

March 6, 2019
House Education Policy Committee

H.F. 73, H.F. 246, H.F. 692

Joseph E. Brown, Sr.
Fairmont Area Schools Superintendent
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Madam Chairwoman, members of the committee.

I am Joseph E. Brown, Sr. – Superintendent of Fairmont Area Schools. I have with me Bob Bonin (welding teacher) and senior student Lucas Denney.

Just as Minnesota is currently experiencing a severe teacher shortage, it is expected that there will be a more serious shortage of skilled workers in the next three to five years in carpenters, welders, electricians and plumbers.

What is the problem? Why are students not taking vocational classes?

- The answer is that many high schools have simply eliminated vocational programs with an increased emphasis on preparing students for a four-year college experience.
- Schools have found it increasingly difficult to recruit and retain certified vocational teachers.
- Schools have cut vocational programs due to lack of funding for up-to-date equipment and facilities.

We have observed that many students do not have time during the regularly scheduled school day to take a vocational class.

- Due to state and federal academic requirements that result in full high school schedules, many students do not have time during the regular school day to take vocational classes.
- Many of our top academic students are taking required core classes along with a foreign language, multiple college classes, band, choir or orchestra and cannot fit a vocational class in during the regular school day.
- Some of our students that are highly interested in vocational careers have full schedules due to taking core classes more than once, remedial classes, and required classes.

What is the solution?

Fairmont Area Schools has implemented summer welding academy classes and Saturday welding academy classes in addition to summer agriculture classes.

Currently we have 20 students taking a 15-week 4 hour per day welding class on Saturdays: 11 students from Blue Earth Area, 3 students from Granada Huntley East Chain, 2 students from Fairmont and 4 adults. This class has 5 women and 15 men. Fairmont has 20 welding booths.

Each of these bills have broad bi-partisan support. They are supported by business and labor. They will have a positive impact on all parts of our great state: rural and urban. Eventually most people will need a skilled worker to build or remodel their home whether one resides on the Iron Range, in the metro or greater Minnesota. Each of these bills will encourage school districts to recruit and retain vocational teachers that may be year-round employees.

Minnesota is blessed with a variety of manufacturing plants that are crying out for skilled welders, turret lathe operators, carpenters, plumbers and electricians.

I do not believe any of these three bills will be a very expensive for three reasons:

- Very few Minnesota high schools have comprehensive vocational programs with certified vocational teachers.
- Few teachers are willing to teach classes in the evening, on Saturdays or in the summer.
- A limited number of students are willing to take any class outside of the regularly scheduled school day.

Schools should also strongly consider hiring vocational teachers on a twelve-month contract and compensate them accordingly. Too many vocational teachers quit teaching to pursue full-time employment in the skilled trades. Minnesota needs well trained certified vocational teachers to provide the appropriate instruction for our students.

The **World's Best Workforce** law requires school districts to produce graduates that are both career and college ready.

The **Tiered Teacher Licensing** law allows school districts to hire Tier I vocational teachers that have five years of experience in the trades.

Passage of these bills will produce additional skilled workers that are eager and ready to reduce the shortage of skilled workers. I would be glad to yield to any questions.

Funding Summary - HF 692

Extended Time Formula Allowance					
Additional Extended Time Available					
Potential Extended Time Revenue Per Student					
WELDING ACADEMY EXAMPLE					
15 SATURDAYS - 4 HOURS PER DAY					
Regular ADM Hours		1,080.00			
Insert Supplementary Vocational Hours		60.00			
Additional ADM Generated		0.0556			
Additional Revenue Generated Per Student		284.28			
Insert # of Students Served		20.00			
Total Revenue Generated	\$	5,685.56			

Estimated Expenditures

TEACHER WAGES 3,505.00

INSTRUCTIONAL AIDE WAGES 1,875.00

FICA 411.57

PERA 140.63

TRA 270.24

WELDER CONSUMABLES 1,600.00

SHIELDING GAS 800.00

FILLER WIRE 880.00

9,482.43

CONSTRUCTION/TRADES ACADEMY EXAMPLE

20 SUMMER DAYS - 8 HOURS PER DAY					
Regular ADM Hours		1,080.00			
Insert Supplementary Vocational Hours		160.00			
Additional ADM Generated		0.1481			
Additional Revenue Generated Per Student		758.07			
Insert # of Students Served		20.00			
Total Revenue Generated	\$	15,161.48			

