



Source: Safe Work SA

Grain Silo Danger

Summary of incident

Grain silos on farms have been associated with various incidents including falls from heights, engulfment, structural collapse and being damaged by moving vehicles, creating risk to the health and safety of workers.

Background

Grain silos on farms are an integral part of farm infrastructure and have a variety of uses. They can be used for the storage of grain, legumes & animal feed between seasons. Incidents involving grain silos may be under-reported due to farmers not understanding the requirements to report injuries to the Regulator or the incident being relatively minor or regarded as a near-miss incident.



Example of an in situ silo used on farms for storage of grains and legumes.

Risks include falls from height while accessing the top of silos to open/close hatches or while checking fill levels within the silo or for maintenance work. There is also risk of engulfment within the silo when simultaneous activities/tasks occur or when damage to the silo goes undetected or unreported causing failure of the structure.

Probable causes

- Workers accessing silo ladders in unsuitable footwear, failing to ensure 3 points of contact with the ladder are maintained or attempting to carry tools or objects while climbing the ladder.
- Lack of regular inspection and maintenance of silos to identify metal fatigue, corrosion or damage from moving vehicles or plant.
- Working under or in silos while filling or emptying of grains is occurring.
- Overfilling the silo due to a change of product with greater moisture content (e.g. wheat compared with legumes).

Action required

- Ensure regular silo inspection and maintenance is conducted, and where required the structural integrity of the silo is assessed by a competent person.
- Consider structural inspection after extreme weather events.
- Do not enter, work inside, on, above or beneath a silo while filling or emptying is occurring.
- Comply with requirements for safe working in confined spaces.
- Always ensure three points of contact are maintained when ascending/descending silo ladders.
- Ensure silos have ground operated hatch levers and sight glasses.
- Always ensure silos with physical damage (e.g. by impact from mobile plant) are assessed and repaired prior to attaching additional load to the silo e.g. winches or hydraulic lifts.



Example of structural support corrosion.

Notice Board

Date Up: ___/___/___ Date Down: ___/___/___

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