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New Regulations on the construction, equipment and operation of passenger ships in the territorial waters surrounding Svalbard

The Norwegian Maritime Authority (NMA) has laid down new Regulations on the construction, equipment and operation of passenger ships in the territorial waters surrounding Svalbard. The Regulations enter into force on 1 January 2020.

The consultation

Draft Regulations on the construction, equipment and operation of passenger ships in the territorial waters surrounding Svalbard were circulated for review from 3 December 2018 to 3 March 2019.

25 consultative statements were received. Renderings and comments on these are included in the enclosed hearing matrix.

On the whole, the consultative bodies are positive about the proposed requirements and the fact that new Regulations are being laid down for passenger ships in the territorial waters surrounding Svalbard. The following is a quote from the Governor of Svalbard:

“The Governor supports the introduction of new Regulations as a safety-related measure. There are changes in the scope and type of traffic surrounding Svalbard, and it is appropriate and necessary that the safety surrounding Svalbard is of at least the same standard as in other sea and ocean areas outside the mainland. In many cases, the need for well-considered and explicit safety requirements will be even stronger surrounding Svalbard as in other parts of the country due to the archipelago's climate, location and access to help in case of emergencies, etc.

In view of this and based on the foregoing, the Governor – with the exception of the note below – does not have any comments on the proposal other than supporting these as an important safety-related measure.”

Moreover, the Ministry of Justice and Public Security declares that *“we find it positive that measures are introduced that will improve shipping safety in Svalbard, and we have no comments to the fact that a separate set of regulations on this topic is being laid down.”*

Most comments are linked to the proposed section 6 on tender craft. The industry's comments to this provision apply to technical and operational factors. The Governor of Svalbard believed that the proposal of section 6 last paragraph, which provided the possibility for short excursions with

tender craft from the ship, could have unfortunate consequences for the environment and wildlife, and that this had not been sufficiently assessed.

The Ministry of Justice and Public Security, the Ministry of Climate and Environment, the Norwegian Environment Agency and the Norwegian Polar Institute supported the Governor's comment and wish for a broader assessment of the consequences of the proposal of section 6 last paragraph. The Ministry of Justice and Public Security allows for the proposal of section 6 last paragraph to be discussed at the ministry level. The NMA supports this proposal.

The technical and operational requirements proposed in section 6 are related to the proposed use in section 6 last paragraph. Therefore, the NMA does not lay down these technical requirements at this point, but is awaiting the outcome of the ministries' discussions. The same applies to the operative requirements, with the exception of the proposed section 6 fifth paragraph regarding the distance to glacier fronts, which is currently entering into force. This is a requirement on which there is broad agreement.

The title of the Regulations and the title of section 1 are amended from Regulations on the construction, equipment and operation of passenger ships in the Norwegian territorial waters surrounding Svalbard to Regulations on the construction, equipment and operation of passenger ships in the territorial waters surrounding Svalbard in line with suggestions from the Ministry of Justice and Public Security.

Details on the new Regulations – SOLAS including the Polar Code will be the new safety standard in Svalbard

Due to Svalbard's judicial position, it is important to have equal rules for all flag States, predictability and clear legislation for ships carrying passengers in the territorial waters surrounding Svalbard.

The NMA believes that the International Convention for the Safety of Life at Sea (SOLAS), 1974, including the Polar Code¹, and the Load Line Convention are most suitable to ensure that ships are constructed, equipped and operated in a way that provides satisfactory safety of life, health, property and the environment, cf. section 9 of the Ship Safety and Security Act². The Polar Code is goal-based with both functional requirements and prescriptive regulations and may be adapted to ship type, ship size and operational pattern.

The requirements of the conventions, with a few exceptions and additions, apply as regulation for passenger ships operating in the territorial waters surrounding Svalbard. Some provisions have been excluded from the chapters of SOLAS because they allow certain undesirable exemptions, or because they make the application of particular provisions of SOLAS contingent on the ship carrying an international certificate.

The conventions are internationally recognised and adopted by the International Maritime Organization (IMO), which stipulates minimum requirements for the construction, equipment and operation of ships. Provisions laid down by the IMO are considered balanced. The various considerations behind the rules of SOLAS are safeguarded through the IMO's open processes, where different interests have the opportunity to put forward their views before the IMO member states lay down new provisions or change existing ones. This also ensures that the future development of the legislation in Svalbard can take place in line with new legislation being

¹ The individual chapters of SOLAS refer to different codes. These codes are made applicable through the references to the codes in the various provisions of SOLAS.

² Act of 16 February 2007 No. 9 relating to ship safety and security (Ship Safety and Security Act)

negotiated internationally in the IMO, which could be an advantage as we in Svalbard are also regulating ships flying foreign flags.

Date of construction

SOLAS is based on the premise that the ships comply with the requirements applicable at the date of construction, unless upgrades have been required. These Regulations are also based on this principle.

Comments to the individual sections

To section 1 Scope of application

First paragraph

The Regulations apply to both Norwegian and foreign passenger ships in the territorial waters surrounding Svalbard³. Passenger ships are ships carrying more than 12 passengers as defined in SOLAS chapter I regulation 2(f), with the exception of warships and other vessels on military service, cf. section 3 (b).

Norway's territorial waters surrounding Svalbard include the internal waters and the territorial sea, extending 12 nautical miles from the baseline, cf. sections 1 and 2 of the Act of 27 June 2003 No. 57 relating to Norway's territorial waters and contiguous zone (Territorial Waters Act) and the Regulations of 1 June 2001 No. 556 relating to the limit of the Norwegian territorial sea surrounding Svalbard.

