Case Study - Sample Stream Conveyor

The Process Challenge

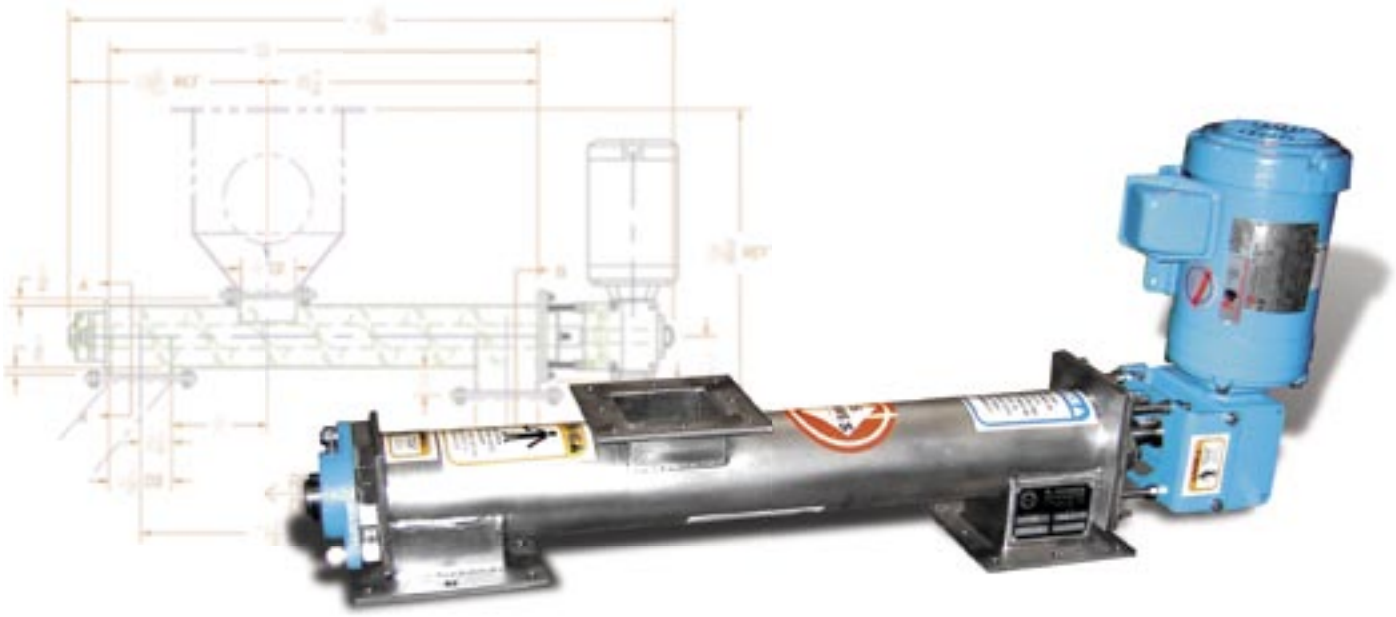
A major pet food manufacturer was looking for a way employ a continuous quality monitor. Their R&D team had already selected a sensor and determined a method of pulling samples from the production line. Their next challenge was to provide controlled mass flow across their new sensor and return the sampled product to the production flow while also having the ability to collect samples for verification testing in their lab. They contacted S. Howes for assistance.

The Solution

S. Howes worked with the customer's R&D department to design a small, reversing screw conveyor to meet their needs. The conveyor components were kept to a minimum size to fit in the tight space available. The sample stream was brought into a hopper designed to house the selected instrumentation for their monitoring needs. This hopper mounted onto the S. Howes conveyor. An inverter duty motor was used so that a Variable Frequency Drive could be used to fine-tune the flow across the sensor. The VFD could be used to adjust the auger speed so that the conveyor capacity could be matched to the sample stream rate. The VFD also allowed the conveyor to reverse direction on demand. During normal operation, the conveyor would accept the sample stream and return it to the main process stream. On demand, an operator can reverse the conveyor to collect a sample for submission to the lab.

The Result

The S. Howes conveyor was installed into one production line of one facility to test the concept. That testing was successful. The customer is now working with S. Howes to develop a universal design of this concept to outfit several production lines.



Photos and drawings are not intended to show or suggest use or non-use of any operator protection systems

S. HOWES

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