**02 DEPARTMENT OF PROFESSIONAL AND FINANCIAL REGULATION**

**658 MAINE FUEL BOARD**

**CHAPTER 8 INSTALLATION OF OIL BURNING EQUIPMENT**

**Summary**: This Chapter sets forth requirements for the installation of oil burning equipment and describes the necessary safety controls, devices and standards for the reduction of fire hazards associated with oil-fired equipment used in residential, commercial, and industrial applications.

**8.1 Nationally Accredited Testing Laboratory**

All heating, chimney and fireplace equipment, as well as any accessory equipment, must be listed and approved by Underwriters’ Laboratories or by an independent nationally recognized testing laboratory. Such listing must be in effect at the time of installation.

**8.2 Workmanship**

All work must be conducted, installed, and completed in a neat and professional manner reflecting a minimum level of competent workmanship.

**8.3 Repair or Replacement**

Repair of any system or replacement of parts may be made in the same manner as it was in the existing system provided that such repair or replacement is not hazardous. All material, equipment and devices must be constructed and installed in accordance with their specific purpose and listing.

**8.4 Maintenance**

8.4.1 **General**

All oil burning equipment and systems, both new and existing, and parts thereof must be maintained in a safe condition.

8.4.2 **Notification to Property Owner of Code Violations**

When performing any service on a customer’s heating system, the licensee must notify the property owner in writing of any code violations and make recommendations to address them.

8.4.3 **Combustion Efficiency Test Required**

When performing an annual tune-up on a heating system, a combustion efficiency test must be conducted, and a copy of the test results must be posted on-site.

**8.5 Installations**

8.5.1 **Code Compliance Required Prior to Placing into Operation**

Whenever a furnace, direct-fired hot water heater, or boiler is installed, the total installation must be brought into compliance with the requirements of NFPA 31 and all other rules of the Board **BEFORE** the furnace, direct-fired hot water heater, or boiler is fired. Prior to leaving the installation (whether installed inside or outside any structure) unsupervised, the licensed oil burner technician must observe, inspect, and test the equipment to ensure that the installation is operating safely and properly and meets all applicable rules of the Board.

8.5.2 **Wiring Compliance Required Prior to Firing**

Whenever a new burner is installed, the wiring must be brought into compliance with the rules of the Board before the unit is fired. The wiring update must include the following:

1. Properly rated fuse or breaker;

2. Properly rated wiring;

3. Properly installed and located emergency switch;

4. Properly installed and located thermal electric switch;

5. Properly installed and located service switch; and

6. Properly installed and located low water cut-off.

8.5.3 **Combustion Efficiency Test Required**

When performing an installation, a combustion efficiency test must be conducted, and a copy of the test results must be posted on-site.

8.5.4 **Water and Condensate Connections to Boilers and Water Heaters**

8.5.4.1 **Hot and Cold Water Piping**

A master or journeyman oil burner technician may connect hot and cold water piping from a boiler or oil fired water heater to existing piping only in the same room where the installation is taking place. Such connections may not be made beyond any existing branch connection supplying water, in accordance with Maine Revised Statutes, Title 32, Section 3302.

8.5.4.2 **State Plumbing Code**

All piping and safety controls on domestic water heaters, domestic water connections to boilers and water heaters, and condensate disposal from oil fired condensing appliances must be made in accordance with the rules of the Plumbers’ Examining Board, established by Title 5, section 12004-A, subsection 32 of the Maine Revised Statutes.

