

LETTERS

Comment on "Method of Test for Determining the Splitting Tensile Strength of Rocks"

REFERENCE: Peng, S. S., "Method of Test for Determining the Splitting Tensile Strength of Rocks," *Geotechnical Testing Journal*, GTJODJ, Vol. 1, No. 1, March 1978, pp. 55-56.

To the editor:

With reference to the abovementioned suggested test method, I wish to point out that an error has been discovered in Section 5.

The formula for the "splitting tensile strength" should actually be:

$$\sigma_t = 2P/\pi DT$$

or

$$\sigma_t = 0.636P/DT$$

The reference for the first formula is Colback, P.S.B., "An Analysis of Brittle Fracture Initiation and Propagation in the Brazilian Tests," *Proceedings of the First International Congress on Rock Mechanics*, Vol. 1, Lisbon, 1966, pp. 385-391; that for the second is International Society for Rock Mechanics, Commission on Standardization of Laboratory and Field Tests, "Suggested Methods for Determining Tensile Strength of Rock Materials," *International Journal of Rock Mechanics and Mineral Science and Geomechanical Abstracts* Vol. 15, 1978, pp. 99-103.

Also, the splitting tensile strength obtained when P in N and D and T in mm are substituted in the first formula given above is in MPa and not kPa.

Yours faithfully,

U. W. Vogler
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Pretoria, South Africa

Author's Response

To the editor:

With regard to Dr. U. W. Vogler's comments on the subject paper, I am sorry to say that Dr. Vogler is right. I therefore

suggest to publish his letter and my concurrence with his comments.

Sincerely,

Syd S. Peng
Chairman, Mining Engineering Program
West Virginia University
Morgantown, W. Va.

Soil Bearing Footing Area Tests

To the editor:

Geotechnical engineers are routinely called on to examine excavations in existing natural ground or engineered fills and to verify or approve the founding materials for a preselected design bearing capacity. This determination may include physical testing, but most frequently the decision is based on visual inspection and some "heel stomping." Quick, reliable field tests that provide quantitative information for documentation and guidance in conjunction with good engineering judgement are not generally available.

Consulting engineers and commercial testing laboratories engaged in construction monitoring may possibly have some form of portable penetration or shear testing device developed for in-house use, that will serve their documentation needs. We would greatly appreciate hearing about these or any standard or generally accepted reliable field test procedures for use by personnel in the routine inspection and approval of soil bearing footing areas.

If there is no consensus on desirable test procedures and equipment, than a questionnaire could be initiated by the *Geotechnical Testing Journal* or an appropriate D-18 subcommittee and the results made available to the profession.

Very truly yours,

Howard Needles Tammen and
Bergendoff
Gay D. Jones, Jr., P.E.
Chief, Geotechnical Engineering Department
Kansas City, Mo.

Editor's note: We are interested in receiving responses from our readers to the above letter. Such responses may be in the form of a letter to the editor or, if appropriate, a technical note or paper. Responses should be sent to *Geotechnical Testing Journal*, ASTM, 1916 Race St., Philadelphia, Pa. 19103.