



# Standard Guide for Design, Construction, and Operation of Vessels Providing Accommodation Service to Offshore Installations<sup>1</sup>

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## INTRODUCTION

This guide provides the marine industry with recommendations for the design, construction and operation of vessels providing accommodation service to offshore installations. An owner or operator of an accommodation service vessel (ASV) should be concerned about the safety of the vessel offered by its design and construction because ASV operations may involve significant consequences due to the presence of large numbers of people, that are typically far offshore and distant from search and rescue assets, and may be located near high risk industrial activities.

### 1. Scope

1.1 *Objectives*—Guidelines are provided for the design, construction, and operation of an Accommodation Service Vessel (ASV) intended to provide accommodation services to an offshore installation. The goal of these guidelines is to focus attention on the safety aspects of design. These guidelines are recommended for each vessel providing accommodation service to an offshore installation for more than 36 persons.

1.2 *Relationship with Regulatory and Classification Standards*—This guide covers information for designing, constructing and operating ASVs and includes considerations not generally addressed in classification or statutory requirements intended for traditional cargo or passenger ships. While portions of this guide may refer to standards, it is not intended to supersede any classification or statutory requirements.

1.3 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the*

*Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

### 2. Referenced Documents

#### 2.1 ASTM Standards:<sup>2</sup>

F1337 Practice for Human Systems Integration Program Requirements for Ships and Marine Systems, Equipment, and Facilities

#### 2.2 API Standards:<sup>3</sup>

API RP 75 Recommended Practice for Development of a Safety and Environmental Management Program for Offshore Operations and Facilities (3rd edition, May 2004)

#### 2.3 International Labor Organization:<sup>4</sup>

ILO Practice for Accident Prevention on Board Ship at Sea and in Port (2nd edition, 10 October 1996)

#### 2.4 International Maritime Organization:<sup>5</sup>

SOLAS International Convention for the Safety of Life At Sea (SOLAS), 1974, as amended, London, 2009  
Resolution A.1023(26) Code for the Construction and Equipment of Mobile Offshore Drilling Units (2009 MODU Code), 2009 London, December 2009, as amended

<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> Available from American Petroleum Institute (API), 1220 L. St., NW, Washington, DC 20005-4070, <http://www.api.org>.

<sup>4</sup> Available from International Labour Organization (ILO), 4 route des Morillons, CH-1211 Genève 22, Switzerland, <http://www.ilo.org>.

<sup>5</sup> Available from International Maritime Organization (IMO), 4, Albert Embankment, London, SE1 7SR, United Kingdom, <http://www.imo.org>.

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STCW International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers (STCW) Convention and Code, London, April 1994, as amended  
 2008 SPS Code Code of Safety for Special Purpose Ships, 2008, London, 2008, as amended

IMO Res. A.1079(28) Recommendations for the Training and Certification of Personnel on Mobile Offshore Units (MOUs), London, March 2014

IMO Res. A.741(18) International Safety Management Code (ISM Code), as amended, London, 2014

IMO MSC-MEPC.7/Circ.8 Revised Guidelines for the operational implementation of the International Safety Management (ISM) Code by companies

2.5 *International Marine Contractors Association*.<sup>6</sup>

IMCA Personnel Transfer Guidance Guidance on the Transfer of Personnel to and from Offshore Vessels and Structures, IMCA SEL 025, Rev.1, IMCA M 202 Rev. 1, June 2014

SIMOPS Guidance on Simultaneous Operations (SIMOPS), IMCA M 203, March 2010

2.6 *United States Code of Federal Regulations*.<sup>7</sup>

Title 30, CFR Part 250 “Oil and Gas and Sulphur Operations in the Outer Continental Shelf” (30 CFR Part 250)

Title 33, CFR Part 96 “Rules for the Safe Operations of Vessels and Safety Management Systems” (33 CFR Part 96)

Title 46, CFR Chapter I, Subchapter H “Passenger Vessels” (46 CFR Subchapter H)

