

Recent ASTM Publications

1974 ASTM Standards in Building Codes, 12th Edition, \$28.50, 03-001274-00

**1974 Manual for Rating Motor, Diesel, and Aviation Fuels, \$17.75,
03-402274-12**

**Interlaboratory Cooperative Study of the Precision of the Determination of the
Average Velocity in a Duct Using ASTM Method D 3154, DS 55-S7,
\$5.00, 055070-17**

**Interlaboratory Cooperative Study of the Precision and Accuracy of the Deter-
mination of the Relative Density of Black Smoke Using ASTM Method
D 3211, DS 55-S10, \$5.00, 05-055010-17**

Instrumented Impact Testing, STP 563, \$21.75, 04-563000-23

Some Fundamentals of Analytical Chemistry, STP 564, \$7.75, 04-564000-39

Handbook of Fatigue Testing, STP 566, \$17.25, 04-566000-30

Errata

Tsvetkov, O. B., "Experimental Determinations of the Thermal Conductivity of Fluids by Coaxial-Cylinder Apparatus," Vol. 2, No. 4, July 1974, p. 227. Equation 3 was incorrectly printed as

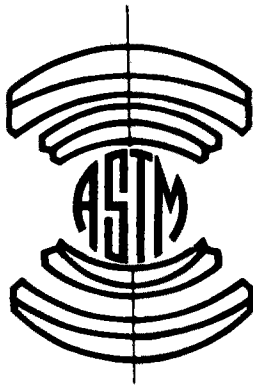
$$\lambda = \frac{\ln (r_2/r_1)}{2\pi l} \cdot C \cdot \overline{m}$$

and should appear as

$$\lambda = \frac{\ln (r_2/r_1)}{2\pi l} \cdot C \cdot m$$

Also, in the second column, first paragraph, Ref 4 should be Ref 14.

PLAN NOW TO ENTER



ASTM 1975 PHOTOGRAPHIC EXHIBIT

22-27 June 1975
Montreal, Canada

CLASSES:

1. **GENERAL**—photographs of evaluation and measurement instruments, processing techniques, testing, component assemblies, and related items.
2. **PHOTOMICROGRAPHY AND ELECTRON MICROGRAPHY**—examples of the application of excellent techniques as well as structural features of all materials—metals, nonmetals, organic or inorganic.
3. **EMISSION MICROGRAPHY**—to include examples of ion, electron, and thermal emission techniques.
4. **SCANNING ELECTRON MICROGRAPHS**—to cover examples of all techniques using the new scanning microscopes.
5. **TECHNIQUE**—examples of unique, unusual, or original techniques of value to the field of testing and evaluation.

DEADLINE FOR ENTRIES—20 MAY 1975
Please write to ASTM Headquarters for your entry forms

If you are not planning to enter the photographic exhibit please pass this information on to someone who may be interested in submitting an entry.

ASTM 1975 PHOTOGRAPHIC EXHIBIT
1916 Race St., Philadelphia, Pa. 19103

MOVING?

To insure uninterrupted service on your JTE subscription, please notify us at least six weeks before you move.

1. Attach your address label from a recent issue in the space provided opposite. (If label is not available, be sure to give your old address, including Zip Code) .

2. Print your name, membership no., and address below. (Be sure to include Zip Code)

3. Mail entire notice to: **ASTM Headquarters**
Circulation Dept.
1916 Race St.
Phila., Pa. 19103

Name _____ Membership No. _____

New Address _____

City _____ State _____ Zip Code _____

Please print or type the above information

Cover Story

Stacking Faults in Cobalt Alloy, photographed by R. R. Russell, won Honorable Mention in Electron Transmission Photomicrography at the 1974 ASTM Photographic Exhibit. The cobalt-rich matrix of directionally solidified cobalt-tantalum carbide eutectic is heavily faulted after being thermally cycled 500 times to 2000°C. An interface is shown between the normal cobalt-rich matrix phase (A) and a matrix composition (B) containing dissolution products from the tantalum carbide fiber phase (C). The fiber deteriorated during thermal cycling. The matrix (B), containing dissolved tantalum and carbon, is more heavily faulted because of its different composition. Some faults, however, pass through (B) into (A) without deflection, indicating no appreciable change in crystal orientation across the A-B interface. Original magnification $\times 150,000$, electrochemically thinned. Mr. Russell is employed by General Electric Corporate Research and Development, Schenectady, N.Y.