SAFETY and OPERATIONS M A N U A L

of the

Frontenac Society of Model Engineers

This Manual comprises the following sections:

1.	General Safety Regulations	December 2009
2.	Railway Operations	December 2009 Amended June 2020
3.	Boiler Operating Rules	December 2009
4.	Boiler Safety Requirements	December 2009 Amended June 2020

Approved by: Membership @ AGM Date…June 27 2020…….

Frontenac Society of Model Engineers
(FSME)

Safety and Operations Manual Section 1

GENERAL SAFETY REGULATIONS

1.1 INTRODUCTION

1.1.1 General

These rules have been approved in accordance with Bylaw 2003-1, SAFETY POLICY, of the Frontenac Society of Model Engineers (FSME). They are binding on any person taking part in an FSME organized event, or using Society equipment. They may be superseded by more stringent rules laid down by organizers of events in which the FSME is participating.

1.1.2 Scope

These rules are intended to provide for a safe environment in which members of FSME and invited guests may pursue the objectives of the Society.

1.2 OPERATING SAFETY: NON-RAILWAY MODELS (see Section 2 for railway operations)

1.2.1 Stationary Models - Table Displays

Stationary models, when operating, shall be under the direct supervision of a person responsible for ensuring that the public does not touch hot or moving parts at any time. It is preferred that the models be made physically inaccessible to the public, in which case they do not require continuous supervision. A person supervising operating models shall keep the models in view at all times and shall only supervise models within their immediate reach.

1.2.2 Vehicular Models

Vehicular models shall be driven with care for spectators, and never above a slow walking pace unless in an area segregated from the public.

1.2.3 Stationary Models - Ground Level

1.2.3.1 General

These requirements include vehicular models being shown in a stationary mode and separate implements powered by stationary ground level models.

1.2.3.2 Monitoring

All models and implements shall be under the supervision of a competent person at all times. Where the model is driving an implement, and dependant on actual size, a second person shall be available to monitor the implement when it is running. The monitors shall ensure that onlookers are not exposed to danger.

1.2.3.3 Stationary Wheeled Models

Wheeled models used in a stationary mode shall have the brake set, or be chocked if they do not have an adequate brake, or have the driving pins removed.

1.3 PRESSURE VESSELS

1.3.1 Boilers

Boilers are dealt with in the **Boiler Operating Rules** (Section 3) and the **Boiler Safety Requirements** (Section 4) of the FSME Safety and Operations Manual.

1.3.2 Compressed Air Systems and Components

Compressed air shall be handled in accordance with commercial practice. Compressed air systems or their components, if not of commercial origin, shall be tested to twice the working pressure before being used. Members constructing or using the components shall be responsible for seeing to this themselves.

1.4. FLAMMABLE LIQUIDS

1.4.1 Storage and Handling

Flammable liquids, except for small amounts of kerosene used to soak wood for starting boiler fires, shall be kept in CSA-approved containers, properly identified and capped. Containers shall be kept at a safe distance from sources of ignition. Cloth and paper soaked in flammable liquids shall also be kept safe. Containers shall be marked clearly with their contents (or the contents shall be obvious).

1.4.2 Fire Extinguishers

A class B fire extinguisher shall be at hand when flammable liquids are in use. Water shall be immediately available in an open container.

1.5. MISCELLANEOUS REQUIREMENTS

1.5.1 Operation of Models in Enclosed Spaces

Models shall not be operated in enclosed spaces where the exhaust gases cannot be dissipated adequately.

1.5.2 Solid Fuel Fire Precautions

The fire safety requirements of the FSME Boiler Operating Rules apply to all users of solid fuels, regardless of purpose.

1.5.3 Flammable Gases

Commercial components shall be used for flammable gases except where the requirements of the model dictate otherwise. Joints in gas fittings shall be tested for leaks. Only approved commercial containers shall be used for flammable gases. Flammable gases shall not be used in areas where they cannot disperse.

