Regulations of 4 December 2015 No. 1392 on towing arrangement and transit of mobile offshore units (Towing Regulations)

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, 14, and 21, cf. Formal Delegation of 16 February 2007 N0. 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 28 June 2016 No. 833, 19 December 2017 No. 2322, 27 March 2023 No. 459, 14 February 2024 No. 280.

Chapter 1
Scope of application

Section 1
Scope of application

(1) These Regulations apply to Norwegian mobile offshore units.

(2) These Regulations do not apply to permanently anchored units as specified in Regulations of 10 July 2009 No. 998 on positioning and anchoring systems on mobile offshore units section 14 fourth paragraph (c).

Chapter 2
Propulsion and towing force

Chapter title amended by Regulation of 28 June 2016 No. 833.

Section 2
Necessary forces during transit

A mobile offshore unit shall have sufficient force either by self-propulsion, towing force or combined self-propulsion and towing force to keep the unit in a fixed position at:

a) 20 m/s wind;
b) 1 m/s current;
c) a significant wave height of 5 m (H_s);
d) zero up-crossing wave period (T_z) between 6 and 9 seconds.

Chapter 3
Towing arrangement

Section 3
Types of towing arrangements

(1) Mobile offshore units shall be provided with:

a) a main towing arrangement;
b) an emergency towing arrangement;
c) a narrow water towing arrangement.

(2) A main towing arrangement is not required when the mobile offshore unit is certified for independent navigation and by self-propulsion complies with the requirements of section 2.

Section 4 *Main towing arrangement*

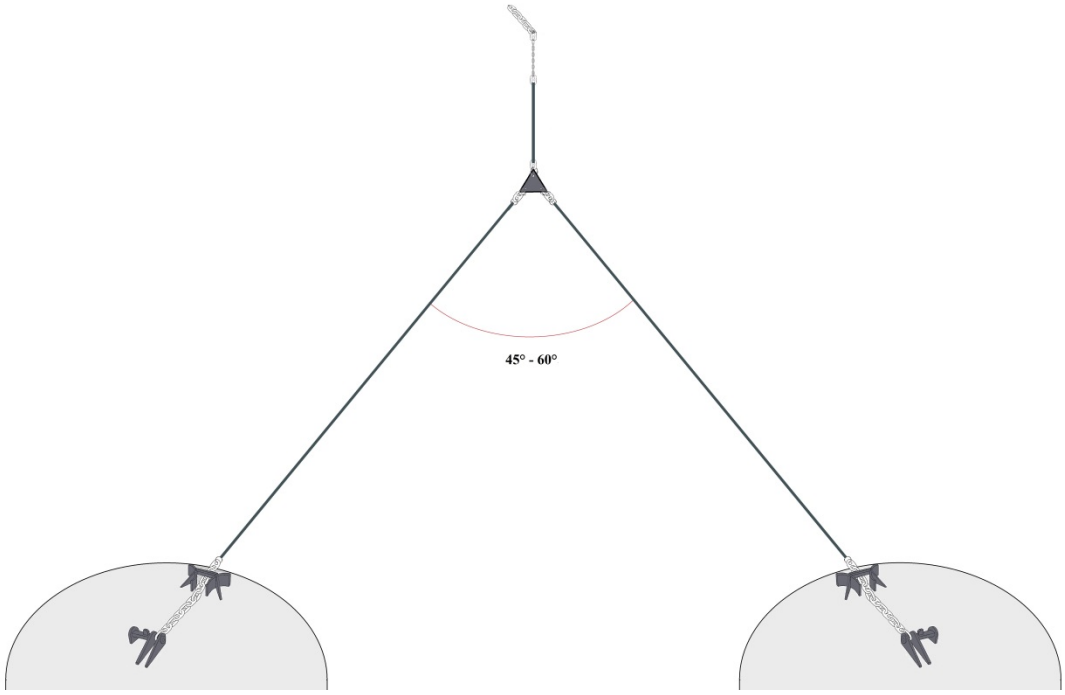
(1) A main towing arrangement shall consist of:

a) at least two fastening devices on the unit, sufficiently spaced to have control during the towing operation;
b) one or more towing connections;
c) one weak link per towing connection, with a suitable chain in the end to place in the shark-jaw of the towing vessel. Weak link means the part of the towing connection which is intended to collapse first in case of overloading;
d) shackles for connections.

