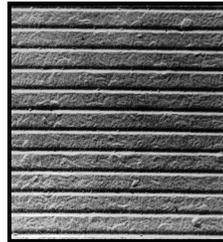


## MAGNIFICATION CALIBRATION DIFFRACTION GRATING REPLICA PRODUCT NO. 606

This specimen is a replica of a 2,160 lines/mm parallel line diffraction grating. When imaging the specimen, it should be kept in mind that the line spacing is 0.463 $\mu$ m and the pattern will not be visible until the imaging system is set to resolve that level of detail - around x2,500. At this magnification, the lines of the pattern will be just over 1mm apart.



To calculate the electron microscope magnification using the pattern of the diffraction grating replica:

Take the measurement, in millimeters, between as large a number of lines of the replica pattern as possible. Apply the following formula:

$$\text{Magnification} = A \times 2160/B$$

**A** is the distance, in mm, between the first and last line measured.

**B** is the number of spaces between the first and last line measured.

(Alternatively, use the PELCO<sup>®</sup> Magnification Calibration Calculator, Prod. No. 252.)

### Care of Grating Replica Specimen

When not in use the replica should be kept in the vial. The replica surface may be damaged if touched. Never try to clean it. Care must be taken to avoid bending the grid as distortion may cause the replica film to fracture. When viewing in the TEM begin at low magnification with a low illumination level. Increase the illumination a little beyond comfortable viewing level then reduce it. This helps to stabilize the specimen. Before moving the specimen to view another grid square, reduce the illumination and magnification to starting levels again.

606 TN V1 092002

**TED PELLA, INC.**  
*Tools for Science and Industry*

P.O. Box 492477, Redding, CA 96049-2477, U.S.A.  
Telephone: 530-243-2200; 800-237-3526 (U.S.A. or Canada) • FAX: 530-243-3761  
Email: sales@tedpella.com • Web Site: <http://www.tedpella.com>

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