

# ► Tekkem Slaking System -Del Rapids, South Dakota

## Project Profile



***The Minnehaha Community Water Corporation service area covers most of the Minnehaha county. The corporation's well field and treatment plant are located above the Big Sioux aquifer midway between Dell Rapids and Baltic. The system serves over 3,000 individual rural users in addition to the cities of Baltic, Crooks, Dell Rapids, Hartford, Humboldt and Sherman.***

***In addition to the Tekkem Slaker, RDP Technologies provided the Lime Storage Silo, Lime Screw Conveyor, Circular Vibrating Grit Screen, Slurry Aging Tank and the Tekkem System Control Panel. for the New South Water treatment plant.***

***The Owner and Banner and Associates investigated their options for lime slaking systems for the new South Plant. The existing Minnehaha North Plant had older technology continuous paste type slakers that required constant maintenance and produced a very inconsistent lime slurry. Their investigation***

*Above*

*Lime storage silo is 40' tall by 12 ft. diameter and stores 85 tons of quicklime. Inclined lime screw transfers lime to the Tekkem Slaker located inside the Chemical Building on the second floor.*

**Location:  
Del Rapids, SD**

**Engineer:  
Banner & Associates**

**Permitted Plant  
Flow:  
South Plant- 3.5 MGD**

**Installation Date:  
2003**



RDP Technologies, Inc.®

## ► Tekkem Slaking System -Del Rapids, South Dakota



**Above:**

*Lime screw conveyor from outside the building transfers lime into the “lug mounted” Tekkem Slaker , as required for each batch. Note: Tekkem System Control panel to right.*



**Above:**

*Tekkem Slaker has a gravity discharge from the second floor above thru the Circular Vibrating screen to the 500 gallon Slurry Aging Tank. Two Watson-Marlow hose pumps, serve as duty/standby delivery devices to transfer lime slurry to the softening basins.*



# ► Tekkem Slaking System -Del Rapids, South Dakota

## Project Profile



**Above:**  
*Water and air piping shown for proper operation of the Tekkem Slaker.*



**Above:**  
*The Tekkem System Control Panel is a NEMA 4X stainless steel, double door enclosure with an Allen-Bradley PLC with a Panel View Screen.*



## ► Tekkem Slaking System -Del Rapids, South Dakota



**Above:**

*The Stainless steel circular vibrating screen discharges “clean” grit” that is used for maintenance purposes on the plant’s gravel road*

The plant staff reports the following enhancements to operation of both the North and South Plants:

- Lime consumption has been reduced by at least 10%.
- Cleaning the slakers has gone from a weekly chore to only once per year as the Tekkem Slakers are “self cleaning”.
- pH set points are now easily maintained due to the precise slaked lime concentrations produced with the load cell based operation of the Tekkem Slakers.
- Plant wide start up and shut downs are easily accomplished as the Tekkem Slaker produces final slaking temperatures of 185 degrees F every batch.

*Click here to email us for more information ([sales@rdptech.com](mailto:sales@rdptech.com))*



RDP Technologies, Inc.®

2495 Boulevard of the Generals

Norristown, PA 19403

**Phone:** (610) 650-9900

**Fax:** (610) 650-9070

[www.rdptech.com](http://www.rdptech.com)