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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 13402-2019

Large diameter steel pipe flanges

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GB/T 13402-2010 "large diameter steel pipe flange", compared with GB/T 13402-2010 main technical changes

as follows.

--- Revised the outer diameter data of steel pipes according to GB/T 28708-2012;

--- Increased flange material and corresponding pressure-temperature rating data;

--- Revised the temperature of use of some materials;

--- Revised the size data of some flanges;

---Flange sealing surface type adds a flat flange;

---Provisioned on the manufacturing methods of various types of flanges;

--- specifies the maximum inner diameter of the butt flange;

--- Increased the method of determining the pressure-temperature rating;

--- Increased pipe gauge number and steel pipe wall thickness;

--- Increased the size of the steel pipe flange of the nominal size DN1650~DN3600.

This standard uses the redrafting method with reference to ISO 7005-1.2011 "Pipe Flanges Part 1. Steel for Industrial and General Purpose Piping Systems

The degree of conformity with ISO 7005-1.2011 is not equivalent.

This standard was proposed by the China Machinery Industry Federation.

This standard is under the jurisdiction of the National Pipeline Attachment Standardization Technical Committee (SAC/TC237).

This standard was drafted. Chaoda Valve Group Co., Ltd., China Machine Productivity Promotion Center, Baoyi Group Co., Ltd., Wuxi City

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Introduction

ISO 7005-1.2011 "Pipe Flanges Part 1. Steel Flanges for Industrial and General Purpose Piping Systems"

Language and definitions, procurement specifications, processes, pressure limits, materials, precautions during use, other precautions, installation instructions, purchaser prescription letters

Technical content such as interest rate, compared with ISO 7005-1.1992, ISO 7005-1.2011 no longer specifies detailed technical parameters, but requires size,

Materials, temperature ratings, etc. directly refer to the European Committee for Standardization EN1092-1 "Flange and its connecting pipes, valves, pipes

Round Flanges for Accessories and Accessories, PN Marking Part 1. Steel Flanges, American Society of Mechanical Engineers Standard ASMEB16.5

Lan and flange fittings (NPS1/2~NPS24) and ASMEB16.47 "large diameter steel pipe flanges (NPS26~NPS60)".

The flange size specified in this standard is interchangeable with ASMEB16.47-2017, and the technical requirements are basically the same, with ASMEB16.47-

The main differences in.2017 are as follows.

--- This standard is written in a different format than ASMEB16.47-2017;

---ASMEB16.47-2017 is made of inch bolts. The bolt holes are in inch sizes. This standard uses metric bolts and bolt holes.

Compatible with metric bolts;

---ASMEB16.47-2017 includes flange data with a nominal pressure of Class400. This standard is not included in Class400.

Flange data;

---ASMEB16.47-2017 includes flange metric and imperial unit data (including flange size and pressure-temperature amount)

Fixed value), this standard does not include imperial unit data;

---ASMEB16.47-2017 does not have an integral flange. This standard adds the type and size of the integral flange;

---ASMEB16.47-2017 The outer diameter of the steel pipe retains one decimal place. The outer diameter of the steel pipe of this standard is based on

GB/T 28708-2012 rounded to an integer number;

--- This standard specifies the manufacturing methods for various types of flanges;

--- Increased the reference quality of the flange;

--- Increased the ordering contract data of the flange;

--- Increased pipe gauge number and steel pipe wall thickness;

---Flange material adopts relevant material standards in China, and the pressure-temperature rating is modified according to the material properties of China.

This standard gives the ASMEB16.47-2017 related flange material and the corresponding pressure-temperature in the form of an appendix.

Rated value

--- Increased the size of the steel pipe flange of the nominal size DN1650~DN3600.

Large diameter steel pipe flange

1 Scope

This standard specifies the type and parameters, type and size, technical requirements, test, inspection and acceptance, and marking of large diameter steel pipe flanges.

Marking, delivery requirements.

This standard applies to the nominal pressure Class75~Class900, the nominal size DN650~DN1500 (NPS26~NPS60)

Diameter steel pipe flange and flange cover.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 152.4 fastener hex head bolt and hex nut countersink

GB/T 700 carbon structural steel

GB/T 711 high quality carbon structural steel hot rolled thick steel plate and wide steel strip

GB 713 steel plate for boiler and pressure vessel

Definition and selection of GB/T 1047 pipe component nominal size

Definition and selection of GB/T 1048 pipe component nominal pressure

GB/T 1804 General tolerances No tolerances for linear and angular dimensions tolerances

GB/T 3274 carbon structural steel and low alloy structural steel hot rolled thick steel plate and steel strip

GB 3531 low alloy steel plate for low temperature pressure vessel

GB/T 4237 stainless steel hot rolled steel sheet and strip

GB/T 9125 pipe flange connection fastener

GB/T 12228 general valve carbon steel forgings technical conditions

GB/T 12229 general valve carbon steel casting technical conditions

GB/T 12230 general valve stainless steel casting technical conditions

GB/T 16253 pressure steel castings

Technical conditions for JB/T 5263 power station valve steel castings

Technical conditions for JB/T 7248 low temperature steel castings for valves

Technical conditions for JB/T 9625 boiler pipe fittings under pressure casting steel parts

NB/T 47008 Carbon steel and alloy steel forgings for pressure equipment

NB/T 47009 Low alloy steel forgings for low temperature pressure equipment

NB/T 47010 Stainless steel and heat resistant steel forgings for pressure equipment

3.1.1 The definition of nominal pressure can be found in GB/T 1048.

3.1.2 This standard specifies five pressure levels for the nominal pressure class, marked as follows.