

**MOBILE OFFSHORE UNITS  
JULY 2008**

**NOTICE NO. 4 – August 2012**

The following Rule Changes become **EFFECTIVE AS OF 1 AUGUST 2012**.

*(See <http://www.eagle.org> for the consolidated version of the Guide for Building and Classing Mobile Offshore Units 2008, with all Notices and Corrigenda incorporated.)*

*Notes - The date in the parentheses means the date that the Rule becomes effective for new construction based on the contract date for construction. (See 1-1-4/3.3 of the ABS Rules for Conditions of Classification – Offshore Units and Structures (Part 1).)*

**CHAPTER 1 SCOPE AND CONDITIONS OF CLASSIFICATION**

**SECTION 2 CLASSIFICATION SYMBOLS AND NOTATIONS**

*(Revise Subsection 1-2/7, as follows.)*

**7 Temporary Mooring Equipment and Systems (1 August 2012)**

Temporary mooring is intended for release at anchor or in an emergency while the unit is in the transit mode.

The symbol **Ⓔ** will be placed after the symbols of classification to signify that the equipment for anchoring (temporary mooring) of the unit is in compliance with 3-4-1/3 of the *ABS Rules for Building and Classing Mobile Offshore Drilling Units (MODU Rules)*.

For self-propelled units, symbol **Ⓔ** is mandatory and all anchoring (temporary mooring) equipment is to be fabricated and tested in presence of and to the satisfaction of the attending Surveyor, and certified in accordance with 6-1-10/Table 1 of the *MODU Rules*.

For non-propelled units fitted with an anchoring (temporary mooring) equipment, if the optional symbol **Ⓔ** is requested, equipment is to be fabricated and tested in presence of and to the satisfaction of the attending Surveyor, and certified in accordance with 6-1-10/Table 1 of the *MODU Rules*.

*(Revise Subsection 1-2/9, as follows.)*

**9 Position Mooring Equipment and Systems (1 August 2012)**

Position mooring is intended for maintaining position during the operation of the unit.

**9.1 Symbol **Ⓜ** for Position Mooring Equipment**

The symbol **Ⓜ** will be placed after the symbols of classification, provided the position mooring equipment, certified by ABS in accordance with the optional class service requested by the Owner, at least complies with 3-4-1/5 of the *MODU Rules* and with requirements of the Owner's specification.

### 9.3 Symbol $\text{\textcircled{P}}$ for Position Mooring System

The symbol  $\text{\textcircled{P}}$  will be placed after the symbols of classification to signify that the position mooring systems, certified by ABS in accordance with the optional class service requested by the Owner, are in compliance with Appendix 3-4-A1 of the *MODU Rules* and 3-4-1/7 of the *MODU Rules* and with requirements of the Owner's specification.

## CHAPTER 1 SCOPE AND CONDITIONS OF CLASSIFICATION

### SECTION 4 PLANS AND DESIGN DATA TO BE SUBMITTED

*(Revise Subsection 1-4/7, as follows.)*

## 7 Additional Plans (1 August 2012)

Where additional class notations or certification under the other Rules, Guides or regulations as described in Section 1-1-5 of the *ABS Rules for Conditions of Classification – Offshore Units and Structures (Part 1)* are requested, submission of additional plans and calculations may be required.

## CHAPTER 1 SCOPE AND CONDITIONS OF CLASSIFICATION

### SECTION 5 OPERATING MANUAL

## 1

*(Revise first paragraph of Subsection 1-5/1, as follows.)*

*(1 August 2012)* An operating manual which is consistent with the information and criteria upon which classification is based is to be placed aboard the unit for the guidance of the operating personnel. The primary language of the Operating Manual is to be English. Units not meeting the criteria of 3-1-3/1.3 and 4-1-1/7.7 of the *MODU Rules* for unrestricted service are to have the notation **Restricted Service** placed in the Operating Manual. In cases where units are designed to the criteria for unrestricted service, but where certain additional conditions specified by the Owner are presented which do not meet the criteria for unrestricted service, the Operating Booklet is to contain a notation **Limited Service Condition** for such additional condition. Insofar as classification is concerned, the operating manual is to include, as appropriate, the following information:

### 1.3

*(Revise Item 1-5/1.1i), as follows.)*

- i) *(1 August 2012)* Limiting environmental conditions, including wave height and period, wind velocity, current velocity, service temperature of the unit (see 3-1-1/25 of the *MODU Rules*), minimum expected sea temperature, sea bed penetration, spud can-soil stiffness, air gap, and water depth;

**CHAPTER 1      SCOPE AND CONDITIONS OF CLASSIFICATION**

**SECTION 6      CONSTRUCTION BOOKLET**

*(Relocate Chapter 1, Section 6 to 7-1/Table 2.)*

**CHAPTER 2      GENERAL**

**SECTION 1      DEFINITIONS**

**5      Types of Unit**

*(Revise Paragraph 2-1/5.1, as follows.)*

**5.1      Self-Elevating Unit (1 August 2012)**

A unit with movable legs capable of raising its hull above the surface of the sea and lowering it back into the sea.

The hull has sufficient buoyancy to transport the unit to the desired location. Once on location, the hull is raised to a predetermined elevation above the sea surface on its legs, which are supported by the sea bed.

The legs of such units may be designed to penetrate the sea bed, may be fitted with enlarged sections or footings, or may be attached to a bottom mat.

**CHAPTER 2      GENERAL**

**SECTION 2      ENVIRONMENTAL LOADINGS**

**1      Loading Criteria (1 August 2012)**

*(Revise first paragraph of Subsection 2-2/1, as follows.)*

A unit's modes of operation should be investigated using anticipated loads, including gravity and functional loads together with relevant environmental loads due to the effects of wind, waves, currents, and where deemed necessary by the Owner or designer, the effects of earthquake, sea bed supporting capabilities, ambient temperature, fouling, ice, etc. Where applicable, the loads indicated herein are to be adhered to for all types of mobile offshore units. The Owner is to specify the environmental conditions for which the plans for the unit are to be approved. These design environmental conditions are to be recorded in the Operating Manual [see 1-1-5/1.3i) of the *MODU Rules Supplement to the ABS Rules for Conditions of Classification – Offshore Units and Structures (Part 1)*].

(Revise 2-2/Table 1, as follows.)

**TABLE 1**  
**Material Selection (1 August 2012)**

	<i>Section of MODU Rules</i>
Material Characteristics	3-1-4/1.3
Toughness	3-1-4/1.5
Materials Other than Steel	3-1-4/1.7
Service Temperature	3-1-4/1.9
Hull Steel Grades	3-1-4/3
Selection of Grades	3-1-4/5

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

**CHAPTER 3 HULL CONSTRUCTION AND EQUIPMENT**

**SECTION 1 PLANS AND DESIGN DATA TO BE SUBMITTED**

**1 Hull and Design Data**

(Add new last bullet and revise second-to-last bullet of Subsection 2-3/1, as follows.)

- (1 August 2012) A description of environmental conditions including the service temperature of the unit (see 3-1-1/25 of the *MODU Rules*) and minimum expected sea temperatures for each mode of operation
- (1 August 2012) Critical structural areas identified in structural analyses (see 3-1-1/29 of the *MODU Rules*)

**CHAPTER 3 HULL CONSTRUCTION AND EQUIPMENT**

**SECTION 2 HULL STRUCTURES AND ARRANGEMENTS**

**3 Common Structures**

(Revise Paragraph 3-2/3.5 and add new Subparagraph 3-2/3.5.1, as follows.)

**3.5 Protection of Steel Work (1 August 2012)**

Unless otherwise approved, all steel work is to be suitably coated. Tanks or preload spaces intended for seawater ballast are to have a corrosion-resistant hard coating on all internal surfaces. Other effective methods of corrosion protection will be specially considered.

In cases where scantlings are based on 3-2/1.1 and 3-2/1.3, and corrosion control methods are not provided, the scantlings are to be suitably increased.

**3.5.1 Performance Standards for Protective Coating (PSPC)**

Where requested by the Owner, a unit with protective coatings which are found to comply with the requirements in the *ABS Guide for the Class Notation Coating Performance Standard (CPS)* will be assigned and distinguished in the Record with the class notation **CPS**.

