

## Circular - Series R

Circular Series R (Regulations) supersedes previous Series F. In the new Series R, relevant legal amendments and amendments to conventions are also published.

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- A: 16 specially authorized employment offices
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- Others:

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*The Circular should be entered into a special diagram or as appropriate in the latest editions of relevant NMA publications and kept until the next editions.*

## Regulations of 1 July 2014 No. 1099 on fire protection on ships

The Norwegian Maritime Authority (NMA) has laid down new Regulations on fire protection on ships. These Regulations enter into force on 15 September 2014. As from the same date, the following Regulations are repealed:

- Regulations of 22 June 1990 No. 536 concerning fire safety measures in ships to which the International Convention for the Safety of Life at Sea (SOLAS-74) applies;
- Regulations of 17 June 1986 No. 1296 concerning fire safety measures in ships to which the International Convention for the Safety of Life at Sea (SOLAS-74) does not apply.

### Consultation

The proposed new Regulations on fire protection on ships were circulated for review from 7 March to 31 May 2014. A total of 13 consultative statements came in, whereof 8 did not include comments to the proposal.

The Norwegian Shipowners' Association supports the proposal, and sees it as positive that the NMA is developing a body of rules that is clear and user-friendly for the industry.

The Federation of Norwegian Coastal Shipping comments that in machinery spaces of category A there are, for certain types and sizes of ships (engaged on domestic voyages), a requirement for fixed fire-extinguishing system for local use. This requirement could lead to major costs in connection with (quote) "larger conversions of ships".

In the opinion of the NMA, the provisions pursuant to SOLAS regulation II-2/10.5 have, with regard to ships engaged on domestic voyages, a relatively narrow application, cf. sections 5 and 12 of the Regulations. If the capacity or expected lifetime of a ship is increased considerably, such a ship shall according to current law satisfy the requirements as if the ship was a new ship of corresponding size or capacity. It is therefore the NMA's assessment that current law should be continued.

The Federation of Norwegian Coastal Shipping furthermore has some comments to new requirements in SOLAS regulation III/15.2.2.6 regarding spare cylinders for fire-fighter's outfits used during drills on board, and that the requirements are made applicable with not much time for implementation.

The Norwegian Maritime Authority's Circulars consist of 2 series, **Series R: Regulations, Acts and Conventions, and Series V: Guidelines and interpretations.**

The requirement for spare capacity applies to equipment used during drills on board, that is to say the resources used in connection with drills shall not reduce the crew's ability to fight a fire or save people where a breathing apparatus is required in order to come to the rescue. The Regulations on fire protection on ships are laid down on 1 July with entry into force on 15 September 2014. In this connection the NMA finds that it will be unproblematic to identify and implement a solution satisfying the requirement for spare capacity.

The final comment from the Federation of Norwegian Coastal Shipping applies to section 6 of the proposal, which concerns ro-ro ships engaged on domestic voyages with fixed foam fire-extinguishing system on vehicle decks. In this regard, the NMA would like to point out the Regulations do not require an approved foam fire-extinguishing system to be installed on vehicle decks. On the other hand, if there is such a system, it shall satisfy certain requirements as stipulated by section 6 subparagraphs a to g.

CEFOR is negative to the exemptions from SOLAS chapter II-2, cf. sections 4 to 18 of the Regulations, when ships instead satisfy the less stringent (national) requirements to safety precautions against fire. CEFOR is particularly concerned with regard to ferries engaged on domestic voyages, and the fact that a requirement for protection against high temperature surfaces has not been stipulated more explicitly, cf. SOLAS regulation II-2/4.2.2.6. The NMA's response to CEFOR's comment is that the starting point of the Regulations on fire protection on ships is to continue the requirements of current law, unless Norway is obliged by international agreements to introduce new and possibly more stringent requirements. Given this premise, there is at the moment no room for introducing new and more stringent requirements for ships engaged on domestic voyages.

### **Comments to new Regulations on fire protection on ships**

In this section we comment on some of the provisions in the Regulations on fire protection on ships.

The starting point for the adjustments in the Regulations is that current law is continued. Several provisions in the regulations concerning fire safety measures which were in force at the time when the new Regulations on fire protection on ships were laid down, correspond with the regulations that follow from SOLAS chapter II-2. These provisions are continued by way of SOLAS chapter II-2 being made applicable as regulation, both for ships covered by SOLAS; i.e. "convention ships", and for "non-convention" ships.

Section 2 incorporates SOLAS chapter II-2 and makes it applicable as regulation for convention ships. Section 3 lays down that SOLAS chapter II-2 shall – in principle – also apply as regulation for ships engaged on domestic voyages and for cargo ships of less than 500 gross tonnage engaged on foreign voyages.

The provisions of sections 4 to 18 stipulate that ships engaged on domestic voyages and cargo ships of less than 500 gross tonnage engaged on foreign voyages need not follow specified rules of SOLAS chapter II-2, cf. section 3, provided that the requirements as stipulated by the individual sections 4 to 18 of the Regulations are satisfied. The provided exemptions are based on the fact that current law is continued in the new Regulations on fire protection on ships.

### **Section 1 Scope of application**

The Regulations apply to Norwegian ships.

Section 1 subparagraph a indicates positively that the Regulations apply to cargo ships of 15 metres in overall length and upwards.

