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

MT 141-2005

**Plastic net protecting top-plane in coal mining
(English Translation)**

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required - Full-copy of this standard will be autom**

Table of Contents

Foreword...	3
1 Scope...	4
2 Normative references...	4
3 Top-plane protection plastic net model...	4
4 Requirements...	4
5 Test methods...	6
6 Inspection rules...	14
7 Marking, packaging, transportation and storage...	15

Foreword

Clause 4.4, 4.5, 4.6, 4.7, 4.8 and 4.9 of this standard are mandatory, AND the rest is recommended.

This standard is the revision of MT 141-1986 "Specification for inspection of plastic net protecting top-plane in coal mining". AND this standard replaces MT 141-1986 from the date of implementation.

As compared with MT 141-1986, the main changes of this standard are as follows.

- ADD the tensile strength requirements (SEE 4.7);
- ADD the determination of the flame temperature of the alcohol torch (SEE 5.7.3.3);
- ADD the Appendix A;
- MODIFY the model preparation method (clause 1.1 of 1986 version; clause 3 of this version);
- MODIFY the preparation of the sample the surface of which is coated with a conductive layer (clause 9.2 of 1986 version; clause 5.6.1.1 of this version);
- DELETE the contents of the fuel consumption amount (clause 5.2.5 of

1986 version);

- CANCEL the requirements for the width and thickness of plastic net (clause 2.2.1 and 2.2.2 of 1986 version).

Appendix A of this standard is normative.

This standard was proposed by China Coal Industry Association Science and Technology Development Department.

This standard shall be under the jurisdiction of the Coal Industry Coal Mine Safety Standardization Technical Committee.

The drafting organization of this standard. Coal Science Research Institute Shanghai Branch.

1 Scope

This standard specifies the product model, requirements, test methods, inspection rules, marking, packaging, transportation and storage of the plastic net protecting top-plane in coal mining (hereinafter referred to as top-plane protection net).

This standard applies to plastic net protecting top-plane in coal mining.

2 Normative references

The provisions in following documents become the provisions of this Standard through reference in this Standard. For the dated references, the subsequent amendments (excluding corrections) 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.

MT 182-1998 Alcohol blast burner structure and technical requirements

MT 113-1995 General test methods and judgment rules for fire-resistant antistatic properties of polymer products for coal mine

3 Top-plane protection plastic net model

The model of the top-plane protection net is divided into 160MS, 180MS, 200MS, 220MS, 240MS, 260MS and 280MS in accordance with the single cross section tensile strength. Model example is as follows.

4.1 Appearance quality

Indicates flame-retardant and anti-electrostatic

Indicates plastic net protecting top-plane

Indicates single cross-section tensile strength, in Megapascal (MPa)

Indicates materials

b) If started time keeping from the time when the sample flame is extinguished, the arithmetic mean of the flameless combustion time of the 6 samples shall be less than 10 s, wherein the single value of the flameless combustion time of any one of the samples shall be less than 30 s.

4.9.2 Alcohol lamp combustion performance

The top-plane protection net shall, through the alcohol lamp combustion test, comply with the following requirements.

a) After removing the alcohol lamp, the arithmetic mean of the flame combustion time of the 6 samples shall be less than 6 s, wherein the single value of the flame combustion time of any one of the samples shall be less than 12 s.

b) If started time keeping from the time when the sample flame is extinguished, the arithmetic mean of the flameless combustion time of the 6 samples shall be less than 10 s, wherein the single value of the flameless combustion time of any one of the samples shall be less than 30 s.

4.10 Specifications of top-plane protection plastic net

The general specifications of the top-plane protection plastic net are as shown in Appendix A.

5.1 Sample preparation

After the product was made 24 h, TAKE the sample.

5.2 Appearance quality

CUT one piece of sample having a length of not less than 10 m; PERFORM visual inspection.

5.3 Specification size inspection

CUT one piece of sample having a length of 1m; USE a Vernier caliper having a precision of 0.02 mm to measure width at any 5 points along the parallel direction; TAKE the arithmetic mean; LEAVE 2 places after the decimal point; ROUND off to 1 place after the decimal point; USE a Vernier caliper having a precision of 0.02 mm to measure thickness at any 5 points; TAKE the arithmetic mean; LEAVE 2 places after the decimal point; ROUND off to 1 place after the decimal point.

5.4 Skewness test

c) Respectively CALCULATE the tensile strength and tensile elongation at fracture of each group of 5 samples, and CALCULATE the arithmetic mean of the tensile strength and the tensile elongation at fracture of each group of samples, TAKE the integer.

5.6.1.1 TAKE a certain number of top-plane protection nets; USE the hot

pressing method to prepare them into circular or square sheet samples the surface of which is flat and smooth; the sample thickness is (1 ± 0.2) mm, the sample diameter or edge length is not less than 100 mm, and the number of sample is 3; AND if the sample surface is coated with conductive layer, it shall