Dale Clark

P.E.

Senior Managing Materials Scientist

Department
Engineering Services

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Locations
Seattle, WA

Biography

Dale Clark is an engineering expert witness consultant with over 20 years of experience in the field of metallurgical and materials engineering in forensic investigations and failure analysis. He has extensive involvement in a broad range of failure analysis projects, routinely serving as the principal investigator, project manager, and expert witness. His work experience includes conducting root-cause failure analysis investigations for industrial and manufacturing clients, the insurance industry, legal teams, and government agencies.

Dale has led investigations of 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, and 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 Dezincifiation | Product Failure | Investigation of allegations of faiures of brass plumbing fittings and componenets due to dezincification corrosion.
- Santa Barbara Oil Pipeline | Crude Oil Discharge | Investigation ot 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 acause 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 axel housing on a modified WWII Duk vehicle used for tours in Seattle resulting 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

- Metallurgical Testing and Analysis
- 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