Section 1 of the Svalbard Act stipulates which areas are included in Svalbard. Both passenger ships operating in the territorial waters surrounding Svalbard and passenger ships engaged on international voyages calling at Svalbard fall under the scope of the Regulations. For foreign ships, the Regulations are applicable with the limitations following international law. The internal waters are fully subject to Norwegian jurisdictional competence⁴. In principle, Norway has the same jurisdictional competence over the territorial sea as it has over its internal waters, but here, the competence is limited by the ships' right of innocent passage. Innocent passage is defined as expeditious, continuous passage through waters in ways not prejudicial to the peace, good order or security of a coastal State. Ships making an innocent passage in the territorial sea surrounding Svalbard fall outside the scope of the Regulations. Passenger ships with stays in the territorial sea fall under the scope of the Regulations.

All sections of the Regulations are based on the Svalbard Treaty. The same requirements apply to all passenger ships regardless of their flag.

The Regulations are not exhaustive with regard to the regulation of passenger ships in the territorial waters surrounding Svalbard. Norway has already implemented i.a. the International Convention for the Prevention of Pollution from Ships (MARPOL)⁵ and the Convention on the International Regulations for Preventing Collisions at Sea, 1972 (COLREG)⁶ that lay down requirements for Norwegian and foreign ships in the Norwegian territorial waters, including

³ Official statistics for the surface area of Norway's sea territory as of 1 January 2012 (in Norwegian only). <https://www.kartverket.no/kunnskap/fakta-omnorge/Sjoarealer/Sjoomrader/>

⁴ Act of 27 June 2003 No. 57 relating to Norway's territorial waters and contiguous zone (Territorial Waters Act)

⁵ Regulations of 30 May 2012 No. 488 on environmental safety for ships and mobile offshore units.

⁶ Regulations of 1 December 1975 No. 5 for preventing collisions at sea (Rules of the Road at Sea)

Svalbard. There are also requirements regarding the obligation to notify and report marine accidents⁷.

In legal areas not covered by these Regulations nor regulated for foreign ships through other regulations of the NMA, for instance working and living conditions for seafarers, the NMA presupposes that the ships comply with relevant regulations of their flag States.

These Regulations shall apply within the Norwegian territorial waters for all islands that are subject to the Svalbard Treaty.

To section 2 Documentation

All ships must be surveyed in accordance with IMO Resolution A.1120(30) and have on board a confirmation that the requirements of the present Regulations are met. The confirmation should be readily accessible for inspection by the NMA surveyors during a port State control inspection.

It is a precondition that every ship has a certificate issued by its flag State ensuring a follow-up and control regime.

The confirmation may be in an electronic format, on the same terms that apply to other certificates for ships operating in Norwegian waters.

The confirmation must be in Norwegian or English and be renewed every five years.

To section 3 Definitions

The terms are defined in order to clarify what is meant by passenger and passenger ship.

The International Convention for the Safety of Life at Sea, 1974 (SOLAS), consolidated edition 2014, as amended by IMO Resolutions MSC.392(95), MSC.394(95), MSC.395(95), MSC.402(96), MSC.404(96), MSC.409(97), MSC.421(98), MSC.435(98) and MSC.436(99) are defined at the beginning of the Regulations. This definition will be updated when new SOLAS amendments enter into force. The procedure is the same as for other Norwegian Regulations implementing IMO legislation, and will make it easier to keep the Regulations up-to-date.

Legally, it is not necessary to refer to the individual codes referred to in SOLAS. SOLAS Chapter II-2, for instance, requires compliance with the IMO's International Code for Fire Safety Systems (FSS Code) and the IMO's International Code for Application of Fire Test Procedures (FTP Code). As SOLAS Chapter II-2 is made applicable as regulation, these codes will also apply as regulations. In SOLAS, the incorporated codes are referred to by abbreviations defined in the introduction of each chapter of SOLAS, see e.g. SOLAS Chapter III regulation 3.10 or SOLAS Chapter XIV regulation 1.1. The codes are typically defined as code XX "as (it) may be amended". The companies must thus keep track of whether the codes have been updated and which requirements currently apply.

To section 4 Planning and implementation of the voyage

The purpose of this section is to avoid grounding, which again could cause loss of ship, need to abandon the ship or environmental damage.

⁷ Regulations of 27 June 2008 No. 744 on the obligation to notify and report marine accidents and other incidents at sea

According to volume 7 of the Norwegian Pilot Guide (“Den norske los”) (2017), “[t]he west side of Svalbard is covered by both electronic navigational charts (ENC) and paper charts produced in more recent years and ENCs at smaller scales. There is a great variation in content and accuracy regarding new and older surveys.⁸” Furthermore, the Norwegian Pilot Guide informs that the coastlines can be encumbered with considerable errors in the chart datum. Additionally, due to the low density of surveys in some areas, the existence of shoals cannot be ruled out. Extra special care must be exercised when sailing in the waters surrounding Svalbard.

Ships shall have on board adequate and updated charts and nautical publications, etc.⁹. Every voyage must be planned in compliance with SOLAS Chapter V regulation 34, and IMO Resolution A.893(21) “Guidelines on voyage planning” and Part I-A chapter 11 of the Polar Code shall also be taken into account. The voyage plan should among other things make sure that the planned route is in areas with adequate water depth.

