

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
MATERIALS CONTROL, SOILS AND TESTING DIVISION

MATERIALS PROCEDURE

MEASUREMENT STANDARDS
MODIFICATIONS - AASHTO T 22 AND T 119

1.0 PURPOSE

- 1.1 To provide a standard for certain measurements required in the testing of portland cement concrete under the provisions of AASHTO T 22 and AASHTO T 119.

2.0 BACKGROUND

- 2.1 Section 601.4 of Standard Specifications designates AASHTO T 22 as the standard for conducting compressive strength tests for cylindrical concrete specimens and AASHTO T 119 for the slump of portland cement concrete.
- 2.2 With the change to the metric (SI) system of measurement, the above mentioned AASHTO procedures need some modification in regard to certain measurements. Both designations have values stated in inch-pound units which are regarded as the standard. Soft conversions stated for certain measurement are not realistic and provide awkward values.

3.0 PROCEDURE

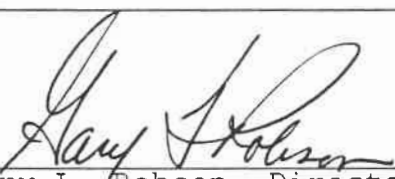
3.1 AASHTO T 22

- 3.1.1 The diameter used for calculating the cross sectional area of a test specimen shall be determined to the nearest 1 mm. The cross sectional area of a specimen shall be determined to the nearest 1 mm² and the compressive strength calculated to the nearest 0.1 MPa.
- 3.1.2 The equation for calculating the compressive strength of a specimen with the result in megapascals is:

$$\text{MPa} = \frac{N \text{ (force in newtons)}}{A \text{ (cross sec area in mm}^2\text{)}}$$

3.2 AASHTO T 119

- 3.2.1 Optimum consistencies given in Table 601.3.2 of specifications and field tolerances are given in values that are multiples of 5 mm. Therefore, slump measurements when conducting a slump test shall be recorded to the nearest 5 mm.
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Gary L. Robson, Director
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