

## DMA RO Circular no. 024

### Interim guideline for approval of high-speed offshore vessels carrying more than 12 industrial personnel

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#### 1. General

This interim guideline has been developed to respond to the advancement within the offshore wind industry and the special hazards that high-speed offshore vessels carrying industrial personnel encounter due to the nature of their operations. It establishes a safety standard that takes into account the nature of offshore operations and offers the possibility to use an equivalent to the passenger vessel safety standard when more than 12 industrial personnel are being carried.

The requirements in this circular have been established based on the “Safety analysis for high-speed offshore vessels carrying up to 60 persons” conducted by the Danish Maritime Authority (DMA) in November and December 2016.

Notice B from the DMA – the construction and equipment, etc. of ships – chapter I, regulation 1(d), stipulates the following:

*“If the design or application of a ship deviates from the principles on which the drafting of this set of regulations is based, or if the number of persons working on board the ship or working on board an installation serviced by the ship exceeds the crew carrying out the ship’s normal navigation, on-going maintenance, operation of machinery and mess services, etc. by more than 12 persons, this shall be taken into account when designing, equipping and operating the ship so that it is ensured that the ship complies with the provisions of section 2 of the act on safety at sea.*”

*In this connection, the Danish Maritime Authority may make the issuance of a trade permit/permit to carry passengers conditional upon the ship’s partial or full compliance with the rules applying to passenger ships, for example through certification in accordance with the IMO Code of Safety for Special Purpose Ships, 2008 (2008 SPS Code).”*

The international interim recommendations on the safe carriage of more than 12 industrial personnel on board vessels engaged on international voyages (MSC.418(97)) state that: *“industrial personnel may be carried on board ships meeting the provisions of the 2008 SPS Code or other standards, providing they meet an equivalent level of safety acceptable to the Administration, taking into consideration the number of persons on board.”*

The 2008 SPS Code has, however, been developed for ships of conventional design and is therefore not suitable for the design, construction, approval and operation of high-speed vessels. This circular takes into account that these vessels carry more than 12 industrial personnel in addition to the vessel’s crew and establishes a safety standard for high-speed offshore vessels in the same way as the 2008 SPS Code regulates offshore vessels of conventional design.

## 2. Application

This circular provides a safety standard equivalent to that of existing Danish regulation and offers an alternative for high-speed offshore vessels carrying more than 12 industrial personnel that must otherwise be approved and certified as high-speed passenger craft or special purpose ships – until the IMO has developed a mandatory code for the said type of ships.

This circular can be applied to high-speed offshore vessels carrying more than 12 industrial personnel on domestic and international voyages:

1. regardless of vessel size;
2. carrying up to 60 persons on board (including crew and passengers);
3. not carrying more than 12 passengers; and
4. engaged in offshore industrial activities as defined in MSC.418(97).

Vessels carrying up to 12 industrial personnel can still be approved and certified in accordance with either Notice F from the DMA, *Technical regulation on the construction, equipment, etc. of small commercial vessels*, Notice B from the DMA, *The construction and equipment, etc. of ships* or the 2000 HSC Code, in accordance with Notice B from the DMA, *The construction and equipment, etc. of ships* without additional safety requirements.

The safety analysis on which this circular is based does not cover the risks related to Fibre Reinforced Plastic (FRP) elements within ship structures. If FRP elements within ship structures on vessels carrying industrial personnel are considered, it must be done in accordance with DMA RO Circular no. 025, *Guidelines for use of Fibre Reinforced Plastic – Fire Safety*.

### 2.1 Industrial personnel

Industrial personnel means all persons who are transported or accommodated on board for the purpose of offshore industrial activities performed on board other vessels and/or other offshore facilities and who meet the interim recommendations on the safe carriage of more than 12 industrial personnel on board vessels engaged on international voyages (MSC.418(97)). Industrial personnel should not be considered or treated as passengers under SOLAS regulation I/2(e).

Industrial personnel are generally not considered seafarers in accordance with the act on *seafarers' conditions of employment, etc.* and are consequently covered by the provisions of the Danish order on *minimum protection of certain categories of persons on board ships* (order no. 722 of 8 June 2017, as amended).

## 3. Approval and certification

High-speed offshore vessels are approved in accordance with the International Code of Safety for High-Speed Craft, 2000 (HSC Code) and the additional requirements of this circular. Accordingly, they must be surveyed and certified as if they were high-speed cargo craft of 500 gross tonnage or above.

