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JIS

Cancellation of designated item for JIS marking

JAPANESE INDUSTRIAL STANDARD

Split Pins

JIS B 1351—1987

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

JAPANESE INDUSTRIAL STANDARD

J I S

Split Pins

B 1351-1987

1. Scope

This Japanese Industrial Standard specifies the steel split pins, hereinafter referred to as the "steel pins", brass split pins, hereinafter referred to as the "brass pins" and stainless steel split pins, hereinafter referred to as the "stainless pins", all for general use.

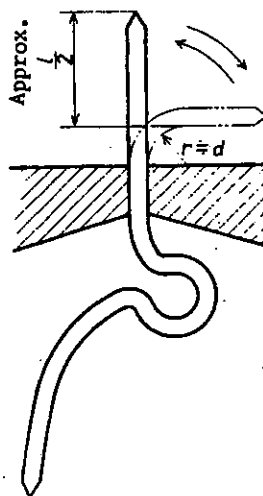
Furthermore, in this Standard, where the steel pins, brass pins and stainless pins are generically called, they shall be called simply the pins.

Remark: The shape and dimensions of split pins specified in this Standard are in accordance with ISO 1234-1976 (Split pins-Metric series).

2. Bending

Even after a pin is bent 3 time repeatedly approximately 90 degrees outward in one direction as given in the following Figure, a crack shall not be produced on the pin. However, the bending radius (r) shall be approximately the same as the diameter of the pin (d).

Figure



3. Hardnesses

The hardnesses of the pins shall conform to Table 1.

Table 1

Division of nominal diameter mm	Vickers hardness	Rockwell hardness
1.6 and under	HV 180 to 240	—
Over 1.6 to 2.5 incl.	HV 160 to 220	—
Over 2.5	—	HRB 67 to 92

4. Shape and Dimensions

The shape and dimensions of the pins shall conform to Attached Table.

5. Appearance

The surface of the pin shall be smooth and free from defects injurious to use, such as cracks, flaws, burrs, rust and gaps on contacting surfaces.

6. Materials

The materials of the pins shall be in accordance with Table 2.

Table 2

Division	Material
Steel pin	SWRM 6 to 17 of JIS G 3505 or SWCH 6 R to 17 R of JIS G 3539
Brass pin	C 2600 W or C 2700 W of JIS H 3260
Stainless pin	JIS G 4315

7. Surface Treatment

The pins shall generally be not subjected to surface treatment. Particularly in the case where plating or other surface treatment is required, it shall be designated by the purchaser.

Furthermore, the steel pins which have been electroplated shall be subjected to the treatment of brittleness elimination, as required.

8. Inspection

Inspection of the pins shall be in accordance with the following. However, the sampling inspection system in the lot inspection shall be as agreed on between the parties concerned.

- (1) Bending Inspection In the bending inspection of the pins, the results shall conform to the requirements of 2.
- (2) Hardness Inspection The hardness inspection of the steel pins shall be carried out in accordance with the Vickers hardness testing method of JIS Z 2244, Rockwell hardness testing method of JIS Z 2245 or the method in accordance with this, as appropriate, and the results shall conform to the requirements of 3.
- (3) Inspection of Shape and Dimensions Inspection of shape and dimensions of the pins shall be carried out by the direct measurement, the limit gauge and other methods, and the results shall conform to the requirements of 4.
- (4) Inspection on Appearance Inspection of appearance of the pins shall be carried out by the visual inspection, and the results shall conform to the requirements of 5.

9. Designation

The pins shall be designated by the Standard number or title of Standard, class, nominal diameter $\times$ length (¹) and material (¹). However, if any designated items are particularly required, they shall be indicated after the designation.

Note (¹) The material may also be indicated by the general name of material of the products.

Example:	JIS B 1351	2 $\times$ 20	SWRM 10	
	<u>Split pins</u>	<u>2 $\times$ 20</u>	<u>Brass</u>	<u>Pointed end</u>
	Standard (number or title of standard)	Nominal diameter ($\times$ length)	(Material)	(Designated item)

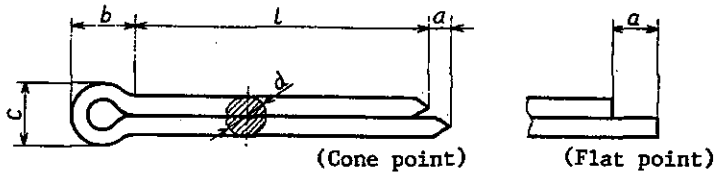
10. Marking on Package

The package shall be marked with the following information on the outer surface.

