

Case study



We noticed a performance gap on the flotation cells installed in our recent expansion and, after some internal reviews, we move forward to Metso's retrofit with their FloatForce® and Center Launder approach. The collaboration between Antapaccay's Operations, Maintenance and Metallurgy departments together with the Metso team helped us to exceed the strategic objectives we have set for the plant, significantly improving metallurgical performance. Furthermore, the Metso retrofit allowed the stabilization of froth generation and extraction, along with providing operational flexibility and lower energy consumption, delivering sustainable benefits to the plant and reducing operating costs.

Mr. Antonio Bravo, Metallurgy Superintendent, Antapaccay

Solution: Metso's flotation performance-based upgrade

Fast forward to 2023, Antapaccay's flotation process took a remarkable turn. After careful consideration, Antapaccay chose Metso's solution. This involved replacing the existing flotation mixing mechanism and froth management system with Metso's FloatForce® mixing mechanism and Center Launder. The retrofit targeted the last three cells of the newest rougher line.

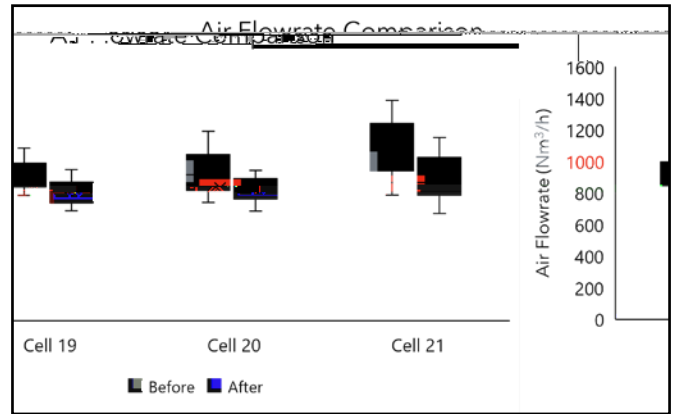
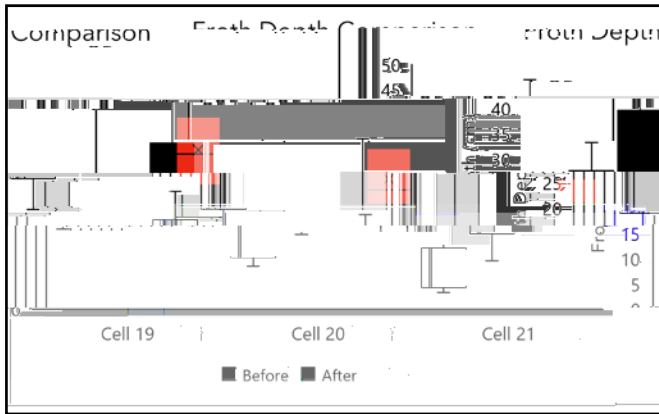
To maximize economic benefits, Metso proposed a performance-based upgrade, guaranteeing metallurgical performance through a customized process guarantee.



Results: Exceeding expectations and the Planet Positive impact

After the evaluation period, Metso and Antapaccay collaboratively studied the results and concluded:

- Copper metallurgical recovery exceeded the performance guarantee.
- Operational parameters were optimized:
 - Reduced air flow rates while maintaining or increasing superficial gas velocity (lg).
 - Increased froth beds and concentrated mass pull.
- Direct motor energy consumption reduction, delivering positive sustainable benefits.



Antapaccay's retrofit led to remarkable results, including increased copper recovery and revenue growth. Metso's solution improved operational flexibility by efficiently removing concentrate froth, reducing energy consumption, and demonstrating commitment to sustainability. The collaboration with Metso resulted in operational excellence and reduced environmental impact.



Metso

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