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**MT**

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

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**Quality Standard of Drill for Coal Geology Exploration  
(English Translation)**

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### 1 Scope

This Standard specifies the drilling, logging, comprehensive acceptance and pumping test quality standards of drill for geological exploration of coal resources.

This Standard is applicable to quality requirements for design drill of geological exploration of coal resources, quality acceptance of drill completion, and drill quality assessment of exploration report.

### 2 Normative References

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

DZ/T 0215-2002 Specifications for Coal, Peat Exploration

DZ/T 0080-1993 Specifications for Geophysical Logging of Coal

#### 3.1 Quality standard of drilling coal-seam

The quality of drilling coal-seam can be divided into 3 levels, such as high-quality, qualified, and unqualified; the quality indicators of various levels can refer to Table 1.

Table 1 - Quality Indicators of Drilling Coal-seam

| Item                   | High-quality | Qualified | Unqualified |
|------------------------|--------------|-----------|-------------|
| Thickness of coal-seam |              |           |             |

Satisfy one of the following conditions:

1. The sum of the missing coal-cores in the initial coal (top) and final coal (bottom) is no more than the following provisions:

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1. The sum of the missing coal-cores in the initial coal (top) and final coal (bottom) is no more than the following provisions:

Unqualified products indicate those products that are not qualified

True thickness of coal- seam / m

Sum of missing amount / m

True thickness of coal- seam / m

Sum of missing amount / m c) Drill collapse, blockage, or sediment in it bury the thickness of the major water- bearing-layer exceeding 1/5.

d) Q-S curve is abnormal; can't be interpreted or utilized.

## **5.2 Quality standard of drill constant-flow unstable flow pumping test**

The quality of drill constant-flow unstable flow pumping test can be divided into 4 levels, such as high-quality, qualified, unqualified and abandoned.

### **5.2.1 Quality standard of high-quality, qualified and unqualified of drill constant-flow unstable flow pumping test**

The quality standard of high-quality, qualified and unqualified of drill stable flow pumping test can refer to Table 6.

### **5.2.2 Other conditions**

The high-quality and qualified levels of drill constant-flow unstable flow pumping test shall also satisfy the following conditions:

- a) The water stopping effect is checked to be qualified; the quality of washing hole is reliable.
- b) The sediment in the hole shall not bury 1/5 thickness of the major water-bearing- layer.
- c) The water samples shall be taken as per the sampling requirements.
- d) The observations of the static water-level and restored water-level shall conform to the provisions of the regulations.
- e) The original data shall be recorded timely, correctly, tidy; the writing shall be clear,

correct, and unmodified.

### 5.2.3 Abandoned hole

It belongs to the abandoned hole once the quality of drill constant-flow unstable flow pumping test is one of the following cases:

- a) The water drawn from the drill penetrates into the hole in the vicinity of it, forming a circulating water.
- b) Sealing and water stopping fails; and there are not the effective flow logging data for remedy.
- c) Drill collapse, blockage, or sediment in it bury the thickness of the major water-bearing-layer exceeding 1/5.
- g) The completeness and rationality of the drawdown, time (distance) semi- logarithm or logarithm curve of unstable flow pumping shall be audited according to the pumping objectives and data interpretation.
- h) In addition to as per the above requirements in Table 6, the other pumping quality standard shall conform to the provisions of Regulation on Coal Resources

Geological Exploration Pumping Test.

- i) When the buried depth of the water-level is greater than 150m, and water volume is large. If the existing pumping equipment can't meet the requirements of water- level drop in Tables 5 and 6, the acceptance shall be conducted as per the approved design comments.

## 6.1 Quality standard of drill comprehensive coal-seam

The quality of drill comprehensive coal-seam can be divided into 3 levels, such as high-quality, qualified, and unqualified.

### 6.1.1 Quality standard of the high-quality layer of the drill comprehensive coal-seam

Through the comparative study of the drilling and logging data, it belongs to the high-quality coal-seam when meeting one of the following conditions:

- a) The depth, thickness of coal-seam, coal-core mining and original records shall satisfy the quality standard of high-quality layer of drilling coal-seam;
  - b) The quality of logging coal-seam shall satisfy the standard of high-quality layer;
- the coal-core length mining rate and weight mining rate of the design sampling coal-seam shall meet the requirements of drilling high-quality layer.

### **6.1.2 Quality standard of qualified layer of drill comprehensive coal-seam**

Through the comparative study of the drilling and logging data, it belongs to the comprehensive qualified coal-seam when meeting one of the following conditions:

- a) The depth, thickness of coal-seam, coal-core mining and original records shall satisfy the quality standard of qualified layer and above of drilling coal-seam;
- b) The quality of logging coal-seam shall satisfy the standard of qualified layer; the coal-core length mining rate and weight mining rate of the design sampling coal-seam shall meet the requirements of drilling qualified layer.

### **6.1.3 Quality standard of unqualified layer of the drill comprehensive coal-seam**

Appendix A (Informative)

Major Data List of Drill of Coal Geological Exploration

**A.5 Report on original record shift of drilling (including record contents of simple hydrological observation)**

**A.21 Result and quality rating table of drill coal-seam comprehensive use**

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