

OREGON'S SKILLED FOREST PRODUCTS WORKFORCE

A National
Leader
In Wood
Products
Manufacturing



A Special Report
of the Oregon
Forest Resources
Institute

It's impossible to avoid. In America, you can't go through a day without some exposure to it. Chances are you slept on it, walked on it, wore it or even brushed your teeth with it. You might have read a newspaper or book made from it (not to mention this magazine in your hands), poured your cereal and milk from containers fabricated from it, or been in a house or building constructed of it. We're talking about wood, of course, and the more than 5,000 products we use every day that come from it. With emerging fields like nanotechnology, the list is growing to include even more unexpected applications such as skin grafts, tissue implants and synthetic bones. This report examines the highly skilled workforce in Oregon that manages and operates the sophisticated machinery used to produce these products and helps keep Oregon a dominant factor in the nation's – and the world's – marketplace.

HIGHLIGHTS

- Historically, forestry and forest products have been perhaps the most common thread in Oregon's cultural fabric, and even today the forest sector is the major contributor – economically and socially – to rural and small-town life across the state. The Oregon Employment Department reports that the state's wood products manufacturing payroll was \$1.26 billion in 2005.
- Oregon is the nation's leading producer of softwood lumber and structural panels. Over the last several decades, many additional uses for wood have emerged, particularly engineered wood products.
- These advances have coincided with other manufacturing efficiencies so that nearly everything once considered wood waste has been put to use. In fact, sawmill wood waste that is not practical for use in other products is increasingly being used to generate energy.
- Oregon's forest sector has adapted as markets, technologies, raw material supplies and both domestic and global competition have changed. For the sector to be competitive in today's global markets, continuous innovation is necessary in all aspects of wood products manufacturing. Operations were once relative low-tech. Today they are fewer in number but are mostly state-of-the-art, large-scale automated facilities producing both traditional and innovative new wood products.
- With innovative new technology and product development, new career opportunities in wood products manufacturing have emerged. Many mills and plants now employ professionals with seemingly unrelated skills in fields such as engineering, chemistry, metallurgy and, of course, computer science and electronics.



FROM HARVEST TO MARKET

Harvesting trees is only the beginning of wood's journey from Oregon's rich forestlands to the vastly diverse manufacturing facilities in the state that convert it into an ever-increasing array of products. Long gone are the days when lumber was the only wood product. The scientific and technological advances in mill and plant operations that have brought these new products to market have also changed the face of the forest products manufacturing workforce.

The technicians and operators in Oregon's wood products mills and plants today are highly skilled, flexible and capable of mastering and improving the sophisticated new machinery used in these operations. They bring the technical, management and business expertise necessary to run an efficient, environmentally friendly and highly competitive forest products manufacturing sector that is keeping Oregon in the forefront of wood products innovation throughout the nation and the world.

Manufacturing with Opportunity

"What we have here is a group of people who have the opportunity to feel good about what they're doing and earn a good living at the same time," says Mike Pieti, Executive Secretary of the Carpenter's Industrial Council, a union representing workers in the forest products industry. "We have in Oregon an industry where workers take pride in providing lumber and other building materials for homes and growing the American economy. At the same time, they feel good about working with a renewable resource in an industry that values efficiency, works to minimize waste and is forward-looking in contributing to the development of new operating technologies like cogeneration and the use of woody biomass that address our growing energy needs."

Employees enter the wood products manufacturing work-



Computers play such a key role in manufacturing today that the entire function of a plant's production lines and machinery can be condensed into control boxes like this one. From this equipment, a technician can identify problems and even make repairs. Each of the boxes shown has an internet address so that the technician can be alerted to and address problems even when away from the plant.



Mike Pieti
Executive
Secretary/Treasurer
Carpenters Industrial
Council
Portland

"People looking at employment in wood products manufacturing today have a tremendous opportunity to select the type of work they feel good about. They are able to look at a whole spectrum of jobs, from stacking lumber to being an expert in the machine shop. There is also a good deal of flexibility. Because of family schedules and other reasons, weekend or night work is available as well. Basically, if you like living in smaller communities with quick access to outdoor activities and a lower cost of living, and if you have a good work ethic, then you're only limited by yourself and your desires."



