



EDWARD W. HOLMES, P.E.
PRINCIPAL EMERITUS & CO-FOUNDER

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Mr. Holmes is a Principal Emeritus and Co-Founder of Engineering Systems Inc. (ESI). For over 40 years, Mr. Holmes has demonstrated expertise in engineering management, process development, quality control, product development, failure analysis, accident reconstruction, materials research, and consulting engineering. He specializes in material failure analysis, aviation accident investigation and component failure analysis, engine tear-down analysis, turbine and piston power plants, industrial safety, consumer products, and fire cause and origin in structures, automobiles, and aircraft.

In 2012, Mr. Holmes was awarded the highest honor of Distinguished Life Member of Alpha Sigma Mu, The International Professional Honor Society for Materials Science and Engineering.

Mr. Holmes is an Instrument-rated private pilot.

Areas of Specialization

- Material failure analysis
- Aircraft and automotive accident reconstruction and failure analysis
- Industrial safety
- Fire cause and origin

Education

- M.S., Metallurgical Engineering, University of Wisconsin, 1965
- B.S., Metallurgical Engineering, University of Wisconsin, 1962
- Additional Graduate Work, University of Illinois, Chicago

Licensed Professional Engineer (P.E.)

- State of Illinois License No. 062-056059
- State of Wisconsin.... License No. 26057

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Professional Affiliations/Honors

Alpha Sigma Mu (Int'l Professional Honor Society for Materials Science and Engineering)

Distinguished Life Member

ASM International (American Society for Metals)

National Membership Committee

Past Chairman of Chicago – Western Chapter Chairman

Treasurer

Secretary

The Metallurgical Society of the AIME (TMS-AIME)

Member

ISASI (International Society of Air Safety Investigators)

Member

Director – Great Lakes Regional Chapter

NFPA (National Fire Protection Association)

Member

Illinois Advisory Committee on Arson Prevention

Member, Board of Directors

Certified Products Safety Manager (CPSM)

International Association of Arson Investigators, Inc. (IAAI)

Positions Held

Engineering Systems Inc., Aurora, Illinois

Principal Emeritus, Co-Founder, 2009 – Present

Vice President, Principal, Treasurer, Co-Founder, 1987 – 2009

Packer Engineering Associates, Inc., Naperville, Illinois

Director, Metallurgical Engineering, 1984 – 1987

Director, Safety Engineering, 1978 – 1984

Continental Can Company, Chicago, Illinois

Manager, Techno-Economic, 1978

Manager, Metals Development & Surface Phenomena, 1975 – 1978

Project Manager, 1973 – 1975

Senior Metallurgist, 1968 – 1973

Exxon Research & Engineering, Florham Park, New Jersey

Metallurgical Engineer, 1965 – 1968

Beloit Corporation, Beloit, Wisconsin

Foundry Quality Control Metallurgist, 1962 - 1964

Publications/Presentations

“Landing Gear Failure Analysis,” **E. W. Holmes** and F. E. Schmidt, Advanced Materials & Processes, An ASM International Publication, May 2006 – Vol. 164, No. 5

“Stress Intensities for a Thumbnail-Shaped Surface Crack in a Solid Cylinder Using ABAQUS/Standard,” J.A. Wilkinson, M.T. Kenner, and **E.W. Holmes**, 2004 ABAQUS Users’ Conference

“Metals and Metal Oxides: How They Can Be Used in Fire Investigation,” Seminar on Fire Investigation and Product Liability Litigation, College of Engineering, University of Wisconsin-Madison, June 13, 2003

“One Set of Facts, Two Different Expert Opinions,” ISASI – Great Lakes Chapter, June 26, 2000

“Fractography of Glass Fractures,” ASM International Materials Week, Chicago, October 1994

“In Service Failure of SAE Grade 8.1 Wheel Studs,” R.J. Shipley, P.C. Bouldin, and **E.W. Holmes**, ASM Handbook of Case Histories in Failure Analysis, Volume 2, 1993

“Metallurgy and Fires,” IACAP Advanced Origin and Cause Seminar, November 3, 1993

“Structures and Metallurgy Techniques and Procedures for Structural and Material Aircraft Failure Investigation,” C. R. Morin, R. P. O’Shea, **E. W. Holmes** and R. E. Schaeffer, Course Handbook, U. S. Department of Transportation, Transportation Safety Institute, Aviation Safety Division, Oklahoma City, Oklahoma, May 1991

“Failure Analysis of Fasteners,” ASM video course, 1988

“Tutorial – Failure Analysis,” Mayfield Grossmann Seminar, ASM, Chicago – Western Chapter, May 13, 1987

“Failure Analysis – Case Histories,” ASM, Valparaiso, February 19, 1987

“Analysis of Causative Factors of the MEA Absorber Vessel Rupture, Chicago, Illinois, July 23, 1984,” Symposium on ASME Codes and Recent Advances in PVP and Valve Technology, Chicago, July 1986

“Analysis of Causative Factors of the MEA Absorber Vessel Rupture, Chicago, Illinois, July 23, 1984,”

C.R. Morin, **E. W. Holmes**, M. J. Grycko, S. L. Meiley, D.F. Bowers, K. F. Packer and Z. B.

Flanders, ASME Codes & Recent Advances in PVP & Valve Technology, PVP Vol. 109

“Product Liability,” ASM, Rockford, Summer 1985

“A Users Look at Continuously Cast Steel,” ASM, Chicago – Western Chapter, October 1977