



New KWS Screw Feeder is Skid-Mounted for Easy Relocation as Required



Double Flights Provide Even Discharge of Lamb Meal to Bar Magnet

Screw Feeder for Unloading Lamb Meal

General Description

Wilbur-Ellis is a leading international marketer and distributor of agricultural products, animal nutrition, and specialty chemicals and ingredients. As a family-owned business since 1921, Wilbur-Ellis prides itself on being a forward-looking company with 4,500 employees across North America and Asia-Pacific. Now a multibillion-dollar company, Wilbur-Ellis continues to strive to provide the world with the essentials to thrive. KWS worked with the Nutrition Division which focuses on industry innovations, sourcing only the highest quality nutrients for livestock, pet food, and aquaculture.

In the Rosser, TX plant, lamb meal arrives via sea container where it is offloaded, processed, and stored before being shipped to various producers of pet food. Lamb meal is a common ingredient in pet food for cats and dogs. It's made from lamb bones and offal that's been rendered using low-temperature and conventional methods and then dried into a powder. Lamb meal is a great source of high-quality protein and essential fatty acids for pets because it contains more protein than fresh lamb.

In an effort to improve product quality, Wilbur-Ellis looked for a way to remove metallic impurities as the lamb meal was being offloaded from the container. In the current process, the lamb meal was offloaded directly into a screw conveyor below grade which took it directly to storage. In the new process, the lamb meal would be offloaded to a screw feeder above grade that would convey the meal through a bar magnet before discharging it into the storage conveyor.

Design Parameters

Product Type: Lamb Meal

Material Density: 47 Lbs. per Cubic Foot

Conveyor System Capacity: 936 Cubic feet per Hour

Duty: Intermittent

KWS Advantages

KWS engineers made a site visit during the initial design phase and met with plant engineers and operators to gain a full understanding of the current process and the expectations of the new system. This would ensure the ideal solution was being offered to meet Wilbur-Ellis' unique application needs. Because the new equipment was fitting into an area around existing equipment, KWS engineers needed to take detailed dimensional measurements of the area and sea containers while on site.

KWS Special Features

Wilbur-Ellis selected Magnetic Products, Inc. (MPI) as the supplier of the drawer-style magnet. KWS worked with the engineers at MPI to design the discharge transition chute from the screw feeder to have adequate length for optimal performance of the magnetic. KWS engineers designed a unique support bracket to rigidly mount the magnet in place preventing movement that could potentially damage the magnet during operation.



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KWS Special Features Cont.

Trucks with containers arrive and are unloaded through a drive-thru building. As a result, Wilbur-Ellis requested the screw feeder and magnet be skid-mounted for easy relocation for truck arrival and offloading. The heavy-duty structural steel design is extremely robust and includes forklift pockets for simple maneuverability.

The final two feet of the screw is fitted with double flights. Double flights have the outside diameter equal to the screw pitch. A second set of flights is added 180 degrees apart from the first set to provide a more even discharge and reduce surges of the lamb meal into the magnet.

Testimonial

Henry Rychlik, Plant Manager – Wilbur-Ellis

"The fitment of the new system is perfect! The KWS engineering team did a fantastic job!"



KWS Coordinated with Magnetic Products to Integrate Bar Magnet to Screw Feeder



Lamb Meal is Received by Sea Container and Offloaded to Screw Feeder



New KWS Screw Feeder Meters Lamb Meal to Bar Magnet



Bar Magnet Removes Ferrous Metals from Lamb Meal



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