

J&L Refining: The Stabilizer™ Plate

Innovative Design. Enhanced Stability. Superior Performance.

Improve load stability, lower energy costs and reduce pulp quality variation with the Stabilizer™ Plate from J&L Fiber Services. Its unique, uni-directional design makes the Stabilizer Plate one of the strongest performers on the market, capable of lowering energy costs and reducing shive to acceptable levels. After refining, the resulting pulp quality has substantially better fiber properties, giving much higher strength while providing energy savings in the process.

And because the Stabilizer Plate minimizes plate clashing, productivity is enhanced through a reduction in plate wear and overall plate costs.

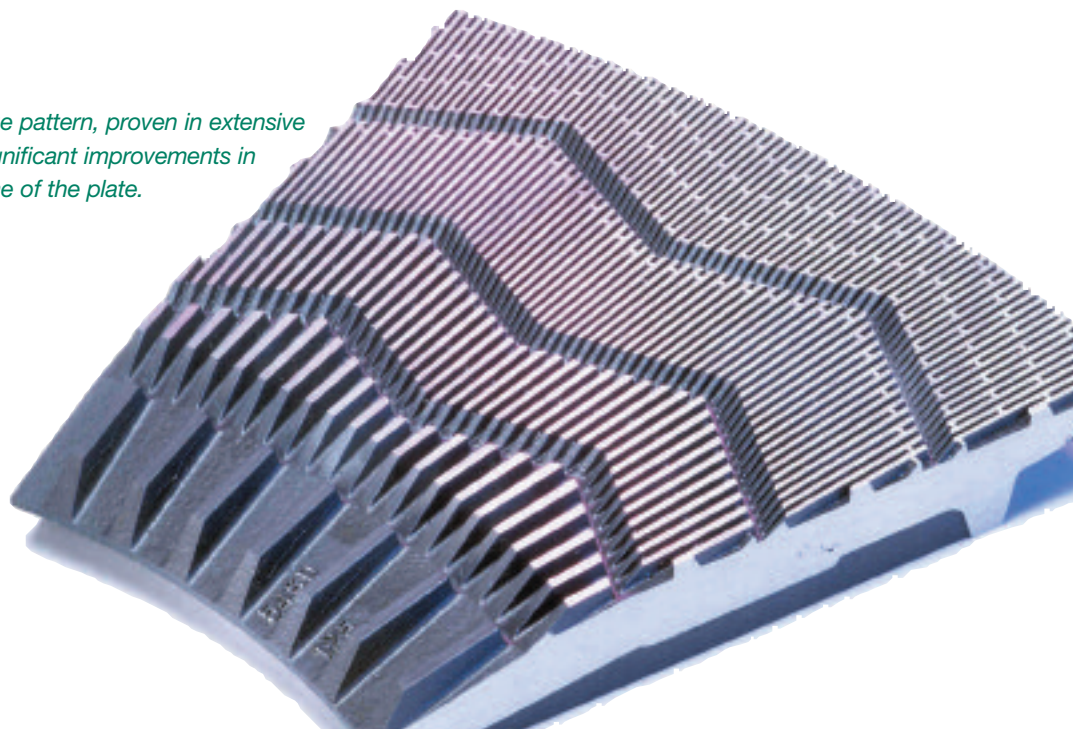
Consider these additional features of the Stabilizer Plate:

■ **Flexibility.** The Stabilizer is ideal for many mechanical pulping applications including newsprint, LWC and SC.

■ **Efficiency.** Energy represents the primary cost component in mechanical pulp manufacture. With the Stabilizer, the energy efficiency process improves. Meanwhile, energy savings increase.

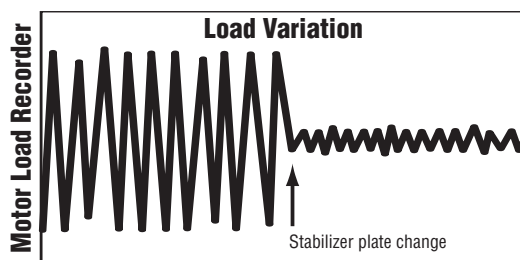
■ **Performance.** The constant angle, uni-directional plate design delivers superior performance compared to conventional plates.

The Stabilizer Plate's unique pattern, proven in extensive global testing, results in significant improvements in fiber quality over the lifetime of the plate.



J&L Stabilizer™ Plate Benefits

- **High Tear Strength.** Tear strength properties remain superior through the refining process when the Stabilizer Plate is utilized.
- **Enhanced Load Stability.** Since unsteady motor loads and plate gaps can lead to poor pulp quality, significantly improving load stability with the installation of J&L Stabilizer Plates can have a dramatic impact on pulp mill performance.



Load Variation: Load variation is significantly reduced after installation of J&L Stabilizer plates.

- **Reduced Process Variability.** Extensive global testing proves that the Stabilizer's innovative design helps your mill operators achieve higher levels of operating efficiency by reducing process variability and improving pulp quality over the life of the plate.
- **Better Overall Performance in Mill Trials.** Comparisons made in recent side-by-side trials of refiners equipped with J&L Stabilizer Plates and refiners using conventional plates show strength improvement at equal energy and production (Table A). Shive is reduced while pulp quality is maintained (Table B). Overall production is demonstrated with energy savings (Table C).

Example A: Strength improvement at equal energy and production.

CSF After Primary, ml	360	440
CSF After Secondary, ml	110	120
Tear Index, mNm ² /g	7.97	8.43
Tensile Index, Nm/g	35.1	40.1
Load Variation, MW	.3	.6

Example B: Reduced shives at equal pulp quality.

Shives, %	18	35
Tear Index, mNm ² /g	3.54	3.53
Tensile Index, Nm/g	37.0	36.1

Example C: Energy savings with increased production.

Total Mainline Specific Energy, kWh/t	2470	2085
Production, admt/d	139	165
CSF After Secondary, ml	135	135
Shives, %	0.65	0.74
Average Fiber Length, mm	1.56	1.54
Tear Index, mNm ² /g	7.34	7.56
Tensile Index, Nm/g	45.1	40.0

Conventional Design
 J&L Stabilizer

The Stabilizer Plate is one more example of how we can help you optimize your pulp processing system with the most advanced technology in the industry. We'll help you determine if the Stabilizer is right for your application, and we'll even offer specific performance guarantees.

Your J&L Fiber Services applications team can recommend a Stabilizer Plate to meet your mill's specific objectives.