



Coffee Break Training - Fire Protection Series

Inspection Techniques: Electrical “Classified Locations”: Class I Examples (Part 5)

No. FP-2011-23 June 7, 2011

Learning Objective: The student shall be able to list examples of areas that could receive a Class I hazardous area designation.

Hazardous area classification should be performed by knowledgeable and qualified experts. Generally, they will follow industry protocols which include some of the following questions:

- Have there been instances of leaks?
- Do leaks occur frequently?
- Do leaks occur during normal or abnormal operation?
- Is the equipment in good condition, questionable condition, or in need of repair?
- Do maintenance practices result in the formation of ignitable mixtures?
- Does routine flushing of process lines, changing of filters, opening of equipment, and so forth result in the formation of ignitable mixtures?



The dispensing area around this aboveground tank is a Class I location.

Here are some examples of areas that typically receive a Class I designation:

- the area where volatile flammable liquids or liquefied flammable gases are transferred from one container to another;
- interiors of spray booths and areas in the vicinity of spraying and painting operations where volatile flammable solvents are used;
- locations containing open tanks or vats of volatile flammable liquids;
- drying rooms or compartments for the evaporation of flammable solvents;
- locations containing fat- and oil-extraction equipment using volatile flammable solvents;
- portions of cleaning and dyeing plants where flammable liquids are used;
- gas generator rooms and other portions of gas manufacturing plants where flammable gas may escape;
- inadequately ventilated pump rooms for flammable gas or for volatile flammable liquids;
- the interiors of refrigerators and freezers in which volatile flammable materials are stored in open, lightly stoppered, or easily ruptured containers; and
- all other locations where ignitable concentrations of flammable vapors or gases are likely to occur in the course of normal operations.

For additional information, refer to National Fire Protection Association (NFPA) 70[®], National Electrical Code[®], Chapter 5 *Special Occupancies*.



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