



SLOVENSKI STANDARD SIST EN ISO 6115:2000

01-december-2000

Shipbuilding - Trawl winches (ISO 6115:1988)

Shipbuilding - Trawl winches (ISO 6115:1988)

Schiffbau - Fischnetzwinden (ISO 6115:1988)

Construction navale - Treuils de peche (ISO 6115:1988)

Ta slovenski standard je istoveten z: EN ISO 6115:1996

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ICS:

47.020.40	Dvigalna oprema in oprema za pretovor	Lifting and cargo handling equipment
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EUROPEAN STANDARD

EN ISO 6115

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 1996

ICS 47.020.40

Descriptors: See ISO document

English version

Shipbuilding - Trawl winches (ISO 6115:1988)Construction navale
(ISO 6115:1988)

Treuils de pêche

Schiffbau - Fischnetzwinden (ISO 6115:1988)

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENEuropean Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

The text of the International Standard from Technical Committee ISO/TC 8 "Ships and marine technology" of the International Organization for Standardization (ISO) has been taken over as an European Standard by Technical Committee CEN/TC 300 "Sea-going vessels and marine technology", the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 1997 and conflicting national standards shall be withdrawn at the latest by May 1997.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 6115:1988 has been approved by CEN as a European Standard without any modification.

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INTERNATIONAL STANDARD

ISO
6115

Second edition
1988-11-01



INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
ORGANISATION INTERNATIONALE DE NORMALISATION
МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Shipbuilding — Trawl winches

Construction navale — Treuils de pêche

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ISO 6115 : 1988 (E)**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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 6115 was prepared by Technical Committee ISO/TC 8, *Shipbuilding and marine structures*.

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This second edition cancels and replaces the first edition (ISO 6115:1981) of which it constitutes a minor revision.

Annex A forms an integral part of this International Standard; annexes B and C are given for information only.

Shipbuilding — Trawl winches

1 Scope

This International Standard specifies requirements and characteristics of single-drum and double-drum trawl winches with electric, electro-hydraulic, hydraulic diesel or externally powered drive.

The winches are used for hauling-in, paying-out and holding the trawl rope while fishing by means of trawling fishing gear.

When equipped with additional auxiliary drums, they may also be used for auxiliary operations when hauling-in, paying-out and emptying the trawl net.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 2408 : 1985, *Steel wire ropes for general purposes — Characteristics*.

ISO 2944 : 1974, *Fluid power systems and components — Nominal pressures*.

ISO 3828 : 1984, *Shipbuilding and marine structures — Deck machinery — Vocabulary*.

ISO 4413 : 1979, *Hydraulic fluid power — General rules for the application of equipment to transmission and control systems*.

ISO 6482: 1980, *Shipbuilding — Deck machinery — Warping end profiles*.

ISO 7825 : 1985, *Shipbuilding — Deck machinery — General requirements*.

IEC 92 : 1965 to 1988, *Electrical installations in ships*.

IEC 529 : 1976, *Classification of degrees of protection provided by enclosures*.

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 3828 and the following definitions apply.

3.1 nominal size: Drum load on the trawl rope drum, in tonnes, as stated in table 1, for a single-drum trawl winch.

NOTE — For a double-drum trawl winch, the nominal size corresponds to twice the drum load stated in table 1.

3.2 drum load: Maximum trawl rope tension, measured at the drum exit with a trawl rope being hauled-in at the nominal speed and being wound onto the appropriate nominal trawl rope winding diameter of the drum.

3.3 design torque: Driving torque available at the drum, resulting from the drum load applied to the half-length rope nominal trawl rope winding diameter, for a single-drum winch.

NOTE — For a double-drum winch, the design torque is twice the design torque of a single-drum winch.

3.4 Nominal trawl rope winding diameter

3.4.1 winding diameter full-length rope: Diameter when the whole design length of the rope has been wound onto the drum, i.e. diameter of the outermost layer of the rope.

3.4.2 winding diameter half-length rope: Diameter when half of the design length of the rope has been wound onto the drum.

3.5 nominal speed of trawl rope: Maximum hauling-in speed of a rope obtainable by the winch at drum load applied to the appropriate nominal rope winding diameter.

