

Metso

Flotation services

Air control upgrade



Flotation

The Metso air control upgrade enhances the flotation cell with an automatic air control system which stabilizes the airflow and provides a faster, more accurate tool for varying the airflow to the cell.

Optimize your circuit performance, metallurgical recovery, and concentrate grade, as well as reduce pressure on operators with an automatic air feed control for flotation cells.



The volume of airflow directly affects flotation performance and has a major impact on the metallurgical recovery and grade of the concentrate.

About the air control upgrade

A common challenge in flotation is that operators do not have sufficient time to continuously adjust the flotation air feed to ensure optimal circuit performance.

Manual air regulation is difficult if there are no flow meters available to indicate the amount of air being fed into the cell, and adjusting the airflow based on the observed bubble properties requires skilled personnel, who may not be available if staff turnover is high.

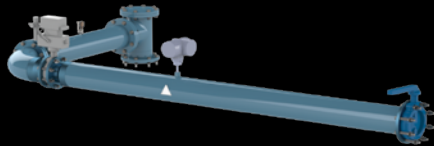
A common challenge in flotation cells with manual air control is that operators do not have sufficient time to continuously adjust air feed to ensure optimal circuit performance.

The Metso air control upgrade makes operator work easier by enabling an automatic control of the flotation cell air feed. Airflow is controlled by an air mass flow meter and an automatic airflow valve.

The metallurgical performance of a flotation cell is directly related to the air feed rate which has been proven by multiple external studies worldwide. In addition to the bubble/particle interaction, air feed also assists in controlling the concentrate outflow speed from the cell.

Benefits

- Increased metallurgical control
- Improved recovery
- Stable operation 24/7
- Possibility to calculate superficial gas velocity (J_g) and peak air recovery
- Smoother froth level and speed control



Increasing air feed produces a larger amount of bubbles and causes a greater probability of bubble/particle interaction, which in turn leads to a higher recovery

The upgrade provides substantial benefits in terms of achieving improved production and quality targets. The automated air control also allows for the air feed to be controlled manually.

Delivery scope

- Air feed pipe
- Air control valve
- Air isolation valve
- Compensators

The air control upgrade can be combined with Metso's basic and advanced control systems as part of a complete upgrade.

