SLOVENSKI STANDARD
oSIST prEN 12514-4:2009

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Sestavni deli sistemov za dovod tekoļ ega goriva oljnim aparatom - 4. del: Varnostne zahteve in preskuġanje - Cevovodi in sestavni deli cevi

Parts for supply systems for consuming units with liquid fuels - Part 4: Safety requirements and tests - Pipings and parts within pipelines

Bauelemente für Versorgungsanlagen für Verbrauchsstellen mit flüssigen Brennstoffen - Teil 4: Sicherheitstechnische Anforderungen und Prüfungen - Rohrleitungen und Bauelemente in Leitungen

Appareils et éléments de construction pour le transfert au consommateur de liquide combustible - Partie 4: Prescriptions de sécurité et essais - Tubes et composants

Ta slovenski standard je istoveten z: **prEN 12514-4**

ICS:

27.060.10	Gorilniki na tekoļ e in trdo gorivo	Liquid and solid fuel burners

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EUROPEAN STANDARD

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English Version

Parts for supply systems for consuming units with liquid fuels - Part 4: Safety requirements and tests - Pipings and parts within pipelines

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This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 47.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (prEN 12514-4:2009) has been prepared by Technical Committee CEN/TC 47 “Atomizing oil burners and their components – Function – Safety – Testing”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 12514-1:2000, EN 12514-2:2000.

According to editions 2000 the following fundamental changes are given:

— standards new structured;

— new parts for supply systems included;

— technical requirements revised;

— number of cycles for the fitness-for-use test added;

— requirements for flood proof parts included;

— selections of materials;

— marking, packing and instructions revised.

This standard consists of 4 Parts:

Parts for supply systems for consuming units with liquid fuels

Part 1: Safety requirements and tests — Terminology, general requirements

Part 2: Safety requirements and tests — Feed pumps, control and safety devices, service vessels

Part 3: Safety requirements and tests — Valves and meters

Part 4: Safety requirements and tests — Pipings and parts within pipelines

1 Scope

This European Standard applies to the following parts of supply systems for the automatic liquid fuel supply of consuming units from one or more tanks:

a) pipes;

b) fasteners;

c) pipeline connections;

d) parts within pipes;

Combinations of single parts are acceptable.

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.

EN 573-3, *Aluminium and aluminium alloys — Chemical composition and form of wrought products — Part 3: Chemical composition and form of products*

EN 728, *Plastics piping and ducting systems — Polyolefin pipes and fittings — Determination of oxidation induction time*

EN 754-1, *Aluminium and aluminium alloys — Cold drawn rod/bar and tube — Part 1: Technical conditions for inspection and delivery*

EN 754-2, *Aluminium and aluminium alloys — Cold drawn rod/bar and tube — Part 2: Mechanical properties*

EN 754-3, *Aluminium and aluminium alloys — Cold drawn rod/bar and tube — Part 3: Round bars, tolerances on dimensions and form*

EN 754-4, *Aluminium and aluminium alloys — Cold drawn rod/bar and tube — Part 4: Square bars, tolerances on dimensions and form*

EN 754-5, *Aluminium and aluminium alloys — Cold drawn rod/bar and tube — Part 5: Rectangular bars, tolerances on dimensions and form*

EN 754-6, *Aluminium and aluminium alloys — Cold drawn rod/bar and tube — Part 6: Hexagonal bars, tolerances on dimensions and form*

EN 754-7, *Aluminium and aluminium alloys — Cold drawn rod/bar and tube — Part 7: Seamless tubes, tolerances on dimensions and form*

EN 754-8, *Aluminium and aluminium alloys — Cold drawn rod/bar and tube — Part 8: Porthole tubes, tolerances on dimensions and form*

EN 755-1, *Aluminium and aluminium alloys — Extruded rod/bar, tube and profiles — Part 1: Technical conditions for inspection and delivery*

EN 755-2, *Aluminium and aluminium alloys — Extruded rod/bar, tube and profiles — Part 2: Mechanical properties*

EN 755-3, *Aluminium and aluminium alloys — Extruded rod/bar, tube and profiles —Part 3: Round bars, tolerances on dimensions and form*

EN 755-4, *Aluminium and aluminium alloys — Extruded rod/bar, tube and profiles — Part 4: Square bars, tolerances on dimensions and form*

