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## Forensic Mechanical Engineer

Regular Full Time  
Cedar Rapids, IA, US

20 days ago  
Requisition ID: 1021

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### POSITION SPECIFICATION

**Position** Forensic Mechanical Engineer

**Organization** KFI Engineers (KFI)

**Reporting Relationship** Senior Fire Protection Project Manager

**Website** <http://www.kfi-eng.com/> (<http://www.kfi-eng.com/>)

### COMPANY BACKGROUND

KFI Engineers is a recognized industry leader in facility infrastructure design and performance. Since 1996, our culture of collaboration and unique capabilities have allowed us to make a difference in the way infrastructure and processing projects are delivered.

Headquartered in St. Paul, MN, with eight regional offices and a team of over 250 professionals, we have a people-first culture that offers opportunities to continue your career with mentorship programs, career growth support, and continued education. With KFI, we find a way to provide creative solutions to unique projects while providing the same care we would expect if we were the client. For more information about KFI Engineers and our culture, please visit [www.kfi-eng.com](http://www.kfi-eng.com) (<http://www.kfi-eng.com>).

### POSITION OVERVIEW

The Forensic Mechanical Engineer focuses on diverse and challenging engineering work while being responsible for overseeing a forensic technical investigation from

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beginning to end. This position has the opportunity to investigate a wide range of failures, fires, and explosions involving residential, commercial, industrial, and appliance fires and explosions. Given the unpredictable nature and location of the work, the Forensic Mechanical Engineer will be required to travel to the location of the incident, sometimes on short notice, to conduct the formal investigation process. The work will often require examination of failed components and other physical evidence on site or in a laboratory environment. Occasionally, the Forensic Mechanical Engineer will dismantle machinery, equipment, or component assemblies in a systematic manner to obtain the evidence, as well as devise and possibly undertake tests as needed. This position will require the ability to perform a thorough examination of available evidence to determine the cause of a mechanical system failure, possibly the origin and cause of a fire, factors contributing to the spread of fire, and evaluate the performance of mechanical systems during the event.

The Forensic Mechanical Engineer will report to the Senior Fire Protection Project Manager and work closely with our Senior Fire Protection Engineer and other in-house forensic team members. This position will primarily be responsible for conducting loss investigations where any mechanical systems are involved. The successful candidate will be able to develop opinions and conclusions based on NFPA 921, the Scientific Method, engineering principles, and sound engineering judgement backed by appropriate experience.

**The position can be done remotely.**

### **TYPICAL RESPONSIBILITIES**

Specific responsibilities will include, but not be limited to, the following:

- Observation/Inspection of losses possibly caused by mechanical system failures
- Collect and examine data at the site of a loss
- Consult relevant codes, standards, and regulations
- Document evidence and other investigation findings
- Ability to photograph damage and evidence related to fires, explosions, or other losses
- Determine and conduct appropriate tests and data acquisition of exemplar and artifacts in the field and in laboratories
- Conduct laboratory-based examinations
- Provide system failure analyses

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- Research and write expert reports
- Interview witnesses, property owners, and building occupants to obtain information during an investigation
- Testify in court cases involving investigated losses
- Additional duties as required

## **KNOWLEDGE, SKILLS AND ABILITIES REQUIRED**

- Highly motivated, professional demeanor with a “can do” attitude
- Team-oriented and strong work ethic
- Proficient and accurate data entry skills necessary
- Ability to prioritize multiple tasks, shift focus if needed to assist other staff
- Maintain a well-organized system to account for various information processed
- Excellent written and oral communication.
- Strong attention to detail
- Competency in Microsoft applications including Word, Excel, and Outlook
- Understanding of the scientific method and the ability to apply it to a loss investigation
- Remain current in the subjects listed as ‘requisite knowledge’ as related to fire investigations in NFPA 1033
- Ability to travel as needed
- Must be able to navigate fire and explosion scenes, crawl, climb, use ladders
- Must obtain and maintain appropriate PPE certifications
- Ability to analyze the site of a loss and develop a list of possible failures
- Knowledge of mechanical systems

## **CORE BEHAVIORS**

### **Accountable**

- Demonstrates persistence in the achievement of goals.
- Acts with a sense of urgency.
- Takes responsibility for own actions.

### **Business Focus**

- Demonstrates agility, adapts well to changes.
- Works well under pressure.
- Meets commitments to internal/external customers.

### **Project Execution**

- Plans projects well, managing last-minute rushes and disruptions.

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- Balances Speed and Quality.
- Looks for improvement in our delivery, tools and processes.

**Demonstrates Respect for Others**

- Keeps others adequately informed.
- Exhibits objectivity and openness to others' views.
- Adapts communication style and method based on audience and situation.

**Team Player**

- Balances team and individual responsibilities.
- Shares expertise with others.
- Inspires respect and trust.

**EDUCATION**

Bachelor's degree in Chemical or Mechanical Engineering is required. Professional Engineering Registration is required. A minimum of 4-6 years of relevant investigative experience is preferred.

**COMPENSATION**

Recognizing the importance of this position to KFI, a competitive salary and benefits package will be offered.

***KFI Engineers is an Equal Opportunity Employer.***

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