3.6 Paying-out speed of trawl rope

3.6.1 paying-out speed under regenerative braking (or equivalent type of braking) : Maximum paying-out speed of a rope obtainable by the winch at 0,5 drum load applied to the appropriate nominal rope winding diameter, while paying-out the rope by means other than a friction brake.

3.6.2 paying-out speed under friction braking : Twice the nominal speed at 0,5 drum load applied to the appropriate nominal rope winding diameter, while paying-out the rope using the friction brake.

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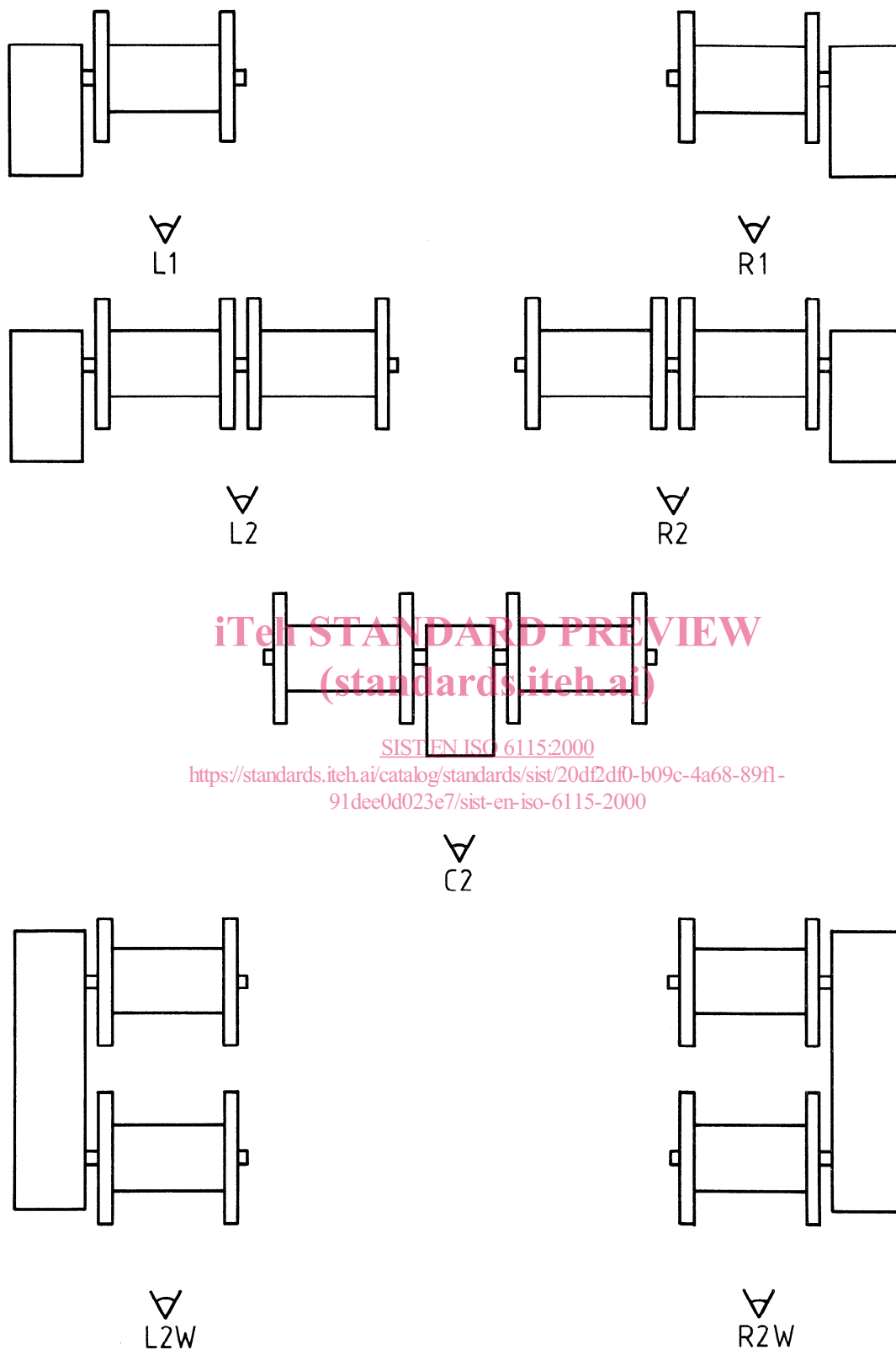


Figure 1 – Examples of right-hand (R), left-hand (L) and central (C), single- and double-drum trawl winches

3.7 single-drum trawl winch: Winch equipped with one main trawl rope drum. (See figure 1: L1 or R1).

