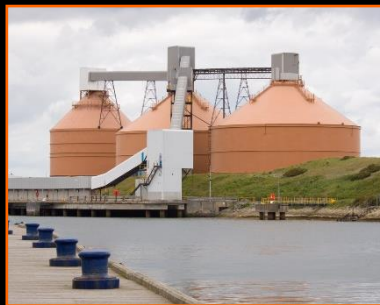
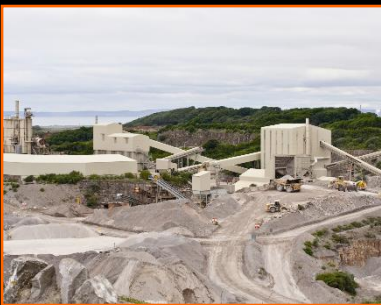


# **HYCONTROL**

LEVEL MEASUREMENT SOLUTIONS



## *Testable Silo Protection Systems Adhesive Manufacturer Application*



## Everbuild avoid sticky situations with fully testable Silo Protection Systems

Fully integrated SPS silo protection systems have been installed by silo safety specialists **Hycontrol** to ensure the ongoing safe and reliable pneumatic filling of powder storage silos operating at the manufacturing site of **Everbuild Building Products Ltd.**

Leeds-based Everbuild, part of the renowned international **Sika Group**, is one of the UK's leading sealant, adhesive and building chemical manufacturers, with customers in over 70 countries. The integrated protection systems, which feature full ground level testing capabilities for all critical system components, have been fitted to two ten metre high silos used to store finely powdered dolomite.

The dolomite, an essential raw material in a wide range of the company's adhesive and sealant formulations, is delivered by road tanker and it is vitally important that the filling process does not result in the over-

pressurisation or overfilling of the silos. Typical storage silos are not pressure rated vessels and as a result, they can rupture at pressures as low as 1 or 2 psi above atmospheric. Failure of any safety system installed to prevent such problems can result in serious personnel injury, environmental pollution, loss of product and disruption to production.

Hycontrol's SPS silo safety system sets the benchmark for effective silo protection. Guidelines from the **Mineral Product Association (MPA)** for silo protection systems recommend that silos should be fitted with three essential components: a pressure sensor calibrated to trigger the protection system if the pressure in the silo approaches a dangerous level, a pressure relief valve (PRV), suitably sized for the application; an effective high-level alarm device, and an auto shut off system that halts the filling process should exceed safe levels be exceeded. In addition to meeting the MPA requirements, Hycontrol's system also includes a complete ground level testing (GLT) facility.

Everbuild's Engineering Manager **Luke Erlank** is clear on his company's safety philosophy and the importance of effective silo protection: "Our parent company's plant in Welwyn Garden City already has Hycontrol SPS protection systems successfully operating on nine silos. Following discussions with



our Sika engineering colleagues, we had no hesitation in installing similar protection systems on our dolomite silos to ensure ongoing plant safety and environmental protection. Hycontrol's advanced GLT feature gives us important operational benefits by allowing our operators to test all key components of the SPS, including pressure sensor and the PRV, before each and every fill. This eliminates any working-at-height risks and the entire system is checked in just six seconds. If any component is not functioning correctly the system will alert our operators and the filling inlet valve will not open until any issues have been fully resolved."

The complete safety system includes Hycontrol's patented FLEX-501D pressure sensor, specifically designed for silo protection. It is the only pressure sensor that is fully and accurately testable over its entire working range, ensuring correct functionality as part of the GLT. It is also self-cleaning and controls the inlet valve throughout the filling process. If the pressure level becomes dangerous, the sensor will trigger an alarm and close the inlet valve whilst the situation is addressed. Crucially this is pre-set to occur before the PRV can lift and release product into the atmosphere.

The high-level alarm utilises a high reliability, self-cleaning DP150 Diamond Point vibrating probe. For this application, the probes are 2.0 metres in length allowing the high-level alarm to be set 1.5 metres below the top of the silo.

The built-in PRV test facility is precisely calibrated to ensure it will only lift at the correct pressure. Previously this was only possible by removing the unit and bench-testing it. The ground level testing procedure physically opens the relief valve to ensure correct operation with the added bonus of cleaning the valve of any accumulated product.

An additional key advantage of the Hycontrol system is its capability to record any high pressure, high level and PRV lift events with a time and date stamp, whilst also counting the number of times an alarm condition is reached. This is essential for preventative maintenance purposes, allowing engineers to address any issues in the system before they can become acute problems.



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