Don Gordon
Unit Manager
Weyerhaeuser's iLevel
Lumber Mill
Cottage Grove

"It's dramatic what's going on in wood products manufacturing right now. We have a lot of employees, probably what would be called the baby boomers, who are looking at retirement in the next five or ten years. So in the near term, the employment picture is encouraging. There's a lot of misperception out there about this kind of work – that it's hard and heavy and dirty – and it's just not the case. Most visitors are amazed, not just at the cleanliness of our plant, but the sophistication of the manufacturing process. It's modern and highly technical, and the great part is the choice that's available and the free training the company provides."

force directly from high school or college, or they can come to it later. "Age has very little to do with it," says Vic White, Oregon human resources manager for Hampton Affiliates in Willamina. "We're very egalitarian. If you have a good work ethic, energy and drive, and common sense about safe and responsible manufacturing, then you can find a rewarding career here."

Individual company practices vary, but most workers comment favorably about the breadth of opportunity available in the field. New employees generally are exposed to a whole range of positions as they first work on the shop floor and then move about to various line operations. This practice gives them a better understanding of the whole manufacturing process and, more important, it ultimately helps them find a job that suits them.

Employees who have the skills or the desire to learn them usually have ample opportunity for advancement. "Most companies make a practice of promoting from within," said Don Gordon, unit manager at Weyerhaeuser's iLevel sawmill. "It just makes sense. Our employees know our operation, and that gives us the opportunity to identify employees with leadership and other management skills."

"Over the 10 years I've been here, I've cross-trained in just about every job in the mill," said Sherry Valley, a gang edger operator in Weyerhaeuser's lumber mill in Cottage Grove (part of the company's residential structural frame business known as iLevel). In her case, she found a specific position on the planer line that suited her.

When advancing employees require additional skills, companies such as Weyerhaeuser routinely work with the unions representing their workers to provide the training. Some mill and plant occupations, like millwrights and electricians, require completion of four-year training programs that promote employees from apprentices to journeymen. Again, many companies provide this training and pay for course work outside the plant. They also provide flexibility in work hours for the days when employees are attending classes.

A NATIONAL LEADER IN FOREST PRODUCTS

Oregon is the nation's leading producer of softwood lumber and structural panels, according to the Western Wood Products Association. Oregon's forest sector has adapted as markets, technologies, raw material supplies and both domestic and global competition have changed. For the sector to be competitive in today's global markets, continuous innovation is necessary in all aspects of wood products manufacturing. Operations were once relatively low-tech. Today they are fewer in number but mostly state-of-the-art, large-scale automated facilities producing both traditional and innovative new wood products.

However, over recent decades, many additional uses for wood have emerged, particularly engineered wood products. Basically, the refinement of joining smaller pieces of wood together to make larger structural pieces, or using small wood particles of various sizes to make materials such as particleboard, have created new wood products and opened up new markets for Oregon wood. These advances have coincided with other manufacturing efficiencies to minimize or eliminate waste material.

New Products through Wood Innovation

Engineered wood products are known in the field as structural composite lumber (SCL). These products involve layering wood veneers or flakes with adhesives and curing them in a controlled process. The result is a highly predictable and uniform engineered wood product free from warping and splitting, with the added benefit of enabling the use of relatively small trees to make large structural timbers that often out-perform conventional lumber. These SCL products include laminated veneer lumber (LVL), laminated strand lumber (LSL) and oriented strand lumber (OSL).

Particleboard is another product that utilizes even finer wood material to



Much of the operations of plants like Boise Cascade's particleboard facility are monitored and controlled from booths like this that are situated in visual proximity to the lines. The real operation of these massive manufacturing lines takes place in these rooms, where the positive logic control that comes from sophisticated computers ensures that each action is coordinated with all the others. Here is the place where operators can identify problems on the line, and often coordinate repairs as well.