Subparagraph b regulates exhaustively the scope of application for ships with passenger certificate. This means that ships with passenger certificate of less than 15 meters in overall length, are not covered by the Regulations. With regard to fire protection on such ships, this will be provided by the Nordic Boat Standard 1990 for Commercial Boats less than 15 metres, which contains requirements for fire safety measures and is incorporated and made applicable as regulation by section 5 of the Regulations on the construction of ships<sup>1</sup>.

The title of the certificate mentioned in subparagraph b refers to provisions on certificates for ships. When these Regulations are laid down, the rules on e.g. passenger certificate are found in the Survey Regulations<sup>2</sup>. It is stipulated by section 9 first and second paragraphs of the Survey Regulations which ships are required to have passenger certificate.

Subparagraph c indicates that class C and D passenger ships of 24 metres in length (L) and upwards, constructed before 1 May 2000, are also covered by the Regulations. It is stipulated by section 8 third paragraph subparagraph c of the Regulations for EU passenger ships<sup>3</sup> that existing class D and C passenger ships (i.e. ships constructed before 1 May 2000) of 24 metres in length (L) and upwards shall, with regard to requirements for fire safety measures, satisfy the Regulations of 17 June 1986 No. 1296 (in the following referred to as Regulations 1986/1296) concerning fire safety measures in ships to which the International Convention for the Safety of Life at Sea (SOLAS-74) does not apply. It is therefore necessary that the new Regulations on fire protection on ships cover such ships, so that current law is continued for the ships concerned.

Subparagraph d stipulates that the Regulations also apply to passenger ships engaged on domestic voyages. The rules on Passenger Ship Safety Certificate are found in section 10 of the Survey Regulations, where it is laid down that ships engaged in trade areas larger than small coasting, i.e. with trade area great coasting or greater trade, carrying more than 12 passengers, shall have a Passenger Ship Safety Certificate. This certificate is a "SOLAS certificate", and the provisions of SOLAS chapter II-2 are therefore applicable.

Subparagraph e specifies that the Regulations also apply to barges. In Norwegian law, barges are covered by the term "ship"; barges will therefore be covered regardless of the specification in the provision. However, for pedagogical reasons and in order to avoid misunderstandings, barges have been mentioned specifically in the provision. Barges are not covered by the scope of application of SOLAS chapter II-2. Requirements for fire protection on barges are therefore stipulated by an individual provisions in the Regulations laid down by this circular.

## **Section 2 Fire protection on ships engaged on foreign voyages**

The wording of section 2 incorporates and makes the provisions of SOLAS chapter II-2 consolidated edition 2009, with amendments up to and including those entering into force on 1 July 2014, applicable as regulation to cargo ships of 500 gross tonnage and upwards engaged on foreign voyages and to passenger ships engaged on foreign voyages.

SOLAS chapter II-2 requires compliance with the IMO's International Code for Fire Safety Systems (FSS Code) and with the IMO's International Code for Application of Fire Test

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<sup>1</sup> See section 5 of the Regulations of 1 July 2014 No. 1072 on the construction of ships

<sup>2</sup> Regulations of 15 June 1987 No. 506 concerning survey for the issue of certificates to passenger ships, cargo ships and lighters, and concerning other Surveys, etc. These Regulations will be replaced by Regulations on the certification of ships, which are being circulated for general review at the time when the Regulations of 1 July 2014 No. 1099 on fire protection on ships were laid down. The titles of the certificates will not be changed.

<sup>3</sup> Regulations of 28 March 2000 No. 305 concerning surveys, construction and equipment of passenger ships engaged on domestic voyages

Procedures (FTP Code). Since SOLAS chapter II-2 is made applicable as regulation by the incorporation in section 2, these codes will also apply as regulation pursuant to SOLAS chapter II-2 without necessarily having to mention them specifically. Nevertheless, it is the NMA's assessment that it for pedagogical reasons is appropriate to include in the provision that the supplementary set of rules stipulated by the FSS Code shall be complied with. It is, however, not necessary to include the FTP Code here, as this set of rules is being used as basis for conformity assessments pursuant to the Marine Equipment Regulations<sup>4</sup>, cf. Appendix A.1/3 thereto.

### **Section 3 Fire protection on ships engaged on domestic voyages and cargo ships of less than 500 gross tonnage engaged on foreign voyages**

As a main rule Norway is obliged to making the provisions of SOLAS chapter II-2 applicable to passenger ships and cargo ships of 500 gross tonnage and upwards engaged on foreign voyages. When the NMA in section 3, with the exceptions laid down in sections 4 to 18 of the Regulations, make SOLAS chapter II-2 applicable to ships engaged on domestic voyages and to cargo ships of less than 500 gross tonnage engaged on foreign voyages, the main justification is that the considerations behind the provisions of SOLAS chapter II-2 apply regardless of where the ship actually sails. The analyses and comparisons of the various sets of rules related to fire protection on ships, that were carried out prior to the circulation for general review of the Regulations now being laid down, also showed that the regulations in force at the time related to fire protection on "non-convention ships" for the most part used the provisions of SOLAS chapter II-2 as a basis.

The meaning of the terms "domestic voyages" and "foreign voyages" is provided by the Trade Area Regulations<sup>5</sup>. Norwegian ships with a trade area as laid down in chapter 2 of the Trade Area Regulations (domestic voyages) and cargo ships of less than 500 gross tonnage with a trade area as laid down in chapter 3 of the Trade Area Regulations (foreign voyages) are covered by the provisions of section 3.

