CASE STUDY
GRAIN FIELD CHICKENS

INDUSTRY

- **Warehousing, Logistics & Cold Storage**
  - Agriculture

PRODUCT INFORMATION

- SecuriHeat LHD
- SecuriSmoke ASD

POULTRY PROCESSING PLANT PROTECTED BY THE LATEST FIRE DETECTION TECHNOLOGY

Grain Field Chickens, based in Reitz in the Orange Free State Province, are known for their high-quality poultry products and being Proudly South African farmers. The company upholds high quality and service standards to supply the SA market with only the best poultry products.

The plant features all the typical fire detection challenges one would expect to encounter in a food processing facility. The extreme temperature fluctuations in the processing and packaging areas and the high humidity, moisture, and steam levels generated by the operations necessitate a specialised fire detection system to cover the risks in these harsh conditions effectively. Some processes create explosive conditions, and equipment in these areas has to be certified for use in explosive atmosphere applications.

The SecuriSmoke ASD535 HD was installed in the cold storage, fresh chiller, plant room and dispatch areas. This heavy-duty ASD suits areas with large amounts of dust and moisture. External filtration can be added to limit dust ingress and ensure successful air monitoring for smoke particles to reduce false alarms. Water retaining boxes restrict moisture from entering the dust filters and sampling chamber to limit blockages and faults in the system. Additionally, heated sampling points on the pipe network in the cold storage applications will prevent the sampling holes from icing up.

The SecuriHeat LHD Heavy-Duty ADW was installed in the evisceration and de-feathering, main packaging, and palletising and wrapping areas. The heavy-duty ADW is explosion-proof and is suited for areas with large amounts of dust, high temperatures, and large volumes of steam where the site has been classified as explosive. The detector is installed outside the environment, and the sensing tube is inside the risk area. The sensing tube's robust construction and flexibility allow the sensing element to be installed close to the fire risk for early detection. Additionally, the ADW allows for fixed and rate-of-rise temperature monitoring.

Fire-Quip and Technoswitch successfully tested the performance of the equipment in simulated off-site environments, giving the end user complete confidence in the products and solutions provided.

The client was pleased with the test results and the contractor's efforts to prove that the technology could be successfully installed in their facility. Technoswitch assisted Fire Quip with the final design to ensure the best protection and a cost-effective solution.

Eleven heavy-duty SecuriSmoke aspirating smoke detectors with 2,960 metres of sampling pipe and five line-type SecuriHeat ADW detectors connected to 1,000 metres of sensing tube now protect this state-of-the-art processing plant.

The installation and commissioning of the fire detection system was completed in April 2022.

Technoswitch prides itself in partnering with Securiton International and Fire-Quip. Based on these relationships and their excellent support, we could provide Grain Field Chickens with an effective, world-class solution and build a new partnership.