First paragraph

The non-mandatory safety part of the Polar Code, Part I-B, gives guidance to the master. The content of the Polar Code Part I-B chapter 10 paragraphs 10.2 and 10.3 becomes mandatory for passenger ships operating within the territorial waters surrounding Svalbard. These rules are set out as “should” rules. There must be specific and justifiable reasons for not following the recommendations of paragraphs 10.2 and 10.3. The company has an overall duty to operate the ship in such a way that satisfactory safety concerning life, health, property and the environment is provided, cf. section 11 of the Ship Safety and Security Act. Furthermore, the ship must be navigated in such a way that it does not pose a risk to life, health, property and the environment, cf. section 14 of the Ship Safety and Security Act. The reference to the Polar Code in section 4 is thus meant to provide particular guidance to masters in the waters in question. Masters must carry out specific risk assessments if they choose to override these recommendations.

According to the Polar Code Part I-B chapter 10 paragraph 10.2, the navigational officers shall aim to plan their route through charted areas. It must be taken into account that the surveys may be limited in certain areas. Navigational officers must take into account all available information and guidance in planning and executing the voyage, and familiarise themselves with the status of surveys and the chart information.

Any deviations from the planned route must be undertaken with particular caution, particularly when navigating poorly charted waters. The echo-sounder must be used and the position checked frequently using both visual/radar fixing and GNSS.

The master’s knowledge of the chart quality and safe route planning is of particular importance in these areas. The master shall navigate the ship in such a way that it does not pose a risk to life, health, property and the environment, cf. sections 14 and 19 of the Ship Safety and Security Act.

Second paragraph

The minimum safe distance from the glacier front does not exempt the master from using his or her own discretion. An even larger distance from the glacier front could be necessary, for instance in narrow fjords or shallow water.

The minimum distance applies to both ship and tender craft launched from the ship.

⁸ The Norwegian Pilot Guide volume 7 Sailing Directions Svalbard and Jan Mayen, third edition (2017), Norwegian Mapping Authority and Norwegian Polar Institute.

⁹ SOLAS Chapter V regulation 27

To section 5 Hospital accommodation and procedures for evacuation by helicopter

The section should contribute to the existence of a minimum of medical facilities, medicaments and equipment on board every ship, and at the same time allow a certain degree of flexibility to evaluate the need on the individual ship, based on the area of operation and the number of persons on board. This is emphasised in the introduction to ACEP's¹⁰ guidelines:

“The specific medical needs of a cruise ship are dependent on variables such as: ship size, itinerary, anticipated patient mix, anticipated number of patients' visits, etc. These factors will modify the applicability of these guidelines especially with regards to staffing, medications, equipment and supplies.”

First paragraph

MSC.1/Circ. 1129¹¹ does not include guidelines, but refers to other internationally accepted guidelines, such as ACEP's guidelines. These will take into account the ship's size and operational pattern. The NMA has chosen not to make the section more prescriptive due to the fact that ships may be fitted in accordance with different standards. The purpose of the provision is to make it clear that there shall be a minimum of medical facilities on board.

This provision does not lead to any upgrade requirements for Norwegian ships with SOLAS certificates, and we assume that to some extent, most flag States regulate the requirements for hospital accommodation on board ships engaged on international voyages. As a minimum, there is an applicable requirement for hospital accommodation for crew members set out in the Maritime Labour Convention (MLC, 2006). We therefore presume that all ships engaged on international voyages have the basic facilities on board, and therefore, that all ships should be able to satisfy this proposed requirement.

Norwegian ships holding a certificate for trade area 4 or for EU Class C¹² are already required to have a “suitable room arranged for transport of sick persons, taking into account the size of the ship, the duration of the voyage and the possibility of using one of the passenger berths for transport of this kind”¹³. Additionally, the Ministry of Health and Care Services' Regulations on medical supplies on ships¹⁴ require that these ships carry a range of medical supplies and equipment. However, the Regulations have their own definitions of vessel groups, which implies that ships operating within 20 nautical miles from the base line will have the lowest requirements for medical supplies and equipment on board.

The “suitable room” must be dedicated to hospital accommodation and may not be used for other purposes. The international guidelines specify some technical requirements for the room(s). Moreover, the company has to evaluate the need for more medical supplies and equipment on board. More may be needed than what is required by the Regulations on medical supplies on ships of category C.

Second paragraph

¹⁰ The American College of Emergency Physicians

¹¹ Where reference is made to PREP - Health Care Guidelines for Cruise Ship Medical Facilities
<https://www.acep.org/administration/resources/cruise-ships/prep---health-care-guidelines-for-cruise-ship-medicalfacilities/#sm.000011y9irdwf5fddw6p2lscvuy28>

¹² Regulations of 28 March 2000 No. 305 on surveys, construction and equipment of passenger ships engaged on domestic voyages

¹³ Section 27 of the Regulations of 2 October 1972 No. 4 on calculation of number of passengers and concerning passenger accommodation, etc.

¹⁴ Regulations of 9 March 2001 No. 439 on medical supplies on ships.

The ship must have procedures for evacuation by helicopter taking into account the recommendations of the “International Aeronautical and Maritime Search and Rescue Manual” (IAMSAR Manual).

To section 6 Requirements for craft used as tenders

The proposed new section 6 last paragraph that was circulated for review will be discussed at the ministry level. The proposed technical and operational requirements of section 6 will be viewed in the context of section 6 last paragraph and are therefore put on hold pending the ministries’ review of the matter. Nevertheless, an exception is made to set requirement for a minimum distance to glacier fronts. This is an important safety requirement, which will apply to existing tender activity and a requirement on which there is broad agreement.

Even though the technical and operational requirements are not being laid down now, this does not exempt the company from the obligation to operate tender craft in a safe manner providing satisfactory safety of life, health, property and the environment, cf. section 11 the Ship Safety and Security Act.

