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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 1228-2006

**High strength bolts with large hexagon head for steel
structures**

(English Translation)

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Foreword

This Standard corresponds to ISO 7412:1984, Hexagon Bolts for High-strength Structural Bolting with Large Width Across Flats (Short Thread Length) - Product Grade C - Property Classes 8.8 and 10.9. It is nonequivalent to ISO 7412.

This Standard replaces GB/T 1228-1991, High Strength Bolts with Large Hexagon Head for Steel Structures.

The major changes of this Standard, compared with GB/T 1228-1991, are as follows.

-- the types of double chamfer head bolts and recessed head bolts in GB/T 1228-

1991 are deleted (the "alternative types of head" and "types allowed to be

manufactured" shown in Article 3 in GB/T 1228-1991).

This Standard is part of the complete national standard series on "connection sets for the friction-type high strength bolts for steel structures". The series also comprises.

-- GB/T 1229-2006, High Strength Large Hexagon Nuts for Steel Structures;

-- GB/T 1230-2006, High Strength Plain Washers for Steel Structures;

-- GB/T 1231-2006, Specifications of High Strength Bolts with Large Hexagon Head, Large Hexagonal Nuts and Plain Washers for Steel Structures;

-- GB/T 3632-1995, Type and Dimension for Sets of Torshear Type High Strength Bolt Hexagon Nut and Plain Washer for Steel Structures;

-- GB/T 3633-1995, Technical Requirement for Sets of Torshear Type High Strength Bolt Hexagon Nut and Plain Washer for Steel Structures

This Standard was proposed by China Machinery Industry Federation.

This Standard shall be under the jurisdiction of the National Standardization Technical Committee on Fasteners.

The responsible drafting organization of this Standard. China Academy of Railway Sciences.

The contributory drafting organizations of this Standard. China Academy of Machinery Science and Technology, Shanghai High-Strength Bolt Factory, Metallurgical Corporation of China Central Research Institute of Building and Construction Co., Ltd., Daye Steel Factory.

1 Application Scope

This Standard specifies the types and dimensions, specifications and designation of high strength bolts with large hexagon head for steel structures and thread sizes M12 ~ M30.

This Standard applies to the friction-type high strength bolted connections of railroad and highway bridges, boiler steel structures, industrial factory buildings, high-rise civil buildings, hoisting machinery and other steel structures.

2 Normative References

The provisions in following documents become the provisions of this Standard through reference in this Standard. For dated references, the subsequent amendments (excluding corrigendum) or revisions do not apply to this Standard, however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the referenced document applies.

GB/T 2, Fasteners - Ends of Parts with External Thread (GB/T 2-2001, idt ISO 4753:1999)

GB/T 1231, Specifications of High Strength Bolts with Large Hexagon Head,

Hexagonal Nuts and Plain Washers for Steel Structures

GB/T 1237, Designation System for Fasteners (GB/T 1237-2000, eqv ISO 4753.1999)

GB/T 5276, Fasteners - Bolts, Screws, Studs and Nuts - Symbols and Descriptions of Dimensions (GB/T 5276-1985, eqv ISO 225.1983)

3 Dimensions

See Figure 1 and Table 1 ~ Table 3 for dimensions. Symbols and descriptions of dimensions are as specified in GB/T 5267. Dimensions and descriptions of thread ends are as specified in GB/T 2.

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