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

GB/T 37400.16-2019

**Heavy machinery general technical specification - Part 16:
Hydraulic systems**

重型机械通用技术条件 第16部分：液压系统

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Foreword

GB/T 37400 "General Technical Conditions for Heavy Machinery" is divided into 16 parts.

- Part 1. Product inspection;
- Part 2. Flame cutting parts;
- Part 3. Welded parts;
- Part 4. Cast iron parts;
- Part 5. Non-ferrous metal castings;
- Part 6. Steel castings;
- Part 7. Repair welding of steel castings;
- Part 8. Forgings;
- Part 9. Machining parts;
- Part 10. Assembly;
- Part 11. piping;
- Part 12. Painting;
- Part 13. Packaging;

1 Scope

Part 16 of China's general technical specification for heavy machinery, covering hydraulic

systems. It specifies the system design, the hydraulic oil, the assembly of system equipment, the quality of castings, forgings, weldments and fittings, and the welding requirements. Hydraulics is how force is applied in heavy machinery: a press, a mill screwdown, a mine hoist brake and a continuous caster's mould oscillation all work hydraulically because nothing else delivers that much force in that little space with that much control. The system is also where such machines fail most often, and almost always for the same two reasons. Contamination accounts for the majority: particles that a system was built with, or that entered through a breather or a seal, wear the pump and jam the valves. And the fluid itself is a designed component rather than a consumable - its viscosity, its cleanliness and its resistance to oxidation determine what the system can do and for how long.

This part of GB/T 37400 specifies the system design, hydraulic oil and system of the hydraulic system of heavy machinery (hereinafter referred to as "mechanical equipment"). Quality of equipment assemblies, castings, forgings, weldments and fittings, welding requirements, electrical wiring, control, rinsing, testing, painting, packaging, transportation and Storage requirements. This part is applicable to the hydraulic system in which the nominal pressure of mechanical equipment is not more than 40MPa and the hydraulic medium is mineral oil type hydraulic oil.

Note. Heavy machinery mainly includes mechanical equipment such as metallurgy, rolling and heavy forging.

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 150.4 Pressure vessels - Part 4. Manufacture, inspection and acceptance

GB/T 191 packaging storage and transportation icon

GB/T 786.1 Fluid transmission systems and components - Graphical symbols and circuits - Part 1 . Graphics for general purpose and data processing symbol

GB/T 3102 (all parts) Quantity and unit

GB 4053.1 Fixed steel ladders and platforms - Safety requirements - Part 1. Steel ladders

GB 4053.2 Fixed steel ladders and platform safety requirements - Part 2

GB 4053.3 Fixed steel ladders and platforms - Part 3. Industrial protective railings and steel platforms

GB/T 4879 anti-rust packaging

GB 5083 General safety and hygiene design of production equipment

GB/T 7631.2 Classification of lubricants, industrial oils and related products (Class L) Part
2. Group H (hydraulic systems)

GB/T 8163 seamless steel pipe for conveying fluid General technical conditions for

GB/T 13384 mechanical and electrical product packaging

GB/T 14039 hydraulic transmission oil solid particle pollution level code

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