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Department of Labor and Workforce Development
Division of Public and Occupational Safety & Health

Mechanical Inspection Bureau of
Boiler & Pressure Vessel Compliance
(MIBB&PVC)

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Installation and Operation of Temporary (Rental) Boilers in New Jersey



INTRODUCTION

A TREMI falling under the jurisdiction of the MIBB&PVC shall meet the statutory and regulatory provisions established to assure the mechanical and structural integrity is satisfactory. This will ensure that the overall operation and functions of the equipment and its integral components meet the standards as adopted and incorporated by reference in New Jersey Administrative Code (N.J.A.C.) 12:90. Application of these standards means that equipment is fabricated, manufactured, constructed in accordance with consensus safety codes and standards. These include but are not limited to, the American Society of Mechanical Engineers (ASME) Codes, the National Board Inspection Code (NBIC) Part 1 "Installation", and this document.

Temporary Rental Equipment Mobile Installation (TREMI) falling under the jurisdiction of the MIBB&PVC include high-and low-pressure boilers, pressure vessels and refrigeration systems. At no time shall a high-pressure boiler be utilized in a low-pressure heating/supply system. A company, entity, or organization that installs a TREMI in the State of New Jersey shall register with the MIBB&PVC.

When it has been determined that a TREMI is to be installed at a location in the State of New Jersey the following steps shall be followed:

- The TREMI owner shall complete and submit the "Portable Equipment Operating Permit" form to the MIBB&PVC.
- The Chief Inspector or a designee shall approve the form is warranted and assign it to a State Inspector.
- The State inspector shall then perform an inspection within 5-working days of being notified of a TREMI. If accepted by the inspector, the inspector shall issue a Jurisdiction Number (JN), which the responsible party of the equipment shall affix to the equipment.
- Installation shall follow this document and comply with the applicable Codes and Standards adopted and incorporated by reference at N.J.A.C. 12:90-4.2, 5.2, 6.2 including those referenced at N.J.A.C. 12:90-10.
- All contractors must contact the municipal (township) code enforcement official for the appropriate permits as required.

Issuance of the JN occurs when the equipment safety inspection performed by a MIBB&PVC inspector, indicates that the mechanical, structural condition and integrity is satisfactory. Displaying of the JN shall be prominent and at a location on the equipment not concealed by paint or insulation. The JN stamping shall be located in a permanent way to the front or side of the equipment on a metal tag or by some form of marking at a height of not less than 5/16 of an inch.

MOBILE/PORTABLE PLATFORM

A Temporary Rental Equipment Mobile Installation (TREMI) may include boilers, pressure vessel, and refrigeration systems. This involves the integral systems such as controls and safety devices, valves, drains, traps, pumps or other components, ancillary equipment and accessories installed on the mobile platform. The TREMI designs come mounted on covered or open trailers, flatbeds, and on railcars as applicable. Regardless of the arrangement, the following shall be required:

- No ASME Section I Power Boiler, (high-pressure boiler) shall be used in place of a low-pressure boiler unless proper safeguards are made to protect the low-pressure piping system and acceptance is obtained from the MIBB&PVC. The rental company must notify the MIBB&PVC in writing and detail their plan to operate a high-pressure boiler in an emergency and reduce the pressure so that safe operation is possible without jeopardizing safety. This must be demonstrated, in a functionality test, which must be signed off and submitted to the MIBB&PVC.
- 30-inch clearance is found on both ends of the boiler.
- One side of the boiler may be reduced to less than 30 inches provided the trailer has access panels for removal of hand hole plugs for inspection and maintenance. (Note: Contact the MIBB&PVC if access is unavailable or if an alternative method is used to comply)
- The boiler shall be anchored to the trailer.
- The trailer shall be provided with wheel chocks and anchored in place to prevent movement of the trailer during operation, when applicable and necessary.
- The trailer shall be level at all times and on substantial foundation to prevent slippage or excessive movement.
- An adequate means of combustion air must be available in accordance with the design specification of the Original Equipment Manufacturer (OEM), adopted codes and standards. By no means shall a trailer be used that does not have an adequate supply of air for proper combustion.
- A means shall be provided for removal of applicable boiler tubes or sections.
- The roof or the ceiling must have adequate space to allow proper operation of all valves and appurtenances.
- A boiler or pressure vessel having a manhole shall have 5 feet clearance from the manhole opening to any wall, ceiling, or piping that prevents entrance through the manhole.
- A boiler or pressure vessel shall be located to provide adequate space for:
 - The operator to have direct and immediate intervention capability.
 - Proper operation of the boiler or pressure vessel and its appurtenances, which shall be free of obstructions or interference.

