

SERVICES AVAILABLE:

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| Failure Analysis | Specification Compliance Testing |
| Forensic Analysis | Heat Treatment and Assessment |
| Reverse Engineering | Case Depth and Properties |
| Product & Process Analysis | Fractography |
| Litigation Support | Material |
| Material & Process Selection | Specification |
| Material/Microstructural Testing | Micro/Macro Digital Photography |
| Product Design | Coating Thickness and Integrity |
| Materials Education/Training | Quality System - Creation,
- Maintenance & Auditing |
| Field Metallurgical Services | |
| Statistical Experimentation (DOE, 6σ, etc) | |

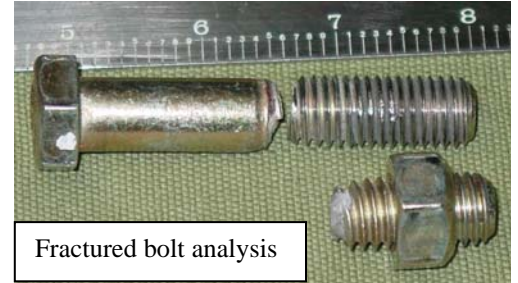
AREAS OF EXPERTISE:

- | | |
|---|-------------------------|
| Root Cause Failure Analysis | NDT (PT, MT, UT, X-ray) |
| Laboratory Management | Tribology |
| Materials Testing & Inspection | Heat Treatment |
| Statistical Experimentation | Corrosion |
| Nuclear Power Generation | Nitriding |
| Personnel Training | Carburizing |
| Threaded Fasteners | Heading |
| Aerospace Components | Forging |
| Hand Tools | Grinding |
| Mechanical Seals | Plating |
| Material Specification for Design | Surface Finish Analysis |
| Welding (GTAW, PAW, EBW) | Spray Coatings |
| QA Management (A2LA, NADCAP, ISO) | |
| Manufacturing Process Analysis & Optimization | |

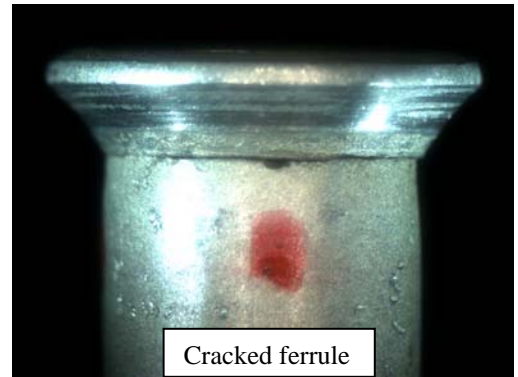
Contact:

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704 517 3038

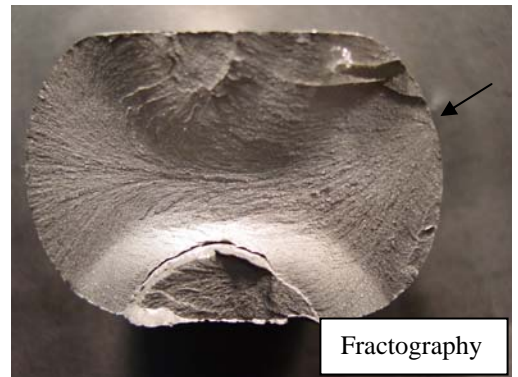
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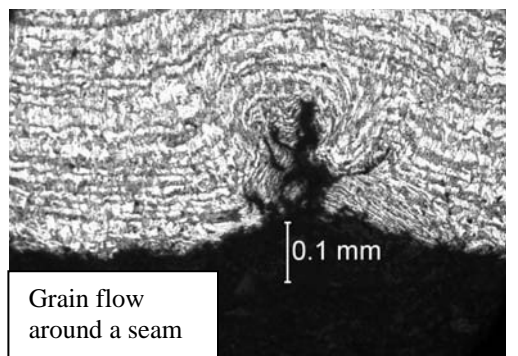
Fractured bolt analysis



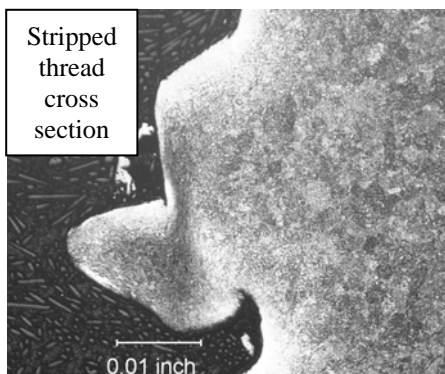
Cracked ferrule



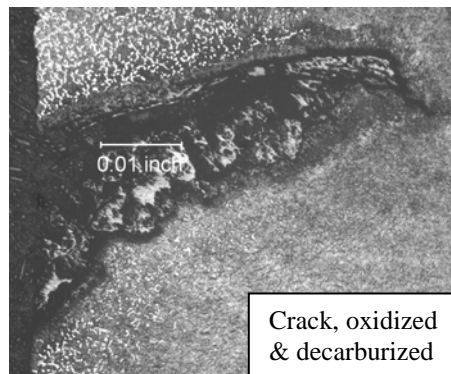
Fractography



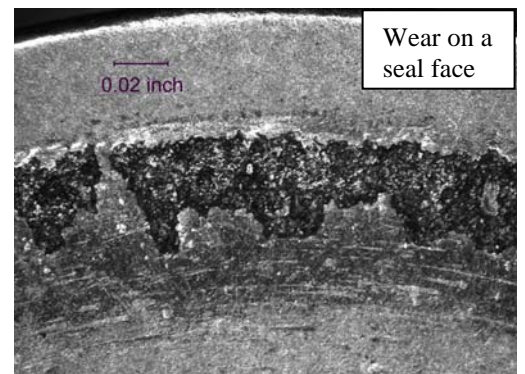
Grain flow
around a seam



Stripped
thread
cross
section



Crack, oxidized
& decarburized



Wear on a
seal face