



PROFESSIONAL INSULATION: WHAT YOU NEED TO KNOW

Energy costs are skyrocketing. When it comes to mechanical systems that operate 24/7, professionally-installed mechanical insulation continues to be an inexpensive, yet often overlooked way to guarantee savings.

Whether developing a project for another buyer, overseeing facility operations, or planning for a future build, professionally-installed mechanical insulation guarantees savings and safety. Properly-installed insulation will prevent and protect heating, cooling, and process systems from mold and condensation. When installed correctly, it will also extend the life of your equipment, and in fact, the life of the entire building.

Use this checklist for your next project to ensure that your professionally-installed insulation is done correctly and will yield returns for years to come.

- Inspect annually to look for damages. Check for mechanical abuse of pipe covering and ensure that the insulation has not been compressed or altered. Water, water stains, or misaligned fittings and valves are all indicators that something is wrong.
- Look for piping and duct systems that are missing insulation. Ensure that all valves, flanges, hangers, gauges, and access entry points are fully insulated. Verify that the insulation is firmly butted and sealed, and that there are no breaks. Make sure all adhesive lapping is closed tightly and has not been re-opened.
- Confirm that hard inserts of sufficient strength have been used at load-bearing points. Look for compressed insulation at these points. Insulation loses its value when compressed.
- Ensure that equipment is completely insulated, including fans, pumps, and motors. When these components are not insulated, they work harder and longer than necessary. This will not only have a direct impact on energy consumption, but it will also reduce the life expectancy of the equipment in the system.
- Verify that the correct type of insulation has been specified for the system it is protecting. The environment that the system is exposed to is critical to choosing the proper insulation. Exposure to chemicals and water will damage and reduce its effectiveness.



- Check that the correct protective coverings and finishes are being used. The insulation is directly dependent on these systems for protection. Have insulated systems exposed to the environment been properly installed and protected? Has protective jacketing been applied with laps away from the weather? Insulated exterior ducts should never have flat surfaces where water can pool. It needs to be sloped in a manner that removes the water. **Standing water will always find a way to get in**, no matter how well it has been sealed.
- Review all insulation and coverings to verify that they have been installed to the manufacturer's recommendations. Duct work that requires fire protection (grease ducts, critical air systems) must be installed according to the manufacturer. Mechanical fasteners and stainless steel banding are requirements to ensure the insulation remains in place in the event of fire.
- Verify that chilled water and glycol systems have been properly sealed to maintain a vapor barrier. Air infiltration to these systems will cause condensation, which promotes the growth of mold, a direct cause of sick building syndrome (SDS). It also will lead to corrosion under insulation (CUI). Both are costly fixes to a building owner.
- Ensure that pumps and valves that are regularly maintained have been insulated in a manner that allows easy access. Have you considered reusable blankets?
- If you are unsure of what you are looking for, consult a professional Pipe Coverer. We are always willing to help!
- Consider calling for a free evaluation/thermal energy audit of your mechanical insulation systems today.

To ensure that your professionally-installed insulation systems have been done correctly and will yield returns for years to come, use this checklist in your current facility or your next project.

Contact Don Follett at DonFollett@MechInsulation.org, (857) 385-8983 (cell), or 844-84-GoGreen today!

