Sjøfartsdirektoratet
Norwegian Maritime Authority

Circular - Series R

Number: RSR 01-2024

Date: 23 January 2024

Case number: 2023/75017

Regulation concerning amendments to the Regulations on the working environment, health and safety of persons working on board ship, and amendments to other regulations

The Norwegian Maritime Authority (NMA) has laid down amendments to the following regulations:

1. Regulations of 1 January 2005 No. 8 on the working environment, health and safety of persons working on board ship (HSE Regulations)
2. Regulations of 15 June 1987 No. 507 on safety measures, etc. on passenger ships, cargo ships and barges
3. Regulations of 13 June 2000 No. 660 on the construction, equipment and operation of fishing vessels of 15 m in length and over

Consultation

The proposed amendments were circulated for review from 6 July to 5 October 2023. Seventeen consultative bodies responded, and eleven commented the proposed amendments. The statements from the consultative bodies and the NMA's comments have been included in the consultation matrix, which is attached to this Circular (available in Norwegian only).

The background for the amendments to the relevant regulations

The HSE Regulations are the key regulations laid down by the Norwegian Maritime Authority when it comes to requirements concerning working environment, health and safety of persons working on board Norwegian ships.

Section 2-2 of the HSE Regulations says that hazards on board shall be identified. When a hazard has been identified, an assessment of the risk represented by the hazard shall be made. The result of the risk assessment is to be documented in writing. The same section further says that if a risk to the safety and health of persons working on board is identified, the necessary measures shall be taken to eliminate or reduce the hazards. One of the main principles of the HSE Regulations is safe working spaces. This principle means that appropriate personal protective equipment shall only be made available and used if a risk cannot be avoided in any other way, cf. section 2-2 fourth paragraph of the HSE Regulations. The company must, as far as practicable, remove or reduce the risks that are identified before personal protective equipment is considered an alternative.

When it comes to risks related to work in narrow and confined spaces, tanks and similar spaces, and revision of existing provisions, the amendments now laid down in the HSE Regulations reflect the IMO's recommendations concerning measures to be taken when entering enclosed spaces, laid down on 30 November 2011 in IMO Resolution A.1050(27).

Due to the regulatory amendments laid down by this circular, the various vessel types can now use the same legislation with provisions to prevent the risk of toxic gases, oxygen deficiency end exhaust from vehicles and other machinery powered by an internal combustion engine.

When activities are planned related to entering enclosed or narrow spaces, these activities must be risk assessed. That means that entry of enclosed spaces must only be permitted for the purpose of measuring the atmosphere in the enclosed spaces.

The Norwegian Maritime Authority has therefore laid down general provisions on entry of confined spaces found in chapter 9 of the HSE Regulations.

In the table below, you can find an overview of the new provisions with a reference to the corresponding repealed provisions in the Regulations on safety measures, etc. on ships and the Regulations on the construction, equipment and operation of fishing vessels of 15 m in length and over.

New provision in the HSE Regulations	Corresponding repealed provisions in the Regulations on safety measures, etc. on ships	Corresponding repealed provisions in the Regulations on the construction, equipment and operation of fishing vessels of 15 metres in length and over
Section 9-6 (1)	Section 11-5(2), Section 15(1)	Section 6-13 (1)
Section 9-6 (2)	Section 11-15(2), Section 17(1)	Section 6-13 (2)
Section 9-6 (3)	Section 15 (4)	Section 6-15 (3)
Section 9-6 (4)	§ 15(2) and § 17 (1)	Section 6- 13(2) and Section 6-15(1)
Section 9-7 (1)	Section 17 (1)	Section 6-15 (1)
Section 9-7 (2)	Section 17 (4)	
Section 9-7(3) and (4)	Section 11-5(2), Section 17(4)	Section 6-15 (3)
Section 9-8	Section 15(4) and Section 17(4)	
Section 9-9	Section 16	Section 6-14
Section 9-10	Section 18	Section 6-16

Administrative norm was previously used as a term to determine the limit values for contamination of the working atmosphere. Section 3 (e) of the repealed the Regulations of 1 November 2001 No. 21 on protection against chemicals defined administrative norm as (emphasis added): *Recommended maximum value for the average concentration of a chemical agent in the air within the breathing zone of a worker in relation to a specified reference period, laid down by the Norwegian Labour Inspection Authority.*

As of 7 January 2013, these administrative norms are found in the Regulations of 6 December 2011 No. 1358 concerning action and limit values for physical and chemical agents in the working environment and classified biological agents (Regulations concerning action and limit values).