8.5.4.3 **Condensate from Fuel Fired Appliances**

1. An approved neutralizer shall be installed in the condensate drain system of all fuel fired condensing appliances, so the condensate is rendered innocuous.
2. Condensate from fuel fired appliances shall be drained into an existing open receptor through an air gap that is connected to a sanitary drainage system in accordance with the rules adopted by the Plumbers’ Examining Board, established by Title 5, section 12004-A, subsection 32 of the Maine Revised Statutes.
3. If there is no existing open receptor, connection to a sanitary drainage system must be done by a Maine-licensed Master or Journeyman plumber utilizing a permit in accordance with the rules adopted by the Plumbers’ Examining Board, established by Title 5, section 12004-A, subsection 32 of the Maine Revised Statutes.
4. Condensate shall not be disposed of by routing through a floor and into a perimeter drain system or underneath a slab.
5. When the installation requires a condensate pump, the condensate pump must be installed in accordance with the manufacturer’s instructions. The condensate pump discharge shall rise vertically to a point where it is possible to discharge to an open receptor connected to the sanitary drainage system.
6. Where an installation requires a condensate pump, the condensate pump must be interlocked with the appliance to prevent to appliance from operating during a condensate pump failure.
7. Each fuel fired condensing appliance requiring a condensate pump shall be provided with its own individual condensate pump.

8.5.5 **Heat Loss Requirement**

8.5.5.1 **New Installations**. Heat loss system design and system load calculations for all new installations must be performed prior to the installation. The licensee must retain a copy of the heat loss system design and system load calculations such that they may be produced for inspection upon request of a Board inspector.

8.5.5.2 **Replacement Systems**. A heat loss and/or load calculation must be conducted before replacement of an existing system. The licensee must retain a copy of the heat loss system design or system load calculations, or the stamped plans of an engineered system, such that they may be produced for inspection upon request of a Board inspector.

**8.6 Low Water Control for Oil-Fired Boilers**

8.6.1 **Low Water Control Required**

All oil-fired boilers must be provided with a properly installed and operating low water cut-off.

8.6.2 **Location**

The low water cut-off may be installed in, or attached to, the boiler at the level recommended by the boiler manufacturer, but in no case shall the low water cut-off be installed below the crown sheet. The low water cut-off, when not installed directly in the boiler, may be installed either in the main supply line (vertical riser) as close to the boiler as possible, or in a water column of continuous piping attached directly to the boiler.

8.6.3 **Appropriate Design**

The low water cut-off must be designed and approved for the medium used (steam or water).

8.6.4 **No Obstructions**

No valves or other obstructive devices shall be installed between the boiler and safety controls or devices.

**8.7 Piping, Pumps and Valves**

8.7.1 **Supply Connections/Oil Shut-off Valves**

8.7.1.1 A listed lever or wheel thermally-operated oil shut-off valve, designed to shut off the oil supply in case of fire, must be installed at the burner and at the oil supply tank.

8.7.1.1.1 When outside tanks are used, a thermally operated shut-off valve must be installed where the supply line enters (inside) the building and where the oil line enters the room where the appliance is located.

8.7.1.1.2 When inside tanks are used, and the oil supply tank is installed in a separate room, a thermally operated shut-off valve must be installed where the line enters the room where the appliance is located.

8.7.1.2 Whenever the oil supply is taken from the top of an oil tank, whether the oil tanks are outside or inside, a thermally operated wheel or lever type shut-off valve must be installed at the tank and at the burner for control of the fuel. A check valve may be used in the supply line.

8.7.2 **Thermally-Operated Valves**

Thermally operated valves over ½″, that are not currently listed may be installed upon receipt of written approval of a Board inspector. The written approval must be requested and received prior to installation.

**8.8 Oil Supply and Return Piping**

8.8.1 **Continuous Supply and Return Lines Required**

Wherever a copper oil supply or return line is installed under cement, sub-floors, or earth surface, it must be continuous without any splices from the burner to the tank.

8.8.2 **Conduit Required**

All copper oil supply and return lines must be encased in a continuous piece of non-metallic liquid-tight conduit such as PVC, ENT, coated copper tubing, or other approved material and must be secured in order to prevent physical damage. The end of the conduit shall not exceed more than two (2) inches from any fitting, except the connection at the fuel tank and at the fuel pump located at the burner shall not exceed 6″.

In order to avoid undetected oil leaks under floors, the conduit must be a minimum of one pipe size larger than the oil supply and return lines. The ends of the conduit must penetrate the cement or earth surface a minimum of two (2) inches above grade.

An oil supply or return line that penetrates a foundation wall must be sealed at the wall to prevent the entry of water, insects or rodents.