STATEWIDE EXAMPLE

MAX OF 216 HOURS - 1000 STUDENTS SERVED

Regular ADM Hours		1,080.00			
Insert Supplementary Vocational Hours		216.00			
Additional ADM Generated		0.2000			
Additional Revenue Generated Per Student		1,023.40			
Insert # of Students Served		1,000.00			
Total Revenue Generated	\$	1,023,400.00			

INSPIRED LEARNING *for Life!*

Fairmont Area Schools

INDEPENDENT SCHOOL DISTRICT 2752

714 Victoria Street • Suite 103 • Fairmont, MN 56031
Phone: 507-238-4234 • Fax: 507-235-4050 • Website: fairmont.k12.mn.us

January 14, 2019

Commissioner Mary Cathryn Ricker
Minnesota Department of Education
1500 Highway 36 West
Roseville, MN 55113

Dear Commissioner Ricker:

Last session, the Minnesota Legislature considered passage of H.F. 3190 providing extended time revenue for pupils enrolled in career and technical education courses.

Minnesota is in desperate need of additional skilled workers. As a rural school superintendent in greater Minnesota, I am fully aware of the need to produce skilled workers to fill the needs of our manufacturers.

This legislation would provide state aid for students taking specific vocational classes outside of the traditional school on evenings, Saturdays and during the summer:

- Welding
- Manufacturing
- Construction Trades
- Automotive and Small Engines
- Plumbing and Electrical

Due to full high school schedules, many students do not have time during the regular school day to take vocational elective classes.

Many of our top academic students are taking a foreign language, band, choir or orchestra and multiple college classes and cannot fit a vocational class in during the regular school day.

Some students that are highly interested in traditional vocational classes have full schedules due to taking core classes more than once or remedial classes and are willing to take vocational classes outside of the regular school day.

Extended Time Revenue for Vocational Classes

Fairmont High School has taught Saturday and summer welding academy classes for the past four years without receiving additional revenue from the state.

We are currently teaching a Saturday welding class for 15 weeks for four hours per day from 8:00 a.m. to 12:00 noon. The current class is made up of the following students:

- 2 Students from Fairmont High School
- 2 Students from Blue Earth Area High School
- 4 Students from Martin Luther High School
- 11 Adults

These four-hour classes are best taught on Saturdays, in the evening, or in the summer. Yet under current state law, schools do not generate any additional revenue.

In my twenty-five years of service as a school administrator, I have observed that we seem to have revenue for remedial classes but do not have revenue for enrichment or vocational classes.

Finally, I believe this legislation will not be very costly for the following reasons:

- Very few Minnesota high schools have vocational programs taught by licensed and certified vocational teachers
- Since schools do not generate additional revenue, few vocational teachers are asked to teach outside of the regular school day
- Few students are willing to take vocational classes outside of the regular school day

This legislation is needed now more than ever before to increase the number of skilled workers in Minnesota. Thank you in advance for your consideration. Please feel free to contact me for additional information.



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Zierke Built mfg. settles in Fairmont

3-12-2018

By JUDY BRYAN
Sentinel Staff Writer

Fairmont **SENTINEL**

As he walks through the new Zierke Built Manufacturing building in Fairmont, Greg Zierke proudly points out the open spaces and high ceilings in the remodeled. Take all the pictures you want, he says, but make sure he's not in any of them.

Zierke bought the former US Foods warehouse at 1500 Winnebago Ave. in 2016 and spent eight months remodeling the building before moving his

enterprise from Winnebago last August.

"I was semi-retired until a couple of years ago," said the 62-year-old Zierke, who serves as the company president with son Kyle as vice president. "I'm working more hours today than in the last 10 years, but I enjoy what we're doing."

And what they're doing is growing their worldwide business building custom fuel tanks and trailers to support generators of all sizes. Some larger ones have been 50 feet long and held 10,000 gallons of fuel. Smaller mobile units are in

ZIERKE

Continued on Page 3



Judy Bryan

Above: Cole Sharp welds a fuel tank at Zierke Built Manufacturing in Fairmont.

ZIERKE

Continued from Page 1

demand for temporary use after national disasters such as hurricanes. The company has built tanks for coal mines and oil fields in Alaska as well as many for farmers and the agriculture industry.

All Zierke Built tanks have double walls which prevent any leakage 99.9 percent of the time, compared to the industry average of 93 percent. The structure of the tanks also is favored by the Environmental Protection Agency and approved by Underwriters' Laboratories, which Zierke said is a top selling point for the merchandise and a huge benefit for the business.

