

SLOVENSKI STANDARD oSIST prEN ISO 10855-1:2024

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Plavajoče kontejnerske enote in z njimi povezan dvižni pribor - 1. del: Načrtovanje, izdelava in označevanje plavajočih kontejnerskih enot (ISO/DIS 10855-1:2024)

Offshore containers and associated lifting sets - Part 1: Design, manufacture and marking of offshore containers (ISO/DIS 10855-1:2024)

Offshore-Container und dazugehörige Anschlaggarnituren - Teil 1: Auslegung, Herstellung und Kennzeichnung von Offshore-Containern (ISO/DIS 10855-1:2024)

Conteneurs pour une utilisation en mer et dispositifs de levage associés - Partie 1: Conception, fabrication et marquage des conteneurs pour une utilisation en me (ISO/DIS 10855-1:2024)

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ICS:

53.020.99	Druga dvigalna oprema	Other lifting equipment
55.180.10	Večnamenski kontejnerji	General purpose containers
75.180.10	Oprema za raziskovanje, vrtanje in odkopavanje	Exploratory, drilling and extraction equipment

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Offshore containers and associated lifting sets —

Part 1:

Design, manufacture and marking of offshore containers

Conteneurs offshore et dispositifs de levage associés —

Partie 1: Conception, fabrication et marquage des conteneurs offshore

ICS: 75.180.10

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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 on 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 WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information.

A list of all the parts of ISO 10855 can be found on the ISO website.

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Introduction

ISO 10855 (all parts) meets the requirements of IMO MSC/Circ.860 (1998) for the design, construction, inspection, testing and in-service examination of offshore containers and associated lifting sets which are handled in open seas.

This document does not specify certification requirements for offshore containers which are covered by the IMO Circular 860 and SOLAS. IMO MSC/Circ.860 requires certification of offshore containers "by national administrations or organizations duly authorized by the Administration", which should take account of both the calculations and the testing, "taking into account the dynamic lifting and impact forces that can occur when handling such equipment in open seas". The certificate of conformity described in Clause 11 complies with IMO MSC/Circ.860. Further information about certification can be found in informative Annex A of this document.

ISO 10855 (all parts) does not cover operational use or maintenance, for which there are several industry guidelines which can be referred to. Some are listed in the Bibliography.

Under conditions in which offshore containers are often transported and handled, the 'normal' rate of wear and tear is high, and damage necessitating repair will occur. However, containers designed, manufactured and periodically inspected according to ISO 10855 (all parts) will have sufficient strength to withstand the normal forces encountered in offshore operations, and will not suffer complete failure even if subject to more extreme loads.

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Offshore containers and associated lifting sets —

Part 1:

Design, manufacture and marking of offshore containers

1 Scope

This document specifies requirements for the design, manufacture and marking of offshore containers with a maximum gross mass not exceeding 25 000 kg, intended for repeated use to, from and between offshore installations and ships.

This document specifies only transport-related requirements.

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 148-1, Metallic materials — Charpy pendulum impact test — Part 1: Test method

ISO 209, Aluminium and aluminium alloys — Chemical composition

ISO 668, Series 1 freight containers — Classification, dimensions and ratings

ISO 1161, Series 1 freight containers — Corner and intermediate fittings — Specifications

ISO 1496-1, Series 1 freight containers — Specification and testing — Part 1: General cargo containers for general purposes

ISO 1496-3, Series 1 freight containers — Specification and testing — Part 3: Tank containers for liquids, gases and pressurized dry bulk

ISO 1496-4, Series 1 freight containers — Specification and testing — Part 4: Non-pressurized containers for dry bulk

ISO 3452-1, Non-destructive testing — Penetrant testing — Part 1: General principles

ISO 5817, Welding — Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) — Quality levels for imperfections

ISO 6892-1, Metallic materials — Tensile testing — Part 1: Method of test at room temperature

ISO 7500-1, Metallic materials — Verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Verification and calibration of the force-measuring system

ISO 9606-1, Qualification test of welders — Fusion welding — Part 1: Steels

ISO 9606-2, Qualification test of welders — Fusion welding — Part 2: Aluminium and aluminium alloys

ISO 9712, Non-destructive testing — Qualification and certification of NDT personnel

ISO 10042, Welding — Arc-welded joints in aluminium and its alloys — Quality levels for imperfections

ISO 10474, Steel and steel products — Inspection documents

ISO 10675-1, Non-destructive testing of welds — Acceptance levels for radiographic testing — Part 1: Steel, nickel, titanium and their alloys

