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

MT/T 691-1997

**Determination of electrostatic potential in detonator production
line**

雷管生产线静电电位测定方法 清晰版

(English Translation)

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Method for measuring electrostatic potential of detonator production line

1 Scope

This standard specifies the instruments, measurement conditions, and measurement procedures for measuring the electrostatic potential of detonator production lines.

This standard is applicable to the measurement of electrostatic potential of detonator production lines in coal mines.

2 Reference standards the following standards contain provisions that, through reference in this standard, constitute provisions of this standard. When this standard was published, the editions shown were all is effective. All standards will be revised, and all parties using this standard should explore the possibility of using the latest versions of the following standards.

4385-1995 Technical requirements for anti-static shoes and conductive shoes GB 12014-89 anti-static work clothes MT 520-1995 Antistatic safety regulations for mine detonator production plants

3 Basic principles

An arbitrary point in the electric field is used as a reference point. The potential of each point in the electric field to this point can be used to compare or explain the nature of the electric field. Reference point After selection, the potential of each point to the reference point is only related to the position of that point. So as long as the potential at this point is measured, a table of charged objects can be obtained.

Area potential.

4 instruments

Use a non-contact electrostatic potentiometer that meets the safety requirements of the detonator production line. Measurement range is 0 ~ 50 kV, its accuracy is $\pm 2.5\%$.

5 Measurement conditions

5.1 The measurement site should have anti-static facilities.

5.2 Avoid measuring near strong electric and magnetic fields, and keep away from other charged objects.

5.3 Determination of environmental conditions. temperature 10 ~ 40 °C, relative humidity is not less than 60%.

6 Measurement steps

6.1 The tester should wear the GB 12014 anti-static workwear and GB 4385 anti-static shoes.

6.2 Check the instrument to make sure it complies with the provisions of this standard.

6.3 Adjust the instrument so that it is in normal working condition.

6.4 Adjust the zero point.

6.5 Measurement. Hold the sensor by hand or mechanically, align the end face of the sensor with the center position of the surface of the electrostatic charge to be measured, and level the measured surface Row. The distance between the sensor and the measured object is determined according to the requirements of the instrument manual.

6.6 Measure the measured object and make a record in time.

7 Measurement object Press MT the classification of procedures specified in Chapter 520 of 520 performs electrostatic potential measurement on each procedure and the human body.

8 Test report

The test report must include the following.

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- a) measurement time;
- b) measured temperature and humidity conditions;
- c) using the name and model of the instrument;
- d) the location of the measurement;
- e) The measured electrostatic potential value.

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