

WETEND TECHNOLOGIES Ltd and TrumpJet® mixing process is winner in Finland with national *European Business Awards for the Environment*

TrumpJet® technology of Wetend Technologies Ltd has been recognized as the winner in Finland in the national "European Business Awards for the Environment" award in "Processes" division. The recognition is made by an award selection board coordinated by the SITRA organization. Wetend and TrumpJet technology will continue in Europe-wide competition.

The TrumpJet™ chemical mixing system mixes and injects liquid from additives and chemicals into high volume process flows. Use of additives and chemicals has increased considerably during past decades. This has e.g. improved quality and efficiency of paper and papermaking process. It would be impossible to run the modern, fast paper machines and make excellent paper and board without the additives. However, there has been no serious attention paid to how the additives are inserted and mixed into the process. The mixing process is often slow, ineffective and fresh water is used frequently to help in mixing. The use of water can also increase total energy consumption, because the fresh water has to be heated up to the process temperature.

The TrumpJet innovation is simple and surprising. The chemical is injected and mixed into the main process by exploiting re-circulated liquid from the main process; in paper mills it is papermaking stock/pulp. As a result use of fresh water can be stopped completely and there will be no need to consume extra heating energy. The elimination of energy use can reduce CO₂ emission of the mill. As a result, the process media, which is led further in manufacturing process, is more homogenous. This improves the quality of the end product and efficiency of production. Savings of the additive or chemical consumption can be also considerable; it can be 10 – 60% less depending on the case.

The TrumpJet installations supplied today are saving approx. 15 – 17 million m³ (4 – 5 billion gpm) of fresh water totally per annum. Saving of energy for heating takes place and there is an annual reduction potential of approx. 150.000 tons of CO₂ emission.

Sappi Somerset mill in Maine/USA has applied the technology. The mill received "2005 Governors Award for Environmental Excellence" award based on the results.

The technology is based on the innovation created by M.Sc. (Tech.) Jouni Matula. Wetend Technologies Ltd has further developed a series of TrumpJet products and applications for various chemicals and additives. TrumpJet and its product versions are supplied to about 120 systems in 16 different countries with a total of 400 individual mixers. In addition to customers in Europe there are also customers in the United States, Canada, Japan, Korea, China and Australia.

Wetend and TrumpJet technology was awarded with the national *InnoFinland Technology Award* 2003 by the President of Finland.

Wetend Technologies Ltd is located in Savonlinna, Finland. The company operates worldwide and develops, markets and supplies mixing processes primarily for the paper, board and pulp industry.

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Minister for Foreign Trade and Development Mari Kiviniemi together with Wetend Team: from left CEO Jouni Matula, R&D Manager Ritva Käyhkö and Director Pekka Kotila



CEO Jouni Matula of Wetend Technologies Ltd presents TrumpJet results



European Business Awards for the Environment

Wetend Technologies Oy /Ltd - TrumpJet®
Savonlinna / Finland

Jouni Matula



Wetend Technologies Ltd / TrumpJet®

Mixing of additives and chemicals in process industry:

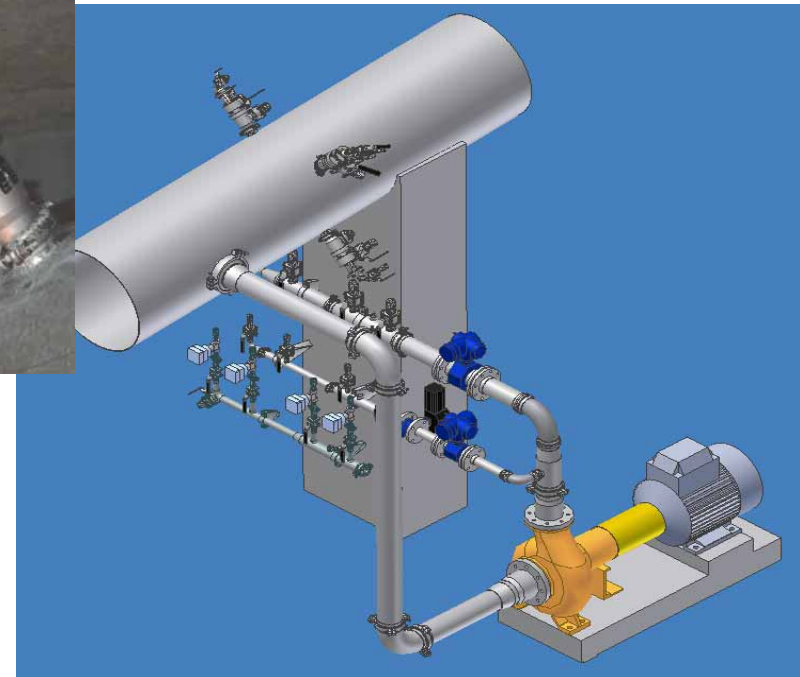
Small chemical flows 0,01 – 1 l/s mixed into large process flows 500 – 3000 l/s

Conventional method:

Fresh water used as mixing media
Now true injection of mixing, mainly
just dosing

TrumpJet® innovation:

Immediate, efficient mixing. Mixing media is
circulated liquid from the main process in the
process temperature.

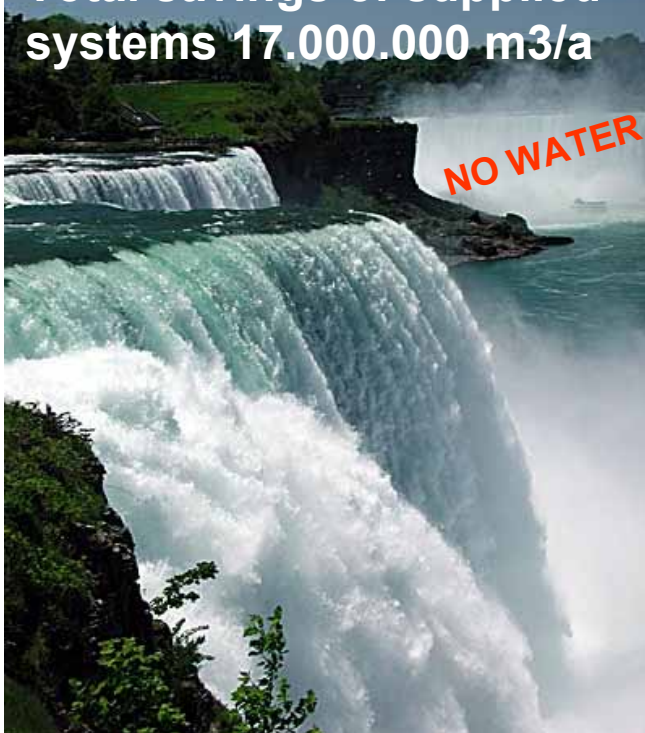


120 systems & 400 mixers, 16 countries

TrumpJet[®] technology; benefits and results

A. Fresh water saving:

Case: 1,1 milj m³/a
Total savings of supplied
systems 17.000.000 m³/a



B. Energy saving and CO₂ reduction:

depends much on case

Case: 36000 MWh/v
CO₂ reduction of
supplied systems
100.000 – 200.000 tn /a



C. Raw material saving:

Savings of additive or
chemical:
0 - 60%; most often. 15 -35%



D. Improvement of Quality of end product and Efficiency of production