Sightseeing with passengers from the mothership must take place within the framework of section 7 of the Regulations of 24 November 2009 No. 1400 on the operation of vessels carrying 12 passengers or less, etc. This means that they have to deal with the geographical limitations that apply to craft constructed without a superstructure, and the permissible operating periods. We would like to underline that all activities must also be carried out in accordance with other legislation, such as the Svalbard Environmental Protection Act.

First paragraph

The first paragraph defines the term tender craft and states that tender craft are regarded as part of the ship's equipment. This means, among other things, that the use of tenders is part of the ship’s operation, and that relevant rules of the Ship Safety and Security Act with appurtenant regulations shall apply to tenders as it does to the other parts of the ship. Furthermore, this means that the tender craft and associated fuel are not defined as dangerous cargo.

Second paragraph

As for the reason for the proposed requirement regarding the distance from glacier fronts, we refer to the background for section 4 second paragraph. The NMA supports AECO’s proposal not to require tenders to be provided with equipment to measure the distance to glacier fronts. It is a precondition that the ship or tender is sufficiently equipped for the distance to be measured. In order for the company to know whether the minimum distance requirement is met, they must have relevant equipment available.

To section 7 Protection against polar bears

The NMA finds it likely that the master and the crew will try to get all persons to shore after an abandonment, while awaiting assistance. Therefore, procedures and equipment related to the risk of being attacked by polar bears are required. The Ministry of Climate and Environment asked for a reference to section 30a of the Svalbard Environmental Protection Act. In principle, the NMA wants to avoid cross-references to other legislation and has thus decided to change the wording of section 7 to take into account the considerations that section 30a of the Svalbard Environmental Protection Act is designed to address. We also refer to the Governor of Svalbard’s provisions on weapons on the archipelago.

To section 8 Passenger high-speed craft

Passenger high-speed craft shall be constructed and equipped in compliance with this section, in lieu of meeting the requirements of chapter 4. Additionally, general provisions of chapter 2 apply.

Passenger high-speed craft shall be certified in accordance with the International Code of Safety for High-Speed Craft adopted by IMO Resolution MSC.97(73), as amended by MSC.175(79), MSC.222(82), MSC.260(84), MSC.271(85), MSC.326(90), MSC.352(92), MSC.424(98) and MSC.439(99) (the 2000 HSC Code).

This code contains a comprehensive safety standard that, when the code is fully applied, is considered to be equivalent to the SOLAS provisions introduced in chapter 4 of the Regulations. For Norwegian ships, the proposal implies that the ships will be certified in accordance with existing regulations regarding 2000 HSC Code vessels¹⁵.

The Polar Code is made applicable to passenger high-speed craft. A high-speed, light-built craft may be considered less suitable for operation in polar waters than a conventional SOLAS ship. It is therefore important to ensure that such craft is sufficiently equipped, and that all relevant safety precautions necessary for the operation have been considered.

It is essential that the craft's characteristics are mapped based on the conditions in which it is intended to operate. Risk assessments may uncover weaknesses, and necessary measures may be taken, either in the form of operational limitations or adaptations/improvements of the ship and its equipment. The conclusion following such an assessment may be that the ship should only operate in the "mildest" conditions, e.g. in "ice-free waters".

First paragraph:

In the opinion of the NMA, high-speed craft should only be allowed on the condition that the highest standard of safety is used (i.e. the 2000 HSC Code).

Second paragraph:

The HSC Code differs between Category A and Category B craft. In general, the preconditions for self-sustained survival following an incident will be better with a Category B craft. For instance, Category B craft have stricter requirements for fire protection and damage stability, including a requirement for an alternative safe area on board, which enables people to stay in a safe area on board the ship during and following an incident, along with a requirement for at least two independent means of propulsion and the ability to manoeuvre to a port of refuge under its own power following an incident in any one compartment on board.

According to our interpretation of the Code's definitions, high-speed craft intended to operate in Svalbard will mainly be Category B craft. Based on the definition of Category A craft, we are specifying that such craft may be used in the Isfjord due to proximity to central areas and shorter time of rescue after an incident.

Third paragraph:

Chapter 13 of the 2000 HSC Code states that every flag State should determine whether the chapter should apply to craft below 150 gross tonnage. Norway has a practice for requiring compliance with this chapter for craft certified under the 2000 HSC Code which operate along the coast of mainland Norway. The navigational conditions are at least as demanding in Svalbard, and we see no reason for an expanded application of exceptions in this area. Chapter 13 of the 2000 HSC Code will apply to high-speed craft regardless of size.

Fourth paragraph:

¹⁵ Regulations of 5 January 1998 No. 6 on the construction, equipment and operation of high-speed craft used as passenger craft or cargo craft.

The 2000 HSC Code includes elements which partly cover the same conditions as the Polar Code, but is nevertheless relatively general in terms of special considerations in polar waters. In order to ensure a systematic approach to polar conditions, the Polar Code is made applicable to high-speed craft in the fourth paragraph.

The 2000 HSC Code has a focus throughout on defining operational limitations, and to stay within these limitations. For high-speed craft, the worst intended conditions shall be defined (2000 HSC Code paragraphs 1.2.1.4, 1.4.61), operating limitations shall be set (2000 HSC Code paragraph 1.4.42), and the craft shall not be allowed to be used in conditions it is not intended to endure. Ideally, all conditions to which a craft may be exposed should then have been accounted for, and by staying within the operational limitations we avoid the craft operating in waters or in conditions for which it is not constructed or equipped.

The Polar Code goes further than that, and sets out requirements for procedures in order to not only stay within the operating limitations; procedures should also be drawn up regarding what to do if the ship encounters ice and/or temperatures which exceed the ship's design capabilities or limitations (Polar Code paragraph 2.3.5).

