

Modernization of two deinking lines in Glückstadt

## “DIP on demand” for faster grade changes

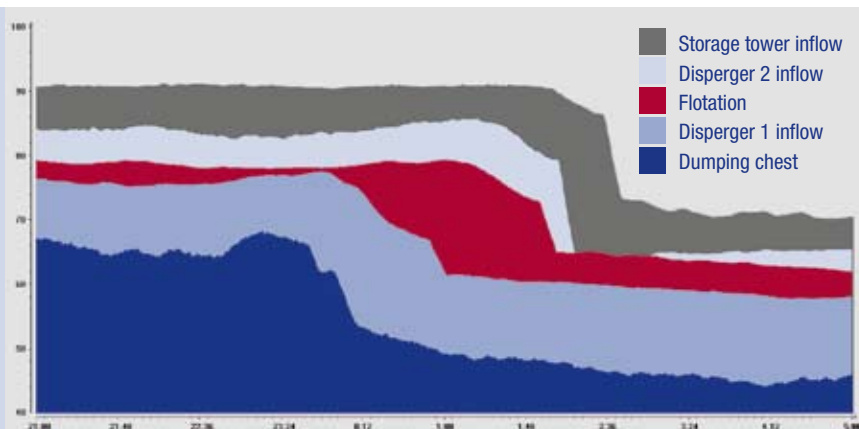
**Voith Paper Fiber Systems has modernized and extended two deinking lines (AP2 and AP3) at Steinbeis Temming Papier, Glückstadt, Germany. At the touch of a key, these rebuilt lines prepare deinked pulp in various qualities for printing and copying papers. The line concept developed for this purpose enables faster and more frequent grade changes.**

Voith Paper Fiber Systems has modernized and extended two deinking lines (AP2 and AP3) at Steinbeis Temming Papier, Glückstadt, Germany. At the touch of a key, these rebuilt lines prepare deinked pulp in various qualities for printing and copying papers.

The line concept developed for this purpose enables faster and more frequent grade changes. While line AP3 continuously produces deinked pulp (DIP) at about 66 to 70% ISO brightness, line AP2 must produce DIP at 60 to 90% ISO brightness

*View of the DIP line in Glückstadt: screening, drainage and thickening.*





Screenshot shows brightness development over the subsystems of DIP line AP2 during automated grade change.

#### Technological data of DIP line AP2

DIP production:	460 tons/24 h
Yield (depending on grade):	81 - 75%
Brightness increase:	> 20% ISO
Dirt speck reduction:	> 98%
Stickies reduction (Tappi):	> 98%
Specific energy consumption:	max. 565 kWh/t
Specific effluent:	max. 8 l/kg

with extremely fast grade change requirements. In other words: DIP on demand.

Based on the compact and energy-saving Voith EcoProcess, line AP2 is designed for furnishes with 20 to 35% ash content and 35 to 65 SR (118-365 CSF) freeness. All the line machinery and quality control systems can be programmed to the target values of the various grades. Only one qualified operator is required for the entire line (not including recovered paper charging), thanks to automated operation with startup/shutdown sequences programmed into the process control system.

The recovered paper furnish for these DIP lines originates both from household newspapers/magazines and from superior grade office waste with high filler content. Fiber and fines losses have been minimized by dispensing with washing, for the first time in this application area.

A production control system adjusts the line throughput according to re-

quirements. For the automated grade change program, in addition to conventional sensorics, Voith uses for the first time newly developed brightness sensors that also measure the UV component.

Thanks to intelligent bleach control (OnQ Bleach), brightness uniformity is improved nearly to perfection while at the same time reducing bleaching agent cost outlay.

#### Flying grade changes

To enable almost immediate grade changes, overall stock consistency is continuously determined by a new method combining fiber and fillers content measurement. Meanwhile, there are several trouble free grade changes each week at Steinbeis Temming Papier without any significant outage time.

The new line concept has greatly simplified office paper production logistics, thus eliminating the need and expense of keeping long-term inventory of each individual grade.

#### Customer Comment



**Michael Söffge**  
President  
Steinbeis Temming  
Papier

"Thanks to Voith as system supplier, we successfully realized the extremely demanding modernization of our AP2 deinked pulp line."

#### Contact



**Falk Albrecht**  
Fiber Systems  
falk.albrecht@voith.com