



## Dale Clark

**P.E.**

### Senior Managing Materials Scientist

#### Department

Engineering Services

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#### Locations

Seattle, WA

## Biography

Dale Clark is a senior managing materials scientist with over 20 years of experience working with metallurgical and materials engineering in forensic investigations and failure analysis. He routinely serves as the principal investigator, project manager, and expert witness on root-cause failure analysis investigations for industrial and manufacturing clients, the insurance industry, legal teams, and government agencies.

Dale has led investigations for failures of diverse materials and devices, including hand and industrial tools due to improper metallurgical heat treating; hand and power cutting equipment due to deficient manufacturing and maintenance; electrical components and circuit boards used in aerospace; mechanical and piping components for petro-chemical refineries; oil and gas pipelines; residential and industrial equipment; medical implants; and plastic piping, tubing, and structural components.

He has also analyzed weld failures and alternative welding procedures for manufacturing clients, performed corrosion analysis and assessments, investigated injuries related to trampoline gyms, and investigated motor vehicle accidents and failures. Additionally, Dale is skilled in the interpretation of laboratory testing using technologies such as differential scanning calorimetry, Fourier transform infrared spectroscopy, scanning electron microscopy, X-ray, and Micro CT.

## Credentials

- P.E. | Professional Engineer

## Representative Consulting Assignments

- PEX Class Action | Water Leaks | Investigation to determine the root cause of failures of PEX pipes used in hydronic heating and potable water systems.
- Brass Dezincification | Product Failure | Investigation of allegations of failures of brass plumbing fittings and components due to dezincification corrosion.
- Santa Barbara Oil Pipeline | Crude Oil Discharge | Investigation to determine the root cause of an underground oil pipeline leak.
- Acoustic Window Failures | Building Defect | Investigation to determine the root cause of failures of acoustic windows in a high-rise condo building.
- Seaplane Crash | Accident Investigation | Investigation to determine the root cause of failure of components involved in the crash of a seaplane in Alaska.
- Vinyl Siding Deformation | Building Defect | Investigation to determine the root cause of warping of vinyl siding on residential buildings.
- Ride the Ducks Crash | Vehicle Accident | Investigation to determine the root cause of failure of the axle housing on a modified WWII Duk vehicle used for tours in Seattle resulting in a collision.

## Professional Experience

- 2023 - Current | Senior Managing Engineer | YA Engineering Services
- 2019 - 2023 | Forensic Materials Scientist | J.S. Held
- 2017 - 2019 | Senior Mechanical Engineer/Materials Scientist | GT Engineering
- 2003 - 2017 | Mechanical Engineer/Materials Scientist | GT Engineering
- 2001 - 2002 | Laboratory Technician/Engineer | GT Engineering

## Area of Practice

- Mechanical Testing of Materials
- Corrosion Analysis

## Publications and Presentations

- August 2004 - Clark, R.A., and D.R. Clark. , "Microbiologically Influenced Corrosion in Hydronic Heating Systems," Practical Failure Analysis, Volume 4, Issue 4
- October 2012 - Clark, D.R., Flinn, B.D. and Clark, R.A., "Roll Plate vs Roll-Forged Ring Comparison of Metallurgical Properties," Commissioned paper to The Steel Structures Division of Thomas & Betts Corporation
- June 2020 - Clark, D.R., Flinn, B.D., "The Role of Metallurgy and Material Science in Failure Analysis," presented to the Washington Defense Trial Lawyers
- 2021 - Carroll, J., Flinn, B.D., Clark, D.R., "Fourier-Transform Infrared Spectroscopy (FTIR) Technology and Analysis," JS Held University

## Education

- Colorado School of Mines - Bachelor of Science - Mechanical Engineering - Golden - Colorado
- Colorado School of Mines - Master of Engineering - Metallurgy and Materials Engineering - Golden - Colorado

## Licenses

- 43737 - Washington - Professional Engineer