Risk of contamination of the working atmosphere and gas hazard may occur during hot work, surface treatment such as sanding/painting and other repair work during operations, for instance in tanks.

The Regulations concerning action and limit values have been issued under the Act of 17 June 2005 No. 62 relating to working environment, working hours and employment protection, etc. (Working Environment Act). Section 1-2 second paragraph of the Working Environment Act states that shipping is exempted from the Act. Because of this, the Norwegian Maritime Authority has adopted amendments to the HSE Regulations, stipulating that the limit values for physical and chemical factors in the working environment, as well as the classification of biological agents into infection risk groups shall also apply to those working

on board. To prevent delayed injuries due to a contaminated working atmosphere, the company must, in addition to implementing measures to prevent acute risks to life and health, ensure that persons working on board are not exposed to higher limit values than currently listed in Annex 2 of the HSE Regulations.

Details on the amendments to the HSE Regulations

The Norwegian Maritime Authority has added five new sections to chapter 9 of the HSE Regulations. In the same Regulations, minor amendments have also been implemented in sections 11-2, 11-5, 12-5, 12-6, 13-1 and 16-3. Due to the five new sections in the HSE Regulations, sections 15, 16, 17 and 18 in the Regulations of 15 June 1987 No. 507 on safety measures, etc. on passenger ships, cargo ships and barges (Regulations on safety measures, etc. on ships), are repealed. For the same reason, the NMA has also repealed sections 6-13, 6-14 and 6-15 of the Regulations of 13 June 2000 No. 660 on the construction, equipment and operation of fishing vessels of 15 metres in length and upwards.

New section 9-6
The new section 9-6 consists of four paragraphs and applies to inspection of gas hazard.

Section 9-6 first paragraph contains provisions requiring necessary inspection to ensure that the air inside of tanks, cargo holds, narrow enclosed spaces and other spaces are safe for persons who will perform operations in such spaces.

The provisions of the second paragraph permit entry of enclosed spaces only for the purpose of conducting atmospheric measurements. Persons entering enclosed spaces must wear a self-contained breathing apparatus and carry portable gas detection equipment, and they shall be suitably trained, cf. the third paragraph of the section. The amendments in section 9-6 second paragraph emphasise that a self-contained breathing apparatus should only be used when assessing the gas hazard. With this amendment, the NMA makes it clear that a self-contained breathing apparatus should not be used for other routine tasks, such as inspections, repairs, surface treatments, cleaning or similar. Reference is again made to the general principle of the HSE Regulations that appropriate personal protective equipment shall only be made available and used if a risk cannot be avoided in any other way. If the company presumes that the work mentioned above can not be carried out without using a self-contained breathing apparatus, the company should consider setting aside these types of tasks to when the vessel is in a repair yard and outside of normal operation, and as a part of the planned maintenance of the vessel.

The third paragraph states that inspections pursuant to the first paragraph shall be conducted by a person who has documented training.

The fourth paragraph includes a requirement to have approved portable gas detector(s) on board. An approved self-contained breathing apparatus with an adequate number of compressed air reservoirs must also be on board. The term “approved” means that the equipment must be wheel-marked, cf. section 2 of the Regulations of 30 August 2016 No. 1042 on marine equipment, with further references to the EU Commission’s implementing acts which are incorporated in the EEA Agreement and implemented in Norwegian legislation. To maintain the approval, the equipment must be maintained and inspected pursuant to the manufacturer’s guidelines and recommendations.

