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

GB 25974.3-2010

**[GB/T 25974.3-2010] Powered support for coal mine -- Part 3:
The hydraulic control system and valves
(English Translation)**

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1 Scope

This Part of GB 25974 specifies the terms and definitions, classification, requirements, test methods, inspection rules, marking, packaging and storage of hydraulic control systems and valves for powered supports for coal mines (hereinafter referred to as supports).

This Part is applicable to the hydraulic control systems and valves of various coal mine supports and other equipment with supporting functions, including various hydraulic control systems, yield valves, pilot check valves, directional valves, shut-off valves, etc.

This Part does not apply to the valves inside the superchargers, columns, jacks (such as column bottom valves).

2 Normative references

The provisions in following documents become the provisions of this Part through reference in this Part of GB 25974. For the dated references, the subsequent amendments (excluding corrections) or revisions do not apply to this Part; however, parties who reach an agreement based on this Part are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the referenced document applies.

GB/T 197-2003 General purpose metric screw threads - Tolerances (ISO 965-1:1998, MOD)

GB/T 321-2005 Preferred numbers - Series of preferred numbers (ISO 3:1973, IDT)

GB/T 699 Quality carbon structural steels

GB/T 1184-1996 Geometrical tolerancing - Geometrical tolerance for features without individual tolerance indications (eqv ISO 2768-2:1989)

GB/T 1220 Stainless steel bars

GB/T 1239.1 Cold coiled helical springs technical specifications - Part 1: Extension spring

GB/T 1239.2 Cold coiled helical springs technical specifications - Part 2:
Compressions spring

GB/T 1239.3 Cold coiled helical springs technical specifications - Part 3: Torsion spring

GB/T 1239.4 Cold coiled helical springs technical specifications - Part 3: Torsion spring

GB/T 1800.1-2009 Geometrical product specifications (GPS) - Limits and fits - Part
1: Bases of tolerances deviations and fits (ISO 286-1:1988, MOD)

GB/T 1804-2000 General tolerances - Tolerances for linear and angular dimensions without individual tolerance indications (eqv ISO 2768-1:1989)

GB/T 2828.1-2003 Sampling procedures for inspection by attributes - Part 1:

Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection (ISO 2859-1:1999, IDT)

GB/T 2829-2002 Sampling procedures and tables for periodic inspection by attributes (Apply to inspection of process stability)

GB/T 3452.1 Fluid power systems - O-rings - Part 1: Inside diameters, cross- sections, tolerances and size identification code (GB/T 3452.1-2005, ISO 3601-

1:2002, MOD)

GB/T 3452.2 Fluid power systems - O-rings - Part 2: Quality acceptance criteria (GB/T 3452.2-2007, ISO 3601-3: 2005, IDT)

GB/T 3452.3 Housing dimensions for O-ring elastomer seals in hydraulic and pneumatic applications

GB/T 9439 Grey iron castings

GB/T 9799 Metallic coatings - Electroplated coatings of zinc on iron or steel (GB/T 9799-1997, eqv ISO 2081:1986)

GB/T 11352 Carbon steel castings for general engineering purpose (GB/T 11352-2009, ISO 3755:1991; ISO 4990:2003, MOD)

GB/T 13306 Plate

GB/T 13319 Geometrical Product Specifications (GPS) - Geometrical tolerancing - Positional tolerancing (GB/T 13319-2003, ISO5458:1998, IDT)

JB/T 3338.1 Cylindrical helical compression springs for hydraulic parts - Technical conditions

MT 76 Emulsifying oil concentrate and high-water content hydraulic fluid used for powered support and prop

MT/T 98 Inspection specifications of hose and hose kit for powered support

MT/T 986 Quick adapter with U pin and accessories for mine

3 Terms and definitions

The following terms and definitions apply to this Part of GB 25974.

3.1

Nominal pressure

The nominal pressure of the valve, which is determined by the basic parameters.

3.2

Nominal flow-rate

The nominal flow-rate of the valve, which is determined by the basic parameters.

3.3

Open pressure of yield valve

The opening pressure, which is determined when the yield valve is in use.

3.4

Close pressure of yield valve

The stable pressure, which is maintained after the yield valve stops overflowing.

3.5

Close pressure of check valve

The stable pressure, which can be maintained after the system is decompressed AND the check valve is closed, when the system supplies liquid to other components through the check valve.

3.6

Open pressure

The pressure, at which the liquid starts passing through the valve, after the system

5.1 General requirements

5.1.1

The nominal flowrate parameters shall meet the requirements of 4.2.7 and 4.2.8.

The nominal pressure parameters shall meet the requirements of 4.2.9 and 4.2.10.

5.1.2

The working fluid shall meet the requirements of MT 76.

5.1.3

The temperature of the working fluid shall be in the range of (10 ~ 50) °C.

5.2.1 Integrity

The hydraulic control system shall be installed, according to the requirements of the design drawings. There shall be neither missing parts nor wrong-installed parts.