DIN EN 303-1:2017-11 (E)

Heating boilers - Part 1: Heating boilers with forced draught burners - Terminology, general requirements, testing and marking

Contents

Page

European foreword 4

1 Scope 5

2 Normative references 5

3 Terms and definitions, units and symbols 7
3.1 Terms and definitions 7
3.2 Units and symbols 10
3.2.1 Units 10
3.2.2 Symbols 11

4 Requirements 11
4.1 Construction requirements 11
4.1.1 General requirements 11
4.1.2 Specific requirements 23
4.2 Operational requirements 25
4.2.1 General 25
4.2.2 Verification of the nominal condensing output 25
4.2.3 Formation of condensation 25
4.2.4 Temperature of combustion products 25
4.2.5 Surface temperature 25
4.2.6 Water side resistance of the boiler 26
4.2.7 Soundness of the boiler 26
4.2.8 Temperature sensing control type TR and temperature sensing control type STB 26
4.3 Electrical equipment 26
4.3.1 Electrical safety 26
4.3.2 Electromagnetic compatibility 27

5 Tests 27
5.1 General 27
5.2 Boilers of steel or non-ferrous metal 27
5.2.1 Tests to be carried out before production 27
5.2.2 Factory production control (FPC) for steel boilers 27
5.3 Boilers of cast iron or non-ferrous metals 28
5.3.1 Test to be carried out before production 28
5.3.2 Test during production 28
5.4 Test for gas soundness 29
5.5 Water side resistance measurement 29
5.5.1 General 29
5.5.2 Test rig for the establishment of the water side resistance 29
5.6 Additional tests for low temperatures boilers 31
5.6.1 Additional tests by using of corrosion resistant coatings 31
5.6.2 Additional tests for oil-fired low temperatures boilers 31

6 Marking 31
6.1 Information on the boiler data plate 31
6.2 Requirements of the data plate 31

7 Technical documentation, scope of supply 31
7.1 General 31

7.2 Technical information (product fiche) and installation instructions 31
7.3 Operating instructions 33
7.4 Label 33

Annex A (informative) Conformity evaluation 34

Annex ZA (informative) Relationship between this European Standard and the ecodesign requirements of Commission Regulation (EU) No [813/2013] aimed to be covered 35

Annex ZB (informative) Relationship between this European Standard and the ecodesign requirements of Commission Regulation (EU) No [811/2013] aimed to be covered 36

Bibliography 37