

# Maine Antique Power Assn. Steam Operation Guidelines

## Boiler and Pressure Vessel Rules and Regulations

### Steam Boiler Categories/Definitions:

**Exhibition Boiler:** A historical boiler or antique boiler generating steam or hot water for the purposes of entertainment, education, demonstration or transportation of the public. This includes steam traction engines, stationary boilers and related equipment.

**Model Hobby Boiler:** A steam boiler, stationary or mobile, whose heating surface does not exceed 20 square feet, whose shell diameter does not exceed 16", whose volume does not exceed 5 cubic feet and has a maximum operating pressure of 150 PSIG.

**Miniature Boiler:** Meets the criteria listed above with a MAP (maximum allowable pressure) of 100 PSIG.

**Steam Properties:** Steam is grouped into two pressure categories. Low pressure steam is defined as less than 15 PSIG. High pressure steam is 15 PSIG or more.

### Boiler Operation:

**Operator:** A qualified, experienced operator must be in attendance at all times while the boiler is in operation.

**If the operator leaves the boiler unattended for any reason, he/she will take the following actions.** 1. Shut down any operating steam driven machinery associated with the boiler. 2. Assure that the water level is at least 1/3 visible in the gauge glass. 3. The fire is banked and the draft doors closed, or the fire is extinguished. The boiler pressure is at least 20 PSIG below the Safety Valve set pressure. On returning to your boiler, make sure that no one has opened/closed any valves during your absence before you re-light the fire.

### Boiler Equipment:

**Safety Valve:** The Safety Valve will be an ASME steam rated valve, sized for the PPH capacity of the boiler, affixed with a metal tag listing the date of test and a lead seal. Any seal broken will render the safety valve unserviceable, thus putting the boiler out of service. No valve of any type shall be installed between the boiler outlet and the Safety valve or in the discharge pipe from the Safety Valve. The Safety valve will be mounted vertically and the discharge pipe will not be reduced in size.

**Gauge Glass:** The boiler will be equipped with a working gauge glass column with drain/shutoff petcocks in the case of a failure of the glass. Additionally the installation of Tri-cocks is recommended to provide a secondary method of determining the water level in the boiler.

**Pressure Gauge:** A properly working pressure gauge of sufficient size and operating range shall be mounted on the boiler, with a syphon (pigtail) mounted between the gauge and the boiler outlet. No valve will be permitted in the line. The Pressure gauge should have a face reading twice that of the MAWP of the boiler, thereby insuring that the needle pointer will be operating in the mid range of the gauge face. The pressure gauge should be re-calibrated every two years by an authorized calibration facility with a sticker installed.

**Tools:** A flat shovel shall be used to bank or pull the fire and used to keep live steam away from the operator should a failure arise. Other tools necessary to assist you in operating, are permitted.

**Fusible Plug:** The owner/operator must state that he/she has either removed the fuseable plug to remove scale buildup or replaced the plug during the past year.

**Safety:** We recommend double roping your display with at least a 6' distance.

**Credits:** No. Carolina Dept. of Labor. Maine Dept. of Labor. North American Safety Valve. Armstrong International. Winters Instruments.

**Summary:** These regulations are in effect to assure the Safety of the Exhibitor, the General Public and all other exhibitors who may be exhibiting antique farm equipment at the event. You, the operator, have a responsibility to maintain your equipment, and to operate it in a **SAFE** manner. Failure to allow an inspection of your exhibit or negligent operation will result in your being required to cease operation.

Your full co-operation is expected and appreciated. Thank you!

( Adopted March 2016 )