

Hazard Alert



Grain Bin

Hazard Summary

A farmer was seriously injured when he fell 6.1 m (20 ft.) from the side of a 200 tonne grain tank. He was climbing the attached ladder to enter the bin from the top hatch to dislodge bridged grain. Both side rails broke, and the ladder began to detach from the bin. The rung that he was holding on to pulled through the bolt holes and the farmer fell to the ground. The tank was built four years prior to this incident.

Hazard Location

On-farm grain storage tank.

Contributing Factors

Inadequate building material for exterior ladder of grain tank. The ladder was made of aluminum pipe that was weakened at the crimp pints at the drilled bolt hole sites.



Legislated Requirements

- The Occupational Health and Safety Act under Section 17 states that “a self-employed person shall take every reasonable precaution to protect the self-employed person’s own occupational health and safety and that of other persons...”
- The Act also states under Section 15 that “a supplier shall ensure that any item, device, material, equipment or machinery supplied to a workplace is, when it is supplied, properly equipped with the safety features or devices required by the regulations.”

Recommendations

- Install ladders that are welded together instead of being bolted and are engineer-designed.
- Examine ladders before climbing for metal fatigue, rust, and cracking on both the rungs and the ladder walls.
- Report any unsafe condition of the ladder to the employer.
- Complete regular maintenance on ladders, making sure to replace bolts and bent rungs and checking the tightness of all nuts and bolts.
- Ensure that all there is restricted access to the ladder to prevent children or unauthorized people from climbing. This may include:
 - A ladder block-off plate that covers the bottom rungs and can be closed and secured.
 - Removal of the bottom 4 feet of rungs so that the ladder does not go down to the ground.
 - A removable or retractable ladder.
- Use both hands and face the ladder when ascending or descending.
- Install an engineered anchor point in the roof to which fall protection can be attached, step-off platforms every 10 feet (picture) or circular stairs with a railing.
- Receive fall protection training and wear appropriate fall protection equipment when necessary.