Safety and Operations Manual Section 2

RAILWAY OPERATIONS
MANUAL OF OPERATING RULES AND PRACTICES

PREAMBLE.

FSME (the "Society") is exempt from the Ontario Amusement Device Regulations for operating a Miniature Railway of 12" gauge or less at speeds of 12 km/hour or less for demonstration of the technology and the heritage aspects of railways. The exemption was obtained in 2003, based upon a long and impressive safety record of miniature railway operations in Ontario and other jurisdictions. Particular care will be taken in observance of the rules for passenger carrying when transporting the general public.

These Rules and Practices will apply to all railway operations by FSME members, and their guests, at all sites where FSME members are operating their own or Society locomotives and trains.

All new and existing members are responsible for reading, understanding and applying these Rules and Practices, as well as identifying the need for any changes that should be addressed.
Persons not known to be experienced drivers of model locomotives shall be prohibited from driving locomotives at FSME sites when the public is present.

2.1. INTRODUCTION

2.1.1 General

At all times safety and prudence shall govern. Locomotives and trains shall be driven with caution; with consideration for passengers, bystanders, and other users of the track; and with safety as the foremost consideration. In addition, the specific rules laid down below shall apply together with, for steam locomotive power, **Boiler Operating Rules** (Section 3) and the **Boiler Safety Requirements** (Section 4) of the FSME Safety and Operations Manual.

2.1.2 Visiting locomotive owners and drivers: such visitors must be briefed on Society safety rules before operating equipment, sign as having read and accepted the requirements of these operating rules, and also either be able to show a valid current boiler certificate from their home club or have a hydro test, an accumulation test, and safety valve setting test administered by FSME officers before firing their locomotive.

2.1.3 Operating Records

Members should update the Society Executive with records of operation on FSME property. The Track Committee will maintain the FSME records with details of all operations at the Society's site, in order to build a log of safety and operational data.

2.1.4 Incidents

A Society Officer and/or a Track Committee member shall review all recorded incidents and make appropriate recommendations to the Society President and membership as part of their ongoing risk assessment duties.

2.1.5 Boiler Certificate

Drivers / owners shall have with them at all times when running steam locomotives a current Boiler Safety Certificate. If not an FSME certificate, one issued by a recognized club may be acceptable.

2.1.6 Traverser (High-line only) and steaming bays operations

Any person wishing to use the traverser must inform all in the area that it is to be moved, and both ends of the table must be watched. A signalman must be assigned to warn other locomotive operators on the track that the traverser is open. They are also then responsible for ensuring the traverser is locked in position when finished with. Spectators must be moved back to a safe distance when any engine is being turned or moved to and from the steaming bays.
Locomotive servicing should only take place in the steaming bays provided.

2.2 OPERATIONS

2.2.1 Track Check

The first driver of the day shall conduct, or confirm that a responsible person has conducted, a safety inspection of the track to be used.

2.2.2 Speed

Speed shall not exceed 6 mph / 10kph (fast walking speed). In any case, trains shall not be driven at speeds which are inappropriate for the conditions or which do not permit a safe distance to be maintained between moving trains. Particular care shall be taken when pulling up to a stationary train.

2.2.3 Standing Locomotives

Locomotives or power units with the engine running, or capable of being started casually (e.g. an electric locomotive without a key lock) shall always be left under the direct care of a competent person. Steam locomotives shall be left in mid gear with the regulator (throttle) closed and parking brake set if one is fitted. The person having care of the locomotive shall keep it under observation at all times.

2.2.4 Driver Responsibility

Ultimate responsibility for the safety of the train and its passengers rests with the driver at all times.

2.2.5 Couplings

All couplings and safety chains shall be connected properly and checked before running is commenced.

2.2.6 Re-railing a derailed steam locomotive

When re-railing a derailed steam locomotive, the blower must be off, the regulator closed, and the locomotive in mid-gear.

