

Understanding Cooking Exposures: Key to Insuring Restaurants

There are many different types of cooking installations and exposures in today's food industry. Understanding these exposures and the hazards they represent is essential for companies who want to underwrite these risks profitably. With a comprehensive inspection process, companies can provide recommendations to enhance the safety of the cooking operation and reduce fire losses.

Standards for cooking installations are set by the National Fire Protection Association (NFPA). NFPA's mission is "to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating consensus codes and standards, research, training and education." NFPA Standard #96 – Standard of Ventilation Control and Fire Protection of Commercial Cooking Operations applies to all cooking installations, and includes the minimum safety requirements related to the design, installation, operation, inspection and maintenance of cooking operations. Changes in cooking equipment and practices as well as fire-fighting technology have brought about many changes in NFPA standards. The NFPA codes and standards are available for viewing and/or purchase on the organization's Web site – www.nfpa.org.

In the past, it was usual to mount a wall fan on the exterior wall and cut a hole through the wall and

hood to vent cooking vapors to the outside. This is still possible today, however the wall must be noncombustible and have a clearance of 10 feet to adjacent buildings, property lines, electrical lines or equipment, as well as 10 feet clearance to operable doors and windows. This is one of the reasons that wall exhaust fans are now of limited use, especially in areas of congested construction. These installations require duct work to the roof and then usually an up blast type fan to dissipate the cooking vapors.


John Higgins, a senior field representative who has been inspecting restaurants for over 40 years with MSO and is also a member of several NFPA committees, has seen firsthand the many changes in restaurants over the years. "In years past, restaurant cooking installation inspections were simple," he said. "The only information that was needed was the clearance to combustibles for the stove, hood and duct system, and whether or not the installation had an automatic extinguishing system. In recent years, changes in cooking processes and technology have made the inspection process more complicated."

A major change in cooking installations was the switch from a dry powder fire extinguishing system



to the wet chemical system, which is similar to a foam system. At about the same time, deep fat fryer manufacturers were bringing out their new fryers, which were better insulated and held the heat longer. In addition, for health reasons, restaurants stopped using animal fat in fryers and started using vegetable oil. Dry chemical extinguishing systems were not designed for these changes. Underwriters Laboratories (UL) decided to research and write a standard for these new cooking installations: UL Standard #300. To comply with this standard, all of the new deep fat frying operations needed the new wet chemical extinguishing systems.





At first, no one realized that the dry chemical portable extinguishers that worked so well in the past would not be acceptable for the new wet chemical systems. Several kitchen fires around the country enlightened NFPA to the fact that the dry chemical powder in the portable extinguishers is under a great amount of pressure. If the wet chemical automatic extinguishing system actuates and puts out a layer of foam, using a dry chemical extinguisher will push away the foam and allow the fire to restart.

Changes in fire protection technology have brought about changes in how businesses operate. Americans love the taste of barbeque. It was not uncommon in the past to have a restaurant that had a smoker out back for slow smoking and cooking of various meats and other edibles. This was either in an outbuilding or out in the open in the back yard. Someone got the idea that since we have a hood, duct, automatic extinguishing system and have space, let's do the barbequing under the hood. Inside barbequing was underway. This created other problems, beginning with what happens to the interior of the hood and duct. Now, instead of building up a coating of grease, which can be cleaned away with steam or chemicals, there is a build up of creosote. This presents an entirely different situation for the cleaning people.

There are other concerns with indoor barbeques. These include proper disposal of the ash accumulation, storage of the fuel supply for the day, and storage of the total fuel supply. Finally, what is the best way to extinguish a fire in a charcoal or wood cooking installation? These are all items that are covered in Chapter 14 of NFPA 96.

Cooking installations and fire safety continue to be an evolving process. As John Higgins tells us: "Just as we are starting to relax, enjoy and understand the standard, we are finding that restaurants in response to the overwhelming popularity of ethnic cuisine are using cooking appliances and practices unfamiliar to the industry. Our new task is to evaluate these appliances and practices and decide if they are safe and in compliance with the code and safety practices."

Understanding the hazards of cooking exposures and installations is an essential step in the underwriting process. Preventing fire losses through inspection and required compliance with recommendations will not only result in a more profitable book of business for the insurer, but also a safer operation for the insured.

This article originally appeared in the NYIA NY Connection Magazine.