ISO 10675-2, Non-destructive testing of welds — Acceptance levels for radiographic testing — Part 2: Aluminium and its alloys

ISO 11666, Non-destructive testing of welds — Ultrasonic testing — Acceptance levels

ISO 15607, Specification and qualification of welding procedures for metallic materials — General rules

ISO 15609-1, Specification and qualification of welding procedures for metallic materials — Welding procedure specification — Part 1: Arc welding

ISO 15614-1, Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 1: Arc and gas welding of steels and arc welding of nickel and nickel alloys

ISO 15614-2, Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 2: Arc welding of aluminium and its alloys

ISO 17637, Non-destructive testing of welds — Visual testing of fusion-welded joints

ISO 17638, Non-destructive testing of welds — Magnetic particle testing

ISO 23277, Non-destructive testing of welds — Penetrant testing — Acceptance levels

ISO 23278, Non-destructive testing of welds — Magnetic particle testing — Acceptance levels

ISO 17636-1, Non-destructive testing of welds — Radiographic testing — Part 1: X- and gamma-ray techniques with film

ISO 17636-2, Non-destructive testing of welds — Radiographic testing — Part 2: X- and gamma-ray techniques with digital detectors

ISO 17640, Non-destructive testing of welds — Ultrasonic testing — Techniques, testing levels, and assessment

EN 10025-1, Hot rolled products of structural steels — Part 1: General technical delivery conditions

EN 10025-2, Hot rolled products of structural steels — Part 2: Technical delivery conditions for non-alloy structural steels

EN 10025-3, Hot rolled products of structural steels — Part 3: Technical delivery conditions for normalized/normalized rolled weldable fine grain structural steels

EN 10025-4, Hot rolled products of structural steels — Part 4: Technical delivery conditions for thermomechanical rolled weldable fine grain structural steels

EN 10088-2, Stainless steels — Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes

EN 10164, Steel products with improved deformation properties perpendicular to the surface of the product — Technical delivery conditions

EN 10210-1, Hot finished structural hollow sections of non-alloy and fine grain structural steels — Part 1: Technical delivery requirements

EN 10219-1, Cold formed welded structural hollow sections of non-alloy and fine grain steels — Part 1: Technical delivery requirements

EN 10250-2, Open die steel forgings for general engineering purposes — Part 2: Non-alloy quality and special steels

EN 10250-3, Open die steel forgings for general engineering purposes — Part 3: Alloy special steels

ASME Boiler and Pressure Vessel Code, Section IX, Welding and Brazing Qualifications

AWS D1.1, Structural Welding Code - Steel

International Maritime Dangerous Goods Code (IMDG Code)

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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 https://www.electropedia.org/

3.1

offshore container

portable unit for repeated use in the transport of goods or equipment handled in open seas to, from and between fixed and/or floating installations and ships

EXAMPLE Examples of offshore containers are:

- general cargo container: closed container with doors;
- cargo basket: open top container for general or special cargo;
- tank container: container for the transport of dangerous or non-dangerous fluids (other types of tanks, e.g. processing plants, storage tanks, that are empty during transport, are considered to be service equipment, and are not covered by this document);
- bulk container: container for the transport of solids in bulk;
- service container: built and equipped for a special service task, usually as a temporary installation e.g. laboratories, workshops, stores, power plants, control stations, accommodation, engine, compressor, generator
- special container: frame or skid for the transport of special cargo e.g. garbage containers, equipment boxes, gas cylinder racks, IBC frame.
 - offshore waste skip: open or closed offshore container used for the storage and removal of waste.

Note 1 to entry: For the purposes of this document the maximum gross mass of offshore containers shall not exceed $25\,000\,\mathrm{kg}$.

Note 2 to entry: The unit incorporates permanently installed equipment for lifting and handling and can include equipment for filling, emptying, cooling, heating, etc.

Note 3 to entry: offshore waste skips are normally constructed from flat steel plates forming the load bearing sections of the container, with bracing in the form of steel profiles e.g. channel or hollow section, being fitted horizontally and/or vertically around sides and ends. In addition to the pad eyes for the lifting set, these containers can have side-mounted lugs suitable for use with the lifting equipment mounted on a skip lift vehicle.

3.2

permanent equipment

equipment that is permanently attached to the container and which is not cargo

EXAMPLE Lifting sets, refrigeration units, shelves, lashing points, garbage compactors.

3.3

Primary structure