

Teal-Jones

New technology increases product quality

Sawmill alignment



When the economic chips are down, competitive companies head back to the drawing board in search of more efficiency and productivity. They seek innovative processes and technologies for new answers to their oldest quandaries. The Teal-Jones Group, a Surrey, British Columbia-based manufacturer of lumber products and specialty items for more than 60 years, faced this challenge during the worst economic conditions in decades. They found a solution in technology they hadn't used before: precision optical alignment.

Company Profile

The Teal-Jones Group has more than 1,200 employees in multiple divisions and operations including forestry and logging, whitewood lumber, western red cedar, red cedar shakes and shingles lumber, as well as custom cutting and planing. Their products are exported worldwide via a global sales and supply network.

The Challenge

The maintenance team at Teal-Jones recognized its longtime best practices with traditional mechanical alignment tools such as wire, mechanic levels and feeler gauges were no longer sufficient at the Surrey sawmill. At a trade show, the company's head saw filer learned about a field-proven technology for industrial precision alignment applications. The solution consisted of an optical alignment kit along with a support team of sawmill veterans to provide training and field services. Teal-Jones recognized the opportunity and expressed strong interest in investigating the approach.

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Training the Teal-Jones staff to use precision alignment equipment allowed the company to do regular alignment checks on its own schedule, increasing the quality of its product output.

The Solution

A Brunson sawmill service consultant went on-site to conduct an assessment, which uncovered a variety of issues: machine centerline alignment deviations of 0.200 in., bad bearings, wobbling infeed rolls and a top bandmill wheel offset by ¼ in. in the primary breakdown. Other discoveries included guide bar misalignment on the board edger as well as secondary machine centers needing attention. Working side by side with the Brunson team to align the machine, Teal-Jones concluded quickly that the precision optical alignment solution held great promise for improved machine performance.

After the initial assessment and alignment, Teal-Jones continued to engage Brunson field services to confirm the machine adjustments were applied correctly and to evaluate additional machine centers. The Teal-Jones team included skilled craftsmen such as saw filers, electricians and millwrights. Everyone found the precision alignment solution easy to learn and faster to apply than traditional alignment methods, and all were impressed at the significant increase in accuracy. The positive results convinced Teal-Jones management to adopt this method.

The Results

The team at Teal-Jones embraced the new alignment strategy by adopting the technology as its new method of alignment. The team's method of defining a machine centerline changed dramatically from the old standard piano wire to high-precision optical lines and planes accurate to ± 0.001 in. The optical solution, with its ability to sweep precise vertical and horizontal planes while keeping the workspace clean and safe, produced remarkable results. **The initial centerline inspection and resulting machine adjustments reduced board deviation from 0.140 in. to 0.040 in.** This parameter has continually improved as misaligned and broken components are identified and fixed. Using this system, the lumber processor improved recovery by a staggering 2% and eliminated wedge on cants, another value-add.

The Teal-Jones head saw filer stated that the team had a winner when fewer saw changes were needed and the deviations improved. Even the software

provider said that they had never seen this mill run so smoothly. "This solution had already paid for itself after four days," stated Dick Jones, Teal-Jones co-owner. "The Brunson team included timber industry professionals with significant industry experience. They were very thorough and competent. We expect substantially more improvement in recovery once all machine centers are aligned."

What's Next?

Adoption of the solution has been steady, as maintenance technicians experience its ease-of-use, speed to measure and capacity to sweep planes. Jones comments, "Because this particular mill runs almost continuously six days a week, it is critical to have frequent, scheduled line ups. We no longer have to wait on the availability of an outside provider to perform our alignments."

Teal-Jones is now in control of its alignment schedule. The team plans to align at least one machine center each month. These line ups not only increase recovery but also minimize unscheduled downtimes, bearing wear, power consumption, and extend saw life.

The Brunson Advantage

Brunson Instrument Company is uniquely qualified to provide a precision alignment solution to your sawmill. We provide expert technical services to many customers, but some customers prefer to "own" their alignments. As the equipment manufacturer, we empower mill operators to be equally successful by providing equipment and training. Our optical alignment system works on a vast array of machine types in both hardwood and softwood lumber mills, providing a complete alignment solution.

