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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 42086.1-2022

**Connections for hydraulic fluid power - Flange connections -
Part 1: Series of 3.5 MPa to 35 MPa, DN13 to DN127**

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foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules for Standardization Documents" drafting.

This document is part 1 of GB/T 42086 "Flanged Connections for Hydraulic Transmission Connections". GB/T 42086 has issued the following part.

---Part 1.3.5MPa~35MPa, DN13~DN127 series;

--- Part 2.42MPa, DN13~DN76 series.

This document is modified to adopt ISO 6162-1.2012 "Hydraulic transmission belt split or integral flange clamp, using metric or inch thread

Flange connection part 1. Flange joints, oil ports, safety valves for 3.5MPa (35bar) ~ 35MPa (350bar), DN13 ~ DN127

Decoration".

Compared with ISO 6162-1.2012, this document has made the following structural adjustments.

---4.5 corresponds to the note of 4.4 in ISO 6162-1.2012, and 4.6 corresponds to 4.5 of ISO 6162-1.2012.

The technical differences between this document and ISO 6162-1.2012 and their reasons

are as follows.

--- Replaced ISO 5598 (see Chapter 3, Table 1, Table 2) with the normatively quoted GB/T 17446 to adapt to my country's technical regulations

components to improve operability;

--- ISO 4762, GB/T 3098.1 replaced ISO 898-1, GB/T 5783 replaced by GB/T 70.1 with normative references

Changed ISO 4017 (see 4.3) to adapt to my country's technical conditions and improve operability;

--- Replaced ISO 48, GB/T 3452.2 with the normatively quoted GB/T 6031 (see 4.4) to replace ISO 3601-3 (see 4.4)

my country's technical conditions to improve operability;

--- Replaced ISO 7089 (see 4.6, Table 2) with the normatively quoted GB/T 97.1 to adapt to the technical conditions of our country and improve the reliability

operability;

--- Replaced ISO 2768-1 (see 6.6) with the normatively quoted GB/T 1804 to adapt to my country's technical conditions and improve operability

active;

--- Replaced ISO 9227 (see 7.1, 7.2) with the normatively quoted GB/T 10125 to adapt to my country's technical conditions and improve reliability

operability;

--- Replaced ISO 1302 (see 7.7, Figure 6) with the normatively quoted GB/T 131 to adapt to my country's technical conditions and improve operability

active;

--- Replaced ISO 19879 (see 8.1) with the normatively quoted GB/T 26143 to adapt to my country's technical conditions and improve operability

active;

--- Increased the marking requirements of DN32 type 2 (imperial) FC and FCS flange clamps (see 9.2) to adapt to the technical conditions of our country,

Improve operability;

--- Added the marking requirements for the oil port mounting surface of type 2 (inch) flange connection (see 9.3) to adapt to the technical conditions of our country and improve

Operability;

---Changed the naming rules of split flange clamps (see 10.1) to adapt to the technical conditions of our country and improve operability;

--- Changed the nomenclature of the integral flange clamp (see 10.2) to adapt to the technical conditions of our country and improve operability;

--- Replaced ISO 261 (see Table 1) with the normatively quoted GB/T 193 to adapt to my country's technical conditions and improve operability;

--- Replaced ISO 724 (see Table 1) with the normatively quoted GB/T 196 to adapt to my country's technical conditions and improve operability;

--- Replaced ISO 263 (see Table 2) with the normatively quoted GB/T 20670 to adapt to my country's technical conditions and improve operability

active;

--- The requirements for the perpendicularity between the thread of the flange and the surface (see Figure 6) have been added to adapt to the technical conditions of our country and improve operability.

The following editorial changes have also been made to this document.

---Change the name of the standard to "Flanged Connections for Hydraulic Transmission Connections Part 1.3.5MPa~35MPa, DN13~DN127

series";

---Deleted the examples of flange oil port and flange head identification.

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

In the hydraulic system, the flanged pipe joint is an important hydraulic component for pipeline connection, which not only requires safety, reliability and no leakage, but also requires

Realize serialization and standardization. GB/T 42086 aims to standardize the general requirements and dimensions of flange connections, and is intended to be composed of three parts.

---Part 1.3.5MPa~35MPa, DN13~DN127 series. The purpose is to determine the pressure of 3.5MPa~35MPa, etc.

Flanges for two-piece and one-piece flange clip-type hard pipe joints and hose joints (DN13~DN127) for four-screw fastening

general requirements and

Dimensional specifications, as well as the size of the sealing ring and sealing groove used together.

--- Part 2.42MPa, DN13~DN76 series. The purpose is to determine the pressure level of 42MPa, which is used for four-screw fastening

One-piece and one-piece flange clamp type hard pipe joints and flange heads of hose joints (DN13~DN76), split flange clamps (FCS and

FCSM), one-piece flange clamps (FC and FCM), general requirements and dimensional specifications for oil ports and mounting surfaces, and the associated

Dimensions of seal ring and seal groove.

--- Part 3.42MPa, DN25~DN80 square series. The purpose is to determine the square flange with 42MPa pressure rating

(DN25~DN80) general requirements and size specifications, as well as the size of the sealing ring and sealing groove used together.

Hydraulic transmission connection flange connection

Part 1.3.5MPa~35MPa,

DN13~DN127 series

1 Scope

This document specifies the hard pipe joints and hose joints (DN13~

DN127) flange head, split flange clamp (FCS and FCSM), one-piece flange clamp (FC and FCM), oil port and mounting surface general requirements

The summation size; also stipulates the requirements and dimensions of the sealing ring and sealing groove used together.

This document applies to connections for hydraulic systems of industrial and commercial products where threaded pipe joints are not convenient.

Note. This document recommends the use of metric threaded fasteners (Type 1), and also provides methods for using existing British threaded fasteners (Type 2).

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to