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GB/T 29168.3-2012

**Petroleum and natural gas industries -- Induction bends, fittings
and flanges for pipeline transportation systems -- Part 3:
Flanges**

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(English Translation)

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Foreword

GB/T 29168 "oil and gas industry pipeline transportation systems induction heating pipe, fittings and flanges" is divided into the following sections.

--- Part 1. induction heating pipe;

--- Part 2. Fittings;

--- Part 3. Flanges.

This section GB/T 29168 Part 3.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This section uses redrafted Law Amendment uses ISO 15590-3:2004 "oil and gas industry pipeline transportation systems with induction heating Pipe, fittings and flanges - Part 3. Flanges. " this part of ISO 15590-3:2004 technical differences and the reasons are as follows.

--- On normative references, this part has been adjusted technical differences, in order to adapt our technical conditions, the adjusted situation Focus is reflected in the status of Chapter 2, "Normative references", the specific adjustments are as follows.

a) increasing the references GB/T 29168.1 "oil and gas industry pipeline transportation systems induction heating pipe, fittings and flanges Part 1. Induction Bends "and GB/T 29168.2" oil and gas industry pipeline transportation systems Induction Heating Bend Pipes, fittings and flanges - Part 2. Fittings "(see 9.8);

b) using the modified adoption of international standards of GB/T 228.1 instead of ISO 6892 (see 9.4.2.2);

c) using the modified adoption of international standards of GB/T 229, GB/T 18658 replaces ISO 148 (see 9.4.3.1,9.4.3.2);

d) with the equivalent to international standards of GB/T 2975 instead of ISO 377 (see 9.4.1);

e) using the modified use of international standards GB/T 4338 instead of ISO 783 (see 9.4.2.2);

f) using the modified use of international standards GB/T 4340.1 replaces ISO 6507-1 (see 9.4.4);

g) identical with international standards of GB/T 9445 instead of ISO 9712 (see 9.5.1);

h) with the equivalent to international standards of GB/T 17600.1 replaces ISO 2566-1 (see 9.4.2.2);

i) with equivalent to international standards of GB/T 18253 replaces ISO 10474 (see 10.1);

j) using the modified adoption of international standards of GB/T 24259 replaces ISO 13623 (see 1,7.2,9.6.1).

--- Added thermocouple regular calibration requirements;

--- In order to ensure that the flange material has sufficient resistance to brittle fracture initiation capability, the 9.2 Table 3 base metal impact test frequency by the applicable when changed to 1 times/furnace;

--- In order to ensure the quality of grinding flange imperfections in 9.5.4 required flange defects after grinding, non-destructive testing should be confirmed;

--- To ensure the flange bearing capacity, the additional requirements in 9.7, all part of the flange according to the design, manufacture, and after installation should be capable of withstanding Subject to the provisions of the hydrostatic test site, and must not have cracks and other damage leakage, or impede use;

--- In order to ensure the quality of welding flanges, 9.9 requires welding, repair welding process documents should be developed. Deal with welding performed at UT after welding Testing.

This section also made the following editorial changes. deleting the ISO special statement has nothing to do with the main content, ISO foreword.

This part of the National Oil and Gas Standardization Technical Committee (SAC/TC355) centralized.

This section drafted by. China Petroleum Technology Research Institute, CNPC pipe project, China Petroleum Pipeline Machinery Manufacturing Co., Ltd., China Stone CNPC Bohai Petroleum Equipment Manufacturing Co., Ltd.

1 Scope

This section GB/T 29168 applies in accordance with GB/T 24259-designed pipe systems with a welding neck flange and blind flange (the whole plane, Convex and ring joint face), as well as anchoring flanges, loose flanges and plate flanges, according to other specifications for the design of piping systems can also be flanged Reference.

This section provides carbon and low-alloy steel forged flanges for the oil and gas industry pipeline transportation systems.

This section provides the oil and gas industry with the ISO 3183 system to match the use of steel flange types. Such flange suitable for Poor Pass and low-temperature service environment for sour service flange made additional demands.

This section does not include connectors, factory welding, bolts, washers, flat welding flanges or flanged fittings and other materials.

This section does not apply to valves, pumps or other equipment with integral casting or forging flange.

This section does not include a flange type or pressure level (Class) choice.

ISO 7005-1 are listed and applicable to this part of the flange size and pressure rating are as follows.

--- DN10 (NPS1/2) to DN1500 (NPS60);

--- PN20 (Class150), PN50 (Class300), PN100 (Class600), PN150 (Class900), PN250 (Class1500), PN420 (Class2500).

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB 150 (all parts) pressure vessel GB/T 228.1 tensile testing of metallic materials - Part 1. room temperature test methods (GB/T 228.1-2010, ISO 6892-1.

2009, MOD)

GB/T 229 metal Charpy pendulum impact test method (GB/T 229-2007, ISO 148-1:2006, MOD) GB/T 2975 Steel and steel products for mechanical testing location and sample preparation (GB/T 2975-1998, eqv ISO 377.

1997)

GB/T 4338 high-temperature metallic materials - Tensile testing (GB/T 4338-2006, ISO 783:1999, MOD) GB/T 4340.1 metallic materials - Vickers hardness test - Part 1. Test method (GB/T 4340.1-2009, ISO 6507-1.

2005, MOD)

GB/T 9445 NDT personnel qualification and certification (GB/T 9445-2008, ISO 9712:2005, IDT) GB/T 17600.1 Steel Conversion of elongation values \u200b\u200b- Part 1. Carbon steel and low alloy steel (GB/T 17600.1-1998, eqv ISO 2566-1. 1984) GB/T 18253 Steel and steel products inspection document type (GB/T 18253-2000, eqv ISO 10474:1991) GB/T 18658 pendulum impact testing machines with standard Charpy V-notch specimens (GB/T 18658-2002, ISO 148-3.

1998, MOD)