

Impact assessment of regulations for amendment of the Swedish Transport Agency's regulations and general recommendations on fire protection, fire detection and fire extinction for SOLAS ships built on or after 1 July 2002 (TSFS 2009:98).

The Swedish Transport Agency's proposal:

- That amendments to SOLAS II-2 and the FSS Code adopted through resolutions and circulars shall be incorporated into the Swedish Transport Agency's regulations and general recommendations on fire protection, fire detection and fire extinction for SOLAS ships built on or after 1 July 2002 (TSFS 2009:98).
- That corrections, clarifications and editorial changes shall be made in TSFS 2009:98.

A. General

1.1 Main reason for the regulation

By ratifying the SOLAS Convention¹, Sweden has undertaken to comply with this and any related resolutions and circulars. Regulations governing fire protection on ships are laid down in the SOLAS Convention, Chapter II-2, *Construction – Fire protection, fire detection and fire extinction*. Chapter II-2 has been adopted into Swedish law, mainly via the Swedish Transport Agency's regulations and general recommendations on fire protection, fire detection and fire extinction for SOLAS ships built before 1 July 2002 (TSFS 2009:97) and the Swedish Transport Agency's regulations and general recommendations on fire protection, fire detection and fire extinction for SOLAS ships built on or after 1 July 2002 (TSFS 2009:98).

¹ The International Convention for the Safety of life at Sea

The FSS Code² is part of the SOLAS Convention and has been adopted in Sweden via Annex 2 to TSFS 2009:98.

In recent years, amendments have been made to SOLAS which have resulted in a number of MSC³ resolutions, twelve of which will be incorporated via this regulation. These resolutions are mandatory, which means that as a state, Sweden must incorporate the requirements into national legislation in order to avoid the risk of breaching its international obligations. In addition, there are a number of circulars which are generally recommendatory in nature, but may also have mandatory elements. These need to be addressed in order to ensure correct and consistent application of the resolutions in Swedish law.

The current proposal deals only with amendments concerning ships built on or after 1 July 2002 which are to be adopted via TSFS 2009:98.

References to SOLAS will hereinafter be written as ‘SOLAS II-2/regulation’. Regulations in Annex 1 refer to the corresponding regulations in SOLAS Chapter II-2, while chapters and regulations in Annex 2 refer to the corresponding chapter and regulation in the FSS Code.

1.2 Other reasons for the regulation

1.1.1 Need for editorial amendments and clarifications

Certain editorial amendments and clarifications have also been made to the regulations when addressing resolutions and circulars as described above. The Swedish Transport Agency has identified the following areas that have been adjusted during revision of the regulations.

- Section 2 on application is unclear regarding which provisions shall apply when ships built on or after 1 July 2002 are repaired, altered or modified. The third paragraph of Section 2 has been adjusted in order for the provision to be aligned with SOLAS II-2/1.3.
- SJÖFS 1974:A11 will be repealed by the amending regulations as the requirements for ships covered by the aforementioned have been replaced by provisions in TSFS 2009:97 and TSFS 2009:98. SJÖFS 1974:A11 has therefore become obsolete.
- The requirement for instruments that measure oxygen levels was dropped in Regulation 4.5.7.1, Annex 1 and has therefore been added.

² International Code for Fire Safety Systems

³ Marine Safety Committee

- Chapter 1, Regulation 3, Annex 2 specifies which Regulation 17 of the Convention is being referred to, i.e. Regulation 17, Annex 1.
- References to repealed statutes have been updated, including references to the Swedish Work Environment Authority's regulations.
- The second paragraph of Regulation 20.3.2.2, Annex 1 states that electrical components shall be rated IP55 *and* T3. In SOLAS, the requirement is IP55 *or* zone 2 (which in practice should mean T3). It appears that there is a linguistic error in the regulations where the word *or* has been replaced with *and*, which gives the regulation a completely different meaning. The regulations are therefore corrected in line with SOLAS.
- Annex 4, which incorporates MSC/Circ.850, is removed because the circular has been replaced by MSC.1/Circ.1432.
- Reference to the BC Code is removed and replaced with the IMSBC Code as the BC Code is repealed.
- The list of definitions in Section 5 has been updated and fully reviewed for language.
- 'Machine spaces' has been changed to 'machinery spaces', and 'rescue craft' has been changed to 'survival craft' in several places.

1.1.2 New documentation requirements in Regulation 19.3.2

The Swedish Transport Agency has noted that it may be difficult, in connection with inspection procedures, to ensure that the requirements in Regulation 19.3.2, Annex 1 are met. The provision aims to ensure that there are no sources of ignition in cargo spaces where relevant classes of dangerous goods are stowed. The proposed amendment introduces a documentation requirement to demonstrate how electrical equipment that may potentially constitute a source of ignition during the transport of dangerous goods is to be isolated from the electrical system and thus demonstrate compliance with the provision. The addition does not alter the substance of the provision, but instead represents a requirement to document the insulation method used.

