

SF**SMARTFEED™**

Process Control and Reporting For Geotube® Chemically Conditioned Slurry Dewatering

Mineral Processing Services, LLC —
Manufacturer of Supporting Technologies for Geotube® Applications

Dewatering using Geotube® containers is a cost-saving technology for many slurry dewatering projects.

SmartFeed™ process controls contribute to a successful Geotube® application, maintaining benefits throughout the project.



Model 1200 EM

- * Process up to 1,200 gpm slurry flow process
- * Condition up to 12% d.s. raw feed
- * Deliver up to 70 gpm of .5% polymer dilution

Site Requirements

- * 6" pipe connection for slurry feed
- * 2" pipe connection 100 gpm @ 80 psi
- * Power 60 amps 480 volts 3 phase
- * Lay-down area 40' x 12'



Model 2500 EM

- * Treats up to 2,500 gpm slurry flow
- * Process slurry up to 12% d.s
- * Can deliver up to 400 gpm of .5% polymer dilution

Site Requirements

- * 8" pipe connection for slurry feed
- * 4" pipe connection 400 gpm @ 80 psi
- * Power 100 amps 480 volts 3 phase
- * Lay-down area 40' x 30'



Model 4000 EM

- * Treats up to 4,000 gpm slurry flow
- * Process slurry up to 25% d.s.
- * Can deliver up to 1,200 gpm .5% polymer dilution

Site Requirements

- * 12" pipe connection for slurry feed
- * 4" pipe connection 600 gpm @ 100 psi "dilution water"
- * 4" pipe connection 600 gpm @ 100 psi "post dilution"
- * Power 200 amps 480 volts 3 phase
- * Lay-down area 80' x 40'

Mineral Processing Services, LLC

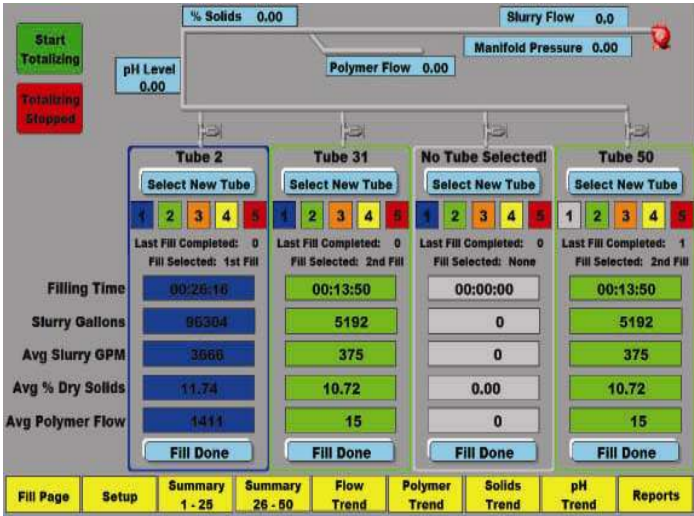
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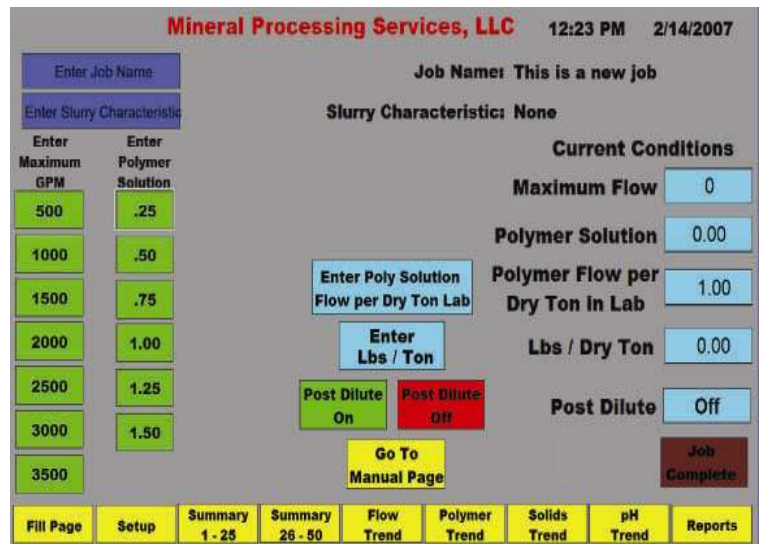


Knowing Your Project Parameters



The SmartFeed™ system monitors slurry characteristics, such as density, percent dry solids, flow, pH, pressure and polymer induction shear velocity, and recalculates the dose rate every 15 seconds based on these changing parameters — maintaining optimum performance of the Geotube® containers and polymer.

The SmartFeed™ system's computer operational interface provides gpm, percent dry solids average, total dry tons of solids and polymer volumes processed to each Geotube® container selected on the project.



