



## Fire and Explosion Protection in the Sugar Industry

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For the production of sugar, the sugar beets are processed completely. The sugar is extracted, and the remaining chips are pelletised and return to the farms as animal feed. Sugar dust is highly explosive and requires good extraction systems and explosion protection. The drying, pelletising, cooling and conveying processes hold a high risk of fire. Machines and material transport are to be monitored. A GreCon spark detection and extinguishment system significantly increases the safety and protection of the production facilities. It detects dangerous ignition sources in time and automatically extinguishes them without interrupting production – and has done so successfully for more than 35 years.

### THE RIGHT SOLUTION

- ✓ a fast, reliable spark extinguishing system which is especially adapted to your production
- ✓ the detection of sparks and glowing particles in the areas at risk
- ✓ protection without interrupting production

## RISKS

For the drying of sugar beet chips in drum dryers, temperatures are up to about 750 °C. Interruptions of the material flow lead to overheating of the chips, which can cause fire in the dryer and the spreading of fire via exhaust ducts and conveying facilities. A further risk of fire is represented by the pelletising process where sparks and glowing embers can also be generated. The following cooling process leads to an extremely high risk of fire. Defective machine parts, foreign bodies or high process temperatures can cause overheating, sparks or glowing embers that can cause fire and dust explosions in the mechanical and pneumatic conveying facilities and downstream filters, silos and bins.

## DANGER ZONES

Fire or explosions in sugar production can damage or even destroy the facilities. A GreCon spark detection and extinguishment system monitors and protects the following areas at risk:

- ✓ Dryer
- ✓ Pellet press
- ✓ Cooler
- ✓ Filter
- ✓ Conveying facilities

## DIAGRAM OF PROTECTION CONCEPT