Clay Underwood
Quality Manager
Weyerhaeuser's
SpaceKraft Plant
Salem

"What I enjoy about my work in product quality is problem-solving. My background is in journalism, seemingly unrelated, but I have a natural curiosity that serves me well in identifying and addressing problems in our plant systems. Our systems are very technically sophisticated, so statistical process-control data drives our decision making. Our goal is to fix a problem, so it's important to seek measures and production efficiencies that engineer problems out of the product. That's a lot more important than increasing inspection, because in the end you can't inspect a problem away."



Lee Daily
Layup Line Worker
Roseburg Forest
Products Plywood Mill
Coquille

Working on the highly automated plywood layup line since it was installed in 2004, Lee Daily marvels at how quickly and efficiently new technology allows them to fill Roseburg Forest Products' plywood needs. "Our old line was far less sophisticated," says Daily, who worked on that line as a tender for 16 years before moving to the new one. "Our experience with the product helped us adapt to the new system. We've got it running so fast and efficiently that we have become very good at matching our speed to product demand, so that we can minimize inventory and storage."



Oregon's forest products manufacturers invest heavily in state-of-the-art equipment to stay competitive in the national and international marketplace. Sophisticated monitoring techniques enable technicians to maintain strict quality standards. Here Morgan Olson, Boise Cascade's particleboard plant superintendent (right) and Chris Castleman, mill technical director, inspect product on the line.

create composite panels made of cellulosic particles of varied sizes joined together with binders and synthetic resins under heat and pressure. Modifications of particle geometry, resin levels and board density enable the creation of different types of products for varied end uses. Other composite panel products include oriented strandboard (OSB) and medium-density fiberboard (MDF). These types of engineered board products take advantage of smaller woody materials, often acquired from other wood products manufacturers, and have helped manufacturers put to use nearly everything once considered wood waste.

To maintain a competitive edge, manufacturers have pursued more complete log utilization for decades, but recent reductions in supply on federal land and increasing global competition have accelerated the search for further efficiencies. With the advent of composites and engineered wood products, virtually all of what was once mill waste is now captured. Any remaining residual material may be used as fuel to create the heat for drying kilns and to generate electricity. With rising energy costs and moves to reduce our dependence on fossil fuels, many in the state and country are exploring the use of forest biomass as an alternative source of renewable energy and biofuels. Oregon is looking seriously

at the potential of biomass from wood for meeting its ambitious renewable energy goals.

New products often come from existing technologies as well. For example, Weyerhaeuser's highly mechanized SpaceKraft facility in Salem is manufacturing a sophisticated shipping container made essentially of corrugated Kraft paper. Developed to compete with the industry-standard 55-gallon steel drums used for shipping liquids, the SpaceKraft container is considerably less expensive, can be used multiple times with new plastic liners and is recyclable. The containers – uniquely designed and manufactured from basically six to ten layers of corrugated Kraft paper – can withstand up to 75,000 pounds of pressure without collapsing and are used for everything from bulk foods to liquids such as milk. The engineered corrugated material is an example of wood fiber use in unexpected applications. The entire plant is automated and the sophisticated electronics that run it require technology-savvy employees.

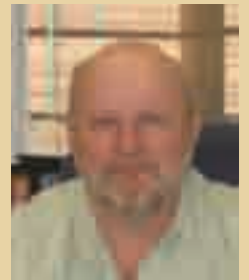
NEW TECHNOLOGIES MEAN NEW JOBS

With each improvement in technology and each new product, new career opportunities in wood products manufacturing have emerged. Wood products manufacturing, historically limited to sawyers and other mill workers who mostly sorted and moved wood around, today calls on the expertise of many professionals with skills in such diverse areas as engineering, chemistry, electronics and computer technology.

