

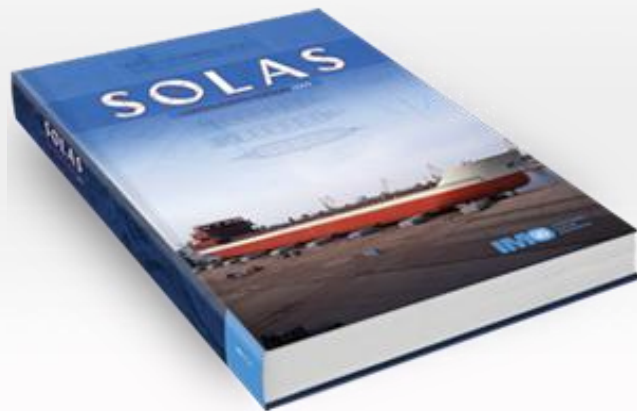
IMO safety and environmental regulations for OSVs

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- **SOLAS and mandatory codes relating to OSVs**
 - Application, exemptions and equivalents
 - IS Code and other mandatory codes
- **Relevant non-mandatory codes and guidelines**
 - OSV Guidelines and OSV Code
 - LHNS Guidelines
 - SPS Code
 - MODU Code
- **Ongoing discussions at IMO re. regulatory framework for OSVs**
- **MARPOL: No_x/So_x regulations and ECAs**
- **MARPOL: CO₂ regulations: EEDI and SEEMP**



- IMO Convention adopted in 1948 and entered into force in 1958
- SOLAS has longer history than IMO and is core instrument
- SOLAS consists of articles and Annex (chapters I to XII)
- Chapter I (General provisions), Regulation 1 (Application):
“(Unless expressly provided otherwise,) the present regulations apply only to ships engaged on international voyages.”





Definitions and exceptions relevant to OSVs

Reg I/2: Definitions

- **International voyage** means a voyage from a country ... to a port outside such country...
- A **passenger** is every person other than the master and the members of the crew or other persons employed or engaged in any capacity on board a ship on the business of that ship ...

Definitions

- A **passenger ship** is a ship which carries more than twelve passengers.
 - A **cargo ship** is any ship which is not a passenger ship.
- (grey area, which may be relevant to special personnel or industrial personnel)

Reg I/3: Exceptions

- The present regulations, unless expressly provided otherwise, do not apply to: ...
cargo ships of less than 500 gross tonnage...



Exemptions and equivalents

Reg I/4: Exemptions

- (a) Single international voyage (for ships not normally engaged on international voyages)
- (b) Any ship which embodies features of a novel kind from any of the provisions of chapters II-1, II-2, III and IV
(details to be communicated to IMO for circulation to all Contracting Governments)

Reg I/5: Equivalents

- (a) Administration may allow any other fitting, material, appliance or apparatus, or type thereof, to be fitted or carried, or any other provision to be made in that ship, if it is satisfied that they are at least as effective as required by the regulations
- (b) Details to be communicated to IMO for circulation to all Contracting Governments



References to OSV, SPS (no explicit references in the text)

Chapter II-1, Part B - Subdivision and stability

Regulation 4 – General

The damage stability requirements in Parts B-1 through B-4 shall apply to cargo ships of 80 m in length (L) and upwards and to all passenger ships ... but shall exclude those cargo ships which are shown to comply with subdivision and damage stability regulations in other instruments* developed by the Organization.



Footnote: references to OSV, SPS

* Cargo ships shown to comply with the following regulations may be excluded from the application of part B-1:

...

- .4 Guidelines for the design and construction of offshore supply vessels (resolution A.469(XII)) (*superseded by 2006 OSV Guidelines from 1 Dec 2006*)
- .5 Code of Safety for Special Purpose Ships (resolution A.534(13)) (*superseded by 2008 SPS Code from 13 May 2008*); ...

