

RECORDED BENEFITS

- 20% reduction of antiscalant consumption
- Avoidance of unplanned shutdowns
- Reduction in labor costs to clean pipes and valves
- Total control of antiscalant feed
- Early detection and warning of scale formation
- Remote monitoring of scaling tendency and automated alarms
- Automated daily reports

Automated Antiscale Dosage Reduces Costs at Gold Leaching Operation

OnGuard™ 3S Analyzer and OnGuard™ P Controller

Customer Challenge

A large mineral processor was operating a Merrill-Crowe leaching circuit for gold extraction. For a long period of time the processor was lacking control of its antiscalant feed, resulting in scaling in the process water (barren solution) and unplanned shutdowns for cleaning and pipe and valve replacements. The antiscalant dosage was not optimized and, due to process flow variations (450 – 1100 m³/hr), was adjusted to peak demand resulting in overdosage.

Recommended Solution

Solenis recommended a more robust system to monitor and control scale in the gold leaching operation. The system, which is comprised of the patented OnGuard™ 3S analyzer and the OnGuard™ P controller, automatically controls antiscalant feed pumps rates based on real-time scale measurement. The system also provides daily reports on scaling rates and antiscalant consumption to assure proper scale control.

Results Achieved

With the implementation of the new monitoring and control system, the consumption of antiscalant was reduced by 20%. The operation of the gold leaching process was significantly improved due to reduced shutdowns and reduced cleaning frequency of the processing pipes and valves. The system also provides automated alarms and early warnings of scale formation.



Dosing pump cabinet (left) and OnGuard™ 3S analyzer and OnGuard™ P controller (right)

All statements, information and data presented herein are believed to be accurate and reliable, but are not to be taken as a guarantee, an express warranty, or an implied warranty of merchantability or fitness for a particular purpose, or representation, express or implied, for which Solenis and its affiliates and subsidiaries assume legal responsibility. ™Trademark, Solenis or its subsidiaries, protected in various countries. *Trademark owned by a third party. ©2023 Solenis.