2. What is to be achieved?

The main purpose of the amendments to the regulations is to comply with the international obligations to which Sweden has committed itself through the ratification of the SOLAS Convention, thereby ensuring an enhanced level of safety in accordance with these amendments. The amended resolutions are mandatory in nature and must therefore be incorporated into

Swedish reg. Circulars are generally recommendatory in nature and aim to ensure the correct and consistent application of the regulations. What the resolutions and circulars have in common is the aim of establishing clearer provisions and enhancing the level of safety compared to the existing level of regulation. In addition to this perspective, we wish to ensure fairness and competition at a national level; the same regulations that apply in the rest of the world should also apply in Sweden.

3. What are the possible solutions?

3.1 Consequences if nothing is done?

If nothing is done regarding the resolutions, Sweden as a state will fail to meet the international commitments it has undertaken to comply with through the ratification of the SOLAS Convention. This may also result in a lower level of safety on Swedish ships compared to ships of other states. In addition, we would have a different level of regulation compared to those states that have incorporated the resolutions, which may lead to both disadvantages and advantages in terms of competition with other states. During port state inspections abroad, Swedish ships that do not comply with relevant SOLAS regulations risk being issued with deficiencies or detained, which is usually very costly. In the event of an accident or incident concerning the specialist area, it may also be demonstrated that the regulations do not meet the intended international standard.

If we do nothing in relation to the circulars, the risk remains that the clarifications drafted on an international level will not reach the parties concerned. Without knowing the content of these circulars, the parties that must comply with them run the risk of misinterpreting the regulations.

If we do not update the regulations with the editorial amendments and clarifications deemed necessary, the regulations will remain unclear and, in some respects, incorrect.

If we do not amend Regulation 19.3.2, Annex 1 in accordance with the proposal, it will continue to be difficult for the Swedish Transport Agency to verify during an inspection procedure that the requirement has been met.

In view of this, the Swedish Transport Agency recommends that measures be taken to ensure that resolutions and circulars are addressed at a national level.

3.2 Alternatives that do not involve regulation

As regards the resolutions, the assessment of the Swedish Transport Agency is that there are no alternatives that do not involve regulation, since international convention requirements and regulations are incorporated into Swedish law through regulation. Otherwise, there is a risk that Sweden will fail to comply with its international obligations.

Regarding circulars of a purely recommendatory nature, it would be possible to introduce these by means other than regulation; providing them as information to the parties concerned, for example. Such an approach would be a departure from how things have been done previously; where circulars have been incorporated as regulations or general recommendations in the regulations to ensure reader accessibility, with all relevant material gathered in one place. For this reason, the Swedish Transport Agency recommends that circulars not be addressed by means other than regulation.

Corrections and clarifications to the regulations can only be made through amendments to the regulations. Therefore, there are no alternatives that do not involve regulation.

With regard to the documentation requirement in Regulation 19.3.2, Annex 1, the Swedish Transport Agency has previously tried to manage this problem via an instruction to RO, but this has not produced the desired effect.

3.3 Regulatory alternatives

3.3.1 The resolutions

Since there are no other alternatives to regulation with regard to the resolutions, the Swedish Transport Agency advocates this solution. Incorporating the resolutions anywhere other than in TSFS 2009:98 is not realistic, as these regulations already cover the subject area. All in all, the Swedish Transport Agency recommends that the resolutions be addressed by means of amendments to TSFS 2009:98.

It is proposed that the following resolutions be incorporated into the TSFS 2009:98 regulations:

Resolution A.1116(30)

The Resolution contains amendments to Resolution A.760(18) with symbols for the marking of evacuation routes to assembly points. The Resolution has been incorporated into Regulation 13.7.1.1, Annex 1.

Resolution MSC.365(93)

The Resolution contains, inter alia, the following amendments.

- Amendment to Regulation 1 (application) and a new Regulation, 20-1, setting out requirements for vehicle carriers transporting vehicles powered by compressed hydrogen or compressed natural gas. The background to the new regulation is an increase in the transportation of vehicles powered by compressed hydrogen and natural gas on vehicle carriers. The purpose of the regulation is to introduce special safety measures to achieve the objectives of SOLAS II-2/2 (contained in Section 1 of the Regulation regarding purpose) in connection with this type of transport.
- Regulation 4 (probability of combustion) and a new paragraph in Regulation 16 (handling) concerning inert gas systems in new tankers. The amendments are linked to the revision of the FSS Code, Chapter 15 on inert gas systems (see Resolution MSC.367(93) below).
- Regulation 3 (definitions) and Regulation 9 (fire zoning) for ventilation systems on new ships.
- Regulation 10 (firefighting) for cargo spaces on new ships. A new Regulation 7.3 concerning fire safety on ships designed to carry five or more tiers of containers on or above the weather deck is introduced, inter alia.
- Regulation 13 (evacuation routes) is extended to include requirements for evacuation from machinery spaces on new passenger ships and new cargo ships.

