

# MIOSHA Fact Sheet



## Pressurized Piping Systems

Pressure testing, working, and connecting to existing piping systems are common work practices that have proven to be dangerous and even deadly at times. Employers must provide instruction to each employee in the recognition and avoidance of hazards and the regulations applicable to the work environment to control or eliminate any hazards or other exposure to illness or injury in accordance with Construction Standard [Part 1, General Rules](#). Additional guidance can be found in General Industry Standard [Part 85, The Control of Hazardous Energy Sources \(Lockout/Tagout\)](#).

### Key safety points:

- **Identify pressure:** Always determine if the pipe or equipment being worked on is under pressure. Use a secondary pressure gauge or valve to confirm the system is depressurized, in accordance with established codes and standards.
- **Never remove end caps (or other fittings and valves) under pressure:** End caps should never be removed while the system is under pressure.
- **Lockout/Block/Remove Energy Sources:** Lockout, block, disconnect, or use other positive means to disconnect the systems being worked on from the energy sources creating the hazard and prevent re-pressurization or exposure to energy sources. Always depressurize and drain the piping system completely before attempting to install, remove, adjust, or maintain any coupling or end cap connection.
- **Verify energy source isolation:** Always verify the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment or maintenance of any coupling or end cap connection.
- **End caps installed for pressure testing shall be equipped with ball valves.** The ball valves can be opened to identify if pressure is present.
- **Under no circumstance shall coupling hardware or other system components be loosened to check if the system is pressurized or to depressurize the system.**
- **Implement Good Policies and Procedures:** Ensure robust policies and procedures are in place for employees working with pressurized piping systems. Stored or residual energy (such as hydraulic systems, air, gas, steam, or water pressure) must be dissipated or restrained by methods such as blocking and/or bleeding down.
- **Employee Training:** Train employees in the identification of energy sources and the hazards associated with installing, testing, and maintaining pressurized systems. Emphasize that a pressure gauge alone is not an acceptable method of verifying system pressure.

MIOSHA's Consultation Education and Training (CET) Division can provide and assist with more information on situational awareness as well as safety and health training. You may contact the CET Division at 517-284-7720 or online at [www.michigan.gov/cet](http://www.michigan.gov/cet). CET may also be available to employee groups and other organizations.

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Consultation Education and Training Division  
530 W. Allegan Street • P.O. Box 30643 • Lansing, Michigan 48909-8143  
[www.michigan.gov/miosha](http://www.michigan.gov/miosha) • (517) 284-7720  
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