



SLOVENSKI STANDARD
oSIST prEN ISO 13710:2011
01-april-2011

Industrija za predelavo nafte in zemeljskega plina - Oscilacijske črpalke z izpodrivnim delovanjem (ISO/DIS 13710:2010)

Petroleum, petrochemical and natural gas industries - Reciprocating positive displacement pumps (ISO/DIS 13710:2010)

Erdöl-, petrochemische und Erdgasindustrie - Oszillierende Verdrängerpumpen (ISO/DIS 13710:2010)

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Industries pétrolière, pétrochimique et du gaz naturel - Pompes volumétriques alternatives (ISO/DIS 13710:2010)

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Ta slovenski standard je istoveten z: prEN ISO 13710

ICS:

23.080	Črpalke	Pumps
75.180.20	Predelovalna oprema	Processing equipment

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN ISO 13710

November 2010

ICS 75.180.20

Will supersede EN ISO 13710:2004

English Version

**Petroleum, petrochemical and natural gas industries -
Reciprocating positive displacement pumps (ISO/DIS
13710:2010)**

Industries pétrolière, pétrochimique et du gaz naturel -
Pompes volumétriques alternatives (ISO/DIS 13710:2010)

Erdöl-, petrochemische und Erdgasindustrie - Oszillierende
Verdrängerpumpen (ISO/DIS 13710:2010)

This draft European Standard is submitted to CEN members for parallel enquiry. It has been drawn up by the Technical Committee CEN/TC 12.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Contents

Page

Foreword.....3

**iTeh STANDARD PREVIEW
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[oSIST prEN ISO 13710:2011
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Foreword

This document (prEN ISO 13710:2010) has been prepared by Technical Committee ISO/TC 67 "Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries" in collaboration with Technical Committee CEN/TC 12 "Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries" the secretariat of which is held by AFNOR.

This document is currently submitted to the parallel Enquiry.

This document will supersede EN ISO 13710:2004.

Endorsement notice

The text of ISO/DIS 13710:2010 has been approved by CEN as a prEN ISO 13710:2010 without any modification.

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DRAFT INTERNATIONAL STANDARD ISO/DIS 13710

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

Petroleum, petrochemical and natural gas industries — Reciprocating positive displacement pumps

Industries pétrolière, pétrochimique et du gaz naturel — Pompes volumétriques alternatives

[Revision of first edition (ISO 13710:2004)]

ICS 75.180.20

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ISO/CEN PARALLEL PROCESSING

This draft has been developed within the International Organization for Standardization (ISO), and processed under the **ISO-lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five-month enquiry.

Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month approval vote in ISO and formal vote in CEN.

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Contents

	Page
Foreword.....	vii
Introduction.....	viii
1 Scope	1
2 Normative references	1
3 Terms and definitions	4
4 Unit Responsibility	8
5 Basic requirements.....	9
5.1 Units	9
5.2 Statutory Requirements	9
5.3 Requirement governance.....	9
6 Basic design.....	9
6.1 General.....	9
6.2 Selection of pump type	12
6.3 Ratings.....	12
6.4 Pressure-containing and pressure-retaining parts	16
6.5 Cylinder connections	17
6.6 External forces and moments	19
6.7 Liquid-end features.....	19
6.7.1 Liners	19
6.7.2 Pistons, plungers and piston rods.....	21
6.7.3 Valve seats	21
6.7.4 Gaskets	21
6.7.5 Stuffing boxes, packing and glands	21
6.8 Power-end running gear	22
6.9 Direct-acting pump	25
6.10 Lubrication	25
6.10.1 Lubrication for power pumps	25
6.10.2 Lubrication for liquid end and power end.....	26
6.11 Materials	26
6.11.1 General.....	26
6.11.2 Positive Materials Identification (PMI)	28
6.11.3 Castings.....	29
6.11.4 Forgings.....	30
6.11.5 Welding.....	30
6.11.6 Low-temperature service	31
6.12 Nameplates and rotation arrows	32
7 Accessories.....	33
7.1 Drivers.....	33
7.1.1 General.....	33
7.1.2 Motors	33
7.1.3 Steam turbines	34
7.1.4 Gear units	34
7.2 Couplings and guards	34
7.3 Belt drives.....	35
7.4 Mounting plates	36
7.4.1 General.....	36
7.4.2 Baseplate and skid	37
7.4.3 Soleplates and sub-soleplates	38