Resolution MSC.367(93)

The Resolution contains amendments to the FSS Code including technical requirements to be applied to the fire safety systems prescribed in Annex 1. These amendments add a new Chapter 15, Annex 2 on inert gas systems for ships built on or after 1 January 2016.

Resolution MSC.392(95)

The Resolution includes amendments to Regulation 4 (probability of combustion) to align the provisions according to Part G of SOLAS II-1, Regulation 11 (structural integrity) and Regulation 20 (special requirements for vehicle spaces, special category spaces and ro-ro cargo spaces). The amendments also concern ventilation for cargo tanks in the cargo area on tankers and the design of ventilation systems for enclosed vehicle spaces, enclosed ro-ro cargo spaces and special category spaces.

Resolution MSC.399(95)

The Resolution contains amendments to the requirements allowing the use of plastic pipes on board ships. The amendments concern the ‘Guidelines for the application of plastic pipes on ships (Resolution A.753(18))’ where developments in materials necessitated a revision and update to the guidelines. Among other changes, the verification of compliance with the requirements has been clarified in the revised Appendix 3 on test methods and criteria for flame propagation, smoke production and toxicity in plastic pipes. The Resolution is incorporated into Section 11 of TSFS 2009:98.

Resolution MSC.403(96)

The Resolution contains amendments to the FSS Code. The amendment in Chapter 8, paragraph 2.4.1, Annex 2 on automatic sprinkler systems entails requirements that the water quality be specified by the system manufacturer. A new Chapter 17 on ‘*Helicopter facility foam firefighting appliances*’ in Annex 2 is introduced, which concerns foam extinguishing systems on helidecks.

Resolution MSC. 404(96)

The Resolution contains new definitions for helidecks and winch areas in Regulation 3.

The new Regulation 13.3.2.7 on ‘*Evacuation analysis for passenger ships*’ is added. Evacuation analyses will now be mandatory for all passenger ships, not just for ro-ro passenger ships. Evacuation analysis requirements are introduced for passenger ships carrying more than 36 passengers and built after 1 January 2020. With this new regulation, the previous regulation on evacuation analysis is removed by deleting Regulation 13.7.4.

In connection with the adoption of the new Chapter 17, of the FSS Code (see Resolution MSC.403(96) above), the new Regulation 18.2.3 on helidecks is added which specifies the implementation of the new chapter by defining performance requirements for foam extinguishing systems. The Resolution also entails consequential amendments to Regulations 18.2.4 and 18.5.1.6.

Resolution MSC.409(97)

The Resolution contains amendments to the requirements for fire extinguishers in boiler rooms. New and existing ships with fixed fire-extinguishing systems (local application systems) in engine rooms and at boilers are exempted from the requirement to have on board a foam extinguisher unit with a capacity of 135 litres. This amendment applies to all ships built before 1 July 2012.

The background to the proposed regulation is that tests conducted in Chinese laboratories showed that foam extinguisher units with a capacity of at least 135 litres are not needed if there is a local application system in the engine room and at the boiler. Such a system is therefore sufficient to maintain fire safety. The early implementation of the amendment is carried out for economic reasons (the shipowner does not need to purchase the equipment) and, to a certain extent, for environmental reasons as well (the foam liquid does not need to be discarded).

Resolution MSC.410(97)

The Resolution contains amendments to Chapter 13 of the FSS Code ‘*Arrangement of means of escape*’ where the text on ‘*case 2*’ in Regulation 13.2.1.2.2.2.1, Annex 2 is replaced. The reason for the amendment is that the previous wording was unclear and could be misinterpreted as meaning that public spaces were to be filled to one-third of their area with crew members, which was not the intention of the requirement. The purpose of the proposed amendment is therefore to eliminate the risk of this misinterpretation. The new wording clarifies the provision but is not intended to bring about any substantive change. The new text clearly states that what is intended is that one-third of the total number of crew members are to shall be placed in public spaces during simulations of Scenario 2.

Resolution MSC.421(98)

The Resolution amends the definition of ‘*vehicle carrier*’ for the purposes of clarification.

The new Regulation 9.4.1.3.5 relaxes requirements for fire zoning in windows protected by sprinklers. The new paragraph 9.4.1.3.6 sets out requirements for fire zoning in windows facing life-saving equipment. The background to the amendment is that attention had been drawn to the need to clarify implementation. The purpose was to clarify the fire integrity requirements applicable to windows on passenger ships carrying ≤ 36 passengers, and on special purpose ships with between 61 and 240 persons on board.

The new paragraph 20.2.1.2 sets out requirements for the transportation of vehicles stowed in cargo holds which do not comply with the requirements of Regulation 20. The purpose of the amendment is to clarify that when vehicles with fuel in their tanks for their own propulsion are loaded into cargo spaces other than vehicle spaces, special category spaces or ro-ro cargo spaces, there shall be no requirement for the cargo space to comply with Regulation 20. In such cases, the cargo space shall instead comply with the applicable requirements in Regulation 19 and the IMDG Code.