(2) The following spare material shall be on board during the towing operation:

a) one complete towing connection;
b) two weak links, including shackles for the mounting arrangement.

(3) If only one towing vessel is used, a bridle with a flounder plate shall be used. The upper angle of the bridle shall be between 45° and 60°, as illustrated below:



Section 5
Emergency towing arrangement

(1) An emergency towing arrangement shall consist of:

a) a towing connection with a suitable chain in the end to place in the shark-jaw of the towing vessel;

b) shackles for connections.

(2) The emergency towing arrangement shall be capable of being arranged for one towing vessel.

(3) Non-self-propelled units may, as an alternative to the second paragraph, be fitted with emergency towing arrangement for the same number of towing vessels as the main towing arrangement.

(4) A mobile offshore unit need not comply with the requirement of the second paragraph if the unit is initially certified or the building contract has been placed before 1 January 2016.

(5) During transit, it shall be possible to hook the emergency towing arrangement to the towing vessel after loss of main and emergency power.

Amended by Regulations of 28 June 2016 No. 833, 19 December 2017 No. 2322 (in force on 1 January 2018).

Section 6
Narrow water towing arrangement

A narrow water towing arrangement shall consist of attachment points for towing lines suitable for connection to an assistance vessel when such vessel is required by the coastal State.

Chapter 4
Design and dimensioning of the main and emergency towing arrangement

Section 7
Design of the towing arrangement

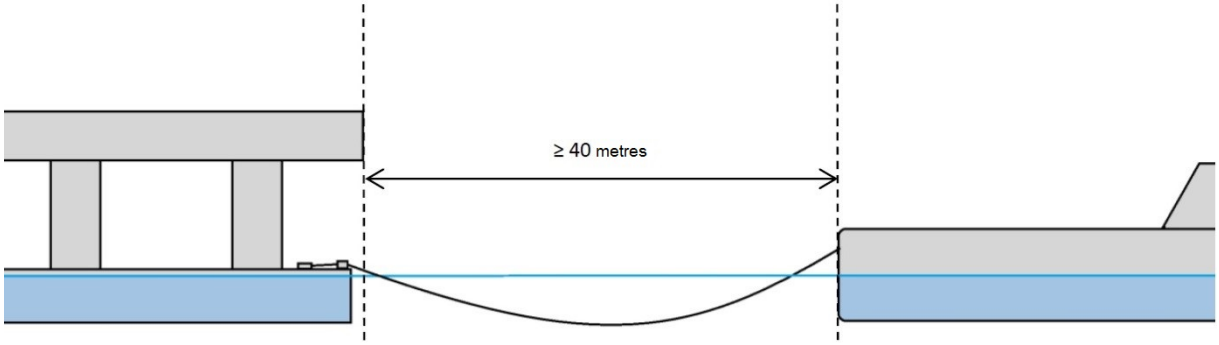
(1) The towing connection shall consist of a chain or a combination of chain and wire. Where the towing connection is subject to heavy wear and tear, a chain shall be used.

(2) Wire in towing connections shall be fitted with terminations, with solid thimbles or cast socket, suitable for towing operations.

(3) The position, construction and arrangement of the attachments shall be such that it is easy and quick to replace the towing equipment in calm waters.

(4) All loose equipment which is part of the towing arrangement shall have a certificate from the manufacturer (certificate of compliance) and be suitable for towing operations.

(5) The towing connection shall be of sufficient length, so that connection to the towing vessel can be executed at a distance of minimum 40 metres from the unit, as illustrated:



Amended by Regulation of 28 June 2016 No. 833.

Section 8
Dimensioning of towing arrangement

(1) The design load (F_D) for the towing arrangement shall at least be equal to the requirements for towing force specified in section 2.

(2) The propulsion power of a mobile offshore unit shall not be included in the dimensioning of the emergency towing arrangement.

(3) The weak link shall have a breaking strength so as to withstand at least three times FD.

(4) The breaking strength of other towing equipment shall be at least 30% higher than the breaking strength of the weak link. If the breaking strength of the weak link is clearly defined, the percentage may be lower.

