



# G SCALE SOCIETY

## CHECKING OF G SCALE LOCOMOTIVE BOILERS

Traditionally, the Society has run locomotives that are largely track powered with a number of members running proprietary steam models, the latter having come with a Manufacturer's boiler certificate/documentation. In consultation with our insurers no other checking is required for you to run your loco at Society events; they do however recommend that an annual safety check be completed.

The Society now considers that an annual safety check of boilers advisory, because of the growing number of event organisers requesting evidence of an annual steam test; you need to be aware of the situation and what is needed to make an informed decision.

It has always been advisable that members carry out a regular safety check of their proprietary locomotive boilers and gas tanks including any items which are screwed into or bolted onto the boiler – e.g. steam and water feed pipes, regulators, control valves, check valves, water sight glass and mountings, safety valves, whistle valves as well as pressure gauges. Most users undertake the majority of these checks as a matter of course when they run their locomotives, however, many shows and events like to have sight of the fact that this is done and the Society Certificate of Annual Inspection and Steam Check will merely formalise and document your history of steam tests.

Given that this check is merely advisory, one may conduct one's own, but certainly, if one is comparatively new to live steam, then it may be better to have another member as an observer. Most of us keep our locomotive(s) in a clean condition, largely because they cost us a lot of money, but in any case it makes it easier to spot a problem such as a slight leak in a gland or banjo bolt. Generally this will result in staining of the part in question and will show initially on first inspection\*

- 1 First of all, do ensure that your pressure gauge is marked with a red line at working pressure. Now, if your commercial loco does not have this – don't panic – neither Accucraft nor Roundhouse currently supply their gauges marked in this way. There is no need at all to demolish your gauge to add a red line. All you need do is to use a red dot of enamel paint on the rim of your gauge at the working pressure. Roundhouse locomotives usually have a working pressure of 40psi, but do be aware that, depending on the locomotive, Accucraft models will have a working pressure of 50 or 60psi (check in your documentation or on the Accucraft UK website in the specification for your model) and other marques may have a different designed working pressure. Check that the water passages of the water level gauge are unobstructed and that, when the locomotive is tilted fore and aft, the level in the gauge rises and falls accordingly.
- 2 Fuel, oil and water your locomotive, then raise steam. The pressure gauge should creep up to its working pressure. Look out for any steam leaks during this process and also check that there are no leaks in the copper piping from your gas tank or from your gas filler valve<sup>1</sup>. If paying attention, you will hear it (in the highly unlikely event that this is the case). Once the boiler attains working pressure the safety valve will start to blow. Most manufacturers nowadays use the 'O' ring type rather than the more impressive 'pop' valve and so it will start to sizzle as it reaches working pressure.

- 3 Do not here turn your gas down; just allow the pressure to rise. It should reach approximately 10% higher than working pressure and the valve should be blowing off strongly, voiding all pressure above this point<sup>2</sup>.
- 4 Turn the gas off and record at which point the safety valve stops blowing (it should be just below the working pressure but the exact point is not critical).
- 5 Fill out your form (the requirements here are self evident) and sign. Keep the paperwork with your manufacturer's certificate. Keep these documents safe at home and not carry them around with your locomotive *unless* you are running at a show or venue that requires sight of them.

\*Generally this may be sorted by tightening the gland or banjo bolt that is leaking.

<sup>1</sup> Again, this is generally sorted by tightening the gland. If your gas filler valve is leaking just don't bother – fit a new one.

<sup>2</sup> Roundhouse safety valves are usually set at 40psi and a dimple ensures that they cannot be altered easily. If in doubt just buy new. Accucraft safeties may be adjusted to set the working pressure in the specification for the locomotive.

The Society Certificate of Annual Inspection and Steam Check form is available to download from the website or by post including a SAE from *Eric Upton*. [See contact details in the Journal]. The record should be retained by the owner of the boiler and passed on to any subsequent owner.

Related items:

- 1: GSS Small Boiler Test Cert – v2 – May 2016
- 2: Society Public Liability Insurance Certificate