

Fire Science and Explosion Analysis



Packer Engineering's Fire Science & Explosion Analysis group, composed of highly trained engineers, life safety specialists, and investigators, provides a full suite of design, consulting, and loss control services. Our staff possesses the extensive experience and technical depth to provide a thorough and accurate examination of incidents involving fires and explosions in commercial, transportation, residential, and industrial settings. Our staff is supplemented by other disciplines of Packer Engineering, ensuring the appropriate person is handling the task.

Packer's team of Engineers & Investigators perform a full range of services including site and incident investigations, root cause analysis, fire

standing of all risk factors, in addition to adding influential confirmation to opinions concerning the ignition, growth, and spread of the fire.

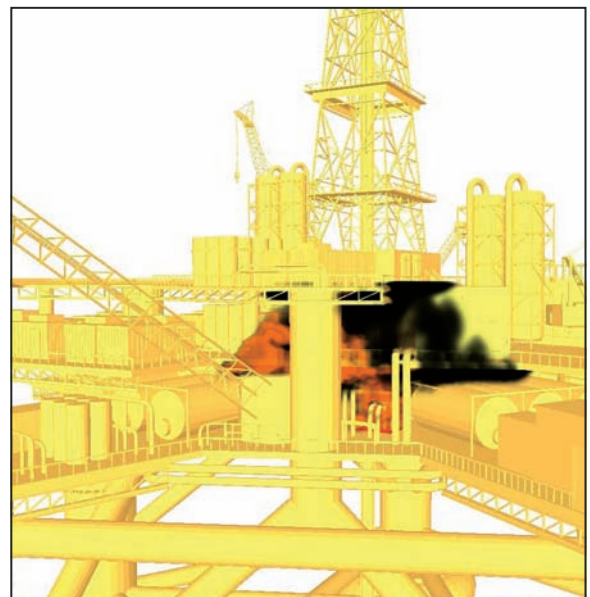
We offer a wide variety of design and consulting services based on the specific needs of the customer. Services range from standard suppression and alarm design to complex performance based designs which may require modeling or laboratory services. Our objective, regardless of the size of the project, is to provide a cost effective solution to our client without compromising on life safety and business continuity. Our trained staff can perform third-party review services for corporations and AHJ's ensuring that the proposed design meets all the necessary safety requirements.

Packer has signed a MoU with the University of Edinburgh's BRE Center for Fire Safety Engineering. The joint efforts of Packer Engineering and the BRE Center bring together an ensemble of more than fifty professionals covering all aspects of fire & explosions as well as the most comprehensive set of tools, experimental facilities and modeling capabilities available worldwide.



reconstruction, fire modeling, system design analysis, product testing, process fire hazard analysis, facility fire hazard analysis and testing services. Our team has been trained to examine not only the origin and cause but also the conditions that allowed the fire and smoke to spread beyond the initiating item. This analysis often results in minimizing a client's exposure.

We use fire and fluid dynamic modeling as a risk assessment tool to characterize and understand potential hazards, as part of HAZOP or other process safety programs, or as an investigative tool to recreate a specific fire or set of competing fire scenarios. Proper application of computer aided fire modeling calculations, coupled with sound engineering analysis, is used to develop an under-



Computer modeling of off-shore oil platform fire.



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Fire & Explosion Investigation

- Fire investigations and analyses
- Fire growth and spread analysis
- Electrical related fire assessment
- Explosion analysis
- FLACS explosion modeling
- Egress analysis
- Industrial fire assessment
- Shipboard fire assessment
- Vehicle fire assessment
- Computational fluid dynamics & zone modeling
- Fire reconstruction and design analysis
- Expert witness services

Design and Consulting Services

- Performance based design & code equivalency evaluations
- Third party review services
- Smoke management system analysis
- Suppression system design
- Alarm system design
- Code consulting
- Computer fire modeling
- Egress modeling
- Life safety evaluations
- Site surveys
- Facility and process fire/explosion hazard analysis
- Fire protection systems performance and reliability analysis
- Testing and analysis for patent prosecution support
- Post fire structural analysis

Research & Development

- BRE Center for Fire Safety Engineering resources
- Large and small scale fire testing of materials and protection systems
- Establishing product performance standards
- Product development & assessment
- Assessment of products of combustion
- Dust combustibility assessment
- Fire & flammability testing
- Design of experiments and complete statistical analysis

