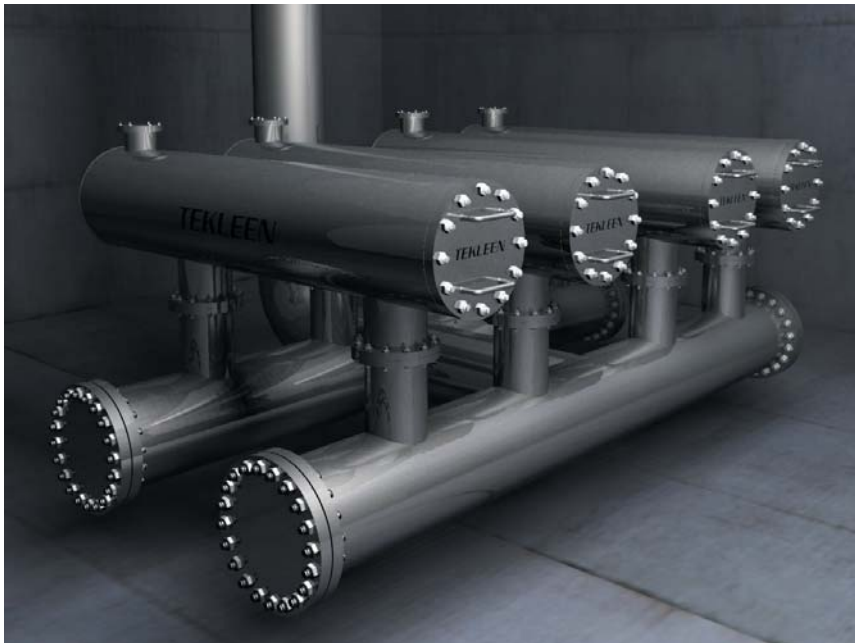


Mississippi Mud is No Match for Minnesota Paper Mill

By Elaine Floyd

Making wood and water come together to create high quality production-graded paper is the business of Blandin Paper, a subsidiary of UPM-Kymmene located in Grand Rapids, Minnesota. The water used in Blandin's paper mills comes directly from the Mississippi River. It flows through a 24-inch pipe at a rate of 4,200 gallons per minute (with a maximum capacity of 10,000 gallons per minute) via two online pumps of 400 hp and 350 hp, respectively. But Blandin Paper does not have to worry about sludge and other impurities from the Mississippi River contaminating its processing equipment and compromising the quality of its paper. The plant has installed four new, state-of-the-art, automatic Tekleen® water filters with 150-micron stainless steel screens to trap any debris that may be dredged up from the river.



Mississippi river water filtration at Blandin Paper, Grand Rapids, MN, 24" line 10,000 gpm filtered with 4 X Tekleen filters model ABW14-P with 150 μ screen

After researching various types of filters, the company chose the Tekleen filter for its low maintenance requirements and reasonable cost. Blandin purchased four X 14" model ABW14-P all 316L SST filters with 11.8 Sq .Ft. 150 micron sintered mesh screens.

The Tekleen filter is a self-cleaning filter that operates on water pressure alone. As dirt particles collect on the screen, the line pressure at the filter outlet drops. When the pressure reaches a preset differential - Blandin Paper's is set at seven pounds -- the backwash cycle begins. Within 10 seconds and without interrupting the main flow, vacuum nozzles aggressively suction the dirt from the inside of the screen. Because of the automatic flushing, there is no plant downtime for routine filter cleaning, which translates to greater productivity for the plant.

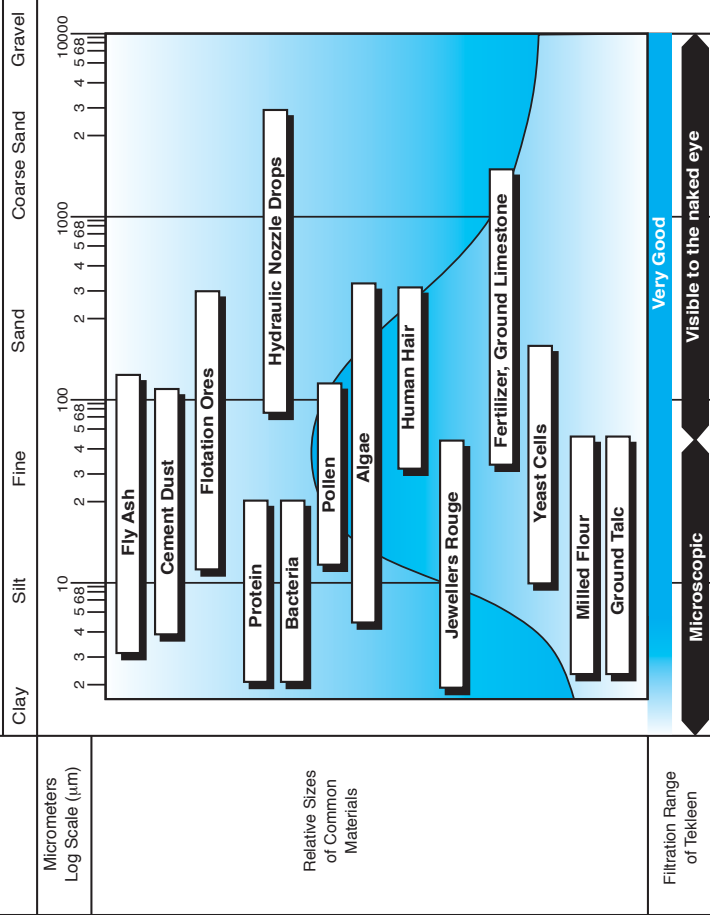
The new water filter not only saves labor costs. It also saves energy and chemical costs due to the lower volume of water used in the back flushing process. "This is very important," says Stanley Roeber, production specialist at Blandin Paper. "The old system was pumping several million gallons a day. That's a lot of pumping energy," he says. Plus, all this water that could have been used for other industrial processes was going back out to the river. "We wanted to be able to put microbicides in the water before it goes to the filter, backwash with small quantities and have it go into our industrial effluent," says Roeber. Now they are able to treat the water from the river at a single point with sodium hypochloride and sodium bromide, send it through the filters, and distribute it throughout the plant. According to Roeber the new system has saved on chemical costs and been much easier to use.