Several decades ago, the emergence of the computer into the manufacturing sector changed the face of wood products manufacturing. Laser technology had already been adapted to milling, helping the human eye determine the most efficient cut for each log in a fraction of a second, but the advent of programmable logic controllers (PLCs) in manufacturing machinery enabled other electronic functions to occur. It began to be possible, for example, for the laser scanner to communicate with the big saws that cut the timber so an operator in a control booth can monitor the computerized functions that involve scanning and setting the big saw blades, which move to new positions with each log going down the line. Scientists at the Oregon State University College of Forestry are even developing scanning techniques that will automatically grade finished lumber by analyzing the number of knots and other factors.

New Jobs Often Require New Skills

All of these advances have led to changes in skills needed in the manufacturing workforce. Great investments in on-the-job training enabled already-skilled employees to learn the electronics and mechanics required by upgraded equip-



Vic White
Oregon Human
Resources Manager
Hampton Affiliates
Willamina

"When I go out and talk about this kind of career, I like to tell people that this isn't the kind of work where you're stuck behind a shovel. That's something from the past. We need people with the technical ability, energy, drive and imagination to run complex machines and equipment. Some are content to just do a job and go home, and there's a place for them too, but for those with the desire and work ethic, the sky's the limit. And the great part is that our company, and others as well, are big on training. We like to invest in people, because it makes them more valuable to us, and they tend to be the kind of employees who will be with us for a long time."



Kim Youngblood
Laminated Veneer Line
Worker
Roseburg Forest Products
Riddle

Kim Youngblood, who has been with Roseburg Forest Products (RFP) since 1988, is taken with the openness of the company to innovation and improvement. "When you're out there on the line, you begin to see ways your team can be more efficient," she says. "When we came up with the idea of switching positions on the line regularly, RFP wholeheartedly supported the idea. Rotating through three stations on the laminated veneer lumber line throughout the day helps you keep your mind sharp and your focus tuned. You don't often hear people say it, but I really love my job and enjoy coming to work every day. Not everyone can say that."

ment. The change also brought new trades and professions into forest manufacturing. Scott Ezell, an electronic control specialist with Boise Cascade's particleboard plant in LaGrande, said, "The old-school method was running one thing well. The new school says, 'give us flexibility. We want to be able to change equipment on the fly so that we can adjust our product mix quickly.' This lets us produce a product based on demand, so that we don't have to warehouse material the way we did."

The key to such nimbleness is data collection and analysis. Boise Cascade, like other large manufacturers, is big on automation. Ezell has even devised a method of putting controls online so he can monitor them and be on call to do troubleshooting from home or a more distant point. "I have a blast with this work," he said. "I love the creative challenges it presents and the ability to use my skills to improve company performance."

In a similar case, the Hampton Affiliates sawmill in Willamina, which has the highest volume output of any lumber mill in the country, is highly automated, and many of its production line functions are driven by computers. For example, an expert grader marks each milled board with a crayon to indicate its quality.



In the manufacture of laminated veneer lumber (LVL), many workers occupy work stations along the line. To keep themselves sharp and alert, Roseburg Forest Product LVL teams came up with a system where team members rotate to different positions along the line every hour. The plan not only keeps them focused, but also gives them cross-training at all the work stations, giving them a better understanding of the whole manufacturing process.

In six one-hundredths of a second, an optical scanner reads and interprets one of the 20 crayon symbols the graders use, then routes the board to any of 45 different bins based on its size and quality. The contents of these bins are then automatically stacked into perfect bundles, banded together and put on palettes, ready for shipment to Home Depot, Lowe's or any number of other destinations. When problems occur, workers quickly turn to an electrical and controls engineer, who can identify the problem from a distant control room and address it from there electronically.

Similar processes are at work throughout forest products manufacturing. Skilled metallurgists now are engaged in the design and maintenance of the giant saw blades used in mill operations, improving their efficiency and minimizing waste. Chemists analyze water quality in the manufacturing process and test the physical properties of products. Along the production lines, employees have learned new skills with the advent of automation. Their experience gives them a solid understanding of the product, so that they are able to take full advantage of automated systems and often make improvements of their own.