The new paragraph 20-1.2.1 clarifies that the provision is not limited to the cargo spaces of the ship.

Resolution MSC.457(101)

The Resolution contains amendments to Chapter 15 of the FSS Code, Annex 2 on inert gas systems. The amendments concern the design of pipe systems and instrumentation.

Resolution MSC.484(103)

The Resolution contains a new regulation to be added to Chapter 9 of the FSS Code, Annex 2 on fixed fire detection and fire alarm systems. The new regulation contains provisions on how fire detectors shall be protected from short-circuiting.

3.3.2 Circulars

Since circulars are generally of a recommendatory nature but are still considered important for providing guidance on compliance with the Resolutions, the Swedish Transport Agency proposes that circulars be incorporated at the national level. As noted in Section 3.2, it is more appropriate to implement these through regulation rather than as information. The current regulation stipulates that this be done through amendments to TSFS 2009:98 due to the fact that the relevant regulations are incorporated via those provisions.

As far as the method of regulation is concerned, there are two options: either the regulation is applied by inserting the circulars into the regulations, thereby generating mandatory requirements, or the circulars are inserted as general recommendations, which entails a recommendatory nature. The decisive factor in the choice of method is the nature, content and wording of the circular in question.

The Swedish Transport Agency considers that the most appropriate method of incorporation is to introduce circulars that are of a recommendatory nature as general recommendations in TSFS 2009:98, and to incorporate circulars that are of a mandatory nature as mandatory regulations.

3.3.3 Circulars incorporated as mandatory regulations

MSC/Circ.1552

SOLAS II-2/17 states that the analysis shall be based on the organisation's guidelines and refers in footnotes to MSC/Circ.1002 as amended by MSC/Circ.1552. In the Regulations' Regulation 17, we state that the analysis shall be prepared in accordance with Annex 3, where we have incorporated the previous Circular, MSC/Circ.1002, and it is now replaced

by MSC/Circ.1552. The Circular is incorporated by being added as Appendix A to Annex 3.

MSC/Circ.1430/Rev.2 and MSC/Circ.1430/Rev.3

The Circular contains revised guidelines for the design and approval of fixed water-based fire-fighting systems for ro-ro spaces and special category spaces. The Circular is incorporated via Annex 2, Regulation 7.2.4 for installations made on or after 1 January 2021, and on or after 1 January 2024, respectively.

MSC/Circ.1515

The Circular replaces *Design guidelines and operational recommendations for ventilation systems in ro-ro cargo spaces* (MSC/Circ.729). The Circular is incorporated via the new Regulation 20.3.1.2.4, Annex 1.

MSC/Circ.1516

The Circular concerns amendments to ‘Guidelines for the maintenance and inspection of fire protection systems and appliances’ (MSC.1/Circ.1432), relating to the testing of automatic sprinkler systems. The Circular is incorporated via Annex 1, Regulation 14.2.2.1.

MSC/Circ.1533

The Circular contains revised guidelines on evacuation analyses for new and existing passenger ships. MSC.1/Circ.1533 repeals MSC/Circ.1238. The Circular is made mandatory by Annex 3, which is incorporated in Regulation 13.3.2.7, Annex 1.

3.3.4 Circulars incorporated as general recommendations

The following circulars are proposed to be incorporated into the Regulations TSFS 2009:98 through general recommendations:

MSC.1/Circ.1456/Rev.1

The Circular contains consistent interpretations used for guidance on the application of the relevant provisions of SOLAS Chapter II-2 and the FSS and FTP Codes. Those parts of the Resolution relating to the FTP Code will be addressed in later regulatory work.

References to the Circular are introduced in the general recommendations to the following regulations.

- Regulation 4.5.7.1, Annex 1
- Regulation 7.5.5, Annex 1
- Regulation 10.2.1.4.1, Annex 1
- Regulation 10.2.1.4.4, Annex 1

- Regulation 10.7.1.3, Annex 1
- Regulation 10.7.2, Annex 1
- Regulation 13.1, Annex 1
- Regulation 5.2.1.3.2, Annex 2
- Regulation 5.2.2.2, Annex 2
- Regulation 10.2.4.1.2, Annex 2

MSC.1/Circ.1458.

The Circular contains a consistent interpretation of the term ‘bilge area’ in the *Revised Guidelines for the approval of equivalent water-based fire-extinguishing systems for machinery spaces and cargo pump-rooms (MSC/Circ.1165)*. A reference to the Circular is included in the general recommendations to Regulation 7.2.1, Annex 2.

MSC.1/Circ.1471.

In the context of the drafting of MSC.365(93) on requirements for ships transporting, as cargo, motor vehicles with compressed hydrogen or natural gas in their tanks for their own propulsion, a circular was also produced with recommendations on safety measures for these vehicle carriers. A reference to the Circular is introduced in general recommendations to Regulation 20-1 , Annex 1.

