

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-18243-02-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 27.11.2019

Date of issue: 04.12.2019

Holder of certificate:

Gövert GmbH
Graf-Beust-Allee 17, 45141 Essen

Tests in the fields:

structural mechanical and metallographic testing; corrosion testing and non-destructive testing (magnetic particle, penetrant, radiographic, visual testing) on metallic materials

Within the given testing field marked with *), the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkKS, the free choice of standard or equivalent testing methods.

Within the given testing field marked with **), the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkKS, the modification, development and refinement of testing methods.

The listed testing methods are exemplary.

Within the given testing field marked with *), the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkKS, to use standards or equivalent testing methods listed here with different issue dates.**

The testing laboratory maintains a current list of all testing methods within the flexible scope of accreditation.

This document is a translation. The definitive version is the original German annex to the accreditation certificate.

Abbreviations used: see last page

*The certificate together with its annex reflects the status at the time of the date of issue. The current status of the scope of accreditation can be found in the database of accredited bodies of Deutsche Akkreditierungsstelle GmbH.
<https://www.dakks.de/en/content/accredited-bodies-dakks>*

Annex to the accreditation certificate D-PL-18243-02-00

1 Non-destructive testing ***

1.1 Magnetic particle testing (MT)

DIN EN ISO 9934-1
2017-03 Non-destructive testing - Magnetic particle testing - Part 1: General principles
(here: *chapter 9*)

DIN EN ISO 17638
2017-03 Non-destructive testing of welds - Magnetic particle testing

ASME Section V,
Article 7 & 25
2017 Magnetic Particle Examination

1.2 Penetrant testing (PT)

DIN EN ISO 3452-1
2014-09 Non-destructive testing - Penetrant testing - Part 1: General principles
(here: *chapter 8*)

ASME Section V
Article 6 & 24
2017 Liquid Penetrant Examination

1.3 Radiographic testing (RT)

DIN EN ISO 17636-1
2013-05 Non-destructive testing of welds - Radiographic testing - Part 1: X- and gamma-ray techniques with film
(here: *only X-ray, stationary*)

ASME Section V
Article 2
2017 Radiographic Examination

DIN EN ISO 5579
2014-04 Non-destructive testing - Radiographic testing of metallic materials using film and X- or gamma rays - Basic rules

-Translation-

Abbreviations used: see last page

Valid from: 27.11.2019

Date of issue: 04.12.2019

Annex to the accreditation certificate D-PL-18243-02-00

1.4 Visual testing (VT)

DIN EN ISO 17637 2017-04	Non-destructive testing of welds - Visual testing of fusion-welded joints
DIN EN 13018 2016-06	Non-destructive testing - Visual testing - General principles (here: <i>chapter 5 and 6</i>)
ASME Section V Article 9 2017	Visual Examination

2 structural mechanical testing as well as metallographic testing and corrosion testing on metallic materials

2.1 mechanical characteristics, strengths and functional tests on metallic materials (samples, welds, structural components, parts as well as complete items) *

Type of testing	Measurement/ test parameter	Measurement and testing range	Characteristic test method
static testing			
- Tensile testing - Compression testing - Shear testing	Power Path/Deformation Temperature	2 N to 1.000 kN from 1 µm -196 °C to 1.000 °C	DIN EN ISO 6892-1 - Method B DIN EN ISO 6892-2 - Method B DIN EN ISO 4136 DIN EN ISO 5178 DIN EN ISO 17660-1 DIN EN ISO 17660-2 ASTM E 8a ASTM E 8
- Impact testing	Impact energy Temperature	0 J to 450 J -196 °C to 200 °C	DIN EN ISO 148-1 DIN EN ISO 9016 ASTM E23
- Bend testing	Power Path/Deformation	2 N to 1.000 kN from 1 µm	DIN EN ISO 5173 DIN EN ISO 7438 ASTM E 190 ASTM E 290
Impact testing/ Hardness testing			
Brinell	Power Diameter	1,839 kN 1 µm to 25 mm	DIN EN ISO 6506-1 ASTM E 10
Vickers	Power Diagonal	0,19 N to 294,2 N 1 µm to 1,5 mm	DIN EN ISO 6507-1 ASTM E92
Rockwell	Power Penetration	98,07 N to 1,471 kN 0,2 µm to 200 µm	DIN EN ISO 6508-1 ASTM E 18

