



GUIDE FOR BUILDING AND CLASSING

DRILLING TENDER BARGES

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Foreword

Noting the special design and operational characteristics of drilling tender barges, ABS has developed this Guide to establish the classification requirements for this type of barge. The requirements in this Guide are applicable to drilling tender barges of a conventional barge displacement hull. For column stabilized or self-elevating drilling tender units, please refer to the *ABS Guide for Building and Classing Mobile Offshore Units*. This Guide is not intended for drilling barges.

This Guide is to be used in conjunction with the *ABS Rules for Building and Classing Steel Barges* and applicable Statutory Regulations.

This Guide is for the use of designers, builders, owners, and operators of drilling tender barges and specifies the ABS requirements for obtaining the classification notation **Drilling Tender Barge**.

This Guide becomes effective on the first day of the month of publication.

Users are advised to check periodically on the ABS website www.eagle.org to verify that this version of this Guide is the most current.

We welcome your feedback. Comments or suggestions can be sent electronically by email to rsd@eagle.org.



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SECTION 1 General

1 Application

This Guide is applicable to non-self-propelled displacement hulls that operate as drilling tender barges, as defined in Subsection 1/5. Requirements for column-stabilized or self-elevating drilling tender units are addressed separately in the *ABS Guide for Building and Classing Mobile Offshore Units (MOU Guide)*.

This Guide addresses only the requirements specific to drilling tender barges. The *ABS Rules for Building and Classing Steel Barges (Barge Rules)* are to be complied with in addition to the requirements contained herein.

3 Classification

The conditions of classification are contained in the separate, generic *ABS Rules for Conditions of Classification (Part 1)*.

3.1 Notation

Drilling tender barges complying with the full requirements of this Guide will be classed and distinguished by the notation **⊗ A1 Drilling Tender Barge**.

Barges complying with the *ABS Guide for Building and Classing Accommodation Barges (Accommodation Barge Guide)* may be assigned the classification **⊗ A1 Drilling Tender, Accommodation Barge**. However, the actual assignment of the **Accommodation Barge** notation is optional for drilling tender barges.

5 Definitions

Accommodation Block. Superstructures and deckhouses enclosing accommodations, including any overhanging decks supporting such accommodations.

Drilling Tender Barge. A barge fitted with facilities to carry persons that is principally intended as support to an offshore drilling unit. The barge is typically moored alongside the offshore unit during drilling operations and may contain the power supply, circulating pumps, storage tanks, drilling pipe racks, casing, cement, storage space, and helicopter landing platform.

Hazardous Areas. An area where flammable or explosive gases, vapors, or dust are normally present or likely to be present.

Short Field Moves. Repositioning of a barge during daylight up to 20 miles in distance or eight hours in duration.

Transit Operations. Barge movements from one location to another that are not classified as short field moves.

7 Operating Manual

An operating manual which is consistent with the information and criteria upon which classification is based is to be placed aboard the drilling tender barge for the guidance of the operating personnel. Insofar as classification is concerned, the operating manual is to include, as appropriate, the following information:

- i)* A general description of the barge, including major dimensions, lightship characteristics
- ii)* Summaries of approved transit and operation conditions including:
 - Limiting environmental conditions, such as wave height and period, wind velocity, current velocity, and service temperature of the barge
 - Design deck loadings, mooring loads, icing loads, variable load, cranes, and types of helicopter for which the helideck is designed
 - Disposition (open or closed) of watertight or weathertight closures
 - Identification of “Restricted Service” or “Limited Service” conditions
- iii)* Vessel Information:
 - General arrangement drawing
 - Location of hazardous areas
 - Watertight and weathertight boundaries, location of unprotected openings, and watertight and weathertight closures
 - Type, location, and quantities of permanent ballast
 - Allowable deck loads
 - Capacity, centers of gravity, and free surface correction for each tank
 - Hydrostatic curves or equivalent
- iv)* Guidance for the maintenance of adequate stability and the use of the stability data
- v)* Guidance for the routine recording of lightweight alterations
- vi)* Guidance for the recommended sequence of emergency shut-downs
- vii)* Examples of loading conditions for each mode of operation and instructions for developing other acceptable loading conditions, including the vertical components of the forces in the anchor cables

The Operating Manual shall be in the language or languages required by the flag State. If the language is not English, a translation into English is to be included and submitted to ABS.

