

Fall 2005

Coarse Screen Conversion References

Why convert from a perforated screen cylinder to a slotted cylinder in coarse applications?

As mentioned in the previous newsletter, increased removal efficiency of coarse screens, improved coarse screen operation, decreased debris concentration to fine screens and increased efficiency and life, concentrated paper and board flakes in coarse screen loop, increased coarse screen capacity, fiber savings, and increased debris concentration to final stage atmospheric reject screen are some of the reasons.

So why haven't some mills converted to slots?

Unfortunately, some mills have experienced poor results because conventional slotted cylinders did not hold up in aggressive applications. Some mills experienced disastrous results. Capacity suffered, rejects were higher and the cylinder life was shortened.

Why should your mill still consider converting to slots?

V-Max. V-MAX has the ability to handle impact issues from coarse debris, the ability to operate at high rotor speeds required for day-in and day out performance, optional designs specific to customer needs, and a proven track record. As the chart below shows, many mills have experienced first-hand the benefits of switching from drilled cylinders to slotted V-Max cylinders in coarse applications. One of J&L's Southern customers sums up the benefits his mill has seen,

"We recently switched from a competitor's 0.062" drilled hole basket to a J&L 0.024" V-Max basket on our OCC primary screen in an effort to improve stock cleanliness and system throughput. Initially the mill was looking at a costly system upgrade to achieve these goals. J&L provided a V-Max basket and claimed they could deliver the same results as the system upgrade. The new basket virtually eliminated our styrofoam contamination problem, and has removed the primary screen bottleneck from our process. The screen can now easily outrun pulping capacity. As a bonus, we've also seen a 34% reduction in energy use on the screen. The V-Max basket solved our stock cleanliness and system throughput issues at a fraction of the cost of a capital system upgrade."

Refer to the following chart on page 2 to see how V-Max performed in other coarse applications. Upon request, we may put you in contact with a mill below if you are interested in discussing their experience switching to V-Max. If so, please call Paul Hughes, J&L's Screen Cylinder Business Manager at 262-547-6886 ext. 2370.

J&L Fiber Services, Inc.
809 Philip Drive
Waukesha, Wisconsin 53186
U.S.A.
Phone: 262-544-1890
Fax: 262-547-8166
www.jlfiberservices.com

Coarse Screen Conversion References

Drilled Cylinder to V-Max

Mill Info	Exist. Cyl. Spec.	Accepts (tpd)	Motor Load	Efficiency	Styrofoam Removal	Mill Objective	Comments
	V-Max Spec.						
Southern mill BC UV500 4 Foil 390 rpm 100% OCC	0.062" breaker bars	550 tpd per pos.	75% FLA	44% Pulmac	No data	Increase capacity 10% and efficiency by 20%	<ul style="list-style-type: none"> Converted two primaries and secondary Increased capacity by 36% Increased efficiency from 44% to 82%
	V-Max, 0.024", 6 spi	730 tpd per pos.	50% FLA	82% Pulmac	Greatly reduced		
Midwestern mill BC UV300 NS III 150 hp 600 rpm 85% OCC 35% mixed & ONP	0.062" breaker bars	250 tpd @ 3.0%	145 amp	No data	No data	Better efficiency required to prevent mill closure	<ul style="list-style-type: none"> Estimated energy savings \$12,960 per year 12% Reject Rate (volume) Increased capacity to maintain stock chest per mills request
	V-Max, 0.024", 6 spi	large increase	105 amp	"much better"	Better removal		
Midwestern mill BC Ultra III 4 Foil 525 rpm OCC	0.079" breaker bars	feed flow 1000-2000	175 hp	57%	No data	Same capacity, more efficiency (Styrofoam, energy reduction)	<ul style="list-style-type: none"> The V-Max reduced the thickening factor from 1.25 to 1.05 Feed consistency is 2.5 to 3.5% \$86K in Energy savings 95% Styrofoam removal
	V-Max, 0.024", 6 spi	same	95 hp	68%	95% removal		
Southern mill BC UV400 Fiedler drum rotor w/6mm foil BB clear OCC	0.062" breaker bars		45% FLA			Decrease debris going forward to fine screens in order to perform a slot width reduction on the fine screen system	<ul style="list-style-type: none"> 20 tpd reduction in accept debris at the same volumetric reject rate Large Yield increase Allows for slot reduction in fine screens 10% energy reduction
	V-Max, 0.026", 6 spi		41% FLA	Accept debris reduced from 57 tpd to 37 tpd			
Southern mill BC Ultra III 4 Foil adjust 531 rpm OCC	0.062" breaker bars	225 tpd	45 amps		No data	Fiber recovery	<ul style="list-style-type: none"> 38% energy reduction Fiber recovery and eff. Testing is pending, mill converted all coarse screens
	V-Max, 0.028", 6 spi	225 tpd	28 amps				
Southwestern mill BC UV500 4 Foil 395 rpm OCC	0.079" breaker bars	800 tpd	120% FLA	No testing	No testing	Decrease energy and increase efficiency	<ul style="list-style-type: none"> \$35,000-\$45,000 annual savings Pulp visual cleaner, no testing to date
	V-Max, 0.030", 7 spi	800 tpd	56% FLA	No testing	Visual improvement		
Canadian mill Beloit S24A S Rotor OCC						Need capacity increase in the secondary coarse screen, without negatively impacting efficiency	<ul style="list-style-type: none"> Increased efficiency of secondary screen, V-Max is cleaner than primary coarse screens Increased capacity by being able to feed secondary forward instead of cascade system
	V-Max, 0.018", 7 spi						
Southeastern mill BC UV400 4 Foil OCC	0.062" breaker bars	250 tpd		No data	No data	Eliminate styrofoam problems at cylinder vats and machine Needed to increase capacity to serve all 3 machines, existing drilled primary coarse screen is a bottle neck, need to accommodate production swings	<ul style="list-style-type: none"> 95% Styrofoam removal, eliminated styrofoam in vats and need to bleed off foam at vats Exceeded capacity needs 88% increase, mill stated the V-Max can support all 3 machines, the screen is no longer a constraint, it can out produce pulper Mill avoided a \$650K capital to purchase and install a screen system for production increase and to remove Styrofoam Energy savings \$12,950 per the mills calculations
	V-Max, 0.024", 6 spi	250 - 470 tpd V-Max enables the mill to swing the capacity as needed	Reduced motor load by 34%	No data	90-95% removal		