

Standard Specification for Large-Diameter Fabricated Carbon Steel Flanges¹

This standard is issued under the fixed designation F 1311; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification provides design and construction criteria for large diameter flanges sizes 14 to 144 NPS, for use in high temperature (1000°F), low pressure service (25 psig), such as internal combustion engine exhaust and forced ventilation systems.

1.2 Values stated in inch-pound units are to be regarded as the standard.

2. Referenced Documents

2.1 ASTM Standards:

A 36/A 36M Specification for Carbon Structural Steel²
F 1155 Practice for Selection and Application of Piping System Materials³

2.2 American Water Works Association:

AWWA C 207 Steel Pipe Flanges for Waterwork Service 4 in. through 144 in.⁴

2.3 Other Documents:

American Bureau of Shipping Rules for Building and Classing of Steel Vessels, ABS Grade A⁵

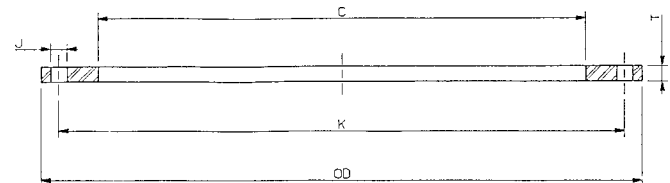
American Welding Society Publication, AWS D 1.1 Structural Welding Code⁶

Code of Federal Regulations Title 46, Subpart 56.30—10 (b) (5)⁷

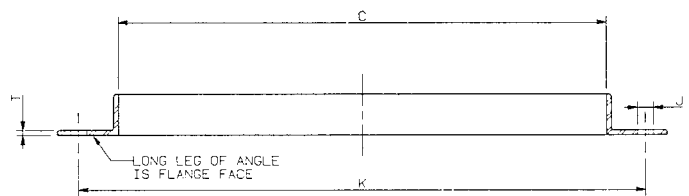
ASME Boiler and Pressure Vessel Code, Section IX, Welding Qualifications⁸

3. Classification

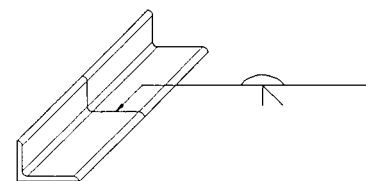
3.1 *Type I*—Plate flanges, for sizes 14 in. inside diameter up to and including 144 in. inside diameter (see Fig. 1).



TYPE I
SECTIONAL VIEW



TYPE II
SECTIONAL VIEW



WELD DETAIL
TYPE II

NOTE 1—1 in. = 25.4 mm

FIG. 1 Flanges, Types I and II

3.2 *Type II*—Rolled angle flanges, for sizes 14 in. up to and including 108 in. inside diameter (see Fig. 1).

4. Ordering Information

4.1 Flanges ordered under this specification shall include the following:

4.1.1 . ASTM designation, title, number, and date of this specification,

4.1.2 Type and material,

¹ This specification is under the jurisdiction of ASTM Committee F25 on Ships and Marine Technology and is the direct responsibility of Subcommittee F25.11 on Machinery and Piping Systems.

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² *Annual Book of ASTM Standards*, Vol 01.04.

³ *Annual Book of ASTM Standards*, Vol 01.07.

⁴ Available from American Water Works Association (AWWA), 1401 New York Ave., NW, Suite 640, Washington, DC 20005.

⁵ Available from American Bureau of Shipping (ABS), ABS Plaza, 16855 Northchase Dr., Houston, TX 77060.

⁶ Available from The American Welding Society (AWS), 550 NW LeJeune Rd., Miami, FL 33126.

⁷ Available from Standardization Documents, Order Desk, Building 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

⁸ Available from American Society of Mechanical Engineers (ASME), ASME International Headquarters, Three Park Ave., New York, NY 10016-5990.