



Standard Specification for Entrainment Separators for Use in Marine Piping Applications¹

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1. Scope

1.1 This specification covers the minimum requirements for the pressure-temperature rating, testing, and making of pressure-containing vessels for entrainment separators.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

1.3 The following safety hazards caveat pertains only to the test methods portion, Section 6, of this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ANSI Standards:²

B2.1 Pipe Threads (Except Dryseal)

B16.1 Cast Iron Pipe Flanges and Flanged Fittings

B16.3 Malleable Iron Threaded Fittings, Class 150 and 300

B16.4 Cast Iron Threaded Fittings, Class 125 and 250

B16.5 Steel Pipe Flanges and Flanged Fittings

B16.11 Forged Steel Fittings, Socket Welding and Threaded

B16.15 Cast Bronze Threaded Fittings, Class 150 and 300

B16.24 Bronze Flanges and Flanged Fittings, Class 150 and 300

B16.25 Buttwelding Ends

B16.31 Nonferrous Pipe Flanges

2.2 ASME Standards:³

SA278 Cast Gray Iron Pressure Vessels

SA395-60 Cast Ductile Iron

Boiler and Pressure Vessel Code, Section VIII

Boiler and Pressure Vessel Code, Section II

¹ This specification is under the jurisdiction of 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 Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036.

³ Available from American Society of Mechanical Engineers (ASME), ASME International Headquarters, Three Park Ave., New York, NY 10016-5990.

2.3 *Manufacturer's Standardization Society of the Valve and Fittings Industry Standard:*⁴

MSSSP-51 150 LB Corrosion Resistant Cast Flanges and Flanged Fittings

2.4 *Military Standard:*⁵

MIL-F-1183 Fittings Tube, Bronze, Cast (Silver Brazings)

3. Definitions of Terms Specific to This Standard

3.1 *entrainment separator*—a mechanical device inserted in a pipeline which by centrifugal force, baffles, or other means will separate a liquid from a gas (vapor).

3.2 *hydrostatic test*—the act of filling an entrainment separator vessel with water and applying internal pressure to all parts of the vessel.

3.3 *master gage*—the calibrated gage used to verify the accuracy of the test gage. This gage shall be recalibrated traceable to the National Bureau of Standards.

3.4 *pressure rating*—the maximum working pressure of an entrainment separator when operated at a specific temperature.

3.5 *proof test*—the act of filling an entrainment separator vessel with water and applying internal pressure to all parts of the vessel for the purpose of causing yielding of the vessel and bursting of the vessel.

3.6 *temperature ratings*—minimum and maximum temperatures at which the entrainment separator may be operated while at specific pressures.

3.7 *test gage*—the pressure gage that is used to check the internal pressure of the entrainment separator. The test gage shall be calibrated at least annually or at any time it is suspected to be in error by a calibrated master gage.

4. Materials and Manufacture

4.1 The pressure-temperature ratings established under this specification are based upon the manufacturer's usage of high quality materials produced under regular control of chemical and physical properties by a recognized process. The manufacturer shall be prepared to submit certification of compliance,

⁴ Available from Manufacturers Standardization Society of the Valve and Fittings Industry (MSS), 127 Park St., NE, Vienna, VA 22180-4602.

⁵ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.