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

Metallic industrial piping - Part 5: Inspection and testing

Contents

Page

Europeanforeword 4

1 Scope 6

2 Normativereferences 6

3 Termsanddefinitions 7

4 Symbolsandabbreviations 7

5 Determinationofinspectionandtestingrequirements 7
5.1 General 7
5.2 Classificationofpiping 7

6 Designreview 7

7 Inprocessinspectionandtesting 8
7.1 General 8
7.2 Materialsandformedpressureretainingparts 8
7.2.1 General 8
7.2.2 Verificationofmaterial 8
7.2.3 Verificationofformedpressureretainingparts 8
7.2.4 Nondestructivetestingofformedparts 8
7.2.5 Destructivetestingofformedparts 12
7.3 Welding 12
7.3.1 Reviewofweldingdocuments 12
7.3.2 Inspectionbeforewelding 12
7.3.3 Testingandinspectionduringwelding 13
7.3.4 Inspectionafterwelding 13
7.3.5 Inspectionofbuiltuppipeends 13
7.4 Heattreatment 13

8 Nondestructivetestingofwelds 13
8.1 ApplicationofNDT 13
8.1.1 General 13
8.1.2 Examinationofweldqualitybysampleinspection 14
8.1.3 Imperfectionsrevealedbysampleinspection 14
8.2 Circumferentialbutt,branch,filletandsealwelds 15
8.2.1 Extentoftesting 15
8.2.2 Dissimilarmetaljoints 17
8.2.3 Transversecracks 17
8.3 Longitudinalwelds 17
8.4 Testingmethods 17
8.4.1 General 17
8.4.2 Qualitylevel 17
8.4.3 Personnelqualification 18
8.4.4 SelectionofNDTmethodsandtestingtechniques 18
8.4.5 Testingtechniquesandacceptancelevels 19
8.5 Reports 19
8.6 Weldrepairs 19

9 Finalassessmentanddocumentation 19
9.1 General 19
9.2 Finalinspection 19
9.2.1 General 19
9.2.2 Visualinspectionbeforetheprooftest 19
9.2.3 Visualinspectionaftertheprooftest 20
9.2.4 Reviewofthemanufacturingdocuments 20
9.3 Prooftest 20
9.3.1 General 20
9.3.2 Hydrostaticpressuretest 20
9.3.3 Pneumaticpressuretest 23
9.3.4 Othertests 25
9.3.5 Documentationoftheprooftest 25
9.4 Documentation 25
9.4.1 Finaldocumentationpackage 25
9.4.2 Designandmanufacturingdocumentationpackage 27
9.4.3 Operatinginstructions 27
9.4.4 Documentationforthepurchaser 27

10 Declaration 27

AnnexA(informative)DeclarationofcompliancewithEN13480 28

A.1 Declarationfordesign 28
A.2 Declarationforfabrication,installationandtesting 29
A.3 DeclarationforcomplianceforpipingwithEN13480 30

AnnexY(informative)HistoryofEN134805 31

Y.1 DifferencesbetweenEN134805:2012andEN134805:2017 31

AnnexZA(informative)RelationshipbetweenthisEuropeanStandardandtheEssential RequirementsofEUDirective2014/68/EUaimedtobecovered 33

Bibliography 34