8.8.3 **OSV Valve or PRV Valve Required: Underground Tubing**

Coated copper tubing must have an OSV valve or PRV valve installed at the tank when used underground.

8.8.4 **OSV Valve or PRV Valve Required: Tanks Higher Than Burner**

Wherever an outlet of an oil supply tank is located more than four (4) feet above the burner, an OSV valve or PRV valve is required.

8.8.5 **Concealment of Oil Lines**

No oil supply or return line shall be concealed in a wall, ceiling, or partition unless access to the oil supply or return line can be made without cutting through existing walls, ceilings or partitions. This may be accomplished by providing removable panels.

8.8.6  **Use of Coated Copper Tubing**

Coated copper tubing must be approved by the manufacturer for the intended use.

8.8.7 **Oil Filter Support**

When an oil filter or other accessory equipment is connected to copper piping smaller than ¾ inches and is not directly connected to the oil tank or oil burner, the filter or other devices must be rigidly supported by a wall- or floor-mounted bracket or other means that provides sufficient support and stability for servicing this type of accessory equipment.

8.8.8 **Flare Fittings Required**

All oil supply and return lines of copper tubing must be connected by flare fittings only. All fittings must be accessible for service or replacement. No compression fittings shall be used on a supply or return oil line unless it is for the introduction of the lines at the top of the tank with a single or double tap bushing.

8.8.9 **Flare Frost Fittings Required Outside**

All connections of supply or return oil lines located outside must be made with flare frost fittings.

8.8.10 **Disconnected Lines**

No oil lines or oil devices which are disconnected from an oil supply tank, burner or unit, shall be left open. Any oil line or oil device which is disconnected or discontinued must be sealed or closed with a plug, cap or other approved fitting.

8.8.11 **Removal of Unprotected Supply Lines Required**

Unprotected supply lines that are buried or grouted must be removed from service.

8.8.12 **Underground Piping: Tanks Over 660 Gallons**

As set forth in the Appendix to this Chapter, if underground or under-slab piping is connected to a tank of over 660 gallons capacity, or to tanks with an aggregate capacity of over 1320 gallons, the installation of the underground piping must be installed by a certified underground oil tank installer and otherwise meet Maine Department of Environmental Protection requirements.

8.8.13 **Reporting of Oil Spills Required**

Oil spills, regardless of the amount spilled, must be reported within two (2) hours to the Maine Department of Environmental Protection in accordance with the Appendix to this Chapter.

**8.9 Oil Supply Tanks**

8.9.1 **Inside Tank Fabrication**

Rectangular built-in place tanks shall be fabricated using one-quarter (1/4) inch minimum thick steel sheets reinforced on maximum 24-inch centers. Tank bottoms must be supported on 12-inch-wide non-combustible piers, to a height of 8 inches above the floor. All welding must be performed by a welder. Tanks must be designed by a registered engineer who shall observe the tank under 5 PSI test and certify to it being tight under this test.

8.9.2 **Manholes**

8.9.2.1 Manholes, sixteen (16) inches in diameter or larger, must be installed in the top of all tanks of 5,000 gallons or more.

8.9.2.2 Manholes provided in 5,000 gallons supply tanks must be liquid tight when installed inside of a structure.

8.9.2.3 Manholes, when required for outside use, may take the form of a floating lifter roof or weak roof-to-shell seam, or other approved pressure relieving construction.

8.9.3 **Separation from Other Appliances**

All fuel oil supply tanks must be a minimum of five (5) feet from any gas and/or solid fuel burning appliance.

8.9.4 **Tank Requirements Upon Conversion to an Alternative Fuel**

If an oil burning appliance is converted to an alternative fuel, but the tank is left in place so that it can be returned to service at some future date, all of the following requirements must be met before the alternative fuel is used:

8.9.4.1 The vent piping must remain intact and open to the outside of the building;

8.9.4.2 The fill pipe must be removed completely, and the tank must be plugged with a threaded malleable iron plug;

8.9.4.3 The burner supply line must be removed and the valves on both the tank and burner must be capped or plugged; and

8.9.4.4 If an underground oil supply line is in use and complies with Section 8.9 of this Chapter, it may remain in place provided that all of the following conditions are met:

1. The oil line is emptied of its contents;

2. The oil line is disconnected from the oil tank and burner; and

3. The oil line is plugged on both ends in addition to the burner and tank fittings being plugged.

Oil can remain in the tank unless prohibited by the local Authority Having Jurisdiction or the Maine Department of Environment Protection.

