e_1 = apparentc0 0 totaltc0 0 emittancetc0 0 oftc0 0 thetc0 0 surfacetc0 0 1,tc0 0 dimensionless1
e

not maintained during service, then the long-term value of the material is diminished.

5.1.2 This test method provides a means for comparative periodic testing of low emittance surfaces in the field. In this

7.3 *Specimen Collection*:

10.3 *Precision*—The numerical values are in dimensionless emittance units. Repeatability limit and reproducibility limit

emittance would appear to be around 0.813—a difference from the normal emittance of only 2 %. This nearly constant

$$a + r = 1 \tag{X1.3}$$

so that only the energy absorbed by the specimen and the energy reflected by the specimen need to be considered for a full accounting of the energy emitted by the detector. Furthermore, Kirchoff's Radiation Law states that, at thermal equilibrium:

$$a_\lambda = e_\lambda \tag{X1.4}$$

so that the fraction of the radiant energy absorbed by the

REFERENCES

(**1**) Kollie, T. G., Weaver, F. J., and McElroy, D. L., “Evaluation of a Commercial, Portable, Ambient-Temperature Emissometer,” Rev. Sci. Instrum., Vol 61, 1990, pp. 1509–1517.

(**2**) Siegel, R., and Howell, J. R., *Thermal Radiation Heat Transfer*, 2nd Ed., McGraw-Hill, New York, NY, 1981.

(**39297 Tm 0 0 0 1 k 0 G [(()] TJ ET Q q BT /F10 1.00 Tf /GS2 gs 88 TJ ET Q q BT 4950 Tm nonymousll, J. R.,**