

Making the grade: Fluke tools help maintain log production

Application Note



Ninety miles and a world away from Seattle, WA, is a high logging town deep in the Cascade Mountains, a mountain range with jagged peaks so breathtaking it's called Washington State's Alps.

The Cascades offer some of the Pacific Northwest's most stunning scenery and more hiking, fishing, hunting and rafting than you have time to imagine. The town of Darrington, 549 feet above the Puget Sound, seems about as far as you can get from Seattle's bright lights. In Darrington, a deep pride in community and generations of family ties shape daily life. Seasons in Darrington feel as timeless as the endless, evergreen forests that stretch farther than any eye can see.

Darrington is a mill town. It always has been. Unlike many Pacific Northwest timber operations, whose mills are closed or closing, Darrington's Hampton Lumber Mill, a division of Hampton Affiliates, just completed a \$15 million technology renovation. Here the art of turning a tree into lumber is a high-tech one.

"More and more mills are using this technology," said Erik Steere, Hampton's electrical supervisor. Steere arrived at Hampton one year ago. Today he leads a crew of five, responsible for all electrical plant maintenance. Their job: to keep the electrical distribution centers and their complex array of heating systems and equipment — saws, planers, de-barkers, kilns and other equipment — in perfect working order in the sometimes rainy, always dusty, vibrating environment of an outdoor saw mill.

It was 1935 when L.M. 'Bud' Hampton began operating a lumberyard in Tacoma, Wash. Not long after, World War II created a tight lumber market, making raw material increasingly hard to find. The shortage led Hampton to purchase a mill and 11,000 acres near Willamina, Ore., in 1942 to supply lumber products to his retail yard in Tacoma.

Today Hampton Affiliates has grown from a single mill operation to one of the nation's largest privately held forest and building products companies. Hampton currently owns 155,000 acres of timberland and six mills in Washington and Oregon. Each mill produces its own blend of products and services. The Darrington mill, which Hampton purchased two years ago, produces kiln-dried dimension and stud lumber from hemlock and Douglas fir logs.

Mill operations in Darrington now are a complex combination of brute strength and precise technology. Computer systems use lasers and camera systems to scan cants, as the logs are called, creating exact planograms that determine which set of cutting options will result in the most efficient use of that timber.

"The system shoots a laser beam and takes a photo of the log, then feeds that data back to a computer, which then uses that data to make any number of the umpteen possible decisions," Steere explained. "The equipment optimizes each log. Out of all the endless possibilities, it will say, 'cut in these ways to make three 4X6s and two 2X4s.'"

Once cut, the lumber goes to the kiln to be dried, then to the planer to be finished before making the trip to a lumberyard or home improvement center.

Steere and his crew depend on Fluke Corporation test equipment to keep the complex system functional, accurate and dependable: Fluke 87s are their meter of choice, while covering the mill. They are used to test motors and various systems around the mill. T5 Voltage Testers, which they stuff in their pockets and which the crew calls "glow sticks," are used for safety checks.

"We have an extensive PM (preventative maintenance) program," Steere said. "In a dusty, vibrating environment like this, we're always tightening screws, testing motors and testing leads to be sure they haven't come loose."

Steere relies on Fluke equipment because of its accuracy and durability in real-world environments.

"I've dropped my 87 and my T5 at one point or another," he said. "They both still work just fine."

Despite its might and size, most of the equipment at the mill operates on low voltages, 480 or 120. Still enough, Steere said, to hurt when you cross it unexpectedly. That's why the crew takes nothing for granted. "We're always pulling out our T5s to see if the line is live."

In the future, Steere plans to expand his bank of Fluke equipment. He wants to be able to record current and voltage measurements over time. "I just haven't seen anything that works as well as Fluke," he said.

Hampton Lumber Mills – Darrington Division

Parent Company – Hampton Affiliates
www.hamptonaffiliates.com

- More than 50 years of building products experience
- Forbes Private 500 Company
- Revenues exceeding \$700 million
- Timberlands totaling 180,000 acres in Washington and Oregon
- Sawmills in Washington and Oregon
- Softwood lumber production capacity: 900 million board feet
- #1 private softwood lumber producer in Oregon, Washington and Idaho
- Fleet of 800 railcars
- Full range of building products, from lumber to windows to molding. Distribution locations throughout the western United States, from Seattle to San Diego.

Planting tomorrow's forests today

Since 1947, Hampton has planted 26.2 million seedlings on proprietary timberlands. Currently a typical winter planting is around 1.6 million seedlings. Private nurseries sow Hampton seed, producing high quality seedlings the company then uses to restock its timberlands. Hampton plants from 400 to 700 trees on every acre it harvests, the company says.

Hampton foresters facilitate other forest uses, as well – wildlife, water and recreation. Populations of elk, deer, bear, grouse, turkey, bobcat and cougar call Hampton forests home. As part of its ongoing environmental conservation, Hampton forest managers undertake several stream enhancement projects on company land each year.

Fluke. *Keeping your world up and running.*

Fluke Corporation

PO Box 9090, Everett, WA USA 98206

Fluke Europe B.V.
 PO Box 1186, 5602 BD
 Eindhoven, The Netherlands

For more information call:
 In the U.S.A. (800) 443-5853 or
 Fax (425) 446-5116
 In Europe/M-East/Africa (31 40) 2 675 200 or
 Fax (31 40) 2 675 222
 In Canada (800) 36-FLUKE or
 Fax (905) 890-6866
 From other countries +1 (425) 446-5500 or
 Fax +1 (425) 446-5116
 Web access: <http://www.fluke.com>

©2004 Fluke Corporation. All rights reserved.
 Printed in U.S.A. 3/2004 2140267 A-ENG-N Rev A