Regulations of 4 December 2015 No. 1406 on potable water and potable water systems on mobile offshore units

Legal basis: Laid down by the Norwegian Maritime Authority on 4 December 2015 under the Act of 16 February 2007 No. 9 relating to ship safety and security (Ship Safety and Security Act) sections 2, 6, 9, 11 and 26, cf. Formal Delegation of 16 February 2007 No. 171 and Formal Delegation of 31 May 2007 No. 590.
EEA references: EEA Agreement Annex II Chapter XIX point 1 (Directive 98/34/EC as amended by Directive 98/48/EC).
Amendments: Amended by Regulations of 5 July 2016 No. 897, 19 December 2017 No. 2322, 14 February 2024 No. 280.

Chapter 1
Scope of application

Section 1
Scope of application

These Regulations apply to Norwegian mobile offshore units.

Chapter 2
Requirements for the potable water

Section 2
Requirements for quality and water treatment

(1) The potable water shall be hygienically safe. It shall:

a) be clear and without conspicuous odour, taste or colour;

b) not contain physical, chemical or biological components that could lead to a risk of harm to human health in normal use;

c) comply with requirements for quality and sampling of the Regulations of 22 December 2016 No. 1868 on water supply and water intended for human consumption (Drinking Water Regulations).

(2) Potable water shall be disinfected as a final step of treatment when the potable water is brought out of the potable water tank for consumption.

(3) Chemical products for treatment of potable water or potable water systems shall be on the Norwegian Food Safety Authority's list of such products.

(4) "Potable water" means all water intended for drinking, cooking, food preparation or other domestic purposes.

Amended by Regulation of 19 December 2017 No. 2322 (in force on 1 January 2018).

Section 3
Potable water bunkered from shore or supply vessels

Potable water bunkered from shore or supply vessel shall be chlorinated during transfer to the unit's potable water tanks.

Section 4
Potable water produced from seawater

(1) Intake of seawater shall not take place in near-coastal areas, ports or other areas where the seawater may be polluted.

(2) For potable water produced by means of:

a) evaporation, a maximum conductivity of 6 mS/m at 25°C shall be permitted, measured at the evaporator outlet;

b) reverse osmosis, a maximum conductivity of 75 mS/m at 25°C shall be permitted, measured at the outlet of the osmosis installation.

Chapter 3
Design, operation and cleaning of potable water systems

Section 5

Risk assessment and control

(1) A risk and vulnerability analysis shall be carried out for the potable water system. The analysis shall take account of:

a) potential contaminants;

b) the necessary number of seawater inlets and protection against backflow from other seawater consumers;

c) that enough water shall always be available.

(2) The risk and vulnerability analysis shall result in necessary risk mitigating measures and contingency plans.

(3) Procedures describing the control of critical points in the water supply shall be available.

(4) The potable water system shall be checked once every 24 hours. The results shall be documented.

Section 6

General requirements for potable water systems

(1) Potable water systems shall be dimensioned for a consumption of at least 200 litres of potable water per person per day.

(2) Tank volume shall ensure that enough water is always available, and shall consist of at least two separate potable water tanks. Units without a water production facility shall have at least three separate potable water tanks.

(3) Chlorination in accordance with section 3 shall be carried out with a system installed upstream of the potable water tank, and the system shall be dimensioned for maximum water supply. Chlorination systems shall be designed so that it is possible to add and mix in extra chlorine if water analyses indicate that this is necessary, cf. section 13 subparagraph f.

(4) The potable water system shall be protected against frost and heat. Hot water shall have a temperature of 65°C at the heater outlet, and at least 60°C after one minute of tapping at any point on the water mains.

(5) Materials that come into contact with the potable water shall not give off substances to the water in such quantities as to make the water hazardous to health or unsuitable as potable water, and shall be capable of tolerating the potable water quality for which the system is designed.

(6) The water production facility shall have two independent systems with salinometers and dump valves which give off an alarm and shut off the water supply when the salt content of the produced water is too high, cf. section 4 second paragraph.

(7) The potable water system shall have testing points making it possible to trace water quality changes through the system. The valve for the testing point shall be placed as close as possible to the main pipe, and the pipe end shall be short and self-draining.

Section 7

Potable water tanks

(1) Potable water tanks shall have:

a) cofferdams, or be adjoined to spaces not constituting any danger of pollution;

b) openings for inspection and cleaning. The openings shall have a tight manhole cover and be so located that inspection and cleaning may take place when the unit is in operation;

c) drainage facilities so that the tanks can be emptied completely;

d) sufficient ventilation. The ventilation pipes shall be so constructed that pollutants cannot penetrate, and the opening shall be covered by a fine net of corrosion-proof material;

e) as few interior frames and struts as possible. Interior surfaces and structures shall be easy to clean and maintain. If the tank is more than four metres high, permanent interior access platforms shall be installed for maintenance purposes at least every four metres.

(2) Pipes which carry other products than potable water through potable water tanks, shall be lead through open ducts (pipe-in-pipe).

(3) In the event of initial application or complete renewal of protective coatings in potable water tanks, the work shall be approved by an inspector certified as FROSIO level III inspector or NACE level 2 inspector.

(4) It shall be documented that protective coatings in potable water tanks are suitable for potable water purposes and that the supplier's recommendation for pretreatment, application, hardening and cleaning have been carried out.

(5) A mobile offshore unit need not comply with the requirements of the first paragraph subparagraphs a and e if the building contract has been placed or the unit is initially certified before 1 January 2016.