"We're a customizing shop. What one customer wants, the other one won't," he said. "We pride ourselves on being a custom fabricator. That's probably why we've grown. Pretty much everything is designed through our company."

As Zierke walks through his new building — he sometimes puts on 10 miles a day hiking through the manufacturing areas — he dodges forklifts and checks in with employees as he recalls how his business got started in 1981.

"I was just a farm boy, but at the time, the ag situation was bad. There was no money in it so I started a welding shop in Elmore," he said.

He fabricated sprayer bars for farmers and eventually expanded to Winnebago, where he had about 70,000 square feet in two buildings that were three blocks apart.

"Paint and prep were in

one with welding and fabricating in the other," he said. "We were constantly moving inventory back and forth. It was horrible, but we did that for 15 years. It got to the point we needed to expand some more."

When the US Foods building became vacant in January 2014, it caught Zierke's eye, but the parties involved couldn't reach an agreement on the price. He looked at buildings in Albert Lea and Mankato but kept getting drawn back to Fairmont, eventually buying the building about 18 months ago.

"I've always liked Fairmont," he said. "I bought a lake home here. I knew I was going to retire in this town."

As the company was growing, it became increasingly difficult to find qualified employees.

"Nothing against Winnebago, but I had to get people to come to Winnebago to work. It was just challenging to find good qualified employees, and most of my employees were from Fairmont already," Zierke said.

He praised city staff for facilitating the move and tax incentives, calling Lindsey Preuss, Fairmont economic development director, "the driver" behind the relocation efforts. The city offered a 10-year tax abatement for 100 percent of the property tax on the building, with the amount not to exceed \$231,000 over the 10-year span. Zierke pays the taxes but then is reimbursed by the city if certain criteria is met. One of the stipulations involves the

hiring of 30 employees over three years, and the company is well on its way to that goal.

When the Zierke Built was in Winnebago, a newspaper ad for welders might net a couple of applicants. Since the move to Fairmont, that same ad could draw 15 or more applicants. All the 30 some employees in Winnebago moved with the company to Fairmont. Currently, the business has about 50 employees, and Zierke said he hires about one or two welders each week.

"I think the Fairmont school is really the best," Zierke said, offering praise for the high school's welding program. "We've hired a lot of kids fresh out of high school. We need welders. We need more and more welders."

The new building houses 45 welding stations where employees work on all sizes of tanks, taking from 8-60 hours to complete a tank that is inspected and measured numerous times.

In the welding room, Zierke points out one of several employee-centered benefits. An air filtration system, with a \$300,000 price tag, removes welding dust and smoke, purifies the air, scrubs it and recycles it, keeping the area relatively clean and pollutant free.

Cooling off work areas during the warmer months can be a challenge, but Zierke installed a trio of 20-foot "Big Ass" brand ceiling fans.

"In the summertime, you can get 60 mph winds off them. They work great. We love it," he said.

Hiring and maintain quality employees is a priority for Zierke, and he will find ways to keep them happy.

"We were one of the first companies that did 10-hour days," he said. "We started that in 1998, and we were told it would never work, but the employees really like it."

When the 7 a.m. starting time was resulting in tardiness and absenteeism, Zierke offered flex time to his workers.

"Now then can come in anywhere between 6 a.m. and 8 a.m. Everybody still has to work until 5:30 p.m.; and they still have to work 40 hours in four days, but it made a huge difference in the mornings," he said. "With flex time, it eliminated the problems."

The increasing demand for tanks and trailers resulted in working overtime on Fridays, and the company has had to outsource about 40 percent of its fabricating. Zierke is even contemplating a Friday-through-Sunday shift.

He also is considering upgrading a plasma cutter used to slice openings in sheets of U.S.-made steel, the only kind used at Zierke Built. He's considering replacing the plasma unit with a \$1.5 million laser machine that can self operate 24 hours a day. He estimates the machine could take up to six months to obtain, with payback reached in four years.

Zierke is planning a ribbon cutting and open house for the new facility, tentatively set for April 18.



Brooke Wohlraabe

Above: Freshman Osvaldo Morales, left, and junior Cole Camp are seen in the welding booths during the Introduction to Welding class at Fairmont Jr./Sr. High School.

1-13-2018 FAIRMONT

Welding Academy

Popular classes paying off

By BROOKE WOHLRABE
Sentinel Staff Writer

Fairmont

Jan. 20 marks the first day of Saturday Welding Academy, a 15-week program at Fairmont Jr./Sr. High School. The program is open to students, community members and students from other schools.