The Operating Manual is to be submitted for review by the ABS solely to verify the presence of the above information which is to be consistent with the design information and limitations considered in the barge’s classification. ABS is not responsible for the operation of the barge.

The Operating Manual required by this Subsection does not need to be in addition to that required by flag and coastal Administrations. The administration may require that additional information be included in the Operating Manual.



SECTION 2 Arrangement, Machinery, and Systems

1 Stability

In assessing the stability of drilling tender barges, the requirements in Section 6 of the *Accommodation Barge Guide* are to be complied with.

When large cranes are permanently installed, the barge is to satisfy the intact stability requirements in 5-3-3/9 of the *Barge Rules*.

3 Pipe Racks

Pipe racks, including the reinforcements for the hull, are to be designed to adequately resist the load effects of drill pipes or risers imposed on the pipe rack using the design load calculations in 5-3-4/5.5.2 of the *Barge Rules*, with the allowable stresses defined in 5-3-4/5.5.3 of the *Barge Rules*.

Consideration should also be given to the barge in damaged conditions, where the pipe racks are to withstand the load effects caused by the trim and heel of the barge with a factor of safety of 1.0.

5 Hazardous Areas

Drilling tender barges may have permanent or temporary equipment on deck that creates hazardous areas. If any of the tender's intended modes of operation include hazardous equipment, arrangements are to be made to accommodate and operate such equipment safely. The area where such equipment will be installed is to be considered hazardous, and electrical equipment, ventilation, and access to adjacent spaces in this area are to be in accordance with 4-3/11 of the *MOU Guide*.

Alternatively, if the area where temporary hazardous equipment will be installed is not in compliance with this Guide, a procedure for making this area suitable for such equipment is to be developed.

7 Mooring Equipment

Owner requested position mooring equipment notations or position mooring system certification are to be in accordance with Section 10 of the *Accommodation Barge Guide*.

9 Piping System Segregation

Piping systems carrying non-hazardous fluids are to be segregated from piping systems which may contain hazardous fluids as per 4-2/1.3 of the *MOU Guide*.

11 Emergency Shutdown Arrangements

Arrangements are to be provided for the shutdown of electrical equipment as per 4-3-5/7 of the *ABS Rules for Building and Classing Mobile Offshore Drilling Units (MODU Rules)*.

13 Bulk Storage, Circulation, and Transfer Systems for Drilling

Equipment and components used solely for operation of drilling systems and complying with an applicable recognized standard need not be in accordance with this Guide or the *Steel Vessel Rules*, except where specifically stated in this Section or the *Accommodation Barge Guide*. Details of the recognized standard applied and how the equipment and components comply with the recognized standard are to be submitted for review.

13.1 CDS Notation (optional)

Systems installed permanently on the barge that have been designed, reviewed and surveyed, in accordance with the *ABS Guide for the Classification of Drilling Systems (CDS Guide)*, will be classed and distinguished in the *Record* with the notation **CDS**.

13.3 Drilling Tender Barges without CDS Notation

Where the optional **CDS** notation is not requested, drilling system equipment and components complying with an applicable recognized standard, need not to comply with the *CDS Guide*. Verification of compliance with such standards may include:

- Surveyor verification of manufacturer's affidavits of compliance, or equivalent documentation, mainly for equipment and components such as pumps, valves, fittings, or motors,
- Design review and surveys after installation of specific assembled systems or sub-systems such as high pressure mud and cement piping or hydraulic piping. The design review will be performed to verify compliance with the applicable recognized standard specified by the manufacturer.

When equipment or components do not comply with an applicable recognized standard, the equipment or component is to be fully certified in accordance with the *CDS Guide*.