## 5 Self-Elevating Units

*(Revise Paragraph 3-2/5.3, as follows.)*

### 5.3 General Requirements for Materials and Scantlings (1 August 2012)

#### 5.3.1 Material Selection

Grouping of structural elements of self-elevating units into material application categories (special, primary, secondary) is to be in accordance with 3-2-3/3.1 of the *MODU Rules*.

#### 5.3.2 Scantlings

Scantlings of the major structural elements of the unit are to be determined in accordance with the requirements of Sections 3-2/1 and 3-2/3. Where applicable, and except as outlined below, scantlings are also to meet the requirements of the *Steel Vessel Rules* or the *Barge Rules*. The section modulus requirement for framing members, in general, may be determined from the equations in 3-2-4/3 of the *MODU Rules*, where the values of  $c$ ,  $h$ ,  $s$  and  $\ell$  are as indicated in 3-2/Figure 1.

## 7 Column-Stabilized Units

*(Add new Paragraph 3-2/7.7, as follows.)*

### 7.7 Material Selection (1 August 2012)

Grouping of structural elements of column-stabilized units into material application categories (special, primary, secondary) is to be in accordance with 3-2-4/1.7 of the *MODU Rules*.

*(Renumber existing Paragraph 3-2/7.7 as 3-2/7.9.)*

## 9 Welding, Forming and Weld Design (1 August 2012)

*(Delete Paragraph 3-2/9.3 and 3-2/Table 7 and revise 3-2/Table 6, as follows.)*

### 9.1 Weld Design

Weld design is to be in compliance with Section 3-2-6 of the *MODU Rules*, as shown in 3-2/Table 6.

**TABLE 6**  
**Weld Design (1 August 2012)**

	<i>Section of MODU Rules</i>
Fillet Welds	3-2-6/1
Full or Partial Penetration Corner or Tee Joints	3-2-6/3
Alternatives	3-2-6/5

**CHAPTER 3 HULL CONSTRUCTION AND EQUIPMENT**  
**SECTION 3 STABILITY AND WATERTIGHT/WEATHERTIGHT INTEGRITY**

**1 Stability (1 August 2012)**

*(Revise Subsection 3-3/1, as follows.)*

All units are to have positive metacentric height in calm water equilibrium position for all afloat conditions, including temporary positions when raising or lowering. For the purpose of determining compliance with the stability requirements contained herein, it is to be assumed that the unit is floating free of mooring restraints. However, detrimental effects of catenary mooring systems or of the thrusters for dynamically positioned units are to be considered.

The metacentric height is to be specified for each mode of operation and guidance is to be included in the Operating Manual on the procedure to determine and satisfy the expected metacentric height. This may be accomplished by including the minimum metacentric height in the calculation of the allowable KG.

The wind speeds referenced in this section are to be used to calculate overturning moments for intact and damage stability calculations. These wind speeds are not intended to represent actual environmental limits.

Stability requirements in accordance with 3-3-2/1 and 3-3-1/3 of the *MODU Rules* are to be complied with, as shown in 3-3/Table 1.

*(Revise 3-3/Table 1, as follows.)*

**TABLE 1**  
**Stability (1 August 2012)**

	<i>Section of MODU Rules</i>
Stability Afloat	3-3-2/1.3
Intact Stability	3-3-2/1.3.1
Damage Stability	3-3-2/1.3.2, 1.3.3
Alternatives for Treatment of Void Spaces	3-3-2/1.3.4
Inclining Experiment	3-3-1/3

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

*(Revise 3-3/Table 2, as follows.)*

**TABLE 2**  
**Stability Criteria (1 August 2012)**

	<i>Section of MODU Rules</i>
Righting Moment	3-3-2/3.3
Overturning Moment	3-3-2/3.7
Wind Tunnel Tests	3-3-2/3.9
Alternative Stability Criteria	3-3-2/3.11

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

**CHAPTER 3 HULL CONSTRUCTION AND EQUIPMENT**

**SECTION 4 POSITION MOORING SYSTEMS**

*(Revise Subsection 3-4/1 and add new 3-4/Table 1, as follows.)*

**1 Position Mooring Systems and Equipment (1 August 2012)**

The symbols **Ⓔ**, **Ⓜ** and **Ⓟ** are not required as a condition of classification, except as indicated hereunder and in 8-5/9 of this Guide.

All self-propelled units are to have temporary mooring equipment for anchoring while the unit is in the transit mode. The symbol **Ⓔ** is a condition of classification for self-propelled units.

For non-self-propelled units, when requested by the Owner, the symbol **Ⓔ** may be placed after the symbols of classification in the *Record*.

**1.1 Temporary Mooring Equipment**

The symbol **Ⓔ** placed after the symbols of classification in the *Record*, thus: **⊠ A1 Ⓔ**, which will signify that the equipment for temporary mooring, for anchoring while the unit is in the transit mode, is in compliance with the applicable requirements of Section 3-4-1 of the *MODU Rules* as shown in 3-4/Table 1 or with requirements corresponding to the service limitation noted in the unit’s classification, which have been specially approved for the particular service. For drilling units with symbol **Ⓟ**, this requirement may be met if position mooring equipment can be released in an emergency while the unit is in the transit mode.

**TABLE 1**  
**Mooring Systems (1 August 2012)**

	<i>Section of MODU Rules</i>
Anchoring and Mooring Equipment	3-4-1/9
Equipment Mass and Size	3-4-1/11
Tests	3-4-1/13
Anchor Types	3-4-1/15
Windlass Support Structure and Cable Stopper	3-4-1/17
Hawse Pipes	3-4-1/19

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

**1.3 Position Mooring Equipment**

When requested by the Owner, the symbol **Ⓜ** may be placed after the symbols of classification in the *Record*, thus: **⊠ A1 Ⓜ**, which will signify that the mooring equipment, anchors, chain or wire rope which have been specified by the Owner for position mooring have been tested in accordance with the specifications of the Owner and in the presence of a Surveyor. See 7-1-A1/1.3 of the *MODU Rules*.

**1.5 Position Mooring Systems**

When requested by the Owner, ABS is prepared to certify the position mooring capability of the unit in accordance with the requirements outlined in Appendix 3-4-A1 of the *MODU Rules*. A unit so certified for position mooring will be designated in the *Record* by the symbol **Ⓟ** placed after the symbols of classification in the *Record*, thus: **⊠ A1 Ⓟ**.

**CHAPTER 4 MACHINERY AND SYSTEMS**  
**SECTION 1 MACHINERY, EQUIPMENT AND THEIR INSTALLATION**

**1 General (1 August 2012)**

*(Replace existing Paragraph 4-1/1.1 and 4-1/Table 1 with the following:)*

**1.1 Requirements for Classification**

Chapter 4 contains general requirements for machinery, equipment and systems and the design requirements for piping systems and electrical systems.

Chapter 5 contains the design requirements for safety systems, including fire extinguishing systems.

Chapter 6 contains the design, testing and survey requirements for the certification of equipment, machinery and system components at vendor’s shop.

Chapter 7 contains the survey requirements during construction of units at builder’s yard and the requirements for periodical surveys after construction.

General requirements for machinery, equipment and systems are contained in Section 4-1-1 of the *MODU Rules*, as shown in 4-1/Table 1.

**TABLE 1**  
**Certification of Machinery (1 August 2012)**

	<i>Section of MODU Rules</i>
Definitions	4-1-1/3
Machinery Plans	4-1-1/5
Inclinations	4-1-1/7.1
Dead Ship Start	4-1-1/7.3
Unattended Machinery Spaces	4-1-1/7.5
Ambient Temperature	4-1-1/7.7
Materials Containing Asbestos	4-1-1/7.9
Materials and Welding for machinery Components	4-1-1/7.11

*(Delete Paragraphs 4-1/1.3 through 4-1/1.11 and 4-1/Table 2 and replace with the following:)*

**1.3 Prime Movers**

Prime movers (diesel engines, gas turbines, steam turbines) are to be in accordance with 4-1-2/1 of the *MODU Rules*.

**1.5 Thrusters and Dynamic Positioning Systems**

Compliance with the provisions of Section 4-3-5 of the *Steel Vessel Rules* is required for main propulsion thrusters in all cases and for propulsion assist thrusters, athwartship thrusters and dynamic positioning systems, including their thrusters, where an optional notation in accordance with 1-2/13 or 1-2/15 is desired.