Mandatory Codes



Relevant mandatory Codes applicable to OSVs

2008 IS Code

- International Code on Intact Stability, 2008 (**2008 IS Code**) (part A) became mandatory on 1 July 2010 under SOLAS and the 1988 Load Lines Protocol, for all types of ships of 24 m in length and over including OSVs and MODUs
- Part B contains recommended intact stability criteria and additional guidelines for certain types of ships, e.g., OSV, SPS and MODU, giving guidance to Administrations if no national requirements are applied

Other relevant mandatory Codes

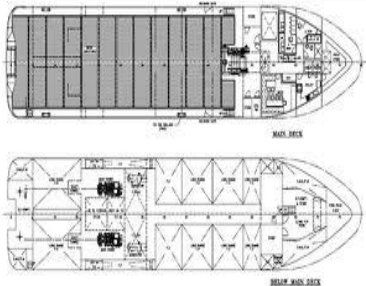
- Fire Test Procedures (FTP) Code
- Fire Safety Systems (FSS) Code
- International Life-Saving Appliance (LSA) Code
- International Safety Management (ISM) Code
- International Ship and Port Facility Security (ISPS) Code



Summary



- SOLAS applies to all passenger ships and cargo ships over 500 GT, engaged on international voyages (if more than 12 persons on board, to be considered passengers, requirements for passenger ships apply)



- SOLAS allows wide range of exemptions and equivalents by Administrations (flag States) (ultimately Administration decides which SOLAS requirements should be applied)



- SOLAS does not directly refer to the OSV, SPS, LHNS Guidelines/Codes (except in footnote in chapter II-1 concerning damage stability requirements)

OSV Guidelines (non-mandatory)



Brief history of OSV Guidelines

November 1981

- IMO Assembly adopts Guidelines for the design and construction of offshore supply vessels (OSV Guidelines) (resolution A.469(XII))

(after 25 years ...)

- IMO, in view of a number of amendments to SOLAS and other IMO instruments (such as the Intact Stability Code) which affected the OSV Guidelines, reviewed and updated them

Revised Guidelines in December 2006

- Maritime Safety Committee (MSC 82) adopts Guidelines for the design and construction of offshore supply vessels, 2006 (resolution MSC.235(82)) which superseded the previous Guidelines



Outline of the 2006 OSV Guidelines

Preamble

- possibility of relaxations introduced by concept of “near-coastal voyage”
- provisions for OSVs carrying more than 12 industrial personnel are not included
- if OSV is used for special purposes (e.g. diving assistance, oceanographic surveys), persons on board in connection with this should be treated as “special personnel”

Application

- all new OSVs of 24 m and over but not more than 100 m in length should comply with stability/subdivision provisions in parts 2 and 3
- Stability of OSVs above 100 m in length should be to the satisfaction of the Administration
- Guidelines may be applied under the equivalency provisions of SOLAS regulation I/5

Definitions

- OSV: primarily engaged in the transport of stores, materials and equipment to offshore installations
- and is designed with accommodation and bridge erections in the forward part of the vessel and an exposed cargo deck in the after part for the handling of cargo at sea
- New OSV: the keel of which is laid on/after 1 June 2007

LHNS Guidelines (non-mandatory)



Outline of the LHNS Guidelines for OSV

Guidelines adopted in 1989

- IMO Assembly adopts Guidelines for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk on offshore support vessels (LHNS Guidelines) (A.673(16))

Amendments in 2006

- MSC 82 recognized necessity to update LHNS Guidelines and, noting that they are referred to in the OSV Guidelines, amended them by resolutions MSC.236(82) and MEPC.158(55), in conjunction with revising OSV Guidelines

Alternative standards

- Guidelines apply in addition to OSV Guidelines and where they set out alternative standards to those in the OSV Guidelines, the LHNS Guidelines should be followed

OSV Code (non-mandatory)



Outline of the OSV Code

Adopted in 1997

IMO Assembly adopts Code of safe practice for the carriage of cargoes and persons by Offshore Supply Vessels (OSV Code) (A.863(20)), providing for safe practice in operation and management of OSVs when interfacing with offshore installations and for guidance on items to be covered by the SMS of the ISM Code

Definitions, main contents

- **Contractor** means the organization that has the responsibility for the operation of the ship as in paragraph 1.1.2 of ISM Code (Company)
- **Operator** means the party who contracts an OSV
- Requirements for port operations, sea transport and operations at offshore installations, including communication requirements
- Annexes on example and types of offshore installations, colour coding of hoses, and interfacing activities of operators and contractors

SPS Code (non-mandatory)



Outline of the SPS Code

SPS Code adopted in 1983

IMO Assembly adopts Code of Safety for Special Purpose Ships (SPS Code) (A.534(13)), noting that, by virtue of the specialized nature of the work undertaken by these ships, special personnel are carried, who are neither crew nor passengers as defined in SOLAS

2008 SPS Code

MSC 84, recognizing numerous SOLAS amendments since 1983 and considerable experience gained in application of Code, adopted the 2008 SPS Code (MSC.266(84)) (with particular attention to trainees on training ships)

