



CIM-Safe

A STEP CHANGE IN FIRE SAFETY

by Cimbria

In the grain processing industry, and particularly in grain drying, there is always the potential risk that a spark can occur, and it is therefore necessary to implement solutions that will minimise the risk of serious damage to the equipment.

Cimbria now takes the current technology into the next level by introducing CIM-Safe, the most efficient spark detecting technology on the market. The CIM-Safe registers the glow from sparks and embers via a high-sensitivity infrared detection system and immediately sends an alarm to the operator and shuts down the dryer, thus preventing a fire from developing.

The grain processing market developed in the direction of fewer, but bigger, processing plants in which efficiency and reliability are key. In terms of maintaining productivity and profitability, it has been even more important now than ever to focus on safety equipment that ensures the safe operation of plants and detects sparks and embers as quickly as possible.

At the same time, legislative requirements such as OSHA in North America and ATEX in Europe have forced the industry – both suppliers of equipment and processing companies – to reconsider and enhance grain processing plant safety. In order to comply with legislation and safeguard processing equipment, Cimbria has recently introduced the new infrared spark detection system called CIM-Safe.

CIM-Safe is now a new safety device implemented primarily on our dryers, because the system has

several advantages. It has a faster reaction, compared to cable solution, and easy installation with highly sensitive infrared sensors. Furthermore, adjustments are not necessary, i.e. the system is always engaged, regardless of whether grain is being processed.

Control unit: The spark detector is connected to a central control unit that monitors the equipment and detects sparks or fire in time, such that it is possible to take action before any further damage occurs



Spark Detector:

The highly sensitive detector sensing infrared light is able to detect even through dense phase material and is fitted in areas where no daylight or other light is present. An air cleaning nozzle will be supplied when the sensor is placed in a humid environment. Cim-Safe can be further equipped with an automatic high-pressure water extinguishing system to provide an effective water barrier for extinguishing sparks when installed in confined space



The CIM-Safe system can easily be integrated into the equipment and connected to the local control panel, which activates an acoustic alarm and flashes on detection. For further safety, another alarm will trigger by other major events.

The later alarm could be configured by the user and used for automatic cut-out. CIM-Safe can also be equipped with an automatic water-based high-pressure system, which acts as an effective water barrier to extinguish sparks in the event closed spaces.

In other words, in all areas in which there is a potential risk of fire or explosion, CIM-Safe can be the solution for minimising expensive damage to equipment and (perhaps even more important) subsequent losses due to production shutdown.

CIM-Safe – Proving its worth in real life emergencies

In June 2018, Cimbria's After-Sales and Service Department, together with one of Europe's largest agribusiness companies, delivered the first of several CIM-Safe projects. In recent years, the client have had a fire in three of their dryers, despite the fact that they had installed CW-4 cables for fire detection in them. Cimbria, therefore, drew up a proposal for a safety upgrade of 24 of their dryers at different locations.

Cimbria won the order with its CIM-Safe solution, because of thorough documented testing and because already on several occasions it hindered fires by detecting the glow from embers before a potential fire could develop, resulting in limited damage and downtime kept to a minimum.

Remote alarm:

The control panel activates an acoustic alarm and flashing warning light upon detection. For added protection, a second alarm is activated upon extended detection. This second alarm can be user-adjusted and is used for automated process shutdown. For added safety, a remote alarm to e.g. a mobile phone can be added



CIM-Safe is compatible with most control units as long as they have a fire safety system. The solution is quick to install with just around 12 hours on a standard plant. Maintenance costs are low on the system and it is easy for the user to operate. Delivery contract was signed on May 1st, 2018. The CIM-Safe solutions (on the 24 plants) were all installed between May 15th – June 15th, i.e. in just 30 days, which is in itself, an impressive feat!

On June 19th there was a joint introduction and training of CIM-Safe held for the operators to make sure that everyone was familiar with its use. Just four months after installation, this company reported that two of the CIM-Safe systems have already proved their worth. CIM-safe prevented two fires for them! From detection of the spark until the plant was up and running again, the downtime was only 20 minutes!

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