**1.7 Moving Cantilevers, Skid Beams and Moveable Structures**

Documentation is to be submitted in accordance with 4-1-2/7 of the *MODU Rules* for moving cantilevers, skid beams or moveable structures.



*(Renumber Paragraph 4-1/1.13 as 4-1/1.9.)*

## 1.9 Unattended Machinery Spaces

Controls necessary for safe operation are to be provided for machinery in spaces which are not normally manned. Relevant data is to be submitted to permit the assessment of the effect of such controls on the safety of the unit. See 4-2-4/3.7 of the *MODU Rules* for bilge alarm systems and 5-3-1/15 of the *MODU Rules* for fire precautions for such spaces.

For self-propelled units where it is intended that propulsion machinery space be periodically unattended and that propulsion machinery be controlled primarily from the navigation bridge, **✕ ACCU** notation will be assigned upon verification of compliance with the provisions of Section 4-9-4 of the *Steel Vessel Rules*.

For non-self-propelled units where it is intended that the machinery space(s) and the local centralized control and monitoring station(s) (if provided) be periodically unmanned, and that the machinery/ systems be controlled and monitored from a remote control and monitoring center located outside the machinery space(s), **✕ AMCCU** notation will be assigned upon verification of compliance with the provisions of Section 3 of the *ABS Guide for Automatic or Remote Control and Monitoring for Machinery and Systems (other than Propulsion) on Offshore Installations*.

**✕ ACCU** and **✕ AMCCU** notations are not mandatory and will be assigned upon request.

*(Delete Paragraphs 4-1/1.15 through 4-1/1.17 and 4-1/Table 3.)*

*(Delete Subsections 4-1/3 through 4-1/7 and 4-1/Table 4.)*

## CHAPTER 4 MACHINERY AND SYSTEMS

### SECTION 2 PUMPS AND PIPING SYSTEMS

#### 1 General

*(Revise Paragraph 4-2/1.5, as follows.)*

#### 1.5 Piping Classes (1 August 2012)

To distinguish between detail requirements of the various systems, the piping is divided into three classes as detailed in 4-2-1/5 of the *MODU Rules*.

#### 1.7 Plans and Data to Be Submitted

##### 1.7.1 Plans

*(Revise fourth from last bullet, as follows.)*

- *(1 August 2012)* All Class I and Class II piping systems not covered above, except for those which form part of an independently manufactured unit.

(Revise 4-2/Table 1, as follows.)

**TABLE 1**  
**Tests and Installation (1 August 2012)**

	<i>Section of MODU Rules</i>
Material Tests and Inspections	4-2-1/9
Protection	4-2-1/11.1
Pipes Near Switchboards	4-2-1/11.3
Expansion or Contraction Stresses	4-2-1/11.5
Molded Expansion Joints	4-2-1/11.7
Metallic Bellow Type Expansion Joints	4-2-1/11.9
Pipe Joints	4-2-1/11.11
Mechanical Joints	4-2-1/11.13
Bulkhead, Deck or Tank-Top Penetrations	4-2-1/11.15
Collision-bulkhead Penetrations	4-2-1/11.17
Sluice Valves and Cocks	4-2-1/11.19
Relief Valves	4-2-1/11.21
Common Overboard Discharge	4-2-1/11.23
Remote Operation	4-2-1/11.25
Instruments	4-2-1/11.27
Flexible Hoses	4-2-1/11.29
Control of Static Electricity	4-2-1/11.31
Leakage Containment	4-2-1/11.33

### 3 Pumps, Pipes, Valves and Fittings

(Revise Paragraph 4-2/3.5, as follows.)

#### 3.5 Pumps, Pipes, Valves and Fittings (1 August 2012)

Pumps, pipes, valves, fittings and other components and details of piping systems for mobile offshore units are to be in accordance with Section 4-2-2 of the *MODU Rules*, as shown in 4-2/Table 2. For pump requirements refer to 6-1-6/7.3.2 of the *MODU Rules*. Certification of piping components at vendor’s plant is covered in Part 6 of the *MODU Rules*.

(Revise 4-2/Table 2, as follows.)

**TABLE 2**  
**Pumps and Piping Components and Details (1 August 2012)**

	<i>Section of MODU Rules</i>
Metallic Pipes	4-2-2/5
Plastic Pipes	4-2-2/7
Valves	4-2-2/9
Pipe Fittings	4-2-2/11
Welded Nonstandard Valves and Fittings	4-2-2/13
Flanges	4-2-2/15
Material of Valves and Fittings	4-2-2/17
Fluid Power Cylinders	4-2-2/19
Sea Inlets and Overboard Discharges	4-2-2/21
Scuppers and Drains on Self-Elevating Units	4-2-2/23
Cooler Installations External to the Hull	4-2-2/27
Penetrations through Watertight Boundaries	4-2-2/29

(Revise 4-2/Table 4, as follows.)

**TABLE 4**  
**Bilge and Ballast Systems and Tanks (1 August 2012)**

	<i>Section of MODU Rules</i>
General Arrangement of Bilge Systems	4-2-4/3
Bilge Piping (All Units)	4-2-4/5
Bilge Pumps (All Units)	4-2-4/7
Size of Bilge Suctions	4-2-4/9.3
Ballast Piping (All Units)	4-2-4/11
Ballasting System for Column-Stabilized Units	4-2-4/13

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

(Revise 4-2/Table 5, as follows.)

**TABLE 5**  
**Fuel Oil Systems and Tanks (1 August 2012)**

	<i>Section of MODU Rules</i>
Fuel Oil Piping System – General	4-2-5/1
Fuel-oil Transfer and Filling	4-2-5/3
Fuel-oil Service System for Boilers	4-2-5/5
Fuel -oil Service System for Internal Combustion Engines	4-2-5/7
Low Flash Point Fuels	4-2-5/9
Additional Measures for Oil Pollution Prevention	4-2-5/11
Class Notation – <b>POT</b>	4-2-5/13

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

(Revise 4-2/Table 6, as follows.)

**TABLE 6**  
**Other Piping Systems and Tanks (1 August 2012)**

	<i>Section of MODU Rules</i>
Lubricating-oil Systems	4-2-6/1
Hydraulic Systems	4-2-6/3
Fixed Oxygen-Acetylene Installations	4-2-6/5
Fuel Storage for Helicopter Facilities	4-2-6/7
Starting-air Systems	4-2-6/9
Cooling-water Systems for Internal Combustion Engines	4-2-6/11
Exhaust System	4-2-6/13
Helicopter Deck Drainage Arrangements	4-2-6/17
Boiler and Associated Piping	4-2-6/19
Steering Gear Piping	4-2-6/21
Gas Turbine Piping	4-2-6/23
Raw Water Systems for Self-elevating Units in Elevated Condition	4-2-6/25

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

**CHAPTER 4 MACHINERY AND SYSTEMS**  
**SECTION 3 ELECTRICAL INSTALLATIONS**

*(Revise 4-3/Table 1, as follows.)*

**TABLE 1**  
**Electrical Installations (1 August 2012)**

	<i>Section of MODU Rules</i>
Standard Distribution System	4-3-1/7
Voltage and Frequency Variations	4-3-1/9
Materials	4-3-1/11
Grounding Arrangements	4-3-1/13
Degree of Protection for Enclosure	4-3-1/15
Temperature Ratings	4-3-1/17
Clearance and Creepage Distances	4-3-1/19

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

**7 Machinery and Equipment**

*(Delete Paragraph 4-3/7.1 and renumber Paragraph 4-3/7.3 as 4-3/7.1.)*

*(Revise 4-3/Table 4, as follows.)*

**TABLE 4**  
**Machinery and Equipment (1 August 2012)**

	<i>Section of MODU Rules</i>
Certification of Electrical Machinery and Equipment	4-3-4/1
Battery Systems and Uninterruptible Power Systems (UPS)	4-3-4/3
Computer Based Systems	4-3-4/5
Cables and Wires	4-3-4/7

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

**9 Specialized Installations**

*(Delete Subparagraphs 4-3/9.1.1 through 9.1.3 and title of Subparagraph 4-3/9.1.4, as follows:)*

**9.1 High Voltage Systems (1 August 2012)**

High voltage systems for mobile offshore units are to comply with Section 4-3-5/1 of the *MODU Rules*, as shown in 4-3/Table 5.

