



## Small (less than 3 bar/litre) Steam Boiler Test Regulations 2018 – a CNMES Guide for Model Engineers

**NB Flash, drum and coil boilers and anything made of steel are excluded from these regulations.**

Ser	<b>Table 1 – Boilers Below 3 Bar/Litres</b>			
	<b>Boiler Type</b>	<b>Low Pressure (LO)</b>	<b>Low Pressure (LS)</b>	<b>High Pressure</b>
1	<b>Boiler Type</b>			
2	<b>Working Pressure (WP)</b>	Less than 29psi	Less than 29psi	29psi to 43.5psi
3	<b>Construction Requirements</b>	Copper or brass. Unique, indelible serial number.	Copper or brass. Unique, indelible serial number.	Copper or brass. Unique, indelible serial number. Silver soldered. Bushes may be of gunmetal or bronze. Threaded stays may be soft-soldered. Brazing acceptable with some alloys – consult with boiler inspector.
4	<b>Safety Valve</b>	Mandated. Set to WP.	Mandated. Set to WP.	Mandated. Set to WP.
5	<b>Regulator or Stop Valve</b>	No.	Mandated.	Mandated.
6	<b>Water Gauge</b>	Not mandated.	Not mandated.	Not mandated.
7	<b>Pressure Gauge</b>	Not mandated. If present marked with WP.	Not mandated. If present marked with WP.	Not mandated. If present marked with WP.
8	<b>Water Feed</b>	Not mandated.	Not mandated.	Not mandated.
9	<b>Fuel Feed</b>	If no water feed, the fuel supply shall be so arranged that it is used up before the water is at minimum.	If no water feed, the fuel supply shall be so arranged that it is used up before the water is at minimum.	If no water feed, the fuel supply shall be so arranged that it is used up before the water is at minimum.
10	<b>Engine Suitability</b>	Sprung oscillating engines only. (Turbines?)	All	All
11	<b>Initial Hydraulic Tests<sup>1</sup></b>	None	Initial shell (2 x WP, no cladding <sup>1</sup> ) then test with fittings (1½ x WP). Record valid for life, unless structural changes made or documents lost.	Initial shell (2 x WP, no cladding <sup>1</sup> ) then test with fittings (1½ x WP). Record valid for life (brass & copper), unless structural changes made or documents lost.
12	<b>Follow-on Hydraulic Tests</b>	None	If structural changes made or documents lost, initial hydraulic tests repeated. Follow-on record valid for life except for brass boilers which are valid for 3 years.	If structural changes made or documents lost, initial hydraulic tests repeated. Copper boiler records valid for life, brass boiler records valid for 3 years.
13	<b>Initial Inspection &amp; Steam Tests</b>	If no pressure gauge, safety valve tested for WP off the boiler. Inspection & steam test to verify that the safety valve lifts at or below WP and handles maximum steam production. Record valid for 14 months.	If no pressure gauge, safety valve tested for WP off the boiler. Inspection & steam test to verify that the safety valve lifts at or below WP and handles maximum steam production. Record valid for 14 months.	If no pressure gauge, safety valve tested for WP off the boiler. Inspection & steam test to verify that the safety valve lifts at or below WP and handles maximum steam production. Record valid for 14 months..
14	<b>Follow-on Inspection &amp; Steam Tests</b>	Initial inspection and steam test repeated by owner/user and witness. Record valid for 14 months.	Initial inspection and steam test repeated by owner/user and witness. Record valid for 14 months.	Initial inspection and steam test repeated by owner/user and witness. Record valid for 14 months.

<sup>1</sup> Certificates for Commercially built boilers may be used to justify not removing cladding for initial hydraulic tests.