The 2000 HSC Code furthermore does not take into account that the areas regulated by the Polar Code are very remote areas, where it is necessary to lay down additional requirements based on distance and time of rescue in the event of an accident. Time is a crucial factor for survival, especially following abandoning the craft.

The Polar Code moreover includes a number of operational requirements and practical safety measures that may be applied to all types of ship, regardless of construction, design and trade area. These will be just as useful and safety-promoting on a high-speed craft as on any other type of ship. The same applies to marine equipment requirements, such as life-saving appliances. In addition, the Polar Code sets out requirements that go beyond what can be expected to take into account through operational limitations; namely survival following abandoning the craft. It is particularly important for this to be met in Svalbard.

As for requirements for safety management, please see comments to section 17.

To section 9 Scope of application for chapter 4

Sections 10 to 19 apply to passenger ships not holding a Passenger Ship Safety Certificate according to SOLAS Chapter I Regulation 12 (a)(i) nor a High-Speed Craft Safety Certificate according to the 2000 HSC Code chapter 1 section 1.8.1. That is to say, only ships with national certificates have to satisfy the minimum requirements of Chapter 4. The chapter is based on a safety level that corresponds to the ships operating near the coastline, and long voyages outside the territorial waters are not taken into account.

To section 10 Construction – subdivision and stability, machinery and electrical installations

First paragraph

SOLAS Chapter II-1 shall apply as regulation, with the exception of Regulations 1.4 and 9.5. The requirement for safe return to port in SOLAS Chapter II-1 regulation 8-1 applies to ships constructed on or after 1 July 2010 of 120 metres or more in length or having three or more main vertical zones. The requirement means that passenger ships should be designed so that the most important systems remain operational in the event of flooding of any single watertight compartment.

Second paragraph

The requirement for design of passenger spaces already applies to Norwegian passenger ships irrespective of trade area constructed or having undergone major conversion on or after 1 January 2010¹⁶ or 1 October 2004¹⁷.

The provision establishes a minimum standard for the design of passenger spaces, primarily with regard to preventing injuries. The provision will also contribute to increased accessibility. The accommodation requirements are based on the IMO guidelines on safety measures for the elderly and disabled persons' needs, as these are internationally recognised. These guidelines include measures for preventing serious injuries from falling.

The requirement applies only to ships which are constructed or the keel of which is laid on or after the entry into force date of these Regulations.

Third paragraph:

This requirement already apply to all Norwegian ships. Among other things, the international standard sets specific requirements for lift installations to be used on moving ships.

To section 11 Construction – fire protection, fire detection and fire extinction

SOLAS Chapter II-2 applies as regulation. In Svalbard, the ships are largely dependent on being self-reliant, as there may be a considerable distance between the ship and the rescue service and between the individual ships. SOLAS lays down a requirement for subdivision into main zones, which means that the passengers in the event of a fire on board may escape to a safe zone on board the ship.

SOLAS also includes a requirement for a sprinkler system in the accommodation. This contributes to increasing the level of safety significantly, as a sprinkler system limits or extinguishes a fire in an early phase. It also helps to prolong the time available for an evacuation.

The requirement for safe return to port in SOLAS Chapter II-2 regulation 21 applies to ships constructed on or after 1 July 2010 of 120 metres or more in length or having three or more main vertical zones. The requirement means that a passenger ship should be designed so that the most important systems remain operational in the event of a fire and that the ship may proceed to a safe port under its own power following such an incident. This requirement involves a considerable rise in standards compared to the previous requirements for passenger ships operating in Svalbard.

To section 12 Life-saving appliances and arrangements

For Norwegian ships, this provision involves strengthened requirements for life-saving appliances on most ships which are not already certified pursuant to SOLAS including the upgrade requirements set out by the Polar Code.¹⁸ The difference between previous requirements and new requirements will vary depending on the ship's current certificate, age and size. It will mainly result in a requirement for increased capacity of survival craft as well as for more lifebuoys. For some ships, it will also involve a requirement for an extra hand-held VHF for survival craft.

First paragraph:

¹⁶ Section 7 of the Regulations of 1 July 2014 No. 1072 on the construction of ships.

¹⁷ Section 8D of the Regulations of 28 March 2000 No. 305 on passenger ships engaged on domestic voyages and section 33 of the Regulations of 5 January 1998 No. 6 on the construction, etc. of high-speed craft.

¹⁸ The phase-in of the Polar Code is meant to be completed for all ships with a Passenger Ship Safety Certificate by 2020.

The first paragraph implements SOLAS Chapter III as regulation. Regulation 2 is not implemented into these Regulations, as it lays down the possibility of exempting all ships subject to the Regulations from all requirements of Chapter III. Furthermore, regulation 21 is not implemented, as the second to sixth paragraphs in this section replace SOLAS regulation 21.

SOLAS Chapter III regulation 34 sets out a requirement that all life-saving appliances and arrangements must satisfy relevant requirements of the International Code for life-saving appliances (LSA Code). Since SOLAS Chapter III is made applicable as regulation, this Code will legally also apply as regulation without having to mention it specifically.

Second paragraph:

SOLAS Chapter III regulation 21.1.1 and regulation 21.1.2 explicitly refer to passenger ships engaged on international voyages and short international voyages. SOLAS does not include requirements for survival craft on ships not engaged on international voyages. This makes it necessary with a separate provision for these ships.

The requirement implies that the ships must have the equivalent capacity as required by SOLAS, but that it is left up to the company to choose liferafts, lifeboats or a combination of liferafts and lifeboats.