- Inspection of all surfaces, tubes, water-walls, economizers, piping, valves, and other equipment.
- Allow access for performing the required maintenance and/or any applicable repair/alteration and replacement of tubes.
- Ladders and Runways shall be provided when necessary to afford safe access; a steel runway or platform of standard construction shall be installed across the tops of adjacent boiler or pressure vessels, or at another convenient level.
- When a valve or appurtenance requiring frequent manipulation cannot be reached or operated from the floor, a platform or other safe means of operation shall be provided. Where feasible a properly designed chain operated valve is allowed.

When a platform or runway is used, it shall:

- Meet OSHA requirements and in no case less than 24 inches wide; and
- Have standard handrails and toe boards that meet OSHA requirements; and
- Be operable from floor level by use of a chain mechanism; and
- Have a permanent stairway when applicable, or
- An inclined ladder, when and where it is applicable.

LOCATION REQUIREMENTS FOR SAFETY

When TREMI arrives at the location of use, it shall be installed and tested through the implementation of the following procedure:

1. For Boilers:
 - a. The technician performing the startup of each boiler shall complete and sign the MIBB&PVC form "Installer Verification of Function Testing and Controls and Safety Devices for all Boilers Regardless of Rating" [BPVC-INST.101]. In addition, the "Portable Equipment Operating Permit" [MIBB&PVC-TREMI] shall be completed and returned to the MIBB&PVC by electronics means as email or by fax.
 - b. For Oil-fired boiler installations, the following activity must be performed prior to placing the boiler in service at the temporary site and after the boiler, trailer and hook-ups are completed.
 - i. Prior to operation, the oil burner assembly must be checked for bent, cracked or damaged casing and broken, missing or damaged controls and safety device components.
 - ii. A qualified individual familiar with combustion control operation and set-up procedures may only adjust and stabilize the oil burner and measure combustion process in accordance with manufacturer's specifications. Take stack measurements and ensure proper settings in accordance with the manufacturer's specifications.
 - iii. Check and verify operation of the linkage attachments and fuel-air controls.
 - iv. The oil burner nozzle and oil line strainer (filter) shall be replaced prior to first light-off after boiler is set-up at the temporary site.
 - v. The proper burner nozzle tip must match what is recommended by the OEM.
 - vi. Every rental boiler company shall have established written procedure for proper selection of the burner nozzle tip for each type of burner and pump pressure used for their boilers.
 - vii. This selection chart must be in the hands of all qualified individuals performing work as boiler service technicians.
 - viii. At no time shall a burner tip be placed in a boiler that exceeds the OEM recommended specifications.
 - c. A combustion analyzer shall be hooked up to monitor and report emissions with a print-out being supplied to the MIBB&PVC along with the BPVC-INST.101 and MIBB&PVC-TREMI form.

2. If equipment is procured from outside of New Jersey:
 - a. An external inspection and assignment of jurisdiction number shall take place before placing the equipment online. If the equipment meets the requirements for an internal inspection this may need to be done if feasible and if the equipment is accessible in the field. The Inspector may use discretion in an emergency situation and the equipment owner can provide updated (within 1-year) maintenance and service records. However, the Inspector shall authorize a Certificate of Inspection for six months and record a violation requiring an internal inspection within that time.
 - b. Documentation shall be required regarding the service history of all safety valves. In addition, all safety valves shall be lift tested during startup when >75% of their set pressure is obtained.
3. The safety relief valves and trim shall be evaluated closely. Since most boilers can be used in a steam or hot water application the rental equipment owner must ensure the proper boiler trim for the type of operation is installed. If the trim can be switched at a control panel, a switch should be of the keyed operating type.
4. A trailer shall have jack stands fitted to all four corners. **Dollies are not** intended for the weight of a boiler full of water and tires can fail.
5. Consideration shall be given as to the protection of the trailer from unauthorized access.
6. If the boiler meets the operator licensing criteria per N.J.A.C. 12:90-3.3, then the appropriate licensed operator coverage must be provided and a logbook maintained. Regardless of how the contract is written, when licensed operators are required, the equipment owner and their customer must work out the arrangement.
 - a. Licensed operators must check on the operation and be familiar with the operation of any equipment placed on the applicable property.
7. Piping or flexible lines to the building being served must be placed with sound engineering practice and, if high pressure steam, to ASME Code.
8. The designated responsible person for the Rental boiler at a facility shall be involved and plan for operations support, maintenance, freeze protection, chemical treatment, boiler blowdown, etc.

