FloAero Inc

Floveyor Aeromechanical Conveyors

Floveyor Comparisons

The following concerns offer reasoning as to why a Floveyor machine is the equipment of choice for applications of loading powder / granule / flake / mixture materials into elevated process equipment.

- Inclined flexible augers retain a significant amount of material. It is neither an accurate nor a consistent amount from batch to batch. The Floveyor does not retain product.
- Inclined screws and flexible augers require the entire tube to be full of product before material will discharge from the end. With the incline of the screw, material slips back between flights. With a mixture of material, this "slippage" leads to segregation of the products. The Floveyor functions in the under loaded condition and transfers that material which it sees without regard to different densities, particle sizes, etc.
- The powders being transferred are heat sensitive. They tend to build up on any surface creating heat, which drag conveyors, flexible augers, and similar machines do. The Floveyor does not impart heat to the product because the product is in suspension while being conveyed. This is associated with the fact that the product, at any moment in time, is within other types of conveyors for a period of 20 – 60 seconds, as compared to only ½ – 4 seconds within a Floveyor.
- The powders being transferred are sticky. They stick to any surface. Bucket elevators, flexible augers, drag conveyors are all in contact with the material for a lengthy period of time, which cause buildup and jamming. The Floveyor suspends the material within the draft pocket it creates, thereby allowing the product to flow freely.
- Drag conveyors and screw conveyors typically do not operate in the vertical position. Therefore, these types of conveyors will need more space to operate at an incline. Flexible augers that are positioned in the "bent" (with a radius) position result in less efficient material transfer, significant potential for breaking of the screw, etc. The Floveyor can be positioned at any angle without affecting its performance.
- Bucket elevators have a difficult time to discharge the entire product from its buckets when the material has a sticky nature. The Floveyor discharges the material with centrifugal force.
- Bucket elevators have open top buckets whereby dusting occurs for powdery type materials and, thereby, causing significant maintenance. The Floveyor has a totally enclosed product zone.
- A pneumatic system requires a significant amount of HP to move the same amount of product. If the pneumatic system utilizes a venturi to create a vacuum, the compressor's motor HP that is needed to create a suitable amount of compressed air, is even more.
- For any pneumatic system, a large (tall) filter receiver is necessary for the air/product separation, especially when transferring dusty powders. Although pneumatic systems offer cartridge filter elements, which give large ft² filter cloth area within a small space, they are not suitable for separating the dusty air of sticky powders, because the sticky particles get trapped within the pleats of the cartridge, even with the use of reverse pulse jet compressed air cleaning. This leads to constant maintenance/replacement of the filters.
- For a pneumatic system to transfer sticky powders, it is necessary that the material is fed into the convey line which requires more than just an airlock or a simple box probe.
- The Floveyor is an economically priced conveyor. Numerous times it gets compared to other common types of mechanical conveyors (flexible augers, inclined screws, etc), whereby the Floveyor price is perceived as being higher. The end user must weigh into account the lack of the design features of the other equipment. Otherwise, one suffers with the problems that occur causing such equipment to break down or jam that is additional cost. By purchasing the Floveyor that attains the customer's end product quality, it results in a significant savings to the end user.
- For a relatively short distance (i.e. < 80), whereby one Floveyor machine is utilized, a suitably sized pneumatic system (to load the materials within a reasonable amount of time) is significantly more expensive for the equipment cost and its installation cost compared to a Floveyor aeromechanical conveyor system.