

## Derrick® provides increased production at reduced costs to Colorado contractor

- Derrick provides Colorado contractor with efficient solids removal
- Enhanced performance of microtunneling operation through efficient separation of drilled solids from drilling fluid

### Background

The performance of a microtunneling operation is directly related to the overall cleaning performance of its slurry separation system. Solids that remain within the slurry adversely affect slurry excavation processes. Benefits of proper and efficient separation of the drilled solids from a drilling fluid include:

- Increased rate of penetration (production)
- Reduced drilling fluids costs
- Reduced water usage
- Reduced water hauling costs
- Reduced hauling and disposal costs of dirty fluid
- Reduced downstream wear on pumps, plumbing, etc.

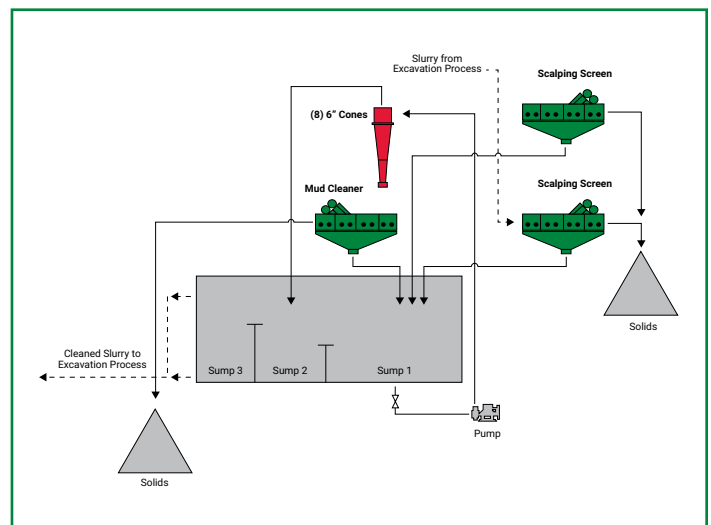
All of the above translates to increased production at reduced costs to the contractor.

A contractor based out of Colorado is using a Derrick Modular Slurry Separation Plant to work in conjunction with an Akkerman Microtunneling machine with outer diameter of 78".

### Solution

Primary separation is achieved through the use of two Derrick FLC 2000 4 panel shakers with 7.3 G's of acceleration that offer up to 800 GPM capacity each. These machines are typically outfitted with Derrick's patented high open area, long life, and non-blinding polyurethane screen panels.

Underflow from the system flows into the base tank and is pumped under 35-40 PSI to eight 6" desilter cones that make a fine separation at approximately 30 microns.



Derrick Modular Slurry Separation Plant flowsheet



Derrick Modular Slurry Separation Plant in operation

The centrifugal separation extracts the ultra fine sands and silts greater than 30 microns and discharges them out the underflow. The fines leaving the hydrocyclones are further dewatered on another FLC 2000 screening machine that is typically outfitted with Derrick's patented Pyramid® screen panels with a corrugated, 3D profile. These screens offer 57% more screen area than conventional flat screens giving the machine an exceptionally high capacity per square foot.

Overflow from the hydrocyclones reports back to the base tank where it eventually overflows out the separation plant and is re-circulated through the MTBM.

### Conclusion

The Modular Slurry Separation Plant has a versatile platform strategy for various civil engineering applications to accommodate a multitude of equipment configurations. Up to three equipment platforms can be mounted on the base tank providing continuous separation. Flexible platform configurations such as an FLC 2000 4-panel shaker, a FLC 2000 4-panel mud cleaner with 6" cones, or a DE-1000™ FHD™ (Full Hydraulic Drive) Centrifuge provide optimal slurry separation. FLC 2000 machines feature Super G® vibrating motors for continuous high G linear motion and hydraulic Adjustable While Drilling (AWD) mechanisms to achieve maximum solids removal and dewatering conveyance. Derrick's performance enhancing, long life Polyweb® urethane screen surfaces or patented corrugated Pyramid screen technology, offers 57% more screening area and results in the most efficient solids removal. The flexible tank and platform can be outfitted with 3 components to achieve the desired result.



Derrick FLC 2000 handling primary separation



Efficient solids removal provided by Derrick FLC 2000 desilting mud cleaner

**For more information, please contact your local Derrick sales representative.**

15630 Export Plaza Drive • Houston, Texas 77032 • Toll Free: (866) DERRICK • Office: (281) 590-3003 • Fax: (281) 590-6187  
info@derrick.com • www.Derrick.com