In line with the scope of application of the Regulations, as stipulated by section 1, the following ships are covered by the term "engaged on domestic voyages":

- cargo ships of 15 meters in overall length and upwards (cf. section 1 subparagraph a);
- ships of 15 metres in overall length and upwards with passenger certificate (cf. section 1 subparagraph b);
- class D and C passenger ships (engaged on domestic voyages) of 24 metres in length (L) and upwards, constructed before 1 May 2000 (cf. section 1 subparagraph c);
- barges (cf. section 1 subparagraph e).

### **Section 4 Structural fire protection on passenger ships engaged on domestic voyages**

Section 4 continues provisions from chapter 3-II sections 16 and 25 of Regulations 1986/1296 and section 22 from Regulations of 11 October 2004 No. 1341 (Regulations 2004/1341).

Section 4 stipulates that the mentioned ships need not comply with the requirements for structural fire protection of SOLAS chapter II-2 if they instead satisfy the principally less stringent requirements of section 4.

The provisions apply regardless of the number of passengers for which the ship is certified. The limitations that otherwise follow from current law are not very practical for the ships concerned, i.e. passenger ships in trade areas 1 and 2 and class D and C passenger ships constructed before 1

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<sup>4</sup> Regulations of 29 December 1998 No. 1455 concerning marine equipment

<sup>5</sup> Regulations of 4 November 1981 No. 3793

May 2000. The same applies to the remaining provisions from chapter 3-II of Regulations 1986/1296, which have been continued in the new Regulations on fire protection on ships.

The term "steel or other equivalent material" is defined in SOLAS regulation II-2/3.43.

The term "non-combustible" is the same term as found in SOLAS regulation II-2/3.33 and in the Marine Equipment Regulations, and the criteria for what is considered non-combustible are specified in the Marine Equipment Regulations<sup>6</sup>.

The third paragraph continues section 22 of Regulations 2004/1341, which contains rules on means of escape and muster stations for passenger ships certified for trade area 1 or 2.

Regulations 2004/1341 concerning life-saving appliances on passenger ships are for the most part continued in the Regulations of 1 July 2014 on life-saving appliance on ships, which also repeal Regulations 2004/1341. The provisions of section 22 of Regulations 2004/1341 have a theme that calls for them to be continued in the Regulations on fire protection on ships.

### **Section 5 Fixed fire-extinguishing systems in machinery and boiler spaces on passenger ships engaged on domestic voyages**

The provision of section 5 continues section 27 first and fourth paragraph of Regulations 1986/1296 and stipulates that passenger ships engaged on domestic voyages, of less than 300 gross tonnage regardless of date of construction, and of less than 2,000 gross tonnage constructed before 1 August 2000 need not comply with the requirements for fixed fire-extinguishing system of SOLAS chapter II-2 when they instead satisfy the principally less stringent requirements of this provision.

The first paragraph continues section 27 first paragraph.

The second paragraph concerning passenger ships of less than 2,000 gross tonnage constructed before 1 August 2000 is a continuation of section 27 fourth paragraph. That particular provision also covers passenger ships of 500 gross tonnage and upwards, the keel of which is laid on or after 1 August 2000, but this is not necessary to include in this provision since it is already stipulated by section 3, cf. SOLAS regulation II-2/10.5.6.

### **Section 6 Ro-ro ships engaged on domestic voyages with fixed foam fire-extinguishing system on the car deck**

The provision is a somewhat altered continuation of section 26B of Regulations 1986/1296. The content of the provision has been changed in that there is no longer a requirement for ro-ro ships carrying dangerous cargo to have a fixed foam fire-extinguishing system. On the other hand, if the ship already has such a system, the requirements provided by Annex IV of Regulations 1986/1296 have been continued.

It will therefore be optional for the company whether to install a fixed foam fire-extinguishing system on the vehicle deck. The option will on the other hand be significant for the extent to which the ship may carry dangerous goods in accordance with the Regulations on dangerous goods on Norwegian ships. The new Regulations on dangerous goods on Norwegian ships stipulate provisions providing more stringent restrictions on such carriage for ships without fixed foam fire-extinguishing system compared to ships with a fixed foam fire-extinguishing system.

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<sup>6</sup> See the Marine Equipment Regulations A.1/3.13



A further amendment to the rules is that there is no longer a requirement for the NMA to approve the system. The individual components are nevertheless subject to approval in accordance with the Marine Equipment Regulations<sup>7</sup>. The supervision will instead be carried out through the normal supervision of Norwegian ships. Pursuant to sections 43 and 45 of the Ship Safety and Security Act, the supervising authority has the authority to demand the submission of documentation for control and to conduct supervision and testing of the systems. There is therefore no need to continue the detailed provisions related to documentation and testing from Annex IV.

## **Section 7 Fire pumps and fire mains on passenger ships engaged on domestic voyages**

and

## **Section 8 Fire hydrants, hoses and nozzles on passenger ships engaged on domestic voyages**

The provisions of sections 7 and 8 continue current law, cf. Regulations 1986/1296 section 27 “Fixed fire-extinguishing installations in machinery and boiler spaces”, second and third paragraphs, and the same Regulations section 28 “Fire pumps, fire mains, fire hydrants, hoses and nozzles”.

These provisions have been placed in Regulations 1986/1296 chapter 3-II “Special provisions for passenger ships with certificate for less than 400 passengers in small coasting and passenger ships in smaller trade than small coasting”.

