Focus tecnico

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Oleoidraulica EN ISO 4413

Info generali
e
Modulo raccolta dati

Estratto EN ISO 4413:2010

Oleoidraulica
Regole generali e requisiti di sicurezza
per i sistemi e i loro componenti

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La norma specifica le regole generali e i requisiti di sicurezza per i sistemi oleoidraulici e i loro componenti utilizzati sul macchinario come definito nella EN ISO 12100.
Essa tratta tutti i pericoli significativi associati ai sistemi oleoidraulici e specifica i principi da applicare al fine di evitare tali pericoli quando i sistemi sono installati per l'uso previsto.

This European Standard was approved by CEN on 6 November 2010.

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

This European Standard exists 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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Annex ZA
(informative)

Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive 2006/42/EC on machinery.

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard confers, within the limits of the scope of this standard, a presumption of conformity with the relevant Essential Requirements, except Essential Requirements 1.5.8 and 1.7.4.2 u), of that Directive and associated EFTA regulations.

WARNING — Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

6 Verification of safety requirements and acceptance testing

The hydraulic system shall be subjected to a combination of inspection and testing to verify that

a) the identification of systems and components conforms to the system's specifications;

b) the connection of components in the system complies to the circuit diagram;

c) the system, including all safety components, functions correctly;

d) there is no unintended leakage on any component other than slight wetting insufficient to form a drop on any cylinder rod after multiple cycles.

NOTE
Because a hydraulic system might not be a complete machine, many verification procedures cannot be carried out until the hydraulic system is incorporated into the machine. Functional testing will then have to be carried out after assembly, by arrangement between the supplier and purchaser.

The results of verification by inspection and testing shall be documented, and the following information shall also be included in the report:

– type and viscosity of the hydraulic fluid used;
– temperature of the hydraulic fluid in the reservoir, after the temperature has stabilized.

B.2.15 Piping for use at pressures less than 7 MPa (70 bar); see 5.4.6

Item number	Material	Rated pressure MPa (bar)	Applicable standards	Supplier

B.2.16 Reservoirs; see 5.4.5

Item number	Type, description and material	Volume L	Applicable standards	Supplier

B.2.17 Accessories

This category may include reservoir air filter breathers, air bleeds, quick-action couplings, pressure gauge protectors, fluid level indicators, magnets, pressure/vacuum limiting devices, etc.

Item number	Type and description	Applicable standards	Supplier

B.2.18 Other components

Item number	Type and description	Applicable standards	Supplier

Bibliography

[1] ISO 1179 (all parts), *Connections for general use and fluid power — Ports and stud ends with ISO 228-1 threads with elastomeric or metal-to-metal sealing*

[2] ISO 3740, *Acoustics — Determination of sound power levels of noise sources — Guidelines for the use of basic standards*

[3] ISO 3744, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Engineering method in an essentially free field over a reflecting plane*

[4] ISO 3746, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane*

[5] ISO 4395, *Fluid power systems and components — Cylinder piston rod end types and dimensions*

[6] ISO 6020-1, *Hydraulic fluid power — Mounting dimensions for single rod cylinders, 16 MPa (160 bar) series — Part 1: Medium series*

[7] ISO 6020-2, *Hydraulic fluid power — Mounting dimensions for single rod cylinders, 16 MPa (160 bar) series — Part 2: Compact series*

[8] ISO 6020-3, *Hydraulic fluid power — Mounting dimensions for single rod cylinders, 16 MPa (160 bar) series — Part 3: Compact series with bores from 250 mm to 500 mm*

[9] ISO 6022, *Hydraulic fluid power — Mounting dimensions for single rod cylinders, 25 MPa (250 bar) series*

[10] ISO 9974 (all parts), *Connections for general use and fluid power — Ports and stud ends with ISO 261 threads with elastomeric or metal-to-metal sealing*

[11] ISO/TR 11688-1, *Acoustics — Recommended practice for the design of low-noise machinery and equipment — Part 1: Planning*

[12] ISO 11926 (all parts), *Connections for general use and fluid power — Ports and stud ends with ISO 263 inch threads and O-ring sealing*1)

[13] ISO/TS 13725, *Hydraulic fluid power — Cylinders — Method for determining the buckling load* [14] ISO 13732-1, *Ergonomics of the thermal environment — Methods for the assessment of human responses to contact with surfaces— Part 1: Hot surfaces*

[14] ISO 13849-1, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design*

[15] ISO 14121-1, *Safety of machinery — Risk assessment — Part 1: Principles*

[16] ISO 16656, *Hydraulic fluid power — Single rod, short-stroke cylinders with bores from 32 mm to 100 mm for use at 10 MPa (100 bar) — Mounting dimensions*

[17] ISO/TR 17165-2, *Hydraulic fluid*

[18] *IEC 60204-1, Safety of machinery — Electrical equipment of machines — Part 1: General requirements*

[19] *IEC 60529, Degrees of protection provided by enclosures (IP code)*

[20] *IEC 61000-6-2, Electromagnetic compatibility (EMC) — Part 6-2: Generic standards — Immunity for industrial environments*

[21] *IEC 61000-6-4, Electromagnetic compatibility (EMC) — Part 6-4: Generic standards — Emission standard for industrial environments*

[22] *IEC 61310-3, Safety of machinery — Indication, marking and actuation — Part 3: Requirements for the location and operation of actuators*