8.9.5 **Fuel Supply Systems That Are Permanently Taken Out of Service**

If a fuel supply tank is permanently removed from service for whatever reason, the tank and all piping connected to it, including the outside fill and vent piping and any supply piping connected to the appliance, shall be:

1. Emptied of all liquid contents and sludge;

2. Cleaned and rendered free of combustible vapors;

3. Removed from the premises or property; and

4. Properly disposed of in accordance with all applicable local,

state, and federal rules and regulations.

**8.10 Outside Oil Supply Tanks**

8.10.1 **Installation on Wood Not Permitted**

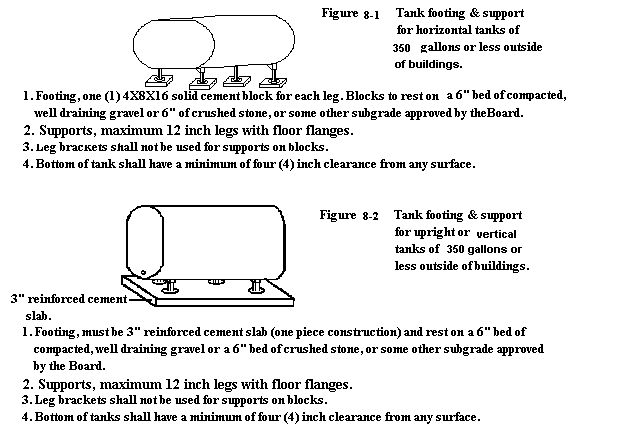
Oil supply tanks shall not be installed on wood or other combustible surfaces or supports.

8.10.2 **Support of Horizontal Oil Supply Tanks**

A horizontal oil supply tank must be mounted on steel pipe legs, not exceeding twelve (12) inches in height with floor flanges at the base of the steel legs and be supported by four 4″ x 8″ x 16″ solid concrete blocks or a one piece reinforced concrete pad not smaller than the tank dimensions. The four (4) blocks or the pad must rest on a firm subgrade consisting of a bed of compacted, well-draining gravel (6-inch minimum), crushed stone (6-inch minimum), or some other subgrade approved by the Board. There must be a minimum of four (4) inches of clearance under the tank from any surface. See Figure 8-1.

8.10.3 **Support of Vertical Oil Supply Tanks**

An upright or vertical oil supply tank must be mounted on steel pipe legs not exceeding twelve (12) inches in height, with floor flanges at the base of the steel leg and must be supported by a reinforced concrete pad at least three (3) inches thick. The pad's width and length shall not be smaller than the tank dimensions. The pad must be of one-piece construction. The pad must rest on a bed of compacted, well-draining gravel (6-inch minimum), crushed stone (6-inch minimum), or some other subgrade approved by the Board. There must be a minimum of four (4) inches of clearance under the tank from any surface. See Figure 8-2.



8.10.4 **Leg Brackets**

The leg brackets welded on the tank are not considered a leg and may not be used to rest on the side of the reinforced concrete pad or solid concrete blocks.

8.10.5 **Legs Not to be Embedded in Concrete**

When a reinforced concrete pad is fabricated on-site, the legs of the supply tanks shall not be embedded as part of the pad.

8.10.6 **Shims Not Permitted**

In all installations, the pipe flanges must be in direct contact with a reinforced concrete pad or solid concrete blocks. The use of shims is prohibited.

8.10.7 **Tank Disposal**

Tanks must be disposed of in accordance with the rules of the Maine Department of Environmental Protection.

8.10.8 **Prevention of Oil Spills Caused by Snow or Ice**

In order to prevent oil spills, outside tanks and piping must be located such that they are not subject to falling snow or ice. To meet this requirement, the tank and outdoor piping must be installed with a protective cover over the tank valve, oil filter, and any piping which is either without structural support or not attached to the side of the building.