The HSC Code applies to passenger craft regardless of size and, since this circular is an interim standard, it should be applied until the IMO has developed a mandatory instrument offering an alternative to the existing high-speed passenger craft rules. High-Speed Craft Cer-

tificates as cargo craft must be issued to high-speed offshore vessels covered by this circular regardless of their size.

The certification of cargo craft according to the HSC Code has been fully delegated to the Recognised Organisations (ROs) through the Danish RO Agreement. Correspondingly, the ROs are fully authorised to approve and certify high-speed offshore vessels. Accordingly, the ROs are to issue High-Speed Craft Safety Certificates and Permits to Operate High-Speed Craft.

### 3.1 *Full-scale evacuation demonstration and verification*

Prior to the issuance of a Permit to Operate High-Speed Craft, a full-scale evacuation drill, with the safe manning and maximum number of persons allowed on board according to the vessel's certification, must demonstrate achievement of the required evacuation time and be verified by the DMA or RO in accordance with the HSC Code, regulations 4.8.3 and 4.8.4.1 as a category A craft.

Where the achievement of the required evacuation time has been demonstrated and verified for a vessel, subsequent vessels in the series (i.e. sister vessels) may, based on a specific evaluation, be exempted from verification by the DMA or RO in accordance with regulation 4.8.11, provided that:

1. The ISM Company is the same.
2. It is a completely identical vessel built according to the same plans and at the same shipyard.
3. Life-saving appliances and arrangements are completely identical.
4. Muster lists and evacuation procedures are completely identical.

Applications for exemptions must be submitted to the DMA and the above must be confirmed by the ROs.

### 3.2 *Equivalents*

Where compliance with specific requirements of the HSC Code would be impractical for the particular design of the craft, equivalents may be considered by the DMA in accordance with the HSC Code. Applications are to be submitted to the DMA in accordance with the Danish RO Agreement.

### 3.3 *Exemptions*

For vessels below 500 gross tonnage, the following exemptions from the HSC Code are normally accepted by the DMA. However, all applications are to be submitted to the DMA in accordance with the Danish RO Agreement.

1. Regulations 2.6.7 and 2.6.10 regarding the position of the damage in any location on the vessel are to apply only in the forward one-third of the length (L) for vessels up to 45 metres. Only one-compartment status is required in the other length areas of the vessel. Exemption from regulation 2.6.7 does not refrain a ship from the requirement given in regulation 8.10.1.3 regarding sufficient survival craft capacity.

2. Regulation 2.6.9 regarding the extent of bottom damage in areas vulnerable to raking damage must, on vessels with a length (L) of less than 45 metres, apply only in the forward one-third of the length (L) of the vessel. In this area the extent of damage is to be applied anywhere, including across the main transverse watertight bulkheads. In the remaining areas of the vessel, regulation 2.6.9 is not to apply.

If, an exemption is granted from regulations 2.6.7, 2.6.9 and/or 2.6.10, an evacuation analysis must be carried out in accordance with regulation 4.8.2 and MSC/Circ.1166, *Guidelines for a simplified evacuation analysis for high-speed passenger craft*.

3. Regulation 8.3.5.1 regarding lifejackets suitable for children is not to apply if no children are carried on board.
4. Regulation 8.10.1.5 regarding a possible exemption from the rescue boat carriage requirement for vessels with a length of less than 30 metres may also be applied for vessels above 30 metres as long as they are below 500 gross tonnage. An equivalent technical arrangement is to ensure that it is possible to recover a helpless person from the water.

Vessels, regardless of size, with an exemption from the rescue boat carriage requirement must meet the requirements of regulations 8.10.1.5.1-8.10.1.5.3. Consequently, man-overboard drills are to replace the rescue boat drills required in regulation 18.5.8.3 of the HSC Code. Man-overboard drills must be carried out at intervals as described in paragraph 4.5 of this circular.

Furthermore, the field of vision from the operating compartment in accordance with regulations 8.10.1.5.2 and 15.3 of the HSC Code must be given special consideration to ensure the safe recovery of a helpless person from the water.

If an exemption is granted in accordance with regulation 8.10.1.5, regardless of vessel size, an equivalent arrangement must ensure that liferafts can be manoeuvred to a safe distance in connection with an evacuation.

## **4. Additional safety requirements**

### *4.1 Class notation*

In addition to the requirements contained in this circular, vessels must be designed, constructed and maintained in compliance with the structural, mechanical and electrical requirements of a recognised classification society. The classification rules applied must be applicable to either vessels carrying industrial personnel or passenger vessels.

### *4.2 Management for the safe operation of ships*

All high-speed offshore vessels, regardless of size, are to be certified in accordance with Notice B from the DMA, chapter IX – safe operation of ships.