Title 46, CFR Chapter I, Subchapter I “Cargo and Miscellaneous Vessels” (46 CFR Subchapter I)

Title 46, CFR Chapter I, Subchapter L “Offshore Supply Vessels” (46 CFR Subchapter L)

Title 46, CFR Chapter I, Subchapter T “Small Passenger Vessels” (46 CFR Subchapter T)

Title 46, CFR Chapter I, Subchapter I-A “Mobile Offshore Drilling Units”, section 109.213 “Emergency training and drills” (46 CFR 109.213)

2.7 *U.S. Coast Guard Notices and Circulars*.<sup>8</sup>

NVIC 02-08 Navigation and Vessel Inspection Circular 02-08 “Crew Endurance Management Systems”

77 FR 70172 “Notice of recommended interim voluntary guidance on Lifesaving and Fire-fighting Equipment, Training and Drills Onboard Offshore Facilities and Mobile Offshore Drilling Units (MODUs) Operating on the U.S. Outer Continental Shelf,” (77 Fed. Reg. 70172, November 23, 2012)

### 3. Terminology

#### 3.1 Definitions:

3.1.1 *accommodation service, n*—the provision of hotel-like services, such as dining, berthing, and access to recreational facilities, for accommodated personnel.

3.1.2 *accommodation personnel, n*—personnel who are not engaged in work aboard the vessel itself but are engaged or intended to engage in work on a nearby offshore installation; accommodated personnel may include, but are not limited to, personnel defined as *offshore workers*.<sup>9</sup> Where these guidelines refer to a standard associated with a “passenger,” that term should be interpreted as intended to be addressed to an accommodated person.

### 4. Summary of Guide

4.1 *Functional Requirements*—An owner, operator, or charterer of a vessel has the responsibility to exercise due diligence to provide a seaworthy vessel for its intended commercial use.<sup>10</sup> To meet this responsibility, each owner, operator, or charterer of a vessel that provides accommodation service should properly address the risks to which the accommodated personnel are exposed. Consideration should be given to:

4.1.1 Meeting an international safety standard such as SOLAS and being classed;

4.1.2 Ease of access between the ASV and the offshore installation it supports (that is, personnel transfer);

4.1.3 Availability of emergency equipment and services on the offshore installation being supported;

4.1.4 Degree to which the ASV would be expected to respond to an emergency on the supported offshore installation;

4.1.5 Degree to which the ASV and the offshore installation it supports are under common command and control;

4.1.6 Nature of the work being undertaken on the supported offshore installation(s) and the hazards related thereto (for example, hydrocarbon exposure);

4.1.7 Ability of workers to discriminate between alarms and emergency instructions on the ASV and the offshore installation it supports;

4.1.8 Duration of service;

4.1.9 Distance from search and rescue (SAR) resources;

4.1.10 Number, size and type of other vessels involved in the offshore activity that are capable of rendering assistance in an emergency;

4.1.11 Resilience of the ASV to maintain capability despite incurring casualties such as fire or flooding;

4.1.12 Number of persons on the ASV;

4.1.13 Protection of means of egress for accommodated personnel;

4.1.14 Station-keeping, including dynamic positioning; and

4.1.15 Environmental hazards.

4.2 *Guide Format*—In view of the variety of vessel types that can provide accommodation service and the multiple items to be considered in providing this service, an ASV design should retain flexibility to mitigate the risks associated with the

<sup>6</sup> Available from International Marine Contractors Association (IMCA), 52 Grosvenor Gardens, London, SW1W 0AU, United Kingdom, <https://www.imca-int.com>.

<sup>7</sup> Available from U.S. Government Printing Office, Superintendent of Documents, 732 N. Capitol St., NW, Washington, DC 20401-0001, <http://www.access.gpo.gov>.

<sup>8</sup> Available from U.S. Coast Guard, 2703 Martin Luther King Jr Ave SE, Washington DC 20593-7000, <https://www.uscg.mil>.

