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Liquid cargo handling equipment — Crude oil offloading system —Tandem mooring winches

Équipement pour la manutention de cargaisons liquides — Systèmes de déchargement de pétrole brut — Treuils d'amarrage en tandem

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 8, *Ships and marine technology*, Subcommittee SC 4, *Outfitting and deck machinery*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Liquid cargo handling equipment — Crude oil offloading system —Tandem mooring winches

1 Scope

This document specifies requirements for the design, operation, performance, and acceptance tests of tandem mooring winches.

It is applicable to the design, manufacture and acceptance of tandem mooring winches for crude oil offloading systems of liquid cargo handling equipment.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3828, Shipbuilding and marine structures — Deck machinery — Vocabulary and symbols

ISO 7825, Shipbuilding — Deck machinery — General requirements

ISO 3730:2012, Shipbuilding and marine structures — Mooring winches

ISO 7365:2012, Shipbuilding and marine structures — Deck machinery — Towing winches for deep sea use

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 3828 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at https://www.iso.org/obp
- IEC Electropedia: available at http://www.electropedia.org/

3.1

mooring pull

pulling force from the receiving tanker to the tandem mooring winch during crude oil offloading

3.2

hawser deployment and recovery load

maximum pull of the rope measured at the drum exit as the tandem mooring winch starts to haul or veer at the *nominal speed* (3.3) with a hawser wound on the drum in a single layer

3.3

nominal speed

maximum rope speed that the tandem mooring winch can maintain when withstanding the hawser deployment and recovery load (3.2)

3.4

hawser quick release

action of a quick release device to release the mooring hawser quickly with conventional or standby power, aiming to release the excessive mooring pull between the hawser winch and lifting vessel under special conditions, such as extreme sea conditions, so as to disconnect the lifting vessel and guarantee the safety of crude oil offloading

3.5 safe working load SWL

maximum safe mooring pull that the tandem mooring winch or independent quick release device can support

4 Types

4.1 Left-hand winch

Winch where the reduction gear or drive of the drum is on the left-hand side of the drum, in relation to an operator situated at the back of the winch with his/her line of sight toward the sea, with symbol L, see Figure 1 a).

4.2 Right-hand winch

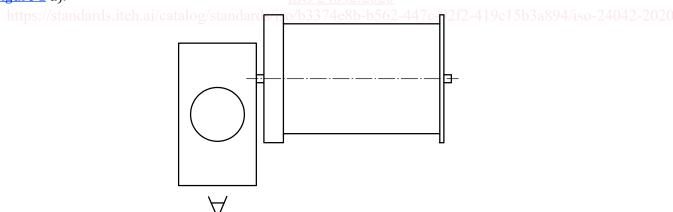
Winch where the reduction gear or drive of the drum is on the right-hand side of the drum, in relation to an operator situated at the back of the winch with his/her line of sight toward the sea, with symbol R, see Figure 1 b).

4.3 Bottom-side winch

Winch where the reduction gear or drive of the drum is on the bottom side of the drum, in relation to an operator situated at the back of the winch with his/her line of sight toward the sea, with symbol B, see Figure 1 c).

4.4 Top-side winch

Winch where the reduction gear or drive of the drum is on the top side of the drum, in relation to an operator situated at the back of the winch with his/her line of sight toward the sea, with symbol T, see Figure 1 d).



a) L type mooring winch