#### 4.3 *Buoyancy, stability and subdivision*

Where compliance with chapter 2 of the HSC Code requires consideration of the effect of passenger weight, the requirements of regulation 2.10 for passenger craft must be used. Furthermore, industrial personnel are to be considered passengers in relation to consideration of the effect of weight, and calculations must be made on the basis of the maximum number of persons on board.

An accurate inclining experiment must be conducted in accordance with regulation 2.7 of the HSC Code.

#### 4.4 *Structural safety*

If the vessel is designed for pushing against or connecting with other structures (boat landings), then the area of the bow intended to be pushed against another structure must be designed and strengthened to withstand the applied loads in accordance with the requirements of a recognised classification society. Furthermore, the requirements of the recognised classification society must take into account unintended contact between the vessel and offshore structures.

#### 4.5 *Emergency instructions and drills*

Emergency fire and evacuation drills in accordance with regulation 18.5 of the HSC Code must be carried out with industrial personnel on board at intervals not exceeding 14 days, and intermediate drills must be carried out with the crew during the intermediate period at intervals not exceeding 14 days.

The goal is that each member of the crew participates in at least one evacuation, fire, damage control and man-overboard drill per week. The purpose of drills with industrial personnel on board is furthermore to train the crew's ability to handle an emergency while carrying industrial personnel on board and, at the same time, to improve the industrial personnel's abilities in an emergency.

#### 4.6 *Escape, evacuation and recovery*

Industrial personnel may be assigned simple duties in connection with evacuation. If industrial personnel are assigned simple duties, they must be included on the muster list as if they were crew and comply with SOLAS III/37. Industrial personnel assigned simple duties must be instructed accordingly when they receive on board ship-specific safety familiarization in accordance with MSC.418(97).

The following minimum requirements shall be met:

1. All deck areas must be fitted with non-skid material.
2. Adequate handholds must be fitted to facilitate safe movement in the accommodation and on deck areas during normal operation and in an evacuation situation.
3. A procedure must be implemented to ensure that the maximum external emergency response time and SAR capacity at an offshore site or for a given voyage is in accordance with the vessel's operational pattern and the LSA equipment limitations.

The procedure used for voyages with industrial personnel on board may differ from the ones used for transit voyages where only the crew is on board. As long as transit voyag-

es take place within the area of operation defined in the Permit to Operate High-Speed Craft, they must take place according to regulations 1.9.1.1.1-1.9.1.1.3.

Transit voyages outside the area of operation defined in the Permit to Operate High-Speed Craft must take place according to regulations 1.9.1.1.1-1.9.1.1.4.

4. An assembly station must be designated and meet the requirements of regulation 8.4.4 of the HSC Code.
5. Immersion suits and lifejackets of appropriate size must be provided for all those on board.
6. All vessels must carry additional lifejackets for not less than 5% of the total number of persons on board in accordance with regulation 8.3.5.2 of the HSC Code. These lifejackets must be stowed in conspicuous places on deck or at assembly stations.
7. Open reversible liferafts according to annex 11 of the HSC Code must not be used.

#### *4.7 High-speed offshore vessels carrying more than 36 persons*

An evacuation analysis must be carried out for vessels carrying more than 36 persons in accordance with regulation 4.8.2 and MSC/Circ.1166, *Guidelines for a simplified evacuation analysis for high-speed passenger craft*.

#### *4.8 Type rating training*

The requirement for type rating training applies to all high-speed offshore vessels regardless of size – just as the requirement for high-speed passenger craft. Type rating training must be in accordance with the requirements for passenger craft. Therefore, the type rating for all crew members must cover the control and evacuation of industrial personnel as if industrial personnel were passengers in the sense of regulation 18.6 of the HSC Code.

Education, training and certification, including Type Rating Certificates, are regulated by the Danish order no. 190 of 9 March 2011 *on technical regulation on education, training and certification of officers on high-speed craft*.

Consequently, the said order applies to high-speed offshore vessels regardless of size. The Company must establish and keep updated an educational and training programme ensuring training in the operational and navigational risks and characteristics of the high-speed craft on which the officer is to serve, in accordance with section 4 of the said order. Furthermore, the Company is to keep a record of the educational and training programme of each individual officer, in accordance with section 8 of the order.

##### *4.8.1 High-speed offshore vessels of 500 gross tonnage and above*

For officers serving on board high-speed offshore vessels of 500 gross tonnage and above, the DMA will issue Type Rating Certificates in accordance with section 8.2 of the order at the request of the Company.