This will be the second Saturday Welding Academy, and there have been two Summer Welding

Academy sections offered in the past.

Fairmont Area High School students may take the class at no charge, while other students and adults will be charged \$250 for the 60-hour course.

Bob Bonin will teach the classes. He has been teaching in the school district for 20 years. He teaches careers in technical education, which include mechatronics, automobile repair and welding.

Bonin says that in the late 1970s, the vocational program at the school was huge, called the Martin County Vocational Center. At the time, there was a separate principal and counselor just for the vocational programs. Students from Welcome, Sherburn, Truman and Granada would get bused in for the two-hour block class.

In the mid 1980s, all of that kind of went away because there was a mentality in education that

everyone needed to go off to a four-year college to get a degree in a field such as science or math. The economy also was going through a tough time and there was not a great need for more people in certain vocational trades.

"In the early 2000s, we started to see more need for vocational programs because we discovered as these people started to get older and hit retirement,

WELDING

Continued on Page 3A

WELDING

Continued from Page 1A

we had not trained the next generation to take these jobs over, so that's where the resurgence is," Bonin explained. "Now, in the last five years, Martin County is at a real deficit for the need in the manufacturing areas."

"When Joe [Brown] got hired here as our superintendent, we were just on the cusp of trying to get that foothold back in, and Joe saw the vision and said we're gonna go with it," he said.

Bonin said the school district has a tight tie-in with the local Chamber of Commerce and business leaders, and district officials are able to see that the more programs they have at the school, the more the community embraces it.

"In Fairmont alone, there's Zierke Built Manufacturing, Weigh-Tronix, Hen-Way Manufacturing and Redi Haul Trailers. They all manufacture some product that requires workers in their shop. They have a great need for multiple types of workers," Bonin explained.

They also have looked beyond Fairmont. Armstrong has two manufacturing firms that need workers. Jackson likewise needs trained people.

"The students that I train either in my welding program or in my automotive small engine program, they all have skill-sets when they graduate so that they can walk into any of those industries and take a job," Bonin said.

He noted that during the school year, he, Principal Andy Traetow and Brown will take the welding class to Weigh-Tronix, Zierke, AGCO and Art's Way Manufacturing in order to get tours and meet with some of the people at those businesses.

Bonin reported that Zierke has 7 to 10 Fairmont graduates working there on any given day, and they are welding based solely on what they learned in his classes.

Students have the option of taking two full semesters of welding classes at the high school, and the classes are always at full capacity.

"There's a lot of validity to our program," Bonin said. "It's not just for fun,"

With some of the classes, students receive college credit.

While the Saturday Welding Academy classes are open to everyone in the community, they are popular among students. There are currently 10 students from Blue Earth already enrolled in the course.

New this time around are three more welding booths, which will make it possible for 20 people to take the class and learn several different types of welding.

"It's a good setting and the Saturday class ends up being more serious because everyone is willing to give up a Saturday to be there," Bonin said. "People are mindful and have a purpose for being there. The level of learning is at a higher level."

At the end of the class, students take a safety test, and then they receive a certificate saying they completed the safety certifications for the welding career occupation. They also get a certificate saying they completed the class.

"Because we work with our local manufacturers, when [students] go to a place with the certificate saying that they successfully completed the program, that gives them an edge

over someone else because they've completed a rigorous program," Bonin explained.

Earlier this school year, the school received a Grow Rural Education grant worth \$10,000 from the Monsanto Fund. Local farmers nominated the school and the money was used to purchase two virtual welders used in various classes, including Brad Johnson's STEM 8 classes and Bonin's welding classes.

"The nice thing is that it gives instant feedback and we can talk about what needs to be changed and they can try again," Bonin said of the virtual welders.

"It's also nice because I can be with them, right beside them and work with them without either of us getting burnt," he noted.

The virtual welders guide the students so they learn the muscle memory associated with welding, including the angle and position of the gun and what speed they should be going. Instant results are shown on a computer screen. Bonin said the virtual welders help the students gain confidence.

The Welding Academy, virtual welders and the various vocational classes offered at the school are some of the ways the district — and community — are investing for the future.

"My passion is in getting those kids who aren't planning on going to a four-year college and train them so that they can be a part of society, rather than a tax on society, and fill those needs," Bonin said.

Those wanting more information or to sign up for the class can contact Bonin at bbonin@fairmont.k12.mn.us

The Welding Program at Fairmont Junior Senior High School

Towards the end of the 1980's we saw a decline in the vocational program financing and educational support towards two year vocational colleges. As a country we began pushing to get more students into four year programs and this resulted a great decline in vocational centers around the state of Minnesota. At Fairmont we were no different.