*(Revise 4-3/Table 5, as follows.)*

**TABLE 5**  
**High Voltage Systems (1 August 2012)**

	<i>Section of MODU Rules</i>
General	4-3-5/1.1
System Design	4-3-5/1.3
Circuit Breakers and Switches – Auxiliary Circuit Power Supply Systems for Operating Energy	4-3-5/1.5
Circuit Protection	4-3-5/1.7
Equipment Installation and Arrangement	4-3-5/1.9
Cable Construction	4-3-5/1.11

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

## **11 Hazardous Areas**

### **11.1 Definitions**

*(Revise Subparagraph 4-3/11.1.1, as follows.)*

#### **11.1.1 Hazardous Areas (1 August 2012)**

Hazardous areas are all those areas where a flammable atmosphere may be expected to exist continuously or intermittently. See IEC Publication 60079-10. Such flammable atmospheres may arise from operations such as use and storage of flammable liquids, paint and acetylene, or any such operation pertinent to the particular service of the unit. Hazardous areas are subdivided into Zones 0, 1, 2, defined as follows:

- *Zone 0* A zone in which ignitable concentrations of flammable gases or vapors are continuously present or present for long periods.
- *Zone 1* A zone in which ignitable concentrations of flammable gases or vapors are likely to occur in normal operating conditions.
- *Zone 2* A zone in which ignitable concentrations of flammable gases or vapors are not likely to occur, and if it occurs, it will exist only for a short time.

*(Add new Paragraph 4-3/11.2, as follows.)*

### **11.2 Plans and Data to be Submitted (1 August 2012)**

The following data should generally be submitted electronically to ABS. However, hard copies will also be accepted.

- Arrangement plans clearly indicating the hazardous areas
- A description of the ventilating system for all hazardous areas
- Complete particulars of the ventilating system including capacities of fans, number of complete changes of air per minute, air flows, areas subject to positive and negative pressure, and location and direction of opening of self-closing doors

**11.3 Classification of Areas**

11.3.1 General

*(Revise Item 4-3/11.3.1i), as follows.)*

- i) *(1 August 2012)* Internal spaces of closed tanks and piping or oil [closed-cup flash point below 60°C (140°F)] or flammable gas and vapor.

*(Revise 4-3/Table 8, as follows.)*

**TABLE 8  
Hazardous Areas (1 August 2012)**

	<i>Section of MODU Rules</i>
Openings, Access, and Ventilation Conditions Affecting the Extent of Hazardous Zones	4-3-6/7
Ventilation	4-3-6/9
Machinery Installations in Hazardous Areas	4-3-6/11

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

**CHAPTER 5 FIRE AND SAFETY – MEASURES AND FEATURES**

**SECTION 1 PASSIVE FIRE PROTECTION**

**1 Structural Fire Protection**

*(Add new Paragraph 5-1/1.6, as follows.)*

**1.6 Alternative Design and Arrangements (1 August 2012)**

When fire safety design or arrangements deviate from the prescriptive provisions of this Guide, including innovative means of passive fire protection, an engineering analysis, evaluation and approval of the alternative design and arrangements is to be carried out in accordance with SOLAS Regulation II-2/17 and ABS *Guidance Notes on Alternative Design and Arrangements for Fire Safety*.

*(Revise 5-1/Table 1, as follows.)*

**TABLE 1  
Structural Fire Protection (1 August 2012)**

	<i>Section of MODU Rules</i>
Construction Materials	5-1-1/3.1
Alternate Materials	5-1-1/3.3
Details, Materials and Methods of Construction	5-1-1/3.5
Fire Integrity of Bulkheads and Decks	5-1-1/3.7
Application of Tables	5-1-1/3.9
Other General Requirements	5-1-1/3.11 through 3.23
Protection of Accommodation Spaces, Service Spaces and Control Stations	5-1-1/5

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

**CHAPTER 5 FIRE AND SAFETY – MEASURES AND FEATURES**  
**SECTION 2 ACTIVE FIRE PROTECTION SYSTEMS AND EQUIPMENT**

**1 Systems and Equipment**

**1.3 Plans and Specifications**

*(Add new bullets in Subparagraph 5-2/1.3.1, as follows.)*

**1.3.1 General (1 August 2012)**

The following plans together with supporting data and particulars are to be submitted.

- Arrangement and details of fire main systems
- Foam smothering systems
- Other fire extinguishing arrangements.
- Fire control plans
- Fire detection systems
- Fixed fire extinguishing systems
- Fire extinguishing appliances
- Control station for emergency closing of openings and stopping machinery
- Fireman’s outfits
- The most severe service condition for the operation of the emergency fire pump (e.g., lightest draft as shown in Trim and Stability Booklet, etc.)
- Calculations and pump data demonstrating that the emergency fire pump system can meet the operational requirements specified in 5-2-2/1.1 of the *MODU Rules* with the proposed pump location and piping arrangements (e.g., adequate suction lift, discharge pressure, capacity, etc.) at the most severe service condition

*(Revise 5-2/Table 2, as follows.)*

**TABLE 2**  
**Additional Fixed Fire Fighting Systems (1 August 2012)**

	<i>Section of MODU Rules</i>
Fixed Firefighting Systems	5-2-3/1
Gas Smothering	5-2-3/3
Foam	5-2-3/5
Fixed Pressure Water Spraying Systems	5-2-3/7
Protection of Helicopter Decks and Refueling Facilities	5-2-3/9
Paint and Flammable Liquid Lockers	5-2-3/11

## 7 Other Fire Protection Requirements

*(Revise Paragraph 5-2/7.1, as follows.)*

### 7.1 Fire Detection and Alarm Systems (1 August 2012)

Fire detectors are to be fitted in machinery spaces which are not intended to be normally manned and which contain fired boilers, internal combustion engines, oil purifiers and similar equipment, and are located so that all potential fire outbreak points are effectively monitored. The fire-detection system is subject to approval in each case. The fire-detection main indicator board is to be at a normally manned station. Accommodation spaces and service spaces are to be covered by automatic fire detection and alarm systems. Smoke detectors are to be the type of fire detection provided in accommodation spaces. A sufficient number of manual fire alarm stations are to be fitted at suitable locations throughout the unit.

## CHAPTER 6 EQUIPMENT AND MACHINERY CERTIFICATION

### SECTION 1 MATERIAL, MARINE EQUIPMENT AND MACHINERY CERTIFICATION (1 AUGUST 2012)

*(Add new Chapter 6, as follows.)*

## 1 General

### 1.1 Application

This Chapter contains the design, testing and survey requirements for the certification of equipment, machinery and system components at vendor's shop. It should be read in conjunction with Chapters 4, 5, and 7 for other design and survey requirements applicable to the mobile offshore unit where the equipment, machinery and systems are to be installed.

### 1.3 Marine and Propulsion Systems

Boilers, pressure vessels, heat exchangers, internal combustion engines, turbines, propulsion equipment, steering gear and other applicable equipment are to be in accordance with the requirements of the ABS *Rules for Building and Classing Steel Vessels (Steel Vessel Rules)*, except as modified herein.

### 1.5 Unit Certification

The certification of machinery for mobile offshore units is to be in accordance with Section 6-1-1 of the ABS *Rules for Building and Classing Mobile Offshore Drilling Units (MODU Rules)*, as shown in 6-1/Table 1.

**TABLE 1**  
**Certification of Machinery (1 August 2012)**

	<i>Section of MODU Rules</i>
Basic Requirements	6-1-1/3.1
Angles of Inclination	6-1-1/3.5
Ambient Temperature	6-1-1/3.7
Skid Mounted Equipment or Machinery	6-1-1/3.9

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.



### 1.5 Design Review and Survey of Equipment and machinery

#### 1.5.1 Design Review

Plans and data required to be submitted for certification of specific equipment and machinery are described in 6-1/3 through 6-1/19.

#### 1.5.3 Surveys

Surveys for equipment, machinery and/or associated components are to be in accordance with Section 6-1-1 of the *MODU Rules*, as shown in 6-1/Table 2.

