



### **JEFFREY P. STARK, P.E., CFL, CFEI**

Mr. Stark is a graduate of the University of New Orleans with a Bachelor of Science Degree in Mechanical Engineering. He has education, training, and experience in machine design, oil & gas equipment design, automotive and engine failure analysis, investigative locksmithing, and fire investigation.

Mr. Stark's professional experience in the oil and gas industry includes design and sizing of lines, control valves, mechanical equipment, fire protection and safety systems. Mr. Stark has experience with commissioning of oil & gas production facilities, hazard and operability studies (HAZOP), facility permits and pipeline permits.

Mr. Stark also oversaw the design, production, and modifications of equipment used in the dredging industry. These designs included stress analysis for structural / mechanical components and bolted connections, machine power plant design including sizing equipment used in machinery arrangements (bearings, couplings, transmission shafting, etc.), machine safeguarding, hydraulics, machinery failure analysis, and analysis of dredge hydrostatics and stability.

Mr. Stark's automotive experience includes foreign and domestic vehicle failure analysis. In addition to mechanical analysis, Mr. Stark specializes in computer diagnostics, advanced engine performance troubleshooting, and automotive/heavy equipment fire origin & cause. Mr. Stark can determine if a mechanical failure was a result of a manufacturing defect, improper service or repair, lack of maintenance, operator error, or the result of damage sustained in an accident. Mr. Stark performs engine failure investigations and fuel contamination evaluations as well as post-theft evaluations to determine the pre-theft condition of the vehicle as well as the integrity of the vehicle's anti-theft system.

Mr. Stark has testified in state, civil, and criminal courts in Louisiana as an expert witness in mechanical engineering, mechanical equipment design and operation, vehicle damage and repair, and fuel system design and operation for vehicles and equipment.

### **EDUCATION**

B.S. – Mechanical Engineering, University of New Orleans 2005

### **LICENSES AND CERTIFICATIONS**

#### **Registered Professional Engineer**

Alabama, License #35120  
Arkansas, License #16651  
Arizona, License #60203  
Florida, License #79478

Georgia, License #39988  
Kentucky, License #31883  
Louisiana, License #36825  
Missouri, License #2016017225  
Mississippi, License #26391  
North Carolina, License #42747  
New York, License #95502  
Oklahoma, License #28059  
South Carolina, License #32429  
Tennessee, License #118295  
Texas, License #119867  
Virginia, License #402055020

Certified Forensic Locksmith

ASE Certified Master Automotive Technician

ASE Certified Advanced Engine Performance Specialist

ASE Certified Light Vehicle Diesel Engines

Berla iVe Certified Vehicle System Forensic Technician (CVST)

Berla iVe Certified Vehicle System Forensic Examiner (CVSE)

Certified Fire and Explosion Investigator (CFEI)

### **PROFESSIONAL ASSOCIATIONS**

American Society of Mechanical Engineers

Society of Automotive Engineers

National Association of Fire Investigators

International Association of Auto Theft Investigators

Associated Locksmiths of America

International Association of Investigative Locksmiths

Tau Beta Pi National Engineering Honor Society

Pi Tau Sigma Mechanical Engineering Honor Society

### **SPECIALIZED TRAINING**

Heavy Vehicle Event Data Recorders

Vehicle System Forensics

Bosch Diesel Common Rail Fuel Systems

Engine Failure Investigation and Analysis

Fundamentals of Fire investigation

Fundamentals of Motor Vehicle Fire investigation

Auto Theft & Fire Forensic Vehicle Examinations

Basic & Advanced Tool Mark Examinations  
Forensic Case Management  
Forensic Report Writing & Evidence Collection  
Forensic Locksmithing  
Defense Against Methods of Entry  
Modern Automotive Key Generation  
Motorcycle Locksmithing  
Advanced Transponder Generation  
Automotive Tips and Tricks w/EEPROM  
Flashshield Certification Training  
Bosch Full Crash Data Retrieval (CDR) Technician  
CDR Data Analyst  
TWIC, SAFE Gulf & HUET Training

**PROFESSIONAL EXPERIENCE**

**U.S. FORENSIC, LLC**

2013 – Current

*Senior Mechanical Engineer / Forensic Engineer*

- Provide forensic engineering evaluations to determine the origin and cause of mechanical failures as well as the extent of damage and the recommended method of repair.
- Evaluate manufacturing equipment and machinery, HVAC systems, plumbing systems (water and gas), electrical systems, fire suppression systems, heavy equipment, oil & gas equipment, hydraulic equipment, medium and heavy duty trucks, diesel and gasoline engines, and foreign and domestic automobiles.
- Perform forensic locksmithing investigations, fire origin and cause investigations, lightning investigations, engine failure investigations, damage consistency examinations, accident reconstruction, and product liability evaluations.