Teamwork and Self-Management Are Common

Many groups of workers have discovered the advantages of coming together as teams to address manufacturing efficiencies. At Roseburg Forest Products' LVL plant, groups are self-managed and have devised their own standards for safety, quality and production. "The union and the company agreed on a unique arrangement for the LVL plant when it went into operation," noted the CIC's Mike Pieti. "The agreement allows the company to experiment with new and innovative work systems."

Team members found that trading functions periodically helped them maintain their concentration, so they instituted a practice where each hour during their shift, every member moves forward to a different station where their position and responsibilities change. Team members claim the practice keeps them alert and adds variety to their jobs.

"This method also gives us a fuller understanding of the whole process," said Kristy Winters, one of the multi-skilled operators on the LVL line. "I also enjoy training new people, which is part of all our jobs. It makes us realize we know more than we thought we did. I learn something new every day, which helps keep my work fresh and interesting."

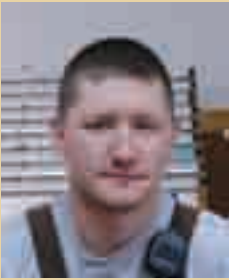
THE BACKBONE OF OREGON'S ECONOMY

Historically, the forest products industry has been perhaps the most common thread in Oregon's cultural fabric, and even today is the backbone of many rural



Sherry Valley
Gang Edger Operator
Weyerhaeuser's iLevel
Lumber Mill
Cottage Grove

"My great grandfather worked here, and so did my grandfather and grandmother. And my dad's been here 35 years. I've often joked that when I was thinking about a career, I figured, why fight fate? Seriously, though, this is a great place to work. There's good pay, good benefits, a clean environment and lots of flexibility in scheduling and finding something you really like to do. It's not really physical work like you'd imagine, but using your head and solving problems. And I really like the way the company encourages involvement. I'm a union steward and have worked on committees like health and wellness, safety and ergonomics."



James Rowe
Apprentice Electrician
Roseburg Forest Products
Plywood Mill
Coquille

After earning a degree in business administration, James Rowe got a job in quality assurance with Roseburg Forest Products' Coquille plywood mill. After four years in that position, however, he wanted to make a more hands-on contribution. He entered into an electrician apprenticeship, and began taking classes at Umpqua Community College three nights a week. Now in the second of four years as an apprentice, Rowe loves the feeling of accomplishment he gets from his job. "The best part about working as an electrician," he says, "is that you're working all over the mill and when you do your work properly, you're really making somebody else's job easier. It's really making a difference."

economies across the state. According to the U.S. Bureau of Economic Analysis, the wood products sector accounted for \$2.9 billion of Oregon's \$25.3 billion gross domestic product in 2004.

Statewide, wood and paper products manufacturing accounts for nearly a quarter of manufacturing jobs, according to the Atlas of Oregon. Although wood products manufacturing is not classified as a high-growth industry, the retirement of a large number of "baby boomers" in the coming years means thousands of openings for new workers. Laurie Warner, head of the Oregon Employment Department, said that while the department expects a slight decrease in the actual number of jobs, "baby boomer" retirements will create nearly 6,000 job openings between 2004 and 2014.

Much has changed in the state, the industry and the world in recent decades. This has required forest products manufacturers to adapt, opening up new career opportunities for high school or college graduates. Fortunately, Oregon has a strong tradition of innovation, which is apparent both in forward-looking policy and in a dynamic forest products workforce that is not just responding to change, but leading the way.



Wood is a natural material, and because each tree is unique in terms of branch structure, ring density and other factors, converting it into a consistent, high-quality product requires skill and experience. Here expert graders quickly assess each piece of material as it moves down the line and assign it a mark to indicate its characteristics. This process ensures that consumers will be able to buy wood products appropriate to their intended use.

