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Stress area and bearing area for threaded fasteners

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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 The Japan Research Institute for Screw Threads and Fasteners (JFRI) / 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 1082** : 1987 is replaced with this Standard.

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Stress area and bearing area for threaded fasteners

1 Scope

This Japanese Industrial Standard specifies the calculation method of the stress area of the general purpose metric screw thread specified in **JIS B 0205-3** and the area where the bearing surface of the threaded fastener comes in contact with the opposite surface and receives the load (hereafter referred to as "bearing area").

NOTE : The stress area for the threaded fastener is mainly used for calculating the stress for the external thread, but it is also used for obtaining the proof load stress and the like of nut.

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 0205-3 *ISO general purpose metric screw threads — Part 3 : Selected sizes for screws, bolts and nuts*

JIS B 1001 *Diameter of clearance holes and counterbores for bolts and screws*

JIS B 1002 *Dimensions of widths across flats*

JIS B 1101 *Slotted head screws*

JIS B 1111 *Cross recessed head screws*

JIS B 1176 *Hexagon socket head cap screws*

JIS B 1180 *Hexagon head bolts and hexagon head screws*

JIS B 1182 *Square head bolts*

JIS B 1186 *Sets of high strength hexagon bolt, hexagon nut and plain washers for friction grip joints*

JIS B 1189 *Hexagon flange bolts*

3 Stress area

3.1 Calculation method of stress area

Calculate the stress area of the general purpose metric screw thread according to the following formula (1) or (2).

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