The provisions of sections 7 and 8 stipulate that the mentioned ships need not comply with the requirements for fire pumps, fire mains, fire hydrants, hoses and nozzles of SOLAS chapter II-2 if they instead satisfy the principally less stringent requirements of these sections.

The tenth paragraph of section 28 corresponds to Appendix A.1/3.29 of the Marine Equipment Regulations and has therefore not been continued here, as the coming regulatory amendment of the Marine Equipment Regulations will maintain this.

## **Section 9 Fire-fighter's outfits on passenger ships engaged on domestic voyages**

For passenger ships of 300 gross tonnage and upwards there is a requirement for fire-fighter's outfits. The required number increases as a function of the gross tonnage. The provision continues current law, cf. Regulations 1986/1296 section 30 “Fire-fighter's outfit”.

This provision has been placed in Regulations 1986/1296 chapter 3-II “Special provisions for passenger ships with certificate for less than 400 passengers in small coasting and passenger ships in smaller trade than small coasting”.

The provision stipulates that the mentioned ships need not comply with the requirements for fire-fighter's outfits of SOLAS chapter II-2 if they instead satisfy the less stringent requirements of this provision. The scope of what fire-fighter's outfits and personal equipment shall include is stipulated by SOLAS and the FSS Code chapter 3.

The provisions of section 9 second paragraph continue current law from the rules that are still current and relevant from the repealed Regulations of 3 December 1979 concerning fire safety

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<sup>7</sup> See the Marine Equipment Regulations A.1/3.49

measures in ships (made applicable by section 1 third paragraph of Regulations 1986/1296). The Regulations contain 130 provisions.

Following our assessment, only one provision turned out to be necessary to continue from the repealed Regulations. The provision otherwise mirrors today's practice exempting requirements for personal equipment on older passenger ships.

### **Section 10 Structural fire protection on cargo ships of less than 500 gross tonnage**

The provision continues current law, cf. Regulations 1986/1296 chapter 4-II "Special provisions for cargo ships of less than 500 gross tonnage", section 44 "Structure, materials, etc".

The provisions of section 10 also continue current law, cf. Regulations 1986/1296 chapter 2 "Technical provisions applicable to all ships", section 16 "Smoke uptake and exhaust pipes".

The provisions stipulate that the mentioned ships need not comply with the requirements for fire-fighter's outfits of SOLAS chapter II-2 if they instead satisfy the less stringent requirements of section 10 of the new Regulations on fire protection on ships.

### **Section 11 Alarm systems on cargo ships of less than 500 gross tonnage**

The provision continues current law, cf. Regulations 1986/1296 chapter 7 "Fixed fire detection and fire alarm systems", section 57 "Alarm systems in cargo ships of less than 500 gross tonnage", first paragraph.

The provisions of section 11 stipulate that cargo ships of less than 500 gross tonnage need not comply with the requirements for alarm system of SOLAS chapter II-2 if they instead satisfy the less stringent requirements of section 11.

### **Section 12 Fire-extinguishing systems in machinery spaces of cargo ships of less than 500 gross tonnage**

The provision continues current law, cf. Regulations 1986/1296 chapter 2 "Technical provisions applicable to all ships", section 9 "Fire extinguishers, etc.", third and fourth paragraphs.

These provisions also stipulate that the mentioned ships need not comply with the requirements for fire-extinguishing arrangements in machinery spaces of SOLAS chapter II-2/10.5 if they instead satisfy the less stringent requirements of section 12.

### **Section 13 Fire-fighter's outfits on cargo ships of less than 500 gross tonnage**

The provision continues current law, cf. Regulations 1986/1296, in that fire-fighter's outfits are currently not required on cargo ships of less than 500 gross tonnage.

### **Section 16 Fire protection on tankers of less than 500 gross tonnage**

Section 16 in the proposed new Regulations on fire protection on ships that were circulated for review, consisted of two paragraphs. Only the first paragraph has been laid down. The provision of the second paragraph, which referred to SOLAS II-2 regulation 12, has been included in the new Regulations on life-saving appliances on ships. If it is not possible to implement the requirement of SOLAS II-2 for means of escape on tankers of less than 500 gross tonnage, the company will have to apply for exemption from these requirements pursuant to section 19 of the new Regulations on fire protection on ships. As regards contents, this corresponds to the wording of section 16 second paragraph that was circulated for review.

Tankers are cargo ships, and will thus be covered by the rules applicable to cargo ships. This special rule for tankers is applied in addition to the general rules for cargo ships. The provision stipulates that these ships need not comply with the special rules for tankers of SOLAS II-2, when they satisfy the less stringent requirements of section 16.

### **Section 17 Structural fire protection on wooden vessels**

The provision continues current law, cf. Regulations 1986/1296 chapter 2 “Technical provisions applicable to all ships”, section 20 “Insulation of machinery spaces in wooden vessels”.

The wording of section 17 has been streamlined compared to current law, without amending the contents of the rules. The provision stipulates that ships build with wood, regardless of whether they are passenger or cargo ships, need not comply with the requirements for structural fire protection of SOLAS chapter II-2, when they instead satisfy the less stringent requirements of section 17.

### **Section 18 Fire protection on barges**

The provision continues Regulations 1986/1296 chapter 1 “General provisions”, section 1 “Scope of application”, sixth paragraph second sentence.