2.2.7 Gauge Glass Failure – General (from Boiler Operating Rules 3.2.8.1)

Every person having care of a boiler shall ensure that they know how to deal with a gauge glass failure on that boiler.

2.2.8 Brake Test:

The driver of each train shall perform a brake test before the first run of the day to ensure that functioning brakes are available to stop the train within a safe distance.

2.2.9 Whistle or warning device:

The driver of each locomotive shall ensure that a whistle or other warning device is available for his/her use and operable.

2.3 PASSENGER CARRYING

2.3.1 Passenger Cars

Passengers shall only be carried on passenger cars of the type specified below, or on driving cars which meet the requirements for these cars.

2.3.2 Conductors

Trains with more than two passenger cars in addition to any driving car, shall carry a Conductor/Guard to assist in passenger management. The conductor must carry a whistle or warning device with which to communicate with the driver.

2.3.3 Whistle Signals

The following signals shall be used:

Stop (as when backing up)	One blast
Proceed:	Two short blasts
Emergency Stop/Warning:	One long blast.
Back up:	Three short blasts
Level crossing of a public road:	Two longs, one short, and one long

2.3.4 Passenger Management

The driver shall:

a. Operate the train smoothly.
b. Ensure that insofar as possible no substantial solid matter is ejected from a locomotive stack.
c. Ensure that passengers are warned not to get off unless they are told to do so and the train has come to a complete stop.
d. Ensure that passengers are warned to sit upright and not to stand up or to lean outwards.
e. Ensure that youngsters, or others, not capable of understanding instructions are in the care of a responsible adult who does understand.
f. Ensure that the passengers are instructed where not to put their hands or feet.
g. In the event that passengers contravene the required behavior, the driver has the authority to stop the train and remove offending passengers.

The driver may delegate tasks c. through f. at 2.3.4, above, to station personnel when available.

2.3.5 Station Manager.

On occasions when major passenger loads are expected such as major steaming or Special Event days, a Station Manager must be assigned to supervise passenger loading and instruction and train regulation, and provide train clearance to proceed.

2.4 DESIGN AND CONSTRUCTION OF LOCOMOTIVES AND ROLLING STOCK

2.4.1 Couplings

Locomotive, tender and driving car shall be connected with sturdy link and pin couplers. Passenger car couplings shall be either link and pin or knuckle couplings. The couplings shall be secured so that they cannot come undone accidentally or be undone casually by hand. Knuckle couplings shall be of sufficient vertical depth that they cannot slip out due to uneven track.
A safety chain must be provided in addition to the service coupling between all cars in a train and between motive power unit and driving car. Safety chains and couplings shall be attached independently to vehicle frames or buffer beams.

2.4.2 Brakes

All trains must have brakes which can stop the train within a safe distance, defined as one-half the range of vision.

2.4.3 Passenger Cars -General

All passenger cars must allow passengers to be seated with feet supported by a floor or running boards.
All new passenger cars are to be assessed and approved by the Society Track Committee.

2.4.4 Passenger Cars - Elevated Track

Passenger cars for elevated track shall meet the following requirements:

a. They shall be designed and built for astride use with full length foot rests and full cladding between the seat and foot rests.
b. The cars shall have a strap or handhold at each end across the seats.
c. Passenger cars for carrying public passengers on the portable track shall be equipped with effective anti-tip devices.

Safety and Operations Manual Section 3

BOILER OPERATING RULES

3.1. INTRODUCTION

3.1.1 General

These rules are issued in accordance with bylaws 2003-1, SAFETY POLICY, and 2003-2, BOILER COMMITTEE AND BOILER SAFETY, of the FSME. The boiler operating rules stated herein apply to all boilers steamed or pressurized by any person during FSME events, during events in which the FSME is participating, or on club areas. They apply to all types of boilers except where it is clear that they apply to only specific types. Toy boilers as exemplified by the "MAMOD" type are specifically exempt from rules which cannot apply to them, although care in operation remains mandatory.