MSC.1/Circ.1472.

The Circular contains guidelines for the design, performance, testing and approval of mobile water monitors. A reference to the Circular with guidelines is introduced in the general recommendations to Regulation 10.7.3.2, Annex 1.

MSC.1/Circ.1480.

The Circular contains a consistent interpretation of Regulation 9.7.1.1, Annex 1. A reference to the Circular is introduced in the general recommendations to that regulation.

MSC/Circ.1487

The Circular contains consistent interpretations of Chapters 5, 9 and 10 of the FSS Code, which were adopted in order to provide more specific guidance for the triggering procedure of CO₂ systems, fixed fire detection and alarm systems and smoke detection systems with extraction tests.

References to the Circular are introduced in the general recommendations to the regulations to which the interpretations refer:

- 5.2.1.3.2, Annex 2:
- 9.2.5.1.1, Annex 2:
- 10.2.4.1.2, Annex 2:

MSC.1/Circ.1491.

The Circular contains a consistent interpretation concerning the location of aft foam monitors, in order to facilitate the implementation of regulatory amendments to the FSS Code (Resolution MSC.339(91)). Reference to the Circular is made in the general recommendations to Regulation 14.2.3.2.3, Annex 2.

MSC.1/Circ.1492.

The Circular contains a consistent interpretation of the positioning of shut-off valves on the fire main on tankers. Reference to the Circular is made in the general recommendations to Regulation 10.2.1.4.4, Annex 1 (reference to MSC/Circ.1456 as amended by MSC.1/Circ.1492).

MSC/Circ.1499

The Circular concerns the consistent interpretation of the requirement for breathing apparatus.

Reference to the Circular is made in the general recommendations to Regulation 3.2.1.2.2, Annex 2.

MSC/Circ.1501

The Circular concerns the consistent interpretation of the regulations on the use of inert gas systems, as amended by Resolution MSC.365(93).

Reference to the Circular is made in the general recommendations to Regulation 16, Annex 1.

MSC/Circ.1505

The Circular concerns the consistent interpretation of the provisions on evacuation routes from ro-ro cargo spaces. Reference to the Circular is made in the general recommendations to Regulation 13.6, Annex 1.

MSC/Circ.1510

The Circular concerns amendments to the annex to MSC/Circ.1120, clarifying certain recommendations on fire test procedures. Reference to the Circular is made in the general recommendations to Regulation 9.3.4, Annex 1 (reference to MSC/Circ.1120 as amended by MSC.1/Circ.1510).

MSC/Circ.1511

The Circular concerns the consistent interpretation of the provisions on fire zoning. Reference to the Circular is made in the general recommendations to Tables 9.5 and 9.6 in Regulation 9 and in Regulation 13, Annex 1.

MSC/Circ.1514

The Circular concerns guidance for smoke management systems installed on
new

passenger ships. Reference to the Circular is made in the general recommendations to Regulation 8, Annex 1.

MSC/Circ.1527

The Circular concerns consistent interpretations, which were drafted in order to provide more specific guidance on the conditions under which materials other than steel may be permitted for components mounted on engines, turbines and gearboxes; arrangements for fixed hydrocarbon gas detection systems in double hulls and double bottom spaces for oil tankers, as well as non-combustible material such as 'steel or equivalent' for ventilation ducts. Reference to the Circular is made in the general recommendations to the following regulations. Reference to the Circular is made in the general recommendations to Regulation 4.1 and 9.7.1.1, Annex 1.

MSC/Circ.1528

The Circular concerns consistent interpretations that have been drawn up in order to provide more specific guidance on fixed gas fire extinguishing systems and fixed fire detection and fire alarm systems; foam generating capacity for fixed foam extinguishing systems; and additional indication units in cargo control rooms. Reference to the Circular is made in the general recommendations to the following regulations in Annex 2:

- 5.2.2.1.7
- 6.3.2.1.2
- 6.3.3.1.2
- 9.2.5.3

MSC/Circ.1550

The Circular contains consistent interpretations of provisions on the requirements for fire pumps on ships designed to carry five or more tiers of containers on or above the weather deck. Reference to the Circular is made in the general recommendations to Regulation 10 and 19, Annex 1 and to Chapter 12, Annex 2.

MSC/Circ.1554

The Circular contains a consistent interpretation in order to provide more guidance on the dimensioning of emergency power sources for fire detection and alarm systems. A reference is introduced in the general recommendations to Regulation 9.2.2.4, Annex 2.

