

ACCIDENT ALERT

Failure to Isolate or Lockout Machine Results in Injury to Hand

The Injury

In a meat packing room, a worker was injured while changing the plates of a vacuum packing machine. The machine was switched off and the safety covers removed. While the plates were being changed, the machine was mistakenly turned on by another person. The machine cycled and the worker's hand was crushed and burnt on the element.

Inadequate Procedure

To change the plates, the operator should switch off the machine and remove the safety covers. The plates can then be changed and the covers realigned, so that the magnets of the covers line up with the reed switches below. The operator — the same one who switched the machine off in the first place — can then switch the machine on again.

Causes

1. In this case another person, the foreman, left the procedure and switched the machine on again — although, since the covers were off, the machine should not have started.
2. The machine's safety mechanism (involving an electromagnetic reed switch) failed. If it had functioned correctly, the machine would not have cycled while the guards were removed.
3. The safety mechanism had been faulty for a few weeks before the injury occurred. The

management knew of this and there had been requests from staff to management to have the machine repaired.

Conclusions and Recommendations

Electromagnetic reed switches cannot be relied upon by themselves and do not always fail to safety.

Before any work is carried out on machinery:

- The machine should be isolated from its power source so that all moving parts are immobilised;
- If practicable, the person doing the work should remove fuses;
- "Hold cards" should be attached to power controls to warn others from reconnecting the machine;
- In addition, lockout devices should be used to physically lock out machinery controls;
- The one key to the lockout device should be held by the operator at risk;
- Employers should formulate these procedures with the involvement of employees;
- Set procedures should be strictly followed.

For further information on isolation, hold cards and lockout devices, see Section 3.9 of *Guidelines for Guarding Principles and General Safety for Machinery* (October 1995) published by the Occupational Safety and Health Service (OSH) of the Department of Labour.