EN 755-5, *Aluminium and aluminium alloys — Extruded rod/bar, tube and profiles — Part 5: Rectangular bars, tolerances on dimensions and form*

EN 755-6, *Aluminium and aluminium alloys — Extruded rod/bar, tube and profiles — Part 6: Hexagonal bars, tolerances on dimensions and form*

EN 755-7, *Aluminium and aluminium alloys — Extruded rod/bar, tube and profiles — Part 7: Seamless tubes, tolerances on dimensions and form*

EN 755-8, *Aluminium and aluminium alloys — Extruded rod/bar, tube and profiles — Part 8: Porthole tubes, tolerances on dimensions and form*

EN 755-9, *Aluminium and aluminium alloys — Extruded rod/bar, tube and profiles — Part 9: Profiles, tolerances on dimensions and form*

EN 1057, *Copper and copper alloys — Seamless, round copper tubes for water and gas in sanitary and heating applications*

EN 1092-1, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, PN designated — Part 1: Steel flanges*

EN 1092-2, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, PN designated — Part 2: Cast iron flanges*

EN 1092-3, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, PN designated — Part 3: Copper alloy flanges*

EN 1092-4, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, PN designated — Part 4: Aluminium alloy flanges*

EN 1254-1, *Copper and copper alloys — Plumbing fittings — Part 1: Fittings with ends for capillary soldering or capillary brazing to copper tubes*

EN 1254-2, *Copper and copper alloys — Plumbing fittings — Part 2: Fittings with compression ends for use with copper tubes*

EN 1254-3, *Copper and copper alloys — Plumbing fittings — Part 3: Fittings with compression ends for use with plastics pipes*

EN 1254-4, *Copper and copper alloys — Plumbing fittings — Part 4: Fittings combining other end connections with capillary or compression ends*

EN 1254-5, *Copper and copper alloys — Plumbing fittings — Part 5: Fittings with short ends for capillary brazing to copper tubes*

prEN 1254-7:2004, *Copper and copper alloys — Plumbing fittings — Part 7: Fittings with press ends for metallic tubes*

EN 1267, *Valves — Test of flow resistance using water as test fluid*

EN 10204, *Metallic products — Types of inspection documents*

EN 10208-1, *Steel pipes for pipelines for combustible fluids — Technical delivery conditions — Part 1: Pipes of requirement class A*

EN 10208-2, *Steel pipes for pipelines for combustible fluids — Technical delivery conditions — Part 2: Pipes of requirement class B*

EN 10226-1, *Pipe threads where pressure tight joints are made on the threads — Part 1: Taper external threads and parallel internal threads — Dimensions, tolerances and designation*

EN 10226-2, *Pipe threads where pressure tight joints are made on the threads — Part 2: Taper external threads and taper internal threads — Dimensions, tolerances and designation*

EN 10241, *Steel threaded pipe fittings*

EN 10242, *Threaded pipe fittings in malleable cast iron*

EN 10305-1, *Steel tubes for precision applications — Technical delivery conditions — Part 1: Seamless cold drawn tubes*

EN 10305-2, *Steel tubes for precision applications — Technical delivery conditions — Part 2: Welded cold drawn tubes*

EN 10305-3, *Steel tubes for precision applications — Technical delivery conditions — Part 3: Welded cold sized tubes*

EN 10305-4, *Steel tubes for precision applications — Technical delivery conditions — Part 4: Seamless cold drawn tubes for hydraulic and pneumatic power systems*

EN 10305-6, *Steel tubes for precision applications — Technical delivery conditions — Part 6: Welded cold drawn tubes for hydraulic and pneumatic power systems*

EN 12449, *Copper and copper alloys — Seamless, round tubes for general purposes*

prEN 12514-1:2009, *Parts for supply systems for consuming units with liquid fuel — Part 1: Safety requirements and tests — Terminology, general requirements*

prEN 12514-2, *Parts for supply systems for consuming units with liquid fuel — Part 2: Safety requirements and tests — Feed pumps, control and safety devices, service vessels*

prEN 12514-3, *Parts for supply systems for consuming units with liquid fuel — Part 3: Safety requirements and tests — Valves and meters*

EN 12627, *Industrial valves — Butt welding ends for steel valves*

EN 13160-1, *Leak detection systems — Part 1: General principles*

EN 13349, *Copper and copper alloys — Pre-insulated copper tubes with solid covering*

