Designation: F1000 – 13

Standard Practice for Piping System Drawing Symbols[1]

This standard is issued under the fixed designation F1000; 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 practice establishes piping system drawing symbols for marine use.

1.2 This set of standard symbols is intended for use on piping system diagrammatics and arrangements for ships.

1.3 Where graphical symbols are required for an item or equipment not covered by this practice, the form and character of the symbol will be left to the discretion of the activity concerned, provided that the symbol used does not duplicate any of those contained herein, and is clearly understandable, subject to one interpretation only, or explained by a suitable note on the drawing when necessary.

1.4 Since symbolic representation does not usually involve exact or scale layout or the actual run or leads of piping, the same symbol may be used for all projections of the system (plan, elevations, and sections).

1.5 Symbols for fluid power, heating, ventilation, and air conditioning (HVAC), and Navy damage control diagrams are not included in this practice.

2. Significance and Use

2.1 Figure 1 provides symbols for strainers, separators, and filters.

2.2 Figure 2 provides symbols for valves. Valves are categorized under the following headings: globe, angle, check, ball, butterfly, gate, relief, manifolds, control, noise control, and miscellaneous.

2.3 Figure 3 provides symbols for valve appendages such as actuators and locking devices. Symbols shown on Fig. 3 are to be combined with the appropriate symbol from Fig. 2.

2.4 Figure 4 provides symbols for piping system–related instrumentation. These symbols are categorized under the following headings: pressure, temperature, flow, level, switches, alarms, and miscellaneous.

2.5 Figure 5 provides symbols for fans, pumps, and turbines.

2.6 Figure 6 provides symbols for plumbing components.

2.7 Figure 7 provides symbols for pipe and pipe fittings.

2.8 Figure 8 provides symbols for noise control components and designations. These symbols are generally used for submarine design.

2.9 Figure 9 provides symbols for transitions. These symbols identify transitions such as pipe material or pipe schedule changes.

2.10 Figure 10 provides symbols for miscellaneous components. These are components which could not be classified under the above categories. Examples include heat exchangers, flasks, and sea chests.

2.11 Figure 11 provides symbols for grooved piping.

3. Keywords

3.1 drawing symbols; piping; piping drawings; piping symbols

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

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