When asked to sum up the benefits of the new automatic filter, Roeber responded: "Reduction in water usage, ease of maintenance, simple design, cost was reasonable, and improved efficiency on cleaning."

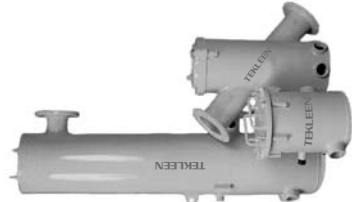
Tekleen filters are produced by Automatic Filters, Inc., a Los Angeles-based company that specializes in industrial and irrigation filtration systems. Tekleen filters have been recognized as the industry's highest quality self-cleaning water filters.

Automatic Filters, Inc. - TEKLEEN
 2672 S. La Cienega Blvd.
 Los Angeles, CA 90034
 Phone: 310-839-2828, 800-336-1942
 Fax: 310-839-6878
 info@tekleen.com
 www.tekleen.com

TEKLEEN® Filtration Spectrum



Please contact your local Tekleen® distributor for more information:



Automatic Filters, Inc.
 2672 S. La Cienega Blvd.
 Los Angeles, Ca 90034 U.S.A.
 (310) 839-2828
 Fax (310) 839-6878
 email: tekleen@aol.com
<http://www.tekleen.com>

TEKLEEN® Conversion Tables

Automatic Filters, Inc. (310) 839-2828 FAX (310) 839-6878

Mesh	Micron	Inches	PSI	Head in ft.	ppm	%	lbs/1000 gal
4	5205	0.2030	0	0	10000	1.000	80.0
8	2487	0.0970	10	20	8000	.8000	60.0
10	1923	0.0750	20	40	6000	.6000	40.0
14	1307	0.0510	30	60	4000	.4000	20.0
18	1000	0.0394	40	80	2000	.2000	10.0
20	840	0.0331	50	100	1000	.1000	8.0
25	710	0.0280	60	120	800	.0800	6.0
30	590	0.0232	70	140	600	.0600	4.0
35	500	0.0197	80	160	400	.0400	2.0
40	420	0.0165	90	180	200	.0200	1.0
45	350	0.0138	100	200	100	.0100	.80
50	297	0.0117	110	220	80	.0080	.60
60	250	0.0098	120		60	.0060	.40
70	210	0.0083	130		40	.0040	.20
80	177	0.0070	140		20	.0020	.10
100	149	0.0059	150		10	.0010	.08
120	125	0.0049	160		8	.0008	.06
140	105	0.0041	170		6	.0006	.04
170	88	0.0035	180		4	.0004	.02
200	74	0.0029	190		2	.0002	.01
230	62	0.0024	200		1	.0001	
270	53	0.0021					
325	44	0.0017					
400	37	0.0015					
550	25	0.0009					
800	15	0.0006					
1250	10	0.0004					
----	5	0.0002					

Filter Models

# Model	Flange Size inches	Screen Area sq. ft.	Max Flow gpm
MTF-1	1" N.P.T	0.6	60
MTF-2	2" N.P.T	0.6	100
ABW2L	2" N.P.T	0.5	110
ABW4	4	0.8	350
ABW4L	4	3.3	400
ABW6L	6	3.3	650
ABW6XLP	6	4.9	600
ABW8	8	3.3	1,300
ABW8LP	8	4.9	1,300
ABW10	10	4.4	1,750
ABW12	12	6.6	2,600
ABW14	14	7.4	4,000
ABW16LP	16	10.0	5,000
ABW20P	20	21.0	8,000
ABW24P	24	21.0	12,000

Filter Construction Materials

- Body** - Carbon steel or stainless steel, ASME option.
- Screen** - Stainless steel mesh on plastic support or 3 layer sintered stainless steel "High Performance"
- Vacuum Screen Cleaner** - Plastic or stainless steel.
- Rinse Valve** - Brass or steel body with plastic actuator
- Elastomers** - Buna, EPDM, Teflon, or Viton