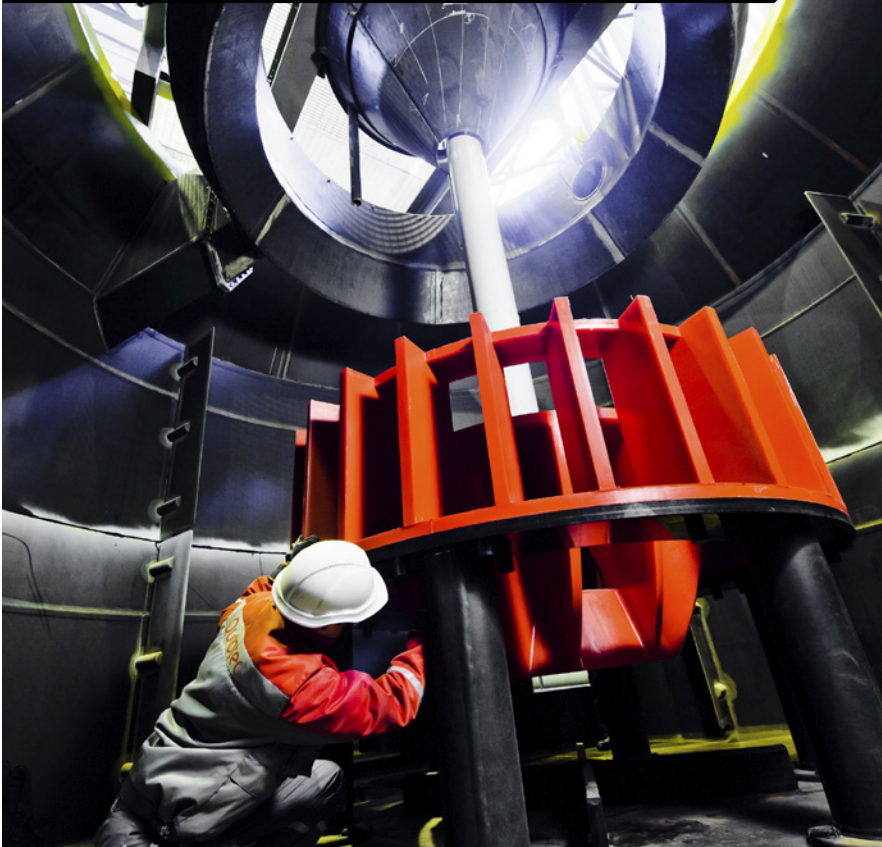


Metso

Flotation services

FloatForce® upgrade



Flotation

Improved flotation hydrodynamics and pumping performance at high air dispersion rates with a new generation mixing mechanism.

Metso has been the market leader of mixing mechanism product development since the 1970's and have pushed through the boundaries of metallurgical performance.

The heart of the flotation cell is the rotor and stator mixing mechanism, which mixes the slurry, disperses air and generates kinetic turbulent energy. Turbulence is needed in order to accelerate the particles and give them sufficient energy, so that they will attach to the bubbles.

Metso latest mixing mechanism has again increased the performance on all Metso flotation tank cells where a conventional OK mechanism has been upgraded to FloatForce. FloatForce improves flotation hydrodynamics, mixing at the same aeration rate and maintaining mixing at a higher air dispersion rate.

What to expect from the FloatForce mechanism

- Increased bubble area flux S_b
- Improved air-hold up volume
- Maximized suspension of coarse particles
- Enhanced flotation cell hydrodynamics

FloatForce mixing mechanism creates superior customer value

Customers worldwide have experienced that FloatForce enhanced hydrodynamics generate superior value to the concentrators' financial performance; revenues and cost of operation.

Better hydrodynamics, together with improved aeration dispersions, result in improved metallurgical performance and recovery.

The enhanced performance makes the flotation operation more flexible and gives the operator

the opportunity to lower the rotation speed, resulting in a lower operation cost.

OEM quality – improves the availability and total cost of ownership

The flotation process takes place during very harsh conditions, especially for the parts that are in contact with the slurry. It has always been Metso's aim to design and manufacture spare parts that last in these abrasive conditions.

On several customer sites Metso has been able to compare the quality of FloatForce against third party suppliers or OK mechanism. The results show, that the improved design quality of FloatForce outperformed mixing mechanisms sourced from other suppliers.

Better quality on wear parts extends the lifetime of the cell resulting in lower cost of operational spare parts and increased equipment availability improving the total cost of ownership.

Benefits

- Increased recovery
- Lower energy consumption
- Improved wear life
- Quicker, simpler, cost-effective maintenance



How much is the financial value of 1% increase in recovery of your current operation?

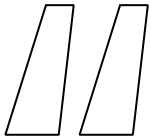
Did you know, that 10% reduction of rotation speed equals to approximately 20% savings on your electricity bill?

Flotation mechanism modernization

This technology is not only available in new Metso flotation technology deliveries, but also for existing installed OK, RCS, SkimAir®, TankCell® and non-Metso equipment.

A flotation mixing mechanism upgrade improves the flexibility of a flotation operation and is delivered by Metso services. The upgrade includes a complete package; the hardware, mechanical engineering, installation supervision and metallurgical know-how.

This upgrade is delivered as a project with the aim to improve the operation flexibility and the flotation hydrodynamics which results in improved metallurgical performance.



How will a new FloatForce mixing mechanism improve my existing flotation operation?



Rotor features

- Wide pumping channels from center to outside
- Separated air dispersion slots
- Directly interchangeable with OK-rotor
- Can be used on all particle sizes

Stator features

- Focus on critical flow areas
- Wear is on small, well defined areas
- Elevated fixing surface of stator wear parts
- Easy and safe maintenance

FloatForce Value calculator

Try out our online value calculator to see what economic and environmental benefits the FloatForce upgrade can bring to your operations