The welding class is one of 5 program that made it through these cuts. However it was on the brink of closing back in 2000. We had 14 welding booths outfitted with the same equipment as when the school opened in the early 70's. The only addition was 3 (GMAW) Gas Metal Arc welders. We were averaging 18 students a year taking classes that were more exploratory and agriculture related. In 2010 I took a few of my students to a regional welding competition and did extremely well. This excitement and exposure led to more students enrolling in the course. I began to change the curriculum and look for ways to improve. These improvements led to a few students starting to get hired locally right out of high school and then this led to an increased number of students taking welding classes.

The need for a new Welding Academy at Fairmont Junior Senior High School

In 2013, the need arose to get more welding equipment do to the increased enrollment. We still only had the 3 GMAW welders that are common equipment in today's welding manufacturing. We also revised our curriculum to align more to industry welding and began to build a stronger program to help the growing need for welders in our region..

During this same time period our Superintendent Joe Brown was contacted about the need for financial support to add an academy with new welders and budget for the consumable goods to operate the class. It was his effort in contacting local manufactures to help support a Welding Academy that has grown our program to where it is at today. Joe was able to secure funding for our welding booths that have 20 GMAW welders, 20 SMAW welders and cutting edge curriculum.

As our program improved, we forged relationships with local manufactures who come into our class and actually work side by side with our students and teacher to give them real world relationships and advice. This practice has strengthened the program as our students know that potential employers are seeing them practice and perform good welding techniques and skills. The mentoring helps the students get a real world perspective of what they would encounter on the job. Students frequently take field trips to our regional manufacturing companies.

The Need for additional Welding Classes outside of the regular school day.

Currently, we offer 2 Intro to welding classes and two CIS (college in the school) Career in Welding class during the school day. This CIS class is concurrent enrollment through Riverland Community College. This year these classes will serve 70 FSH students. An additional number

of our students can not take the class during the traditional school day due to no time in their schedules with the number of required math, science, english and history classes they need to graduate. Unfortunately, many students that are interested in becoming skilled workers may have to repeat some of the core classes because they do not pass them the first time. This jams up their daily class schedule and creates the need to offer the Saturday Welding Academy or Summer Welding Academy so the students who can not fit these classes into their schedule have an opportunity to get into the class to find out if a career in welding is for them.

Our Saturday Welding Academy currently being held has 12 students enrolled. 2 students from Blue Earth Area High School, 7 from Fairmont Senior High School and 3 from Martin Luther High School in Northrup. We also have 10 adults from the Southern Minnesota region enrolled as well. We also held a Summer Academy that served 12 students.

Most students who take these vocational classes do much better with the hands-on application and see great success in the area of welding.

Approximately 15% of the grades 9 - 12 students we train in our Regular School Welding, Saturday School Welding and Summer School Welding Academies will either enter the welding workforce after graduation or go on and attend a 18 month training program at a post-secondary institution for welding.

The Benefit of a Comprehensive Welding Academy.

The benefit for the Southern Minnesota manufacturing and welding communities is simple. **Skilled workers.** The students that we are training in our welding academies will become employed in local manufacturing firms that are in desperate need of skilled workers. One huge benefit of offering a Saturday and Summer Academy is, we bring in students from not just our school but to the neighboring high schools (Blue Earth, Granada-Huntley-East Chain, Martin Luther, Martin County West) who are also taking advantage of the off hours training. This is another great benefit to the workforce.

Please note Zierke Built Manufacturing moved to Fairmont in 2017 due mainly to our Welding Academy and access to skilled workers. They have hired seven of our recent graduates that are employed full time.

Currently, we have 15 former student from the last 4 years graduates working in our local manufacturing centers as welders or fabricators from these classes. There is not a single day that goes by that our local newspapers or job service is not advertising for needing welders.

The equipment our students get to take advantage of are listed below:

As we are in the final semester of the 2018-2019 school year, I would like to take a minute to give an overview of all the equipment that our students have access to as part of the CTE Welding/Manufacturing programs.

2 - Virtual Welding Simulators that give instant feedback to the student about correct welding techniques and their weld process.