The second paragraph may involve a strengthening of the rules for existing ships that have complied with the EU Regulations.

The requirement for compliance with the LSA Code is applicable to all ships irrespective of year of construction. The NMA finds that the LSA Code expresses a necessary level of safety, and it is therefore required that survival craft shall be in compliance with the LSA Code, irrespective of year of construction.

If the requirement is met by using liferafts, it is recommended that these be of a type with inflatable double bottom. Section 4.2.2.2 of the LSA Code requires the raft floor to provide sufficient insulation against cold. This can be done by either having an inflatable floor (4.2.2.2.1) or having other equivalent solutions (4.2.2.2.2). The systematics of the LSA Code is that performance requirements shall be supported by test or evaluation requirements in resolution MSC.81(70) (“Revised recommendation on testing of life-saving appliances”). However, there are no test requirements that describe the insulation properties of the raft floor, and there are therefore no parameters with which to measure equivalence. The results from the exercises SARex1¹⁹ and SARex2²⁰, which were carried out with rafts manufactured in accordance with paragraphs 4.2.2.2.2 and 4.2.2.2.1 respectively, document a significantly lower heat loss when using an inflatable floor. The results are supported by research from Transport Canada²¹. We have therefore decided to lay down a requirement for an inflatable floor while waiting for the IMO to introduce a test standard that will ensure equivalence by establishing measurable requirements for insulation properties/heat loss.

¹⁹ SARex Spitzbergen: Search and rescue exercise conducted off North Spitzbergen : Exercise report
<https://brage.bibsys.no/xmlui/handle/11250/2414815>

²⁰ SARex2: Surviving a maritime incident in cold climate conditions
<https://brage.bibsys.no/xmlui/handle/11250/2468805>

Thermal protection in liferafts: assessment of occupant heat balance and development of performance criteria, TR-2009-06: <http://doi.org/10.4224/18227279>

²¹ Thermal protection in liferafts: assessment of occupant heat balance and development of performance criteria, TR-2009-06

The requirement for launching arrangement or marine evacuation system (MES) is meant to contribute to dry-shod evacuation on all passenger ships. It is essential for survival in cold climates to avoid getting wet.

Third paragraph:

Continues current law for Norwegian ships.

Fourth paragraph:

Continues current law for Norwegian ships.

Fifth paragraph:

The ship shall carry at least one rescue boat.

A lifeboat may be accepted as a rescue boat provided that it and its launching and recovery arrangements comply with the requirements for a rescue boat. This is a continuation of current law for Norwegian ships.

Sixth paragraph:

The number of rescue boats and/or lifeboats shall be sufficient to ensure that no more than nine liferafts need to be marshalled by each rescue boat or lifeboat after evacuation. This will lead to some ships being required to carry more than one rescue boat. This requirement corresponds to the requirement applicable to ships engaged on a short international voyage in SOLAS.

To section 13 Radio communication

The provision for the most part continues previous requirements. The Circular RSV 1-2017 required A2 for all trade in Svalbard, whereas SOLAS Chapter IV sets out that ships shall be equipped in accordance with the radio coverage available in the area of operation²². This could result in relaxed requirements for some ships depending on their area of operation.

For ships only operating in the Isfjord, for instance, it will be sufficient to be equipped for sea area A1.

The company must nevertheless take into account the equipment's possible limitations and access to public transmissions of safety messages via the selected equipment.

The industry has asked whether the Telex service will be replaced by Iridium in the near future. These Regulations are based on the latest version of SOLAS and will, following the systematics of the Norwegian legislation, be updated whenever revisions of SOLAS come into force.

The proposal to approve Iridium has been adopted by the IMO, but we are awaiting a decision from the WRC (World Radio Conference). The IMO will establish performance and test standards, and the equipment is not yet available on the market.

To section 14 Safe navigation

The provision for the most part continues current law. The requirement for AIS is now made applicable to all passenger ships irrespective of size, cf. SOLAS Chapter V regulation 19.2.1.

Prior to the consultation, the NMA had received comments from the emergency response agencies that they wanted to equip all ships in the territorial waters surrounding Svalbard with AIS. In their consultative statement, the Norwegian Coastal Administration states that a requirement for AIS on every passenger ship will make it easier to get an overview of resources in the event of an

²² Radio signal chart ALRS Vol. 5.

undesired event. The NMA also uses AIS data, inter alia for general risk assessment and risk assessments on ship level (risk-based supervision).

To section 15 Carriage of cargoes and fuel oil

The section implements SOLAS Chapter VI. This is not a new requirement for Norwegian ships.

To section 16 Carriage of dangerous goods

The section implements SOLAS Chapter VII. This is not a new requirement for Norwegian ships.

The NMA specifies that vehicles which are not survival craft or tender craft, such as jet skis and snowmobiles, etc., which have combustion engines, along with fuel for such vehicles, are considered cargo and not part of the ship's stores and provisions, cf. SOLAS Chapter VII regulation 2.2.

When the mentioned vehicles are considered cargo, they are classified as UN 3166, cf. the IMDG²³ Code, if they have a combustion engine. Special provision (SP) 961 of the IMDG Code determines whether the vehicle should be considered dangerous cargo or other cargo, depending on the deck or the space on/in which they are stowed.

Reserve fuel for the vehicles is also cargo, and must be transported in spaces or on decks suitable for such transport, depending on the type of fuel. This means that some types of fuel may not be acceptable; there are for instance strict limitations for the transport of petrol (UN 1203) on passenger ships.

