JEC Vac Solutions Ltd. Conveying Eductor replaces worn out rotary airlock in Silica Sand Conveying System

Silica sand can be a nightmare in lean phase pneumatic conveying systems due to its highly abrasive nature causing substantial wear problems. Excessive maintenance and repair requirements, loss of conveying efficiency and production downtime mean expensive running costs and reduced profitability.

A major company in the sand and clay industry in the UK was experiencing just these problems with excessive wear on the rotor tips and body of a rotary valve. The wear problem caused loss of conveying capacity due to blow back through the valve reducing the rotor pocket fill efficiency and loss of pressure in the conveying line. Together these problems caused frequent pipeline blockages and production shut downs resulting in excessive costs.

JEC Vac Solutions Ltd solved the problem with a Pneumatic Conveying Eductor utilising the existing blower and minor modifications to the conveying line.

Pneumatic conveying eductors offer low cost solutions for trouble free conveying of bulk solids and powders. With convey rates of up to 9000kg per hour and no moving parts, the conveying Eductor can be operated 24 hours a day, 7 days a week with no maintenance requirements.

Available in both Painted and Hygienic Stainless Steel construction Conveying Eductors offer a reliable, cost effective conveying alternative for all industries.

Eductors rely on self metering venturi technology to create a vacuum which siphons bulk solids into the conveying line. Conveying eductors enable the use of low pressure air to be used to move powders, pellets, and bulk solids cleanly and with minimum degradation, to storage, process or packing operations.

Conveying eductors have additional advantages over rotary airlocks in lean phase conveying systems such as:

- No blow-back into the feeding silo or hopper as dry bulk is actually sucked into the line improving conveying rates and efficiency.
- Minimum product degradation as there is no mechanical shearing as caused by the blades of rotary airlocks.
- No moving parts thereby eliminating the need for expensive downtime repairs and maintenance resulting in reduced operating costs and increased profitability.
- Low cost alternative to replacing rotary valves in existing systems to improve system performance.

Additive Injection Systems

Eductors are also ideally suited for Injection of sorbent and other additives into low pressure gas streams such a Flue gas cleaning systems or furnaces.

Dry sorbent injection involves the addition of an alkaline material into the gas stream to react with the acid gases. The sorbent may be injected directly at different points: into the combustion process, into the flue gas duct, or an open reaction chamber.
The acid gases react with the alkaline sorbents to form solid salts which are removed with the flue dusts. Eductors may be used together with simple measuring equipment to accurately feed additives into processes in a cost effective, reliable way.

Contact JEC Vac Solutions Ltd now, to see how we can help improve your conveying systems to reduce costs and improve profitability.

In addition to the Pneumatic Conveying Eductors, JEC Vac Solutions Ltd. also design and supply Central Vacuum Cleaning Systems, Heavy Duty and Bulk Collection Vacuum Systems, Mobile Industrial Vacuum Cleaners and Vacuum Conveying Systems.

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