PURPOSE

This University of Nevada, Reno Facilities Services Department Standard Operating Procedure (SOP) provides guidelines for use and operation of the Rothenberger Pipe Freezing System. This SOP is written specifically for operating this system in conjunction with the instruction manual.

PROCEDURES

The following SOP shall be used by all HVAC personnel when using the Rothenberger Pipe Freezing System:

Commissioning
1. The freezing system must be tempered, i.e. have adopted room temperature (+10 degrees Celsius up to a maximum of 32 degrees Celsius) before commissioning.
2. Shut down the heating or cooling circuit on which the piping is to be interrupted by means of an ice plug. Shut down the heating or cooling pump in order to stop the water flow. Verify with supervisor that the correct water system is shut off and pipe is ready for freezing.
3. Position the freezing system in such a way that the equipment ventilator motor does not blow on to the pipes to be frozen, as they must be protected against warm air.
4. Hold the refrigerating tongs upright and switch the system on for five minutes so that any oil that may still possibly be in the refrigerating tongs can find its way back into the circuit. Switch on by operating the rocker switch.
5. Only apply the refrigerating tongs to the straight pipe sections. Badly distorted or out-of-center pipes are not suitable for freezing.
6. Spread heat-conducting paste generously on the contact surfaces between the refrigerating tongs, reducing inserts and pipes to avoid insulation bridges. The heat-conducting paste must be used for optimal function.
Operating
1. Press the gripper tongs together with the appropriate insert onto the pipe to be frozen and tighten by means of the fastening screw. Only tighten the fastening screw by hand.
2. Do not switch the unit on until both refrigerating tongs have been secured firmly to the pipes to be frozen. Only touch the refrigerating tongs wearing gloves suitable for cold temperatures.
3. Only open the wet side circuit when the temperature of minus 15 degrees Celsius has been reached for ten minutes.

Shutdown
1. Shut down the freezing system, allow the refrigerating tongs and hoses to defrost, remove from the pipe and clean.

2. Hold the refrigerating tongs upright for about five minutes and switch the system back on so that any oil that may still be in the refrigerating tongs can find its way back into the circuit.

3. Shut down the system, remove the power plug and carefully store the hose assembly group in the housing compartment. Do not bend or stretch the hoses.

IMPLEMENTATION
The HVAC supervisor is responsible for the implementation of this SOP within area(s) of responsibility.

TRAINING
All qualified HVAC personnel who use the Rothenberger Pipe Freezing Unit will receive thorough training before operating the unit. The supervisor will ensure that the HVAC personnel using the Rothenberger Pipe Freezing System follow this procedure, in conjunction with the operating manual at all times.

COMPLIANCE
Compliance with all UNR and FMS policies and procedures is required of each employee. Failure to comply with this SOP may result in disciplinary action as outlined in the Nevada System of Higher Education Prohibitions and Penalties, and/or the Nevada System of Higher Education Board of Regents Handbook.