

Safety and health alert

06/00 Electrical short results in death

Incident

A person received fatal crush injuries when a 3 tonne pneumatically operated sorting gate self-closed, crushing him. Further examination revealed that a hand held electrical pendant switch had malfunctioned and sent an electrical impulse to a solenoid valve, sufficient to operate the pneumatic ram of the gate. The pendant switch unit is typical of switches used to operate travelling overhead cranes.

Factors

The pendant control had four switches for various operations. The bottom two switches were for opening and closing the pneumatically operated gate. There were several spare electrical terminals inside the pendant and some of the terminal screws had worked loose and fallen to the bottom of the pendant. One of these screws created a circuit between the switch contacts controlling the "close gate" switch.

The pendant switch was in continuous use and was carried for distances up to five metres during operation. This constant movement and vibration may have caused the screws to become loose.

Recommendations

- Lock out and tag out systems must be in place when working with electrically operated equipment and adequate instruction, training and supervision provided to ensure the safe system of work is maintained.
- Owners of similar moveable pendant switches should have them checked by a suitably qualified person to ensure that there are no loose components.
- Any rattles or other indication of loose components should be immediately reported and the switch taken out of service until it is checked by a competent person.
- Do not attempt shortcuts. These unplanned methods do not incorporate safety. If they did they would be the normal method of work.

Further Information

Further information can be obtained from the WorkSafe internet site www.worksafe.wa.gov.au, or by contacting customer service on 1300 307 877 or email: safety@docep.wa.gov.au.

