WHAT IS AN INDUSTRIAL MAINTENANCE TECHNICIAN?

Industrial maintenance technicians maintain and repair manufacturing equipment and other industrial machinery, such as conveying systems, production machinery, and packaging equipment. They are responsible for efficient operation of the equipment with minimal down-times so that customer products are produced on schedule. Technicians understand how machines and automated systems operate and have a well-rounded knowledge of electrical, mechanical, pneumatic and computer technology. Preventive maintenance and safety are important aspects of the technician’s role.

WHAT TECHNOLOGY WILL I BE USING?

- Computer aided manufacturing CAM software—Extranet Machine Tools Suite
- Enterprise resource planning ERP software
- Hot technology—SAP software
- Facilities management software—Maintenance management software.
- Industrial control software—BIT Corp ProMACS PLC; KEYENCE PLC Ladder Logic
- Spreadsheet software—Microsoft Excel

ARE THERE OPPORTUNITIES FOR ADVANCEMENT?

Industrial maintenance technicians are highly skilled individuals. Through ongoing training and education plus on-the-job experience, advancement opportunities are available. A positive attitude, updated skills, and strong work ethic will help you stand out. Many companies offer tuition reimbursement to employees continuing their education leading to college degrees.

WHAT IS AN INDUSTRIAL MAINTENANCE TECHNICIAN?
**WHAT KIND OF TOOLS MIGHT I BE USING?**
- Calipers – Dial calipers; Vernier instruments
- Drill press or radial drill – Drill presses; Punch presses; Radial drills
- Hex keys – Allen wrenches; Hex wrenches
- Micrometers – Inside and outside micrometers
- Power grinders – Cylindrical grinders; Grinding wheels; Precision grinders
- Microcontrollers – Programmable logic controllers
- Voltmeters/Sensors/Actuators

**WHAT SPECIFIC TASKS MIGHT I BE REQUIRED TO PERFORM?**
- Repair or maintain the operating condition of industrial production or processing machinery.
- Disassemble, repair or replace broken or malfunctioning components of equipment.
- Observe and test the operation of machinery to diagnose malfunctions.
- Reassemble equipment after completion of inspections, testing or repairs.
- Clean, lubricate, or adjust parts, equipment.
- Verify the adequacy of repairs.
- Record parts or materials used and order new parts.
- Study blueprints or manufacturers’ manuals to determine correct installation or operation of machinery.
- Cut and weld metal to repair broken metal parts, fabricate new parts or assemble new equipment.
- Enter codes and instructions to program computer-controlled machinery.
- Measure and adjust pneumatic and hydraulic components.
- Utilize technical documents: data sheets, circuit diagrams, function charts, schematics.

**IS THIS FIELD GROWING?**
- Ohio is the third largest manufacturing state in the country based on employment with over 682,000 workers.
- Nearly 13% of the state’s total employment is in manufacturing and approximately 40% of the state’s manufacturing is in Northeast Ohio.
- The average annual total compensation for manufacturing in Ohio far surpasses other sectors. According to the Bureau of Labor Statistics (BLS.gov), the national employment outlook of industrial machinery mechanics, machinery maintenance workers, and millwrights is projected to grow 16 percent from 2014 to 2024, much faster than the average for all occupations. The need to keep increasingly sophisticated machinery functioning and efficient will drive demand for these workers. Job prospects for qualified applicants should be good. The field is also referred to as mechatronics.

**WHAT EDUCATION IS REQUIRED?**

**Education Required**
High school diploma minimum

**Courses in:**
- mechanical drawing
- mathematics
- blueprint reading
- computer programming
- electronics
- hand tools
- welding
- electronics
- pneumatics

**Key Skills and Knowledge**
Mechanical engineering technology and its practical application in designing and producing goods in addition to the functioning and maintenance of equipment.
- Manual dexterity
- Mechanical/Electrical
- Math
- Computer / information technology
- Troubleshooting
- Judgement and Decision Making
- Time management

**Associate Degrees**
Community colleges offer applied engineering technology short-term certificates and two-year degrees. These programs combine classroom learning with hands-on lab projects.

**Apprenticeship**
Apprenticeships offer combination of work experience and related technical instruction (RTI). Apprenticeships may be available through a manufacturing company or a machinists’ union. The RTI is offered by a union, career-technical school or community colleges.

**NIMS and Industry Certifications**
Industrial maintenance and mechatronics certification is being developed by the National Institute of Metalworking Skills (NIMS). Siemens, a global industrial company, offers a Mechatronic Systems Certification that is vendor-neutral. Other companies like Allen-Bradley have specific equipment training programs.

**Manufacturing Skill Standards Council**
The Manufacturing Skill Standards Council (MSSC) is an industry-led training, assessment and certification system focused on entry-level core skills and knowledge needed by the nation’s front-line production and material handling workers. Two certifications: Certified Production Technician (CPT); Certified Logistics Technician (CLT) are offered by the MSSC.

**National Career Readiness Certification**
ACT WorkKeys® is a job skills assessment system that helps employers select, hire, train, develop, and retain a high-performance workforce. All position openings posted on Ohio Means Jobs list the preferred WorkKeys® scores associated with that job in math, reading, and locating information. To learn more or to take practice tests, go to: ACTWorkKeys.com, OhioMeansJobs.com, TalentNEO.org.

**WHAT SALARY SHOULD I EXPECT TO EARN?**

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<thead>
<tr>
<th>Industrial Maintenance Annual Salary</th>
<th>United States</th>
<th>Ohio</th>
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<tbody>
<tr>
<td>High</td>
<td>$75,300</td>
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<tr>
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