

Increased Production of Cyanidation Slimes Filter for Mining Ores

Context of Inquiry

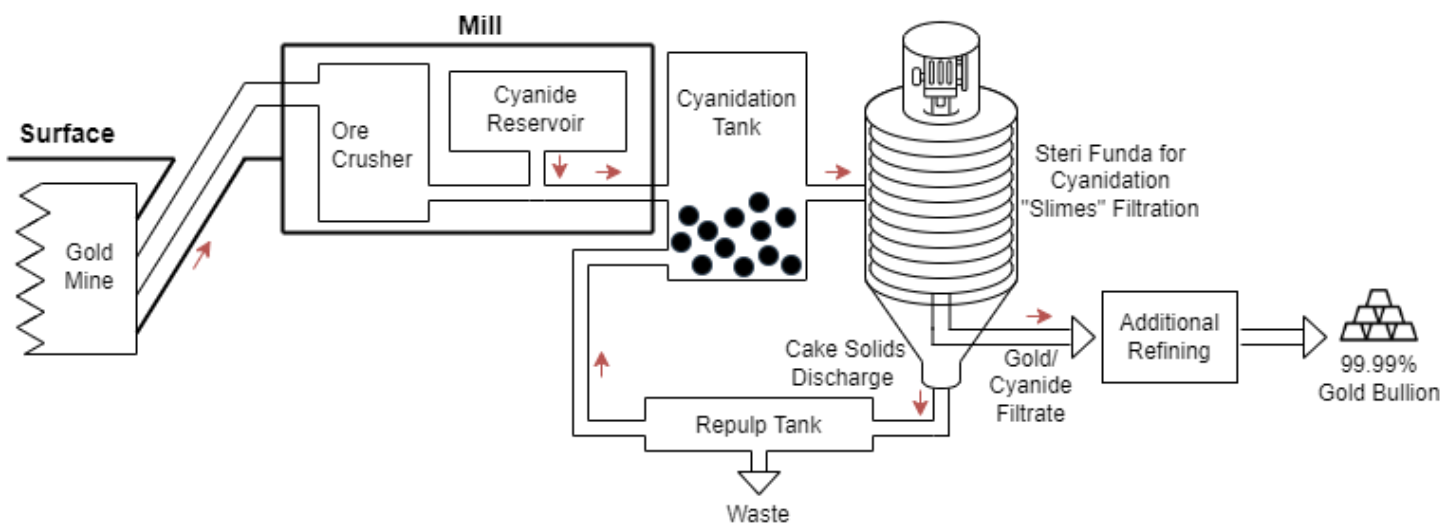
A longstanding Steri customer, who had been utilizing a smaller 5m² Funda filter for processing Cyanidation Slimes at a gold beneficiation mill, desired to enhance their existing plant operations. While the initial installation of the 5m² Funda filter had met the client's requirements in the past, the growth in production and scale over time required a plant expansion. The client sought to enhance filtration efficiency, reduce processing time, and eliminate bottlenecks in their expanding process. During consideration of process line improvements, it was crucial to address the variability in solids loading and flow rates specified by the client for different batches.

Exploration of Alternatives

Through an evaluation of data provided by an external engineering firm, Steri Engineers determined that the current setup was significantly undersized for the desired throughput. To overcome this bottleneck, various filtration technologies, including Candle Filters, were tested on a pilot scale. Although the Candle Filters showed promising results under constant process parameters, Steri's extensive experience cautioned against their suitability as the expected variation of slurry characteristics was beyond their normal capability. The Funda filter emerged as the technically optimal solution as the horizontal filter plates with increased spacing allowed for higher cake buildup and improved filter utilization. Multiple filter sizes were considered to effectively address the bottleneck and accommodate the client's diverse range of solids loading and flow rate scenarios ultimately settling on a 40m² Funda.

Steri's Expertise

Steri's expertise played a pivotal role in discerning different filtration technologies and their suitability for the client's application saving the client a significant amount of time and operational frustrations. By providing the client with a proper solution that aligned with their diverse needs, Steri demonstrated its ability to navigate complex filtration challenges while maintaining a holistic view of all process parameters. Like the initial Funda filter, the new larger 40m² Funda performed exceptionally well, reinforcing Steri's commitment to delivering safe, reliable, and tailored filtration solutions.



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