



WELDING TRAINEE

Welding trainees are learning how to join metal parts that are used in shipbuilding, bridge construction, automobile manufacturing, aerospace applications and other manufactured products.

JOB TITLES COMMON TO THIS CAREER OCCUPATION INCLUDE:

MIG Welder Trainee
TIG Welder Trainee
Arc and Gas Welder Trainee
Computer Numeric Control Fabricator Trainee

Water Jet Machine Trainee
Painter Trainee
Press Operator Trainee
Flame Cutting Machine Trainee

Laser Cutting Machine Trainee
Plasma Cutting Machine Trainee
Press Brake Operator Trainee
Shear Operator Trainee

SAGINAW VALLEY

Each ladder depicts a series of work experiences that leads to more challenging and higher paying opportunities. While every level of the ladder can provide a satisfying job, some employees will choose to gain even more skills and responsibilities that will advance them in their careers. To do so, they will need more education, training, and work experiences. Some jobs will require a certificate, a license, or an advanced degree.

CLIMBING THE CAREER LADDER

ADVANCED LEVEL

Bachelor's degree or proven technical skills that can be demonstrated through industry experience

Manufacturing Engineer
\$19.50-\$26.75/hour

Supervisor
\$19.00-\$27.00/hour

MID LEVEL

Associate's degree or equivalent training and experience

Assembly Specialist
\$12.50-\$22.10/hour

Machining Specialist
\$16.00-\$23.50/hour

Fabricating Specialist
\$14.50-\$19.75/hour

ENTRY LEVEL

High school diploma and completion of the Engineering/Manufacturing and Industrial Technology Career Pathway requirements and/or appropriate career and technical education classes

Co-op/Internship Student
\$6.00-\$8.00/hour

Machinist Trainee
\$8.10-\$12.00/hour

Welding Trainee
\$8.10-\$12.00/hour

Wages will vary within this occupation based on the ability of the employee to operate machinery without the aid of close supervision. The ability to operate more than one type of machine will also increase the wage and the employee's advancement opportunity in the company.

JOB DESCRIPTION

Each occupation is described in terms of specific tasks and typical job duties.

A WELDING TRAINEE MUST BE ABLE TO:

- Learn to read and understand blueprints and other job specifications
- Learn the use of precision measuring methods and equipment
- Apply mathematics and learn to do calculations to verify dimensions on the work piece
- Be capable of operating machinery to produce quality parts
- Communicate with coworkers and supervisors to receive instructions and coordinate activities
- Be reliable and punctual in attendance

WAGES

Wage information was obtained from the Michigan Department of Labor and Economic Growth and from local employers to give a general idea of the wages and salaries for this occupation.

WAGE RANGE

\$8.10-\$12.00/hour

WORKING CONDITIONS

A welding trainee is exposed to a number of hazards, including the intense light created by the arc, poisonous fumes, and very hot materials. They must wear personal protection equipment such as safety shoes, goggles and protective lenses. Welders may work outdoors, as well as inside, in well ventilated areas. They may be required to lift heavy equipment and work in a variety of awkward positions to weld the parts.

EDUCATION AND TRAINING

Courses, programs, and certificates that are needed for employment are offered by local education and training providers.



HIGH SCHOOL

- Completion of high school's Engineering/Manufacturing and Industrial Technology Career Pathway and/or appropriate career and technical education classes
- Algebra
- Geometry
- Trigonometry
- Physics
- Career studies, such as a welding program
- Co-op work experience
- Saginaw/Midland/Bay Michigan Works! automation certificate

COMMUNITY COLLEGE

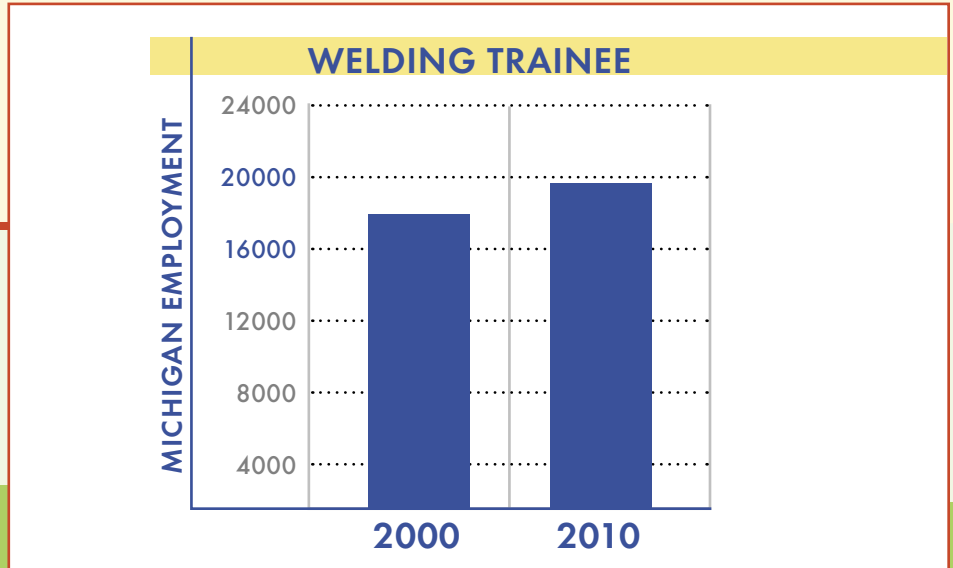
- Delta College: advanced certificate, welding engineering technology; associate's degree in applied science, welding engineering technology

