



The Turbulent Technologies Mixing System for Solvent Extraction

Bateman Litwin's Advanced Technologies Division has broad, proven experience in providing state-of-the-art solvent extraction know-how and technologies.

The Turbulent Technologies Mixing System is a new addition to the family of advanced solvent extraction technologies and systems supplied by Bateman, which include the BATEMAN SETTLER™ and Bateman Pulsed Columns (BPC).

The Turbulent Technologies Mixing System with its advanced design, enhances separation in the settler, and provides many advantages compared to the conventional mixing systems used in solvent extraction circuits. It enables significant reduction of entrainments levels without changing the process flow, and can easily be retro-fitted to most existing mixer settlers or installed in new settlers.

The Turbulent Technologies Mixing System developed by Turbulent Technologies is based on a patent for "Method for Coalescence Induced Liquid/Liquid Separations and Apparatus Thereof" (US pending patent filing 12/352,295).



Unique Capabilities:

Creates uniform dispersion in the mixing tank (avoiding formation of small droplets)
Predictable and controlled drop size distribution as a function of the mixing regime, allowing process optimization
Scaling up while maintaining optimum mixing conditions
Increased throughput with no increase in entrainment.

Advantages:

Reduces entrainment of expensive extractants
Reduces organic contamination in the product stream
Reduces ecological impact of organics in the raffinate stream
Enables reduction of size of settlers while maintaining same level of entrainments
Reduces maintenance costs
Eliminates the need for After-settlers

The Bateman Advanced Technologies Provides:

- Optimal SX Solutions tailored to meet customers' requirements
- Lab and piloting services
- Plant commissioning led by experienced teams of process engineers
- Project financing facilitation
- Superior HSE & Quality Control standards
- Minimization of environmental risks

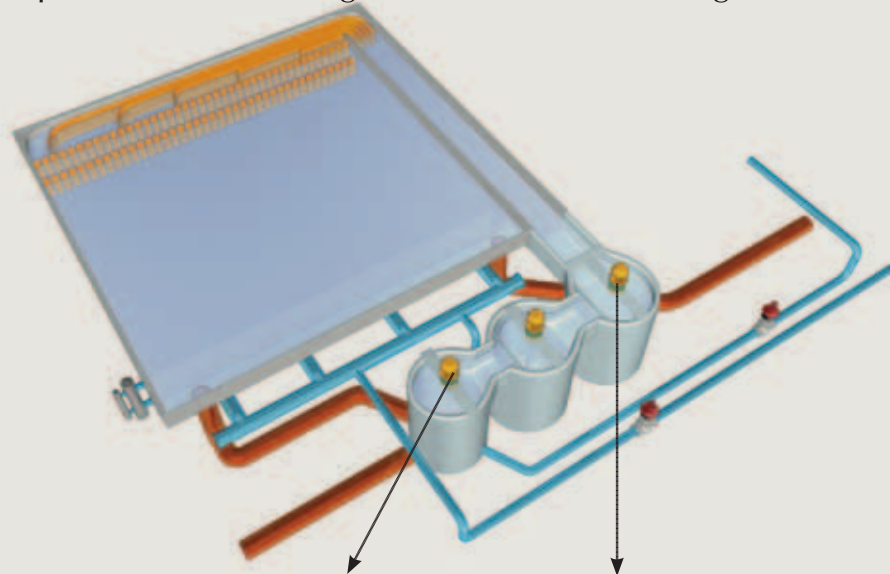
Bateman Litwin Headquarters

Haaksbergweg 591101 BR
Amsterdam, The Netherlands
Tel: +31 20 564 0491
Fax: +31 20 564 0490

Bateman Advanced Technologies

13 HaTnufa St.
High-Tech Park 20692
Yokneam
Israel
Tel: + 972 4 9599 888
Fax: + 972 4 9599 850

The Turbulent Technologies Mixing system is used to improve the coalescing in mixer settler operations by applying special impeller and baffle designs inside a normal mixing tank.



Primary Mixer (Pumper)

The Turbulent Technologies Mixing System replaces Last Stage Mixer

Pilot results show organic entrainment reduction of more than 50% when using the Turbulent Technologies Mixing System.

The Bateman solvent extraction systems are backed up by a comprehensive range of services, starting with bench scale exploratory tests through to pilot scale test work, culminating in the design, construction and commissioning of full-scale solvent extraction plants.