

# Electrical contact—Roofing

## Explain dangers

Cutting into existing roofs and mechanically fastening insulation are common jobs for roofers. One of the hazards they face when doing these jobs is contact with electrical services.

Electrical conduits or cable could be just beneath the membrane of the roof. They could also be mounted to the underside surface of the roof deck on the inside of the building.

The most common danger for roofers when they encounter electrical services is electrocution. However, there are also dangers associated with cutting the deck, such as kickback from the saw and fire.

## Identify controls

- Before cutting into the roof, ask the owner for information on the location of conduits or cable. If electrical equipment is installed closer than 38 mm (1.5 in) from the bottom of the roof deck, there is a danger of accidental electrical contact.
- If possible, check the underside of the roof deck inside the building for conduits and cable in the spot where you plan to cut.
- If you are working on a concrete roof deck, x-ray the area before cutting.
- Always remove the membrane system before cutting holes in the roof deck.
- If an electrical service is located close to where you plan to cut, ask for the power to be shut off and locked out.
- If the power cannot be shut off and locked out, ask that a new location be chosen for the hole. Contact with electricity can seriously injure or even kill you. Don't cut until you have received confirmation that the area is clear of all services.
- Don't forget that the hazards faced when cutting into the roof also exist when securing (mechanically fastening) insulation to the roof deck. If possible, check the underside of the

roof deck inside the building for electrical services. You may need to have two-way communication with someone watching the progress from the inside of the building.

**NOTE:** If you find electrical services and there is a risk of contacting them, look for alternatives to mechanically fastening insulation to roof decking.

- Radio detection is becoming a reliable way to check for electrical services. Before fastening the insulation to the decking or cutting a hole, scan the area using a radio detection device and mark areas of concern. This can help reduce the risk of electrical contact.



**Radio Detection Device**

## Demonstrate

Walk around the work area and, if possible, look for any services on the underside of the decking.

Radio detection companies often provide training on their products. Arrange for worker training if you plan to use this equipment.