

DIN EN 12952-6:2022-02 (E)

Water-tube boilers and auxiliary installations - Part 6: Inspection during construction; documentation and marking of pressure parts of the boiler

Contents	Page
European foreword	4
1 Scope	6
2 Normative references	6
3 Terms and definitions	7
4 General organization	7
4.1 General	7
4.2 Conformity assessment	7
4.3 Competency of the manufacturer	7
4.4 Calibration of equipment	7
4.5 Inspection activities	8
5 Non-destructive testing (NDT) of parent materials	10
6 Production test plates for drums	10
6.1 General	10
6.2 Number of production test plates	10
6.3 Tests required	11
6.3.1 Non-destructive testing	11
6.3.2 Destructive tests	11
6.4 Acceptance criteria	11
6.4.1 Non-destructive testing	11
6.4.2 Transverse tensile test	11
6.4.3 Longitudinal tensile test on weld metal	12
6.4.4 Bend tests	12
6.4.5 Impact values	12
6.4.6 Macroscopic examination	12
6.4.7 Hardness survey	12
6.4.8 Dissimilar joints	12
6.5 Non-conformance of results	13
6.5.1 General	13
6.5.2 Specific case for Charpy V-notch impact tests	13
7 Non-destructive testing of welds	13
7.1 Type and extent of non-destructive testing	13
7.1.1 General	13
7.1.2 Drums and Headers	14
7.1.3 Tube walls	15
7.1.4 Pipes and Tubes	16
7.1.5 Extension procedure of random testing in case of repairs	18
7.2 Qualification of non-destructive testing (NDT) personnel	18
7.3 The detection of surface imperfections	19
7.3.1 General	19
7.3.2 Visual examination	19
7.3.3 Penetrant testing	19
7.3.4 Magnetic particle testing	19
7.3.5 Acceptance criteria for weld surface imperfections	20
7.4 Testing for volumetric imperfections	22

7.4.1	Radiographic testing	22
7.4.2	Ultrasonic testing	25
7.5	Non-destructive testing reports	26
8	Final inspection	27
8.1	Visual and dimensional examinations	27
8.2	Hydrostatic pressure test	27
8.2.1	General	27
8.2.2	Test procedure	27
9	Documentation	28
10	Marking	29
Annex A (normative) Special requirements for chemical recovery boilers		30
A.1	General	30
A.2	Special requirements for non-destructive testing (NDT) of welds	30
A.2.1	General	30
A.2.2	Special requirements for NDT of welds in a chemical recovery boiler - Volumetric testing	30
A.2.3	Methods of testing	30
Annex B (informative) Significant technical changes between this document and the previous edition		31
Annex ZA (informative) Relationship between this European Standard and the essential requirements of Directive 2014/68/EU aimed to be covered		32
Bibliography		33