

TRAINING BULLETIN NUMBER 13
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ELECTRIC RADIANT HEATING

Description

Electrical radiant heating has become a common type of heating system for buildings in the City of Los Angeles. Cables are installed in loops throughout an area and connected to thermostats which control the amount of current flowing through the wires. The power supply to the thermostat comes from the building circuit breaker panel and may be as high as 220 volts. Amperage and wattage will vary with the installation. The heating wires are concealed in construction by covering with dry-wall, plaster, or cement. These loops of wire are commonly installed in ceilings of buildings and may be found in floors and walls.

When these systems are installed in a number of rooms, such as a residence, thermostats are provided for each room except bathrooms and halls. Chapter 9, Article 3 of the Los Angeles Municipal Code requires the thermostats to be installed so that there is no possibility of current flowing through the system when the thermostat is turned off.

Hazard

The hazard presented by electric radiant heating circuits is similar to that of any other circuit. A malfunction or mechanical injury to the system may cause a short circuit resulting in a common electrical fire. Electric shock hazard is present if the energized conductor is exposed, or ceilings or walls are pulled that contain energized heating circuits.

Fire Fighting

During fire fighting operations two problems are obvious: First, is the fact that the presence of an electric radiant heating system in a building may not be immediately apparent, and ceilings or walls containing these circuits may be pulled, jeopardizing firemen's safety; Second, if it is known that the occupancy is equipped with an electric radiant heating system, it may be difficult to locate the proper service box to de-energize the system affected.

Conclusions

Do not cut into ceilings or walls of buildings known to contain these systems until circuits have been de-energized.

When fires occur in occupancies known to have electrical radiant heating systems, consider de-energizing the building by use of the main electric shutoff.