If there is a risk of other toxic gases on board besides those mentioned in section 9-6 fourth paragraph (a), these gases must be risk assessed, and equipment for measuring them must be available on board. Examples of other toxic gases are chlorine and ammonia.

New section 9-7
The new section 9-7 has four paragraphs.

The basis for the provisions in the first paragraph is that the inspections required under section 9-6 have been carried out, and that it has been confirmed that the air in enclosed areas and spaces is safe for humans to stay in. Before anyone is permitted to carry out work in an enclosed area or space, thorough

ventilation must be conducted using either natural or mechanical methods. Continuous ventilation shall be maintained throughout human activities inside an enclosed area or space.

The second paragraph sets out a requirement that all persons involved in activities related to enclosed spaces, shall use a suitable communication system. This requirement is to ensure that anyone involved at any time will be able to contact each other while carrying out the activities.

The third paragraph says that a designated person equipped with radio communication equipment shall be stationed continuously at the entrance. Self-contained breathing apparatus, rescue equipment and a pocket resuscitation face mask shall be available at the entrance.

The fourth paragraph states that personnel trained in the use of self-contained breathing apparatus and rescue procedures from enclosed spaces shall be readily available, prepared to respond promptly. In other words, the fourth paragraph requires that necessary plans and preparations be made before anyone enters enclosed areas or spaces. The designated person equipped with radio communication equipment required in the third paragraph (a) must not
be part of or included in the personnel group that will be available and ready to respond promptly pursuant to the requirements in the fourth paragraph.

New section 9-8
The new section 9-8 has two paragraphs.

The first paragraph sets out a requirement for drills for entry into and rescue from enclosed spaces. The drills must be risk-assessed, then planned and carried out in a safe manner.

In the second paragraph (a) to (e) there are instructions concerning what must be included in the drills mentioned in the first paragraph. In (a) to (d), the term “inspection” is used, which means that the equipment must be checked against the performance it is supposed to deliver. When the instruments for measuring the atmosphere in enclosed areas and spaces are to be inspected, this means for instance that the instruments must be calibrated, and that the results of the measurements must be correct and trustworthy.

Section 9-8 second paragraph sets out requirements for the contents of each type of drill for entry into and rescue from enclosed spaces. In the proposed section 9-8 second paragraph (e) that was circulated for comments, it was proposed that each drill should include instruction of first aid and resuscitation techniques. After receiving and considering the comments, the NMA has changed the wording to: “[…] simulation of first aid and resuscitation techniques.” The NMA has therefore concluded that simulating first aid and resuscitation techniques is more comprehensive in a training context than merely receiving instructions on first aid and resuscitation techniques.

New section 9-9
The new section 9-9 has four paragraphs.

The first paragraph deals with marking of access points to areas where there is a risk of gas exposure or oxygen deficiency. Such access points must be clearly and visibly marked, either with signs or posters informing of the hazards.

In locations where signs or posters are susceptible to damage or soiling, the second paragraph requires that the door, hatch, manhole cover, etc. shall be painted in the same colour as the signs or posters.

The third paragraph says that warning signs and posters shall be in accordance with two alternative standards, either Norwegian Standard NS 6033, or NS-ISO 3864-1. If NS-ISO 3864-1 is used, it must be combined with NS-ISO 3864-3. To make this connection clearer, the NMA has chosen to add the preposition “with” after the conjunction “and”, which comes after NIS-ISO-1.

If the working language on board is not Norwegian, the fourth paragraph says that the warning signs must be in the working language used on board. It is set out in section 15 sixth paragraph (f) of the Regulations of 5 September 1992 No. 693 on the form and keeping of log books for ships and mobile offshore units that if the working language on board is not Norwegian, information about the ship's working language must be entered in the log book.

New section 9-10
The new section 9-10 has five paragraphs.

The purpose of the provision of the new section 9-10 is to reduce the risk of exhaust fume poisoning when an internal combustion engine is used in cargo spaces, etc. As a consequence of comments from the consultation, the NMA has determined that the term "internal combustion engine" relates to both vehicles and other machinery operated by internal combustion engines, cf. repealed section 6-16 second paragraph in the Regulations on the construction, equipment and operation of fishing vessels of 15 m in length and over.