**TABLE 2**  
**Machinery Surveys (1 August 2012)**

	<i>Section of MODU Rules</i>
General Survey Requirements	6-1-1/5.3
Prototype Testing	6-1-1/7
Type Approval Program	6-1-1/9
Manufacturer’s Guarantee	6-1-1/11
Asbestos	6-1-1/13

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

### 3 Hull Structure and Outfitting

Materials used for hull construction and hull outfitting for which certification is required as indicated in 6-1-2/Table 1 of the *MODU Rules* are to be produced, tested, and certified in accordance with the ABS Rules for Materials and Welding (Part 2), as applicable, and this Section.

Where material other than steel is used, material suitability and test results per the International Code for Application of Fire Test Procedures (FTP Code) is to be acceptable to ABS.

Hull structure and outfitting and/or associated components are to be in accordance with Section 6-1-2 of the *MODU Rules*, as shown in 6-1/Table 3.

**TABLE 3**  
**Hull Structure and Outfitting (1 August 2012)**

	<i>Section of MODU Rules</i>
Material for Hull Structure	6-1-2/3
Material for Foundation Structures	6-1-2/5
Helideck Structure	6-1-2/7
Watertight Doors	6-1-2/9

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

## 5 Prime Movers

Prime movers (diesel engines and their turbochargers, gas turbines, steam turbines) for which certification is required as indicated in 6-1-3/Table 1 of the *MODU Rules* are to be designed, constructed, tested, certified and installed in accordance with Part 4, Chapter 2 of the *Steel Vessel Rules* and this Section.

Prime movers and/or associated components are to be in accordance with Section 6-1-3 of the *MODU Rules*, as shown in 6-1/Table 4.

**TABLE 4**  
**Prime Movers (1 August 2012)**

	<i>Section of MODU Rules</i>
Internal Combustion Engines	6-1-3/3
Survey and Certification	6-1-3/5

## 7 Propulsion and Maneuvering Systems

Propulsion and maneuvering machinery (propulsion shafts and its components, propulsion gears and clutches, propellers, propulsion and positioning thrusters and steering gears) for which certification is required as indicated in 6-1-4/Table 1 of the *MODU Rules* are to be designed, constructed, tested, certified and installed in accordance with Part 4, Chapter 3 of the *Steel Vessel Rules* and this Section.

Propulsion and maneuvering systems and/or associated components are to be in accordance with Section 6-1-4 of the *MODU Rules*, as shown in 6-1/Table 5.

**TABLE 5**  
**Propulsion and Maneuvering Systems (1 August 2012)**

	<i>Section of MODU Rules</i>
Materials for Propulsion Equipment	6-1-4/3
Survey and Certification	6-1-4/5

## 9 Boilers, Pressure Vessels and Fired Equipment

Boilers, fired and unfired heaters, pressure vessels and heat exchangers for which certification is required as indicated in 6-1-5/Table 1 of the *MODU Rules* are to be designed, constructed, tested, certified and installed in accordance with Part 4, Chapter 4 of the *Steel Vessel Rules* and this Section.

All boilers, heaters, pressure vessels and heat exchangers within the scope of 6-1-5/1.1 are to be certified by ABS. Mass-produced pressure vessels, including seamless extruded cylinders and fluid power cylinders, may be certified by alternative means as described in 4-4-1/1.11 of the *Steel Vessel Rules*.

Boilers, pressure vessels and fired equipment and/or associated components are to be in accordance with Section 6-1-5 of the *MODU Rules*, as shown in 6-1/Table 6.

**TABLE 6**  
**Prime Movers (1 August 2012)**

	<i>Section of MODU Rules</i>
Application	6-1-5/1.1
Grouping of Boilers and Pressure Vessels	6-1-5/1.3
Materials for Group I Boilers, Heaters, Pressure Vessels and Heat Exchangers	6-1-5/3
Survey and Certification	6-1-5/5

## 11 Piping Systems

Materials used for piping system components, for which certification is required as indicated in Section 6-1-6 of the *MODU Rules*, are to be produced, tested, and certified in accordance with *ABS Rules for Materials and Welding (Part 2)*, as applicable and this Section.

Piping system components for which certification is required as indicated in 6-1-6/Tables 1 and 2 of the *MODU Rules* are to be designed, constructed, tested, certified and installed in accordance with Part 4, Chapter 2 of the *MODU Rules* and this Section.

Piping systems associated with steering gear systems are to be in accordance with Section 4-3-4 of the *Steel Vessel Rules*.

Piping systems, such as steam, exhaust and feed systems, associated with boilers are to be in accordance with the applicable requirements of Part 4, Chapters 4 and 6 of the *Steel Vessel Rules*.

Class I, II and III piping systems are defined in 4-2-1/Table 1 of the *MODU Rules*.

Piping and/or associated components are to be in accordance with Section 6-1-6 of the *MODU Rules*, as shown in 6-1/Table 7.

**TABLE 7**  
**Piping Systems (1 August 2012)**

	<i>Section of MODU Rules</i>
Pipes	6-1-6/3
Piping Components other than Pipes	6-1-6/5
Survey and Certification	6-1-6/7

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

## 13 Electrical Systems and Control Equipment

Electrical equipment and machinery for which certification is required as indicated in 6-1-7/Table 1 of the *MODU Rules* are to be designed, constructed, tested, certified and installed in accordance with this Section.

Electrical systems and control equipment and/or associated components are to be in accordance with Section 6-1-7 of the *MODU Rules*, as shown in 6-1/Table 8.

**TABLE 8**  
**Electrical Systems and Control Equipment (1 August 2012)**

	<i>Section of MODU Rules</i>
Insulation material	6-1-7/1.1
Accessibility	6-1-7/1.3
Plans and Data to be Submitted	6-1-7/3
Rotating Machines	6-1-7/5
Accumulator Batteries	6-1-7/7
Switchboards, Distribution Boards, Controllers, etc.	6-1-7/9
Transformers	6-1-7/11
Other Electric and Electronics Devices	6-1-7/13
High Voltage Systems	6-1-7/15
Electric Propulsion System	6-1-7/17
Survey and Certification	6-1-7/19

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

## 15 Fire and Safety – Equipment and Systems

Safety equipment and systems for which certification is required as indicated in 6-1-8/Table 1 of the *MODU Rules* are to be designed, constructed, tested, certified and installed in accordance with this Section.

Fire and safety equipment and systems and/or associated components are to be in accordance with Section 6-1-8 of the *MODU Rules*, as shown in 6-1/Table 9.

**TABLE 9**  
**Fire and Safety Equipment and Systems (1 August 2012)**

	<i>Section of MODU Rules</i>
Fire Doors	6-1-8/3
Fire-Rated Windows	6-1-8/5
Gas-Tight Doors	6-1-8/7
Fire and Gas Detection Systems	6-1-8/9
Fire Pumps	6-1-8/11
Survey and Certification	6-1-8/13

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

## 17 Jacking and Associated Systems

Jacking systems are used to elevate and lower the hull of self-elevating units in the elevated condition and to raise and lower the legs in the afloat condition.

The hull of the unit is maintained stationary in the elevated condition by means of a holding mechanism. The same mechanism is used to maintain the legs stationary in the afloat condition.

The jacking system and holding mechanism on self-elevating units are to be designed and constructed with sufficient redundancy so that upon failure of any one component, the system will prevent an uncontrolled descent of the unit. This is to be accomplished either by continuing to jack to a safe position or holding in place. Approved procedures are to be provided to allow emergency raising or lowering of the unit after failure in the case the unit is holding in an unsafe position.

Jacking systems are to be considered as machinery to provide the vertical movement of the legs as well as structural elements transmitting the loads between hull and legs, as applicable to the particular system design.

Jacking and other elevating systems for mobile offshore units are to be in accordance with Section 6-1-9 of the *MODU Rules*, as shown in 6-1/Table 10.

