

DIN EN 13480-5:2017-12 (E)

Metallic industrial piping - Part 5: Inspection and testing

Contents		Page
European 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	7
5.1	General	7
5.2	Classification of piping	7
6	Design review	7
7	In process inspection and testing	8
7.1	General	8
7.2	Materials and formed pressure retaining parts	8
7.2.1	General	8
7.2.2	Verification of material	8
7.2.3	Verification of formed pressure retaining parts	8
7.2.4	Nondestructive testing of formed parts	8
7.2.5	Destructive testing of formed parts	12
7.3	Welding	12
7.3.1	Review of welding documents	12
7.3.2	Inspection before welding	12
7.3.3	Testing and inspection during welding	13
7.3.4	Inspection after welding	13
7.3.5	Inspection of built up pipe ends	13
7.4	Heat treatment	13
8	Nondestructive testing of welds	13
8.1	Application of NDT	13
8.1.1	General	13
8.1.2	Examination of weld quality by sample inspection	14
8.1.3	Imperfections revealed by sample inspection	14
8.2	Circumferential butt, branch, fillet and seal welds	15
8.2.1	Extent of testing	15
8.2.2	Dissimilar metal joints	17
8.2.3	Transverse cracks	17
8.3	Longitudinal welds	17
8.4	Testing methods	17
8.4.1	General	17
8.4.2	Quality level	17
8.4.3	Personnel qualification	18
8.4.4	Selection of NDT methods and testing techniques	18
8.4.5	Testing techniques and acceptance levels	19
8.5	Reports	19
8.6	Weld repairs	19

9	Final assessment and documentation	19
9.1	General	19
9.2	Final inspection	19
9.2.1	General	19
9.2.2	Visual inspection before the proof test	19
9.2.3	Visual inspection after the proof test	20
9.2.4	Review of the manufacturing documents	20
9.3	Proof test	20
9.3.1	General	20
9.3.2	Hydrostatic pressure test	20
9.3.3	Pneumatic pressure test	23
9.3.4	Other tests	25
9.3.5	Documentation of the proof test	25
9.4	Documentation	25
9.4.1	Final documentation package	25
9.4.2	Design and manufacturing documentation package	27
9.4.3	Operating instructions	27
9.4.4	Documentation for the purchaser	27
10	Declaration	27
Annex A (informative) Declaration of compliance with EN 13480		28
A.1	Declaration for design	28
A.2	Declaration for fabrication, installation and testing	29
A.3	Declaration for compliance for piping with EN 13480	30
Annex Y (informative) History of EN 134805		31
Y.1	Differences between EN 134805:2012 and EN 134805:2017	31
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2014/68/EU aimed to be covered		33
Bibliography		34