8.10.9 **Existing Tanks to Meet Current Standards**

All existing outside supply tanks must be held to the same standards as newly installed tanks.

8.10.10 **Fuel Supply Line: Single Tank Installations**

For a single-tank installation, the fuel supply line shall not extend more than twelve (12) inches beyond the face of the tank.

**8.11 Inside Oil Supply Tanks**

8.11.1 **Leg Brackets**

The leg brackets welded on the tank are not considered a leg and may not be used to rest on the side of the reinforced concrete pad or solid concrete blocks.

8.11.2 **Installation on Wood Not Permitted**

Oil supply tanks shall not be installed on wood or other combustible surfaces.

8.11.3 **Support of Inside Oil Supply Tanks on Finished Floors**

The tank legs of an installation of an unenclosed supply tank(s) located inside a building(s) with a finished cement floor shall not exceed twelve (12) inches in height with floor flanges at the base of the steel legs. The use of shims is prohibited.

8.11.4 **Support of Inside Oil Supply Tanks on Unfinished Floors**

The installation of an unenclosed supply tank(s) located inside a building(s) without a finished cement floor must be supported by four 4 inch x 8 inch x16 inch solid concrete blocks or a reinforced concrete pad. The pad must be at least three (3) inches thick, the width and length extending the full dimensions of the tank. The tank legs shall not exceed twelve (12) inches in height with floor flanges at the base of the steel legs. There must be a minimum of four (4) inches of clearance under the tank from any surface. The use of shims is prohibited.

8.11.5 **Multiple Tank Installation: Tops to be on Same Horizontal Plane**

The top of all of the fuel oil tanks on a multiple tank installation must be on the same horizontal plane.

8.11.6 **Location of Oil Shut-Off Valves**

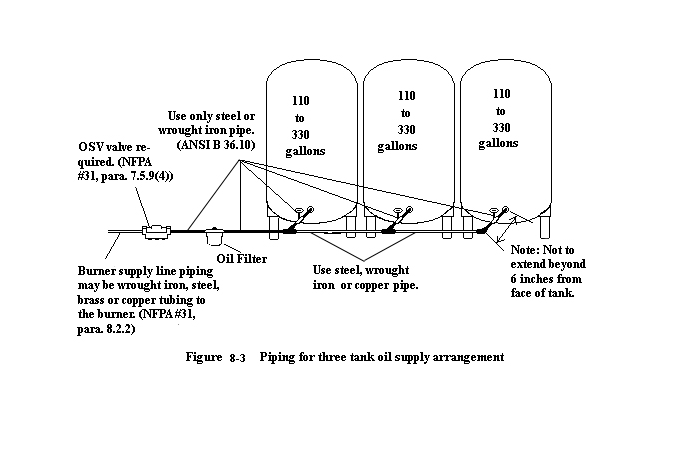
Oil shut-off valves must be provided immediately adjacent to the burner supply connections at the bottom of the supply tanks.

8.11.7 **Manifold Requirements**

The manifold at the cross connections of the burner supply line must be of steel, wrought-iron pipe or copper tubing. The manifold piping must be as close to the shut-off valves as possible so that the distance between the tank and the last fitting does not extend beyond six (6) inches from the face of the tanks and the final fitting (elbow or tee). See Figure 8-3.

8.11.8 **Prevention of Oil Spills From Multiple Tank Installations**

On multiple tank installations, it is the installer’s responsibility to ensure that return line product will not cause spillage.



8.11.9 **Multiple Tank Installations: Common Venting System**

When installing multiple fuel oil tanks with separate fill pipes and a common venting system, the requirement for increasing the vent pipe one pipe size larger than the largest individual vent pipe is not applicable.

8.11.10 **Cross-Connection of Two Oil Supply Tanks**

When installing two tanks that are cross connected according to Figure 8.9.1 of NFPA 31, the gauge must be installed only in the vented tank and all burner supply piping from the tank outlet to the filter installed at the tank must be black iron pipe. The piping connected from the second tank may be either black iron pipe or copper tubing. If the filter is not located at the tank manifold, then copper tubing may be used to connect the black iron pipe manifold to the inlet of the filter.