3.8 double-drum trawl winch: Winch equipped with two main trawl rope drums, double in-line or waterfall, provided with a common drive. (See figure 1: L2, R2, C2, L2W or R2W.)

3.9 Single-drum trawl winch side

3.9.1 right-hand winch: Winch where the reduction gear or the drum drive is on the right-hand side of the main drum, in relation to an observer situated on the side of the motor, power supply or controller.

3.9.2 left-hand winch: Winch where the reduction gear or the drum drive is on the left-hand side of the main drum, in relation to an observer situated on the side of the motor, power supply or controller.

4 Design and operation

4.1 General requirements

Trawl winches shall meet the general requirements for deck equipment in ISO 7825 and the specific requirements given in 4.2 to 4.12.

4.2 Auxiliary equipment

4.2.1 Trawl winches may be also fitted with auxiliary drums and warping-ends: if these are fitted, their positions and characteristics shall be agreed between the purchaser and manufacturer.

For the profile of warping-ends, see ISO 6482.

4.2.2 A spooling gear is to be fitted to the main drum in order to achieve uniform winding of the trawl rope, unless otherwise agreed between the purchaser and manufacturer.

The auxiliary drums may also have spooling gears, if agreed between the purchaser and manufacturer.

Provision shall be made for manual adjustment of any spooling gear fitted.

Mechanical spooling gear (if fitted) shall be designed to operate against the drum load, at fleet angles up to 6° per side in horizontal and vertical planes.

If the spooling gear is automatically driven, it shall be possible to disengage the spooling carriage. Subject to agreement between the manufacturer and purchaser, the spooling gear shall be adaptable to wires of more than one diameter.

4.3 Control and measuring instruments

4.3.1 A trawl winch may have an instrument to measure the tension in the trawl rope, if agreed between the purchaser and manufacturer. The equipment shall be capable of measuring

the tension while the rope is being paid-out, hauled-in and when trawling the fishing gear. The measurement of tension may be replaced by the measurement of torque at the drum whilst trawling, if agreed between the purchaser and manufacturer. It is recommended, for winches greater than nominal size 4 (see table 1), that the tension should be measured without contact of the measurement instruments (pick-up) with the trawl rope.

4.3.2 A trawl winch may have an instrument to measure the length of paid-out trawl rope, if agreed between the purchaser and manufacturer. Instrument error shall not exceed 0,15 % of the trawl rope lengths.

4.3.3 A trawl winch may have instruments to measure the electrical and/or hydraulic values as agreed between the purchaser and manufacturer.

4.4 Signalling devices

If agreed between the purchaser and manufacturer, a trawl winch may be fitted with adequate signalling devices giving necessary information on

- a) the winch and its components being ready for operation;
- b) which components of the winch are being operated;
- c) the engaging of clutches and/or drum brakes;
- d) failure of winch components;
- e) overloads and other dangerous conditions, for example:
 - the trawl rope being down to the first layer on the drum while paying-out the fishing gear,
 - no release of the automatic brake,
 - allowable temperature of the electric motor windings being exceeded,
 - slipping of the trawl drum while trawling the fishing gear,
 - overloading of the spooling gear.

4.5 Protection

4.5.1 Overload protection of trawl winches shall be provided during hauling-in. It shall operate under overload not exceeding 1,5 times the value of drum load at the outermost layer of a trawl rope being fully wound onto the drum, unless a higher value is agreed between the purchaser and manufacturer. A time interval protection device shall be fitted to overcome the transient overloads experienced in service. When the protection device of one winch has operated, the second winch shall stop simultaneously.