

High-efficiency, in-drum mixer quickly reconditions $Mg(OH)_2$ slurry

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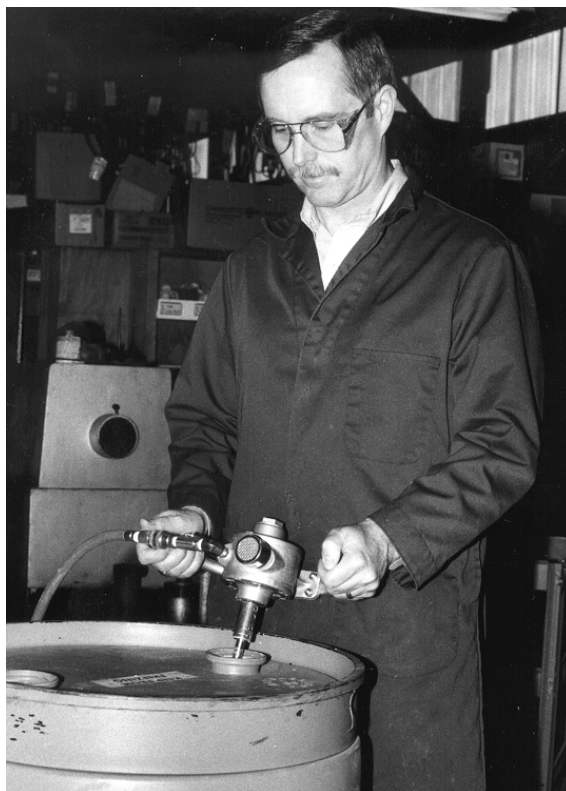
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Problem: Maram Corporation, a specialty chemical company in North-brook, IL, markets a 58% slurry of magnesium hydroxide [$Mg(OH)_2$] that is packaged in 55-gal drums. Over time, the slurry tends to separate. Solids settle to the bottom of the drums. The drums of slurry need to be reconditioned (mixed) before use. If the product sits in inventory for an extended period, impacted sediments can form that require even more vigorous mixing. A boat-prop-type bung-entering drum mixer was being used. It was taking about 25-35 minutes to recondition a drum of slurry. Speeding up the process was desirable.

Solution: Maram engineers searched two years for a portable mixer that would quickly get material off the bottom of a drum that had settled. They located an air-powered, bung-entering, high-efficiency, adjustable drum mixer that does the job.

The stainless-steel mixer has four levels of adjustable, fold-down, high-shear impellers that easily pass through the bung hole of the 55-gal drums. The impellers automatically open when the shaft rotates and close when spinning ceases. The special turbine blade profile maximizes material movement at all rpm. When rotating, the impellers generate a vortex directed downward along the shaft, forcing the liquid to the bottom, where the sediment is dislodged. Handlebars and grips on the unit make one-person operation easy. Bung and rim-mounting drive units are available for unattended mixing.

Maram recommends that its customers use



Maram Corporation staff test the bung-entering, high efficiency drum mixer in a 55 gal drum of $Mg(OH)_2$ slurry. The results are a more-than-500% reduction in mixing time.



DM-55BAS Bung Mount - High Efficiency Drum Mixer

the mixer on drums of $Mg(OH)_2$ slurry in two different ways. One is to dislodge settled material from the bottom of a drum. The second is to eliminate stratification within the drum at the time of product use. Every time a new drum is brought from inventory and opened, the mixer is used 5-10 minutes to recondition the slurry. On succeeding days of use, before drawing material out of an open drum, the mixer is put into the drum for a brief time to ensure the product homogeneity.

Results: The bung-entering mixer has reduced the drummed-slurry reconditioning time for Maram customers by more than

500%. Mixers agitate the top, middle and bottom of the drum simultaneously. The slurry is homogenized to a higher level than had previously been achieved.

Use of the bung-entering, high-efficiency, adjustable drum mixer has been so successful that Maram sends the mixer to customers who order the $Mg(OH)_2$ on approval. After trying it, each customer has chosen to buy the mixer. None has been returned.

Model DM-55ADH/A bung-entering, high-efficiency, adjustable drum mixer is a product of DRUM-MATES® Inc.