8.11.11 **Removal of Piping Required Upon Removing Tank From Service**

When removing, replacing, or taking a tank out of service for any period of time, the oil tank fill and vent piping must be removed from the side of the building.

**8.12 Vent Alarms**

8.12.1 **Inside Tanks**

All No. 1 and No. 2 fuel oil tanks from 11 to 5,000-gallon capacity located inside a structure must have a vent alarm.

8.12.2 **Outside Tanks**

All No. 1 and No. 2 fuel oil tanks from 65 to 5,000-gallon capacity located outside must have a vent alarm.

8.12.3 **Manufacturer’s Instructions**

All vent alarms must be installed according to manufacturer’s Instructions.

**8.13 Tank Patches**

All oil supply tanks must be liquid tight. Leaking tanks may be temporarily repaired with a tank patch. Any tank so repaired must be replaced within thirty (30) days of the repair.

**8.14 Used Underground Oil Tanks**

Used underground oil storage tanks are prohibited from use for aboveground storage of oil unless:

8.14.1 Such use has been approved by the Maine State Fire Marshal; or

8.14.2 A Maine licensed professional engineer, or other person meeting the requirements of the statutes and rules governing professional engineers practicing in Maine, certifies that the tank meets all applicable specifications and requirements of UL #142 as referenced in NFPA 31.

**8.15** **Electrical Equipment, Required Control Switches**

8.15.1 **Thermal Cut-Off Switches**

A thermal cut-off switch must be wired into the burner circuit to shut off the burner in the event of a fire at the unit. The switch must be placed at the highest point directly above the unit to be fired with the thermal element pointed downwards and must be placed on the bottom of the floor joist or stringer at the front of the unit. In no case shall it be lower than the point where the flue connector enters the chimney. The switch must be wired to shut off the burner, circulating fan, forced or induced draft fan and any remote oil pump that is not an integral part of the burner. A thermal electric switch is required for each oil-fired unit in a multi-appliance installation.

8.15.1.1 On multi-unit installations, the emergency and thermal electrical switches must be wired in series through individual unit relays so that, if one switch is opened, all equipment will be rendered inoperable whenever the "EMERGENCY" switch is opened.

8.15.1.2 All remote pump sets must have a thermal cut-out switch installed as follows:

1. Maximum of three (3) feet above pump set;

2. The element must be pointed downwards; and

3. The switch must be supported in accordance with NFPA 70.

8.15.2 **Service Switch**

A service disconnect switch for control of the burner while observing the flame must be placed at the unit, within arm’s reach of the technician.

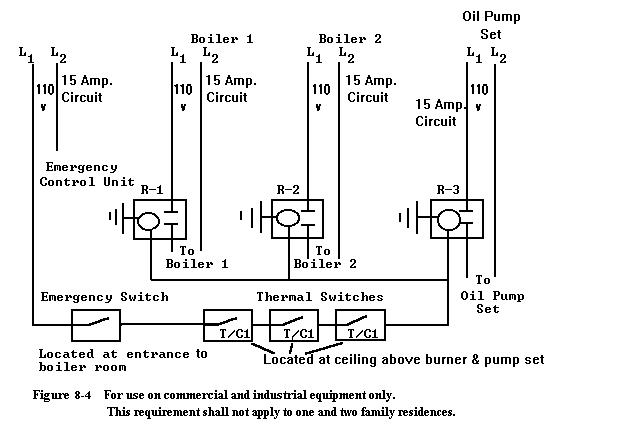
8.15.3 **Emergency Switch**

8.15.3.1 If the entrance to the boiler room is only accessible from the outside, the emergency switch may be placed at the inside not more than one foot beyond the door opening. An emergency switch shall not be placed outside of any building.

8.15.3.2 On commercial and industrial equipment, the emergency switch must be installed in accordance with Figure 8-4 on multi-unit installations. The requirements of Section 8.15.1.1 do not apply to one- or two-family residences.