Contents

- applies to SPS of 500 GT and above certified on or after 13 May 2008
- Special Purpose Ship Safety Certificate to be issued, in addition to SOLAS safety certificates
- Definition for “special personnel” included (carried on board in connection with the special purpose of the ship)



Application

- applies to SPS of not less than 500 GT **certified** on or after 13 May 2008
- Administration may apply Code to SPS of less than 500 GT and to SPS constructed before 13 May 2008
- does not apply to ships meeting the MODU Code requirements
- not intended for ships used to transport and accommodate industrial personnel that are not working on board

Definitions

- **Passenger:** definition same as in same as SOLAS
- **Special personnel:** all persons who are not passengers or members of the crew carried on board in connection with the special purpose of the ship or because of special work carried out on board that ship
- includes scientists, trainees, fishermen, salvage, pipe-laying, cable-laying, seismic, diving, crane operators

Definitions

- **Special purpose ship:** mechanically self-propelled ship which by reason of its function carries on board more than 12 special personnel
- if ship carries more than 12 passengers, it should not be considered as SPS but as SOLAS passenger ship

MODU Code (non-mandatory)



Outline of the MODU Code

MODU Codes adopted in 1979 and 1989

IMO Assembly adopted Code for the Construction and Equipment of Mobile Offshore Drilling Units (MODU Code) in 1979 (A.414(XI)) and updated it in 1989 (A.649(16)), following a number of tragic MODU casualties which emphasized the need for a review of the international safety standards

2009 MODU Code

2009 MODU Code (A.1023(26)) adopted in 2009, in view of amendments to ICAO Convention concerning helicopter facilities and numerous amendments to SOLAS, especially concerning fire protection, life-saving, stability and subdivision

Purpose, application

- recommends design criteria, construction standards and other safety measures for MODUs constructed on or after 1 January 2012
- coastal State may impose additional requirements regarding the operation of industrial systems, not dealt with by the Code



Proposal by Germany and IMCA (International Marine Contractors Association)

MSC 85 in 2008

- MSC 85 considered proposal (MSC 85/23/4) to investigate the need for clarification of classification of vessels in the offshore industry regarding guidance provided in relevant IMO codes and guidelines, with a view to exploring the possibility of developing a safety code for offshore construction support vessels
- MSC instructed DE Sub-Committee to consider all other relevant codes with a view to avoiding duplication



DE Sub-Committee

- DE 52 agreed that clarification of existing IMO instruments would be far more beneficial than the development of a specific new code
- DE 53 agreed to resolve matter with guidelines/interpretations (IACS)
- DE 54 - item not on agenda
- DE 55 agreed to interpretations of the SPS Code for MSC 90's approval
- DE 56 discussed classification of wind farm vessels (Workshop before MSC 90 on 15 May 2012)

Interpretations of SPS Code



Draft MSC circular for approval by MSC 90

Interpretations for chapters 1, 2, 6, 7 and 10

- **Chapter 1 (General):** SOLAS exemption provisions still apply, regardless of provisions in the Code
- **Chapter 2 (Stability and subdivision):** bilge pump numeral: number of passengers to be number of special personnel
- **Chapter 6 (Fire protection):** where the Code refers to SOLAS, passenger ship requirements should be applied; return-to-port requirements should only be applied if more than 240 persons are carried
- **Chapter 7 (Dangerous goods):** clarification of formal safety assessment (does not mean full FSA study)
- **Chapter 10 (Safety of navigation):** SPS with more than 240 persons on board to apply requirements of SOLAS chapter V for passenger ships, less than 240 persons cargo ship requirements



Chapter 3 – Requirements for the control of emissions from ships

Regulation 13 - NO_x

- Applies to marine diesel engines with a power output of more than 130 kW on ships
- Sets **emission limits for NO₂** for ships constructed on or after:
 - Tier I: 1 Jan 2000
 - Tier II: 1 Jan 2011
 - Tier III: 1 Jan 2016
- Tier III controls apply only to specified ships while operating in Emission Control Areas (ECA), outside Tier II controls apply

Regulation 14 - SO_x

- Sets **limits for sulphur contents** of fuel oil used on ships:
 - 4.5% m/m prior to 1 Jan 2012
 - 3.5% m/m on or after 1 Jan 2012
 - 0.5% m/m on or after 1 Jan 2020
- Limits for **ECAs**:
 - 1.5% m/m prior to 1 July 2010
 - 1.0% m/m on or after 1 July 2010
 - 0.1% m/m on or after 1 Jan 2015