### **Section 19 Exemptions**

Section 19 first paragraph is new compared to the proposal circulated for general review.

The provisions of section 19 first paragraph implement SOLAS regulation I/5 and signal that alternative solutions may upon written application be considered equivalent to the requirements of the Regulations. The wording *"when it is established"* means that the applicant must convince the NMA that the proposed solution satisfies the regulatory requirements. Documentation of completed tests of such alternative solutions may be an example of how to meet the requirement.

The provisions of the second paragraph continue the possibility of granting exemptions from the requirements of the Regulations. The latitude of the paragraph is limited to ships not regulated by SOLAS II-2, that is to say ships engaged on domestic voyages, smaller cargo ships engaged on foreign voyages and barges regardless of trade area.

The wording of section 19 gives the NMA the legal basis to make decisions on exemptions from the requirements of the Regulations. An exemption requires that the company submits a written application containing information and justification, which the NMA will then assess, taking into account the considerations and interests that the applicable requirements are meant to look after. Whether a decision shall be made exempting the company from certain commitments, is decided following a concrete assessment. Companies applying for exemptions are not entitled to have these granted even if the terms of the exemption provision are satisfied. The starting point is that the requirements of the Regulations shall be met. Only in extraordinary cases, where warranted by valid grounds, will there be an opening for making a decision to exempt.

There are two possibilities for granting exemptions, cf. subparagraphs a and b.

Pursuant to subparagraph a the criteria are as follows:

*"it is established that the requirement is not essential and that the exemption is justifiable in terms of safety"*

That the requirement is not essential means that the requirement concerned is considered to be less essential when compared to the extraordinary reasons forming the basis for an exemption. In the processing of such applications it is also possible that considerations related to social economy



may be taken into account. An exemption pursuant to subparagraph a may only be granted if a waiver of the requirement concerned will still provide a solution considered overall justifiable in terms of safety.

The exemption pursuant to subparagraph a will also be relevant in the particular cases where, due to the general wording of the requirements, it is difficult to make the regulatory requirement applicable to the ship in question.

With regard to the term "*justifiable in terms of safety*", assessments must take into account the safety of life and health, environment and material values.

Pursuant to subparagraph b the criteria are as follows:

*"it is established that compensating measures will maintain the same level of safety as the requirement of these Regulations"*

The term "*compensating measures*" is relatively wide, and may include a number of measures, including innovative measures, as long as they are considered to maintain the same level of safety as the requirement(s) of the Regulations.

## **Section 20 Entry into force**

The Regulations enter into force on 15 September 2014.

The new Regulations on fire protection on ships are part of a regulations project that will lead to a major structural change when 10 international instruments are implemented into Norwegian legislation. A common date for entry into force, 15 September 2014, has been set for the regulations implementing SOLAS chapters II-1, II-2, III, IV, VI, VII and XII.

## **Section 21 Amendments to other regulations**

The following amendments are made to other regulations:

Regulations of 2 October 1972 No. 4 concerning calculation of number of passengers and concerning passenger accommodation, etc., sections 15 to 17 are repealed. The provisions of sections 15 to 17 correspond to the provisions of SOLAS, in addition to there being some more stringent Norwegian special requirements. These provisions are therefore repealed, and the more stringent Norwegian special requirements will not be continued.

The Regulations of 15 September 1992 No. 707 concerning the accommodation and catering service on ships, section 10 first paragraph subparagraphs b, c, d, e and l, and second paragraph subparagraphs f, g, i, j and k are removed, along with the references to fire in the second paragraph subparagraphs c and m. These requirements are now laid down in the new Regulations on fire protection on ships, and have been repealed in order to avoid duplication of rules. The wording of section 10 is amended in line with this. As a consequence of the changed wording of section 10, the reference in section 24 seventh paragraph has been updated.

## **Economic and administrative consequences**

With the exception of the amendments of SOLAS chapter II-2 stipulated by MSC.338(91), the new Regulations on fire protection on ships for the most part continue current law.

A wide spectre of private and public representatives participated in the negotiations prior to the adoption of MSC.338(91). Unified Norwegian positions were the basis for the NMA's contribution to the negotiations at the IMO. It is the NMA's assessment that the results of the negotiations, as stipulated by the amendments to SOLAS chapter II-2, appear balanced from a

cost-benefit perspective. More stringent requirements for e.g. fire divisions will increase the costs of constructing ships, but will, on the other hand, reduce the risk of loss of lives and material values. The provisions that follow from MSC.338(91) will apply equally to all, and will therefore not lead to a distortion of competition or particularly negative effects for Norwegian interests.

The starting point for the new Regulations is that the NMA's legislation shall become more readily available to the users, and that it shall become easier for the industry to locate applicable requirements. The NMA therefore presupposes that using the new Regulations will be time-saving for both the industry and other actors.

It is also the NMA's assessment that a new and changed structure will make the future maintenance of the legislation less resource-demanding for the authorities.

If companies and others have referred to the repealed Regulations in their normative documents, they will have to bear the costs of incorporating and updating new references. The NMA presupposes, however, that the overall gain of the new Regulations is larger than the costs associated with the entry into force of the new Regulations on fire protection on ships.