MSC/Circ.1555

The Circular contains consistent interpretations of provisions concerning the definition of a vehicle carrier, appropriate connection for the supply of inert gas to double hull spaces, ventilation provided by fan coil units and internal circulation fans, fire integrity of bulkheads between the wheelhouse and a toilet inside the wheelhouse, the appropriate number of emergency air cylinders to be provided during drills and sources of ignition on board ships carrying dangerous goods. The definition of a vehicle carrier is inserted in Section 5. Other references to the Circular are made in the general recommendations to the following regulations in Annex 1:

- 4.5.5.1
- 5.2.1.2
- 5.2.1.3
- 7.9.3
- 9.1
- 15.2.2.6
- 19.3.2

MSC/Circ.1556

The Circular contains a consistent interpretation of the provisions on the dimensioning of pumps and pressure tanks for automatic sprinkler systems. A reference to the Circular is introduced in the general recommendations to Chapter 8, Annex 2.

MSC/Circ.1574 and MSC.1/Circ.1574/Corr.1

The Circular provides interim guidelines for the use of fibre reinforced plastics (FRP) as elements within ship structures, in relation to fire safety. A reference to the Circular is introduced in the general recommendations to Regulation 17.3, Annex 1.

MSC/Circ.1581

The Circular contains consistent interpretations of regulations on suitable means of calibration for portable atmospheric test instruments for cargo spaces on tankers, fire integrity of boundaries between spaces within the tanker cargo areas, and fire integrity of the bulkheads between the wheelhouse and the navigation cabinets inside the wheelhouse. References to the Circular are introduced in the general recommendations to Regulations 9.2.2.4.2, 9.2.3.3.2, and 9.2.4.2.2, Annex 1.

MSC/Circ.1582/Rev.1

The Circular contains consistent interpretations of provisions in the FSS Code on requirements related to inert gas systems on tankers. References to the Circular are introduced in the general recommendations in Chapter 15, Annex 2.

MSC/Circ.1615

The Circular contains interim guidelines to minimise the occurrence and consequences of fires in ro-ro spaces and special category spaces for new and existing ro-ro passenger ships. A reference to the Circular is made in the general recommendations to Regulation 20, Annex 1.

MSC/Circ.1616

The Circular contains consistent interpretations of certain provisions on the limitation of fire and on firefighter communication. References to the Circular are made in the general recommendations to Regulations 9 and 10, Annex 1.

MSC/Circ.1395/Rev.4

The Circular contains a list of fixed bulk cargo for which a fixed gas fire extinguisher system may be exempted. Incorporated via the updating of Regulation 10.7.1.4, Annex 1.

3.3.5 Documentation requirements in Regulation 19.3.2

Inspection activities have highlighted the problem of ensuring compliance with the requirement in Regulation 19.3.2, Annex 1. There is a clarification in the instructions to recognised organisations that the method of isolation shall be documented in the Document of Compliance, but this has not been deemed sufficient to demonstrate compliance with the provision.

The addition to the provision does not entail any amendment to the application of the provision, but solely serves to clarify and document the choice of method. Since the instructional approach has not been deemed sufficient, it is considered that the need to be able to ensure compliance with the regulation cannot be met by any means other than through regulation.

4. Who is affected?

The regulations are addressed to shipowners engaged in international shipping with passenger ships and cargo ships exceeding 500 gross tonnage, as well as crews serving on these ships. According to the Swedish Transport Agency's ship monitoring system, SITS, there are between 80 and 100 ships that could be subject to upcoming requirements in the various resolutions and circulars. Shipping companies operate both SOLAS cargo ships and passenger ships. These companies range from small businesses with one ship to large shipping companies with several ships.

The regulations are also addressed to manufacturers of marine equipment and shipyards that build, convert or repair these ships. The Swedish

Transport Agency is involved in connection with the construction, flagging, conversion and repair of such SOLAS ships, as well as with supervision and the processing of applications. Recognised organisations contracted for ship supervision are also affected. Passengers who travel aboard passenger ships certified for international voyages are also affected.

5. What consequences will the regulation have?

5.1 Companies

(X) The regulation is not deemed to significantly impact working conditions, competitiveness or other conditions for companies. All consequences for companies are therefore described under 5.1.

() The regulation is deemed to significantly impact working conditions, competitiveness or other conditions for companies. Therefore, the impact assessment does not contain a description under 5.1: instead, all consequences for companies are described in Section C.

How much time will the regulation require for companies, and what impact will this have on their administrative costs?

Overall, the amendments should have relatively little impact on the time required and administrative costs for the companies concerned. Several of the amendments involve clarifications or explanations of provisions, sometimes through amendments to the Regulations of the Convention and sometimes through consistent interpretations, for example. In cases where practical application has previously been unclear, the amendments will lead to positive effects as it will be easier to do the right thing. This is the case, for example, with the amendment to Regulation 20 introduced by MSC.421(98). This aims to clarify what is meant by the regulations and thus should not lead to consequences other than more consistent application. The same applies to the amendment to Chapter 13 of the FSS Code (Resolution MSC.410(97)) on 'arrangement of means of escape', which will clarify the procedure for operators carrying out evacuation calculations on passenger ships, which in itself can be time-saving. These measures should be applicable regardless of company size. The estimated time, and therefore the cost of the work, depends entirely on the company's current expertise regarding establishment of consistent application.

