IACS Unified Interpretations for Fire Safety and Fire Extinguishing

Amended Rules and Guidance

Rules for the Survey and Construction of Steel Ships Part R
Guidance for the Survey and Construction of Steel Ships Part R
Guidance for the Survey and Construction of Passenger Ships

Reason for Amendment

IACS has adopted a number of Unified Interpretations (UIs) for SOLAS requirements related to fire safety and fire extinguishing as well as for requirements of the International Code for Fire Safety Systems (FSS Code) over the years whenever it has deemed it to be necessary, and these UIs have then subsequently been incorporated into the ClassNK Rules.

Some of the aforementioned UIs, however, have not been reviewed in quite a long time which means that some of the UIs are now inconsistent with the current versions of SOLAS and the FSS Code. IACS, therefore, reviewed the following UIs in order to try and address these inconsistencies.

UI SC61: Interpretation for pumps and fire mains used in fixed deck foam systems
UI SC86: Interpretation for the treatment of ro-ro spaces
UI SC125: Interpretation for divisions constructed of non-combustible core materials but coated with combustible veneers
UI SC147: Interpretation for watertight doors which are also used as fire doors

As a result of its review, IACS decided to delete SC61 and SC86 since they have already been formally incorporated into SOLAS and the FSS Code and thus are no longer needed. In addition, IACS also decided to adopt amended versions of SC125 and SC147 to ensure they are consistent with the current versions of SOLAS and FSS Code.

Accordingly, relevant requirements were amended in accordance with the deletion of UI SC61 and UI SC86, and the revision of UI SC125(Rev.3) and UI SC147(Rev.2). In addition, as part of the comprehensive review of the ClassNK Rules, relevant requirements for the prevention of heat transmission at pipe penetrations in the “B” class divisions were amended for clarification purposes.

Outline of Amendment

(1) Deleted requirements, related to pumps and fire mains used in fixed deck foam systems that are specified in accordance with UI SC61.
(2) Deleted requirements, related to the ro-ro spaces to be treated as weather decks for the purpose of Regulation 19, Chapter II-2 of SOLAS that are specified in accordance with UI SC86.
(3) Amended requirements specified in accordance with UI SC125(Rev.3) in Guidance for the Survey and Construction of Steel Ships Part R and the Guidance for the Survey and Construction of Passenger Ships to clarify the treatment of divisions constructed of non-combustible core materials but coated with combustible veneers with respect to Regulations 3.4 and 3.10, Chapter II-2 of SOLAS.
(4) Amended requirements specified in accordance with SC147(Rev.2) in the Guidance for the Survey and Construction of Steel Ships Part R and the Guidance for the Survey and Construction of Passenger Ships to clarify the treatment of the watertight doors required

by Regulation 16, Chapter II-1 of SOLAS which are also used as fire doors.

(5) Amended requirements for the prevention of heat transmission at pipe penetrations in the “B” class divisions.

“Rules for the survey and construction of steel ships” has been partly amended as follows:

Part R FIRE PROTECTION, DETECTION AND EXTINCTION

Chapter 19 CARRIAGE OF DANGEROUS GOODS

19.2 General Requirements

Paragraph 19.2.2 has been amended as follows.

19.2.2 Application for Categories of Cargo Spaces*

The following cargo spaces are to govern the application of **Tables R19.1** and **R19.2**:

(1) Weather deck cargo spaces (includes the following (2) to (6) where applicable);

((2) to (7) are omitted.)

"Guidance for the survey and construction of steel ships" has been partly amended as follows:

Part R FIRE PROTECTION, DETECTION AND EXTINCTION

R3 DEFINITIONS

R3.2 Definitions

Paragraph R3.2.4 has been added as follows.

R3.2.4 "*B*" Class Divisions

A division constructed of non-combustible core materials coated by combustible veneers may be accepted as a "*B*" *class division* provided the following conditions are satisfied:

(1) the non-combustible core materials are tested in accordance with Part 1, Annex 1 of the FTP Code;

(2) the "*B*" *class division* is tested in accordance with Part 3, Annex 1 of the FTP Code; and

(3) the veneers are tested in accordance with the Part 2 (if applicable) and Part 5, Annex 1 of the FTP Code.

