ASME B16.48-2005
(Revision of ASME B16.48-1997)

Line Blanks

AN AMERICAN NATIONAL STANDARD

The American Society of
Mechanical Engineers

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Three Park Avenue • New York, NY 10016

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The next edition of this Standard is scheduled for publication in 2010. There will be no addenda or written interpretations of the requirements of this Standard issued to this edition.

The American Society of Mechanical Engineers
Three Park Avenue, New York, NY 10016-5990

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FOREWORD

In July 1993, the ASME B16 Committee gave to its Subcommittee C the assignment to convert the API 590 Steel Line Blanks Standard into an ASME standard. The American Petroleum Institute no longer publishes the API 590 Standard.

These line blanks were designed in accordance with the rules of the ASME B31.3-2002 edition. Materials and relevant footnotes have been added following the ASME format.

Significant additions made to this 2005 edition include reference to the use of all materials listed in B16.5 Table 1-A plus Metric units. The added materials of construction include additions to classes of alloy steels, stainless steels, and nickel alloys. This edition has also been metricated over previous editions to include both U.S. Customary units (in parenthesis) and Metric units in the text, Metric units in dimensional tables in the body, and U.S. Customary units in dimensional tables in Nonmandatory Annex A.

All requests for interpretations or suggestions for revisions should be sent to the Secretary, B16 Committee, The American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990.

The B16 Committee operates under procedures accredited by the American National Standards Institute (ANSI). Following approval by the Standards Committee and ASME, this revision to the 1997 edition was approved as an American National Standard by ANSI on September 19, 2005 with the designation ASME B16.48-2005.

ASME B16 COMMITTEE
Standardization of Valves, Flanges, Fittings, and Gaskets

(The following is the roster of the Committee at the time of approval of this Standard.)

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LINE BLANKS

1 SCOPE

1.1 General

This Standard covers pressure-temperature ratings, materials, dimensions, tolerances, marking, and testing for operating line blanks in sizes NPS ½ through NPS 24 for installation between ASME B16.5 flanges in the 150, 300, 600, 900, 1500, and 2500 pressure classes.

1.2 Definitions

1.2.1 Figure-8 Blank. A figure-8 blank (also called a spectacle blank) is a pressure-retaining plate with one solid end and one open end connected with a web or tie bar (see Fig. 1).

1.2.2 Paddle Blank. A paddle blank is similar to the solid end of a figure-8 blank. It has a plain radial handle. It is generally used in conjunction with a paddle spacer in large sizes.

1.2.3 Paddle Spacer. A paddle spacer is similar to the open end of a figure-8 blank. It has a plain radial handle. It is generally used in conjunction with a paddle blank.

1.3 References

Codes, standards, and specifications, containing provisions to the extent referenced herein, constitute requirements of this Standard. These reference documents are listed in Nonmandatory Appendix B.

1.4 Quality Systems

Nonmandatory requirements relating to the product manufacturer's Quality System Program are described in Nonmandatory Appendix C.

1.5 Relevant Units

This Standard states values in both Metric and U.S. Customary units. These systems of units are to be regarded separately as standard. Within the text, the U.S. Customary units are shown in parenthesis or separate tables. Refer to Nonmandatory Appendix A. The values stated in each system are not exact equivalents; therefore, it is required that each system of units be used independently of the other. Combining values from the two systems constitutes nonconformance with the Standard. Nonmandatory Appendix A provides dimensions in U.S. Customary units.

1.6 Convention

For the purpose of determining conformance with this Standard, the convention for fixing significant digits where limits and maximum and minimum values are specified, shall be rounded as defined in ASTM Practice E 29. This requires that an observed or calculated value shall be rounded off to the nearest unit in the last right-hand digit used for expressing the limit. Decimal values and tolerances do not imply a particular method of measurement.

1.7 Size

NPS, followed by a dimensionless number, is the designation for nominal blank size. NPS is related to the reference nominal diameter, *DN*, as defined in ISO 6708. The relationship is typically as follows:

NPS	DN
½	15
¾	20
1	25
1¼	32
1½	40
2	50
2½	65
3	80
4	100

NOTE: For NPS ≥ 4, the related *DN* is *DN* = 25 (NPS).

1.8 Service Conditions

Criteria for selection of materials suitable for particular fluid service are not wihtin the scope of this Standard.

2 PRESSURE-TEMPERATURE RATINGS

2.1 Pressure Classes

Line blanks covered by this Standard are for the following pressure classes: 150, 300, 600, 900, 1500, and 2500 as listed in ASME B16.5.

2.2 Pressure-Temperature Ratings

2.2.1 Ratings. Ratings are the maximum allowable working gage pressure at the temperature shown in Tables 2 and F-2 of ASME B16.5 for the appropriate material and pressure class. For intermediate temperatures, linear interpolation between temperatures within a pressure class is permitted by ASME B16.5.

2.2.2 System Pressure Testing. Line blanks may be subjected to system tests at a pressure not to exceed 1.5 times the 38°C (100°F) rating rounded off to the next higher 1 bar (25 psi) increment. Testing at any higher pressure is the responsibility of the user, taking into