Amended by Regulation of 19 December 2017 No. 2322 (in force on 1 January 2018).

Section 8

UV units

(1) Mobile offshore units shall be provided with UV units with:

a) sufficient processing capacity at maximum water supply and at the poorest water quality, cf. section 2 first paragraph (c);

b) timer;

c) intensitometer;
d) signal lamps for each UV tube;
e) solenoid valve which shuts off the supply of water in the event of alarm or power failure.

(2) UV units shall be on the Norwegian Institute of Public Health's list of biodosimetrically tested UV units.

(3) A mobile offshore unit need not comply with the requirements of the second paragraph up until replacement of the UV unit if the unit is certified before 1 January 2010.

Amended by Regulation of 19 December 2017 No. 2322 (in force on 1 January 2018).

Section 9

Additional treatment of potable water produced from seawater

(1) Mobile offshore units producing potable water from seawater shall be provided with an alkalisation system or use water glass for treatment of water.

(2) In the alkalisation system, means shall be provided for:
a) sufficient return flushing of the filter;
b) easy access for interior maintenance and replacement of the filter materials.

Amended by Regulation of 19 December 2017 No. 2322 (in force on 1 January 2018).

Section 10

Pipes in the potable water system

(1) Pipes in the potable water system shall be:
a) clearly marked "Drikkevann/Potable water";
b) lead through open ducts (pipe-in-pipe) when they penetrate other tanks.

(2) The pipe network shall be so designed that:
a) water temperatures between 20°C and 60°C are prevented;
b) the water flow rate for circulation pipes is maximum 0.7 m/s;
c) the amount of water remaining stagnant over time is minimised.

(3) Pipes without circulation shall be sized in accordance with NS-EN 806-3 concerning specifications for installations inside buildings conveying water for human consumption, Part 3: Pipe sizing - Simplified method. A mobile offshore unit need not comply with this requirement if the building contract is placed or the unit is initially certified before 1 January 2016.

(4) There shall not be blind pipes in the potable water system.

(5) Pipes in the potable water system shall be protected against pollution through backflow. Technical barriers protecting the potable water shall be in compliance with NS-EN 1717 concerning protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow, chapter 5.8 table 2.

Amended by Regulation of 19 December 2017 No. 2322 (in force on 1 January 2018).

Section 11

Seawater inlets

(1) Seawater inlet for potable water shall be so located that the risk of influences from discharges from the unit is minimised. In the event of several inlets, the inlet which at any time is most favourable in relation to conditions of current and pollution shall be used.

(2) For units for which the building contract has been placed after 1 January 2016, seawater inlets used in the production of potable water shall be separated from inlets for cooling water for machinery, and the potable water inlet shall be physically closed off when the unit is in near-coastal areas, ports or other areas where the seawater may be polluted.

Section 12

Bunkering station

(1) Mobile offshore units shall be provided with a bunkering station. Mobile offshore units without a water production facility shall have at least two bunkering stations.

(2) A bunkering station shall be provided with a shut-off valve. Between the shut-off valve and the hose connection there shall be a water test tap and a flush valve.

(3)The flush valve shall be readily accessible and shall have the same capacity as the bunkering pipe.

Amended by Regulation of 19 December 2017 No. 2322 (in force on 1 January 2018).

Section 13

Bunkering documentation

Bunkering shall be documented. The declaration shall contain information about:
a) supply vessel and whether the vessel has added chlorine to the water;
b) the water works used ashore and the water works' default value for conductivity;

c) colour, odour, taste, clarity, conductivity and pH value for each tank from which the supply vessel supplies water;
d) amount of water bunkered;
e) amount of chlorine added;
f) chlorine measurements for each tank where water has been bunkered. The measurements shall be made at least 30 minutes after the bunkering is completed, and the residual chlorine value shall be above 0.05 mg/l Cl_2.

Section 14
Measuring equipment

There shall be equipment on board mobile offshore units for measuring conductivity (salinity), PH value, colour and chlorine content.

Section 15
Cleaning of tanks, pumps and pipe systems

(1) Tanks, pipes and pipe systems for potable water shall be kept clean on the inside.
(2) The potable water system shall be cleaned and disinfected before the unit leaves the yard, thereafter at least once a year and after repairs of the potable water system.
(3) Stagnant water shall be flushed weekly with full pressure.
(4) Shower heads and shower hoses shall be cleaned and disinfected at least every quarter of the year.

Chapter 4
Concluding provisions

Section 16
Exemptions

(1) The Norwegian Maritime Authority may exempt a mobile offshore unit from one or more of the requirements of the Regulations if the company applies for an exemption in writing and one of the following requirements is met:
a) it is established that the requirement is not essential and that it is justifiable in terms of safety;
b) it is established that compensating measures will maintain the same level of safety as required by these Regulations;
c) it is established that the requirement hinders the development and use of innovative solutions when such solutions will maintain the same level of safety as required by these Regulations.
(2) Statement from safety representative shall be attached to the application for exemption.

Section 17
Transitional provision

Mobile offshore units may, until the next certificate issue, comply with the requirements that applied at the time of the last certificate issue, unless otherwise provided by the individual provision.
Amended by Regulations of 19 December 2017 No. 2322 (in force on 1 January 2018), 14 February 2024 No. 280.

Section 18
Entry into force

These Regulations enter into force on 1 January 2016. As from the same date the Regulations of 4 September 1987 No. 860 on potable water system and potable water supply on mobile offshore units are repealed.