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

GB/T 17116.1-2018

Replacing GB/T 17116.1-1997

Pipe supports and hangers - Part 1: Technical specification

管道支吊架 第1部分:技术规范

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Foreword

GB/T 17116 "Pipe Supporting and Hanging" is divided into the following three parts.

--- Part 1. Technical specifications;

--- Part 2. Pipe connection parts;

--- Part 3. Intermediate connectors and building structure connectors. This part is the first part of GB/T 17116. This part is drafted in accordance with the rules given in GB/T 1.1-2009. This part replaces GB/T 17116.1-1997 "Pipe hangers and hangers Part 1. Technical specifications", and GB/T 17116.1-1997 In addition to the editorial changes, the main technical changes are as follows:

--- Modified the temperature classification of the pipeline system;

--- Increased the lower temperature limit for use of gray cast iron, malleable cast iron and ductile iron;

--- According to the degree of versatility, the typical standard components of the hangers are sorted and adjusted;

---Adjusted the safety factor of the allowable stress of the support and hanger components;

--- Modified the maximum load of the threaded boom according to the adjusted material allowable stress;

---The threaded boom with a nominal diameter greater than or equal to 56mm is modified to use a fine thread with a pitch of 4mm;

---Modified pipe clamp tolerance for forming;

---Specific requirements are given on the test methods and results of the support of hanger parts and their raw materials;

---Specific requirements for the performance test of the support and hanger;

--- Classification refines the inspection requirements for hangers and components;

1 Scope

China's national technical specification for pipe supports and hangers - the hardware that holds industrial piping up and lets it move. It is Part 1 of GB/T 17116 and specifies the basic requirements for the materials, design, manufacture, installation, testing, inspection, operation and maintenance of pipe supports and hangers, and it applies to the supporting and hanging devices of round-section metal pipe. Supports are the part of a piping system that is easiest to underestimate and most expensive to get wrong. A hot line grows: a steam main a hundred metres long moves a quarter of a metre between cold and operating condition, and every support along it has to carry the weight while permitting that movement in the directions it must occur and restraining it in the directions it must not. A rigid hanger where a variable spring belonged will load a nozzle beyond what the connected machine can take; a spring set to the wrong cold load will bottom out and become rigid at temperature; a guide missing where the code required one will let a line snake under thermal load or vibrate under flow. This part sets the framework for all of it: the materials allowed for each service temperature range, the design rules and load cases including the safety factors and the treatment of dynamic and seismic loads, the requirements for manufacture and for the spring elements in particular, the marking and the load scales that make a spring hanger adjustable and auditable, the installation requirements including cold setting and the removal of erection restraints, the testing and inspection regime, and the operation and maintenance checks by which a support system is verified once the plant is hot. Parts 2 and 3 give the components themselves. Issued on 15 March 2018 and in force since 1 October 2018, it replaces GB/T 17116.1-1997.

This part of GB/T 17116 specifies the basics of materials, design, manufacture, installation, testing, inspection and operation and maintenance of pipeline supports and hangers. Claim. This section applies to the support and hanger devices of round-section metal pipes.

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

90.1 fastener acceptance inspection GB/T 91 cotter pin GB/T 117 taper pin

GB/T 119.1 cylindrical pin not hardened steel and austenitic stainless steel

GB/T 119.2 cylindrical pin hardened steel and martensitic stainless steel

GB/T 150.2-2011 Pressure Vessels Part 2. Materials

GB/T 150.3-2011 Pressure Vessels Part 3. Design