(5) As an alternative to the requirements of the third and fourth paragraphs, a unit which is initially certified, or for which the building contract has been placed, before 1 January 2016, may be fitted with:

a) a weak link with a breaking strength so as to withstand between two times F_D and the breaking strength of the towing equipment;

b) towing equipment with a breaking strength so as to withstand at least three times F_D.

(6) Triplates shall be so dimensioned that the yield limit is not exceeded when subjected to a load that causes other towing equipment to break, cf. fourth paragraph.

(7) The shackles for connection shall have a breaking strength that exceeds the breaking strength of the strongest part of the towing connection.

(8) Fastening devices for towing, hawseholes, etc. shall be dimensioned with a utilization factor of 0.9, and associated supporting structure with 0.8, against the material's yield limit in relation to the breaking strength pursuant to the fourth paragraph, or the fifth paragraph for units that are initially classified or have a building contract entered into prior to 1 January 2016.

Amended by Regulations of 28 June 2016 No. 833, 19 December 2017 No. 2322 (in force on 1 January 2018), 27 March 2023 No. 459.

Section 9
Additional requirements for the main towing arrangement

(1) A weak link shall be placed at the end of the towing equipment which is connected to the towing vessel.

(2) In the event of a break in the main towing arrangement, it shall be possible to establish a new tow connection in a quick and safe manner.

(3) The unit shall be fitted with a retrieving arrangement which shall be dimensioned to retrieve the combined load of the unit's towing connection and have a safety margin equal to the weight of 150 metres of wire of the heaviest type used for towing the unit.

Chapter 5
Planned transit

Section 10
Requirements for transit

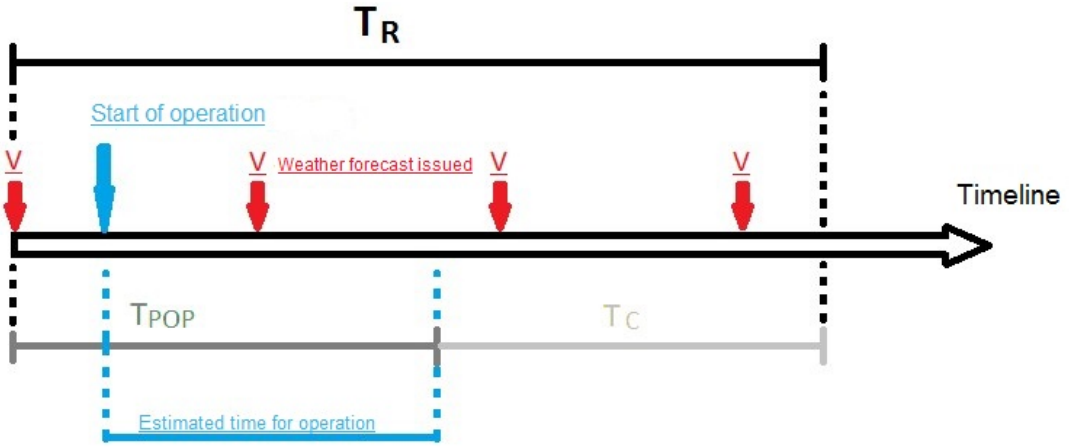
(1) Transits shall take place in such a way that it causes the least possible encumbrance and danger to other activities. Special regard shall be paid to fishing and shipping.

(2) Weather restricted or unrestricted operations shall be performed within the unit's design criteria.

(3) Weather restricted and unrestricted operations mean:

a) *"weather restricted operations":* Operations with reliable weather forecasts, where the operation's reference period (T_R) is less than 96 hours and the planned operation period based on a conservative schedule for the operation (T_{POP}) is less than 72 hours.

$T_R = T_{POP} + T_C$
where
T_R starts at the time of the last weather forecast before the operation commences,
T_C = Estimated maximum contingency time. T_C shall cover general uncertainty in T_{POP}, and possible contingency situations that will require additional time to complete the operation.
b) *"unrestricted operations"*: Operations where either T_R is of longer duration than 96 hours or T_{POP} is of longer duration than 72 hours or where the weather forecasts are unreliable.



T_R starts at the time of the weather forecast. The operation starts when the unit leaves the safe condition.

(4) Before a weather restricted operation:
a) an updated weather forecast for each 12-hour period of the waters in question shall be obtained;
b) the weather window shall be three times the planned operation time. Alternatively, the risk-based method in DNV-OS-H101 chapter 4 can be used to estimate the weather window. A standard with an equivalent safety level can be used. When using a risk-based method, the weather window shall not be less than 1.5 times the planned operation time.

