PERSONNEL QUALIFICATIONS

Scott D. Bouse | Senior Associate

EDUCATION

- Texas A&M University
  - Bachelor of Science, Biomedical Engineering, 2006
  - Master of Science, Mechanical Engineering, 2009

PRACTICE AREAS

- Finite Element Analysis
- Fatigue Life Calculation and Assessment
- Fitness for Service
- Instrumentation/Monitoring/ Load Testing
- Engineering Critical Analysis
- Pressure Vessel Design and Analysis
- Metallurgical Evaluations
- Nondestructive Examinations
- Turnaround Support

REGISTRATIONS

- Professional Engineer in CA, GA, IL, IN, LA, TN, TX, and WY

PROFESSIONAL AFFILIATIONS

- American Society of Mechanical Engineers (ASME)

TECHNICAL COMMITTEES

- API 579/ASME FFS-1 Joint Committee

CONTACT

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EXPERIENCE

Scott Bouse joined WJE in 2018 with diverse experience in finite element, fracture mechanic failure, and fitness for service analyses, as well as instrumentation and monitoring in laboratory and field applications. Mr. Bouse is highly proficient in API 579 (Fitness for Service), including Level 3 analysis, Calculations per ASME B31, ASME VIII (Div. 1,2), TEMA, PCC-1, PCC-2, API 530 (Heater Tubes), API 620 (Low-Pressure Tanks), and API 650 (Atmospheric Tanks). In the laboratory and in the field, he has applied high-temperature strain gages, standard resistive-foil gages, thermocouples, and other sensors to gather data needed to both feed analysis inputs and validate results.

Prior to joining WJE, Mr. Bouse spent ten years at Stress Engineering Services, where he performed detailed engineering calculations on a wide variety of equipment types, including vessel-to-structure interactions and damage assessments. He has authored and presented papers and presentations on assessment and analysis topics to the refining and petrochemical industries.

REPRESENTATIVE PROJECTS

Finite Element Analysis

- Assessment of corrosion on a large, open-topped storage bin for the power industry *
- Design of calculations for a high-temperature heat exchanger bolted joint to minimize leakage of fluid during thermal transient events *

Fatigue Life Calculation and Assessment

- Design of calculations for thermo-mechanical fatigue damage in cyclical process vessels *
- Crack propagation predictions for vessels undergoing cyclic loading *

Fitness for Service

- Detailed assessments of dented, cracked, or corroded pressure equipment *
- Creep, subcritical crack growth, and combined damage assessments (i.e., cracks within a locally thinned region) *

Instrumentation/Monitoring/ Load Testing

- Installation of thermocouples and strain gages to process equipment to establish factual basis for modeling simplifications *
- Fire exposure testing of pressurized equipment *
- Design validation testing of fiber reinforced polymer components for power plant applications *

Pressure Vessel Design and Analysis

- Design of repair options for pressure vessels and/or piping *
- Performance of rerating calculations for pressure vessels to suit client process objectives *

Turnaround Support

- Performance of real-time, on-site engineering assessments of damaged process equipment during unit turnarounds/outages *

** Indicates with previous firms*