3.2. BOILER OPERATION

3.2.1 Boiler Certificates

All boilers shall have a valid boiler certificate issued for them in accordance with the FSME Boiler Safety Requirements. Visitors must bring valid certificates from a recognized club or authority or arrange for a boiler test by the FSME before firing the boiler.

3.2.2 Monitoring

A boiler in steam shall always be attended, monitored, and managed by a competent person.

3.2.3 Boiler Feeds

All boilers except stationary boilers shall be operated with at least two working feeds, one of which shall be a hand pump. Stationary boilers need only have an operable hand pump adequate to maintain water level at full steam output without being used more than 25% of the time

3.2.4 Boiler Feed Failure

If all boiler feeds fail or the available feeds prove inadequate at maintaining safe water level the fire shall be dropped, drawn, or otherwise put out immediately. Any vehicle with only one operable boiler feed shall be taken out of service immediately, i.e. brought in and not driven or used until the required two feeds are again operable. If the remaining boiler feed depends on vehicle motion for operation, the fire shall be dropped, etc. as for a total boiler feed failure.

3.2.5 Water Level

Operators shall ensure that water is always showing in the gauge glass or available at the lower try cock. Inability to maintain the water at these levels for any reason shall be treated as a complete boiler feed failure.

3.2.6 Safety Valve Check

When steam is being raised the operator shall verify by any safe method that the safety valves are capable of lifting freely, i.e. are not jammed or stuck on their seats.

3.2.7 Pressure Gauge

When a pressure gauge is fitted, the pressure gauge shall be marked at the working pressure of the boiler as set out in the Boiler Safety Requirements, FSME Safety and Operations Manual, Section 4.

3.2.8 Gauge Glasses

3.2.8.1 Gauge Glass Failure - General

Every person having care of a boiler shall ensure that he/she knows how to deal with a gauge glass failure on that boiler.

3.2.8.1.1 Gauge Glass Failure - No Shutoffs Fitted

When gauge glass shutoffs are not fitted the required minimum actions are:

a. Ensure that spectators are warned away, and bring the machinery to a stop. On vehicles, warn the riders to sit still until otherwise advised.
b. Shut off the fire's source of draft and drop the fire.
c. Ensure that no unnecessary persons are near the boiler until it has blown down.

3.2.8.1.2 Gauge Glass Failure - Shutoffs Fitted

When gauge glass shutoffs are fitted, and operable, the required minimum actions are:

a. Operate both shutoffs and bring the machinery to a stop. On vehicles, warn the riders to sit still until otherwise advised.
b. Shut off the fire's source of draft and check if there is water at the lower shutoff.
c. If there is no water at the lower shutoff, drop the fire immediately.
d. If there is water at the lower shutoff, either install a new glass and turn on the draft again, or pump the water to the upper shutoff before restoring draft and installing a new glass.
f. Do not operate the machinery without a gauge glass.

3.2.9 Hand Protection

Every boiler operator shall carry a glove or cloth allowing him/her to manipulate hot controls, and controls near the gauge glass in the event of gauge glass failure.

3.2.10 Eye Protection

Boiler operators must wear glasses for general safety.

3.2.11 Pressure Gauge/Safety Valve Failures

If there is any reason to suspect that the pressure gauge has failed, or any reason to suspect that a safety valve has failed (even one out of a pair), the fire shall be dropped immediately and the pressure reduced as quickly as possible. If a safety blows off at an indicated pressure that is different from the safety valve setting by more than ten (10) psi, the fire shall be dropped (since either the pressure gauge or the safety valve must be at fault).

3.3. MISCELLANEOUS REQUIREMENTS

3.3.1 Moving of Boilers in Steam

Boilers in steam shall not be moved on the main line, except through the normal movement of the vehicle using the boiler for propulsion, unless the fire is dropped and/or steam pressure is less than half the working pressure. Boilers with steam pressure in them shall be moved only in cases of emergency, except in moving between steaming bays and the main line.