Bjørn E. Pedersen  
Acting Director General of Navigation and Shipping

Linda Bruås  
Acting Head of Department

Attachment:  
Regulations of 1 July 2014 No. 1099 on fire protection on ships

# Regulations of 1 July 2014 No. 1099 on fire protection on ships

**Legal basis:** Laid down by the Norwegian Maritime Authority on 1 July 2014 under the Act of 16 February 2007 No. 9 relating to Ship Safety and Security (Ship Safety and Security Act) sections 6, 9, 11, 19, 20 and 21, cf. Royal Decree of 16 February 2007 No. 171 and Formal Delegation of 31 May 2007 No. 590 by the Ministry of Trade, Industry and Fisheries.

**EEA references:** EEA Agreement Annex XIII point 56f (Directive 2009/45/EC as amended by Directive 2010/36/EC).

## Section 1

### *Scope of application*

These Regulations apply to Norwegian:

- a) cargo ships of 15 metres in overall length and upwards;
- b) ships of 15 metres in overall length and upwards with passenger certificate;
- c) class C and D passenger ships of 24 metres in length (L) and upwards, constructed before 1 May 2000;
- d) ships with Passenger Ship Safety Certificate engaged on foreign voyages;
- e) barges..

## Section 2

### *Fire protection on ships engaged on foreign voyages*

For cargo ships of 500 gross tonnage and upwards engaged on foreign voyages and passenger ships engaged on foreign voyages, the following shall apply as regulation:

- a) the International Convention for the Safety of Life at Sea, 1974 (SOLAS) consolidated edition 2009 chapter II-2, as amended by MSC.256(84), MSC.257(84), MSC.269(85) MSC.291(87), MSC.308(88) and MSC.338(91);
- b) the International Code for Fire Safety Systems (FSS Code), cf. MSC.98(73), as amended by MSC.206(81), MSC.217(82), MSC.292(87), MSC.311(88), MSC.327(90) and MSC.339(91).

## Section 3

### *Structural fire protection on passenger ships engaged on domestic voyages*

Section 2 shall apply correspondingly to

- a) cargo ships engaged on domestic voyages;
- b) cargo ships of less than 500 gross tonnage engaged on foreign voyages;
- c) passenger ships engaged on domestic voyages.

## Section 4

### *Structural fire protection on passenger ships engaged on domestic voyages*

The requirements for structural fire protection pursuant to SOLAS regulations II-2/5.3, 9.2.2 and 11, cf. section 3, do not apply to passenger ships engaged on domestic voyages, which have

- a) steel or other equivalent material in bulkheads and decks forming divisions that separate accommodation and public spaces from machinery and cargo spaces;
- b) steel or other equivalent material in bulkheads and decks in galleys, paint lockers, lamp rooms, store rooms including spaces intended for luggage and mail, adjacent to accommodation spaces, and door to these rooms, except around galleys where no hot food is prepared;
- c) all stairways of steel frame construction;
- d) "B" class divisions in bulkheads where there are no requirements for steel or other equivalent material pursuant to subparagraphs a) to c); and
- e) smoke uptake and exhaust pipes so arranged that the temperature does not lead to risk of ignition.

A ship pursuant to first paragraph (a) to (e) of 300 gross tonnage and upwards shall have

- a) enclosed stairways with "A-30" class divisions from the deck where the stairways begin and to the lifeboat embarkation deck;
- b) non-combustible corridor bulkheads extending from deck to deck and right out to the ship's side; and
- c) ceilings of non-combustible material in corridors and stairways.

A ship pursuant to first paragraph (a) to (e) or second paragraph (a) to (c) constructed on or after 1 July 2005 shall have assembly stations, appurtenant embarkation stations and intermediate escape routes which are separated from open car deck by an "A-30" class division. A ship with assembly capacity and survival craft for 100% of the number of passengers on either side may have half of the capacity separated from open car deck by an "A-30" class division. The escape routes shall have documented capacity for escape between assembly stations and embarkation stations.

## Section 5

### *Fixed fire-extinguishing systems in machinery and boiler spaces on passenger ships engaged on domestic voyages*

The requirements for fixed fire-extinguishing systems in machinery and boiler spaces pursuant to SOLAS regulations II-2/10.4 and 10.5, cf. section 3, do not apply to passenger ships of less than 300 gross tonnage engaged on domestic voyages.

The requirements for fixed fire-extinguishing systems in machinery and boiler spaces pursuant to SOLAS regulations II-2/10.5.6, cf. section 3, do not apply to passenger ships of less than 2,000 gross tonnage engaged on domestic voyages and constructed before 1 August 2000.

## Section 6

### *Ro-ro ships engaged on domestic voyages with fixed foam fire-extinguishing system on the car deck*

Ro-ro ships engaged on domestic voyages, which form a part of the road network in Norway, carry packaged dangerous goods and have foam fire-extinguishing systems on the car decks, shall satisfy the following requirements:

- a) the foam fire-extinguishing system shall have sufficient capacity for an application time of at least 30 minutes and a foam application rate of at least 6.5 l/m<sup>2</sup>/minute in the parking area for vehicles used for the carriage of persons and goods which are not packaged dangerous goods (vehicle space) and 10 l/m<sup>2</sup>/minute in the parking area for vehicles used for the carriage of packaged dangerous goods (dangerous goods area), where vehicle spaces are at least 15 metres in length and dangerous goods areas are at least 20 metres in length;
- b) the foam fire-extinguishing system shall be capable of operating a parking area where there is a fire as well as adjacent parking areas, or only the area where there is a fire when the ship has an extra protective wall of foam with at least 35% additional coverage in front of and behind this area;
- c) the necessary amount of foam concentrate shall be calculated on the basis of the greatest simultaneous need for foam application, cf. subparagraphs a) and b);
- d) foam tanks shall be provided with a level alarm or a gauge glass;
- e) power supply to the foam fire-extinguishing system shall come from the main and emergency source of power, or from a special generator for the foam fire-extinguishing system;
- f) fixed foam-generating equipment shall be independent of manual operation;
- g) it shall be possible to activate release of the foam fire-extinguishing system manually from two locations; from the bridge or fire control central, and from a location near parked vehicles.