(5) Environmental criteria for unrestricted operations shall be based on extreme value statistics for the areas in question. When active use of long-term weather forecasts can predict any extreme weather conditions within the defined T_R, the weather criteria may be reduced in consultation with the Norwegian Maritime Authority. Extreme value statistics means environmental conditions with a 10-year return period for towing operations lasting up to 30 days and a 100-year return period for operations lasting more than 30 days.

(6) Unrestricted operations shall not be carried out if environmental conditions which may pose a risk to life, property and the environment are forecast.

Section 11
Additional requirements for self-elevating units during transit

(1) During towing, the legs of a self-elevating unit shall be secured in a position which is accepted by an MOU classification society.

(2) Before a weather restricted operation:
a) safe jack-up locations along the tow route shall be established where the distance between the locations is not more than 12 hours;
b) the deck cargo shall have a permanent location;
c) the deck cargo shall be accounted for in the design and operation criteria;
d) the deck cargo shall be secured in order to withstand environmental loads that may occur during the towing operation, and heeling caused by damage to the unit, cf. section 21 of the Regulations of 20 December 1991 No. 878 on stability, watertight subdivision and watertight/weathertight means of closure on mobile offshore units.

(3) Deck cargo shall not be carried during an unrestricted operation. There shall only be personnel on board for periods when this is necessary for the execution of the towing operation.

Chapter 6
Risk assessment and procedure

Section 12
Risk assessment

(1) Prior to each transit, the company shall carry out a risk assessment. The risk assessment shall at least include:

a) the personnel necessary for carrying out the towing operation;
b) the number of towing vessels needed assessed against the consequence of a single failure, e.g. line breakage or engine breakdown;
c) the condition of the towing vessel and specifications, including towing equipment and towing arrangement;
d) the towing vessel's force restriction in order to protect against overloading of the towing arrangement;
e) weather conditions in relation to design criteria;
f) the reliability of the weather forecast;
g) the need for and the use of fendering;
h) safe distance to towing vessel during hook-up;
i) stability;
j) seafastening;
k) planned tow route, including port of refuge and bunkering station;
l) necessary ballasting during the towing operation;
m) assessment of vulnerability and criticality of the ballast system;
n) any additional measures during towing in coastal waters or in areas with other installations and upon departure and arrival;
o) contingency plan in case the operation criteria are exceeded;
p) availability of towing force;
q) the amount of oil and chemicals on board assessed against any environmental consequence in the event of a discharge.

(2) For self-elevating units, the risk assessment shall also include:
a) seabed conditions on jack-up locations;
b) pre-loading during jacking up operations, including accept criteria for minimum and maximum permitted submersion of legs in the seabed;
c) safe jack-up locations along the planned tow route.

Section 13
Procedure for the planning and execution of transits

The unit shall have a procedure for the planning and execution of transits. The procedure shall at least include:
a. how towing or transits shall be executed, including interaction between the unit and the towing vessel;
b. items to be checked before and during transits, i.a. weather forecast, seafastening, weathertight and watertight closing;
c. relevant structural restrictions and operational limitations, i.a. wave height, wave period, wind, current, deck cargo, draught and temperature;
d. diagrams showing wind forces as function of wind velocity, current forces as function for current velocity and wave drift forces in relation to significant wave height and period;
e. stability data;
f. general arrangement;
g. specification of the unit's thrust, if any, including relevant redundancy;
h. ballast system;
i. required personnel and competence;
j. safety equipment;
k. the towing design load (F_D) for the towing equipment and arrangement, including the emergency towing arrangement;
l. methods for establishing a new towing connection;
m. anchor particulars (if fitted) and the use thereof;
n. measures during critical events, e.g. line breakage, engine breakdown, extreme weather. A possible measure may be e.g. increasing the length of the towing connection.

(2) For self-elevating units, the procedure shall also include securing of legs and inspection of leg wells.

Chapter 7
Concluding provisions

Section 14
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 15
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 16
Entry into force

These Regulations enter into force on 1 January 2016. As from the same date, Regulations of 17 December 1986 No. 2319 on field moves and towing of mobile offshore units and concerning towing system and mooring of supply ships at such units are repealed.