**TABLE 10**  
**Jacking and Other Elevating Systems (1 August 2012)**

	<i>Section of MODU Rules</i>
Definitions	6-1-9/3
Plans and Data to be Submitted	6-1-9/5
Failure Modes and Effects Analysis (FMEA)	6-1-9/7
Material	6-1-9/9
Strength Analysis	6-1-9/11
Mechanical Components	6-1-9/13
Electrical Power System	6-1-9/15
Hydraulic System	6-1-9/17
Control, Monitoring and Alarm System	6-1-9/19
Low Temperature Operation	6-1-9/21
Jacking Systems of Novel Design	6-1-9/23
Survey and Certification	6-1-9/25

## 19 Anchoring System – Symbol Ⓔ

This Section only applies to drilling units that are classed with the Ⓔ symbol.

This Section does not apply to drilling units that are classed with the optional Ⓜ or Ⓟ symbols. For requirements of Ⓜ and Ⓟ, see Appendix 7-1-A1 of the *MODU Rules*.

Anchoring systems for mobile offshore units are to be in accordance with Section 6-1-10 of the *MODU Rules*, as shown in 6-1/Table 11.

**TABLE 11**  
**Anchoring System (1 August 2012)**

	<i>Section of MODU Rules</i>
Anchoring System – Symbol Ⓔ	6-1-10/3
Survey and Certification	6-1-10/5

*(Renumber existing Chapters 6 and 7 as Chapters 7 and 8.)*

**CHAPTER 7 SURVEYS**

**SECTION 1 SURVEYS DURING CONSTRUCTION (1 AUGUST 2012)**

*(Revise Chapter 7, Section 1, as follows.)*

**1 General**

This Section pertains to surveys and testing to be carried out during construction of a mobile offshore unit at the builder’s yard/facility. The requirements for design review are given in Chapters 3, 4, and 5 of this Guide.

General requirements for surveys during construction are shown in 7-1/Table 1. The requirements for specific surveys are included in subsequent Subsections.

All Rule contents covered by subsequent Subsections of this Chapter and that require visual examination, verification, testing, etc., are to be carried out in presence of and to the satisfaction of the attending Surveyor.

**TABLE 1**  
**Surveys During Construction (1 August 2012)**

	<i>Section of MODU Rules</i>
Survey at Builder’s Yard	7-1-1/3
Certification and Classification	7-1-1/5
Onboard Drawings and Manuals	7-1-1/7

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

**3 Surveys at Builder’s Yard – Hull Structure and Outfitting**

**3.1 General**

For typical surveys required to be carried out, see 7-1/Table 2. All surveys and testing are to be carried out in presence of and to the satisfaction of the attending Surveyor, prior to the sea trial, with the exception of testing of the onboard computer, and hull structure testing such as hydrostatic testing and hull structural testing of tanks which may be carried out during the sea trial as referenced in Section 7-1-9 of the *MODU Rules*.

**TABLE 2**  
**Surveys at Builder’s Yard – Hull Structure and Outfitting (1 August 2012)**

	<i>Section of MODU Rules</i>
Survey of Hull Structure and Outfitting	7-1-2/3
Material	7-1-2/5
Qualification of Welders and Welding Specifications	7-1-2/7
Production Welding	7-1-2/9
Corrosion Protection	7-1-2/13
Survey of Load Line	7-1-2/15
Watertight/Weathertight Integrity	7-1-2/19
Onboard Computers for Stability Calculations	7-1-2/21
Hull Testing During Construction	7-1-2/23
Construction Booklet (Construction Portfolio)	7-1-2/25
Hull Inspection and Maintenance Program (HIMP) (Optional)	7-1-2/27

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

### 3.3 Nondestructive Testing (NDT)

Prior to commencement of any NDT, an NDT plan is to be submitted to the attending Surveyor for review and acceptance, and is to conform to 2-4-1/5.17 of the *ABS Rules for Materials and Welding (Part 2)* and 3-2-7/5 of the *MODU Rules*. NDT is to be carried out in accordance with *ABS Guide for Nondestructive Inspection of Hull Welds*.

All NDT procedures are to be reviewed and accepted by the Surveyor before commencement of NDT. Radiographic Testing (RT), Ultrasonic Testing (UT), Magnetic Particle Inspection (MPI), Penetrant Testing (PT), Eddy Current (EC) or Alternating Current Field Measurement (ACFM) is to be carried out to the satisfaction of the Surveyor. With the exception of RT, the Surveyor may require to witness the NDT carried out by a qualified technician.

**TABLE 3**  
**Nondestructive Testing (1 August 2012)**

	<i>Section of MODU Rules</i>
Nondestructive Testing (NDT) of Column-Stabilized Units	7-1-1/11.1
Nondestructive Testing (NDT) of Self-Elevating Units	7-1-1/11.3
Type and Extent of NDT	7-1-1/11.7
NDT Personnel and Records	7-1-1/11.9
NDT Acceptance Standards	7-1-1/11.11

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

### 3.5 Survey of Spaces (Damage Stability Criteria)

In assessing the damage stability of mobile offshore units as required by Chapter 3, Section 3, the assumed extent of damage is to be in accordance with the *MODU Rules* as indicated in 7-1/Table 4. If damage of a lesser extent results in a more severe condition, such lesser extent is to be assumed. During the survey of spaces, all piping, ventilating systems, trunks, etc., within the assumed damage area are to be considered damaged. Positive means of closure are to be provided to preclude progressive flooding of other intact spaces. Assumed damage conditions are as follows.

**TABLE 4**  
**Damage Conditions (1 August 2012)**

	<i>Section of MODU Rules</i>
Damage Conditions for Self-Elevating Units	7-1-2/17.1
Damage Conditions for Column-Stabilized Units	7-1-2/17.3

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

## 5 Surveys at Builder’s Yard – Machinery, Piping, Pressure Vessels, and Outfitting

### 5.1 General

This Subsection pertains to surveys and testing to be carried out on machinery, piping, pressure vessels, and mechanical outfitting items during construction, installation and testing of mobile offshore units at builder’s yard/facility.

The documentation requirements for design review are given in Chapters 3, 4, and 5 of this Guide.

Surveys and testing of mechanical and piping systems are referenced in Section 7-1-4 of the *MODU Rules*, as indicated in 7-1/Table 5. All surveys and testing are to be carried out in presence of and to the satisfaction of the attending Surveyor, prior to the sea trial as referenced in Section 7-1-9 of the *MODU Rules*.

**TABLE 5**  
**Surveys at Builder’s Yard – Machinery, Piping, Pressure Vessels, and Outfitting (1 August 2012)**

	<i>Section of MODU Rules</i>
Survey of Machinery, Piping, Pressure Vessels, and other Outfitting Items	7-1-3/3
Materials and Operational Conditions	7-1-3/5
Internal Combustion Engines	7-1-3/7
Piping	7-1-3/9
Piping Installation Details	7-1-3/11
Metallic and Plastic Pipes	7-1-3/13
Valves	7-1-3/15
Pipe Fittings	7-1-3/17
Flanges	7-1-3/19
Fluid Power Cylinders	7-1-3/21
Sea Inlets and Overboard Discharges	7-1-3/23
Scuppers and Drains on Self-Elevating Units	7-1-3/25
Cooler Installations External to the Hull	7-1-3/27
Penetrations Through Watertight Boundaries	7-1-3/29

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

## 7 Surveys at Builder’s Yard – Mechanical and Piping Systems

### 7.1 General

This Subsection pertains to surveys and testing to be carried out on mechanical and piping systems during construction, installation and testing of mobile offshore units at builder’s yard/facility.

The documentation requirements for design review are given in Chapters 3, 4, and 5 of this Guide.

Installation surveys and testing of mechanical and piping systems are referenced in Section 7-1-3 of the *MODU Rules*, as indicated in 7-1/Table 5. ABS Surveyor attendance is required, typically for the following purposes. All surveys and testing are to be carried out in presence of and to the satisfaction of the attending Surveyor, prior to the sea trial as referenced in Section 7-1-9 of the *MODU Rules*.



