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JIS

JAPANESE INDUSTRIAL STANDARD

Mercury Filled Thermometers

JIS B 7528–1979

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In the event of any doubt arising,
the original Standard in Japanese is to be final authority.

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Mercury Filled Thermometers B 7528-1979

(Reaffirmed: 1984)

1. Scope

This Japanese Industrial Standard specifies among round shaped vapour pressure type indicating thermometers with a single concentric pointer, those used in temperatures of -30 to 500° C, (hereinafter referred to as the "thermometers"). The thermometer consists of an indicating part and a pressure part in which a Bourdon tube and a temperature sensitive cylinder are connected with each other by a conduit tube and which is filled with mercury.

2. Terms and Definitions

The definitions of principal terms used in this Standard shall be as given below:

(1) pressure part A series of elements for transforming a measured temperature into a visible displacement, consisting of a Bourdon tube and a temperature sensitive cylinder, and being filled with mercury.

(2) indicating part A device in which the displacement of the Bourdon tube can be read as the indication of temperature.

(3) conduit tube A metal tube of a small diameter connecting the temperature sensitive cylinder with the Bourdon tube.

(4) Bourdon tube A flattened metal tube which is formed into an arc, spiral or other shape, and connected to the temperature sensitive cylinder through the conduit tube, and the displacement of which is caused by a change in volume of mercury due to its temperature filled in the temperature detecting part.

(5) transforming mechanism A mechanism which transforms the displacement of the Bourdon tube into a pointer motion through a pinion and geared sector or other system.

(6) connection part That part of the thermometer at which the temperature sensitive part is securely fixed in the place where temperature is measured.

(7) temperature detecting part That part of the thermometer inserted into a temperature-measured object.

(8) temperature sensitive cylinder That portion of the temperature sensitive part which is a metal tube filled with mercury and inserted into a temperature-measured object and senses its temperature.

(9) immersion line A line marked on the temperature detecting part to medicate the position up to which the detecting part is to be immersed in the liquid in a temperature bath for testing the thermometer. Where the immersion line is not marked, it shall be taken at the bottom end of the connection part.

3. Nomenclature for Principal Parts

The nomenclature for the principal parts of thermometers shall be as given in Fig. 1. This figure shows nomenclature only and does not give a standard for the shape of thermometers.

Applicable Standards are listed on Page 14.