8.15.3.2.1 On multi-unit installations, the emergency shut-off switch must be placed at the outside entrance of the room containing the appliances. The emergency switches and the thermal cut-off switches must be wired in series through individual unit relays so that, if the emergency switch is opened, all heating equipment in the room and the remote pump set will be rendered inoperable. This application also applies if there are two or more appliance rooms in the same building that are connected to a common fuel supply system.

[NOTE: For Primary Safety Controls, Required Programming and Timings for Burners, refer to ASME CSD-1.]



8.15.4 **Controls Containing Mercury**

Thermostats containing mercury must be disposed of in accordance with all federal and State Regulations. (Refer to 38 M.R.S. § 1663 and check with your local supplier)

**8.16** **Use of Priority Controls**

A priority control for installation of an oil-fired warm air furnace and an oil-fired hot water heater when the existing chimney flue is not of adequate size to accommodate both appliances is allowed. The chimney must be lined. A priority control is required when replacing an existing furnace or water heater when the chimney is not properly sized for both appliances.

**8.17** **Steam Boilers**

Steam boilers must be installed according to manufacturer’s instructions.

**8.18** **Safety and Pressure Relief Valves**

8.18.1 **Approved Safety or Pressure Relief Valve Required**

Steam and hot water boilers must be equipped with listed or approved steam safety or pressure relief valves that conform to ASME requirements. A shut-off valve shall not be placed between the relief valve and the boiler or on discharge pipes between such valves and the atmosphere.

* + 1. **Termination**

8.18.2.1 All steam safety or pressure relief valves must terminate in a manner which precludes the possibility of accidental scalding in accordance with ASME.

* + - 1. Steam safety relief valves over two (2) inches in diameter must terminate outside of the structure in a safe location.
      2. Steam safety or pressure relief valves which terminate in the structure must terminate six (6) inches to twelve (12) inches above the floor.

8.18.3 **Installation in Upright Vertical Position Required**

Steam safety and pressure relief valves on boilers must be installed with the spindle in the upright vertical position.

**8.19** **Water and Steam Boiler Pipe Supports**

8.19.1 **General**

Piping must be supported with pipe hooks, metal pipe straps, bands, brackets, or hangers suitable for the size of the piping and must be of adequate strength and quality and located at intervals so as to prevent or damp out excessive vibration.

8.19.2 **Spacing**

Spacing of supports shall not be greater than shown in Table 8-1.

8.19.3 **Allowance for Expansion and Contraction**

Supports, hangers, and anchors must be installed so as not to interfere with the free expansion and contraction of the piping between anchors. All parts of the supporting equipment must be designed and installed so that they will not be disengaged by movement of the supporting piping.

**Table 8-1**

**Support of Piping**

|  |  |  |  |
| --- | --- | --- | --- |
| **Steel Pipe, Nominal Size of Pipe**  **(Inches)** | **Spacing of Supports**  **(Feet)** | **Nominal Size of Tubing**  **(Inch O.D.)** | **Spacing of Supports**  **(Feet)** |
| 1/2 | 6 | 1/2 | 4 |
| 3/4 or 1 | 8 | 5/8 or 3/4 | 6 |
| 1 1/4 or larger (horizontal) | 10 | 7/8 or 1 | 8 |
| 1 1/4 or larger (vertical) | every floor level |  |  |

**8.20** **PEX Tubing**

All PEX tubing and fittings used in heating systems must be listed by the manufacturer for use on heating systems and be manufactured with an oxygen barrier.

**8.21** **Emergency Temporary Repairs of Warm Air Heat Exchangers**

Emergency temporary repairs of warm air heat exchangers in oil burning appliances are allowed if the safety limitations of the repairs are explained in writing to the owner at the time of the repair.

**8.22 Welding of Non-Residential Warm Air Heat Exchangers**

* + 1. **General**

8.22.1.1 Welding of non-residential warm air heat exchangers is permissible only as set forth in this Section (8.22).

8.22.1.2 Welding of residential warm air heat exchangers is not permissible under any circumstances.

8.22.2 **Consultation With Manufacturer Required**

The manufacturer must be consulted to determine whether the welding of a heat exchanger is sound engineering practice. The manufacturer must provide a written statement as to the feasibility of its heat exchanger being welded. If the heat exchanger is no longer in production, a master licensee must make a written request to the Board and obtain written approval from the Board before the repair is undertaken.

