

Safety and health alert

06/04 Grain silo failures on farms

Incident

There were a number of silo failures on farms in Western Australia over the past several years.

Factors

- Proper maintenance of silos and supporting structures.
- The issue of corrosion of structural members, welds and fastening devices such as bolts and screws.
- Overloading due to lack of maximum rated load markings (based on volumetric capacity) on the silos.
- The design of the silos and supporting structures:
Manufacturers and the persons responsible for the silo modifications must engage the services of an engineer/competent person to properly assess the design, manufacture or modification of silos.

Recommendations

- It is recommended that a competent person carry out inspections of the silos at least once a year prior to the harvesting season.
- Repair or replace rusted structural members, welds, bolts and screws.
- Provide safe operating procedures and maximum rated load markings (based on volumetric capacity) on the silos to avoid overloading of the silos.
- It is strongly recommended that silo manufacturers and persons responsible for the modification of silos and supporting structures employ the services of competent persons such as engineers to properly design the silos and supporting structures.
- Designers must consider factors such as the properties of the stored material, geometric parameters of the silos, storage capacity, environmental loads such as wind loads etc. and other relevant loads when designing or modifying silos and/or supporting structures. The designers may refer to "AS3774-1996, Loads on bulk solid containers" as a guide.

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.

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