In remote areas, it is particularly important to carry out risk mitigation measures. The NMA's interpretation maintains a level of safety which is necessary for the transport of this type of vehicles. We thus avoid passenger ships carrying flammable liquids with a low flashpoint, such as petrol. By way of comparison, the main rule in the other regulations is that passenger ships must use fuel with a flashpoint above 60°C. For some types of marine equipment, such as emergency generators, emergency fire pumps and survival craft, the main rule is that they may use fuel with a flashpoint of 43°C. Both ships and survival craft may in exceptional circumstances use fuel with a lower flashpoint, but this requires special measures. The most relevant comparison is rescue boats which may use petrol under certain conditions (the LSA Code 5.1.1.8). The NMA's view is that there is no foundation for expanded acceptance of petrol on other vehicles even if they were to be equipped with the same safety measures, as this would result in a larger amount on board, and thus a greater risk for the ship during transport.

To section 17 Safety management

The ship must have Safety Management Certificate pursuant to SOLAS Chapter IX (the International Safety Management (ISM) Code, adopted by Resolution A.741(18), as amended by Resolutions MSC.104(73), MSC.179(79), MSC.195(80), MSC.273(85) and MSC.353(92).

Ships already holding a Passenger Ship Safety Certificate (SOLAS) also have a SMC (Safety Management Certificate).

For ships with national certificates, this will be a new requirement.

To section 18 Safety measures in polar waters

The safety part of the Polar Code is drawn up as an addendum to Chapters II-1, II-2, III, IV and V of SOLAS. Since we want to use the same systematics in these Regulations as in SOLAS, the additional requirements set out by the Polar Code have been set up in a separate section.

²³ International code for the transport of dangerous goods by sea

Ships with national certificates, which have previously complied with Circular RSV 1-2017, have not been subject to the new Polar Code. This provision thus involves a strengthening of the rules for these ships.

Paragraph 8.3.3.1.1 of the Polar code implements what has previously been a special Norwegian requirement for thermal protection for all persons on board passenger ships. The requirement was introduced as an immediate measure for all Norwegian passenger ships following the *Sleipner* casualty in 1999. After the accident, the commission of inquiry recommended that the requirement for thermal protection should be expanded to apply to all ships operating in cold waters²⁴.

Both our Circular RSV 1-2017 and the Polar Code allow thermal protection in the form of either thermal protective aids (TPA) or insulated immersion suits. These two alternatives provide very different protection, and there is a significant difference in cost. These options will be continued for

the companies, cf. the Polar Code. The companies must base their choice on a holistic evaluation of the overall protection provided by the life-saving appliances, expected air temperature and expected time of rescue. Based on the research referenced in the comments to section 12 second paragraph (double bottomed rafts), we are recommending that TPAs are primarily used on ships with lifeboats adapted to polar conditions or on ships where the maximum time of rescue is assumed to be short, and which do not operate in low air temperatures (minus 10 degrees Celsius or colder). The SARex exercises show an expected survival time of less than 24 hours if an uninsulated suit is used in rafts or lifeboats without active heating.

First paragraph:

The first paragraph implements SOLAS Chapter XIV as regulation. The exceptions from regulations 2.1 and 3 are made because these Regulations do not require ships to be certified pursuant to SOLAS Chapter I.

Second paragraph:

If the ship does not have certificates pursuant to SOLAS, including a separate Polar Ship Certificate, the documentation required pursuant to section 2 shall nevertheless include the same information as the Polar Ship Certificate required pursuant to Appendix 1 to the Polar Code, cf. regulation 1.3.5.

Third paragraph:

One of the principles in the Polar Code's rescue chapter is that ships shall be equipped to ensure survival in a predefined time period, based on how far from assistance the ship is operating. There is no upper limit for how long the expected time of rescue may be, but the Polar Code has set a lower limit. All ships must therefore be equipped to ensure that all persons on board may survive for a minimum of five days after evacuation. The emergency preparedness in Svalbard indicates that assistance in many cases will be available in less time than that, and in our opinion, it would be unreasonable to require equipment for five days for ships only operating in the most central areas in Svalbard, such as the Isfjord. The NMA has therefore decided that the minimum requirement for number of days shall not apply. We have kept the functional requirement as set out by the Polar Code, i.e. that every ship must be equipped to ensure survival for the expected time of rescue. We stress that this time may exceed five days in Svalbard as well, particularly for ships with a large number of persons on board operating in the most remote parts of the archipelago. The company must be able to document the assessments underlying the chosen time of rescue.

²⁴ NOU 2000:31 paragraph 12.4.1.

To section 19 Load line

The Load Line Convention, Annex B, Annex I applies to ships of 24 metres in length (L) and upwards.

Some of the technical requirements for construction is now made applicable to ships of less than 24 metres in length (L). This means that all requirements related to means of closure, height of coamings and sills, height of air pipes and ventilators, freeing port area and overboard discharge valves specified in the Load Line Convention shall be complied with for both convention and non-convention ships.

The requirement for documentation and survey in section 2 will satisfy the need for control of whether the requirements of the Regulations are met.

To section 20 Exemptions and equivalents

In the previous sections, the alternative design provisions of the various chapters of SOLAS are made applicable. There are provisions for alternative design in SOLAS Chapter II-1 part B regulation 4.2, Chapter II-1 part F regulation 55, Chapter II-2 part F regulation 17, Chapter III part C regulation 38, and Chapter XIV regulation 4.

The exemption and equivalent provisions of the various codes incorporated in SOLAS apply when processing applications for exemption from any requirements of the codes. High-speed craft, for instance, comply with the equivalent provision of regulation 1.11 of the 2000 HSC Code.