OREGON'S WOOD PRODUCTS EXPERTS

As harvested timber moves from forest to manufacturing facilities across the state, a dedicated group of experts and technicians carry on the generations-old Oregon tradition of leadership in wood products fabrication. The mills and plants scattered across our rich, forest landscape are inextricably linked with the culture, economy and character of Oregon's rural communities. With decades of plant innovation and modernization, the Oregonians who keep this industry vibrant and competitive have evolved into a highly skilled workforce committed to the highest standards of wood products excellence.



STATE-OF-THE-ART EQUIPMENT

Darren Coleman
Shelving Line Operator
Roseburg Forest Products
Roseburg

When Roseburg Forest Products invested in a state-of-the-art shelving line – one quite sophisticated and almost completely automated – the company had a hard time finding someone up to the challenge of managing it. “A few position openings created an opportunity,” said Darren Coleman, “and I thought, ‘What the heck?’ and decided to give it a try.” The line, which is filled with photo eyes and sensors to create perfect shelves out of four- to twelve-foot pieces of particleboard, was incredibly complex, but Coleman found he had an affinity for it. With study and training, much of it self-directed, Coleman persevered and has mastered both operation and maintenance issues. When operating at full capacity, the line can produce more than 625,000 lineal feet of shelving a week.

ENGINEERING WITHOUT THE DESK

Phillip Fuller
Engineering Project Manager
Hampton Affiliates
Willamina

After earning his bachelor's degree in civil engineering, Phil Fuller was faced with a difficult career decision: he loved engineering, but knew he did not want to be stuck behind a desk. He was drawn to lumber manufacturing for just that reason – to get a hands-on engineering experience. “There’s no engineering job anywhere that lets you see a project through from conception to production like this one does. It’s vastly rewarding to actually see the fruits of your labor firsthand and to know that you were responsible for an incredibly large and complex piece of machinery functioning perfectly.” Fuller has been with a number of mills around the Pacific Northwest throughout his career, and his skill set is much in demand because of his combination of hands-on knowledge of equipment and his technical background.



COMPUTERS ENHANCE MONITORING

Don Dutton
Milling and Drying Operator
Boise Wood Products
Particleboard Plant
La Grande

Through 34 years at Boise Cascade's particleboard plant in La Grande, Don Dutton has seen immense changes in the operations of his milling and drying line, where he is an operator. As computer technology improved, Dutton



drawn on his past experience to master the electronic upgrades that improved controls and operator flexibility. Virtually every facet of the line is now visible on his computer screens in the control booth, and he can make adjustments easily from there as well.



NEW ENGINEERED WOOD PRODUCTS

Kristy Winters
Laminated Veneer Line Operator
Roseburg Forest Products
Roseburg

Roseburg Forest Products has some innovative concepts and working conditions at their most recent laminated veneer mill, built in 2000. Kristy Winters, a member of Carpenters Industrial Council (CIC) Local Union 2949, loves her job there, where she and two other members of her shift work as a team to cover three different job stations on the LVL line. Teams like hers are self-managed, so when she and her teammates found that rotating station positions every hour kept all three members fresh and attentive, they had the power to institute that policy. Each of the three positions requires extensive on-the-job training, and she says she is still learning new things after six years there. "When you first start, there is so much to learn in a short period," said Winters. "The learning curve is very steep, but it's incredibly rewarding when you begin to master each of the jobs."

BECOMING A MILLWRIGHT

Jared Wilson
Millwright Apprentice
Weyerhaeuser's iLevel Lumber Mill
Cottage Grove

The millwright is a very important person in the manufacturing process, essentially responsible for all the mechanical aspects of the machinery. Jared Wilson's interest in wood products began with employment in a lumber yard, whose owner suggested he explore mill work as a career. After applying, testing and interviewing, he began working in production at Weyerhaeuser's iLevel lumber mill in Cottage Grove. At the time, there was a need for relief operators, a position that gave him exposure to many different machines. Liking the physical part of the work and having a natural curiosity about how machines work led him to commit to the four-year millwright training program. The company pays for his training – which involves course work at Lane Community College in everything from power transmission to welding – and accommodates his work schedule to his classes.





