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Headed studs

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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 Japanese Society of Steel Construction (JSSC)/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 1198 : 1995** is replaced with this Standard.

However, **JIS B 1198 : 1995** may be applied in the **JIS** mark certification based on the relevant provisions of Article 19 Clause 1, etc. of the Industrial Standardization Law until February 20th, 2012.

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Headed studs

1 Scope

This Japanese Industrial Standard specifies the characteristics of the steel headed studs (hereafter referred to as "studs") mainly used for preventing slippage of composite structures of steel concrete or preventing slippage of compositional structures of steel concrete in civil engineering structures and architectural structures.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS B 7507 *Vernier, dial and digital callipers*

JIS B 7516 *Metal rules*

JIS G 0320 *Standard test method for heat analysis of steel products*

JIS G 3101 *Rolled steels for general structure*

JIS G 3106 *Rolled steels for welded structure*

JIS H 4040 *Aluminium and aluminium alloy rods, bars and wires*

JIS Z 2241 *Method of tensile test for metallic materials*

JIS Z 3145 *Method of bend test for stud welds*

3 Terms and definitions

For the purposes of this Standard, the following terms and definitions apply.

3.1 nominal length, L

the length after a stud is welded

The length in which the weld allowance (WA) defined in 3.3 is added to the nominal length (L) is the full length (see table 3).

3.2 stud base

the end part of the welding side of the stud

3.3 weld allowance, WA

the part to be melted when a stud is welded

The weld allowance (WA) is included in the full length (see table 3).

3.4 one inspection lot

one manufacturing lot of which the heat number of steel material, the designation of stud and the treatment process to be described in a steel material inspection certificate (also called a Mill Sheet), to be used for the stud material are identical

4 Quantity symbol

The main quantity symbols used in this Standard shall be as follows.

- d : shank diameter (mm)
 D : head part diameter (mm)
 T : thickness at head part (mm)
 L_1 : full length or the length before welding (mm)
 L : nominal length (mm)
 r : radius under head (mm)
WA : weld allowance (mm)

5 Types

The types of studs shall be classified by the designation corresponding to the shank diameter (d) and be in accordance with table 1.

Moreover, the nominal length (L) indicated in table 1 indicates the representative length for reference and is not to specify the nominal length (L). The nominal length (L) shall be subjected to the agreement between the parties concerned with delivery, the designation of the customer or the order sheet.

Table 1 Classification

Unit : mm		
Shank diameter (d)	Designation	Nominal length (L) (informative)
10	10	50, 80, 100
13	13	80, 100, 120
16	16	
19	19	80, 100, 130, 150
22	22	
25	25	120, 150, 170

6 Manufacturing lot number

The manufacturing lot number is applied by adding a number or symbol every one manufacturing lot and is used for the discrimination of product.

7 Material

The material of studs shall be the rolled silicon killed steel or aluminium killed steel, and their chemical compositions shall be those shown in table 2. The chemical compositions shall be confirmed that the analytical values in the steel material inspection certificate of the steel material analyzed by using the heat analysis according to **JIS G 0320** conform to table 2.