The first paragraph says that vehicles and other machinery operated by an internal combustion engine shall only be used in spaces provided with efficient mechanical ventilation. The efficiency of the ventilation can be determined based on results from measurements required pursuant to the fourth paragraph of this section.

To reduce the risk of exhaust fume poisoning, the second paragraph states that vehicles and other machinery with an internal combustion engine shall not be abandoned with the engine running.

The third paragraph mandates signs or posters warning of the risk of exhaust fume poisoning in spaces where vehicles and other machinery operated by an internal combustion engine are used. The signs or posters must be designed in accordance with the standards of section 9-9 third paragraph, cf. the wording of the same section first paragraph "[...] or spaces where there is a risk of oxygen deficiency". Rooms where vehicles and other machinery with internal combustion engines are used, must therefore be clearly marked with warning signs or posters.

The fourth paragraph clearly sets out that the requirement found in section 9-6 first paragraph, cf. the same section fourth paragraph (a) applies when vehicles and other machinery operated by an internal combustion engine are to be used in cargo spaces.

The fifth paragraph requires the use of measuring instruments during loading and unloading. In the event of suspected exhaust gas presence in the spaces, measuring instruments capable of measuring carbon monoxide must be used.

Further details on updated lists for limit values for contamination in the working atmosphere and classified biological agents

On 28 June 2021 and 24 March 2023, the Norwegian Labour Inspection Authority laid down amendments to the Regulations concerning action and limit values. These amendments entered into force on 1 July 23021 and 24 March 2023 respectively, and one consequence is updated limit values for contamination in the working atmosphere in Annex 1 and updates in the list of classified biological agents in Annex 2 of the Regulations concerning action and limit values. The amendments laid down by the Norwegian Labour Inspection Authority in the Regulations concerning action and limit values, ensure that current Norwegian legislation corresponds with Directive (EC) 2000/54 and Directive (EC) 2004/37, as well as more recent amending directives. These legal acts are EEA-relevant and have been incorporated into Annex XVIII No. 15 of the EEA Agreement.

The NMA has determined that the limit values applicable pursuant to the Regulations concerning action and limit values mentioned above will also apply on board Norwegian ships. The amendments will ensure that Norway complies with obligations pursuant to the EEA Agreement.

Amendments to section 11-2

The definition of the wording "biological agents", which was preciously found in (b) of this section, has been moved to (a). The definitions which were previously found in (c) to (j), are found in (b) to (i) in the new version.

The definition of the term "limit value" in (f) has been changed in line with the definition found in section 1-6 first paragraph (b) of the Regulations concerning action and limit values. Still, "person working on board" is used instead of "employee", which is used in section 1-6 first paragraph (b) of the Regulations concerning action and limit values.

The definition of "micro-organism" in (k) has been changed to correspond with the definition in section 7 first paragraph (a) of the Regulations concerning action and limit values.

Amendments to section 11-5

As mentioned above, section 9-6 first paragraph requires necessary inspection to ensure that the air inside of tanks, cargo holds, narrow enclosed spaces and other spaces are safe for persons who will perform operations in such spaces. To avoid duplicate requirements, the NMA has repealed the provisions in section 11-5 second paragraph of the HSE Regulations.

Amendments to section 12-5

In section 12-5 of the HSE Regulations, the headline of the section has been changed. It now describes the contents of the section, which is limit values for pollutants in the working atmosphere.

Prior to the amendments laid down by this circular, section 12-5 first paragraph contained a provision requiring the limit values for lead, vinyl chloride and benzene respectively not to be exceeded. Compared to the proposed amendments, section 12-5 first paragraph is continued. The current limit values that must not be exceeded, however, are set in the new Annex 2 to the HSE Regulations.

In the consultation, the NMA suggested that section 12-5 second paragraph should be repealed. After considering the comments from the consultative bodies, section 12-5 second paragraph has been continued.