**TABLE 6**  
**Surveys at Builder’s Yard – Mechanical and Piping Systems (1 August 2012)**

	<i>Section of MODU Rules</i>
Jacking and Associated Systems	7-1-4/3
Tank Vents and Overflows	7-1-4/5
Sounding	7-1-4/7
Bilge System	7-1-4/9
Ballast System	7-1-4/11
Fuel-Oil System	7-1-4/13
Low Flash Point Fuels	7-1-4/15
Lubricating-Oil Systems	7-1-4/17
Hydraulic Systems	7-1-4/19
Fixed Oxygen-Acetylene Installations	7-1-4/21
Fuel Storage for Helicopter Facilities	7-1-4/23
Starting-air Systems	7-1-4/25
Cooling-Water Systems for Internal Combustion Engines	7-1-4/27
Exhaust System	7-1-4/29
Valves in Atomizing Lines	7-1-4/31
Helicopter Deck Drainage Arrangements	7-1-4/33
Boilers and Associated Piping	7-1-4/35
Steering Gear Piping	7-1-4/37
Gas Turbine Piping	7-1-4/39
Piping System Pressure Test	7-1-4/41

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

## **9 Surveys at Builder’s Yard – Electrical Cables and Equipment**

### **9.1 General**

This Subsection pertains to surveys and testing to be carried out on electrical cables and equipment during construction, installation and testing of mobile offshore units at builder’s yard/facility.

The documentation requirements for design review are given in Chapters 3, 4, and 5 of this Guide.

Installation surveys and testing of electrical cables and equipment are referenced in Section 7-1-5 of the *MODU Rules*, as indicated in 7-1/Table 7. ABS Surveyor attendance is required, typically for the following purposes. All surveys and testing are to be carried out in presence of and to the satisfaction of the attending Surveyor, prior to the sea trial as referenced in Section 7-1-9 of the *MODU Rules*.

For definition of various terms, see 4-3-1/3.5 of the *MODU Rules*.

**TABLE 7**  
**Surveys at Builder’s Yard – Electrical Cables and Equipment (1 August 2012)**

	<i>Section of MODU Rules</i>
Survey of Electrical Cables and Equipment	7-1-5/3
Cable Installation	7-1-5/5
Equipment Installation and Arrangement	7-1-5/7
Earthing	7-1-5/9

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

## **11 Surveys at Builder’s Yard – Electrical Systems**

### **11.1 General**

This Subsection pertains to surveys and testing to be carried out on electrical systems during construction, installation and testing of mobile offshore units at builder’s yard/facility.

The documentation requirements for design review are given Chapters in 3, 4, and 5 of this Guide.

Installation surveys and testing of electrical systems are referenced in Section 7-1-6 of the *MODU Rules*, as indicated in 7-1/Table 8. ABS Surveyor attendance is required, typically for the following purposes. All surveys and testing are to be carried out in presence of and to the satisfaction of the attending Surveyor, prior to the sea trial as referenced in Section 7-1-9 of the *MODU Rules*.

**TABLE 8**  
**Surveys at Builder’s Yard – Electrical Systems (1 August 2012)**

	<i>Section of MODU Rules</i>
Main Source of Power	7-1-6/3
Emergency Source of Power	7-1-6/5
Distribution System	7-1-6/7
Circuit Protection System	7-1-6/9
Systems for Steering Gear Installed in Self-Propelled Units	7-1-6/11
Lighting and Navigation Light Systems	7-1-6/13
Interior Communication Systems	7-1-6/15
Manually Operated Alarms	7-1-6/17
Fire Protection and Fire Detection Systems	7-1-6/19
Electrical System Testing	7-1-6/21

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

## **13 Surveys at Builder’s Yard – Hazardous Areas**

### **13.1 General**

For the purpose of this Guide and by definition (see 2-1/3), mobile offshore units are not intended to install drilling or production equipment on board or provide storage of hydrocarbons. However, these units may be temporarily used to store or install equipment in open deck areas from the drilling or production units they support. These storage areas where hydrocarbon vapors may be present during the operation of the unit are to be designated as a hazardous zone appropriate to the expected hazard.

Other areas or spaces of the unit where flammable or explosive gases, vapors or dust are normally present or likely to be present are to be designated hazardous areas. Hazardous areas are to be classified based on the likelihood of presence and the concentration and type of flammable atmosphere, as well as in terms of the extent of the area or space.

For definition of various terms, see 4-1/11.5 of this Guide.

This Subsection pertains to survey of the following items onboard mobile offshore units built at builder’s yard/facility, including required onboard testing and trial. The documentation requirements for design review are given Section 4 of this Guide. Following items are to be surveyed and tested in presence of and to the satisfaction of the attending Surveyor, preferably prior to delivery of the unit, in accordance with Section 7-1-7 of the *MODU Rules* as indicated in 7-1/Table 9.

- i) Arrangement of hazardous areas (zones)
- ii) Openings and penetrations affecting the extent of hazardous areas
- iii) Installation and function of access doors and hatches between hazardous areas and adjoining areas/spaces
- iv) Installation and function of ventilation of hazardous areas and adjoining areas/spaces
- v) Installation of machinery in hazardous areas
- vi) Installation of cables and electrical equipment in hazardous areas
- vii) Installation of cables and electrical equipment in paint stores and battery lockers
- viii) Piping systems serving the hazardous areas

**TABLE 9**  
**Surveys at Builder’s Yard – Hazardous Areas (1 August 2012)**

	<i>Section of MODU Rules</i>
Openings and Penetrations Affecting the Extent of Hazardous Zones	7-1-7/3
Access and Ventilation Conditions Affecting the Extent of Hazardous Zones	7-1-7/5
Machinery Installations	7-1-7/7
Equipment and Installation in Hazardous Area	7-1-7/9
Paint Stores and Battery Lockers	7-1-7/11
Piping and Installation in Hazardous Area	7-1-7/13

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

## **15 Surveys at Builder’s Yard – Fire and Safety**

### **15.1 General**

This Subsection pertains to surveys and testing to be carried out on fire and safety features during construction, installation and testing of mobile offshore units at builder’s yard/facility.

The documentation requirements for design review are given in Chapters 3, 4, and 5 of this Guide.

Installation surveys and testing of fire and safety features are referenced in Section 7-1-8 of the *MODU Rules*, as indicated in 7-1/Table 10. ABS Surveyor attendance is required, typically for the following purposes. All surveys and testing are to be carried out in presence of and to the satisfaction of the attending Surveyor, prior to the sea trial.

**TABLE 10**  
**Surveys at Builder’s Yard – Fire and Safety (1 August 2012)**

	<i>Section of MODU Rules</i>
Surveys of Fire and Safety Features	7-1-8/3
Passive Fire Protection Systems	7-1-8/5
Active Fire Protection – Fixed Systems	7-1-8/7
Active Fire Protection – Additional Fixed Systems	7-1-8/9
Active Fire Protection – Portable Fire Fighting Systems	7-1-8/11
Fire Detection and Alarm Systems	7-1-8/13
Outfitting	7-1-8/17

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

## 17 Surveys at Builder’s Yard – Sea Trial

### 17.1 General

A sea trial procedure is to be developed by the builder and submitted to the attending Surveyor for review and comments, well in advance, prior to commencement of the trial.

A pre-planning meeting in presence of the attending Surveyor(s) is to be carried out prior to the sea trial to at least confirm the following:

- Sea trial procedure to be followed
- Sea trial schedule and estimated duration of tests to be carried out during the sea trial
- Key personnel from the builder, owner, operator, and any other representative
- Any specific test to be carried out that may be outside the scope of classification

During sea trial of a mobile offshore unit, the operation of machinery, electrical systems and safety features required by this Guide is to be demonstrated to the satisfaction of the attending Surveyor(s) in accordance with Section 7-1-9 of the *MODU Rules*, as indicated in 7-1/Table 11. Complete function tests are to be carried out, including duration runs and tests for operation of all protective devices and stability tests for control, in presence of and to the satisfaction of the attending Surveyor(s).

If the unit is self-propelled, maneuvering tests which should include a reversal of the drilling unit from full speed ahead to full speed astern, are also to be carried out in presence of and to the satisfaction of the attending Surveyor(s).

**TABLE 11**  
**Surveys at Builder’s Yard – Sea Trial (1 August 2012)**

	<i>Section of MODU Rules</i>
Stability Test	7-1-9/3
Safety	7-1-9/5
Hull Structure Testing	7-1-9/7
Testing on Self-Elevating Units	7-1-9/9
Sea Trial for Self-Propelled Drilling Units	7-1-9/13
Anchoring/Mooring Trial	7-1-9/15
Dynamic Positioning System (DPS)	7-1-9/17

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

**17.3 Sea Trial**

During the sea trial, tests in accordance with Section 7-1-9 of the *MODU Rules* are to demonstrate that each item of plant and the system as a whole is satisfactory for drilling unit’s service after construction, as indicated in 7-1/Table 12.