**TECHNICAL ENGINEERING CONSULTANTS**

2011 - 2013

*Facilities Engineer*

- Held responsibility for the design and facility modifications of offshore oil and gas production facilities for the Gulf of Mexico and knowledge of API 14C, 14E, 14J, RP 75 and RP 500, including line sizing, control valve sizing and equipment sizing, preparation of data specification sheets, facility and pipeline permits.
- Designed included flow lines, manifolds, production separators, vent scrubbers, gas dehydration, piping systems and controls, fire suppression /

protection and safety systems, relief and venting systems, mechanical equipment, drainage, cathodic protection systems, and pipelines.

- Supervised piping designers in the development of all drawings, which included commingling schematics, PFD's, equipment layouts, safety device locations, area class locations, MFD's, interconnect piping, vessel design, skid design, and fabrication drawings.
- Performed hazard and operability studies (HAZOP) for offshore oil and gas platforms.
- Developed SAFE charts for platform logic.
- Performed relief system analysis, including PSV sizing, backpressure calculations, blow-by calculations, and thermal radiation.
- Extended offshore and land based trips for multiple projects including platform pre-commissioning.

**DSC, LLC**

2006 - 2011

Project Manager / Project Engineer / Design Engineer

- Held the position of project engineer/manager for two modular 24" dual suction pump/cutter head dredges that were delivered on time and under budget to Bangladesh.
  - Included the preliminary sales package along with a stability analysis, stress analysis for the ladder frame, truss and A-frame, hydraulic piping design with schematics, engine exhaust and cooling systems, and design for size constraints around available shipping containers.
  - Also included was an extended field service trip to another manufacturing facility during the fabrication process.
- Held the position of project engineer for four 36" suction pump/cutter head dredges to be used in the oil sand operations in Canada.
  - Included hull drawing submittals to ABS for approval and multiple field service trips to manufacturing facilities in Canada to oversee the fabrication, construction and commissioning of the dredges.
- Held the position of project engineer for a plant barge to be used with a 22" underwater suction pump dredge in the Arkansas River to process sand and aggregate.
  - Design included four spud carriage systems on the barge for simultaneous operations that included walking the barge up river while swinging the dredge under operation and unloading processed sand to barges on each side.
  - Made multiple field service trips during the construction, assembly and at the end to work out the final issues for the client.

- Held the position of project/design engineer for a modular 10" suction dredge to be used in Baghdad, Iraq to clear out the cooling water intakes for the electrical power plant.
  - Included a stability analysis and the stress analysis for the ladder frame.
- Held the position of project/design engineer for 800 HP and 400 HP cutter drive dredges to be used in the Abu Dhabi island projects.

**EXPRESS TECH AUTOMOTIVE**

1995 - 2005

General Manager / Shop Foreman / Lead Technician

- Provided quality repairs and excellent customer service at a high volume foreign and domestic automotive repair shop, including medium and heavy duty truck repair.
- Specialized in computer diagnostics, ignition systems, and advanced engine performance troubleshooting.
- Managed the hiring/firing of employees along with shop budgets.
- Maintained employment while obtaining a degree in mechanical engineering.

**CLASSES TAUGHT**

Approved Insurance Instructor:

- Fuel System Contamination: Louisiana & Texas
- Post Vehicle Theft Evaluation and Transponder Systems: in Georgia, Louisiana, North Carolina, & Texas
- Investigating Vehicle Fires: Louisiana
- Damage Consistency: Louisiana

**SKILLS**

Engineering Tools: Inventor, AutoCAD, ALGOR, ANSYS, Pipe Flow, Pipe Calc

MS-Office: Word, Excel, PowerPoint, Microsoft Project

**AWARDS RECEIVED**

Chevron Texaco Scholarship in Mechanical Engineering - (2004 - 2005)

ASME 2005 Robotics Tournament, Team Captain – 2nd Place (2005)

ASME 2004 Robotics Tournament – 4th Place (2004)