-Translation-

Abbreviations used: see last page

Valid from: 27.11.2019

Date of issue: 04.12.2019

Annex to the accreditation certificate D-PL-18243-02-00

2.1.1 Special impact testing - drop weight test on metallic materials such as pipes with the impact energy from 1 J to 120.000 J **

DIN EN 10274 1999-07	Metallic materials - Drop weight tear test
API RP 5L3 2014	Drop Weight Tear Test on Line Pipe
ASTM E208-17e1 2017	Standard test method for conducting drop-weight test to determine Nil-ductility transition temperature of ferritic steel
HV DWTT 1 2019-07	Metallic materials - drop weight test with and without instrumented Finne

2.2 Metallographic testing *

ASTM E112 2010	Standard Test Methods for Determining Average Grain Size
DIN EN ISO 17639 2013-12	Destructive tests on welds in metallic materials - Macroscopic and microscopic examination of welds
ISO 4968 1979-11	Steel; Macrographic examination by sulfur print (Baumann method)
SEP 1520 1998-09	Microscopic examination of carbide structure in steels by means of diagram series
ASTM E112 2013-10	Standard Test Methods for Determining Average Grain Size
ASTM E340 2015-06	Standard Practice for Macroetching Metals and Alloys
ASTM E407 2015-05	Standard Practice for Microetching Metals and Alloys
ASTM E562 2019	Standard Test Method for Determining Volume Fraction by Systematic Manual Point Count
ASTM A763 2015	Standard Practices for Detecting Susceptibility to Intergranular Attack in Ferritic Stainless Steels

-Translation-

Abbreviations used: see last page

Valid from: 27.11.2019

Date of issue: 04.12.2019

Annex to the accreditation certificate D-PL-18243-02-00

2.3 Corrosion testing *

DIN EN ISO 3651-1 1998-08	Determination of resistance to intergranular corrosion of stainless steels - Part 1: Austenitic and ferritic-austenitic (duplex) stainless steels - Corrosion test in nitric acid medium by measurement of loss in mass (Huey test)
DIN EN ISO 3651-2 1998-08	Determination of resistance to intergranular corrosion of stainless steels - Part 2: Ferritic, austenitic and ferritic-austenitic (duplex) stainless steels - Corrosion test in media containing sulfuric acid
ASTM A262 2015	Standard Practices for Detecting Susceptibility to Intergranular Attack in Austenitic Stainless Steels
ASTM G28 2015	Standard Practices for Detecting Susceptibility to Intergranular Corrosion in Wrought, Nickel-Rich, Chromium-Bearing Alloy
ASTM G48 2015	Standard Test Methods for Pitting and Crevice Corrosion Resistance of stainless Steels and Related Alloys by Use of Ferric Chloride Solution
ASTM A923 2014	Standard Test Methods for Detecting Detrimental Intermetallic Phase in Duplex Austenitic/Ferritic Stainless Steels
ANSI/NACE TM0177 2016	Laboratory Testing of Metals for Resistance to Sulfide Stress Cracking and Stress Corrosion Cracking in H ₂ S Environments
ANSI/NACE TM0284 2016	Evaluation of Pipeline and Pressure Vessel Steels for Resistance to Hydrogen-Induced Cracking

Abbreviations used:

ANSI	American National Standards Institute
API	American Petroleum Institute
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
DIN	Deutsches Institut für Normung e.V. German Institute for Standardisation
EN	European Standard
ISO	International Organisation for Standardisation
NACE	National Association of Corrosion Engineers
SEP	Steel-iron test sheets from the Association of German Ironworks
HV DWTT 1	In House method of Gövert GmbH testing laboratory

-Translation-

Abbreviations used: see last page

Valid from: 27.11.2019

Date of issue: 04.12.2019