These provisions of SOLAS may be applied when the company wants to use an alternative design or arrangement which deviates from the requirements of the Convention, but fulfils the purpose of the provision from which they deviate, while the alternative design contributes to ensuring that the Regulations' level of safety is maintained. The SOLAS provisions on alternative design give guidance on processes that need to be undertaken in order to document alternative design.

Section 20 first paragraph entails that the flag State of the ship may grant exemptions from requirements of the Regulations when the company upon written application establishes that the arrangement provides an equivalent measure of safety. This is meant to provide a legal basis for exemption in the cases not covered by the mentioned legal bases for alternative design. The wording of this section is general and can be used to approve solutions providing a level of safety corresponding to the requirements of the Regulations. This legal basis may be used for applications for exemption both from requirements set out by the Conventions and from requirements not set out by the Conventions. Ships which fail to achieve the level of safety required by these Regulations, neither by following the prescriptive requirements nor by granting equivalent solutions pursuant to section 20, may not operate on Svalbard.

If acceptance has been granted for equivalent solutions, there shall be a list on board the ship which comprises equivalent solutions accepted by the flag State.

To section 21 Transitional provisions

The transitional provision shall take account of those who are already operating passenger ships in Svalbard. They will be given sufficient time to adjust after the entry into force of the new Regulations.

The goal is to phase in more stringent safety requirements as soon as practicable, while at the same time taking into account the industry's need for time to adjust. The transitional arrangement takes into consideration companies that currently have established a business in the waters

surrounding Svalbard. There are no transitional arrangements for companies that have only exceptionally operated in Svalbard, as these have not based their operation on income from activities in Svalbard, and thus should be seen as equal to new actors wanting to enter the market. Therefore, the transitional provision is applicable to ships having operated in the territorial waters surrounding Svalbard every year for the last three years. These ships are not required to meet the requirements of these Regulations, with the exception of sections 4 and 7, until five years after the entry into force (1 January 2025).

To section 22 Entry into force

The Regulations enter into force on 1 January 2020.

Administrative and financial implications

Consequences for the companies

In 2016, 43 passenger ships were registered in Svalbard. 37 of these ships held a Passenger Ship Safety Certificate (SOLAS). Statistics from the Governor of Svalbard show that the total number of passengers travelling with expedition cruise ships or overseas cruise ships in 2018 had increased compared to 2017²⁵.

The new rules will have limited or few financial consequences for ships that currently hold a Passenger Ship Safety Certificate (SOLAS). Ships with Passenger Ship Safety Certificate (SOLAS) are already required to comply with SOLAS Chapter XIV²⁶. That implies that the ship shall comply with the Polar Code and hold a Polar Ship Certificate. New passenger ships were required to hold a Polar Ship Certificate from 1 January 2017, and existing ships by the first renewal survey after 1 January 2018.

The requirements that could entail changes for ships with Passenger Ship Safety Certificate (SOLAS) are largely operational, apart from the requirement for hospital accommodation. Some changes may entail costs associated with administrative work or training following the implementation of new requirements, while others may require the replacement of old equipment with new.

For a small number of ships that currently have the lowest standard of safety, the conversion costs in order to satisfy the new Regulations could exceed the current value of the ship. The conversion costs of achieving a SOLAS standard for ships operating in polar waters are estimated to around 9,500,000 NOK. Approximately 1,500,000 NOK of these are costs of complying with the Polar Code. These estimations are based on a hypothetical conversion of a ship of an “existing EU Class C” standard, measuring less than 40 metres in length and capable of carrying 90 passengers.

What will happen to ships operating in Svalbard today will be decided based on, among other things, second hand value, current activity, conversion costs, price of alternative ships, and expected development of the market. Prognoses for port calls in Longyearbyen made for the various ship categories indicate an expected market growth²⁷.

The five-year transitional provision will allow the companies to plan the phase-in of new rules and spread the costs over several years.

²⁵ <https://www.sysselmannen.no/globalassets/sysselmannen-dokument/arsrapporter/sysselmannen-pa-svalbard---arsrapport-2018.pdf>

²⁶ For Norwegian ships, this follows from the Regulations of 23 November 2016 on safety measures for ships operating in polar waters.

²⁷ Report on new port infrastructure in Longyearbyen prepared by Menon on assignment from the Norwegian Coastal Administration, in cooperation with DNV GL and Dr. Techn. Olav Olsen (in Norwegian only): <http://www.kystverket.no/globalassets/rapporter-og-brosjyrer/kvu-longyearbyen-hovedrapport-v2.pdf>

These Regulations will make the requirements for the construction, equipment and operation of passenger ships in the territorial waters surrounding Svalbard more accessible to companies from all flag States. With Regulations to adhere to it is easier to determine which rules apply. In addition, the Regulations refer to an internationally known set of rules.

Consequences for the NMA

The introduction of minimum safety requirements makes our legislation comply with the current assessment of which requirements must be fulfilled in order to ensure satisfactory safety of life, health, property and the environment in Svalbard, cf. sections 1 and 9 of the Ship Safety and Security Act. The legislation complies with internationally recognised requirements for passenger ships operating in polar waters, a set of rules of which Norway has been an initiator. The new Regulations enable the NMA to spend less time providing guidance on which requirements apply to passenger ships in the territorial waters surrounding Svalbard. Earlier, the NMA provided guidance in a circular containing information on certificates required to operate passenger ships in Svalbard.

The NMA will still be in charge of certification (of Norwegian ships), inspection and guidance. The difference lies in the fact that the requirements for the ships will be laid down in Regulations and provide a level of safety which, according to the NMA, is justifiable in terms of safety.

Olav Akselsen
Director General of Shipping and Navigation

Countersigning
title