16 - Welding booths with Miller 211 MIG welders and Lincoln ARC welders

4 - Welding booths with Miller 215 MIG/Tig/Arc welders

2 - Spool guns for Aluminum, Stainless, Low Carbon

1 - Miller 350P Pulse Welder with both MIG and Push/Pull Gun for Aluminum to teach the students actual industry welding

6 - Oxy-fuel welding/cutting stations

2 - Plasma cutting stations

1 - Lincoln Torchmate Plasma Cam Table

1 - Ironworker

1 - Endmill

1 - Lathe

1 - Bandsaw

Other advantages these students get to take advantage of are:

Curriculum that is constantly being aligned to postsecondary and industry standards

Skill alignment through partnerships with local industry presence weekly in our classroom

Community connections with field trips to local industry

Career exploration using MCIS and ACE career fair

Instruction in soft skills and interview skills

Instructor that is in continuous training to stay updated with industry and educational standards

Welding Academy Sponsors

Avery Weigh-Tronix

1000 North Armstrong Drive

Fairmont, MN 56031

(507) 238-4461

Zierke Built Manufacturing

1500 Winnebago Ave

Fairmont, MN 56031

(507) 399-2154

GKN Armstrong Wheels

5453 6th Ave

Armstrong, Iowa 50514

(712) 864-3202

AGCO Jackson Operations

550th Ave
Jackson, MN 56143
(507) 847-2690

Redi-Haul Trailers Inc.

1205 North Dewey Street
Fairmont, MN 56031
(507) 238-4231

Hen-Way Manufacturing

1715 190th Ave
Fairmont, MN 56031
(507) 436-5433

Meester Machine Works Inc.

1117 East 10th Street
Fairmont, MN 56031
(507) 235-3462

Art's Way Manufacturing Co., Inc.

5556 Iowa 9
Armstrong, Iowa 50514
(712) 864-3131

McNeilus Co. Inc.

520 Hwy Street East
Dodge Center, MN 55927
(507) 374-6321

American Welding & Gas, Inc.

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KEVIN WOLF • Associated Press

Federal Reserve Chairman Jerome Powell testified before a Senate committee on Tuesday.

Fed's Powell concerned about the U.S. labor force

2-27-2019 MPLS

Participation is very low compared with rates in other countries.

By HEATHER LONG
Washington Post

WASHINGTON - The U.S. economy is slowing but remains healthy, Federal Reserve Chairman Jerome Powell told senators Tuesday at his semiannual testimony before Congress. But he repeatedly urged lawmakers to address "unsustainable" debt and find ways to get more Americans working again.

The economy is growing at a "solid pace, albeit somewhat slower than in 2018," Powell said. "Over the past few months, we have seen some crosscurrents and conflicting signals."

The Fed expects the U.S. economy to grow 2.3 percent in 2019. The Fed estimated that it grew just shy of 3 percent last year, the fastest annual pace in more than a decade but below

President Donald Trump's goal. The Commerce Department will release the official 2018 growth figure Thursday.

Both Republicans and Democrats questioned Powell about how to get higher wages and more Americans working. Powell called it a "very troubling concern" that U.S. labor force participation remains so low compared with rates in other countries, especially for young men and for women. He suggested that Congress work on policies to improve education, address the opioid crisis and ensure that benefits for struggling Americans don't discourage people from working.

"There are lots of people, millions of people, who are out of the labor force and in a better world would be in the labor force," Powell said. "We want the economy to grow, and we want that prosperity to be widely spread. Labor force participation gets at both of those things almost better than anything."

More than 2.1 million people joined the labor force in the past year, but Powell said that there's more room to go and that the retirement of many baby boomers does not explain all of the decline in labor force participation. While the United States has a record number of job openings right now, many workers lack the skills to get those jobs or do not live where the jobs are.

Powell, who has come under fire from Trump for raising interest rates four times last year, said that now is "a good time to be patient and watch and wait" before any future rate hikes. The Fed sees two major headwinds: trouble abroad in the European and Chinese economies, and "ongoing government policy uncertainty," especially on trade.

"Uncertainty is the enemy of business," said Powell, who added that it could get even worse if Congress does not lift the debt ceiling in the coming months.

A group spearheaded by the National Association of Manufacturers is traveling the country trying to spread the word that an industrial career path is not what it used to be



Photos by LEILA NAVIDI • leila.navidi@startribune.com

MORE ON THE FLOOR

2-26-2019 MPLS

By DEE DePASS • dee.depass@startribune.com

The number of unfilled U.S. manufacturing jobs will swell to 2.4 million in a decade unless aggressive recruiting and training begin now.

