

DIN EN 13951:2010-02 (E)

Liquid pumps - Safety requirements - Agrifoodstuffs equipment - Design rules to ensure hygiene in use (includes Amendment A1:2008)

Contents

	Page
Foreword.....	3
Introduction	4
1 Scope	4
2 Normative references	5
3 Terms and definitions	5
4 List of hazards.....	8
5 Hygiene: safety requirements and/or measures	11
5.1 Materials	11
5.2 Design – Food areas.....	12
5.3 Design - Non-food areas	16
5.4 Auxiliary liquids, barriers and lubricants.....	16
5.5 Guards and shrouds.....	17
5.6 Legs.....	17
6 Verification of hygiene measures	17
6.1 Inspection of documentation.....	17
6.2 Inspection of the assembled pump or pump unit	17
6.3 Materials	17
6.4 Level of cleanability.....	17
6.5 Surface roughness test.....	18
7 Information for use	18
7.1 General.....	18
7.2 Instruction for use - Instruction handbook	18
Annex A (informative) Materials in contact with foodstuffs (EU regulations)	20
A.1 Metallic materials in contact with foodstuffs.....	20
A.2 Elastomeric materials in contact with foodstuffs.....	20
A.3 Plastic materials in contact with foodstuffs	20
Annex B (informative) Surface roughness.....	21
Annex C (informative) Design practices	22
Annex D (informative) Hygienic risk associated with types of pump inlet and outlet connections	24
D.1 Hazards sources	24
D.2 Criteria to be taken into account.....	24
Annex E (informative) Hygienic risk linked to the choice of shaft sealing system and to the characteristics of the pumped product	25
Annex ZA (informative) Ⓐ Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/CE Ⓐ	26
Annex ZB (informative) Ⓐ Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC Ⓐ	27
Bibliography	28