



The bulk bag unloader supplied to unload silica sand.



The flexible screw conveyor transfers silica sand 18ft/ 5.5m high over a distance of 16ft/ 5m.

Customer Requirements

Carroll & Meynell Ltd, a leading manufacturer of electrical transformers, moved to a new facility to accommodate considerable growth in their business. Further growth caused them to re-think their production methods. The handling of the fine silica sand used to 'pot' transformers was a major bottleneck in their production line.

1. Silica sand was received in 50lb/ 25kg bags and emptied into a hopper.
2. The hopper was lifted on to a platform by forklift to provide a head of sand for filling around the winding within each transformer casing.
3. They used hand-operated ball valves to control the sand and the valves stuck open from time to time.
4. All in all, it was a time consuming and a very messy process given that Carroll & Meynell are using around 1.25 tons of sand per day.

Spiroflow Solution

Carroll & Meynell concluded that the optimum solution was to receive their dry sand in sealed 1 ton bulk bags and then mechanically convey it up to small holding hoppers above each of two production lines. They also wanted more reliable flow control valves at the end of the sand delivery tubes.

The Spiroflow system includes:

- A bulk bag unloader
- A flexible screw conveyor
- A diverter valve with tubular feed chutes to the holding hoppers
- Two holding hoppers with level probes
- Unloading chutes to the sand filling points on each of the two production lines
- Iris diaphragm valves to control the flow of sand

Carroll & Meynell's own engineers installed the system and, being electrical engineering specialists, they manufactured the controls system to our specification.

The Result

The installation has been in operation for some time now and has transformed the output of the 110 volt transformers produced for the construction industry. Production is now up to 6,000 units a month – several times more than before.

As Director, Bob Carroll, concludes, "We started to get cold feet about doing the installation ourselves having manufactured the supports to drawings provided by Spiroflow - but it was so easy to install. It was spot on, it all slotted together well! It has been doing a sterling job ever since and has eliminated both the bottleneck and the housekeeping problems on our production line."

How Can Spiroflow Help Your Business?

Contact us today to discuss your specific applications and needs.