Steel Gate, Globe and Check Valves for Sizes DN 100 and Smaller for the Petroleum and Natural Gas Industries

ANSI/API Standard 602
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ISO 15761: 2002, Steel gate, globe and check valves for sizes DN 100 and smaller, for the petroleum and natural gas industries

API
American Petroleum Institute

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Asbestos is specified or referenced for certain components of the equipment described in some API standards. It has been of extreme usefulness in minimizing fire hazards associated with petroleum processing. It has also been a universal sealing material, compatible with most refining fluid services.

Certain serious adverse health effects are associated with asbestos, among them the serious and often fatal diseases of lung cancer, asbestosis, and mesothelioma (a cancer of the chest and abdominal linings). The degree of exposure to asbestos varies with the product and the work practices involved.

Consult the most recent edition of the Occupational Safety and Health Administration (OSHA), U.S. Department of Labor, Occupational Safety and Health Standard for Asbestos, Tremolite, Anthophyllite, and Actinolite, 29 *Code of Federal Regulations*, Section 1910.1001; the U.S. Environmental Protection Agency, National Emission Standard for Asbestos, 40 *Code of Federal Regulations*, Sections 61.140 through 61.156; and the U.S. Environmental Protection Agency (EPA) rule on labeling requirements and phased banning of asbestos products (Sections 763.160-179).

There are currently in use and under development a number of substitute materials to replace asbestos in certain applications. Manufacturers and users are encouraged to develop and use effective substitute materials that can meet the specifications for, and operating requirements of, the equipment to which they would apply.

SAFETY AND HEALTH INFORMATION WITH RESPECT TO PARTICULAR PRODUCTS OR MATERIALS CAN BE OBTAINED FROM THE EMPLOYER, THE MANUFACTURER OR SUPPLIER OF THAT PRODUCT OR MATERIAL, OR THE MATERIAL SAFETY DATA SHEET.

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ISO Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 15761 was prepared by Technical Committee ISO/TC 153, *Valves*, Subcommittee SC 1, *Design, manufacture, marking and testing*.

Annexes A, B and C form a normative part of this International Standard. Annexes D and E are for information only.

Introduction

The purpose of this International Standard is to establish basic requirements and practices for socket-welding, butt-welding, threaded and flanged end, steel gate, globe and check valves with reduced body seat openings, whose general construction parallels that specified by the American Petroleum Institute standard API 602 and the British Standard BS 5352.

The form of this International Standard corresponds to ISO 6002 and ISO 10434. However, it is not the purpose of this International Standard to replace ISO 6002, ISO 10434 or any other International Standard not identified with petroleum or natural gas industry applications.

Steel Gate, Globe and Check Valves for Sizes DN 100 and Smaller for the Petroleum and Natural Gas Industries

1 Scope

This International Standard specifies the requirements for a series of compact steel gate, globe and check valves for petroleum and natural gas industry applications.

It is applicable to valves of

— nominal sizes DN 8, 10, 15, 20, 25, 32, 40, 50, 65, 80 and 100,

— corresponding to nominal pipe sizes NPS ¼, ⅜, ½, ¾, 1, 1¼, 1½, 2, 2½, 3 and 4,

and to pressure designations of Class 150, Class 300, Class 600, Class 800 and Class 1500.

Class 800 is not a listed class designation, but is an intermediate class number widely used for socket-welding and threaded end compact valves.

It includes provisions for the following valve characteristics:

— outside screw with rising stems (OS & Y), in sizes $8 \leqslant \mathrm{DN} \leqslant 100$ and pressure designations $150 \leqslant \mathrm{Class} \leqslant 1500$ including Class 800;

— inside screw with rising stems (ISRS), in sizes $8 \leqslant \mathrm{DN} \leqslant 65$ and pressure designations of Class $\leqslant 800$;

— socket-welding or threaded ends, in sizes $8 \leqslant \mathrm{DN} \leqslant 65$ and pressure designations of Class 800 and Class 1500;

— flanged or butt-welding ends, in sizes $15 \leqslant \mathrm{DN} \leqslant 100$ and pressure designations of $150 \leqslant \mathrm{Class} \leqslant 1500$, excluding flanged end Class 800;

— bonnet joint construction — bolted, welded and threaded with seal weld for Class ≤ 1500 and union nut for Class ≤ 800;

— body seat openings;

— materials, as specified;

— testing and inspection.

This International Standard is applicable to valve end flanges in accordance with ASME B 16.5 and valve body ends having tapered pipe threads to ISO 7-1 or ASME B 1.20.1. It is applicable to extended body construction in sizes $15 \leqslant \mathrm{DN} \leqslant 50$ and pressure designations of Class 800 and Class 1500, and to bellows and bellows assembly construction as may be adaptable to gate or globe valves in sizes $8 \leqslant \mathrm{DN} \leqslant 50$. It covers bellows stem seal type testing requirements.