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Standard Practice for Classifying Water Bodies for Spill Control Systems[1]

This standard is issued under the fixed designation F625/F625M; 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.

ε[1] NOTE—Units information was editorially corrected in October 2011.
ε[2] NOTE—Types in Table 1 were editorially corrected in November 2011.

1. Scope

1.1 This practice creates a system of categories that classify water bodies relating to the control of spills of oil and other substances that float on or into a body of water.

1.2 This practice does not address the compatibility of spill control equipment with spill products. It is the user's responsibility to ensure that any equipment selected is compatible with anticipated products.

1.3 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

1.4 *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. Terminology

2.1 *Definitions:*

2.1.1 Recommended units of measure are given for each of the following definitions.

2.1.2 *air temperature*—average or point temperature of the air measured at or near the ground or water surface, (°C).

2.1.3 *current*—average water velocity relative to a reference point, (m/s).

2.1.4 *debris*—any solid or semi-solid substance that could interfere with the operation of a spill control system.

2.1.5 *water depth*—mean vertical distance measured from the surface of the water to the top of the continuous solid surface below at mean lower low water, (m).

2.1.6 *water temperature*—average or point temperature of a water body as measured within the top 300 mm [12 in.], (°C).

2.1.7 *wave height*—(significant wave height) the average height, measured crest to trough, of the one-third highest waves, considering only short-period waves (that is, period less than 10 s), (m).

2.1.8 *wave period*—(significant wave period) the average period of the one-third highest waves, measured as the elapsed time between crests of succeeding waves, (s).

2.1.9 *wind*—the air velocity measured at a height 10 metres [33 ft] above the ground or water, (m/s).

3. Summary of Practice

3.1 General environmental conditions for spill control systems are grouped into four major types of water bodies (see Table 1). Additional factors that may affect spill control operations are listed in Section 5.

4. Significance and Use

4.1 This practice is to be used as a guide to classify water bodies for spill control systems. These classifications may be used in formulating standards for design, performance, evaluation, contingency and response planning, contingency and response plan evaluation, and standard practice for spill control systems.

4.2 Relatively few parameters of broad range have been used in Table 1 in order to enable the user to readily identify general conditions under which spill control systems can be used.

4.3 Satisfactory operation of any specific spill control systems may not extend over the full range of conditions identified by Table 1. Detailed discussion with systems suppliers is recommended.

4.4 Effective operation of oil spill control equipment depends on many factors, of which the prevailing environmental conditions are just a few. Factors such as, but not limited to, deployment techniques, level of training, personnel performance, and mechanical reliability can also affect equipment performance.

[1] This practice is under the jurisdiction of ASTM Committee F20 on Hazardous Substances and Oil Spill Responseand is the direct responsibility of Subcommittee F20.11 on Control.

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