Paragraph R3.2.10 has been added as follows.

R3.2.10 "*C*" Class Divisions

A division constructed of non-combustible core materials but coated with combustible veneers may be accepted as a "*C*" *class division* provided that the following conditions are satisfied:

(1) the non-combustible core materials are tested in accordance with Part 1, Annex 1 of the FTP Code; and

(2) the veneers are tested in accordance with Part 2 (if applicable) and Part 5, Annex 1 of the FTP Code.

R10 FIRE FIGHTING

R10.8 Cargo Tank Protection

R10.8.1 Fixed Deck Foam Systems

Sub-paragraph -1 has been amended as follows.

1 With respect to the requirements of **10.8.1, Part R of the Rules**, the fire pumps or the emergency fire pump required in **10.2, Part R of the Rules** may be utilized as pumps for fixed deck foam systems provided that those pumps have sufficient capacity for supplying both the deck foam systems and the water supply systems as required. ~~A common line for fire main and deck foam line can only be accepted provided it can be demonstrated that the hose nozzles can be effectively controlled by one person when supplied from the common line at a pressure needed for operation for monitors.~~

R19 CARRIAGE OF DANGEROUS GOODS

R19.2 General Requirements

Paragraph R19.2.2 has been amended as follows.

R19.2.2 Application for Categories of Cargo Spaces

~~**1** With respect to the provisions of **19.2.2, Part R of the Rules**, ro-ro spaces fully open above and with full openings in both ends may be treated as a weather deck.~~

~~**2**~~**1** The wording "container cargo spaces" specified in **19.2.2(3), Part R of the Rules** means spaces equipped with cell-guides for stowage and securing of containers.

~~**3**~~**2** For the application of **19.2.2, Part R of the Rules**, vehicle spaces are considered as a ro-ro space as defined in **19.2.2(4)** or **(5)**, **Part R of the Rules**.

~~**4**~~**3** The provisions of **19.2.2(7), Part R of the Rules** cover only those cargoes listed in Group *B* of the *IMSBC* Code except cargoes of *MHB* (materials hazardous only in bulk). The carriage of other dangerous solid bulk cargoes is to be subject to acceptance by the Administrations involved.

R29 FIXED FIRE DETECTION AND FIRE ALARM SYSTEMS

R29.2 Engineering Specifications

Paragraph R29.2.1 has been amended as follows.

R29.2.1 General Requirements

1 In applying **29.2.1-2.(4), Part R of the Rules**, watertight doors complying with **13.3.3, Part C of the Rules** which also serve as fire doors are not to close automatically in the case of fire detection.

2 In applying **29.2.1-5, Part R of the Rules**, reference is made to the "*General Requirements for Electromagnetic Compatibility for All Electrical and Electronic Equipment*" (*IMO Res. A*.813(19)).

Annex R9.3.1 DETAILS OF PENETRATIONS

2 DETAILS

2.1 Penetration of Pipes

2.1.3 Prevention of Heat Transmission

Sub-paragraph -2 has been amended as follows.

2 Notwithstanding **-1** above, for a penetration of a pipe made of material having low-heat conductivity character (e.g. a metalic pipe) and an outside diameter of less than 150 *mm* in a "B" class division, the insulation may be terminated at the end of penetration piece or sleeve as required. (See **Fig. 2.1.3-2**)

“Guidance for the survey and construction of passenger ships” has been partly amended as follows:

Annex 7-1 INTERPRETATION OF PROVISION OF CHAPTER II-2, *SOLAS* CONVENTION ON PASSENGER SHIPS

1 INTERPRETATION OF PROVISION OF CHAPTER II-2, *SOLAS* CONVENTION

1.1 Interpretation

Table 7-1-A1 has been amended as follows.