## Section 7

### *Fire pumps and fire mains on passenger ships engaged on domestic voyages*

The requirements for fire pumps pursuant to SOLAS regulation II-2/10.2.2, cf. section 3, do not apply to passenger ships engaged on domestic voyages, of:

- a) less than 50 gross tonnage;
- b) 50 gross tonnage and upwards, but less than 100 gross tonnage, having a fire pump driven by a main engine or other engine;
- c) 100 gross tonnage and upwards, but less than 500 gross tonnage, having at least one independently driven fire pump, or driven by the main engine if the propeller can be disconnected;
- d) 500 gross tonnage and upwards, but less than 1,000 gross tonnage, having at least to independently driven fire pumps;
- e) 1,000 gross tonnage and upwards, having fire pumps with sources of power supply and seawater inlets, whereof at least one shall not be possible to put out of action in the event of fire in any one compartment.

For ships pursuant to first paragraph (a) to (f):

- a) a pressure of at least 4.0 bar shall be obtained anywhere on the ship's fire main, when dual-purpose type nozzles (spray/jet type) are in operation;
- b) the fire pump(s) shall, at the pressure specified in subparagraph a), be capable of delivering a quantity of water which is not less than two thirds of the quantity required to be dealt with by the bilge pumps when employed for bilge pumping;
- c) sanitary, ballast, general service or other pumps may be accepted as fire pumps. When a centrifugal pump is used as a fire pump, a non-return valve shall be fitted at the pump.

## Section 8

### *Fire hydrants, hoses and nozzles on passenger ships engaged on domestic voyages*

The requirements for fire hydrants, hoses and nozzles pursuant to SOLAS regulation II-2/10.2.1 and 10.2.3, cf. section 3, do not apply to passenger ships engaged on domestic voyages, when

- a) fire hoses may be readily connected to the hydrants;
- b) the hydrants are always readily accessible and the piping is so arranged that it will not be damaged by cargo or vehicles;
- c) a hose station is provided at each hydrant, consisting of a hose and a dual-purpose nozzle (spray/jet type) with a coupling connecting it to the hydrant, as well as two sets of spanners.

Ships pursuant to the first paragraph

- a) of 200 gross tonnage and upwards shall have a sufficient number of hydrants so positioned that at least two jets of water from different hydrants may reach any part of the ship;
- b) of less than 500 gross tonnage shall, when a fire pump is mandatory, have at least one hose station in machinery and boiler spaces;
- c) of 500 gross tonnage and upwards shall have at least two hose stations in machinery and boiler spaces;
- d) shall have hose stations to the same extent as specified in subparagraphs b) and c) in the auxiliary machinery space when the auxiliary machinery is located in a separate space.

## Section 9

### *Fire-fighter's outfits on passenger ships engaged on domestic voyages*

The requirements for fire-fighter's outfits pursuant to SOLAS regulation II-2/10.10, cf. section 3, do not apply to passenger ships engaged on domestic voyages, of:

- a) 1,000 gross tonnage and upwards, having at least four fire-fighter's outfits and one set of personal equipment;
- b) 500 gross tonnage and upwards, but less than 1,000 gross tonnage, having at least two fire-fighter's outfits and one set of personal equipment;
- c) 300 gross tonnage and upwards, but less than 500 gross tonnage, having at least one fire-fighter's outfit;
- d) less than 300 gross tonnage.

The requirements for personal equipment pursuant to the first paragraph do not apply to passenger ships engaged on domestic voyages of 500 gross tonnage and upwards constructed before 1 July 1986.

## Section 10

### *Structural fire protection on cargo ships of less than 500 gross tonnage*

The requirements for structural fire protection pursuant to SOLAS regulations II-2/5.3, 9.2.3 and 11, cf. section 3, do not apply to cargo ships of less than 500 gross tonnage, which have

- a) steel or other equivalent material in the bulkheads in galleys, paint lockers, lamp rooms and store rooms adjacent to accommodation spaces;
- b) bulkhead and linings in corridors and stairways below deck with surfaces having low flame spread and limited smoke development characteristics;
- c) non-combustible insulating materials; and
- d) exhaust pipes and smoke uptake so arranged that the temperature does not lead to risk of ignition.

## Section 11

### *Alarm systems on cargo ships of less than 500 gross tonnage*

The requirements for alarm systems pursuant to SOLAS regulation II-2/7, cf. section 3, do not apply to cargo ships of less than 500 gross tonnage having an alarm system that ensures that the persons on board are alerted in the event of danger.