##### *4.8.2 High-speed offshore vessels of less than 500 gross tonnage*

The DMA does not require or issue Type Rating Certificates for officers serving on board high-speed offshore vessels of less than 500 gross tonnage. With the exception of the above, vessels of less than 500 gross tonnage must comply with the Danish order in full.

## 5. Additional requirements if enclosed sleeping berths are provided for industrial personnel

The HSC Code does not allow for the provision of sleeping berths for passengers and, thus, enclosed sleeping berths are never to be provided for passengers on board high-speed offshore vessels.

Overnight accommodation for industrial personnel was included in the scope of the safety analysis on which this guideline is based. Since industrial personnel are not considered or treated as passengers, it might be possible to provide enclosed sleeping berths for industrial personnel.

If enclosed sleeping berths are provided for industrial personnel, the following additional minimum requirements must be met.

It should be noted that section 5 of this circular, regarding enclosed sleeping berths provided for industrial personnel, might not be accepted by all coastal and port States.

### 5.1 Minimum requirements

1. If enclosed sleeping berths are provided for industrial personnel, an evacuation analysis must be carried out in accordance with regulation 4.8.2 and MSC/Circ.1166, *Guidelines for a simplified evacuation analysis for high-speed passenger craft*, taking into account the number of industrial personnel for whom enclosed sleeping berths are provided.
2. The accommodation areas containing sleeping berths for industrial personnel must meet all the provisions of the HSC Code applicable to accommodation areas containing sleeping berths for crew members.
3. The muster list must include industrial personnel as if they were crew and comply with SOLAS III/37.
4. On a high-speed offshore vessel where industrial personnel are planned to be provided with enclosed sleeping berths, the mustering of newly-embarked industrial personnel must take place prior to departure. Industrial personnel are to be instructed in their duties as assigned on the muster list and the action to take in an emergency.
5. The ship-specific safety familiarization mentioned in section 4.3 of MSC.418(97) must include escape from enclosed sleeping berths in case of an emergency.
6. If enclosed sleeping berths are provided for industrial personnel, all evacuation, fire, damage control and man-overboard drills mentioned in paragraph 4.5 of this circular must be carried out with industrial personnel on board.
7. The evacuation time in accordance with regulation 4.8 of the HSC Code and the evacuation drill mentioned in paragraph 3.1 of this circular, which is to demonstrate compliance with regulations 4.8.3 and 4.8.4.1 of the HSC Code, must be achieved with industrial personnel distributed in enclosed sleeping berths when the first abandon craft announcement is given.
8. Exemption from paragraph 3.1 of this circular regarding verification of full-scale evacuation demonstration is not possible if enclosed sleeping berths are provided for industrial personnel.
9. Public spaces and service spaces, accommodation areas where sleeping berths are provided for crew or industrial personnel, storage rooms other than those containing

flammable liquids, and similar spaces must be protected by a fixed sprinkler system in accordance with regulations 7.13.1 and 7.13.2 of the HSC Code.

10. Exemption from regulations 2.6.7, 2.6.9 and 2.6.10 of the HSC Code are not possible if enclosed sleeping berths are provided for industrial personnel.

11. All cabins must be located with due regard to easy, safe and quick access to public spaces from inside the craft in accordance with regulation 4.7.1 of the HSC Code. This is interpreted as meaning that no cabins must be located below the design waterline.

## **6. Dangerous goods**

Dangerous goods must be transported in accordance with either:

1. SOLAS regulation II-2/19, SOLAS chapter VII and the provision of the HSC Code, chapter 7, part D – Requirements for craft and cargo spaces intended for the carriage of dangerous goods, or alternatively
2. DMA RO Circular no. 023 – Carriage of dangerous goods in packaged form on offshore vessels of less than 500 gross tonnage carrying industrial personnel within the renewable energy offshore sector.

## **7. Noise and vibrations**

The International Code on Noise Levels on Board Ships (Noise Code) applies to all Danish ships, including high-speed craft. The Noise Code has been transposed into Danish law through Notice A from the DMA – *Technical regulation on occupational health in ships*, chapter III – *Physical occupational health effects*.

Since industrial personnel are not considered or treated as passengers under SOLAS regulation I/2(e), they should be treated as crew in relation to the Noise Code. Consequently, all spaces intended to be used by industrial personnel should be considered accommodation spaces.

## **8. Personnel transfer at sea**

In accordance with paragraph 5 of MSC.418(97), MSC-MEPC.7/Circ.10, *Guidance on safety when transferring persons at sea*, or relevant industry standards should be taken into account, to the extent possible, when transferring industrial personnel at sea.