



## Commercial Cooking Operations — *What Do Insurance Inspectors Look For?*

Larger restaurants and those with sizeable commercial cooking operations face a significant fire exposure. This is especially true where cooking produces grease-laden vapors and/or smoke. The normal temperature range for food service frying is 325 to 375 degrees Fahrenheit. As the cooking oil temperature increases, so does the risk of an accidental grease fire, which can lead to substantial damage and possibly serious injuries. Deep fat fryers should be equipped with a high temperature shut-off device, which will disengage the fuel if the cooking oil exceeds 475 degrees Fahrenheit.<sup>1</sup>

Restaurants in this category must conform to National Fire Protection Association (NFPA) standard 96. NFPA 96 identifies preventive fire safety requirements designed to reduce the potential fire hazard of commercial cooking operations. The standard covers the design, installation, operation, testing, and maintenance of cooking equipment.

Companies that insure restaurants typically use insurance inspectors to evaluate the facilities, specifically the condition of cooking equipment and loss-control practices of the restaurant operation. This enables the insurer to determine whether the operation meets its underwriting requirements and is eligible for insurance.

Insurance inspectors will look at the following features or details of the commercial cooking operation and equipment<sup>2</sup>:



- If deep fat fryers are used, are they equipped with high limit controls, reset buttons?
- Is there 16" of clearance or an 8" high combustible baffle barrier provided between fryers and adjacent cooking surfaces that can produce a flame?
- All commercial cooking lines should have a vent hood exhaust system, and the hood should have baffle-type filters<sup>3</sup>; mesh filters are not permitted.
- How frequently are the baffles cleaned?
- How often is the internal hood and exhaust duct system cleaned? There should be a minimum of semi-annual cleaning. Quarterly cleaning is required for 24-hour operations or heavy deep fat frying. (Systems with extensive ducting require professional commercial cleaning.)

<sup>1</sup>Commercial Kitchen Fire Safety, Guide One Risk Resources for Health Care, [http://www.goriskresources.com/Docs/Shared/ps\\_comm\\_kitchenfire.pdf](http://www.goriskresources.com/Docs/Shared/ps_comm_kitchenfire.pdf).

<sup>2</sup>Patrick J. Hill, *Defining Risk Assessment, Loss Control Survey and Reporting for the Insurance Industry*, pp. 65 – 69, copyright 2006 Alexander & Schmidt, Yarmouth, Maine. This is a comprehensive and instructive book on general risk assessment.

<sup>3</sup>A baffle filter is designed to prevent the flame from penetrating through the filter into the duct work. Baffles cause grease vapors to swirl around as they are drawn through, and the grease settles onto the stainless steel baffles.

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- Where is the termination point of the exhaust system? Is it clean and free of grease? It is not permitted to go through a combustible wall. It must be ducted above the roof line.
- If the duct system passes through a combustible building structure, a minimum of 18" clearance from the combustible structure is required, if unprotected. That can be reduced when protected in accordance with NFPA 96.
- All commercial cooking lines with equipment that produces grease-laden vapors, especially deep fat fryers, must have an automatic extinguishing system (AES).
- In the event of a flash fire, is a manual pull station provided in the direction of the kitchen exit?
- Is the AES inspected and serviced at least semi-annually?
- In addition to the AES, a commercial grade kitchen (Type K) fire extinguisher should be provided in the kitchen area, and employees must be trained to activate the AES and use the fire extinguishers.

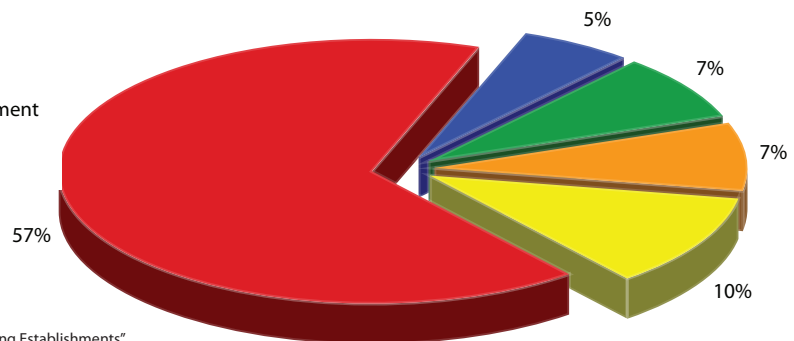


*This photo illustrates the correct installation of a metal baffle plate between the open flames from the range and the deep fat fryer. Metal baffles should be used only when there is not sufficient space available to provide a 16" clearance between the deep fat fryer and any source of open flames. Baffle filters are seen above the range and fryer.*



## Top 5 Major Causes of Restaurant Fires

- Intentional
- Smoking Materials
- Electrical Distribution & Lighting Equipment
- Heating Equipment
- Cooking Equipment



Source: National Fire Protection Association, "Structure Fires in Eating and Drinking Establishments"