship designed to meet SOLAS and the IBC Code (for structural fire protection purposes) is a vessel meeting the IBC Code shall not apply the requirements for location of the main cargo control station as required in SOLAS, Chapter

MSC Guidelines for Review of Chemical Tankship Structural Fire Protection

Procedure Number: C1-26

Revision Date: May 2, 2012

II-2, Regulation 56.2. [Note: This requirement is discussed in MSC Guidelines for Review of Chemical Tankship General Arrangements.]

- For chemical tankships, not required to meet SOLAS, with a keel laying date on or after January 1, 1975, ensure compliance with the following requirements:
 - Insulation of exterior boundaries, superstructures and deckhouses. 46 CFR 32.56-20
 - Openings in exterior boundaries, accommodation, service, and control spaces. 46 CFR 32.56-21
 - Openings in and insulation of boundaries, other spaces. 46 CFR 32.56-22
 - Category A machinery spaces, windows and port lights. 46 CFR 32.56-25
 - Category A machinery spaces, bulkheads and decks. 46 CFR 32.56-30
 - Doors. 46 CFR 32.56-35
 - Category A machinery spaces, insulation. 46 CFR 32.56-40
 - Combustible veneers. 46 CFR 32.56-50
 - Control Spaces. 46 CFR 32.56-55
 - Ventilation ducts. 46 CFR 32.56-60

- For chemical tankships required to meet SOLAS, Ch. II-2, ensure compliance with the following regulations:

- 42 Structure
 - 1 steel construction
 - 2, 3 aluminum structures
 - 5 method determination
- 46 Protection of stairways and lift trunks in accommodation spaces, service spaces and control stations
 - 1 stairways and doors, relative to deck penetration
- 47 Doors in fire-resisting divisions
 - 1 door fire integrity and construction
- 48 Ventilation systems
 - Apply Regulation II-2/16
 - 1 duct material and sizing
 - 2 penetration sleeves
 - 3,4 duct passage limitations
 - 5 "B" penetration sleeve
 - 6 control stations
 - 7 galley ranges

MSC Guidelines for Review of Chemical Tankship Structural Fire Protection

Procedure Number: C1-26

Revision Date: May 2, 2012

49	Restricted use of combustible materials
50	Details of construction
56	7, 8.3 Exterior boundaries of superstructure and deckhouse
57	Bulkheads w/in the accommodation and service spaces 1, 2 bulkhead construction
58	Fire integrity of bulkheads and decks 1, 2 minimum fire integrity Table 58.1: bulkheads Table 58.2: decks 4 windows

- For tankships on international voyages and with keel-laying dates after July 1, 1998, compliance with the FTP Code, as cited within SOLAS, is mandatory. In particular, any SFP arrangements that deviate from specified SOLAS construction standards, are acceptable only if the alternative arrangement is proven to meet the FTP Code.

Definitions

International Voyage: A voyage from a country to which the present Convention applies to a port outside such country, or conversely. (See SOLAS Chapter I, Part A, Regulation 2(d).)

Disclaimer

This guidance is not a substitute for applicable legal requirements, nor is it itself a rule. It is not intended to nor does it impose legally-binding requirements on any party. It represents the Coast Guard's current thinking on this topic and may assist industry, mariners, the general public, and the Coast Guard, as well as other federal and state regulators, in applying statutory and regulatory requirements. You can use an alternative approach for complying with these requirements if the approach satisfies the requirements of the applicable statutes and regulations. If you want to discuss an alternative, you may contact the MSC, the unit responsible for implementing this guidance.