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

GB/T 70.1-2008

**Hexagon socket head cap screws
(English Translation)**

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Foreword

This part is one of the national standard "Hexagon socket screw" (including gauge) series. This series includes.

- GB/T 70.1-2008 Hexagon socket head cap screws;
- GB/T 70.2-2008 Hexagon socket button head screws;
- GB/T 70.3-2008 Hexagon socket countersunk head screws;
- GB/T 70.4 Hexagon socket button head screws with collar;
- GB/T 70.5-2008 Gauging of hexagon sockets;
- GB/T 77-2007 Hexagon socket set screws with flat point;
- GB/T 78-2007 hexagon socket set screws with cone point;
- GB/T 79-2007 hexagon socket set screws with dog point;
- GB/T 80-2007 Hexagon socket set screws with cup point;
- GB/T 5281-1985 Hexagon socket head shoulder screws

This part is part 1 of GB/T 70.

This part, through modification, adopts ISO 4762:2004 "Hexagon socket head cap screws" (English version), AND the main changes are as follows.

- In the references, USE Chinese standard to replace the international standard (Chapter 2);
- ISO 4762 does not specify packaging technical requirements, AND this part

specifies (SEE Table 2);

- ISO 4762 does not specify the simplified markings, AND this part provides the simplified marking in accordance with GB/T 1237 (SEE 5.2);
- ISO 4762 does not specify the specific performance level of the non-ferrous metal screw, AND this part specifies it (SEE Table 2).

This part replaces GB/T 70.1-2000 "Hexagon socket head cap screw".

As compared with GB/T 70.1-2000, this part has the following main changes.

Hexagon socket head cap screws

1 Scope

This part specifies the hexagon socket head cap screws of thread specifications for the M1.6 ~ M64, performance level of 8.8, 10.9, 12.9, A2-50, A2-70, A3-50, A3-70, A4-50, A4-70, A5-50, A5-70, CU2 and CU3, AND the product grade A.

As for the reference mass of screw, SEE Appendix A.

If requiring other technical requirements, they shall be selected from the current standards (GB/T 196, GB/T 3106, GB/T 3098.1, GB/T 3098.6, GB/T 3098.10 and GB/T 3103.1).

2 Normative references

The provisions in following documents become the provisions of this Standard through reference in this Standard. For the dated references, the subsequent amendments (excluding corrections) 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 70.5 Gauging of hexagon sockets (GB/T 70.5-2008, ISO 23429.2004, IDT)

GB/T 90.1 Fasteners - Acceptance inspection (GB/T 90.1-2002, idt ISO 3269.2000)

GB/T 90.2 Fasteners - Marking and packaging

GB/T 196 General purpose metric screw threads - Basic dimensions GB/T 196-2003, ISO 724.1993, ISO general purpose metric screw threads - Basic dimensions, MOD)

GB/T 197 General purpose metric screw threads - Tolerances (GB/T 197-2003, ISO 965-1.1998, ISO general purpose metric screw threads - Tolerances - Part 1. Principles and basic data, MOD)

GB/T 1237 Designation system for fasteners (GB/T 1237-2000, eqv ISO 8991.1986)

GB/T 3098.1 Mechanical properties of fasteners - Bolts, screws and studs (GB/T 3098.1-2000, idt ISO 898 1.1999)

GB/T 3098.6 Mechanical properties of fasteners - Stainless steel bolts, screws and studs (GB/T 3098.6-2000, idt ISO 3506 1.1997)

GB/T 3098.10 Mechanical properties of fasteners - Bolts, screws, studs and nuts made of non-ferrous metals (GB/T 3098.10-1993, eqv ISO 8869.1986)

GB/T 3103.1 Tolerances for fasteners - Bolts, screws and nuts (GB/T 3103.1-2002, ISO 4759-1.2000, IDT)

GB/T 3106 Fasteners - Bolts, screws and studs - Nominal lengths and thread lengths [GB/T 3106-1982 (confirmed in 1988), eqv ISO 888.1976]

GB/T 5267.1 Fasteners - Electroplated coatings (GB/T 5267.1-2002, ISO 4042.1999, IDT)

GB/T 5267.2 Fasteners - Non-electrolytically applied zinc flake coatings (GB/T 5267.2-2002, ISO 10683.2000, IDT)

GB/T 5276 Fasteners - Bolts, screws, studs and nuts - Symbols and descriptions of dimensions (GB/T 5276-1985, eqv ISO 225.1983)

GB/T 5779.1 Fasteners - Surface discontinuities - Bolts, screws and studs

for general requirements (GB/T 5779.1-2000, idt ISO 6157-1.1988)

GB/T 5779.3 Fasteners - Surface discontinuities - Bolts, screws and studs

for special requirements (GB/T 5779.3-2000, idt ISO 6157-3.1988)

GB/T 16938 Fasteners - General requirements for bolts screws studs and nuts (GB/T 16938-2008, ISO 8839.2005, IDT)

3 Dimensions

As for the type and dimension, SEE Figure 1 and Table 1.

The dimensional code and marking methods shall comply with GB/T 5276.

c The length of the incomplete thread is $u \leq 2P$.

d d_s applies to products that specify the value of l_s min.

e If the head top edge can be rounded or chamfered, it can be selected by the manufacturer.

f The bottom edge may be rounded or chamfered to d_a , BUT shall not have burrs.

Figure 1 (continued)

Appendix A

(Informative)

Mass of Hexagon socket head cap screws

Table A.1 provides the reference mass of the hexagon socket head cap screws of commodity specification.

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