

### Alan Stone | Principal



#### EDUCATION

- Illinois State University
  - Bachelor of Arts, Liberal Arts, 1977
- University of Illinois at Urbana-Champaign
  - Bachelor of Science, Metallurgical Engineering, 1978
  - Master of Business Administration, 1980

#### PRACTICE AREAS

- Failure Analysis
- Ferrous Heat Treating
- Corrosion Assessment
- Microscopy
- Laboratory Evaluations
- Litigation Consulting
- Construction Materials Assessment
- Research and Product Evaluation

#### CONTACT

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#### EXPERIENCE

Alan Stone is a recognized metallurgical expert in the failure analysis of metal components, metallography, scanning electron microscopy, and ferrous metallurgy heat treatment. He has performed thousands of failure analyses and corrosion investigations. Mr. Stone's areas of expertise include optical microscopy of metals and scanning electron microscopy/EDS micro analysis. His experience includes analyzing components from structural, process, aviation, defense, marine, automotive, rail, and manufacturing industries. His projects include evaluations of structural metals, castings, forgings, springs, gears, tools, valves, nozzles, electrical and electronic components, machine parts, transmission and brake components, and piping/plumbing. In addition Mr. Stone's work has involved archeological, antique, and art objects, including specimens of historic and national significance such as assisting with locating the remains of the first T. Rex (dynamosaurus).

Mr. Stone has contributed to the Spectrum Library Identification and Classification Explorer (SLICE) energy dispersive spectrometer (EDS) database, which was originally developed for the Federal Bureau of Investigation. He has also hosted ASM Materials Camps for ASM International (formerly known as the American Society for Metals); has taught heat-treating workshops for ASM; has published photomicrographs in numerous trade journals, reference books, and technical websites; and has published in the *ASM Case Histories of Failure Analysis Handbooks, Volumes 1 and 2*.

Mr. Stone was formerly the president and director of Aston Metallurgical Services Co. Inc., an independent metallurgical testing laboratory. Prior to that, he was the division manager with the United State Testing Company Technical Services and plant metallurgist for Metal Treating & Engineering.

#### REPRESENTATIVE PROJECTS

##### Failure Analysis

- Parking Structure - Milwaukee, WI: Failure analysis and metallurgical evaluation of welded connector plates
- Parking Structure - California, PA: Failure analysis and metallurgical evaluation of welded connector plates
- Water Main Pipe - Chicago, IL: Failure analysis and metallurgical evaluations of catastrophic failure
- Structural Piping - Various Chemical Plants: Failure analysis/corrosion investigations\*
- Steam Line - Austin, TX: Metallurgical failure analysis of various components involved in a catastrophic steam line failure
- Roof Bolt/Stud Failures - Miami, FL: Failure analysis and metallurgical evaluations of catastrophic failure

##### Corrosion Assessment

- Chiller Tubes - Dubai: Corrosion evaluations of copper tubing\*
- A/C Piping - DeKalb IL: Corrosion evaluations of stainless steel piping\*
- Copper Water Pipe - Killington VT: Corrosion evaluations of pin holes in copper piping\*
- Aircraft Wiring Red Plague Attack: Corrosion evaluations of silver plated copper wiring\*

##### Laboratory Evaluations

- Missile Component: Metallurgical evaluations of material defects\*

\* Indicates with previous firms

#### PROFESSIONAL AFFILIATIONS

- American Association for the Advancement of Science
- American Chemical Society
- American Society for Materials
- Microbeam Analysis Society
- Midwest Society of Electron Microscopists
- International Metallographic Society
- Society for Automotive Engineering
- State Microscopy Society of Illinois