<sup>9</sup> For example, 46 CFR 125.160.

<sup>10</sup> For example, 46 U.S.C. 30701 Note, § 4(1).

parameters of a particular accommodation service and utilize a variety of design features. For this reason, the recommended standards of this guide are presented in a matrix format and not intended to be applicable to all situations.

## 5. Recommended Standards

5.1 **Table 1** contains a list of recommendations associated with each consideration category.

**TABLE 1 Standards Recommended for ASVs**

Category	Recommended Standard	
Authority to Operate	The vessel should meet the requirements and interpretations of the International Convention for Safety of Life at Sea (SOLAS) as either a passenger ship or a cargo ship, or an equivalent national regulation.	
Independent Certification	The vessel should be classed with an international classification society recognized by the Administration and should obtain and maintain notations associated with significant design features of the vessel (for example, if the vessel is fitted with dynamic positioning, a dynamic positioning notation should be obtained).	
Safety Management System (SMS)	The vessel should operate under a certified Safety Management System developed under API RP 75 supplemented by applicable elements of 30 CFR part 250, subpart S, the ISM Code, and 33 CFR part 96. The SMS also should be compatible with the SEMS of the offshore installation the vessel supports as well as incorporate recommendations of NVIC 02-08 "Crew Endurance Management Systems."	
Portable Accommodation Modules, if Installed	Portable Accommodation Modules should meet class and SOLAS requirements associated with the design, construction, installation, and survey of fixed accommodation installed on board and the host vessel standards. The design review for the installation should verify that the protected means of egress and issues for which strict SOLAS compliance is not practicable should be addressed by use of SOLAS regulation II-2/17.	
Subdivision, Stability, and Watertight Integrity	If vessel is not column-stabilized:	2008 SPS Code, Chapter 2 should be met.
	If vessel is column-stabilized:	2009 MODU Code, Chapter 3, should be met, except that, if more than 60 persons are carried, vertical bulkheads in columns are considered to be damaged if they are spaced closer than ¼ of the column perimeter (see 2009 MODU Code, paragraph 3.5.10.3).
	Active counterflooding systems:	Flooding control and mitigation measures that can be implemented and completed using emergency power sources within ten minutes of the onset of internal flooding may be included in the assessment of the ability of the vessel to meet damage stability standards as an equivalent means to reduce list or trim, or both.
Electrical Installations	If ≤60 persons on board	SOLAS II-1 Part D emergency source of power standards for cargo ships should be met, plus the emergency power source should be able to supply any power operated watertight door with sufficient power to enable operation for at least 30 minutes.
	If >60 persons on board	SOLAS II-1 Part D emergency source of power standards for passenger ships should be met (36 hour duration rather than 18 hours; requires transitional power source) and tanker hazardous location standards should also be met.
Fire Protection	2008 SPS Code, Chapter 6, should be met.	
Lifesaving Equipment and Arrangements	"Notice of recommended interim voluntary guidance on Lifesaving and Firefighting Equipment, Training and Drills Onboard Offshore Facilities and Mobile Offshore Drilling Units (MODUs) Operating on the U.S. Outer Continental Shelf," (77 FR 70172, October 12, 2012), should be met.	
	2008 SPS Code, Chapter 8, should be met.	
Hydrocarbon Risks, If Exposed	All vessels:	2009 MODU Code, Chapter 9, should be met.
	If within 60 meters of a hydrocarbon risk source:	A site specific hazards and fire/explosion risk analysis should be performed and referred to in the design basis;  Hydrocarbon gas detection equipment facilitating selective emergency shut-downs of ventilation systems and prime movers should also be provided.
	When combustible gases are detected, these should activate:	Audible and visible alarms before the vapor concentration reaches 20% of the lower explosion limit (LEL)
		Automatic machinery safeguards (for example, shut-down) in hazardous areas when the LEL reaches 40% of the LEL  Other operational measures to safeguard personnel and remove the vessel from the hazardous environment