

TRUMPJET™ CHEMICAL MIXING SYSTEMS OF WETEND TECHNOLOGIES LTD ALREADY 150 INSTALLATIONS IN PAPER MILLS IN 17 DIFFERENT COUNTRIES

The use of additives and chemicals has increased considerably during the past decades. This has improved quality and efficiency of the paper. It would be impossible to run modern and fast paper machines and make excellent paper or board without the additives. However, no serious attention has been paid to way of inserting the chemicals into the process. The mixing process is often slow, ineffective and fresh water is often used to help the mixing. Use of water also increases the energy consumption of the process.

With the new TrumpJet™ technology liquid form additives are injected into the main process. As an innovation TrumpJet is simple and surprising. The chemical is injected and mixed into the main process

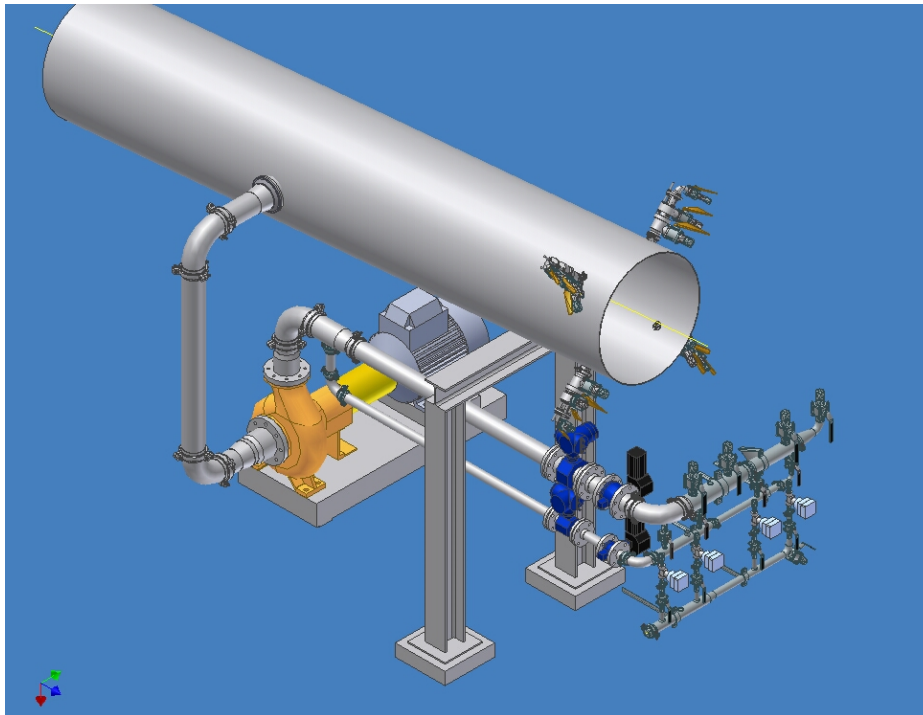
by exploiting re-circulated liquid from the main process; in paper mills it is paper-making stock or pulp. As a result the use of fresh water can be completely stopped and as well there will be no need to consume extra energy to heat the water to process temperature.

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 homogeneous. This improves 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

TrumpJet Chord for simultaneous mixing of retention aid polymer and ASA sizing agent close to headbox





System layout drawing of a TrumpJet mixing station of a retention aid polymer

are saving approximately 20 million m³ of fresh water annually. The energy saving potential is 1 million MWh (around 600.000 barrels of oil) that equals to 300.000 tonnes of CO₂ emission. The TrumpJet technology is used e.g. in several mills in Finland – the very first system was installed at UPM Jämsänkoski Mill in 1999.

Sappi Somerset mill in Maine, USA, has applied the technology and the mill received the “Governors Award for the Environmental excellence 2005” based on the good results achieved.

The technology is based on the innovation of M.Sc. 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 have been supplied to about 150 systems in 17 different countries with a total of 500 in-

dividual mixers. In addition to customers in Europe there are also customers e.g. in the United States, Canada, Japan, Korea and China. Within the last 18 months Wetend Technologies has supplied 18 TrumpJet systems to Japan.

Wetend and TrumpJet technology was awarded with the national *InnoFinland Technology Award 2003* by the President of Finland and it was recognized as the winner in Finland in the national “*European Business Awards for the Environment*” award in “Processes” division in 2005.

Wetend Technologies Ltd was established in 2001 and is located in Savonlinna, Finland. The company operates worldwide and develops, markets and supplies mixing processes primarily for the paper, board and pulp industry. The company invests considerably in R&D together with customers, partners and research cen-

ters. In co-operation with Lappeenranta University of Technology, Wetend Technologies has developed and commissioned the new FiberLaboratory research center that was opened last summer in Savonlinna. FiberLaboratory, operated by the University, supports scientific research and development of pulp and paper manufacturing processes.

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