Engineering Case Studies Online

ALEXANDER STREET PRESS

Engineering Case Studies Online

The analysis of engineering failures is an essential part of many engineering curricula today. This focus enables modern engineers and scholars to learn what not to do and how to create designs with a greater chance of success. Key to learning is establishing the nature of each failure—structural, corrosive, electrical, etc.—and understanding that element.

The engineering field needs a comprehensive and authoritative resource to provide in-depth, impartial analysis of key engineering failures. *Engineering Case Studies Online* is a collection that will grow to include **250 hours of video and 50,000 pages of text** resources to meet this growing need. Content is displayed alongside targeted learning objects designed to facilitate detailed understanding of the causes and impact of these failures. Materials in the collection include:

- Feature-length video documentaries of major failures.
- Monographs explaining cases in detail and describing key engineering concepts and issues.
- Simulations depicting precisely what went wrong.
- Primary footage of accidents, including related news segments.
- Audio footage and transcripts.
- Testimonies from participants, victims, and witnesses.
- Images, accident reports, blueprints, and other key archival content whenever available.
- Bibliographies of authoritative materials from newspapers, Web sites, and journals.
- Specially written cases that explore engineering ethics.

The collection provides in-depth coverage for more than 50 of the most frequently taught and seminal case studies around the world together. Example cases include:

- Air France flight 4590
- Apollo 13
- The Big Dig
- Boeing 787 Dreamliner
- Chernobyl power plant
- Comet airliners
- Deepwater Horizon oil rig
- Ford Pinto
- Fukushima Daiichi nuclear power plant
- Hyatt Regency walkway
- Space shuttle Challenger
- Tacoma Narrows bridge
- Titanic
- TWA flight 800

All materials in *Engineering Case Studies Online* are carefully cultivated by expert editors, with the assistance of an advisory board of engineering librarians and faculty. Materials come from a wide range of content partners, including the Digital Rights Group, BBC, Future Media, TVF International, as well as leading academic publishers such as Princeton University Press, John Wiley & Sons, Harvard University Press, and engineering associations such as the American Society of Civil Engineers.

More than 60 percent of video material in the collection was produced since 2000, and new content is added regularly. The database is global in focus, and originates from the United States, the United Kingdom, and Australia, with selections from across Europe and Asia. And because *Engineering Case Studies Online* addresses cases from a variety of angles, including their legal and ethical implications, the collection has broad applications for fields including architecture, business, law, urban planning, health and safety, environmental studies, science, sociology, media, and technology.

Tools for Teaching and Research

All content is deeply indexed for more than 15 fields—including engineering area, keyword, subject, date, region, experiment, and relevant web resources—allowing users to quickly and easily find the exact content they're looking for. Only *Engineering Case Studies Online* allows for such detailed queries as:

- Find video interviews with the operators of the Chernobyl power plant.
- What type of connection failure caused the collapse of the fourth floor walkway at the Hyatt Regency, and how was it caused? What alternative forms of construction for the walkway could have been used?
- Give me visuals to compare and contrast the causes and impacts of Chernobyl and Fukushima. Were there common causes? Differences?
- Show me simulations of how and why the DH-106 Comet window failed and in-depth information about the structural and engineering failures of the entire Comet fleet.

Publication Details

Engineering Case Studies Online is available worldwide through annual subscription or one-time purchase of perpetual rights. Prices are scaled to institutional size and budget. To request a free trial or price quote, please contact our distributor at info@dotlib.com.

ALEXANDER STREET PRESS

http://alexanderstreet.com • copyright © 2014 • Alexander Street Press, LLC