Safety

Freeze Warning: Your Guide to Winterizing Industrial Equipment

Kip Hanson | Dec 14, 2023

Winter weather can wreak havoc on the electronics, motors, batteries, hydraulic lines, pumps and other components that power industrial equipment.

Slippery sidewalks might cause dangerous falls, while snow piled high on factory rooftops often leads to expensive repairs come springtime.

And that hose bib on the side of the building? Forgetting to wrap it could be a costly mistake.

These are just a few examples of how winter weather can test the mettle of manufacturers in colder climates, reducing productivity and creating a potentially unsafe environment. This guide provides actionable steps for facility managers to mitigate these and other weather-related risks that come with falling temperatures:

- Holiday lights are a pleasant sight on any building, and manufacturing facilities are no exception. But while you're up on the ladder, it's a good idea to string some de-icing cables along the eaves. Be sure to buy the proper clips to attach them, and enough heavy-gauge extension cords to plug everything in.
- Speaking of ladders, don't wait until the rain and snow start before checking the roof. Has the HVAC unit been inspected recently? How about the roof itself? Are there gutters, and are they clogged with leaves? Perform annual maintenance on these structures early in the season and be sure to follow the "three points of contact" rule when climbing up there.
- The Centers for Disease Control and Prevention offers a list of ***winter weather tips,*** which include a warning that "many cold-weather injuries result from falls on ice-covered sidewalks, steps, driveways and porches." Be sure to stock up on plenty of calcium chloride, aka deicer, to keep these areas safe and slip-free.
- Are people complaining that the front office or breakroom is too cold? Take care when using space heaters. Keep them at least 3 feet away from combustible materials and don't forget to shut them off before going home for the night. Better yet, plug them into an appropriately rated timer that will cut the power at closing time.
- How about the shop floor? No one expects it to be kept at 68 degrees, but everyone knows that part quality will suffer if the production area gets too cold. To keep heating bills under control, take a hard look at your building's energy efficiency. Install additional insulation wherever necessary, seal gaps around windows and doors with weatherstripping, inspect the building's

ductwork, and make sure to keep the loading dock closed.
- It's a good idea to winterize potential problem areas such as hose bibs and irrigation systems during the fall. Similarly, be sure to insulate any indoor pipes running along the ceiling or outside walls. Failure to do so could lead to a flooded facility.

Looking for cold weather gear? MSC has you covered, with everything from base-layer shirts to coats, boots and gloves. Click here to get what you need.

- Perhaps the shop's air compressor is in an unheated room near the building exterior. Maybe it's even in a separate building or shed out back. When was the last time it had preventive maintenance? Is the oil viscosity rated for the expected temperatures? Has the drain valve been opened recently? Don't wait for this critical equipment to freeze up before giving it the attention it deserves.
- Most machine shops and sheet metal manufacturers own one or more company vehicles. Larger firms may have a fleet of them. All should have a pre-winter checkup at your neighborhood garage. Have mechanics change the oil, check the batteries and tires, top off the fluids and do whatever else is needed to keep the vehicles roadworthy.
- Upon the vehicles' return, make certain each is equipped with an ice scraper, jumper cables, flares, snow chains, a shovel, first-aid kit, flashlight, a warm blanket or two and some emergency rations. Doing so might keep an accidental slide into a ditch from turning into a tragedy.
- The company forklift doesn't need that level of winter preparedness but depending on your parking lot and whether there's a ramp to the loading dock, it might need tires that are better equipped to handle slippery surfaces. Now's also an excellent time to make sure the battery is in good working order.
- The National Fire Protection Association says December, January and February are the ***peak months for heating fires***. Granted, most of them are home fires, and many are caused by improper use of the aforementioned space heaters, but sprinklers and extinguishers should still be inspected, functional, and insulated against freezing as winter approaches.
- As for fire prevention, your building almost certainly has a fire hydrant out front. It won't do any good, however, if it's buried under 6 feet of snow when the fire department arrives. Hire a company to keep it clear (or task a cold-loving employee with the job). While you're at it, have you contracted a snow removal company to plow the parking lot?
- Has everyone been informed of the company's plan for a blizzard or power failure? Under what conditions should employees stay home? Is there a list of phone numbers, and who will call whom? No one wants to battle their way into work through snow and slick roads only to find that the plant is closed.

While this is a long list, planning is essential. Determine who's responsible for each of these tasks. Make certain they'll be available to perform them when needed and designate a backup. Also, figure out who's ordering the necessary winter weather supplies, what they're buying, who's installing them if needed, and who's keeping an eye on the situation after that.

The U.S. Occupational Safety and Health Administration has a lot to say about ***preparing for winter weather***. So does the National Weather Service, both ***here*** and ***here***.

Winterizing the factory isn't limited to preparing for the cold; it includes ensuring continuity of operations and safety for employees.

That requires a proactive approach, open communication and regular, scheduled maintenance to address the unique challenges posed by lower temperatures and harsh weather conditions.

Which steps in winterizing your machine shop are most important? Tell us in the comments below.