Table 7-1-A1 Interpretation of *SOLAS* II-2

Number	*SOLAS*	Interpretation
(omitted)		
3.4	"*B*" class divisions are ***those divisions formed by bulkheads, decks, ceiling or linings which comply with the following criteria***[*1]: .1 they are constructed of approved non-combustible materials and all materials used in the construction and ***erection***[*2] of "*B*" class divisions are non-combustible, with the exception that combustible veneers may be permitted provided they meet other appropriate requirements of this chapter; .2 they have an insulation value such that the average temperature of the unexposed side will not rise more than 140°C above the original temperature, nor will the temperature at any one point, including any joint, rise more than 225°C above the original temperature, within the time listed below: class "*B*-15" 15 *min* class "*B*-0" 0 *min* .3 they are constructed as to be capable of preventing the passage of flame to the end of the first half hour of the standard fire test; and .4 the Administration has required a test of a prototype division, in accordance with the Fire Test Procedures Code, to ensure that it meets the above requirements for integrity and temperature rise.	*1: A division constructed of non-combustible core materials but coated with combustible veneers may be accepted as a "*B*" class division provided that the following conditions are satisfied: (1) the non-combustible core is tested in accordance with Part 1, Annex 1 of the FTP Code; (2) the "*B*" class division is tested in accordance with Part 3, Annex 1 of the FTP Code; and (3) the veneers are tested in accordance with Part 2 (if applicable) and Part 5, Annex 1 of the FTP Code. *2: Materials of joint entering into the construction of *B* class division are also to be non-combustible materials.
(omitted)		
3.10	"*C*" class divisions are ***divisions constructed of approved non-combustible materials***[*1*2]. They need meet neither requirements relative to the passage of smoke and flame nor limitations relative to the temperature rise. ***Combustible veneers***[*23] are permitted provided they meet the requirements of this chapter.	*1: Materials of panels and joints entering into construction of *C* class divisions are to be non-combustible. However, where sprinklers are provided on the both sides of *C* class divisions or bulkheads, combustible materials may be permitted for construction. *2: A division constructed of non-combustible core material but coated with combustible veneers may be accepted as a *C* class division provided the following conditions are satisfied: (1) the non-combustible core material are tested in accordance with Part 1, Annex 1 of the FTP Code; and (2) the veneers are tested in accordance with Part 2 (if applicable) and Part 5, Annex 1 of the FTP Code. *23: They are to have low flame-spread characteristics.
(omitted)		

2 INTERPRETATION OF PROVISION OF FIRE SAFETY SYSTEMS CODE

2.1 Interpretation

Table 7-1-B1 has been amended as follows.

Table 7-1-B1 Interpretations of FSS Code

Number	*FSS* Code	Interpretations
(omitted)		
FSS 8.2.5.2.1	Each section of sprinklers shall include means for giving a visual and audible alarm signal automatically at one or more indicating units ***whenever any sprinkler comes into operation***[*1]. Such alarm systems shall be such as to indicate ***if any fault occurs in the system***[*2]. Such units shall indicate in which section served by the system a fire has occurred and shall be centralized on the navigation bridge, or in the continuously-manned central control station and, in addition, visible and audible alarms from the unit shall also be placed in a position other than on the aforementioned spaces to ensure that the indication of fire is immediately received by the crew.	*1: The case where sprinkler comes into operation means both of the following conditions. (1) the operating condition of sprinkler head (2) the operating condition of sprinkler pump *2: The case where the fault occurs in the system means the following: (1) drop of water level in the pressure tank (2) drop of pressure in the pressure tank (3) (main and emergency) power failure of sprinkler pump (4) break down of visual and audible fault signal
FSS 9.2.1.2.4	the system may be arranged with output signals to other fire safety systems including; .1 paging systems, fire alarm orpublic address systems; .2 fan stops; .3 ***fire doors****; .4 fire dampers; .5 sprinkler systems .6 smoke extraction systems .7 low-location lighting systems .8 fixed local application fire-extinguishing systems; .9 closed circuit television (CCTV) systems; and .10 other fire safety systems	* : Watertight doors complying with **13.3.3, Part C of the Rules** which also serve as fire doors are not to close automatically in the case of fire detection.
(omitted)		