



## Falex Litigation Technical Investigations Our Mission, Approach, and Services

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We conduct litigation technical investigations of accidents, product failures, and intellectual property disputes for litigators, insurers, and companies. We provide multi-disciplinary investigations in a broad spectrum of areas involving the performance of materials in structural and mechanical applications. Our scientific investigations are conducted by the scientific method, and they are data-driven, scientifically sound, comprehensive, and authoritative. Our priority is to establish the key underlying technical issues and the relevant physical science principles. Then we flesh out the design, materials performance, structural, and mechanical issues. We utilize contemporary project management and coordination processes to meet time and budget constraints and to continuously monitor our progress.

Our mission is focused on your needs.

- We bring clarity by providing actionable, reliable, and understandable insight that establishes the key issues, and is authoritative and compelling.
- We strive to be the definition of professional in all of our conduct including ethics, investigation methods, technical work, project management, and communications.
- We seek to be your trusted resource and advisor in challenging times when the stakes are high.

Our approach is based on the fact that the physical sciences (physics and physical chemistry) provide the underpinnings of materials science, mechanics, and structures. The physical sciences provide the fundamental, unifying principles that are applicable across the broad range of technical issues that arise in accidents, product failures, and intellectual property disputes. The physical sciences provide the insight for cutting through the complexity and seeming uniqueness of each accident, product failure, and intellectual property dispute. The physical sciences provide the framework for identifying the key underlying technical issues, and for organizing them and explaining them to non-technical people in a way that makes sense. Materials science, mechanics, and design apply the overarching principles of the physical sciences to the specifics of the accident, product failure, or intellectual property dispute. This is a powerful, unique, and superior approach.

Our approach is also unique for scientific investigations that involve moving components such as rotating machinery, engines and transmissions, brakes, slips and falls, and conveyor systems. Investigative organizations view moving components as mechanical systems to be studied by mechanical engineers, but this is too limiting a perspective that fails to recognize a huge body of knowledge and experience called tribology, the science of friction, wear, and lubrication. Like the physical sciences, tribological science provides the overarching scientific principles for understanding accidents, failures, and intellectual property disputes involving bodies in motion that contact each other, lubricants, and fuels. We are the only investigative organization that formally incorporates the science of tribology into our scientific investigations of accidents, product failures, and intellectual property disputes.

The value of our approach is seen in our unique ability to provide testing that includes the world's largest array of tests for friction, wear, and the properties of lubricants and fuels. These tests are the basis for most relevant ASTM standards, and the instruments we use are widely recognized as the leading instruments in the field. Ad-hoc, full-scale tests are the norm for testing of components, assemblies, and systems, but the downside is that tests of this nature are not supported by a well-



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established scientific background. We use full-scale testing as is appropriate, but often we can employ sub-scale testing that uses modified ASTM methods, and is performed on ASTM-qualified test instruments that provide far greater control and repeatability, and for which there is a well-established scientific basis. This provides more reliable data, lower cost, and quicker turnaround because the test instruments already exist so there is far less costly and time-consuming custom test method, test development, and test setup.

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**Falex Litigation Technical Investigations**

[www.FalexInvestigations.com](http://www.FalexInvestigations.com) | p: 630.556.9700

Falex Litigation Technical Investigations was formed to provide litigators, insurers, and corporate counsel with expert witness consulting and scientific investigations that are informed by core competencies in the physical sciences, materials performance, and tribology - the science of friction, wear, and lubrication - to provide better outcomes at lower cost with intellectual property disputes, product failures, process incidents, accident investigations, and Consumer Product Safety Commission recalls and issues.