

Wing nut of manhole detaches and flies away during discharge bulk silo truck

NON INEOS incident at 3rd party terminal

Logistics SHE Alerts

HIPO



what

A driver was unloading a bulk silo truck which had been loaded by a colleague.

Suddenly, a (wing) nut of one of the manholes detached and flew away through the air.

No one was injured.

The truck had been well maintained at regular intervals. The state of the nuts is part of the preventive inspection programme.

Two months before the incident, one nut of another manhole on this truck had been replaced.

why

The driver who loaded the truck did not notice any defect when closing the manholes.

The driver who unloaded the truck noticed when checking the tightness of the nuts that one nut was hard to turn. This is the nut that flew away.

The screw-thread appeared to be damaged, possibly by overtightening.

During unloading, the force on the nuts of a manhole can exceed 1000 kgf because of the air pressure inside the silo.

Turning the nut when the bulk silo is pressurised, damages the screw-thread.

learning

Drivers must be aware that a nut which does not turn easily can be damaged resulting in a dangerous situation therefore these have to be replaced.

When tightening the nuts, it is important not to use excessive force as this could lead to failure of the screw-thread.

When the screw-thread of a nut is damaged, the forces in the remaining nuts are unevenly distributed. This can cause failure of the other nuts followed by the manlid suddenly blowing open.

Never tighten the nuts when the bulk silo is pressurised!

See also video about another non Ineos accident (*no password needed –click cancel*)

<http://www.logisticsmatters.info/Unsafe%20Conditions/Video%2002-11-15.%20tightening%20manlid%20with%20silo%20under%20pressure.mp4>

Compromised safety principles

