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European foreword

This document (EN 12514:2020) 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 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of an identical text or by endorsement, at the latest by January 2021, and conflicting national standards shall be withdrawn at the latest by April 2022.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 12514-1:2000 and EN 12514-2:2000.

This document has been prepared under a standardization request given to CEN by the European Commission and the European Free Trade Association, and supports essential characteristics of EU Directives.

In comparison to EN 12514-1:2000 and EN 12514-2:2000, the following fundamental changes are given:

— standard new structured;

— new components for supply systems included;

— technical characteristics and requirements revised;

— updating of the terms and definitions;

— merging of components to type series;

— fuels categorized and new fuels added;

— nominal lifetime defined;

— essential characteristic for flood proof components included;

— selections of materials;

— marking, packing and instructions revised;

— inclusion of Annex ZA giving the correspondance to the Measuring Instruments Directive (MID) 2014/32/EU.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

Pressure values given in this standard are given as gauge pressure (pressure exceeding atmospheric pressure) unless noted otherwise. Vacuum (negative pressure) is therefore designated by a negative value.

1 Scope

This document specifies the safety and performance essential characteristics and tests methods for the components for supply systems. Their intended use is the supply with liquid fuel for one or more consuming units from one or more tanks.

This document applies to components for pressurised, negative pressurised, (vacuum), non-pressurised, underground, above ground, inside and/or outside systems to supply liquid fuels.

The components for supply systems covered by this document are piping kits/systems with the following components:

a) feed pump;

b) control and safety device for feed pumps;

c) service tank;

d) service vessel;

e) safety shut-off device;

f) isolating valve;

g) quick acting valve;

h) switch-over valve;

i) forced switch-over valve;

j) check valve;

k) pressure compensating device;

l) discharge valve;

m) pressure reducer;

n) filter;

o) meter;

p) de-aerator;

q) anti-siphon safety device;

r) insulating device;

s) pressure gauge;

t) vapour/air separator;

u) pressure control path;

v) pressure retaining device;

w) remote acting fire safety valve;

x) pipe;

y) pipeline connections;

z) component within pipes;

aa) combined component;

bb) withdrawal device.

Not covered by this document are items belonging to the consuming unit (e.g.: heating/cooling appliances in buildings) and items used for the mounting and support of components.

Not covered by this document are items with the intended use of gas for building heating/cooling systems and any items of heating networks.

Not covered are items used for drainage (including highways) and disposal of other liquids and gaseous waste, supply of oil and other liquids, supply of gases, pressure and vacuum systems, communications, sanitary and cleaning fixtures and storage fixtures.

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.

EN 573-3:2019, Aluminium and aluminium alloys - Chemical composition and form of wrought products - Part 3: Chemical composition and form of products

EN 682:2002+A1:2005, *Elastomeric Seals - Materials requirements for seals used in pipes and fittings carrying gas and hydrocarbon fluids*

EN 754:2016 (All parts), *Aluminium and aluminium alloys - Cold drawn rod/bar and tube*

EN 755:2016 (All Parts), *Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles - Part 1: Technical conditions for inspection and delivery*

EN 806-4:2010, *Specifications for installations inside buildings conveying water for human consumption — Part 4: Installation*

EN 809:1998+A1:2009 + AC:2010, *Pumps and pump units for liquids - Common safety requirements*

EN 837-1:1996, *Pressure gauges - Part 1: Bourdon tube pressure gauges - Dimensions, metrology, requirements and testing*

EN 837-2:1997, *Pressure gauges - Part 2: Selection and installation recommendations for pressure gauges*

EN 837-3:1996, *Pressure gauges - Part 3: Diaphragm and capsule pressure gauges - Dimensions, metrology, requirements and testing*

EN 1057:2006+A1:2010, *Copper and copper alloys - Seamless, round copper tubes for water and gas in sanitary and heating applications*

EN 1092 (All parts), *Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated*

EN 1127-1:2019, *Explosive atmospheres - Explosion prevention and protection - Part 1: Basic concepts and methodology*

EN 1254 (*All parts except part 6*), *Copper and copper alloys - Plumbing fittings*

EN 1267:2012, *Industrial valves - Test of flow resistance using water as test fluid*

EN 1363-1:2018, *Fire resistance tests - Part 1: General requirements*

EN 10151:2002, *Stainless steel strip for springs - Technical delivery conditions*