New Polyweb® Screen Formulation Doubles Panel Life in Tough Chemical Application

- Higher resistance to harsh chemicals, high temperature, and lime scaling
- Reduce panel consumption by 50% and annual cost by 38%
- Less maintenance increases uptime

Background

Wet screening involves more than just ore and water. Any number of chemicals may be added as reagents or produced during upstream processes, either intentionally or as a byproduct. While some of these chemicals are inert, others can react with urethane panels, damaging the structural integrity and shortening their usable life. This is especially true when exposed to acids, ammonia, chlorinated solvents, or other chemicals that cause extremes in pH.

A Southeast Asian gold operation experienced these panel durability concerns with their safety screen located after the cyanide destruction step. This process generated sulfuric acid and ammonia which caused swelling to the conventional orange urethane panels. As a result, panel life was around two to four weeks resulting in added downtime and high operating costs.

Figure 1– Panel section before and after soaking for 3 days in slurry containing sulfuric acid and ammonia

Solution

Derrick supplied R&D optimized urethane panels designed for tough chemical and high temperature duties. Field results have shown these “white panels” have less susceptibility to lime scaling and better chemical resistance due to the higher-grade urethane formulation.

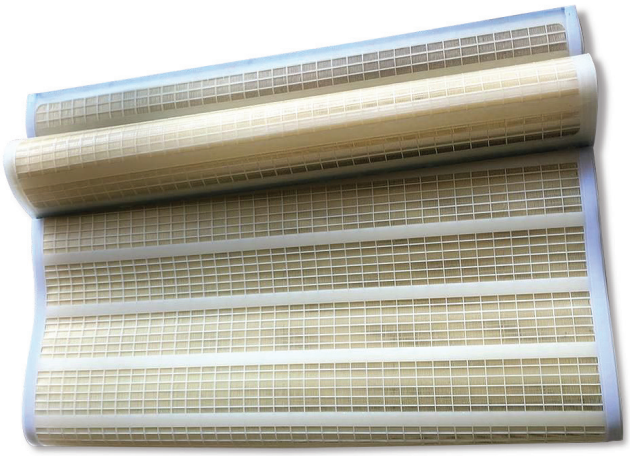

Figure 2 – “White Urethane” Panel prior to installation

Conclusion

The initial set of test panels (Figure 1) more than doubled the life of the original panels, operating for 58 days before replacement. While marginally more expensive on a per panel basis, the customer is projected to save about 40% annually on panels due to increased life.

Based on this initial success, Derrick has supplied a heavy construction version of the “white urethane” panel to extend panel life further with the goal of aligning panel life with the customer’s preventative maintenance schedule.

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