3.3.2 Dropping of Fires

Except in an emergency or where a suitable surface is not available, fires shall not be dropped over flammable material. If they have to be dropped over flammable material, the area shall be soaked with water, and shall be watched closely until all dropped burning particles are extinguished.

3.3.3 Water Availability

All operators of boilers shall have sufficient water readily available for fire-fighting purposes when operating over natural surfaces. For operating over non-flammable artificial surfaces a suitable amount, but no less than two litres, shall be to hand.

3.3.4 General Safety Regulations

Boiler operators are subject to the General Safety Regulations of the FSME Safety and Operations Manual Section 1, and particular attention is drawn to the requirements therein respecting flammable liquids.

Frontenac Society of Model Engineers
(FSME)
Safety and Operations Manual Section 4

BOILER SAFETY REQUIREMENTS

4.1 INTRODUCTION

4.1 General

This code is issued in accordance with bylaws 2003-1, SAFETY POLICY, and 2003-2, BOILER COMMITTEE AND BOILER SAFETY, of the FSME. It recognizes the importance of maintaining the highest safety standards, and is therefore based on accepted and proven practice, and is, in some cases, more stringent than practice accepted elsewhere.

As per motion passed Oct 2019, A boiler test by the owner is accepted by FSME. Therefore, for the purpose of this document, a boiler inspector is defined as anyone carrying out the inspection of a boiler. FSME shall provide a resource to help members conduct their own tests

4.2 Applicability

This code applies to all boilers steamed during FSME events or on club areas by FSME members. Visitors must be able to produce a valid boiler certificate from another recognized club or be subject to this policy. This policy does not apply to toy engines exemplified by the "MAMOD" type.

4.2 DESIGN AND CONSTRUCTION

4.2.1 Copper Boilers

Copper boiler designs shall meet the requirements of Reference 1, 3, 4, 5 and 6 - or shall come from recognized designers. Sound construction practice is laid out in these references. However, inexperienced builders are highly encouraged to consult with experienced builders, and not to use oxy-acetylene without practice and a thorough knowledge of the equipment gained under competent instruction.

4.2.2 Steel Boilers

Because the construction of steel boilers is very demanding, steel boilers shall meet the requirements of References 2 or 7 and shall be welded only by certified welders. The design and/or construction of steel boilers by persons not qualified professionally is discouraged.

4.2.3 Materials

4.2.3.1 Materials - General

Boilers shall be constructed of materials of known quality, or supplied by reputable suppliers. Steel boiler material shall be certified by the supplier as to its type and quality.

4.2.3.2 Materials - Copper Boilers

Only copper, tin bronze (gunmetal) and phosphor bronze may be used for non-removable fittings and components on copper boilers. Monel may be used for stays and brass for stay nuts, except that monel stay ends and brass stay nuts exposed to combustion products shall be run over with silver solder or high melting point solder.

4.2.4 Miscellaneous Design and Construction Requirements

4.2.4.1 Locking of Safety Valves

Safety valves need not be lockable, but this is a desirable feature.

4.2.4.2 Pressure Gauges

All boilers shall be fitted with a pressure gauge.

4.2.4.3 Gauge Glass

Gauge glass shall be known to be Pyrex (TM) or be obtained from a reputable supplier as boiler gauge glass.

4.3. BOILER TEST REQUIREMENTS

4.3.1 New Boiler - Hydrostatic Test

a. The final inspection and pressure test shall be carried out by a boiler inspector in the presence of an independent witness.

b. The person submitting the boiler for test shall be present during the test and shall provide any fittings which may reasonably be needed to attach the inspector's pressure gauge to the boiler. The pump shall also be provided by the person submitting the boiler.

c. The boiler under test shall be bare, and all fitting bushes shall be plugged, except for possibly one fitted with a drain for release of pressure after the test.

d. The boiler shall be pressurized to two times working pressure with cold water, and shall hold that pressure for twenty minutes. The amount of air entrapped shall be minimized to the satisfaction of the boiler inspector.