- (1) Title of Standard
- (2) Nominal diameter $\times$ length
- (3) Material (The general name of the material of the products may also be used.)
- (4) Quantity and designated items
- (5) Manufacturer's name or its abbreviation (²)

Note (²) For the abbreviation, the registered trademark should be used as far as possible.

Attached Table. Shape and Dimension of Split Pins



Unit: mm

Nominal diameter		0.6	0.8	1	1.2	1.6	2	2.5	3.2	4	5	6.3	8	10	13	16	20	
<i>d</i>	Basic dimension	0.5	0.7	0.9	1	1.4	1.8	2.3	2.9	3.7	4.6	5.9	7.5	9.5	12.4	15.4	19.3	
	Tolerance	0 -0.1						0 -0.2						0 -0.3				
<i>c</i>	Basic dimension	1	1.4	1.8	2	2.8	3.6	4.6	5.8	7.4	9.2	11.8	15	19	24.8	30.8	38.6	
	Tolerance	0 -0.1	0 -0.2	0 -0.3	0 -0.4	0 -0.6	0 -0.7	0 -0.9	0 -1.2	0 -1.5	0 -1.9	0 -2.4	0 -3.1	0 -3.8	0 -4.8			
<i>b</i>	Approx.	2	2.4	3	3	3.2	4	5	6.4	8	10	12.6	16	20	26	32	40	
<i>a</i>	Maximum	1.6	1.6	1.6	2.5	2.5	2.5	2.5	3.2	4	4	4	4	6.3	6.3	6.3	6.3	
	Minimum	0.8	0.8	0.8	1.2	1.2	1.2	1.2	1.6	2	2	2	2	3.2	3.2	3.2	3.2	
Diameters of applicable bolts and pins	Bolts	Over	—	2.5	3.5	4.5	5.5	7	9	11	14	20	27	39	56	80	120	170
		Or under	2.5	3.5	4.5	5.5	7	9	11	14	20	27	39	56	80	120	170	—
	Crevice pins(*)	Over	—	2	3	4	5	6	8	9	12	17	23	29	44	69	110	160
		Or under	2	3	4	5	6	8	9	12	17	23	29	44	69	110	160	—
Pin hole diameter		Reference	0.6	0.8	1	1.2	1.6	2	2.5	3.2	4	5	6.3	8	10	13	16	20
<i>l</i>	4	±0.5																
	5																	
	6																	
	8																	
	10	±0.5																
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	112																	
	125																	
	140																	
	160																	
180																		
200																		
224																		
250																		
280																		

Note (3) In the case of crevice pins which are to be subjected to the repeated load in the direction vertical to axis the split pins, one step larger than the those in this Table shall be used.

- Remarks 1. The nominal diameter shall be in accordance with the diameter of the pin hole.
2. The value d shall be the value between the end and the point $\frac{l}{2}$ from the end.
3. The shape of the end may be either cone point or flat point. In the case where either of them is required, it shall be so designated.
4. The length (l) shall be restricted to those given in the frame of the bold lines, and the numerical values in the frame indicate their tolerances. However, in the case where the value of l other than given in this Table is particularly required, the purchaser shall so designate.
5. The head shall not be inclined remarkably from the centre of axis.

Applicable Standards:

JIS G 3505-Low Carbon Steel Wire Rods

JIS G 3539-Carbon Steel Wires for Cold Heading and Cold Forging

JIS G 4315-Stainless Steel Wires for Cold Heading and Cold Forging

JIS H 3260-Copper and Copper Alloy Wires

JIS Z 2244-Method of Vickers Hardness Test

JIS Z 2245-Method of Rockwell and Rockwell Superficial Hardness
Test

Corresponding International Standard:

ISO 1234-1976 Split pins-Metric series

B 1351-1987
Edition 1

Japanese Text

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