



Standard Practice for Pressure Water Cleaning and Cutting¹

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1. Scope

1.1 This practice covers the personnel requirements, operator training, operating procedures, and recommended equipment performance/design for the proper operation of all types of pressure water-jet cleaning and cutting equipment as normally used by industries concerned with construction, maintenance, repair, cleaning, cutting, and demolition work.

1.2 The term high-pressure water jetting covers all water jetting, including the use of additives or abrasives at pressures above 100.5 psig (0.69 MPa).

1.3 Any person required to operate or maintain pressure water-jetting equipment shall have been trained and have demonstrated the ability and knowledge to do so in accordance with the original equipment manufacturer's instructions, specifications, and training programs.

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

1.5 *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.* See 3.1.3, 4.4, 5.7.2, 5.11, 5.14, 6.2, 6.7, and Sections 8 and 11 for specific hazards statements.

2. Referenced Documents

2.1 *ANSI/IEEE Standard:*²

957-1987 IEEE Guide for Cleaning Insulators

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *dump system, n*—the discharge orifice operator-controlled, manually operated device or system that reduces

the pressure to a level that yields a pressure flow at the nozzle that is considerably below the risk threshold.

3.1.2 *guard, n*—should be so designed, constructed and used that it will:

- (a) provide positive protection;
- (b) prevent all access to the danger zone during operations;
- (c) cause the operator no discomfort or inconvenience;
- (d) not interfere unnecessarily with production;
- (e) operate automatically or with minimum effort;
- (f) be suitable for the job and the machine;
- (g) preferably constitute a design, integral built-in feature;
- (h) provide for machine oiling, inspection, adjustment and repair;
- (i) withstand long use with minimum maintenance;
- (j) be durable, fire- and corrosion-resistant;
- (k) not constitute a hazard by themselves (without splinters, sharp corners, rough edges, or other sources of accidents); and
- (l) protect against foreseeable use and foreseeable misuse of operational contingencies, not merely against normally expected hazards as determined from a job safety analysis

3.1.3 *high-pressure water cleaning, v*—the use of high-pressure water, with or without the addition of other liquids or solid particles, to remove unwanted matter from various surfaces, where the pressure of the liquid jet exceeds 100.5 psig (0.69 MPa) at the orifice. (**Warning**—The limit of 100.5 psig (0.69 MPa) does not mean that pressures below 100.5 psig (0.69 MPa) cannot cause injury or require any less attention to the principles of this practice. Adequate precautions, similar to those of this practice, are required at all pressures.)

3.1.4 *high-pressure water cutting, v*—the use of high-pressure water, with or without the addition of other liquids or solid particles, to penetrate into the surface of a material for the purpose of cutting that material, where the pressure of the liquid jet exceeds 100.5 psig (0.69 MPa) at the orifice.

3.1.5 *hose assembly, n*—a hose with safety coupling each indicating pressure capacities and attached in accordance with manufacturer's specifications.

3.1.6 *lance, n*—a rigid metal tube used to extend the nozzle from the end of the hose.

3.1.7 *lancing, v*—an application whereby a lance and nozzle combination is inserted into, and retracted from, the interior of a pipe or tubular product.

¹ This practice is under the jurisdiction of ASTM Committee E34 on Occupational Health and Safety and is the direct responsibility of Subcommittee E34.10 on Industrial Safety.

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² Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.