Take Care With Compressed Air Meeting Kit



WHAT’S AT STAKE

The use of compressed air is essential on most construction job sites and production lines. For thermal operations and processing companies, compressed air assists with the removal, repair, and installation of refractories that keep employees and materials safe.

WHAT’S THE DANGER

RISKS OF COMPRESSED AIR WITHOUT SAFETY MEASURES OR SUFFICIENT TRAINING

- Projection of substances propelled by compressed air (particles of dust, humidity and/or oil). These can cause injuries to the eyes, ears, or face, if the operator does not have the appropriate personal protection elements.
- Blows received due to whipping movements of the hose, produced by the sudden exit of compressed air, which can cause injuries. This movement can be aggravated by the presence of metallic elements, such as the nozzle, and other parts or couplings of the equipment that supplies the compressed air.
- Contact with compressed air flow, which can cut the skin or enter body openings (mouth, nose, and ears), causing serious internal injuries and even death.
- Projection of components (pieces) of the tools, due to the lack of maintenance of these or by using inadequate pressures that can cause breakage or disintegration of the equipment.
- Explosion, due to exceeding the limits of the containers and components of the compressed air network, due to lack of maintenance or due to the use of unsuitable materials for the pressure that is required to be handled.
- Exposure to high noise levels due to the expansion of compressed air used in a tool, which generates sudden changes in pressure.
- Exposure to chemical risk agents, due to the dispersion of particulate matter in the workplace, the formation of oil mists or explosive atmospheres, resulting from the use of compressed air to clean machines or workstations.

WORKPLACE HORSEPLAY – HAZARDS – CAUSE SERIOUS ACCIDENTS

- Compressed air accidentally blown into the mouth can rupture the lungs, stomach, or intestines.
- Compressed air can enter the navel, even through a layer of clothing, and inflate and rupture the intestines
- Compressed air can enter the bloodstream, and death is possible if it makes its way to blood vessels in the brain
- Direct contact with compressed air can lead to serious medical conditions and even death
- Even safety nozzles which regulate compressed air pressure below 30 psi should not be used to clean the human body
- As little as 12 pounds of compressed air pressure can blow an eye out of its socket. If an air pocket reaches the heart, it causes symptoms similar to a heart attack. Upon reaching the brain, pockets of air may lead to a stroke.

HOW TO PROTECT YOURSELF

BEST SAFETY GUIDELINES WHEN USING COMPRESSED AIR

- All compressed air equipment should be kept in good working condition. Inspect it regularly and perform any maintenance as soon as possible.
- All employees working with compressed air machines should have undergone the appropriate health and safety training. Make sure that only competent employees are allowed to operate the machines.
- When you are inspecting your machines, make sure that you check the supply lines of the system and take a close look at the hoses for any cracks and damage.
- Keep hoses away from grease and oil, as this can damage the hose materials.
- The shut-off valve for the air supply should be located as close as possible to the point of operation.
- Keep hoses organized and out of the way, to not create a tripping hazard by being strewn across the floor.
- The ends of the hoses should be secured, to not whip around if an accidental break occurs.
- Compressed air pipes need to be inspected regularly and checked for wear and rust. If the pipes are located within tight spaces or along machinery, they should be inspected for damage caused by vibration or friction.
- Check the fittings of the compressed air machine, to ensure that they are tight and securely clamped.
- Any of the moving parts in the machine, such as pulleys, belts, or compressor flywheels, should be guarded so that they do not pose a hazard.
- Never crimp or uncouple the pressurized hose, always bleed off the pressure before releasing any connections.
- Make sure that all equipment is grounded, to prevent the risk of static electricity.
- All employees who are using compressed air should wear proper eye protection as well as hearing protection.
- Before performing maintenance on electric compressors, disconnect from the power supply.

KEEP IN MIND THE “NEVER” AND “ALWAYS”

- Always follow pressure ratings and limitations.
- Always check the condition of hoses and lines before use.

- Always wear proper PPE.
- Always wear proper protective clothing.
- Never use it to clean workspaces or equipment unless necessary.
- Never point it at yourself or another person.

FINAL WORD

Compressed air use is required to drive many of the different tools used for the demolition, repair, and installation of refractories used to protect thermal processing equipment. Hazard awareness and safety training allows for refractory crews to use compressed air in a safe and efficient way to complete complex tasks.