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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 43406-2023

**Liquid cargo handling equipment - Crude oil offloading system
- Tandem mooring winches**

液货装卸设备 原油外输系统 串靠系泊绞车

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting:

This document is modified to adopt ISO 24042:2020 "Liquid cargo handling equipment crude oil export system tandem mooring winch":

The technical differences between this document and ISO 24042:2020 and their reasons are as follows:

- Added explosion-proof requirements for electrical parts (see 5.1:2) to meet electrical safety requirements;
- Added general requirements for test items (see 6.1) and a summary of the test chapters;
- The requirement for "model" in the "nameplate" has been deleted (see 7.2), and this information has been reflected in the "product identification";
- Added provisions for packaging, transportation and storage (see Chapter 8):

The following editorial changes have been made to this document:

- The relationship between the safe working load and the breaking load of large cables has been corrected, changing "not more than" to "not less than" (see 5.3:5):

Please note that some content in this document may be subject to patents: The publisher of this document assumes no responsibility for identifying patents:

1 Scope

This document specifies the type, design, acceptance test, marking system, packaging, transportation and storage of tandem mooring winches:

This document applies to the design, manufacture and acceptance of tandem mooring winches for crude oil export systems of liquid cargo handling equipment:

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, the dated quotations for undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document:

GB/T 11869-2018 Shipbuilding and offshore structures deck machinery offshore towing winches (ISO 7365:2012, IDT) winches) Note: GB/T 4446-1995 Mooring winches (ISO 3730:1988, NEQ) Note: GB/T 3893-2008 Deck machinery terms and symbols for shipbuilding and offshore structures (ISO/FDIS3828.2007, IDT) ISO 7825 Shipbuilding-Deckmachinery-General requirements (Shipbuilding-Deckmachinery-General requirements) Note: GB/T 42050-2022 General requirements for shipbuilding deck machinery (ISO 7825:2017, IDT)

3 Terms and definitions

The terms and definitions defined in ISO 3828 and below apply to this document:

mooring pull mooringpul when crude oil is exported, it receives the pulling force of the tanker on the mooring winch:

When the single-layer large cable is wound on the drum and the mooring winch begins to retract and unwind at the nominal speed (3:3), the maximum value measured at the point where the cable leaves the drum is Big pull:

nominal speednominalspeed the maximum cable speed that the tandem mooring winch can maintain when bearing heavy cable retracting and retracting loads:

Large cable quick release hawserquickrelease the quick release device of the tandem mooring winch relies on conventional power or backup power to quickly release the mooring cable:

Note: The purpose is to release the excessive mooring pull force of the tandem mooring winch on the receiving tanker under special working conditions such as extreme sea conditions, thereby freeing the receiving tanker and ensuring Safety in crude oil export operations: