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

MT/T 167-1987

**Mine insulated PVC sheathed communication cables
(English Translation)**

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Mine polyethylene insulated PVC sheath Communication Cable this standard applies to polyethylene insulated polyvinyl chloride sheathed communication cables used in underground coal mines and other explosive gas environments.

Hereinafter referred to as the cable).

1 Model and specifications	
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1.1 Table 1 shows the cable types and applications.

Table 1

Model name application range HUYV mining polyethylene insulated PVC sheathed communication cable HUJYV Mine-reinforced core-core polyethylene insulated PVC sheathed communication cable for level and inclined lanes with high mechanical damage HUYBV Mine polyethylene insulated galvanized steel wire braided PVC sheath Communication Cable for flat and inclined lanes with high mechanical impact HUYAV Mine polyethylene insulation aluminum polyethylene adhesive sheath PVC protection Communication cable for wet inclined shafts and alleys HUYA32 Mine polyethylene insulated aluminum polyethylene bonded sheath steel wire armored poly Vinyl chloride sheathed communication cable for vertical or inclined shafts

1.2 Cable specifications the cable specifications should meet the requirements of Table 2.

Table 2

HUYV HUJYV HUYBV HUYAV HUYA32 Logarithm x Core number 1 x 2 2 x 2 1 x 4 5 x 2 1 x 2 2 x 2 5 x 2 10 x 2 20 x 2 20 x 2 30 x 2 50 x 2 30 x 2 50 x 2 80 x 2

1.3 Cable Nomenclature and Representation

1.3.1 Naming Code

Mine communication cable HU Copper wire core omitted Steel copper reinforced wire core J Polyethylene insulation Y Aluminum polyethylene bonding sheath A Polyethylene inner sheath omitted Woven armor B PVC sheath V Fine round steel wire armor, PVC outer covering 32

1.3.2 Representation the cable is indicated by model, specification and standard number. Such as.

Mine polyethylene insulated aluminum-polyethylene bonded sheathed steel wire armored PVC sheathed communication cable with 30 twisted pair cores Shown as.

HUYA32 30 x 2 MT 167-87 Mine polyethylene insulated PVC sheathed communication cables with a star-stranded core should be expressed as.

HUYV 1 x 4 MT 167-87

2 Working conditions

2.1 The cable should work properly in the following environments.

- a. Temperature. -40 ~ 50 °C;
- b. Monthly average maximum relative humidity. 95% (at 25 ° C).

2.2 The cable should be able to adapt to the following laying and installation conditions.

- a. Temperature. not lower than -10 °C;
- b. Minimum bending radius during installation. HUYV and HUYV types should be 10 times the outer diameter of the cable, and other models are 15 times the outer diameter.

3 Technical requirements

3.1 Components

3.1.1 Conductor

3.1.1.1 HUYV type uses tinned soft round copper wire stranded conductor; HUYV type uses tinned soft round copper wire and galvanized steel wire mixed twisted conductor;

Other models use soft round copper wire.

3.1.1.2 The structure of the conductor shall comply with the requirements in Tables 3 to 7.

table 3

Model specifications	Core structure	Number of pieces/Nominal diameter of single wire, mm	Nominal thickness of insulation	Nominal thickness of outer sheath mm
HUYV	1 x 2	7/0.28	0.45	1.6
7.1	2 x 2	7/0.28	0.45	1.6
8.6	1 x 4	7/0.28	0.45	1.6
8.0	5 x 2	7/0.28	0.45	1.6
11.5				

Table 4

Model specifications	Core structure	Number of pieces/Nominal diameter of single wire, mm	Nominal thickness of insulation	Nominal thickness of outer sheath mm
HUYV	1 x 2	4/0.28	0.45	1.6
7.1	2 x 2	4/0.28	0.45	1.6
8.6				

table 5 Model specifications Core structure no./single wire nominal diameter mm

Model specifications	Core structure	no./single wire nominal diameter mm	Nominal insulation thickness	Nominal inner sheath thickness	Braided galvanized steel wire diameter	Nominal outer sheath thickness	Cable max	Outer diameter mm
HUYBV	5 x 2	1/0.8	0.35	1.5	0.20 ~ 0.30	1.6	15.6	10 x 2
1/0.8	0.35	1.5	0.20 ~ 0.30	1.6	18.4	20 x 2	1/0.8	0.35
1.5	0.20 ~ 0.30	2.0	23.4					

Table 6

Model specifications	Core structure	no./single wire nominal diameter mm	Nominal insulation thickness	Aluminum polyethylene bonding	Layer overlap width	Nominal inner sheath thickness	Nominal outer sheath thickness	Cable max	Outer diameter mm
HUYAV	20 x 2	1/0.8	0.35	not less than 6	1.5	2.0	23.4	30 x 2	1/0.8
0.35	not less than 6	2.0	2.0	27.4	50 x 2	1/0.8	0.35	not less than 6	2.0
2.0	2.0	32.6							

Table 7

Model specifications	Core structure	no./single wire nominal diameter mm	Nominal insulation thickness	Aluminum polyethylene bonding	Cover overlap width	Nominal inner sheath thickness	Galvanized armored steel wire diameter	Nominal outer sheath thickness	Cable max	Outer diameter mm
HUYA32	30 x 2	1/0.8	0.35	not less than 6	2.0	not less than				

1.6 2.5 32.6 50 x 2 1/0.8 0.35 not less than 6 2.0 not less than 1.6 2.5 37.3 80 x 2 1/0.8
0.35 not less than 6 2.2 not less than 2.0 2.5 43.0

3.1.2 Insulation

3.1.2.1 The insulation uses low-density polyethylene cable material, the nominal thickness should meet the requirements of Tables 3 to 7, and the average value of the insulation thickness should not be small at the specified nominal value, the thinnest point thickness is not less than the nominal value minus 0.05mm.

3.1.2.2 The insulation shall be tightly packed on the conductor, and it shall be easily peeled off without damaging the conductor or tin plating.

The insulation surface should be smooth, uniform in color, and free from cracks and other damage.

3.1.3 Line Group

3.1.3.1 Insulated wire cores shall be twisted into wire groups. A pair of cores should be twisted, and the twisting pitch should not be greater than 120mm.

Twisted or double twisted, the pitch is not more than 150mm.

3.1.3.2 Two pairs of insulated cores are applied in different colors. The common pair is red and white, the logo pair is blue and white, and the star twisted group is four the insulation of the insulated cores shall be red, blue, white and green.

3.1.4 Cable core

The cables of one pair of cores and two pairs of cores can be directly used as the core of the cable; for more than two pairs of cables, the twisted pairs should be twisted concentrically to form a cable core, the twist direction of the outermost layer is right, and the twist direction between adjacent two layers must be opposite. Two adjacent pairs of wire groups in the same layer should use different There should be a marker pair in each layer.

3.1.5 Banding

HUYBV, HUYAV, HUYA32 cable cores should be wrapped with a layer of plastic tape on the outside.

Not less than 20% of the bandwidth, and the minimum must not be less than 5mm.

3.1.6 Adhesive coating HUYAV, HUYA32 type cables are covered with a layer of aluminum polyethylene composite tape longitudinally outside the plastic wrapping tape. The cover must be continuous and complete.

The vertical package overlap should be greater than specified in Tables 6 to 7, and the overlap should be heat sealed.

3.1.7 inner sheath