The highly efficient impeller for gas-liquid reactors

EKATO COMBIJET

Excellent performance stability in two and three-phase mixtures

Advanced Process Solutions

Industries

- Chemicals
- Biotechnology
- Polymers
- Hydrometallurgy

Applications

- Gas-liquid reactions
- Fermentation
- Purified terephthalic acid
- Bio-leaching

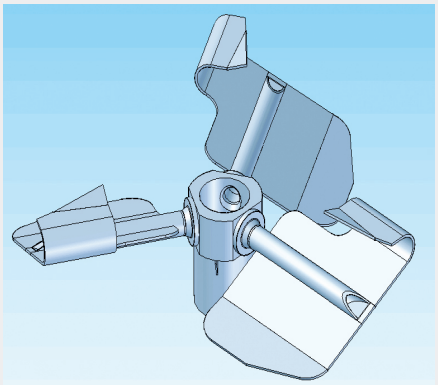
Features

- Combines strong radial and axial flows
- Very good gas dispersion performance resulting in increased mass transfer rate
- Short blend times
- Stable operation with respect to power consumption
- Increased flooding limit
- In combination with the EKATO PHASEJET as primary disperser
- Superior with integrated gas disperser (gas feed through hollow spars)

Benefits

- Cost-effective impeller due to running in ungassed and gassed conditions
- Better homogeneity at gassed conditions
- Increased suspending performance under gassed conditions
- Reduced hydraulic forces

Typical fermenter setup with COMBIJETs and PHASEJET



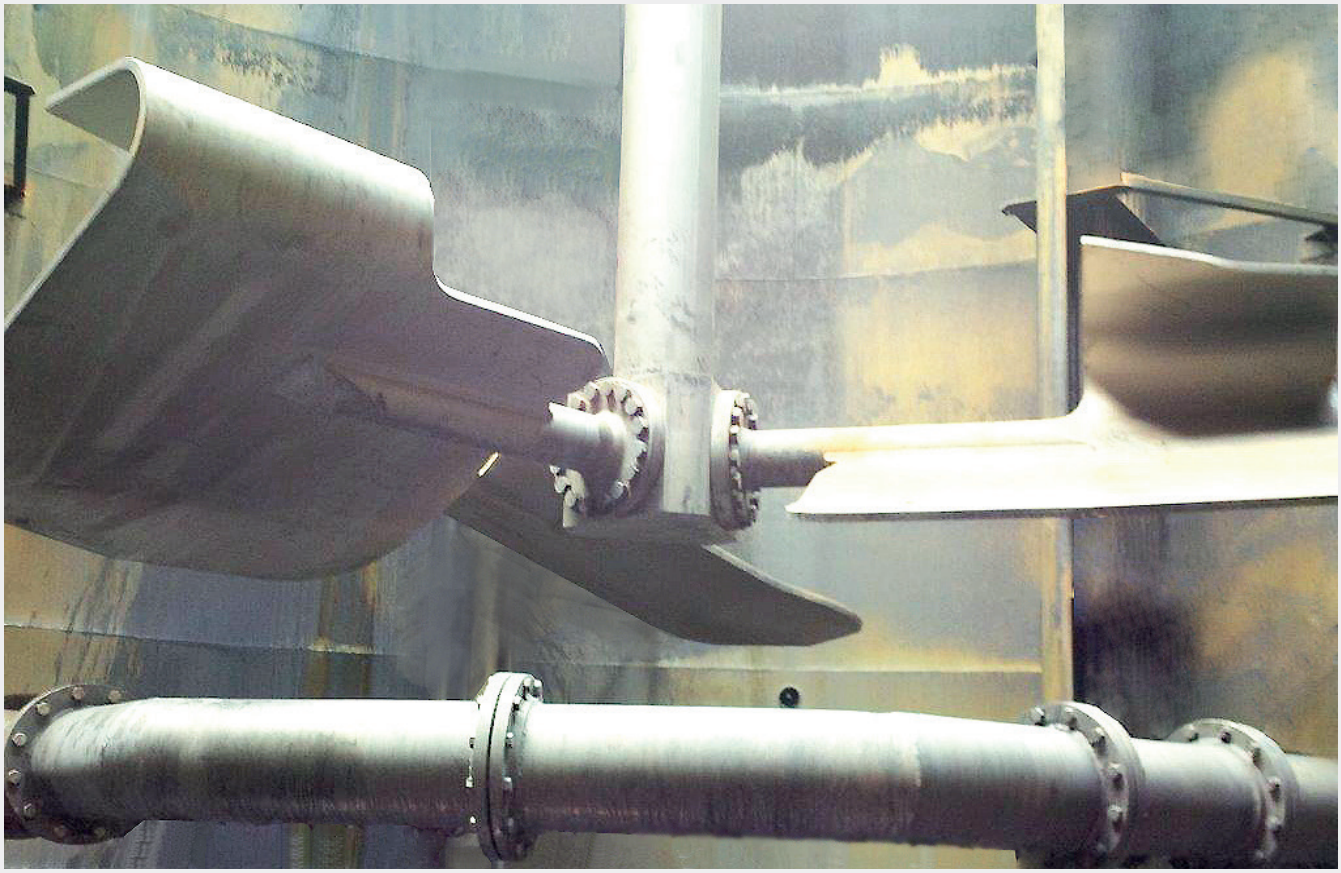
COMBIJET+ with integrated gas disperser for enhanced mass transfer

CFD simulation - Flow pattern in a fermenter

EKATO COMBIJET

Its special blade shape creates a strong radial and axial flow thereby providing an excellent gas dispersion and intensive mixing of the fluid. A prevention of gas pockets behind the blades ensures a stable performance across a wide range of operating conditions. Optimized process results can be realized for a variety of gas-liquid reactions when combining the COMBIJET with the PHASEJET as primary disperser.

A further innovation is the EKATO COMBIJET+ with integrated gas disperser that avoids complex vessel internals such as sparger ring or multiple feed pipes. In addition, an increased mass transfer can be achieved.



4.8 m COMBIJET installed in a bioleach reactor

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