TOTAL SOLUTIONS
from SEMI-BULK SYSTEMS

Power Plants
April 2009

This Power Plant status update is being sent to Ameren UE Engineers & Associates relating to the Sioux Plant FGD project

Power Plants - Limestone Slurry for FGD

In September 2007, two vans of Ameren Engineers and other Power Plant design teams traveled to Indiana to visit NIPSCO's Power Plant utilizing the VACUCAM® Ejector Mixer process for slurring pulverized limestone for FGD. The system had been in operation for more than 10 years. The simplicity of the system, the efficiency and dependability of the operation, the minimal maintenance and operational cost, and the quality of slurry convinced management of **the long term benefits of using**

pulverized limestone vs. crushed limestone and ball mills.

The First Ameren Installation

The first Ameren system was purchased in early 2008 for the

Process XstreamLining!

Lower your total operating cost including manpower, optimize slurry quality and scrubbing efficiency, lower initial capital costs, lower installation costs, reduce power consumption and more through our Process XstreamLining.

Learn more about how the VACUCAM® Ejector Mixer can provide you the flexibility you need for any power plant needs.

Case Studies

How have we helped other industrial plants increase their productivity through our Process XstreamLining? Call us about our Case Studies at 800-732-8769 to learn more. Or by e-mail at info@semi-bulk.com

Sioux Power Plant and was delivered by Semi-Bulk in January 2009. The installation should be completed in late 2009. Semi-Bulk Systems has worked with Sargent & Lundy and the project team to provide the most efficient process to meet all of the plant slurry production requirements.

The Sioux plant will certainly have the state-of-the-art limestone storage and slurry process for FGD, incorporating two domes for pulverized limestone storage. To meet the capacity requirements and the logistics of the facility, a modular skidded dual mixer system was selected to be installed in the vault of each dome. The in-line single pass process will receive 500gpm process water to the dual mixers and **deliver 600gpm of 30%+ limestone slurry** to the slurry storage tanks feeding the scrubber.

A Smaller Footprint

The modular skidded unit has a small footprint and is installed in the dome vault (basement). Limestone is constantly delivered from the fluidized dome floor into the fluidized surge pot. Water is delivered from the water supply pump skid to the Ejector mixers. The Mixer generates a powerful vacuum and conveys the limestone through a convey hose at **a rate in excess of 1000#/minute** for each mixer. The modular unit can be operated as a single mixer process or it can be operated with both mixers simultaneously. The 30%+ slurry is delivered to the in-line slurry tank and pumped to the slurry storage tank. A redundant slurry pump is provided on the skid.

A water supply pump skid is provided with total redundancy to deliver water to either system below each of the domes. During factory acceptance testing, we demonstrated a limestone convey and **mix rate of 1500#/minute per mixer or 3000#/minute** for the dual mixer system. The system also demonstrated total dispersion and slurry quality with zero evidence of dusting in the operating area. We look forward to commissioning and operation of this process in the Ameren Sioux Power Station.

About Semi-Bulk Systems

How can we help you? Call us at 800-732-8769 to discuss a custom limestone slurry process for your company.

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