

New Spark Detection
Increases the Degree of Protection in Big Drop Chutes



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Due to increasing production capacities, the dimensions of conveying systems in the wood based panel industry are getting larger and larger. Looking at it concerning safety regulations, it becomes more and more difficult to monitor such enormous material quantities to optimally detect a transportation of ignition energy in time to take preventive protection measures. To take account of this development, GreCon developed a new detector type, the Linear Light Polyp LLQ, to offer optimum safety in the area of preventive fire and explosion protection for production plants.

Additional Safety for Drop Chutes

The Linear Light Polyp LLQ is installed in the drop chute right in the middle of the material flow so that the material drops onto the sensor from above and „flows along“ both sides. The optical sensory surfaces of the detector are located on both sides and thus offer further possibilities - in addition to the detectors on the outside walls of the drop chute - to detect sparks or glowing embers that are hidden inside a dense flow of material. This gives greater reliability.

Function Principle

The Linear Light Polyp LLQ consists of a solid, high-strength stainless steel hollow section in which the optical fibres have been tried and tested for decades, are split and distributed over the width of the section. Thus, optical sensory fields spread along the hollow section on both sides.

Optical Sensory Fields

When the Linear Light Polyp LLQ is installed in the drop chute centrally, it divides the cross section of the chute in half, and the detection performance of the entire system is greatly increased by a simple geometric trick.

Change of the Geometric Proportions

Due to the protected arrangement of a large number of optical fibres directly in the material flow, the detection reliability can be clearly optimised by changing the geometric proportions, since the optical measurement of ignition energy in a dense material flow is clearly improved. This way, the entire safety concept for modern production plants, using spark detection technology that has been tried and tested for years, can be clearly optimised.

Retrofitting in Existing Installations

Of course, the new Linear Light Polyp LLQ can be retrofitted in existing installations to improve the detection reliability. Retrofitting is easily possible in connection with all GreCon control consoles.

Patented Application

The Linear Light Polyp LLQ is patented under number 20 2009 006 359.3.