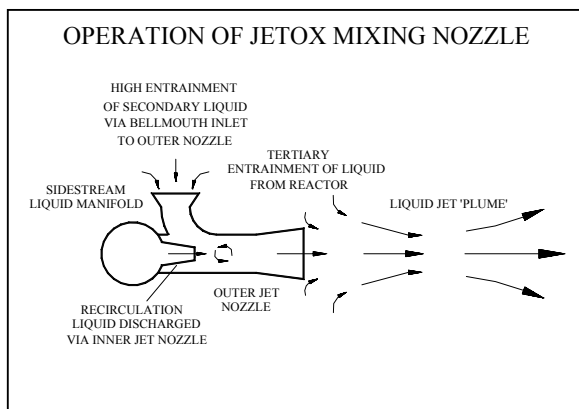




## JETOX NEWS

### *Aquabio uses JETOX multi-nozzle 'self entraining' mixing technology for 'deep tank' mixing in wastewater surge tank*

Anoxic mixing of an existing 14 metre high covered tank was required at a UK papermill, prior to entering a new BIOPAQ<sup>®</sup> anaerobic treatment plant. A 30kW JETOX multi-nozzle jet mixing system was used to ensure that no submerged electro-mechanical parts were required and to significantly reduce in-tank maintenance. Also, in the absence of ancillary items normally associated with a 'conventional' drop-in or high level entry mixers e.g. access walkways, guiderails and lifting gear etc., the capital costs and maintenance required is kept to a minimum.



#### JETOX Operation

The JETOX mixer exploits venturi nozzle technology to enable contact mixing of a liquid motive and an entrained, or 'induced', liquid from the surroundings.

A pumped 'sidestream' of pressurised liquid is recirculated in a manifold and through a 'primary' jet nozzle. The reduction in static pressure as the velocity increases through the nozzle

causes secondary liquid to be entrained down into the outer jet nozzle. The mixture of liquid travels through the secondary nozzle and extends as a 'plume' into the tank entraining further liquid from the tank contents in the process. The resulting 'plumes' from each of the jet nozzles can be directed horizontally to the tank base, at any incline, or angle, to suit the preferred mixing pattern and tank geometry.

JETOX mixing has the following advantages:-

- Induction effect with high entrainment : motive ratio
- High tank 'turnover' rates, rapid contact times
- Reduced 'dead spots'
- Easily accessible and low maintenance
- Solids handling capability
- Excellent directional mixing patterns
- Robust and 'self cleaning' during operation
- Inexpensive installation
- Deep tank capability, reducing WWTP 'footprint' requirements
- Sub surface mixing action at full liquid depth with reduced emissions to atmosphere
- Ideal for 'stop/start' batch processes and aerobic sludge digestion due to mixing and non-clogging characteristics
- Choice of bespoke materials for corrosion resistance, resilience and commercial considerations
- Secondary JETOX Educator available for specified applications

*For further information about this, and other, JETOX aeration and mixing systems contact us at Aquabio Limited, Worcester, UK, either by e-mail or fax.*

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