

Case study | Flour silo grounding - Food manufacturing business

The dangers of flour

Even the most conscientiously managed sites can benefit from an external expert's experienced eye.



In a typical food factory flour is a common ingredient that is bulk stored in silos. Flour is an organic matter that when dispersed in air in certain conditions may burn or explode on the introduction of an ignition source.

Limiting the potential for the presence of an ignition source is a key factor in preventing dust explosions which can severely disrupt business operations and cause considerable damage to buildings and equipment.

Approach

During a food factory survey a client demonstrated exemplary maintenance checks of their bonding and earthing equipment used to load and unload the bulk flour silos. This involves annual testing for continuity and resistivity plus general condition of the clips. In addition to this clear signage was on display in the unload area highlighting the risk of explosions! One would suspect the build up of static is eliminated at all times for this operation.

When walking past the flour tanker unloading area, our specialist identified that the driver was using his own earthing/bonding cable when unloading and that the driver was attaching it to a random signpost frame for earth.

There are two issues with this, firstly the food manufacturer can not be certain of the condition of the flour tanker's earthing equipment, and secondly that the earth point used could not be guaranteed a clear path to earth. This is all that is required for a considerable dust explosion for this site.

Outcome

With QBE's experience of the food industry and of loss prevention engineering, we are able to identify possibly significant exposures which can easily be overlooked by clients. In this case the procedures for unloading flour were reviewed and re-enforced to all drivers working for the client.

Whilst ignition sources can never be fully eliminated, the QBE site survey potentially prevented a significant event for this food manufacturing client.

Whilst this is a food client, it is also applicable to the following industries which have dust hazards present: wood/furniture, metal, paper manufacturing, chemical and textile.

Further information

If you would like any further information or advice on our Risk Management Service please contact the team on rs@uk.qbe.com

For more information on QBE visit:
www.QBEurope.com/rs