The limit values set in Annex 2 have been calculated based on 8 hours of exposure. It is not uncommon to have work arrangements on board Norwegian ships with 12 hour working periods. When the limit values are calculated based on an exposure period of 8 hours, the limit values must be reduced when the exposure period is increased from 8 hours to 12 hours. There are various methods for calculating a factor for reducing limit values. The NMA has established that a general reduction factor of 0.6, as stipulated in section 36 of the Regulations relating to conduct of petroleum activities, will also be an appropriate risk-reducing measure on board Norwegian ships. When this reduction factor of 0.6 is applied, the total exposure to contamination of the working atmosphere at an exposure period of 12 hours, will correspond with the exposure to contamination of the working atmosphere during a period of 8 hours.

Hence, in section 12-5 there is now a new third paragraph saying that for a working (exposure) period of 12 hours, the limit levels in Annex 2 shall be multiplied by a safety factor of 0.6.

Amendments to section 12-6

In section 12-6 of the HSE Regulations, the headline of the section has been changed. It now describes the contents of the section, which is measures in the event of exceeded exposure limit values for pollutants in the working atmosphere.

The limit values for pollutants in the working atmosphere are now included in Annex 2 to the HSE Regulations. The amended section 12-5 first paragraph states that the limit values shall not be exceeded. Section 12-6 requires that preventative measures shall be taken to improve the situation if the limit values in Annex 2 are exceeded.

Section 12-7
In the proposed amendments, the NMA suggested that section 12-7 should be repealed. Reference is made to the consultation letter, which explains why section 12-7 could be repealed. After considering the comments from the consultative bodies, the NMA has decided to continue the provisions of the current section 12-7.

Amendments to section 13-1
The definitions of infection risk groups, which are now found in section 13-1 first paragraph, are taken from Annex 3 and the wording used in the consultation. Compared to the definitions in the previously applicable section 13-1 first paragraph, the amendments of the definitions are only editorial.
Because of the new content in Annex 2, section 13-1 second paragraph now refers to Annex 3, which contains a list of classified biological agents.

Amendments to section 16-3
Since the biological agents related to the respective infection risk groups are set out in Annex 3, the limit values in the section's first and second paragraphs, which refer to Annexes in the HSE Regulations, have been amended.

Details of the amendments to the Regulations on safety measures, etc. on passenger ships, cargo ships and barges and the Regulations on the construction, equipment and operation of fishing vessels of 15 m in length and over

As previously mentioned, the NMA has gathered the provisions on inspection of gas hazard and oxygen deficiency in chapter 9 of the HSE Regulations. As a consequence of these amendments, sections 15, 16, 17 and 18 of the Regulations on safety measures, etc. on ships are repealed. Sections 6-13 to 6-15 in the Regulations on the construction, equipment and operation of fishing vessels of 15 metres in length and over are also repealed.

Since the HSE Regulations now contain all provisions on inspection of gas hazard, etc.,
the NMA has laid down amendments to section 6-16 of the Regulations on the construction, equipment and operation of fishing vessels of
15 metres in length and over. The title of the section has been changed. It now describes the contents of the first and only paragraph of the section, which is a continuation of the previously applicable section 6-16 third paragraph. In connection with the continuation of the training and age requirements for truck operators, there are minor editorial changes.

Administrative and financial implications

The NMA’s assessment is that the amendments laid down by this circular will only lead to minor administrative and financial implications for the authorities and the industry. Those who may be affected by the amendments will, as a main rule, have routines, measures and equipment to handle biological, physical and chemical agents. The NMA also surmises that inspection of gas hazard and the risk of oxygen deficiency is already in place in line with the requirements of section 2-2 of the HSE Regulations.

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Linda Bruås, Head of Department

This document has been electronically approved, and therefore does not contain handwritten signatures

Attachments:

Regulation concerning amendments to the Regulations on the working environment, health and safety of persons working on board ship and amendments to other regulations

Consultation matrix