



Designation: E 1211 – 9702

Standard Practice for Leak Detection and Location Using Surface-Mounted Acoustic Emission Sensors¹

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1. Scope

1.1 This practice describes a passive method for detecting and locating the steady state source of gas and liquid leaking out of a pressurized system. The method employs surface-mounted acoustic emission sensors (for noncontact sensors see Test Method E 1002), or sensors attached to the system via acoustic waveguides (for additional information, see Terminology E 1316), and may be used for continuous inservice monitoring and hydrotest monitoring of piping and pressure vessel systems. High sensitivities may be achieved, although the values obtainable depend on sensor spacing, background noise level, system pressure, and type of leak. This practice is not intended to provide a quantitative measure of leak rates.

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

1.3 *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:

¹ This practice is under the jurisdiction of ASTM Committee E-7 E07 on Nondestructive Testing and is the direct responsibility of Subcommittee E07.04 on Acoustic Emission Method.

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