## Section 12

### *Fire-extinguishing arrangements in machinery spaces of cargo ships of less than 500 gross tonnage*

The requirement for fire-extinguishing arrangements in machinery spaces pursuant to SOLAS regulation II-2/10.5, cf. section 3, do not apply to cargo ships of 200 gross tonnage and upwards, but less than 500 gross tonnage, when the ship has

- a) a sufficient number of fire extinguishers so that no point in the machinery space is more than 10 m away from an extinguisher, but at least two portable fire extinguishers;
- b) one fire extinguisher at each oil-fired boiler installation.

The exception pursuant to the first paragraph also applies to cargo ships of

- a) 100 gross tonnage and upwards, but less than 200 gross tonnage, having at least two portable fire extinguishers in the machinery space;



- b) less than 100 gross tonnage, having at least one portable fire extinguisher in the machinery space.

### Section 13

#### *Fire-fighter's outfits on cargo ships of less than 500 gross tonnage*

The requirements for fire-fighter's outfits pursuant to SOLAS regulation II-2/10.10, cf. section 3, do not apply to cargo ships of less than 500 gross tonnage.

### Section 14

#### *Fire pumps and fire mains on cargo ships of less than 500 gross tonnage*

The requirements for fire pumps, fire mains, fire hydrants and hoses pursuant to SOLAS regulation II-2/10.2, cf. section 3, do not apply to cargo ships of

- a) less than 100 gross tonnage, having a fire pump driven by the main engine;  
b) 100 gross tonnage and upwards, but less than 500 gross tonnage, having one independently driven fire pump.

For ships pursuant to the first paragraph

- a) a pressure of at least 4.0 bar shall be obtained anywhere on the ship's fire main, when dual-purpose type nozzles (spray/jet type) are in operation;  
b) the fire pump(s) shall, at the pressure specified in subparagraph a), be capable of delivering a quantity of water calculated according to  $Q = (0.15 \sqrt{L(B+D)} + 2.25)^2$  m<sup>3</sup>/t, where  
- L = the ship's length between perpendiculars in metres  
- B = the ship's maximum moulded breadth in metres  
- D = the ship's moulded depth to bulkhead deck amidships in metres;  
c) the fire mains shall be heat-resistant and non-combustible;  
d) the fire mains shall have a diameter ensuring a uniform distribution and a steady pressure at required capacity.

### Section 15

#### *Fire hydrants, hoses and nozzles on cargo ships of less than 500 gross tonnage*

The requirements for fire hydrants, hoses and nozzles pursuant to SOLAS regulation II-2/10.2, cf. section 3, do not apply to cargo ships of less than 500 gross tonnage when

- a) fire hoses may be readily connected to the hydrants;  
b) the hydrants are always readily accessible and the piping is so arranged that it will not be damaged by deck cargo;  
c) a hose station is provided at each hydrant, consisting of a hose and a dual-purpose nozzle (spray/jet type) with a coupling connecting it to the hydrant, as well as two sets of spanners;  
d) the ship has hose station(s) pursuant to subparagraph c) in machinery and boiler spaces.

Ships pursuant to the first paragraph

- a) of 200 gross tonnage and upwards shall have a sufficient number of hydrants so positioned that at least two jets of water from different hydrants may reach any part of the ship, one of which shall be from a single length of hose;  
b) of less than 200 gross tonnage shall have a sufficient number of hydrants so positioned that at least one jet of water from a single length of hose may reach any part of the ship.

### Section 16

#### *Fire protection on tankers of less than 500 gross tonnage*

The requirements for fire protection on tankers pursuant to SOLAS regulations II-2/4.5, 9.2.4, 10.9 and 11.6, cf. section 3, do not apply to tankers of less than 500 gross tonnage, having a transportable dry-powder apparatus with at least 10 m of hose, which is ready for immediate use and placed near the tank deck.

### Section 17

#### *Structural fire protection on wooden vessels*

The requirements for structural fire protection pursuant to SOLAS regulations II-2/9 and 11, cf. section 3, do not apply to wooden vessels having a fire-extinguishing system in the machinery space.

On wooden vessels where the engine is not placed in a separate compartment, all combustible material which is exposed to heat from exhaust manifolds, exhaust pipes, etc. shall be insulated.

Engine cover shall be insulated on the inside. The insulation shall be surrounded by galvanized or aluminium sheeting.

## Section 18

### *Fire protection on barges*

The Norwegian Maritime Authority will in individual decisions specify which requirements of these Regulations a barge shall satisfy.

## Section 19

### *Exemptions*

The Norwegian Maritime Authority may upon written application permit other solutions than those required by these Regulations when it is established that such solutions are equivalent to the requirements of the Regulations.

The Norwegian Maritime Authority may exempt a ship engaged on domestic voyages or a cargo ship of less than 500 gross tonnage engaged on foreign voyages from one or more of the requirements of these Regulations if the company applies in writing for such exemption and one of the following conditions is met:

- a) it is established that the requirement is not essential and that the exemption is justifiable in terms of safety;
- b) it is established that compensating measures will maintain the same level of safety as the requirement of these Regulations.

## Section 20

### *Entry into force*

The Regulations enter into force on 15 September 2014.

From the same date the following regulations are repealed:

- a) Regulations of 22 June 1990 No. 536 concerning fire safety measures in ships to which the International Convention for the Safety of Life at Sea (SOLAS-74) applies;
- b) Regulations of 17 June 1986 No. 1296 concerning fire safety measures in ships to which the International Convention for the Safety of Life at Sea (SOLAS-74) does not apply.

## Section 21

### *Amendments to other regulations*

From 15 September 2014 the following amendments are made to other regulations:

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