Letter to the Editor

Dear Sir:

Marpet [*1*] has discussed a comparison of measurements made using several walkway-safety tribometers. I have several comments.

The subject article lists "coefficient of friction" as a keyword referring to the measurements made by the various tribometers evaluated. These instruments actually measure either the "static coefficient of friction (SCOF)" or the "dynamic coefficient of friction (DCOF)." These terms should be included in the keywords list.

The description of the Horizontal-Pull Slipmeter incorrectly states that the 6-lb. weight on the sensors is 10 lb; the description of the Technical Products Model 80 incorrectly states that the sensor pads of $^{7}/_{16}$-in. diameter are of $^{1}/_{2}$-in. diameter.

The description of the Brungraber Mark II inclined-strut tribometer implies that the *static* coefficient of friction is recorded; this is incorrect, since the sensor free-falls to the surface and is therefore moving relative to the test surface and the *dynamic* coefficient of friction is actually measured. The Brungraber Mark I articulated-strut tribometer is a static tester. The distinction between the two measurements is most apparent when one compares the Mark I (Slip-Test PAST) value of 0.61 with the Mark II (Slip-Test PIST) value of 0.13, both for wet Neolite® on smooth ceramic tile (NWL) [*1*, Fig. 1]. The Mark II value is within the range of the values found for the Sigler Pendulum Dynamic Tester, 0.09, and the Tortus Dynamic Friction Tester, 0.37, each of which measures the DCOF.

The force plate/tribometer comparison data [*1*, Fig. 7] show the best correlation was obtained with the ASTM C 1028 tester used for testing ceramic tiles. Although the Chatillon gage specified in the test method is commercially available, the Neolite holder and test weight must be obtained and fabricated by the user. The next best correlation, for the Technical Products Model 80, is for a tribometer that is commercially available in complete form and can be used for testing both walkways and footwear [*2*].*

References

[*1*] Marpet, M., "Comparison of Walkway-Safety Tribometers," *Journal of Testing and Evaluation*, Vol. 24, No. 4, 1996, pp. 245–254.

[*2*] Meserlian, D. C., "Effect of Walking Cadence on Static Coefficient of Friction Required by the Elderly," *Professional Safety*, November 1995, pp. 24–29.

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*Meserlian, D. C., "Proposed International Standard Specification/Test Method for Slip Resistance of Walkway Surfaces (and Footwear) in the Field and Laboratory as Measured by a Drag Type Friction Tester," Letter to the Editor of *Journal of Forensic Sciences*, Vol. 41, No. 6, 1996, pp. 1089–1090.

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