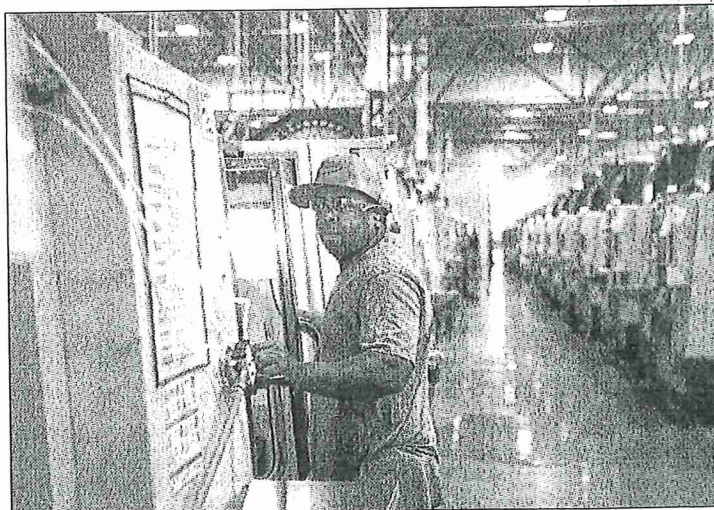
That was the message Monday from industry leaders who stopped at Protolabs' factories in Plymouth and Brooklyn Park and Graco in Minneapolis as part of a 25-city State of Manufacturing Tour spearheaded by the National Association of Manufacturers (NAM).

"We are kind of on a recruiting mission," Jay Timmons, CEO of NAM, told forum guests at the new Protolabs factory in Brooklyn Park. "Today we have about 428,000 open jobs in this country. That's a lot of openings [and] we can't find enough people to fill those jobs."

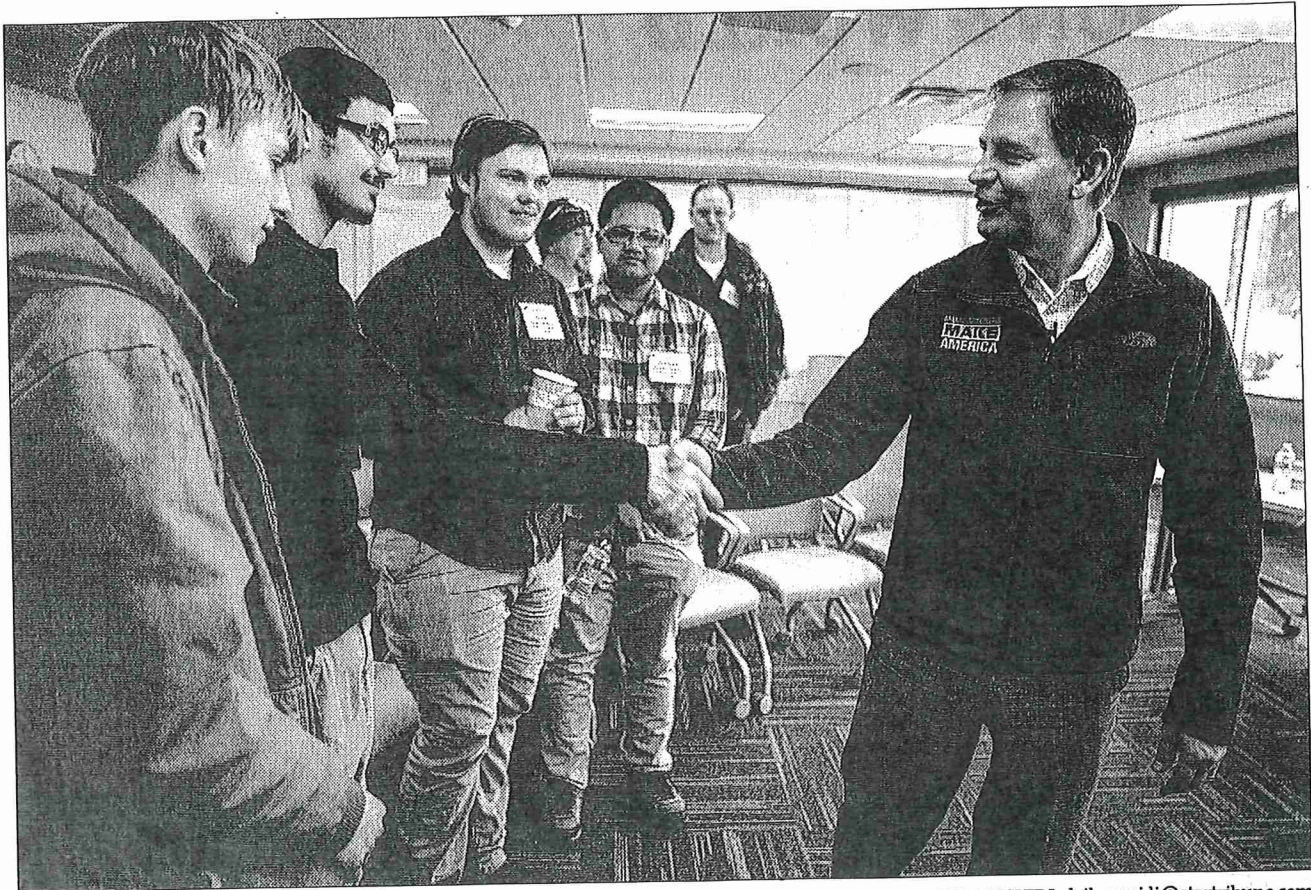
The numbers will worsen if nothing is done to interest more young people in skilled manufacturing jobs, said officials. NAM represents 14,000 manufacturing operations.