MAINTAINING ELECTRONIC CONTROLS

Scott Ezell
Electronic Control Specialist
Boise Wood Products
Elgin Complex
La Grande

As electrical supervisor for Boise Cascade's stud mill and plywood plant in Elgin, Scott Ezell must be able to repair, install and operate the electronics of virtually every piece of machinery in the two plants. "From fixing a light fixture to making more than 800 possible adjustments to a roller motor, a mill electrician must have an enormous knowledge base," he says. Ezell started at the Oregon Institute of Technology, where he studied electronics engineering technology. Although not a direct tie-in to becoming an electrician, he was accepted into the four-year mill electrician apprenticeship program with Boise Cascade and worked his way up. Now certified as both a mill electrician and general electrician, Ezell also instructs apprentices in his spare hours.

AN ENGINEER STUDIES EFFICIENCY

Susan Monroe
Mechanical Engineer
Weyerhaeuser's SpaceKraft Plant
Salem

"The key to my job is increasing efficiency," said Susan Monroe. "I analyze all of the data we've collected and figure out what aspects of our operation are slowing down fulfillment of our customers' needs." The plant produces highly innovative shipping containers and is a study in state-of-the-art automation, and Monroe has helped make it that way, overseeing installation of new equipment and doing extensive product testing. After earning her mechanical engineering degree, Monroe held various positions, including jobs at Boeing and the Industrial Assessment Center at OSU, achieving her Professional Engineer certification along the way. She eventually landed at Weyerhaeuser's SpaceKraft facility in Salem, where she is a member of their leadership team.





THE SKILL OF THE OPERATOR

Jamie Torres
Eight-foot Lathe Operator
Roseburg Forest Products
Coquille

A native of southern Mexico, Jamie Torres has lived in Coquille for more than 20 years and has been at the Roseburg Forest Products plywood plant for more than 11 years. Torres, a member of CIC Local Union 2784, is a fast learner and has worked his way up through the ranks, performing a number of jobs within the plant. He now operates an eight-foot lathe – one of the most prestigious jobs in the plant. The lathe takes a four- or eight-foot log secured at each end and starts it spinning at high speed against a “knife.” Long sheets of veneer a fraction of an inch thick are “peeled” from the log at a rate of about 1,000 feet per minute. It takes just a few seconds to peel a log into veneer, which will be used to make plywood.

QUALITY ASSURANCE AND CONTROL

Chris Castleman
Mill Technical Director
Boise Wood Products
Particleboard Plant
La Grande

Having always been interested in manufacturing, Chris Castleman sought out the industrial technologies program in college. He learned some much sought-after skills there, and soon after graduation found himself in a job as a lab technician at Boise Cascade’s particleboard plant in La Grande. He excelled at his work, and at the age of 26 was promoted to technical director for the mill. He is responsible for quality control there and directs functions like physical and chemistry testing, addressing customer concerns, researching new technologies and testing products for consistency and strength.



RUNNING LOG LINES FROM THE KEYBOARD

Jason Conolly
Electrical and Controls
Engineer
Hampton Affiliates
Willamina

A sawmill such as the one Hampton Affiliates runs in Willamina is typically driven almost entirely by computers, using advanced automation to grade, sort and stack boards at an incredible rate of speed. Shown here in the control room at the Willamina mill, Jason Conolly fine-tunes the process electronically. A key troubleshooter, he floats from assignment to assignment among Hampton's various manufacturing sites. "I have friends from college with the same degree as me who work for Intel or other high-tech companies," said Conolly, a graduate of OSU. "But they only work on a tiny piece of a project. I get to look at an entire mill and do both design and implementation of anything I think can increase efficiency. It's really a fascinating process."