NOTE: A pressure drop not exceeding 1 pound per square inch (psi) per minute may be accepted at the discretion of the boiler inspector if the source of the leak can be identified and the boiler inspector is of the opinion that the leak does not imply any potential structural problem.

e. If the pressure test is successful, the boiler inspector shall issue an initial boiler certificate for the initial hydraulic test, in the form annexed to this code.

4.3.2 New Boiler - Steam Test

A steam test shall be carried out before the boiler certificate is issued. For locomotives and traction engines this test shall be carried out with the boiler and chassis components assembled in running order; stationary boilers shall have all fittings and controls mounted. This test shall be carried out with a reference gauge attached to the boiler; the person submitting the boiler for test shall provide a fitting acceptable to the boiler inspector. The steam test shall be done as follows:

a. If at any time during the test the steam pressure as measured on the inspector's gauge exceeds 125 % of the working pressure, the fire shall be damped, stopped or dropped.

b. The first test after firing the boiler and after the pressure has started to rise shall be of the water gauge. The blowdown valve shall be operated and the water level shall be seen to return quickly to its previous level.

c. The safety valve(s) shall be set. The first valve shall be set to lift at the working pressure, the second (if fitted) at the working pressure plus 5 psi.

d. The working pressure shall be marked in RED on the boiler pressure gauge normally fitted to boiler and in such a manner that the marking cannot come off easily.
NOTE: It is preferred that this marking be under the glass in indelible ink.

e. An accumulation test shall be carried out. The boiler shall be steamed at maximum force using the blower, starting with the water at the top of the gauge. During this test the safety valves should be lifting and the pressure must not rise above 110 % of the working pressure as measured on the inspector's gauge. The test shall be stopped after ten minutes, or when the water comes to the bottom of the gauge glass. The duration of the test shall be recorded on the record of the test. (The associated engine may be allowed to turn slowly during this test, or the drain cocks may be cracked barely open, for superheater protection.)

f. If the test is failed, the remedial action taken shall be discussed with the boiler inspector before a retest is done.

g. On successful completion of the steam test, the inspector will annotate the initial certificate accordingly and the boiler may be placed in service.

4.3.3 Boiler Test - Rebuilt or Repaired Boiler

Rebuilt boilers or boilers that have been repaired shall be retested as per 4.3.1 and 4.3.2 above. Repairs to removable fittings shall not be deemed to be repairs in this sense. Repairs to boilers shall be discussed with, and approved by, a boiler inspector.

4.3.4 Existing or Acquired Boiler (ie: new to FSME)

The boiler inspector shall have the right to require the full series of tests at 4.3.1 and 4.3.2 above, and to inspect for possible repairs. The inspector may waive these tests if they are satisfied with the origins of the boiler, but shall still issue a suitably annotated initial test certificate.

4.3.5 Annual Boiler Test

All boilers shall be submitted annually for a boiler test. This test shall consist of a hydrostatic test to 1.5 times the working pressure. The safety valves may be restrained (rather than removed) and all fittings may be in place, and the boiler in its normal mountings. The hydrostatic test shall be followed by a steam test during which the gauge glass, pressure gauge marking, and safety valve setting(s) shall be checked as per 4.3.2 above. The boiler inspector may use the normal boiler pressure gauge for this test if it goes high enough and if they are satisfied as to its quality. The boiler owner shall provide the pump for the test.

NOTE: If the pressure gauge fitted to the boiler does not go to the hydrostatic test pressure, the person submitting the boiler for test shall be prepared to remove it and seal the attachment point for the hydrostatic portion of the test.

4.3.6 Submission of Boilers for Testing

Persons submitting boilers for testing shall make mutually acceptable arrangements for testing with the inspector. The workshop environment is preferred. The test shall be carried out in quiet conditions such that the failure of an internal component, such as a stay, may be heard.

4.3.7 Duration of Validity of Boiler Tests

Tests and the associated certifications shall be valid for one year, except that tests as per 4.3.1 shall have indefinite validity.

