

# ViscoSight™

Powered by RheoLogiX™

CONTINUOUS ON-SITE  
SLURRY RHEOLOGY  
MEASUREMENT

A ROBUST **SIDE-STREAM RHEOMETER** DEVELOPED FOR FULLY **AUTOMATED, CONTINUOUS MONITORING AND ANALYSIS OF VISCOELASTIC PROPERTIES OF NON-NEWTONIAN SLURRIES.**

## Why ViscoSight™



**Continuous Rheology Monitoring:** Provides continuous rheological parameters such as Bingham Plastic Yield Stress, plastic Viscosity, Herschel-Bulkley indexes - flow behaviour (n) and consistency (k) in addition to relative Deposition Limit Velocities for non-Newtonian slurries.



**Representative of Site Conditions:** As near as possible in-process conditions, unlike offline laboratory testing.



**Improves Efficiency:** Live rheological data allows pumps, pipelines, and process systems to be operated closer to their optimum capacity.



**Avoids Process Upsets:** Rheological changes that precede process upsets, such as blockages, pump overloads, and erosion of beach slopes, can be detected early enough to act on.



**Portable Design:** Benchmark testing methodology packaged in a compact, fully autonomous format, ready for site deployment.



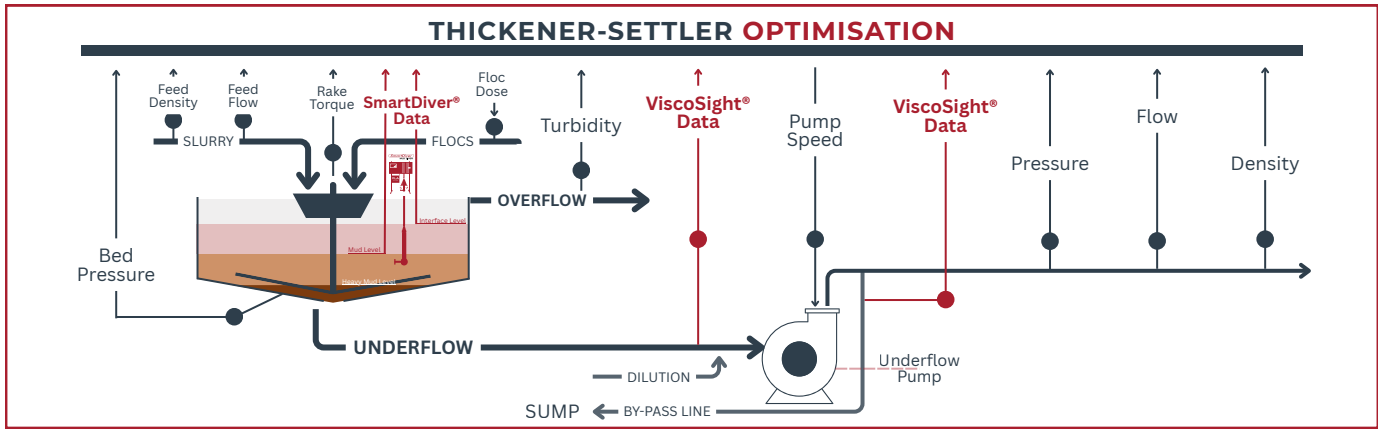
## HOW IT WORKS

- Connects to the process via a bypass line, continuously diverting a side stream of slurry through a measurement loop.
- Pumps the slurry through two pipe sections of different diameters at varying flow rates, measuring pressure drop at each condition.
- The proprietary RheoLogiX® algorithm converts these measurements into a complete rheological profile.
- The non-Newtonian parameters can then be integrated with the site's control systems.

“Shift from Reactive to  
Proactive Slurry  
Management.”

SCAN TO READ MORE





**Ore Extraction Feed&Slurry Transport**  
Crushed Ore Slurry

Adjust water addition or pump speeds to maintain optimum flow under varying ore conditions, preventing pipeline blockages and pump overloading.

**Grinding & Classification**  
Mill Discharge Slurry

Adjust water flow, mill speed, and cyclone feed pressure to maintain consistent grinding efficiency and classification performance.

**Screening & Desliming**  
Clay-Rich Slurry

Trigger spray water or dispersant addition precisely when viscosity rises, preventing screen blinding and reducing excessive dilution.

**Reagent & Chemical Conditioning**  
Fine-Particle Slurry

Provides a much clearer picture of when the slurry is becoming too structured (high yield stress) or too thick to allow proper mixing.

**Flotation Circuits**  
Fine-Particle Slurry

Adjust air rates, frother addition, or impeller speeds when viscosity rises to maintain bubble-particle interaction and protect recovery.

**Gravity Separation**  
Dense-Medium Slurry

Adjust medium density, wash water, and feed rate through continuously monitoring to maintain stable separation under variable ore and fines loading.

**Thickening & Paste Preparation**  
Underflow & Tailings Slurry

Control flocculant dosing, underflow pump rates, and rake speed based on live yield stress data for consistent paste quality and improving water recovery.

**Filtration & Dewatering**  
High-viscosity Pre-Filter Slurry

Pre-condition slurry through dilution or dispersant adjustment before filtration to improve drainage rates and achieve consistent cake quality.

**Tailings Transport & Deposition**  
Thick Tailings Slurry

Optimise pipeline velocity, pump power, and dilution through automated measurement cycles to prevent blockages and ensure consistent beach slope and deposition behaviour.

OPERATIONAL INSIGHTS WITH VISCOSIGHT™