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Test Method 28R for Certification and Auditing of Wood Heaters

1.0 Scope and Application

1.1 This test method applies to certification and auditing of wood-fired room heaters and fireplace inserts.

1.2 The test method covers the fueling and operating protocol for measuring particulate emissions, as well as determining burn rates, heat output and efficiency.

1.3 Particulate emissions are measured by the dilution tunnel method as specified in ASTM E2515-11 *Standard Test Method for Determination of Particulate Matter Emissions Collected in a Dilution Tunnel*. (IBR, see § 60.17) Upon request, four-inch filters may be used. Upon request, Teflon-coated glass fiber filters may be used.

2.0 Procedures

2.1 This method incorporates the provisions of ASTM E2780-10 (IBR, see § 60.17) except as follows:

2.1.1 The burn rate categories, low burn rate requirement, and weightings in Method 28 shall be used.

2.1.2 The startup procedures shall be the same as in Method 28.

2.1.3 Manufacturers shall not specify a smaller volume of the firebox for testing than the full usable firebox.

2.1.4 Prior to testing, the heater must be operated for a minimum of 50 hours using a medium burn rate. The conditioning may be at the manufacturer's facility prior to the certification test. If the conditioning is at the certification test laboratory, the pre-burn for the first test can be included as part of the conditioning requirement.

2.2 Manufacturers may use ASTM E871-82 (reapproved 2013) (IBR, see § 60.17) as an alternative to the procedures in Method 5H or Method 28 for determining total weight basis moisture in the analysis sample of particulate wood fuel.