EN 13480-3, *Metallic industrial piping — Part 3: Design and calculation*

EN 13480-6, *Metallic industrial piping — Part 6: Additional requirements for buried piping*

EN 13480-8, *Metallic industrial piping — Part 8: Additional requirements for aluminium and aluminium alloy piping*

EN 14585-1, *Corrugated metal hose assemblies for pressure applications — Part 1: Requirements*

EN 15014, *Plastics piping systems — Buried and above ground systems for water and other fluids under pressure — Performance characteristics for pipes, fittings and their joints*

EN ISO 228-1, *Pipe threads where pressure-tight joints are not made on the threads — Part 1: Dimensions, tolerances and designation (ISO 228-1:2000)*

EN ISO 527-1:1996, *Plastics — Determination of tensile properties — Part 1: General principles (ISO 527-1:1993 including Corr. 1:1994)*

EN ISO 1179-1, *Connections for general use and fluid power — Ports and stud ends with ISO 228-1 threads with elastomeric or metal-to-metal sealing — Part 1: Threaded ports (ISO 1179-1:2007)*

EN ISO 1179-2, *Connections for general use and fluid power — Ports and stud ends with ISO 228-1 threads with elastomeric or metal-to-metal sealing — Part 2: Heavy-duty (S series) and light-duty (L series) stud ends with elastomeric sealing (type E) (ISO 1179-2:2007)*

EN ISO 1179-3, *Connections for general use and fluid power — Ports and stud ends with ISO 228-1 threads with elastomeric or metal-to-metal sealing — Part 3: Light-duty (L series) stud ends with sealing by O-ring with retaining ring (types G and H) (ISO 1179-3:2007)*

EN ISO 1179-4, *Connections for general use and fluid power — Ports and stud ends with ISO 228-1 threads with elastomeric or metal-to-metal sealing — Part 4: Stud ends for general use only with metal-to-metal sealing (type B) (ISO 1179-4:2007)*

EN ISO 2578:1998, *Plastics — Determination of time-temperature limits after prolonged exposure to heat (ISO 2578:1993)*

EN ISO 6806:1995, *Rubber hoses and hose assemblies for use in oil burners — Specification (ISO 6806:1992)*

EN ISO 8434-1, *Metallic tube connections for fluid power and general use — Part 1: 24 degree cone connectors (ISO 8434-1:2007)*

EN ISO 8434-4, *Metallic tube connections for fluid power and general use — Part 4: 24° cone connectors with O-ring weld-on nipples (ISO 8434-4:1995)*

EN ISO 9080, *Plastics piping and ducting systems — Determination of the long-term hydrostatic strength of thermoplastics materials in pipe form by extrapolation (ISO 9080:2003)*

EN ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests (ISO 9227:2006)*

EN ISO 9974-1, *Connections for general use and fluid power — Ports and stud ends with ISO 261 threads with elastomeric or metal-to-metal sealing — Part 1: Threaded ports (ISO 9974-1:1996)*

EN ISO 9974-3, *Connections for general use and fluid power — Ports and stud ends with ISO 261 threads with elastomeric or metal-to-metal sealing — Part 3: Stud ends with metal-to-metal sealing (type B) (ISO 9974-3:1996)*

EN ISO 15874-2, *Plastics piping systems for hot and cold water installations — Polypropylene (PP) — Part 2: Pipes (ISO 15874 -2:2003)*

EN ISO 15875-2, *Plastics piping systems for hot and cold water installations — Crosslinked polyethylene (PE-X) — Part 2: Pipes (ISO 15875-2:2003)*

EN ISO 15876-2, *Plastics piping systems for hot and cold water installations — Polybutylene (PB) — Part 2: Pipes (ISO 15876-2:2003)*

EN ISO 19879:2005, *Metallic tube connections for fluid power and general use — Test methods for hydraulic fluid power connections (ISO 19879:2005)*

EN ISO 21003-1, *Multilayer piping systems for hot and cold water installations inside buildings — Part 1: General (ISO 21003-1:2008)*

EN ISO 21003-2, *Multilayer piping systems for hot and cold water installations inside buildings — Part 2: Pipes (ISO 21003-2:2008)*

