

RECORDED BENEFITS

- \$650,000 ROI
- Maintenance shutdowns extended from every 6 weeks to every 12 weeks
- 60% reduction in scale density
- 8X reduction in pipe flow obstruction/restriction
- No negative downstream (thickener) impacts
- Improved worker safety by reducing hazardous maintenance work
- Real-time program monitoring

Challenging Quench Circuit Scale Knocked Out by New High Temp/High Solids Antiscalant

Zalta™ MA11-556 Antiscalant

Customer Challenge

High temperature and high solids conditions are perfect environments where significant process scale can occur. One example where very difficult scale poses challenges is found in quench circuits of roasters and autoclaves. Solenis was tasked by a gold mine to come up with a solution that would extend maintenance shut down periods beyond four weeks and avoid significant CAPEX needed to reduce calcium sulfate (gypsum) scale.

Recommended Solution

Solenis' mining team including field service, application experts and Research & Development worked to completely understand process conditions and effectively screen potential antiscalant solutions, leading to the development and successful implementation of Zalta MA11-556. This product was used in conjunction with Solenis' OnGuard™ 3S scale analyzer to continuously monitor scale conditions. Solenis' tools and methodologies to measure and record scale are unmatched.

Results Achieved

Zalta MA11-556 inhibited calcium sulfate scale. This solution reduced process downtime, increased ore processing, reduced maintenance labor hours, improved safety and is projected to save a total of \$650,000/yr.



Treated tank/feed pipe – easy to break apart scale, less total deposit, **5% obstruction of flow after 6 weeks**



Untreated tank/feed pipe – hard to break apart scale, more total deposit, **40% obstruction of flow after 6 weeks**