

DIN EN 13480-5:2013-11 (E)

Metallic industrial piping - Part 5: Inspection and testing

Contents		Page
Foreword		4
1	Scope	6
2	Normative references	6
3	Terms and definitions	7
4	Symbols and abbreviations	7
5	Determination of inspection and testing requirements	8
5.1	General	8
5.2	Classification of piping	8
6	Design review	8
7	In-process inspection and testing	11
7.1	General	11
7.2	Materials and formed pressure retaining parts	11
7.2.1	General	11
7.2.2	Verification of material	11
7.2.3	Verification of formed pressure retaining parts	12
7.2.4	Non-destructive testing of formed parts	12
7.2.5	Destructive testing of formed parts	12
7.3	Welding	13
7.3.1	Review of welding documents	13
7.3.2	Inspection before welding	13
7.3.3	Testing and inspection during welding	13
7.3.4	Inspection after welding	14
7.3.5	Inspection of built up pipe ends	14
7.4	Heat treatment	14
8	Non-destructive testing of welds	14
8.1	Application of NDT	14
8.1.1	General	14
8.1.2	Examination of weld quality by sample inspection	15
8.1.3	Imperfections revealed by sample inspection	15
8.2	Circumferential butt, branch, fillet and seal welds	17
8.2.1	Extent of testing	17
8.2.2	Dissimilar metal joints	19
8.2.3	Transverse cracks	19
8.3	Longitudinal welds	19
8.4	Testing methods	19
8.4.1	General	19
8.4.2	Quality level	19
8.4.3	Personnel qualification	23
8.4.4	Selection of NDT methods and testing techniques	24
8.5	Reports	24
8.6	Weld repairs	24
9	Final assessment and documentation	25
9.1	General	25

9.2	Final inspection	25
9.2.1	General	25
9.2.2	Visual inspection before the proof test	25
9.2.3	Visual inspection after the proof test	25
9.2.4	Review of the manufacturing documents	26
9.3	Proof test	26
9.3.1	General	26
9.3.2	Hydrostatic pressure test	26
9.3.3	Pneumatic pressure test	29
Issue 2 (2013-08) 9.3.4	Other tests	30
9.3.5	Documentation of the proof test	30
9.4	Documentation	31
9.4.1	Final documentation package	31
9.4.2	Design and manufacturing documentation package	32
9.4.3	Operating instructions	32
9.4.4	Documentation for the purchaser	32
10	Declaration	32
Annex A (informative)	Declaration of compliance with EN 13480	33
Annex ZA (informative)	Relationship between this European Standard and the Essential Requirements of EU Directive 97/23/EC	35
Bibliography	35a