ISO/DIS 13710

7.5	Controls and instrumentation	39
7.5.1	General	39
7.5.2	Control systems	39
7.5.3	Instrument and control panels	39
7.5.4	Instrumentation	40
7.5.5	Alarms and shutdowns	41
7.5.6	Electrical systems	41
7.6	Auxiliary piping	42
7.7	Pulsation and vibration control requirements	42
7.7.1	General	42
7.7.2	Selection and scope of design analysis methods	43
7.8	Special tools	44
8	Inspection, testing and preparation for shipment	44
8.1	General	44
8.2	Inspection	45
8.2.1	General	45
8.2.2	Materials inspection	45
8.2.3	Mechanical inspection	46
8.3	Testing	46
8.3.1	General	46
8.3.2	Hydrostatic test	46
8.3.3	Pre-testing check	47
8.3.4	Mechanical run test	47
8.3.5	Performance test for direct-acting pump	48
8.3.6	Performance test for power pump	48
8.3.7	Test tolerances	48
8.3.8	NPIP/NPSH test	49
8.4	Optional tests	49
8.5	Preparation for shipment	49
9	Vendor's data	50
9.1	General	50
9.2	Proposals	51
9.2.1	General	51
9.2.2	Drawings	51
9.2.3	Technical data	52
9.2.4	Performance envelope	53
9.2.5	Optional tests	53
9.3	Contract data	53
9.3.1	General	53
9.3.2	Drawings and technical data	53
9.3.3	Progress reports	53
9.3.4	Parts lists and recommended spares	53
9.3.5	Installation, operation, maintenance and technical data manuals	54
Annex A (informative)	Pump material specifications	55
Annex B (normative)	Vendor drawing and data requirements (VDDR) form	62
Annex C (normative)	Pulsation and vibration control techniques	65
C.1	Design analysis methods — General	65
C.2	Analysis Method 1	65
C.3	Analysis Method 2 (acoustical simulation)	66
C.3.1	General	66
C.3.2	Mechanical review and piping restraint analysis	66
C.4	Maximum allowable pulsation levels	66
C.5	Inlet pressure versus liquid vapour pressure	67
C.6	Pressure-limiting valve protection	67
C.7	Separation margin requirements for piping systems	69
Annex D (informative)	Reciprocating positive-displacement pump data sheets	70

Annex E (informative) **NPIP and NPSH**..... 73

E.1 **General**..... 73

E.2 **Calculation of NPIPA** 73

E.3 **Calculation of acceleration head**..... 74

E.4 **Effect of impedance on acceleration** 75

Annex F (informative) **Inspector's checklist**..... 76

Annex G (normative) **Lubrication system**..... 78

Bibliography 80

2010

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(standards.iteh.ai)**

<https://standards.iteh.ai/catalog/standards/sist/44309749-e513-4de8-b804-c81f98576ef6/osist-pren-iso-13710-2011>

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 13710 was prepared by Technical Committee ISO/TC 115, *Pumps*, Subcommittee SC 3, *Installation and special application*, in collaboration with ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*, Subcommittee SC 6, *Processing equipment and systems*.

This second edition cancels and replaces the first edition (ISO 13710:2004), which has been technically revised.

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Introduction

This International Standard was developed from API Std 674, 2nd edition, 1995, with the intent that the 3rd edition of API Std 674 will be the same as this International Standard.

Users of this International Standard should be aware that further or differing requirements may be needed for individual applications. This International Standard is not intended to inhibit a vendor from offering, or the purchaser from accepting, alternative equipment or engineering solutions for the individual application. This may be particularly appropriate where there is innovative or developing technology. Where an alternative is offered, the vendor should identify any variations from this International Standard and provide details.

This International Standard requires the purchaser to specify certain details and features.

A bullet (•) at the beginning of a paragraph indicates that either a decision is required or further information is to be provided by the purchaser. This information should be shown on data sheets or stated in the enquiry or purchase order (see examples in Annex D).

In this International Standard, where practical, US Customary (USC) units are included in brackets for information.

Annex A lists typical materials standards used in pumps.

Annex B contains a form in which are listed the vendor drawing and data requirements (VDDR).

Annex C specifies techniques for pulsation and vibration control.

Annex D contains typical data sheets.

Annex E describes pump system interaction and explains the differences between NPIP and NPSH.

Annex F contains an inspector's checklist.

Annex G specifies requirements for the lubrication system.

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Petroleum, petrochemical and natural gas industries — Reciprocating positive displacement pumps

1 Scope

This International Standard specifies requirements for reciprocating positive-displacement pumps and pump units for use in the petroleum, petrochemical and natural gas industries. It is applicable to both direct-acting and power-frame types.

This International Standard is not applicable to controlled-volume pumps and rotary pumps.

NOTE For controlled-volume pumps see API Std 675; for rotary pumps see API Std 676.

2 Normative references

The following referenced documents are indispensable for the application 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 7 (all parts), *Pipe threads where pressure-tight joints are made on the threads*

ISO 228-1, *Pipe threads where pressure-tight joints are not made on the threads — Part 1: Dimensions, tolerances and designation*

ISO 261, *ISO general-purpose metric screw threads — General plan*

ISO 262, *ISO general-purpose metric screw threads — Selected sizes for screws, bolts and nuts*

ISO 281, *Rolling bearings — Dynamic load ratings and rating life*

ISO 286-2, *ISO system of limits and fits — Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts*

ISO 724, *ISO general-purpose metric screw threads — Basic dimensions*

ISO 965 (all parts), *ISO general-purpose metric screw threads — Tolerances*

ISO 1328-1, *Cylindrical gears — ISO system of accuracy — Part 1: Definitions and allowable values of deviations relevant to corresponding flanks of gear teeth*

ISO 1940-1, *Mechanical vibration — Balance quality requirements of rigid rotors — Part 1: Determination of permissible residual imbalance*

ISO 3448, *Industrial liquid lubricants — ISO viscosity classification*

ISO 5753, *Rolling bearings — Radial internal clearance*

ISO 6336, *Calculation of load capacity of spur and helical gears*