

JIS

JAPANESE INDUSTRIAL STANDARD

Taper Pins

 JIS B 1352—1988

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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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Taper Pins

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1. Scope

This Japanese Industrial Standard specifies steel taper pins and stainless steel taper pins with a taper of $\frac{1}{50}$ for general use, hereinafter referred to respectively as the "steel pins" and "stainless pins".

When steel pins and stainless pins are called collectively in this Standard, they shall simply be called as the pins.

Remarks 1. The body of this Standard is in accordance with ISO 2339-1986 except the parts enclosed in double rectangles.

2. The shape • dimensions, overall accuracy of taper and surface roughness of the pin shall be specified in Appendix in case where they are not in accordance with ISO 2339.

2. Classification

The pins shall be classified in two classes as given in Table 1 according to the surface roughness of the taper part.

Table 1

Classes	Surface roughness ⁽¹⁾ of the taper part	Remark
A class	$R_a=0.8 \mu\text{m}$	Taper pins manufactured mainly by the grinding.
B class	$R_a=3.2 \mu\text{m}$	Taper pins manufactured mainly by the turning.

Note ⁽¹⁾ R_a shall be in accordance with the average roughness of the centre line specified in JIS B 0601.

Applicable Standards and Corresponding International Standard: See page 11.

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3. Hardness

The hardness of pin shall be in accordance with Table 2.

Table 2

Division		Hardness	
		Vickers hardness	Rockwell hardness
Steel pin	Steel pins not conducted by heat treatment	HV 125 to 245	HRB 70 to HRC 21
	Steel pins treated by quenching and tempering	HV 255 to 327	HRC 23 to 33
Stainless pin		HV 208 to 280	HRB 93 to HRC 27

4. Shape and Dimensions

The shape and dimensions of pin shall be in accordance with Attached Table.

5. Appearance

The pin shall comply with the requirements of Table 1 in surface roughness of the taper part and in addition to it, be free from defects such as quenching cracks, burrs and flaws detrimental in use, nicks, rusts or the like.

6. Heat Treatment and Materials

The heat treatment and materials of the pins shall be in accordance with Table 3 as a rule.

Table 3

Division	Heat treatment	Materials
Steel pin	Not conducted	SUM 22 to SUM 24 L of JIS G 4804 or SGD 41-D of JIS G 3123 or S 43 C ⁽²⁾ to S 45 C ⁽²⁾ of JIS G 4051
	Quenching • tempering ⁽³⁾	S 43 C to S 50 C of JIS G 4051
Stainless pin	Not conducted	SUS 303 of JIS G 4303

Notes ⁽²⁾ This material shall be treated by the normalizing before the use of it.

⁽³⁾ The quenching • tempering may be omitted where the thermally refined steel is used.

7. Surface Treatment

The surface treatment of pin is not conducted generally. Provided that the corrosion prevention oil shall be applied at the time of supply in case of the steel pin.

Furthermore, where the plating and other surface treatments are required, the orderer shall specify.

8. Inspection

8.1 Hardness Inspection The hardness inspection of pin shall be conducted in accordance with the test method specified in JIS Z 2244 or JIS Z 2245 and the hardness of end part or taper part shall comply with the requirements of 3.

Furthermore, the hardness of pin may be in accordance with any one of Vickers hardness or Rockwell hardness but where the measured value of hardness is doubtful, the hardness of pin shall be determined by the Vickers hardness.

8.2 Shape • Dimension Inspection The shape • dimension inspection of pin shall be conducted by the direct measurement, the limit gauge or other method and the results shall comply with the requirements of the specification of 4.

8.3 Appearance Inspection The appearance inspection of pin shall be conducted by visual observation and the results shall comply with the requirements of the specification of 5. Provided that the surface roughness of taper part shall be tested by the measuring method of the surface roughness specified in JIS B 1071 or an alternative method.

8.4 Delivery Inspection The sampling inspection plan for the lot at the time of delivery shall be subjected to the agreement between the purchaser and the manufacturer.

9. Designation of Products

The designation of pin shall be in accordance with number of standard or title of standard, Class ⁽⁴⁾, nominal diameter × nominal length, material ⁽⁵⁾ and specified matters ⁽⁶⁾.

Notes (4) Class A may be taken as A and Class B may be taken as B.

(5) The materials shall be in accordance with the material symbols specified in Japanese Industrial standard. Provided that the materials of the steel pin, which are free from heat treatment, may be marked with the symbol of St. Furthermore, the material of the steel pin treated by quenching and tempering shall be marked with symbol Q behind the symbol of that material. The case, where the thermally refined steel has been used, applies to this, as appropriate.

(6) The class of surface treatment, the symbol giving the allowable value of nominal diameter (d) and the like shall be shown as required.