LOCAL EDUCATION AND TRAINING PROVIDERS

- Local school districts
- Bay-Arenac ISD Career Center
- Saginaw Career Complex
- Saginaw/Midland/Bay Michigan Works!
- Delta College

JOB OUTLOOK

The rate of growth within this occupation is projected by data from local employers and the Michigan Department of Labor and Economic Growth.



ADVANCEMENT

Welding trainees are employees beginning their careers in advanced manufacturing. They are supervised by experienced welders who help the trainee learn how to make perfect welds. With continuing education and on-the-job training, they will advance to a fabricating specialist position or be considered for other promotions within the company. Most companies will provide a training plan for the new employee. Trainees are usually given progressively challenging job assignments to increase their skills.

WHAT THE EMPLOYER SAID



WHAT DO YOU LOOK FOR IN A POTENTIAL EMPLOYEE FOR THIS POSITION?

“We look for someone who has basic math skills, is able to work with fractions and decimals, has a working knowledge of the tools and equipment and how they work, can use basic measuring tools, and can read directions carefully and follow the steps. We also look for someone who has a good work ethic.”

Larry Erskine, field leader
Consumers Energy

STAR PROFILE

This interview is intended to show you what is needed to be a star employee.



EMPLOYEE:
JAMES DARBY

OCCUPATION:
**GAS SYSTEMS
MECHANIC**

COMPANY:
CONSUMERS ENERGY

TELL US HOW YOU ATTAINED YOUR CURRENT POSITION.

I hired in with the gas crew at Consumers Energy just a few weeks after I graduated from high school.

DESCRIBE YOUR TYPICAL DAY.

I work outside. Typical shifts are 10 hours. Sometimes they are even longer if we have an emergency with a pipeline. I do the welding and sometimes the fabricating.

WHAT TRAINING AND EDUCATION DID YOU NEED TO ENTER THIS POSITION?

Because I had finished all of my requirements at Freeland High School in my junior year, I was able to enroll full-time at the Saginaw Career Complex in my senior year. At the Career Complex, I took machine trades and welding. My credits articulated to Delta College, where I then took classes in the machine trades, math, and more welding. At the Career Complex, I learned not just my trade but job ethics. They stressed the importance of being to work on time and doing your best every day.

WHAT QUALITIES MAKE SOMEONE A “STAR” IN THIS OCCUPATION?

The qualities that make someone a star in this occupation are doing the job right to the best of your ability, taking pride in your work, and taking your job seriously. Stars don't ever slack off. They leave family problems at home and they don't get involved in other employees' problems.

WHAT DO YOU LIKE MOST/LEAST ABOUT YOUR JOB?

My favorite part of the job is welding. It is hands-on and challenging. Many of these pipes are 60 years old. Some people say the pipes can't be fixed, but we make them work. I also like the change in scenery.

The thing I like least about the job is when the weather produces challenges for us with lots of rain and snow.

WHAT ADVICE CAN YOU GIVE SOMEONE SEEKING A JOB IN YOUR FIELD?

Take as many advanced classes as you can in high school. If you take classes at the Saginaw Career Complex, you can learn a lot about your trade, a lot about job ethics, and save a lot of money at Delta College through articulation.

ARE THERE ANY LICENSES OR CERTIFICATIONS NEEDED FOR YOUR POSITION?

No licenses or certifications are needed for this position.

ACKNOWLEDGMENTS

The Career Ladders project began as a Saginaw County Vision 2020 initiative. To date, more than 300 individuals have been involved in the project. It is impossible to list them all, but the Comprehensive Education and Workforce Development Committee appreciates each one and the incredible participation by our major employers and educational institutions, as well as the support from the Arnold and Gertrude Boutell Memorial Fund, The Dow Chemical Company, The Dow Corning Foundation, the Fordney Club, the Hospital Council of East Central Michigan, the Michigan Department of Labor and Economic Growth, the National Tooling and Machining Association – Saginaw Valley Chapter, the Saginaw Community Foundation, the Saginaw County Business and Education Partnership, the Saginaw County Chamber of Commerce Foundation, Saginaw County's local school districts, Saginaw County's Promise, the Saginaw County Vision 2020, the Saginaw Future Inc., the Saginaw/Midland/Bay Michigan Works!, the Saginaw Township Business Association, the Saginaw Valley Manufacturers' Association, and the Saginaw Valley Tech Prep Partnership. We also want to thank NOVA for their guidance.

EQUAL OPPORTUNITY EMPLOYER/PROGRAM. AUXILIARY AIDS AND SERVICES ARE AVAILABLE UPON REQUEST TO INDIVIDUALS WITH DISABILITIES.