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National Standard of the People's Republic of China

GB/T 20801.3-2006

压力管道规范 工业管道

第 3 部分：设计和计算

**Pressure piping code – Industrial piping – Part 3: Design and
calculation**

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Foreword

This standard is not equivalent to ISO 15649:2001 Petroleum and Natural Gas Industries – Piping. GB/T 20801 Pressure Piping Code – Industrial Piping consists of six parts:

- Part 1: General;
- Part 2: Materials;
- Part 3: Design and calculation;
- Part 4: Fabrication and assembly;
- Part 5: Inspection and testing;
- Part 6: Safeguarding

This is the third part of GB/T 20801.

In this part, Annex C and Annex F are normative, Annex A, Annex B, Annex D, Annex E and Annex G are informative.

This part was proposed by Subcommittee on Pressure Piping of China Standardization Committee on Boilers and Pressure Vessels (SAC/TC 262/SC 3).

This part is under the jurisdiction of China Standardization Committee on Boilers and Pressure Vessels (SAC/TC 262).

This part was drafted by National Technology Center for Design of Chemical Equipment, SINOPEC Shanghai Engineering Company Limited, East China University of Science and Technology, Bureau of Safety Supervision of Special Equipment of General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China, Economics & Development Research Institute of SINOPEC, Engineering Construction Management Department of SINOPEC, Liaoning Provincial Institute of Safety Science.

The main drafters of this part are Qin Shujing, Cai Nuanshu, Ding Bomin, Ying Daoyan, Xia Dekai, Gao Jixuan, Xiu Changzheng, Wang Zhenan, Ye Wenbang, Shou Binan, Wang Weiguo, Huang Zhenglin, Zhou Jiexiang, Tang Yongjin, Zhang Baojiang, Yu Puyi and Liu Jinshan.

Pressure piping code – Industrial piping – Part 3: Design and calculation

1 Scope

This part specifies the basic requirements for the design and calculation of the pressure pipings within the range stated in GB/T 20801. These basic requirements include the provisions for design conditions, design criteria, piping components and their pressure design and stress analysis.

2 Normative References

The following normative documents contain provisions which, through reference in this part of GB/T 20801, constitute provisions of this standard. For dated references, subsequent amendments (not including corrections) to, or revisions of, any of these publications do not apply. However parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies.

GB 150 Steel pressure vessels

GB/T 196-2003 General purpose metric screw threads--Basic dimensions (ISO 724:1993, MOD)

GB/T 197-2003 General purpose metric screw threads--Tolerances (ISO 965-1:1998, MOD)

GB/T 539-1995 Oil-resisting asbestos-rubber sheets

GB/T 1031-1995 Surface roughness--Parameters and their values (neq ISO 468:1982)

GB/T 1047-2005 Pipework components--Definition and selection of DN (nominal size) (ISO 6708:1995, MOD)

GB/T 1048-2005 Pipework components--Definition and selection of PN (nominal pressure) (ISO/CD 7268:1996, MOD)

GB/T 1220-1992 Stainless steel bars

GB/T 3077-1999 Alloy structure steels

GB/T 3098.1-2000 Mechanical properties of fasteners--Bolts, screws and studs (idt ISO 898-1:1999)

GB/T 3098.6-2000 Mechanical properties of corrosion-resistant stainless-steel fasteners--Part 1: Bolts, screws and studs (idt ISO 3506-1:1997)

GB/T 3287-2000 Malleable cast iron pipe fittings (eqv ISO 49:1994)

GB/T 3420-1982 Gray iron castings for pipe fittings

GB/T 3422-1982 Cast-iron pressure pipe made by continuous casting process

GB/T 3985-1995 Asbestos-rubber sheets

GB/T 5782-2000 Hexagon head bolts (eqv ISO 4014:1999)

GB/T 6170-2000 Hexagon nuts, style 1 (eqv ISO 4032:1999)

GB/T 6175-2000 Hexagon nuts, style 2 (eqv ISO 4033:1999)

GB/T 7233-1987 Methods for ultrasonic testing and for specifying quality levels of steel castings

GB/T 7306.1-2000 Pipe threads with 55 degree thread angle where pressure-tight joints are made on the threads--Part 1: Parallel internal and taper external threads (eqv ISO 7-1:1994)

GB/T 7306.2-2000 Pipe threads with 55 degree thread angle where pressure-tight joints are made



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