REGULATORY COMPLIANCE

1. All New Jersey Uniform Construction Codes (UCC) fire, plumbing, electrical, building and mechanical permits shall be obtained from the appropriate state agency and/or local municipality.
2. All applicable federal, state, and/or local emission requirements shall be met and pertinent air discharge permits shall be obtained from the New Jersey Department of Environmental Protection.
3. The following Codes are selected from N.J.A.C. 12:90-10 for compliance, this list is not all inclusive:
 - a. ASME Section I, "High Pressure Boilers", current edition.
 - b. ASME Section IV, "Low Pressure Boilers" current edition.
 - c. ASME CSD-1-2012, "Controls and Safety Devices for Automatically Fired boilers"
 - d. ASME Section VI, "Recommended Rules for Care and Operation of Heating Boilers".
 - e. ASME Section VII, "Recommended Rules for Care of Power Boilers".
 - f. All fuel gas piping shall be installed to the provisions of NFPA 54 "The National Fuel Gas Code", 2011 Edition, NFPA 58 "LP-Gas Code"
 - g. Where applicable, the provisions of NFPA 85 "Boiler and Combustion Systems Hazard Code" 2011 Edition shall be met.
 - h. For all high pressure (>15 psig) steam piping, ASME B31.1 "Power Piping" 2010 Edition, or equivalent API Code.
4. Pressure Vessels, which are procured as TREMI use in New Jersey shall conform to the following:
 - a. Shall be constructed in accordance to the appropriate ASME Code or a nationally recognized Code of Construction accepted by the MIBB&PVC.
 - b. A company or organization who installs such Equipment in the State of New Jersey shall register with the MIBB&PVC and shall comply with the Codes and Standards adopted and incorporated by reference at N.J.A.C. 12:90-5.2 and 10.1. The MIBB&PVC shall inspect each item of Equipment regulated on the TREMI.
 - c. Each regulated piece of Equipment used shall have a jurisdiction number issued by the MIBB&PVC prominently displayed and affixed to be readily visible on the pressure vessel front. The jurisdiction number shall not be concealed by paint or lagging and shall be affixed at all times for inspection purposes. The stamping may be affixed to a metal tag or by some form of permanent marking of a height of not less than 5/16 inch.
 - d. Equipment procured from within New Jersey may already be inspected and registered, which shall be verified by the inclusion of a current New Jersey Certificate of Inspection included with the documentation in addition to the affixed jurisdiction number.

5. The local code enforcement unit of the municipality or township where the TREMI is installed must always be contacted for the proper permits for installation and approvals for operation. However, no boiler is allowed to operate in the State of New Jersey at a place of business unless the MIBB&PVC has performed an inspection to determine compliance with the Boiler, Pressure Vessel and Refrigeration Rules.
6. FOR QUESTIONS REGARDING THIS INFORMATION, please contact the MIBB&PVC by calling (609) 292-2921 or email at BPVRCompliance@dol.nj.gov. To report an emergency situation related to your boiler, pressure vessel, pressure retaining item or refrigeration system under the jurisdiction of the MIBB&PVC please call (609) 984-0626.
<http://lwd.dol.state.nj.us/labor/lsse/content/bbpvc.html>

Signed:

Michael O. Amuzie
Chief, MIBB&PVC

Date: March 3, 2025

GUIDELINES FOR RENTAL BOILERS

Additional information regarding Rental Equipment is also provided by the **American Boiler Manufacturers Association (ABMA)** from their website. The following article was obtained from the ABMA website and may also be obtained through the following link: <http://www.abma.com/>

Foreword

Guidelines for Rental Boilers has been developed by the Rental Boiler Group of the American Boiler Manufacturers Association (ABMA) to provide information to rental boiler customers. The contents of this Guidelines document are offered as guidance only. ABMA does not assume responsibility or liability for consequences arising from adherence or non-adherence to these guidelines. This publication is intended to supplement information and manuals furnished by equipment suppliers and manufacturers who should be consulted regarding operational or equipment problems.

Members of the ABMA Rental Boiler Group are dedicated to the safe, efficient and reliable operation of rental boiler equipment. These companies urge all prospective customers to carefully weigh all aspects associated with the acquisition and operation of rental boiler equipment and to consult closely with the rental boiler supplier of their choice to obtain the type of equipment to best suit their needs. The contents of this publication should not be construed as an endorsement by ABMA of any product, manufacturer or supplier of rental boiler equipment.

Members of the ABMA Rental Boiler Group include: Affiliated Power Services; Holman Boiler Works, Inc.; Nationwide Boiler, Inc.; Power Mechanical, Inc.; Wabash Power Equipment Company; and Ware.

The American Boiler Manufacturers Association (ABMA) is the national nonprofit trade association of commercial, institutional, industrial, heat recovery, and electricity generating boiler and combustion equipment manufacturers and their suppliers - the companies and personnel that design and fabricate today's real-world boiler systems, providing steam and hot water to millions throughout the country and across the globe. ABMA is headquartered in Vienna, Virginia.

1.0 GENERAL

1.1 The rental boiler shall be built in accordance with all applicable codes for the design, fabrication, construction, and the assembly of boilers and pressure vessels. The boiler shall bear the ASME code stamp. Repairs to boilers and pressure vessels shall be performed by an organization in possession of a valid National Board repair "R" certificate of authorization or a New Jersey Repair organization, or a valid ASME certificate of authorization firm having a National Board certificate for repairs.

1.2 The boiler shall meet the intent of the application as supplied by the customer.

1.3 The boiler shall be equipped with safety devices, controls and equipment that comply with the latest applicable codes such as, but not limited to, the National Fire Protection Association (NFPA); the American Society of Mechanical Engineers (ASME) CSD-1; federal codes; and insurance carrier requirements such as Factory Mutual (FM), Industrial Risk Insurers (IRI), and Hartford Steam Boiler.

1.4 The boiler shall comply with applicable federal, state, and/or local emission requirements as specified by the customer.

1.5 The boiler shall have annual inspections performed by a recognized inspection agency or by the government regulatory agency. The inspection certificate or documentation shall be available with the boiler as it travels from site to site.

1.6 The rental boiler supplier shall demonstrate that the equipment has been properly maintained and is suitable for continued operation. The suggested annual maintenance, which follows and/or that which is recommended by the boiler manufacturer should be accomplished. Annual maintenance documentation and the results of inspections shall be available for user review.

1.6.1 Hydrostatic test.

1.6.2 Waterside and fireside inspection.

1.6.3 All safety controls and devices checked for proper operation. All safety valves inspected, serviced, repaired, and/or overhauled by an authorized firm with the appropriate National Board authorization.

1.7 The boiler rental company shall maintain records for maintenance, repair, and operations history on the boiler and auxiliary equipment and present when requested by user.

1.8 The boiler shall be delivered completely assembled with all controls, safety devices, valves, piping etc. to the greatest extent possible based on allowable shipping and/or weight clearances. An instruction manual shall be provided with the rental.

1.9 The boiler start-up shall be performed by a well-qualified service technician and/or service engineer.

1.10 The boiler shall be installed properly using sound engineering practices and in accordance with applicable association, trade, federal, state, and local codes. The system shall be installed by a qualified contractor.

1.11 If the unit is trailer-mounted, the trailer should be current with Department of Transportation inspections for safety.

Approved by the ABMA Board of Directors - April 7, 1997

Reviewed and Reapproved by Rental Boiler Group – 2012.