



# The Macrogram

Hartford Chapter of the ASM International  
Build on our Strengths - Leverage our Diversity - Network to Succeed

## MONTHLY MEETING – TOPIC

March 18, 2008

### Awards and Recognition Night\*

**Topic: Metallurgical Failures in History and Failures in Inspection Procedures**

**Speaker:** Arthur McEvily  
Professor Emeritus  
University of Connecticut

**Directions: Cugino's**, 1076 Main Street, Newington, CT 06111, Ph: (860) 665-0881  
Main Street is Route 176. **Cugino's** is south of Route 175 (Cedar Street). Use alleyway to parking area in rear.

**Agenda:** Cocktails: 5:30-6:30 PM  
Dinner: 6:30-7:30 PM  
Program: 7:30-8:30 PM  
**Program Charges:** Regular Members - \$28.00  
Retirees - \$15.00  
Full Time Students - \$15.00

**Technical Chairperson:** Arnie Grot  
**Reservations:** Call Shirley at Dynamic Metals (860) 583-3336 by noon March 13th. **Thanks!**

### Bio:



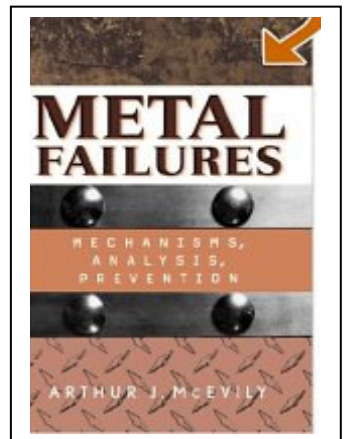
Dr. McEvily was honored in 2006 by ASM/TMS for his contributions to theoretical and experimental aspects of fatigue and fracture over the past 50 years. He received his Ph.D. from Columbia University and began his career at NASA, later working for the Ford Motor Co. before joining UConn. He has been a visiting professor/researcher in India, Japan, Great Britain, the USSR, Germany and China. He is a fellow of ASM, ASME and the International Fatigue Congress.

### Abstract:



Despite the great strides forward that have been made in technology, failures continue to occur, often accompanied by great human and economic loss.

The most frequently used inspection methods are, for the most part, effective and reliable. There have been instances, however, where the designated inspections were not able to detect cracks, and as a result catastrophic failures occurred. In the aviation field we are fortunate the accident reports are made public, so engineers can learn from the mistakes and take corrective actions to prevent recurrences. A number of cases where faulty inspection procedures resulted in accidents will be discussed. These cases are based on published reports and personal experiences and will deal with the crashes which involved a 707 freighter (visual examination), a DC-10 (dye penetrant), a small passenger plane (magnetic particle), a 737 (eddy currents), and a 747 freighter (ultrasonics).



\* **Service Award**  
*Recipients will receive a gift based on years of membership. Awards will be presented at dinner.*

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