8.22.3 **Master Licensee to Oversee Welding Repair**

The repair of a heat exchanger by welding must be performed by a welder in a procedure suitable for the material. A master licensee must oversee such repairs. The master licensee must receive guidance from the welder as to the feasibility and acceptability of performing the welding procedure of the metals prior to the repair of any heat exchanger. After completion of said repairs or welding, the master licensee must obtain a written statement from the welder documenting that the heat exchanger has been welded, tested and is acceptable for use without leakage of flue gases.

8.22.4 **Documentation of Repair to be Provided to Owner**

Written documentation of said repairs or welding must be provided to the owner. The original documentation must be kept on file by the master licensee who requested the welding. A copy of all the repair documents containing, at a minimum, the following information must be sent to the Board:

1. The name of the owner and location where the repairs were completed;

2. The name and address of the welder;

3. Specific area(s) or location(s) where the repair(s) or welding was performed;

4. Written approval of the repair from the manufacturer where applicable;

5. Equipment identification information, i.e., name, model number, serial number and gross Btu rating; and

6. The name, address, and license number of the master licensee who requested the repair.

8.22.5 **Limitation**

Welding repair of a heat exchanger may be performedonly once. A subsequent welding repair shall not be made to a heat exchanger unless a master licensee makes written request to the Board and obtains written approval from the Board before the repair is undertaken.

**Appendix**

**DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**OIL REGULATIONS**

The Maine Department of Environmental Protection’s Bureau of Remediation and Waste Management regulates underground oil storage tanks and the cleanup of any discharge of oil onto or into land or waters of the State of Maine.

**1. Underground Oil Storage Tanks:**

All underground oil storage tanks must be installed by a person who is licensed by the Board of Underground Storage Tank Installers. The installation and operation of the tank is regulated by the Department of Environmental Protection.

**2. Reporting Oil Spills:**

To avoid fines or civil penalties, oil spills onto or into the lands or waters of the State of Maine must be reported within two (2) hours to the Department of Environmental Protection. To report a leak, call the 24-hour response line at 1-800-482-0777.

**3. Abandonment of Tank by Removal:**

Tanks must be disposed of in accordance with the Department of Environmental Protection Rules. Used, underground, oil storage tanks are prohibited from use for aboveground supply of oil except where a Maine registered engineer certifies that the tank meets the requirements of UL 142 and NFPA 30.

**4. Underground Piping and Aboveground Tanks with Over 660 Gallons or Aggregate Volume Over 1320 Gallons**

If underground or under-slab piping is to a tank of over 660 gallons capacity or to tanks with an aggregate capacity of over 1320 gallons, then the installation of the underground piping must be installed by a certified underground oil tank installer.

A. Piping must be installed by a certified underground oil tank installer as required under 38 M.R.S. §570-K, Aboveground oil storage facilities.

B. Piping must be constructed of fiberglass, cathodically protected steel, or other equally noncorrosive material approved by the Department of Environmental Protection as set forth in rule.

C. Piping installed on or after June 24, 1991 must include secondary containment and leak detection as required by Department of Environmental Protection rules.

D. Piping that is “grouted,” such as piping run on the surface of a floor and then encased in grout or cement or some similar material, shall be considered underground piping. Such grouted piping must include secondary containment and leak detection as required by Department of Environmental Protection rules.

**5. For more information about the Department of Environmental Protection’s regulations, contact them at:**

Maine Department of Environmental Protection  
Bureau of Remediation and Waste Management  
17 State House Station  
Augusta, Maine 04333-0017  
(207) 287-7688

STATUTORY Authority: 32 M.R.S. §18123(2)

EFFECTIVE DATE:

September 27, 2014 – filing 2014-241

REPEALED AND REPLACED:

September 16, 2023 – filing 2023-164