

Hose

Steam Hose Recommendations

The Boston Wolf Coupling offers significant advantages over the traditional bolt-style steam hose end. The Wolf ferrule is designed to grip the hose reinforcement to provide long-lasting coupling retention. This design avoids the problem of "cold flow" by involving the reinforcement as part of the coupling retention method rather than relying on the compression of the rubber cover by a bolt-style coupling. By using the Wolf Permanent Attach Coupling, the requirement for periodically re-tightening a bolt-style clamp is avoided. Additionally, there are no clamps to get hung up on obstacles in the plant.

- 1 Install an OSHA approved safety cable on the hose at every junction to prevent whipping of the end if the coupling should disconnect.
- 2 Ensure continuous static grounding of the hose at each coupling.
- 3 If the clamps are a bolt-on style, tighten them to the correct torque before use. Use calibrated torque wrenches, not impact or other types.
- 4 Repairs on steam hoses and couplings should be done only by fully qualified distributors or fabricators.
- 5 All workers near the hose should wear full protective safety gear including gloves, safety shoes, full-length protective clothing and protective glasses or goggles.
- 6 Perform a complete safety check before the steam is turned on. Inspect the area and remove all unnecessary objects and debris. Inspect the hose for gouges, kinks, worn areas, loose couplings and other potential safety problems.
- 7 Install a shut-off valve between the source of steam and hose assembly.
- 8 Use spring guards to protect the hose from kinking when handling of the hose is required.
- 9 Avoid excessive flexing of the hose, particularly near couplings. Flexing can weaken the assembly.
- 10 Examine connections to the steam source. Use straight connections instead of bending the hose. Install pipe elbows to ensure either straight vertical connections pointing downward, or a 45° downward angle that allows the hose to gently contact the ground without too much flexing.
- 11 Be aware of the danger of hammer effect and take steps to prevent it. Hammer effect is caused by spikes of extreme pressure; it can damage hose assemblies and break couplings free. The usual causes are blockage, pinched-off flow or valves being opened or closed too fast. Make personnel aware of both the danger and causes, and urge them to avoid actions that can cause the hammer effect.
- 12 When finished using steam, always close the pressure valve from the steam source. In addition to providing an extra safety margin, this action can extend the working life of the hose.
- 13 Add an extra measure of safety by ensuring that all steam hose connections are incompatible with other hoses in the plant or by color-coding for different applications. Manufacturers can often cooperate with these requests and suggest good color-coding systems.
- 14 Train workers to look for signs of problems during usage, such as steam leakage, loose clamps, hose shrinkage, cover damage or exposed reinforcement.