**TABLE 12**  
**Sea Trial (1 August 2012)**

	<i>Section of MODU Rules</i>
Operation of Machinery and Piping Systems	7-1-9/11.1
Ballast Systems	7-1-9/11.3
Bilge System	7-1-9/11.5
Electrical Installation for Main Services	7-1-9/11.7
Communication Facilities	7-1-9/11.9
Fire Extinguishing System	7-1-9/11.11
Main Source of Power	7-1-9/11.13
Emergency Source of Power	7-1-9/11.15
Distribution System	7-1-9/11.17
Circuit Protection System	7-1-9/11.19
Lighting and Navigation Light Systems	7-1-9/11.21
Public Address (PA) and General Alarm (GA) Systems	7-1-9/11.23
Fire Protection and Fire Detection Systems	7-1-9/11.25

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

**CHAPTER 7 SURVEYS**  
**SECTION 2 SURVEYS AFTER CONSTRUCTION**

*(Revise 7-2/Table 1, as follows.)*

**TABLE 1**  
**Conditions for Surveys After Construction (1 August 2012)**

	<i>Section of MODU Rules</i>
Definitions	7-2-1/3
Notification and Availability for Survey	7-2-1/5
Damage, Failure and Repair	7-2-1/7
Alterations/Modifications	7-2-1/9
Welding and Replacement of Materials	7-2-1/11
Lay-up and Reactivation	7-2-1/15
Incomplete Surveys	7-2-1/13
Onboard Drawings and Manuals	7-2-1/15
Survey Intervals	7-2-2/1
Annual Surveys	Section 7-2-4
Special Periodical Surveys	Section 7-2-5
Drydocking Survey or Equivalent	Section 7-2-6
Underwater Inspection in Lieu of Drydocking (UWILD)	7-2-6/3

*Note:* Any reference to “drilling” in the *MODU Rules* is to be interpreted as referring to the type of operation for which the mobile offshore unit is designed and/or intended.

### **3 Survey Pre-planning**

*(Revise first paragraph of Paragraph 7-2/3.1, as follows.)*

#### **3.1 Special Surveys, Drydocking Surveys, and Underwater Inspections in Lieu of Drydocking (1 August 2012)**

Plans and procedures for Special Surveys, Drydocking Surveys, and Underwater Inspections in Lieu of Drydocking are to be made available onboard for the purpose of carrying out an onboard pre-planning of the survey with the Surveyor. Plan submissions are to comply with 7-2-3/1.1 and 7-2-3/1.3 of the *MODU Rules*.

*(Following text remains unchanged.)*

### **9 Drydocking Survey or Equivalent (1 August 2012)**

*(Delete Paragraph 7-2/9.1 and 7-2/Table 5.)*

*(Revise Subsection 7-2/11, as follows.)*

### **11 Specific Surveys on Self-Elevating Units After Ocean Transit Tow (1 August 2012)**

A specific survey is to be carried out on self-elevating units after the completion of an ocean transit tow, either as a wet tow or dry tow, in accordance with Section 7-2-7 of the *MODU Rules*.

## **CHAPTER 8 SPECIFIC UNIT TYPES**

### **SECTION 2 CRANE UNITS**

*(Add new Subsection 8-2/8, as follows.)*

#### **8 Supporting Structure for Deck Cargo (1 August 2012)**

Foundations and supporting structure in way of deck cargo and permanently attached cargo-carrying structures are to be designed to adequately resist the load effects of the cargo in severe storm, normal operating and transit conditions using the allowable stresses defined in 3-2-1/3 of the *MODU Rules*.

Consideration is also to be given to the unit in damaged conditions, where the structures above are to withstand the load effects of the cargo caused by the trim and heel of the unit in these damaged conditions, using the allowable stresses defined in 3-2-1/3 of the *MODU Rules* in association with a factor of safety of 1.0.

Tie-down or other securing arrangements are not included in the scope of Classification.

## **9 Stability**

*(Revise Paragraph 8-2/9.1, as follows.)*

### **9.1 Overturning Moment (1 August 2012)**

In calculating overturning moments for crane units, the effect of the crane loads acting simultaneously with the maximum design wind force associated to the operation of the crane is to be determined. The full range of crane positions, elevations and weights is to be considered in order to investigate the most critical scenarios. The wind area of the deck cargo is to be considered in the calculation of the overturning moment.

When the crane unit is equipped to counter-ballast while lifting, the unit is to be able to withstand the sudden loss of the hook load in each condition of loading and operation. The free surface effects are to be considered for those tanks which are ballasted. Specific reference may be made to Chapter 8, Appendix 1, “Stability Criteria for Counter-Ballasted Crane Units”.

*(Revise Paragraph 8-2/9.3, as follows.)*

### **9.3 Deck Cargo (1 August 2012)**

Loading conditions in the operations manual are to include the effect of the deck cargo for each operating condition, using the estimated weight and the height of the center of gravity of the cargo based on the most severe loading assumptions. The loading conditions are to cover the full range of operating configurations, from no deck cargo on board to the maximum design deck load.

If the unit is intended to carry deck cargoes that may accumulate water, such as open cargo bins or open pipes, a free surface correction is to be applied to afloat conditions.

## **CHAPTER 8 SPECIFIC UNIT TYPES**

### **SECTION 3 CONSTRUCTION AND MAINTENANCE UNITS**

*(Add new Subsection 8-3/8, as follows.)*

## **8 Supporting Structure for Deck Cargo (1 August 2012)**

Foundations and supporting structure in way of deck cargo and permanently attached cargo-carrying structures are to be designed to adequately resist the load effects of the cargo in severe storm, normal operating and transit conditions using the allowable stresses defined in 3-2-1/3 of the *MODU Rules*.

Consideration is also to be given to the unit in damaged conditions, where the structures above are to withstand the load effects of the cargo caused by the trim and heel of the unit in these damaged conditions, using the allowable stresses defined in 3-2-1/3 of the *MODU Rules* in association with a factor of safety of 1.0.

Tie-down or other securing arrangements are not included in the scope of Classification.

## **9 Stability**

*(Revise Paragraph 8-3/9.1, as follows.)*

### **9.1 Overturning Moment (1 August 2012)**

In calculating overturning moments for construction and maintenance units, the effect of the crane loads acting simultaneously with the maximum design wind force associated with the operation of the crane is to be determined. The full range of crane positions, elevations and weights is to be considered in order to investigate the most critical scenarios. The wind area of the deck cargo is to be considered in the calculation of the overturning moment.

When the construction and maintenance unit is equipped to counter-ballast while lifting, the unit is to be able to withstand the sudden loss of the hook load in each condition of loading and operation. The free surface effects are to be considered for those tanks which are ballasted. Specific reference may be made to Chapter 8, Appendix 1 “Stability Criteria for Counter-Ballasted Crane Units”.

*(Revise Paragraph 8-3/9.3, as follows.)*

### **9.3 Deck Cargo (1 August 2012)**

Loading conditions in the operations manual are to include the effect of the deck cargo for each operating condition, using the estimated weight and the height of the center of gravity of the cargo based on the most severe loading assumptions. The loading conditions are to cover the full range of operating configurations, from no deck cargo on board to the maximum design deck load.

If the unit is intended to carry deck cargoes that may accumulate water, such as open cargo bins or open pipes, a free surface correction is to be applied to afloat conditions.

## **CHAPTER 8      SPECIFIC UNIT TYPES**

### **SECTION 5      PIPE AND CABLE LAYING UNITS**

## **9 Stability**

*(Revise Paragraph 8-3/9.5, as follows.)*

### **9.3 Pipe Racks and Cable Reels (1 August 2012)**

Loading conditions in the operations manual are to include the effect of the pipe racks and cable reels for each operating condition using the estimated weight and the height of the center of gravity of the cargo based on the most severe loading assumptions. The loading conditions are to cover the full range of operating configurations.

If the unit is intended to carry deck cargoes that may accumulate water, such as open cargo bins or open pipes, a free surface correction is to be applied to afloat conditions.