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Liquid pumps - Safety requirements - Agrifoodstuffs equipment; Design rules to ensure hygiene in use

EESTI STANDARDI EESSÕNA

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English Version

Liquid pumps - Safety requirements - Agrifoodstuffs equipment;
Design rules to ensure hygiene in use

Pompes pour liquides - Prescriptions de sécurité - Matériel
agro-alimentaire; Règles de conception pour assurer
l'hygiène à l'utilisation

Flüssigkeitspumpen - Sicherheitsanforderungen -
Nahrungsmittelausrüstungen; Konstruktionsregeln zur
Sicherstellung der Hygiene bei der Verwendung

This European Standard was approved by CEN on 22 January 2012.

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Foreword

This document (EN 13951:2012) has been prepared by Technical Committee CEN/TC 197 “Pumps”, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by October 2012, and conflicting national standards shall be withdrawn at the latest by October 2012.

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

This document supersedes EN 13951:2003+A1:2008.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

The modifications brought to the previous version of EN 13951:2003 deal with normative reference updates, minor editorial changes, minor details add-on and the clause renumbering has been adapted accordingly.

According to the CEN/CENELEC Internal Regulations, the national standards organizations 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This document is a type C standard as stated in EN ISO 12100.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this document.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of the other standards, for machines that have been designed and built according to the provisions of this type C standard.

In drafting this European Standard, it was assumed that pumps within the scope of this European Standard are in accordance with all relevant requirements of EN 809. EN 13951 provides additional hygiene related requirements to prevent the pump causing contamination of the pumped product when used in accordance with the instruction handbook.

It is the responsibility of the manufacturer to ensure that the pump is designed and manufactured such that it can be adequately cleaned. However, due to the influence of the product, the process and the cleaning regime adopted, it is only the end-user that can ultimately ensure hygienic conditions during operation.

1 Scope

This European Standard deals with the special technical safety requirements for liquid pumps and pump units operating with agrifood-stuff. This European Standard is intended to be used with EN 809 to give the additional requirements for hazards arising from the pumping of substances intended for human and domestic animal consumption (see Clause 4).

This European Standard also establishes requirements and/or measures for the reduction of risks during use, including misuse foreseeable by the manufacturer.

This European Standard is not intended to be used for pumps and pump units at any stage in the public water supply, nor for pumps handling pharmaceutical products, nor for any other application for which more appropriate standards exist.

The pumps and pump units covered by this European Standard are the following:

- rotodynamic pumps;
- rotary positive displacement pumps;
- reciprocating positive displacement pumps.

Pumps dealing with agrifood-stuff which are not indicated in this scope are potentially covered by EN 1672-2:2005+A1:2009.

This document is not applicable to liquid pumps for agrifoodstuff applications which are manufactured before the date of its publication as an EN.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 809, *Pumps and pump units for liquids — Common safety requirements*

EN ISO 4287, *Geometrical product specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters (ISO 4287:1997)*

EN ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO 12100:2010)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 12100:2010 and the following apply.

3.1

food/agrifood-stuff products

product, ingredient or material intended to be orally consumed at any stage of its production process

3.2

food hygiene

taking of all measures during the preparation and processing of food to ensure that it is fit for human or animal consumption

[SOURCE: EN 1672-2:2005+A1:2009]

3.3

adverse influence

reduction of the fitness for consumption of a food; a food can be adversely influenced in particular by microbial pathogens or other unwanted micro-organisms, toxins, vermin, domestic animals and other contaminants

3.4

areas of equipment

Note 1 to entry: These areas are not to be confused with any others amongst those defined in other standards (e.g. electro-technical standards).

3.4.1

food area

set of machinery surfaces which are exposed to the food and from which the food or other materials can drain, drip, diffuse or be drawn into (self returned) the food or food container

[SOURCE: EN 1672-2:2005+A1:2009]

3.4.2

non-food area

area other than those specified above

3.5

product/pumped product

products passing through the pumps as a result of process, testing, cleaning, rinsing, or disinfecting products