EVALUATING INCOMING TIMBER

Kristina Gertson
Trainee Log Scaler
Oregon Log Scaling and Grading Bureau
Roseburg

"What I love about my job," said Kristina Gertson, "is that I learn something new every day." Gertson is a log scaler for the Southern Oregon Log Scaling Bureau and is currently assigned to the Roseburg Forest Products mill in Roseburg. Log scalers make an initial assessment – with the help of a handheld computer – of how many board feet can be cut from an incoming truckload of logs at the mill. It is the scaler's assessment that sets the price paid for the logs delivered, so in order to arrive at a figure that is fair to both the mill and the landowner, Gertson's determination must factor in the condition of the log – whether it has dry rot or disease that renders parts of it unusable, whether it has a curve that will make it less desirable for straight boards, and dozens of other variables.



TRAINING TOMORROW'S METALLURGISTS

Robbie Bennett
Saw Shop Apprentice
Warm Springs Forest Products Industries
Warm Springs

The Warm Springs mill has a one- to two-year training program to teach tribal youths the highly technical skills needed to operate manufacturing machinery. Nineteen-year-old Robbie Bennett (pictured with supervisor Dave Garrett) is in the middle of a four-month training program to learn how to run the computerized grinders that sharpen the highly sophisticated band saws used in cutting to fine tolerances. "Every day I learn something new," said Bennett. "It's really a joy to come to work and have something different to try and a new challenge to tackle." These precisely calibrated machines have to be extremely accurate to ensure clean cuts. They are so sensitive that operators must program the computer to repeat irregular sequences of spacing between teeth. Otherwise harmonic resonances occur while the saw is running, which results in what is called "washboard" lumber.

UPWARD MOBILITY

Morgan Olson
Plant Superintendent
Boise Wood Products
Particleboard Plant
La Grande

A double major in rangeland management and crop science in college, Morgan Olson has always gravitated towards science. After graduating from college, he ended up working for Boise Cascade through an environmental internship program wherein mills would contribute their water runoff to meet local hay farmers' irrigation needs. Intrigued by his work with the mill, he successfully sought a position in the testing lab at the particleboard mill in La Grande. After several promotions and eventually becoming the plant's technical director, Olson was named plant superintendent before he turned 30.



UP THROUGH THE RANKS

Lois Perdue
Finishing End
Superintendent
Hampton Affiliates
Willamina

Lois Perdue is a perfect example of working one's way up in forest manufacturing. When she started work, she had her eyes set on a supervisory position, and spent two years taking classes in management. In 1998, after eight years familiarizing herself with virtually every facet of mill operations, she was offered a supervisor's position at the Hampton Affiliates lumber mill in Willamina. In addition to her management of several operations, she was given responsibility for working with the sales team to enhance customer satisfaction with specific clients like Home Depot and Lowe's. "This is such a competitive industry," said Perdue, "and with a limited supply of trees coming in, we need to maximize our efficiency by getting more out of each log and continually aiming for zero waste."



TEAM LEADERS FROM WITHIN

Dennette Ryker
Planer Department Team Leader
Weyerhaeuser's iLevel Lumber Mill
Cottage Grove

Dennette Ryker came to Weyerhaeuser's sawmill in Cottage Grove as a laborer in machine operations and worked as a stacker, sorter, grader and forklift operator. She eventually became cross-trained in a number of positions. Her supervisors felt she had leadership potential and urged her to apply for a team leader position. She agreed and went through a regimen of panel interviews, situational training and team building. Following her selection, she attended classes off-site two days a week for six weeks and management training at company expense. A member of Machinists Local 246, she credits Weyerhaeuser for helping her advance by accommodating her absences and providing her with the skills she needed in her supervisory role.



Oregon Forest Resources Institute
317 SW Sixth Avenue, Suite 400
Portland, Oregon 97204
971.673.2944
800.719.9195
www.oregonforests.org

Leslie Lehmann, Executive Director
Dave Kvamme, Director of Communications
Mike Cloughesy, Director of Forestry

Acknowledgments

The Oregon Forest Resources Institute is grateful to all the forest products workers and managers who shared their expertise and love of their work.

Project Management:

Editorial/Production Management: Feinstein Group, Ltd.
Design: Joseph Erceg Graphic Design
Photography: Michael and Josh Feinstein

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