

The Bassett Lowke Society's procedures for running live-steam engines in public exhibitions

1. Background

- 1.1 The National Regulations on pressure vessels (hereafter referred to as the Regulations) may be consulted via the following link: <http://www.legislation.gov.uk/ukxi/2000/128/contents/made>
These Regulations apply wherever the Health and Safety Act 1974 applies. Sections 8 and 9 pertain to boiler testing. Section 14 pertains to the keeping of records.
- 1.2 This documented response is to indicate that the Bassett-Lowke Society (hereafter, the Society) has read these Sections and proposes a Scheme of Safe Operation for small live-steam toy engines that satisfies the requirements of testing and documentation.
- 1.3 Strictly speaking, the running of toy steam engines for hobby purposes is outwith the regulations. However, it makes sense to have a documented Scheme to ensure that members of the Society operate toy steam safely in public.
- 1.4 The Model Engineering Liaison Group (MELG) Response to the Regulations does not apply to the running of the Society's live steam engines. These latter are steam-operated toys operating at a maximum of 1.0 bar litre product with a simple safety valve set to an appropriate pressure for the boiler and lacking substantial fittings such as water gauge, blower or re-fill valves. Such toys were designed to be safely operated even by children. This is an entirely different situation from that discussed by the MELG.

2 Boiler-testing procedures

- 2.1 At each show organised by the Society where the public are present a 'show coordinator' is named. This person is the responsible person on the day (the 'competent person' of Section 8 (2) (b) (1) in the Regulations). This person will vary from show to show depending on geographical location of the show. If the show coordinator has reason to be absent from the track-side, he or she may temporarily delegate his or her duties to another competent person present.
- 2.2 The show coordinator will visually inspect each boiler and may also, if judged appropriate, conduct a pressure-release test on each safety valve. He or she will make a written record to satisfy Section 9 (3) of the Regulations.
- 2.3 Each person wishing to run a toy steam locomotive (or a small stationary toy steam engine) demonstrates to the show coordinator that the safety valve

(SV) is correctly lifting, and confirms that in the previous steam run it worked as required. This demonstration is made before each run if there is more than one at a particular show.

- 2.4 Given that toy steam boilers and safety valves do not have labelled identification, the prospective operator also certifies that the SV of one boiler has not been put in a different boiler unless the substitute SV is also known to be entirely suitable for purpose.
- 2.5 The procedures outlined in 2.2 – 2.4 above become the examination required by Section 9 (1) b of the Regulations. Records will be kept by the show coordinator for the duration of each show in accordance with Section 14 of the Regulations.
- 2.6 Each prospective operator also certifies that his or her loco/engine boiler is sufficiently watertight to be operated as a toy steam engine in the manner intended by the manufacturer. For added security, each person also certifies that to the best of his or her knowledge the loco/engine is fit for toy purpose and will be operated in accordance with the manufacturer's instructions where available. (Given that the largest risks are associated with fuel fires, not boiler pressure, attention is also given to these risks being minimised: see 3.1 below.)
- 2.7 Sections 2.2 – 2.6 above apply to toy steam, i.e. in general boilers of less than 1.0 bar litre product.
- 2.8 The Society does not need to engage at all with hydraulic testing because it is impossible for most toy steam operators to know the history of a boiler for a toy made in the days of coarse-scale model steam engines. If the boiler has recently been modified, it is sensible to do this; but for old acquired toys one simply does not know. The MELG response document (Section 14.8) makes a similar point.

3. Other safe working practices

- 3.1 The toy steam fraternity already has a detailed set of working practices governing the safe operating of steam toys at events where the public attend. These cover matters of safe fuel storage in labelled tins, checking of a loco's fuel reservoir and burner, fire extinguishing precautions, notices to the public concerning not touching hot engines, burns procedures, first aid etc. and will continue to be rigorously enforced, unchanged. A copy of these working practices will be held at each show by the show coordinator and distributed ahead of time to all expected attendee operators.