

*Plaque awarded to Voith Sulzer  
Stock Preparation for the best paper  
for innovation at the TAPPI  
Recycling Symposium, Washington/  
USA, March 5-8, 2000.*



The North American paper industry perception is that stickies are still the No. 1 degrading culprit affecting recycled pulp. Stickies cost the U.S. paper industry \$ 700 million a year, according to the American Forest & Paper Association (AF&PA). The personal computer revolution in the office and at home is creating not less paper consumption but more and unfortunately an increased percentage of adhesive products are included in this paper boom. Of all types of adhesives entering the paper recycling stream, pressure sensitive adhesives (PSA) give the recycling process technology the biggest challenge.

One of the biggest consumers of PSA's in the USA is the U.S. Postal Service. It is estimated that the U.S. Postal Service has a 12-15% PSA market share. This market share increases to 40% if the complete U.S. Federal Government is taken into account. Realizing its contribution to the problem, the U.S. Postal Service initiated an environmentally benign pressure-sensitive adhesive program in



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## Stickies summit in Washington, D.C.

1995 to develop pressure-sensitive postage stamps which do not adversely affect the recycling process.

The ongoing efforts focus on both pre-consumer and post-consumer areas. The U.S. Postal Service was successful in implementing an industry-wide approach, promoting the concept of vertical teams to determine the requirements and the testing of a new generation of benign adhesives which can be easily screened out in the recycling process. The vertical teams consist of industry representatives from adhesive suppliers, converters, stamp printers, face and liner suppliers, fine paper recycling mills and equipment manufacturers. Voith Sulzer's project involvement also included pilot trials in their Stock Preparation Research Center in Appleton, Wisconsin/USA.

From March 5-8th, 2000, TAPPI, the U.S. Postal Services, the U.S. Adhesive Council, the U.S. Forest Service and AF&PA presented a "success story" during the 2000 TAPPI Recycling Symposium in Washington, D.C. Since 1997 all stickies from U.S. self-adhesive postal stamps are screenable in the recycle process with a 99%+ efficiency. Pilot and mill trials provided unequivocal testimonies to this success story. The U.S. Postal Service is taking an additional path forward, now tackling labels and silicon release liners. It is expected that the new adhesive standards will carry over to other "sticky" markets such as Post-It notes, tapes, etc.

This proactive program of the U.S. Postal Service is receiving applause from Europe. During the international session

at the TAPPI conference in Washington, Dr. E. Krauthauf from Haindl Papier, Schongau/Germany titled his paper appropriately: "Europe looks to the U.S. Postal Service PSA Project with Great Expectations".

At the TAPPI conference 70 highly technical papers were presented. Six papers were selected to receive the "best paper award" for various categories such as University, Innovation, Paper Mill, etc.

The paper by Heise, Cao and Schabel entitled "A novel application of TAPPI T277 to determine macrostickies disintegration and agglomeration in the recycle process" received the award for innovation. The authors, located at Voith Sulzer Paper Technology in Appleton/USA and



Ravensburg/Germany revealed in their paper the two different mind-sets which exist in the adhesive and paper industry when it comes to the screenability of PSA's. For the first time the detrimental impact of shear forces at higher consistencies in pressure screening equipment was presented. In addition, the authors discussed a statistical methodology to describe the disintegration and agglomeration probability of stickies in recycling equipment.