"Manufacturing is obviously a huge part of the economy in the U.S.," said Carolyn Lee, executive director of the Washington-based Manufacturing Institute and a panel member. "But there is no place we go where we don't hear that companies are

See **PROTOLABS** on D3 ►



At top, Protolabs CEO Vicki Holt, center, led a tour of the company's Brooklyn Park manufacturing plant on Monday for Carolyn Lee of the Manufacturing Institute, left, and Jay Timmons of the National Association of Manufacturers. Above, CNC mill operator Anthony Robinson worked inside the Protolabs manufacturing facility.



LEILA NAVIDI • leila.navidi@startribune.com

Jay Timmons, right, of the National Association of Manufacturers, talked to Dunwoody College of Technology students from left, Matthew Saufferer, Faariz Binmahfooz, Austin Jelinek-Hill and Richirady Somnang during Monday's tour of Protolabs.

Manufacturers warn of labor crisis

◀ **PROTOLABS** from D1

desperate for skilled workers. A baby boomer retires every 10 seconds."

Timmons and the rest of the traveling group are trying to highlight "the next frontier" of manufacturing as they travel the country.

Factories today offer great pay, training, career advancement and the chance to work with technology, robots and sophisticated machine programs that produce quality goods efficiently, Timmons said.

"Protolabs deploys the type of advanced technologies that define modern manufacturing," he said.

But getting that message across to the public will take more work, he said. It will require factories to educate younger students about job opportunities and working conditions. And they will

need to offer more internships and apprenticeships like Protolabs does.

And the industry still has work to educate the public on the type of jobs offered in today's factories. Many parents and young people still view factories as the grimy jobshops of decades ago, panelists said.

That misperception, Lee said, has parents pushing college-age students away from technical-college degrees that can give graduates multiple job offerings and salaries spanning \$50,000 to \$75,000 a year.

To showcase that reality, Protolabs CEO Vicki Holt, who also is NAM's regional vice chairwoman, gave a tour of the new Brooklyn Park facility to congressional aides and politicians, Dunwoody College of Technology students and Chamber of Commerce officials.

"We're excited to be part of

this event to provide an up-close view of what manufacturing looks like today, how this digital evolution benefits product developers and how this tech-enabled manufacturing landscape is creating new opportunities for workers," Holt said.

She led the group, which included Minneapolis Mayor Jacob Frey, through the pristine operation with 270 CNC (computer numeric control) milling machines grinding steel, aluminum or plastic into parts for customers around the globe. Each of the machines, she said, cost about \$100,000 and is tended to by 225 employees.

"Protolabs is a pioneer in digital manufacturing," and is growing dramatically, Holt said. "Five years ago, we had 750 employees. Today we have 2,700."

The company will add another 650 workers in 2019, she said.

The group of national manufacturing officials last week toured Protolabs' 3-D printing plant in Raleigh, N.C. In coming weeks, the group will be in Arizona, California, Iowa and Ohio.

"We are excited to tell [the industry's] story and the positive impact" it has on communities, Timmons said.

That message is needed, said E.J. Daigle, robotics and manufacturing dean at Dunwoody College. More firms must reach out to young people and let them know about the training, paid internships and tuition assistance that is available, he said.

"I'd prefer seeing these young folks working in apprenticeships and internships at Protolabs [and Graco] than at McDonald's and other retail and fast-food places," Daigle said.