



Application

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A PNEUMATIC CONVEYING SYSTEM J-PACK HAS BEEN INSTALLED IN A FOOD PLANT

We Recover The Starches With A Big Bag Pneumatic Loading Thanks To The Venturi Ejectors



In a food production plant has been installed a recovery of the starch. Sucked into a filter, the starch is presented as fine dust particles, that had to be put in a big bag to be stored in a designated area.

The suction with the filter collector is classified in ATEX zone 22 and therefore also the recovery system must be designed to operate with the same classification.

The proposed solution is based on a dilute phase pneumatic conveying, by means of a [J-PACK](#) IV model package. The

component to which the pneumatic injection has been assigned is a [VENTURI EDUCTOR](#) of the type in line, supplied with compressed air controlled by flow and pressure regulators. The feeding the eductor has been assigned to a [ROTARY AIRLOCK](#) high pressure seal, in order to contain at most the leakage of the flushing air in countercurrent pulsed by the filter above.

The rotary valve discharge the powder into a conical transition chute, equipped with some fluidization plugs more a pinch of line with adjustable flow, so as to guarantee the false air necessary in order to convey the product.

The pneumatic conveying takes place in rubber hose, transferring into a cyclone automatic filter. The inlet of the big bag is provided with inflatable seal.

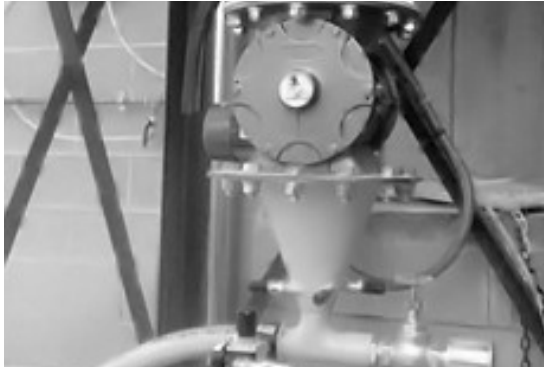
An instrument panel allows the management from a remote control panel.



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THE SELECTION OF A STRATEGIC COMPONENT **ATEX And Cost Optimization**



From the point of view of the operational flow, the injection system had to be connected to a pneumatic system installed in the area ATEX 22, therefore had to be designed and constructed with suitable characteristics. The most immediate solution would be to provide for all ATEX certified machines, then certify the entire system. In this occasion our design activity has set the goal of containing the costs of supply, while maintaining compatibility with the system requirements. The solution came with a choice of installing a rotary valve ATEX

classified, also certified as an explosion-proof component.

Once installed, the component acts as a compartment against the effects of explosion that could result from the process upstream to downstream equipment, in our case eductor, the big bag filter and pneumatic components, that in turn were selected classified ATEX.

The DNA of ROSADA ILS is the design of reliable and durable solutions and not the cheapest possible. Nevertheless our research is constant, also by reason of the economic aspects of a system.

A rotary valve ATEX classified, certified also as an explosion-proof component.

The targeted search for a strategic component of higher cost has led to some savings in terms of global supply and system maintenance.

Standard Compressed Air In Pneumatic Conveying

The pneumatic conveying of starch has been chosen in the dilute phase with Venturi in-line eductor, fed sideways by compressed air network, regulated as in flow and pressure. This allows the material to be conveyed flows along the pipeline and along the eductor body, without deviation, as it happens with a conventional eductor.

Such a solution has the advantage of economy of supply, installation and maintenance, also because it does not require the use of a specific unit of air production at low pressure, such as a blower or other.

But to understand whether the component is the optimal solution you must also consider



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the capacity limits and the consumption of compressed air.

