

Professional Practices

Insurance Carriers Put Less of a Premium on Fire Protection Engineering

Risk Solutions

HSB Professional Loss Control

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May 1, 2002

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Regardless of whether owners or designers welcomed it, insurance carriers have traditionally had a major influence on fire protection design. Based on knowledge accumulated for more than a century, the insurance industry built a stable of fire protection experts, including engineers, who could offer solutions to complex design problems.

On many projects, especially large facilities and industrial buildings, insurance carriers would provide fire protection and life-safety specifications to the design team early in the process, and stay involved throughout, providing services such as:

- Comprehensive engineering evaluations of fire protection equipment.
- Witnessing annual dry-pipe and deluge-valve testing.
- Witnessing acceptance tests for special suppression systems.
- Testing water supplies.
- Annual performance testing of fire pumps.
- Training for plant personnel.
- Life-safety evaluations.
- Risk-based analysis, or cost/benefit evaluation.

These loss-control activities were viewed by the insurance carrier as a sound investment, because it was common for a builder's risk policy to turn into a long-term property policy once a facility was constructed. Thus, it was in the carrier's interest to protect the building, operations and the insured's business continuity from loss. And the insurance carrier's professionals often found deficiencies in designs and installations that were either unrecognized by, beyond the scope of or simply missed by the authorities having jurisdiction (AHJs).

An Industry Shift

While a handful of prominent insurers still believe that such engineering is a sound investment, the industry's involvement in fire protection design and specifications has been decreasing. This has been the result of an industry-wide attempt among insurance carriers to minimize premium increases and maximize profits by eliminating or segregating property loss-control services from insurance indemnity products.



Hartford Steam Boiler

In part, this industry shift has been a reaction to the dynamic modern business environment, where corporations—both insurance carriers and those insured—are involved in a perpetual process of reorganization. As a result, insurance carriers may not expect to insure a facility for an extended time and thus have less incentive to make an investment in loss control.

Instead, their involvement in an insured builder's risk policy is often limited to a site visit for merely finding out whether construction exposures are under control—without regard to permanent fire protection features. In many cases, fire protection plans are inadequately reviewed. In some cases, they are not reviewed at all.

Thus, it is now much more typical for insurance carriers to have no involvement in fire protection engineering, or for their involvement to negatively impact the project and its budget. For example, the insurance carrier may get involved with a project after construction has begun and create costly and disruptive change orders by asking for additional fire protection. In other cases, when the builder's risk carrier has no technical involvement at all, the property carrier often may not recommend upgrades until the project has been completed, when it is costly and disruptive. Therefore, unless other agreements have been made well in advance, it is no longer best for owners to count on the insurer's participation.

But as insurers increasingly move away from their traditional role, a void has been created in the application of fire-protection design. This void of expertise, in itself, often results in additional costs—as well as construction and production interruptions—for the facility owners.

Further Complications

Unfortunately, this void comes at a time when input from fire protection engineers is more critical than ever.

Because fire protection is often viewed as not affecting a business' bottom line, fire-protection systems are often awarded as design-build contracts to the contractor with very limited specifications. For example, while a typical specification from an A/E firm may call for an installation of automatic sprinklers per National Fire Protection Association (NFPA) Standard 13, the specialty contractor—in the interest of competition—will usually base their design on minimum code requirements. Although this may be acceptable in a simple office building, in more complex occupancies the owner is not being adequately served.

It must be understood that building codes typically aim to protect occupants from the building and its hazards—not to protect the building, its contents and the operations from loss. This is especially true with industrial facilities, which have far fewer code requirements than schools, hospitals and office buildings.

But the fire protection design should be based on the facility owner's tolerance to risk, not the minimum code requirements. Here is where fire protection engineers need to start marketing their services. For example, the typical minimum "code" protection requirement for a dedicated computer room is sprinkler protection. However, because the contents in a computer room are vital to the company's business continuity, additional provisions such as early fire detection and actuation of a gaseous fire extinguishing system would be appropriate to ensure that fire damage is kept to an absolute minimum. In addition, the owner may be interested in considering a preaction sprinkler system to protect against unwanted sprinkler discharge. In other cases, when dealing with a limited budget, prioritization of objectives and protection of hazards is necessary and a quantitative risk assessment of each would be desirable.

