

# A *Measurable* Difference

## J&L Fiber Services Product Case Study

### Underhung Plate Pattern

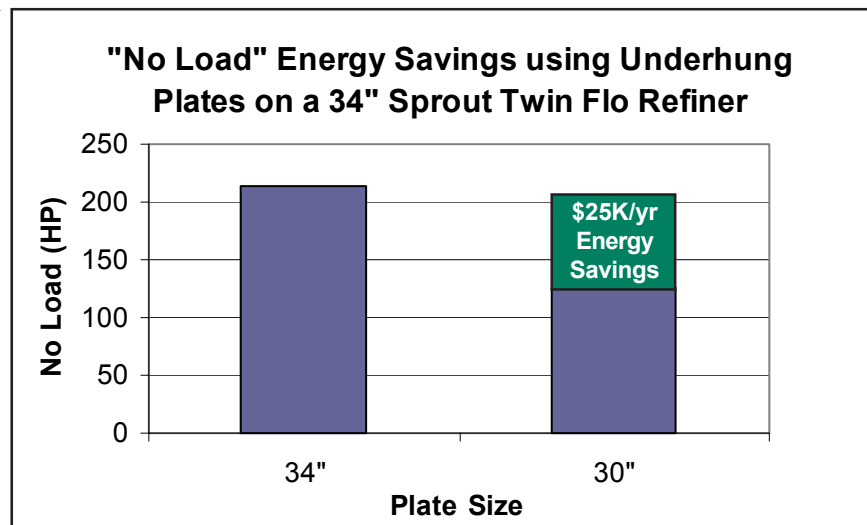
#### **MILL INFORMATION**

OEM/Model: 34" Sprout Twin Flo Refiner, 600 RPM

#### **OBJECTIVE**

Reduce energy requirements.

#### **TRIAL COMPARISON**



"No Load" or "Waste Load" is the total power required to overcome the "drag" the refiner motor encounters as it spins while processing fibers with the plates backed all of the way out. This No Load "drag" is always present, even when the refiner is operating at normal plate gaps.

No Load (hp) =  $3.083 \times 10^{-13} D^4.249 \text{ rpm}^3$   
(D is effective plate diameter in inches and RPM is refiner motor speed)

Savings is based on 340 operating mill days per year at \$0.05 per kWh for electrical energy.

#### **CONCLUSION**

Underhung plate designs are appropriate in certain situations and have the potential to save a mill a significant amount in electrical energy or improve refining efficiency.