EN ISO 21003-3, *Multilayer piping systems for hot and cold water installations inside buildings — Part 3: Fittings (ISO 21003-3:2008)*

ISO 272, *Fasteners — Hexagon products — Widths across flats*

ISO 1817, *Rubber, vulcanized — Determination of the effect of liquids*

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

ISO 6149, *Fluid power systems and components — Metric ports — Dimensions and design*

ISO 6149-1, *Connections for hydraulic fluid power and general use — Ports and stud ends with ISO 261 metric threads and O-ring sealing — Part 1: Ports with truncated housing for O-ring seal*

ISO 6149-3, *Connections for hydraulic fluid power and general use — Ports and stud ends with ISO 261 metric threads and O-ring sealing — Part 3: Dimensions, design, test methods and requirements for light-duty (L series) stud ends*

ISO 6162, *Hydraulic fluid power — Four-screw split-flange connections for use at pressures of 2,5 MPa to 40 MPa (25 bar to 400 bar) — Type I metric series and type II inch series*

ISO 6162-1, *Hydraulic fluid power — Flange connectors with split or one-piece flange clamps and metric or inch screws — Part 1: Flange connectors for use at pressures of 3,5 MPa (35 bar) to 35 MPa (350 bar), DN 13 to DN 127*

ISO 6162-2, *Hydraulic fluid power — Flange connectors with split or one-piece flange clamps and metric or inch screws — Part 2: Flange connectors for use at pressures of 35 MPa (350) to 40 MPa (400 bar), DN 13 to DN 51*

ISO 6508, *Metallic materials — Hardness test — Rockwell test (scales A - B - C - D - E - F - G - H - K)*

ISO 6605, *Hydraulic fluid power — Hoses and hose assemblies — Test methods*

ISO 7005-1, *Metallic flanges — Part 1: Steel flanges*

ISO 7005-2, *Metallic flanges — Part 2: Cast iron flanges*

ISO 7005-3, *Metallic flanges — Part 3: Copper alloy and composite flanges*

ISO 8434-2, *Metallic tube connections for fluid power and general use — Part 2: 37 ° flared connectors*

ISO 8434-3, *Metallic tube connections for fluid power and general use — Part 3: O-ring face seal connectors*

ISO/FDIS 8434-6, *Metallic tube connections for fluid power and general use — Part 6: 60° cone connectors with or without O-ring*

ISO 12151-1, *Connections for hydraulic fluid power and general use — Hose fittings — Part 1: Hose fittings with ISO 8434-3 O-ring face seal ends*

ISO 12151-2, *Connections for hydraulic fluid power and general use — Hose fittings — Part 2: Hose fittings with ISO 8434-1 and ISO 8434-4 24° cone connector ends with O-rings*

ISO 12151-3, *Connections for hydraulic fluid power and general use — Hose fittings — Part 3: Hose fittings with ISO 6162 flange ends*

ISO 12151-4, *Connections for hydraulic fluid power and general use — Hose fittings — Part 4: Hose fittings with ISO 6149 metric stud ends*

ISO 12151-5, *Connections for hydraulic fluid power and general use — Hose fittings — Part 5: Hose fittings with ISO 8434-2 37° flared ends*

ISO/FDIS 12151-6, *Connections for hydraulic fluid power and general use — Hose fittings — Part 6: Hose fittings with ISO/FDIS 8434-6, 60° cone ends*

ANSI/ASME B1.20.1, *Pipe threads, general purpose (inch)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in prEN 12514-1 apply.

4 Safety requirements

4.1 General requirements

4.1.1 General

Fixed pipeline connections on parts complying with prEN 12514-2 and prEN 12514-3 shall be included in the type testing and factory production control.

If the standards on pipes and fasteners referenced in this document contain equivalent or more rigorous requirements, the requirements of prEN 12514-4 are considered as fulfilled and need not be tested further.

4.1.2 Materials

According to prEN 12514-1.

Rigid metallic pipes also according to annex A.

Sealing rings according to annex C.

Test according to annex D.3 of prEN 12514-1:2009.

Non-metallic pipes according to 4.2.3.

4.1.3 Construction requirements

According to prEN 12514-1.

Test according to annex D.3 of prEN 12514-1:2009.

4.1.4 Pressure strength

According to prEN 12514-1.

Test according to annex D.1 of prEN 12514-1:2009; the factory production control for fasteners may be neglected.