Additionally, fire protection engineers have the ability to factor the life-cycle, operating and testing costs into the initial design, giving the owner a much clearer evaluation of risks vs. protection costs.

Such issues are above and beyond what most architects, fire protection contractors and AHJs are able to address. Therefore, just because the building officials approve a set of plans does not necessarily mean a well-protected facility. It merely means that the design has been reviewed for minimum code requirements. The absence of fire protection engineers from insurance carriers only exacerbates the lack of expertise on these issues.

Service Shift

So, as insurers cut back on engineering services, and fire protection system selection continues to be left up to contractors, it is more important than ever that architects and engineers promote the value of fire protection engineering.

Many fire protection and loss-prevention engineers who formerly worked with insurance carriers are directly migrating to the consulting sector. More and more A/E firms are hiring experienced fire protection engineers as an addition to their other design expertise. Another area of growth is the number of specialized fire protection consulting firms.

Professional fire protection engineers—whether they are working for an insurance carrier, an A/E firm or part of a specialty consulting firm—can save money, both in the short and long term, by specifying and designing a system that best meets the owner's goals and objectives. In addition, these professionals have the ability to use performance based approaches in cases where an otherwise prescriptive method would be more costly and result in a lower level of protection.

From a building owner or designer's perspective emphasis should be placed—especially for industrial facilities—on protecting the facility and operations from loss, in addition to the provision of adequate levels of life-safety features.

Possible Benefits For All

So while the insurance industry has shifted away from providing these valuable services, professional fire protection engineers are still available in a variety of other capacities, and it is crucial for these professionals to find new ways to market their services to take advantage of this industry shift.

And in practice, this shift may end up providing some positives for both building owners and fire protection engineers. It is important to remember that preventing fire losses has always been more important to the insured than to the insurance carrier. This is because while a particular fire loss may not be statistically significant to an insurer, to the company involved such a loss is not only a financial issue, but can also impact employee morale, the community and even customer loyalty.

By working directly with the owner, or as a more integral part of the design team, fire protection engineers have a greater opportunity to influence the project, especially at the crucial beginning stages. And although owners may now end up paying consultants for the same services that insurance carriers traditionally offered, more often the fire protection consultants will be working directly in the interests of the building owners, not their insurance carrier.

Legal Update: California's New Mold Law

By Dave Barista, contributing editor

When California Governor Gray Davis signed Senate Bill 732 last October, it marked the nation's first major state-level effort to legislate toxic mold. In effect since January, the bill aims to reduce public health risk from mold by establishing permissible exposure limits and standards for identifying and remediating mold, as well as requiring mold disclosure during property transactions.

SB 732, known as the Toxic Mold Protection Act, requires the California Dept. of Health Services (DHS) to convene a task force of consumers, business owners and medical and mold-abatement experts to advise the DHS on the development of permissible mold exposure limits. DHS will report on the findings by July 1, 2003.

The statute also requires DHS to: develop standards for the assessment of molds in indoor environments as well as any necessary alternative standards for hospitals, child care facilities and nursing homes; create standards for the identification and remediation of mold; review the exposure limits at least once every five years and consider any new scientific evidence that indicates that molds may present a health risk different from what was previously determined; and produce public education materials and resources to inform the public about the health effects of molds, methods of prevention, methods of identification, and remediation of mold growth and mold infestation.

If permissible mold exposure levels are eventually set and adopted, the law will also require that the owners of residential, commercial or industrial property provide a written disclosure of the mold conditions to buyers or tenants, if it is known that mold exceeds the permissible exposure limit.

While California is clearly the frontrunner in mold legislation, other states are close on its heels with various forms of regulation. Arizona, Connecticut, Indiana, Maryland, Nevada, New Jersey, New York, Pennsylvania and Texas all have some sort of edict in the works.

Some bills, such as New York's SB 5799, are similar to California's regulations, with the goal of creating mold exposure limits, as well as standards for assessment and remediation. Other efforts are more basic in nature, simply setting the groundwork for government-funded studies.

For instance, Maryland's SB 283, which came online last July, established a task force to study the nature, location and extent of health and environmental risks posed to workers as a result of mold located in the HVAC systems of office buildings. Results will be presented to state officials by July.