4.3.7.1 Damage or Possible Damage to Boilers

An accident to a boiler, with any evidence suggesting possible damage to the boiler, or a fault noted with the boiler, shall immediately invalidate all tests and certifications. Faults with external fittings are not included, except that safety valves must be reset by, or under the supervision of, a boiler inspector using an accurate gauge.

4.3.7.2 Loss of Certificate(s)

Loss of a certificate may, at the discretion of the boiler committee, require the corresponding retest(s) before any replacement boiler certificate is issued.

ANNEXES

Annex A FSME Initial Boiler Test Certificate

Annex B FSME Annual Boiler Test Certificate

REFERENCES

1. Australian Miniature Boiler Safety Committee, AMBSC CODE -PART 1 - COPPER BOILERS Issue 6: 1994

2. Australian Miniature Boiler Safety Committee, AMBSC CODE -PART 2 - STEEL BOILERS Issue 4: 1995

3. Martin Evans, MODEL LOCOMOTIVE BOILERS, Model and Allied Publications Ltd., 1969.

4. Martin Evans, MANUAL OF MODEL STEAM LOCOMOTIVE CONSTRUCTION, 3rd ed., Model and Allied Publications Ltd., 1967.

5. Alec F. Farmer, MODEL LOCOMOTIVE BOILERMAKING, Patrick Stephens, 1988.

6. THE BRAZING BOOK. Published by Handy & Harman, New York, 1977. (Available from Handy & Harman in Canada, 290 Carlingview Dr., Rexdale, Ont., M9W 5G1)

7. Australian Miniature Boiler Safety Committee, AMBSC CODE -PART 2 - STEEL BOILERS BRIGGS TYPE. Issue 3 as amended 1987.

8. The American Society of Mechanical Engineers, ASME BOILER AND PRESSURE VESSEL CODE - SECTION I - RULES FOR CONSTRUC-TION OF POWER BOILERS, 1986 ed. (as amended from time to time).

FSME Initial Boiler Test Certificate

Boiler Identification:

Boiler Application:

Boiler Designer:

Boiler Builder:

Boiler Drawing Set:
and/or
Applicable Code:

Inspection for Conformance with Drawing Set and/or Code:

Notes:

Date: Inspector Signature:

Initial Hydraulic Test:

Test Pressure:

Test Gauge:

Duration of Test:

Notes:

Date; Inspector Signature:

Witness Signature:

FSME Initial Boiler Test Certificate

Steam Test:

Water Gauge Blowdown:

Pressure Gauge Marking:

Safety Valve Setting(s): No. 1: No. 2:

Accumulation Test Duration:

Notes:

Date:

Inspector
Signature:

Witness
Signature:

First Annual Test Due:

Conditions:

1. This certificate is not valid unless both the hydrostatic and steam test sections are completed.

2. The owner and/or user of the boiler remain solely responsible for its safe use.

3. FSME boiler committee accepts no liability on the grounds of this boiler test certificate.

NOTE: This certificate is to be kept by the boiler owner and to be shown to the boiler inspector before the annual boiler test starts.

ANNEX B
FSME Boiler Code (December 2009)

FSME Annual Boiler Test Certificate

Page No: Boiler Owner:

Boiler Identification: Working Pressure:

Date of Test: Date of Expiry:

Boiler Inspector: Witness:

Date of Test: Date of Expiry:

Boiler Inspector: Witness:

Date of Test: Date of Expiry:

Boiler Inspector: Witness:

Date of Test: Date of Expiry:

Boiler Inspector: Witness:

Conditions:

1. This certificate is not valid unless both the hydrostatic and steam test sections are completed.
2. The owner and/or user of the boiler remain solely responsible for its safe use.
3. FSME boiler committee accepts no liability on the grounds of this boiler test certificate.
4. Annual boiler test certificate pages shall be kept by the boiler owner and shown to the boiler inspector before the annual test is started.