

General Workplace Inspectorate

Promoting Safety and Health in the Meat Industry

ACCIDENT/INCIDENT ALERT

23 September 2002

Fingers Amputated in Beef Chain

Incident

The victim was cleaning the length of the top guard of a beef chain while it was in operation. The areas of the guard to be cleaned varied from 2.5 - 2.8 m above floor level. He was being pushed along on a small flat-topped trolley of approximately 1.1 m in height.

At a point approximately halfway along the beef chain, he lost his balance and reached out his left hand for something to hold and thereby prevent himself falling to the concrete floor.

His gloved hand went into the approximate 50 mm gap between the inside edge of the gambrel rail and the main framework of the chain and became jammed. Before he could pull his hand free it was further jammed between a moving hock pusher and one of the steel divider brackets supporting the gambrel rail from the main framework of the chain.

The nearest stop button was 15 m from the accident site and the employee pushing the trolley was unable to get to it in time to prevent the injury.

As a result, the ring and little fingers of the victim's left hand were amputated.

The remainder of his hand and tendons required surgical reattachment and skin grafts.

Investigation

The resultant investigation highlighted the following points:

- It was not unknown for the chain to be going during cleaning. The victim thought the chain was off before he commenced cleaning.
- Deposits of fat on the floor impeded the smooth passage of the trolley.
- The trolley platform was 900 mm x 485 mm. Trolley height was 1100 mm.
- The nearest stop button was 15 m from the accident site. The chain could be restarted from this same stop button.
- The person pushing the trolley did not know the location of the stop button.
- The chain speed was measured at 1.5 m in approximately 17 seconds.
- No written procedure was in place for the chain to be switched off prior to cleaning, although it was accepted practice.
- Had the bottom guard on the chain been made approximately 50 mm wider to extend to the bottom edge of the gambrel rail, there would not have been a gap for the victim to place his hand. (Hygiene may have been compromised.)

- Had the gambrel rail been box sectioned back toward the main framework of the chain, but still allowing for the gambrel to be suspended from it, this accident could not have occurred and hygiene would not have been compromised.

N.B. Some gambrel rail entrapment points were within reach from floor level.

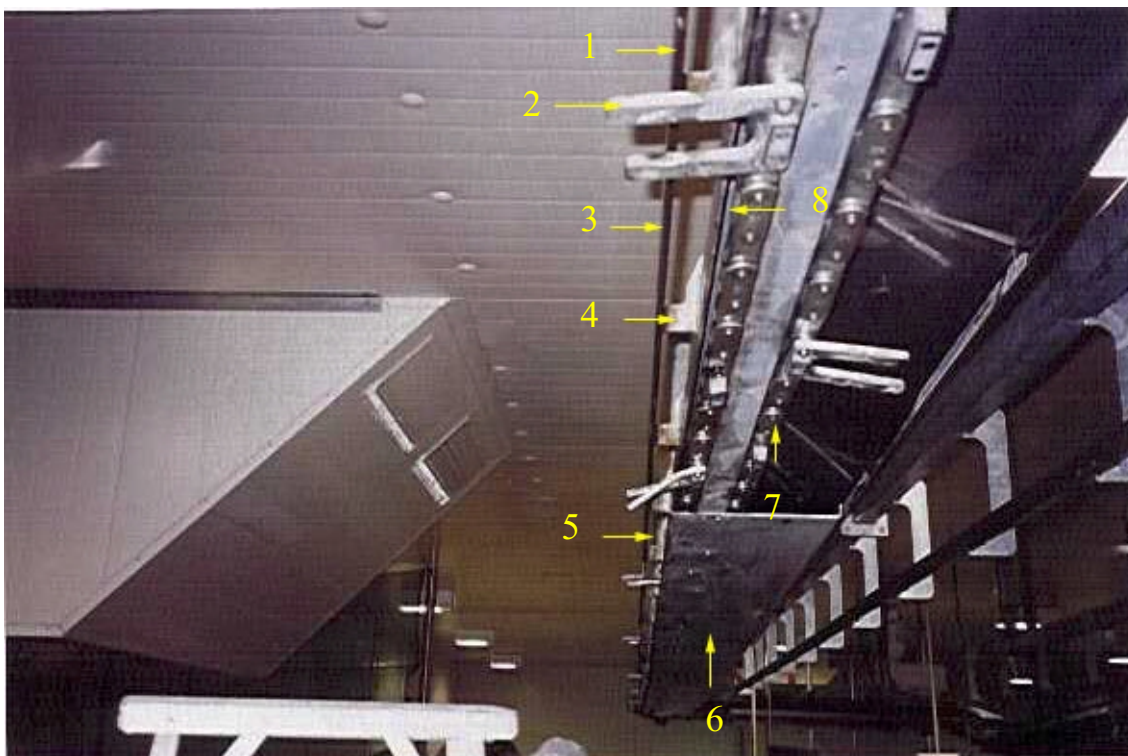
Recommendations

OSH makes the following recommendations:

- That gaps between gambrel rails and the main body of a beef chain be box sectioned or the bottom guard be extended to close the gap to the gambrel rail.

- That pull cords for emergency stop are within easy reach of the chain.
- For cleaning and maintenance, the chain must be stopped and lockout systems used to prevent unauthorised restart.
- That employees be trained in lockout procedures and the location of emergency stops and pull cords.
- That trolleys used as mobile work platforms have a guardrail at a height of 1 m.

The company also widened the wheel base on the trolley.



Key

- 1 & 3 Gambrel rail
- 2 Hock pusher
- 4 Spacer brackets support the gambrel rail
- 5 Extending guard 50 mm to this point would isolate gap
- 6 Section shows bottom guard in place
- 7 Section showing guard removed
- 8 Part of main framework to which brackets attach