

SLOVENSKI STANDARD oSIST prEN ISO 10855-3:2024

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Offshore containers and associated lifting sets - Part 3: Periodic inspection, examination and testing (ISO/DIS 10855-3:2024)

Offshore-Container und dazugehörige Anschlaggarnituren - Teil 3: Wiederkehrende Kontrolle, Inspektion und Prüfung (ISO/DIS 10855-3:2024)

Containeurs offshore et dispositifs de levage associés - Partie 3: Contrôle périodique, inspection et essais (ISO/DIS 10855-3:2024)

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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 3:

Periodic inspection, examination and testing

Containeurs offshore et dispositifs de levage associés — Partie 3: Contrôle périodique, inspection et essais

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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/Circular 860^[11] 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". 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 and manufactured 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 3:

Periodic inspection, examination and testing

1 Scope

This document specifies requirements for the periodic inspection, examination and testing of offshore freight and service containers, built in accordance with ISO 10855-1, with maximum a gross mass not exceeding 25 000 kg and their associated lifting sets, intended for repeated use to, from and between offshore installations and ships. Inspection requirements following damage and repair of offshore containers are also included.

Recommended knowledge and experience of staff responsible for inspection of offshore containers is given in $\underbrace{Annex\ B}$.

Recommended knowledge and experience of staff responsible for inspection of lifting sets intended for use with offshore containers is given in $\underline{\mathsf{Annex}}\,\mathsf{C}.$

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~3834-2, Quality requirements for fusion welding of metallic materials -Part 2: Comprehensive quality requirements

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

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

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

ISO 17643, Non-destructive testing of welds — Eddy current testing of welds by complex-plane analysis

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

ISO 10855-1:2018, Offshore containers and associated lifting sets — Part 1: Design, manufacture and marking of offshore containers

ISO 10855-2:2018, Offshore containers and associated lifting sets — Part 2: Design, manufacture and marking of lifting sets

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

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

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

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

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/IEC 17020, Conformity assessment — Requirements for the operation of various types of bodies performing inspection

ISO/IEC 17025, General requirements for the competence of testing and calibration laboratories

EN 818-4, Short link chain for lifting purposes — Safety — Part 4: Chain slings - Grade 8

ISO 4778, Round steel short link chains for lifting purposes — Chain slings of welded construction — Grade 8

EN 818-6, Short link chain for lifting purposes — Safety — Part 6: Chain slings — Specification for information for use and maintenance to be provided by the manufacturer

EN 13414-2, Steel wire rope slings — Safety — Part 2: Specification for information for use and maintenance to be provided by the manufacturer

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 10855-1 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 https://www.electropedia.org/ 202

3.1

inspection body

body that performs periodic inspection or examination

3.2

owner

legal owner of the offshore container or the delegated nominee of that body

3.3

visual examination

examination in accordance with ISO 17637

4 Symbols

WLL_s minimum working load limit of each shackle

WLL_{off} maximum rating of an offshore container to which any given sling set may be attached

R rating, i.e. the maximum gross mass, MGM, of the container including permanent equipment and its cargo, but excluding the lifting set, in kg

- T tare mass, i.e. the mass of an empty container including any permanent equipment excluding cargo and lifting set, in kg
- *P* payload, i.e. the maximum permissible mass of cargo which may be safely transported by the container, in kg

NOTE 1 P = R - T

NOTE 2 *R, T* and *P* are by definition, in units of mass, kilograms (kg). Where design requirements are based on the gravitational forces derived from these values, those forces are indicated thus: *Rg, Tg* and *Pg* the units of which are in Newtons or multiples thereof. Container inspection plate.

5 Container inspection plate

5.1 General

Containers shall be fitted with a plate carrying the information specified in <u>5.2</u>.

The plate shall be made of corrosion-resistant material securely attached externally in a manner designed to avoid unauthorized or accidental removal. The plates shall be fitted to a door, or on containers with no doors, in a prominent position.

Aluminium rivets have been found to be unsuitable as a fixing method in the offshore environment and shall not be used. The information on the plate shall be in the English language.

NOTE Provision for an additional language can be made.

The text shall be permanently and legibly marked on the plates in characters not less than 4 mm high.

5.2 Contents of inspection plate

The plate shall be headed 'OFFSHORE CONTAINER INSPECTION PLATE - ISO 10855-3'.

The plate shall contain the following information:

- a) owner's container number;
- b) owner's name;
- c) date of last inspection.

The date of last inspection shall be the date on which the most recent inspection was carried out to the satisfaction of the competent person.

To avoid confusion, the plate shall not carry the date of the next inspection. Provision shall be made on the plate to facilitate permanent marking to record a minimum of nine inspections.

NOTE 1 For marking of the inspection plate, see <u>Clause 10</u>.

NOTE 2 In some markets it is common practice to mark an initial inspection date on the inspection plate before the container is taken into use.

A recommended format for the plate is shown in <u>Figure 1</u>.