*Cost-Saving Polymer Preparation Systems

*Real-Time Polymer Demand Dosing Based On Actual Dry Solids

*Polymer-To-Slurry Induction Mixers With Shear Monitoring

*Daily Project Mass-Balance Reporting

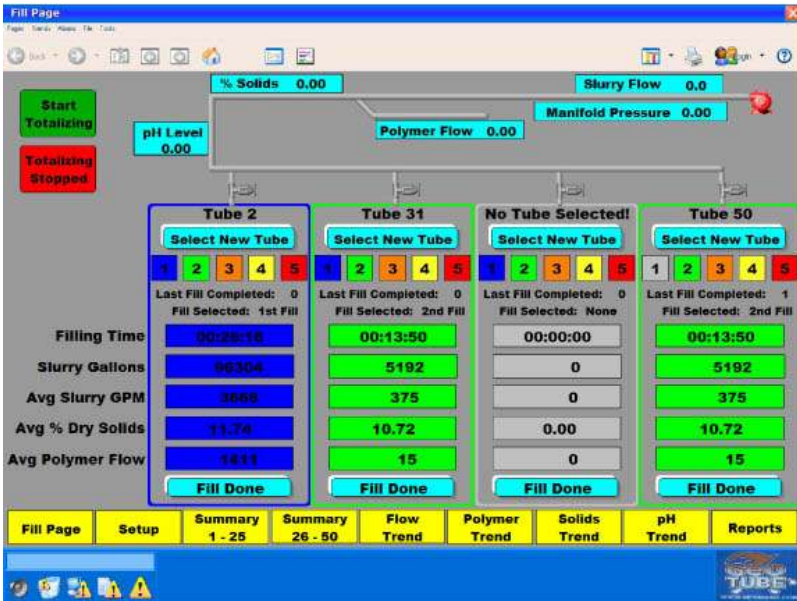
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Risk Management And Reporting



The SmartFeed™ system provides full reporting of dewatering performance *for each Geotube® container* in the project – including filling time, gallons of slurry pumped, average gpm, average percent dry solids and average polymer flow.

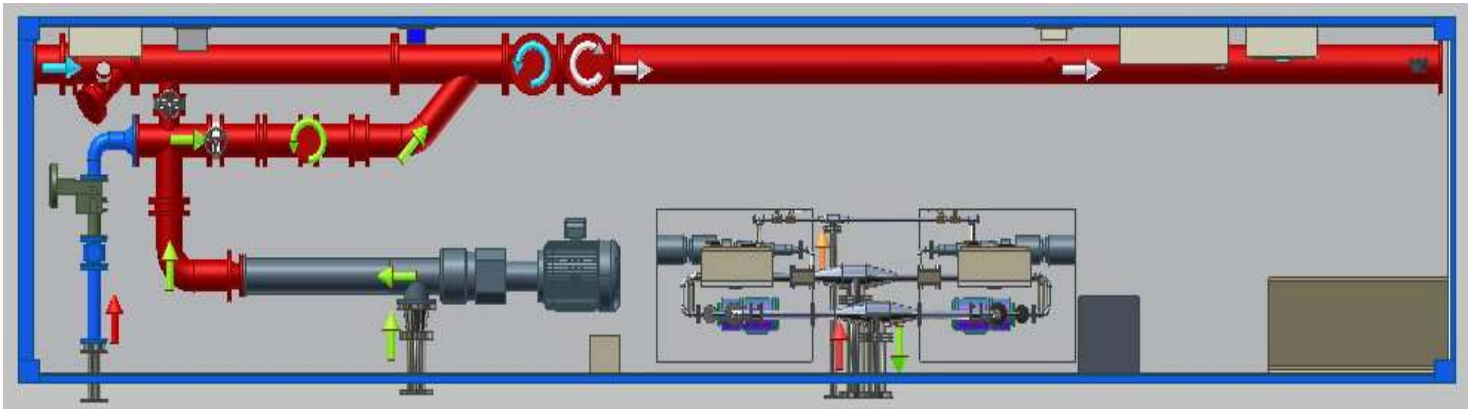
This data can be exported to Excel spreadsheets and charted, to provide quality management reports to stakeholders.

	Current Fill		Fill 1-Tube		Fill 2-Tube		Fill 3-Tube		Fill 4-Tube	
	Slurry	Polymer	Slurry	Polymer	Slurry	Polymer	Slurry	Polymer	Slurry	Polymer
1	37367	10808	0	0	0	0	0	0	0	0
2	99304	37097	0	0	0	0	0	0	0	0
3	63238	30961	0	0	0	0	0	0	0	0
4	4263	4992	0	0	0	0	0	0	0	0
5	30644	4821	0	0	0	0	0	0	0	0
6	6299	4029	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0
11	22069	4829	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0
15	71817	3879	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0
17	42	0	1000	25	833	21	487	17	1383	48
18	0	0	1061	27	833	21	0	0	0	0
19	0	0	1917	48	0	0	0	0	0	0
20	0	0	1917	48	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0
22	39744	9879	0	0	0	0	0	0	0	0
23	6299	1129	0	0	0	0	0	0	0	0
24	30644	4829	0	0	0	0	0	0	0	0
25	3157	198	0	0	0	0	0	0	0	0

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SmartFeed™ System Features

- * ANSI pipe connections for dredge or pump system slurry feed
- * ANSI pipe connections for water supply
- * NEMA 4-fuseable disconnect for primary power supply
- * Water treatment test equipment for TSS, DS, pH, turbidity, salinity
- * Slurry flow meter
- * Water flow meters
- * Emulsion polymer preparation systems
- * Positive-cavity polymer feed pumps
- * Density meters
- * Dry solids meters
- * Post-dilution water to polymer inline variable-velocity static mixers
- * Polymer to slurry inline variable-velocity static mixers self-cleaning
- * Computer operator interface for process functions
- * Data acquisition for daily process mass-balance reporting
- * Filtration technicians to maintain and operate SmartFeed™ systems

SmartFeed™ System Benefits

- * Replicates P-GDT bench-test parameters for full-scale application
- * Reduces polymer consumption up to 30% over non-SmartFeed™ applications
- * Reduces Geotube® container area up to 20% over non-SmartFeed applications
- * Maintains filtrate quality standards 100% of the operational period
- * Provides process parameters reports daily to support project production rates
- * **SmartFeed™ Cost-Saving Benefits Increase Project Profitably and Successes!**

SmartFeed™ is a Patent Pending Technology of Mineral Processing Services, LLC

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