Some amendments mean that ships of a certain type or function that were previously not subject to certain provisions are now included. For example, vehicle carriers transporting cargoes comprising vehicles fuelled by compressed hydrogen and natural gas now need to comply with certain fire safety measures, in accordance with Regulation 20-1 (Resolution MSC.365(93)). These and similar amendments define operational requirements, which means that companies and their staff have to allocate time and resources to the implementation of new procedures.

What other costs will companies incur as a result of the regulation, and what operational changes may they need to make?

Costs are likely to increase since the regulation entails new requirements for design and equipment. However, any increased costs are not generally expected to have a major impact on companies.

As mentioned above, several of the provisions provide clarifications and explanations. Particularly in cases where the regulations relate to design and equipment, these clarifications may be considered to have positive effects as they help to prevent incorrect or inconsistently applied regulations resulting in undesirable costs.

Some amendments will make things easier for companies; such as Regulation 9, Annex 1 to TSFS 2009:98 on the fire zoning of windows (Resolution MSC.421(98)), which involves relaxing the requirements relative to how Sweden has interpreted the regulations. As a result, there will be, to some extent, a reduced level of safety and reduced costs for Swedish-flagged ships, as the requirements for structural fire protection are relaxed.

This also applies to the amendment of Regulation 10 (Resolution MSC.409(97)) on exemption from the requirement to have on board a foam extinguishing unit with a capacity of 135 litres. The amendment means that, where applicable, shipowners are given the opportunity to dispense with foam extinguisher units of the above-mentioned type, thereby making a saving.

To what extent might the regulation affect competitive conditions for companies?

The regulation covers international requirements and ships on international voyages, so the Swedish Transport Agency considers that there is no impact on competitive conditions. Different companies' ability to offset cost increases is assessed as equal, regardless of the size of the company or the regulatory amendments proposed. Smaller companies maintain the technical expertise required by the proposed regulations in different ways. Large companies are more likely to employ their own personnel to maintain expertise, while small companies are more likely to rely on consultants and

classification societies for this purpose and are able to adjust these costs over time and as needed.

In what other ways may the regulation affect companies?

The Swedish Transport Agency considers that the regulation will not affect companies in other respects.

Do special considerations need to be taken into account for small companies when drafting the regulations?

Smaller companies maintain the technical expertise required by the proposed regulations in different ways. Large companies are more likely to employ their own personnel to maintain expertise, while small companies are more likely to rely on consultants and classification societies for this purpose and are able to adjust these costs over time and as needed. The Swedish Transport Agency therefore considers that no special consideration is needed for small companies.

5.2 Individuals

The overall assessment is that passengers travelling on passenger ships certified for international voyages are offered a higher level of safety on these voyages, which in the long run may lead to increased ticket costs. The amendments may also lead to a higher level of safety for the crews of both cargo and passenger ships.

5.3 The State, regional and municipal authorities

The proposal is not considered to have any significant impact on society in general. The proposal does not affect government finances through increased or reduced taxes or fees. Minor administrative costs will be incurred by the Swedish Transport Agency, e.g. for internal dissemination of information and skills development as a result of the revised regulatory framework, updates to certificate templates, etc. The costs of these measures are dependent on what is considered necessary and how the different measures are to be implemented. It is therefore not possible to estimate potential costs.

5.4 Environment

Accidents can have a negative impact on the environment. If the amendments may lead to enhanced safety, the risk of negative environmental impact due to accidents should be reduced, which in turn should be perceived positively from an environmental standpoint.

5.5 External effects

The proposal is not considered to have any significant impact on society in general. However, a high level of maritime safety and updated regulations for fire protection, fire detection and fire extinction are important for the avoidance of accidents and harm to people and the environment.

6. **Summary of options considered and why the proposed regulation is considered the best option**

Regulation of the resolutions is seen as the best option as this is the only way for Sweden to comply with its international commitments in this area. As we are committed to ensuring that Sweden fulfils its international obligations, there are no alternatives to incorporating the Resolutions into national regulations. Since the regulations are already compiled in TSFS 2009:98, it is obvious that the amendments should be made within these regulations. The proposed amendments are in line with international requirements, which is important in terms of competition. Regulation is thus considered the best option.

Since circulars are generally of a recommendatory nature, there are several options.

For those circulars that are of a recommendatory nature but are nevertheless considered important as guidance in respect of compliance with the Resolutions, the Swedish Transport Agency proposes that these circulars be incorporated at a national level. As noted in Section 3.2, it is more appropriate to implement these through regulation rather than as information. The relevant regulation should be introduced via amendments to TSFS 2009:98 as the Circulars are directly connected to these regulations.

