



Designation: ~~D6301-03~~ Designation: D 6301 - 08

Standard Practice for ~~the Collection of Samples of Filterable and Nonfilterable Matter in Water~~ Collection of On-Line Composite Samples of Suspended Solids and Ionic Solids in Process Water¹

This standard is issued under the fixed designation D 6301; 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 is applicable for sampling condensed steam or water, such as boiler feedwater, for the collection of filterable suspended solids and (optional) nonfilterable matter/ionic solids using a 0.45- μm membrane filter (~~filterable matter~~)(suspended solids) and ion exchange media (~~nonfilterable matter~~)(ionic solids). As the major ~~filterable contaminants~~suspended component found in most boiler feedwaters is some form of corrosion product from the preboiler system, the device used for this practice is commonly called a corrosion product sampler.

1.2 *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 ASTM Standards:²

D 1066 Practice for Sampling Steam

D 1129 Terminology Relating to Water ~~D1192~~Guide for Equipment for Sampling Water and Steam in Closed Conduits

D 1193 Specification for Reagent Water

D 1971 Practices for Digestion of Water Samples for Determination of Metals by Flame Atomic Absorption, Graphite Furnace Atomic Absorption, Plasma Emission Spectroscopy, or Plasma Mass Spectrometry

D 2332 Practice for Analysis of Water-Formed Deposits by Wavelength-Dispersive X-Ray Fluorescence

D 2777 Practice for Determination of Precision and Bias of Applicable Test Methods of Committee D19 on Water

D 3370 Practices for Sampling Water from Closed Conduits

D 3864 Guide for Continual On-Line Monitoring Systems for Water Analysis

3. Terminology

3.1 *Definitions*—For definitions of terms used in this practice, refer to Terminology D 1129.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *corrosion product sampler, n*—a device used to collect integrated samples of filterable suspended solids and (as an option) nonfilterable matter/ionic solids. It consists of a flow totalizer that accurately measures the amount of sample passing through the device and a 0.45- μm pore size membrane filter. Adding a second filter for ion exchange resin impregnated membranes allows for collecting nonfilterable matter/ionic solids.

3.2.2 *filterable matter/ionic solids, n*—includes all matter that is removed by a 0.45- μm pore size filter. —includes all matter that will pass through a 0.45- μm pore size filter and may be captured on anion, or cation ion exchange membranes, or both.

3.2.3 *nonfilterable matter/suspended solids, n*—includes all matter that will pass through a 0.45- μm pore size filter and may be captured on anion, or cation ion exchange membranes, or both. —includes all matter that is removed by a 0.45- μm pore size filter.

4. Summary of Practice

4.1 A typical sampling apparatus, or corrosion product sampler, is used to obtain integrated, representative samples of filterable suspended solids and nonfilterable matter/ionic solids using a 0.45- μm membrane filter and ion exchange membranes. The sampling

¹ This practice is under the jurisdiction of ASTM Committee D19 on Water and is the direct responsibility of Subcommittee D19.03 on Sampling of Water and Water-Formed Deposits, Analysis of Water for Power Generation and Process Use, On-Line Water Analysis, and Surveillance of Water.

Current edition approved Aug. 10, 2003; Oct. 1, 2008. Published September 2003; October 2008. Originally approved in 1998. Last previous edition approved in 1998 as ~~D6301-98~~; D 6301 - 03.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

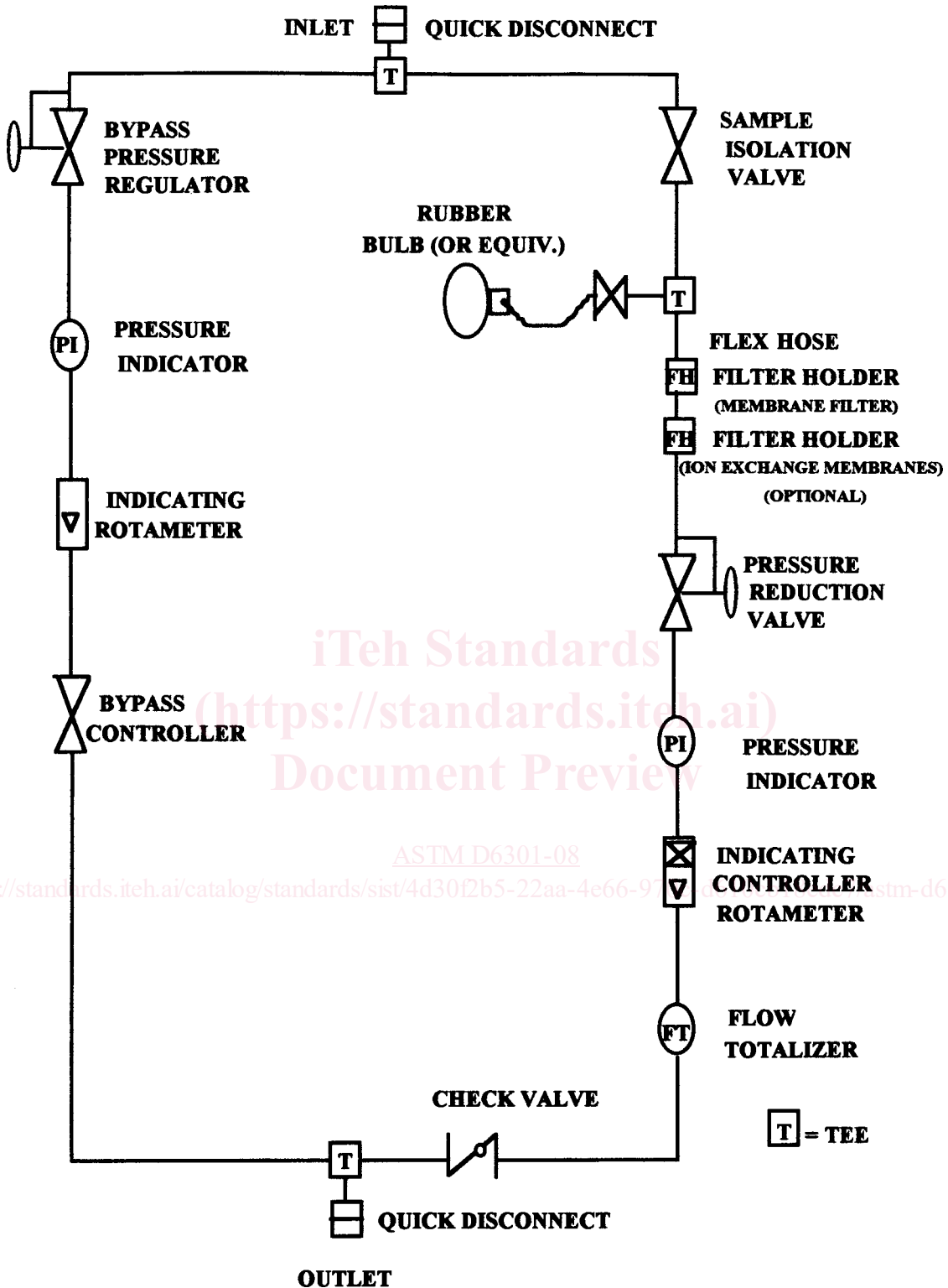


FIG. 1 Simplified Flow Diagram for Corrosion Product Sampler