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CASE STUDY : Limestone

A major cement manufacturer in the Midwest utilizes 12 FMC Syntron vibratory pan feeders to transport limestone from the surge pile to the raw mill feed belt.

MAJOR CEMENT PLANT SOLVES LIMESTONE FLOW PROBLEMS WITH TIVAR® 88

Application:	Feeders
Quantity:	12 FMC Vibratory Pan Feeders
Liner:	TIVAR® 88, 1/2" Thick
Bulk Material:	Limestone
Substrate:	Carbon Steel
Problem:	Sticking
Date Installed:	1990

The Challenge



FMC Syntron vibratory pan feeder after TIVAR® 88 liner installation.

Due to external environmental factors (freezing temperatures and rain), significant flow problems occurred in the pan feeder. Moist and/or freezing limestone would stick to and plug the pan feeder, creating quality control problems and raw mill downtime. This resulted in off-specification kiln feed and created additional processing steps to bring the kiln feed back into acceptable specifications.

Plant production labor had elected to use jackhammers and heating torches to keep limestone from freezing, and to break freezing material loose from the pan feeder. This was an unsatisfactory solution due to safety and labor issues.

Quadrant's solution

TIVAR® 88, 1/2"-thick, due to its low coefficient of friction, excellent sliding abrasion resistance, and excellent release properties even in freezing temperatures, was selected as the material to "test" line one pan feeder.

TIVAR® 88 successfully met the challenge, eliminating flow problems in the pan feeder. As a result of this success, the other eleven pan feeders were lined with TIVAR® 88. Many of these liners have now been in service for more than a decade. This success resulted in TIVAR® 88's selection for use in other plant applications, including coal pan feeders, clinker/gypsum reclaim hopper pan feeders and coal surge bin hoppers.

Important: Most plastics will ignite and sustain flame under certain conditions. Caution is urged where any material may be exposed to open flame or heat generating equipment. Use Material Safety Data Sheets to determine auto-ignition and flashpoint temperatures of material or consult Quadrant Engineering Plastic Products. WARRANTY: Characteristics and applications for products are shown for information only and should not be viewed as recommendations for use or fitness for any particular purpose. TIVAR® and SystemTIVAR® are registered trademarks of Quadrant Engineering Plastic Products, Inc.