As far as the method of regulation is concerned, there are two options: either the regulation is applied by inserting the circulars as paragraphs, thereby generating mandatory requirements, or the circulars are inserted as general recommendations, which entails a recommendatory nature. The regulations already include general recommendations where previous circulars have been incorporated. The chosen system and format is thus familiar to those persons applying the regulations. The general recommendations that are proposed to be included in the regulations remain within the scope of the circulars.

With regard to corrections and clarifications in the regulations, there is no alternative to regulation. The Swedish Transport Agency has tried to ensure compliance with the requirements of Regulation 19.3.2, Annex 1 by means of instructions, but as this has not been effective, regulation is deemed to be the only feasible solution.

7. What authorisations form the basis for the authority's decision-making powers?

Authorisations are provided in Chapter 2, Section 1 of the Swedish Ship Safety Ordinance (2003: 438).

8. Is the regulation consistent with, or does it exceed, the obligations arising from EU law or other international regulations?

The proposed regulations align with EU law. Several of the issues fall within the competence of the EU and have been the subject of EU coordination before negotiations at the IMO⁴. For example, the EU-coordinated position prior to meetings of the Maritime Safety Committee of the IMO⁵ in 2014 was to support the adoption of the amendments. Swedish regulation will correspond to international regulation with no national deviations.

The proposal will be notified in accordance with the provisions of the Ordinance on Technical Regulations (1994:2029). This is due to some of the circulars, which are generally of a recommendatory nature, being incorporated into the regulations as mandatory regulations.

9. Does special consideration need to be given regarding the date of entry into force, and is there a need for special communication initiatives?

Since the Swedish regulation will enter into force later than several of the international amendments, the date of entry into force should be set as soon as possible. Industry organisations are involved in the work of regulatory development at the IMO and are well informed and prepared for the internationally negotiated regulatory amendments. The Swedish Transport Agency will, however, take steps to communicate the new provisions and their entry into force in good time, especially considering that this will not occur simultaneously with the entry into force of the Resolutions. The information will be sent to interested parties for consultation. The Swedish Transport Agency will also publish information on the authority's website about the new regulations when they are adopted. Otherwise, no further communication efforts are deemed necessary.

B. Fulfilment of transport policy goals

The overall goal of Swedish transport policy is to ensure a socio-economically efficient transport provision that is sustainable in the

⁴ International Maritime Organization

⁵ MSC (Maritime Safety Committee)

long term for both citizens and businesses throughout the country. The overall goal also includes performance goals and health, environment and safety (HES) goals with a number of prioritised areas.

The performance goal is to create accessibility for people and goods. The design, functioning and use of the transport system shall help to provide everyone with basic accessibility of high quality and usability, as well as contributing to development throughout the country. At the same time, the transport system must be gender-equal, which means it should respond to the transport needs of both men and women in equal measure.

The HES goal concerns health, environment and safety. The design, functioning and use of the transport system shall be adapted to ensure that no one is killed or seriously injured. It shall also contribute to the overall generational goal for the environment and to attainment of the environmental quality goals, as well as helping to improve health.

10. How does the regulation affect the functional goal?

The proposal has no significant impact on the functional goal as accessibility will not be affected to any significant extent. However, citizens' travel may in some sense be considered to be improved due to enhanced safety and security.

11. How does the regulation affect the HES goal?

The proposed regulation is considered to support the health, environment and safety goal as it leads to an enhanced level of safety, primarily for passenger ships, and ultimately reduces the risk of accidents with negative consequences for people and the environment.

C. Companies

The regulation is not deemed to significantly impact the working conditions, competitiveness or other conditions for companies. All consequences for companies are therefore described under point 5.1.

D. Summary of consequences

Affected party	Impacts that cannot be quantified		Quantified impact (SEK thousands)	Comments
	Advantages	Disadvantages	+ / -	
Companies	The regulatory framework will be slightly clearer, and safety for crew/passengers will be somewhat enhanced	There may be some increase in the time required to adapt operations to the new regulations. The acquisition or adaptation of equipment entails certain costs.		These costs cannot be estimated.
Citizens	Enhanced safety for passengers/citizens	-		These costs cannot be estimated.
The State, et al.	No impact	No impact		These costs cannot be estimated.
External effects	No impact	No impact		
Total	No significant impact	No significant impact		Overall, the Swedish Transport Agency considers that the benefits of the regulation outweigh the disadvantages

E. Proportionality of the proposal

The proposal is deemed to meet the requirements of proportionality as the international regulation on which the proposal is based, as well as national derogations, have been developed with due regard to the principle of proportionality.

F. Follow-up and evaluation

No specific follow-up or evaluation of the proposal is deemed necessary. The need for evaluation of implemented regulations can usually be identified in connection with the application of the regulations in question. If there is a need to analyse specific consequences of the proposal, this will be done in future regulatory work.

G. Consultation

The Swedish Transport Agency has no statutory obligation to consult any other authority with regard to the issuing of these regulations. The Swedish Shipowners' Association has acted as the reference group in this process.

If you have any questions regarding the impact assessment, or any opinions you would like to share, please contact us:

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