



Metering Ground Limestone from a Silo to a Paddle Mixer

Question

I am working on a project with part of the process to transport ground lime for a silo to a paddle mixer. I would like to use a conveyor belt to transport the lime but am concerned about belts being very messy with dust and carry over. Would a screw feeder be more appropriate for this application?

Answer

A screw feeder is the most preferred way to meter ground limestone to a paddle mixer. Screw feeders can be designed to be totally enclosed and dust-tight to prevent any product leakage. Since this is a heavy industrial application, we would recommend using adjustable flanged gland seals on the drive and tail shafts to keep the fine, ground limestone contained in the screw feeder. The screw feeder would typically be designed with a U-trough and a bolted cover. Bolting the cover on 6-inch centers would ensure that there is no product leakage. You could also use a tubular housing instead of the U-trough to make sure there is no product leakage.

A screw feeder can accurately meter the ground limestone to the paddle mixer. Screw feeders are volumetric metering devices and when used with an AC variable frequency drive can accurately meter within 0.5-percent.

If the distance between the silo and the paddle mixer is more than 20-feet you may consider using a short screw feeder to meter the product from the silo to a transfer screw conveyor. The transfer screw conveyor would then convey the product to the paddle mixer. It is difficult to design a screw feeder longer than about 20-feet without adding an internal hanger bearing. We would not recommend using an internal hanger bearing in a screw feeder for your application.



**Design
Engineering
Manufacturing**

KWS Manufacturing

3041 Conveyor Drive
Burlison, Texas 76028

Toll Free: (800) 543-6558

Phone: (817) 295-2247

Fax: (817) 447-8528

www.kwsmfg.com