Chapter 3 – Requirements for the control of emissions from ships

Emission Control Areas (ECAs) (Appendix VII to Annex VI)

Regulation 13 – NO_x ECAs

- North American area
 - Off Pacific coast
 - Off Atlantic coast
 - Off Hawaii
- United States Caribbean sea area (Puerto Rico + US Virgin)
- Any other sea area that may be designated by IMO

Regulation 14 – SO_x ECAs

- Baltic Sea (reg 1.11.2, Annex I)
- North Sea (reg 1.14.6, Annex V)
- North American area
 - Same areas as reg 13
- United States Caribbean sea area (Puerto Rico + US Virgin)
- Any other sea area that may be designated by IMO



Mandatory measures to reduce GHGs (MEPC 62 in July 2011)

New chapter 4 – Regulations on energy efficiency of ships

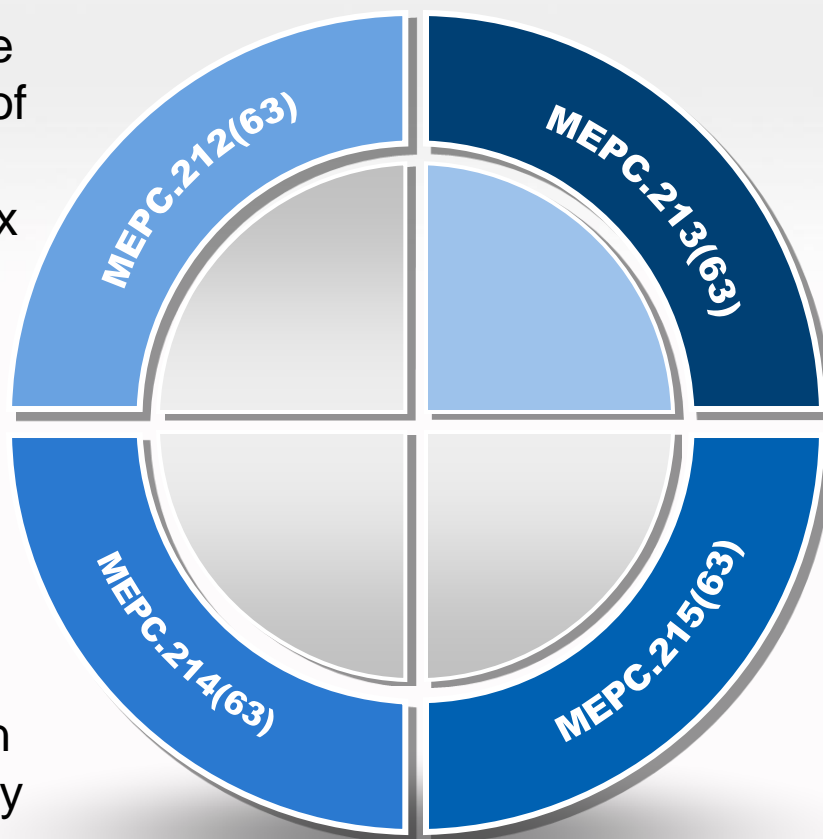
- **Application:** all ships of 400 GT and above from 1 January 2013. Waiver may be granted under certain conditions but requirements will apply to all ships from 1 July 2019 latest.
- **Mandatory Energy Efficiency Design Index (EEDI)** for new ships to be calculated in accordance with Guidelines on method of calculation of the attained EEDI (res. MEPC. 212(63)) and to be compared to required EEDI.
- **Ship Energy Efficiency Management Plan (SEEMP)** for all ships establishes mechanism to improve energy efficiency of ships. May form part of the SMS under ISM Code. Guidelines on SEEMP in resolution MEPC.213(63).
- **International Energy Efficiency (IEE) Certificate** (Appendix VIII of chapter 4) to be issued to every new ship to verify that ship's attained EEDI complies with requirements and that SEEMP is on board.
- **Market-based measures** to be further discussed.



EEDI guidelines adopted at MEPC 63 (Feb 2012)

2012 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI)

2012 Guidelines on survey and certification of the Energy Efficiency Design Index (EEDI)



2012 Guidelines for the development of a Ship Energy Efficiency Management Plan (SEEMP)

Guidelines for calculation of reference lines for use with the Energy Efficiency Design Index (EEDI)

Thank you for listening



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