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**Vapour pressure thermometers**

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## Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Measuring Instruments Federation (JMIF)/Japan Pressure Gauges and Thermometers Manufacturers' Association (JPTMA)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS B 7529**:1979 is replaced with this Standard.

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# Vapour pressure thermometers

## 1 Scope

This Japanese Industrial Standard specifies the vapour pressure thermometers (hereafter referred to as thermometers) consisting of a Bourdon tube and a temperature sensitive cylinder connected with each other by a conduit tube, and filled with a volatile liquid. The indicator in a round case has a single pointer and scales concentrically marked on the dial. The pressure change caused by the vapour pressure change of the volatile liquid contained in the system according to the temperature change at the temperature sensitive part is converted to a mechanical displacement of the pointer to indicate the temperature. The thermometers are used in the temperature range of  $-30\text{ }^{\circ}\text{C}$  to  $+200\text{ }^{\circ}\text{C}$ .

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. For those without the indication of the year, the most recent edition (including amendments) shall be applied.

JIS B 0202 *Parallel pipe threads*

JIS B 0203 *Taper pipe threads*

JIS Z 8103 *Glossary of terms used in measurement*

JIS Z 8703 *Standard atmospheric conditions for testing*

## 3 Terms and definitions

For the purpose of this Standard, the following terms and definitions, and those given in **JIS Z 8103** apply.

### 3.1 pressure system

system for converting a measured temperature into a visible displacement, consisting of a Bourdon tube, a temperature sensitive cylinder and a conduit tube, which is filled with a volatile liquid

### 3.2 indicator

part consisting of a Bourdon tube, an amplification mechanism connected with a temperature sensitive part via a conduit tube, and a case for housing those parts, which indicates a temperature

### 3.3 conduit tube

metal capillary connecting a temperature sensitive cylinder with a Bourdon tube

### 3.4 Bourdon tube

flattened metal tube formed into an arc and connected to the temperature sensitive cylinder via the conduit tube, which generates the displacement by vapour pressure change due to temperature of the volatile liquid contained in the temperature sensitive part