How a Best Plant Prepares Its Future Workforce

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Among the most effective tools Pratt & Whitney's North Berwick, Me., plant uses to attract young people to manufacturing is plant events that show them the high-tech machining used in producing jet engine parts.

(IW - Steve Minter: 3-21-16) "If you don't build it, you're not going to have it."

Patrick Regan, product director at Pratt &Whitney's North Berwick, Maine plant, isn't talking about a specialized tool or an exotic component for one of the jet engines Pratt produces. He's referencing a necessity for every U.S. manufacturer – developing a robust workforce with the skills necessary to manufacture 21st Century products.

The need is particularly pressing at the North Berwick plant, a 2015 IndustryWeek Best Plants winner. The plant, which started up in 1979, is facing the prospect not only of baby boomer employees retiring but also the demands of a huge modernization and expansion project aimed at increased production of components and modules for new commercial and military jet engines. In 2015, the plant hired 186 employees, bringing its total workforce to more than 1,400. The local workforce, Regan explains, simply won't provide the numbers of skilled employees needed without a concerted effort by the plant to attract and train new manufacturing workers.

"We're in a huge investment cycle right now," says Michael Papp, the general manager. "Spending the money wisely is important." The plant is expected to spend a total of \$150 million on physical plant improvements and new processes and equipment that will make the plant more productive and position it for the future. But that won't happen just by putting in new machinery, he emphasizes.

"Pat and his guys are out there making sure we get the equipment in. That's important but you can put equipment anywhere," Papp says. "The difficulty is

getting the people with the skill sets that make you competitive."

Papp and his team are tackling that challenge in a variety of ways. For the long term, they use community outreach to fight negative stereotypes about manufacturing and show the opportunities that it provides. Those efforts range from visiting high schools to inviting Eagle Scouts in for tours and hosting the local United Way banquet.

"We invited about 20 counselors from grade schools in the area," notes Deb Chipperfield, the human resources manager. "We brought them in, did a presentation and then took them out into the plant to show that this is high-tech machining in a clean, modern facility with a skilled and collaborative workforce. This is not a stereotypical factory environment from 30 years ago. This is a great place to work and learn and grow. They can transfer that message when they are talking to the youth about careers and manufacturing.."

In April 2013, North Berwick created an apprenticeship program to fuel the skilled worker pipeline. Apprentices go through rotation assignments in various areas of the plant such as machining, coatings and assembly. They also go to school during this time. When the first class graduates in March 2017, they will be certified in the machine trades by the state of Maine and will have an associate degree from York County Community College.

In a time of rising student debt, one attraction for young people is that they can work at North Berwick while getting their degree. A student can work on afternoon or night shifts, or on weekends, and the company will pay for their education, Papp notes.

Plant officials underscored the importance of building relationships with local colleges.

"Five years ago, York County Community College did not have any machining programs," says Papp. Plant officials worked with the school to set up a curriculum and donated surplus machinery and \$90,000 to the new program. Today, the school has added a building for its manufacturing programs, purchased equipment and offers both 1-year certificate and 2-year associate degree programs in precision

machining. For graduates of the program, Papp notes, "In essence, you are writing your ticket to a pretty good career."

Filling the plant's manpower needs involves extra effort for a leadership team already overseeing a physical plant transformation. In 2014, for example, the plant held an onsite job fair.

"We thought we would try a little job fair," recalls Chipperfield. "We had over 600 people come in." Applicants lined up onto the street for the event, which made for a very long and successful day.

More recently, the plant has been holding large interview events, dubbed "superdays," on Saturdays on a quarterly basis. The plant brings in 40 people and divides them up with four teams of an HR manager and a supervisor for interviews. Papp said doing this on a weekend eliminates employee conflicts with busy schedules and also helps candidates who might have trouble coming in during the workweek.

Pratt is also partnering with YCCC on an onboarding program. Before they step on the production floor, new employees go through a six-week program, conducted by college instructors and Pratt subject matter experts, that trains them on basic shop math, reading blueprints, machining, safety, quality and other aspects of their new job. Training doesn't stop there. The plant has over 300 certified trainers in its workforce who provide continuing on-the-job training to employees.

All of this training helps to reinforce a work culture that strives for perfection in the products it makes.

"We spend a lot of time putting visibility on the importance of our product," says Leo Dionne, the plant's transition manager. "We are making jet engine components. There is no space for errors with these parts."