SECTION 3 Fire Protection and Operation Safety

1 General Requirements

In general, the level of safety requirements applied drilling tender barges is depending on the number of people being carried onboard.

1.1 36 or More Persons

Where a drilling tender barge is fitted with facilities to carry 36 or more persons, it is to comply with all of the requirements contained in Part 3, Chapter 5 of the *Barge Rules*.

1.3 Fewer Than 36 Persons

Where a drilling tender barge is fitted with facilities to carry fewer than 36 persons, the requirements contained in Part 3, Chapter 5 of the *Barge Rules* are given special consideration, taking into account the length of the voyage, area of operation, number of persons onboard, and other relevant information. At a minimum, this will include consideration for the selection of materials for accommodations, service spaces and work spaces, fire-extinguishing equipment, electrical power supply, lifejackets, lifebuoys, survival craft, communications, etc.

3 Other Fire Protection Requirements

In addition to the requirements in the above Subsection 3/1, drilling tender barges are to comply with the following requirements.

3.1 Passive Fire Protection of Accommodation Block

The exterior boundary of an accommodation block is to be an “A-60” Class boundary for the whole of the portion that faces the adjacent drilling unit and is within 30 m (98 ft) of any area where a hydrocarbon fire may arise. If the distance is more than 30 m (98 ft), but less than 100 m (328 ft), an “A-0” Class boundary is required.

Where an “A-60” Class boundary is required, an “A-0” Class boundary used in conjunction with a water curtain system designed to provide a density of at least 6.1 liters/min/m² (0.15 gpm/ft²) of the exposed surface area may be used as an equivalent means of meeting the “A-60” Class rating.

The ventilation inlets and outlets as well as other openings in the deckhouse and superstructure exterior boundaries are to be located as far away from the adjacent drilling unit as practicable.

3.3 Active Fire Protection Systems and Equipment

The active fire protection requirements of Part 5, Chapter 2 of the *MODU Rules* are to be apply; special consideration may be given taking into account the installed equipment, number of persons onboard, and other relevant information.

3.5 Fire Protection for Mud Processing Areas and Mud Tanks

If the drilling tender barge is fitted with mud processing areas and mud tanks, additional fire protection is required in accordance with the *ABS Rules for Building and Classing Mobile Offshore Drilling Units (MODU Rules)* as detailed in Section 3, Table 1 below:

TABLE 1
Additional Fire Protection

	<i>Section of MODU Rules</i>
Fixed Fire Extinguishing Systems	5-2-3/1.3.2
Portable Fire Extinguishers	5-2-4/1.1
Fire Detection	5-2-5/1.1.5
Mud Tank Alarm	5-2-5/1.7
Gas Detection and Alarm System	5-2-5/3
Hydrogen Sulfide Detection and Alarm	5-2-5/5
Respiratory Protection for Hydrogen Sulfide	5-2-5/7.3
One Emergency Control Station	5-3-1/7

5 Operation Safety

5.1 Transit

During transit of the drilling tender barges, only crew members necessary for the transit operation are to be onboard.

5.3 Short Field Moves

Short field moves are only to occur during daylight. Barges may be manned during short field moves if the bow height and reserve buoyancy requirements of Load Line are met. Otherwise, the barges must be unmanned or the crew reduced to the minimum necessary to conduct the short field moves.



SECTION 4 Surveys

1 Testing, Trials, and Surveys During Construction

1.1 Hull Trials and Testing

The requirements for hull testing, trials, and survey during construction in this Guide refer to Part 3, Chapter 4 of the *Barge Rules*.

1.3 Machinery Trials and Testing

- Barge system machinery is to be tested in accordance with the appropriate sections of Part 4 of the *ABS Rules for Building and Classing Steel Vessels*.
- Machinery related to optional notations such as **DPS**, **AMCCU**, **AMS-NP**, **M**, or **P** shall be tested in accordance with the appropriate Guide or Rules.
- Industrial systems not required by Class are to be verified to be in accordance with 2/15.3.

3 Surveys After Construction

The requirements for Survey after Construction in this Guide refer to Section 7-2-1 of the *MODU Rules*.