



# *Model Engineering Association of New Zealand Incorporated.*

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## **MEANZ Update August 2017**

### **Model Engineering Convention 2018**

It only seems like a few months ago that we were all up in the Bay of Plenty at the convention hosted by the Tauranga Model Marine and Engineering Club. Now it's that time of the year for those of your membership wishing to attend our biennial convention, 4<sup>th</sup> to 8<sup>th</sup> of January 2018 to start making plans in earnest so as to make the organisation a little easier for the host club in this case the Nelson Society of Model Engineers. Those of us intending to take vehicles and equipment across Cook Strait should be booking their journeys now so as to avoid disappointment.

The Nelson convention will see the 2018 BGM of your Model Engineering Association of New Zealand held and member clubs should start thinking about nominations for the executive positions of President, Secretary/Treasurer and North/South Island representatives.

All MEANZ member clubs should also be looking from amongst its membership for outstanding workmanship in the construction of any of their projects with a view to contesting the Canterbury Award.

With the challenge set for the Les Moore Challenge by the Nelson Model Engineers there should be no lack of entries and all Convention attendees' should front up with a small set of hand tools so as to participate in the challenge.

Roll on summer and the famed Nelson sunshine.



### **Passenger Carrying Rolling Stock (Ride Cars)**

Our ride car designs have evolved over many years to cater for the non-scale loads (Adult Human Beings) which we carry on our miniature railways. The main design criteria, to keep the centre of gravity as low as possible while providing comfortable secure seating so that the load keeps still whilst in transit.

Clubs and individuals building and or purchasing new or second hand ride cars need to assess against this design criterion. A higher centre of gravity (knees under chins etc.) significantly erodes the

safe operating envelope of the ride car i.e. an accident waiting to happen!

With some adult human beings becoming larger than historic Norm's clubs station staff may have to start assessing persons for suitability re riding on our trains re the safe operating envelope.

## **Review of the MEANZ Manual of Operating Procedures (MOP)**

In accordance with MEANZ Administration Policy (MAP 9) the Executive are conducting a review of the MEANZ Manual of Operating Procedures. This document first issued in 2006 is the foundation document to which our member clubs who operate miniature railways evolve their own site specific operating procedures on. This document was developed from best practice derived from British and Australian codes of practice and current NZ practice.

### **Review Methodology**

The MEANZ executive have reviewed the MOP against the current British passenger-carrying miniature railways, the AALS code of practice and two NZ club operating documents, "Traincraft" and The Canterbury Society of Model and Experimental Engineers Inc.'s Safety and Running Rules to identify if the MOP still represents Best Practice. The executive have also factored in any outcomes from Incident reports received from clubs.

### **Outcomes of review**

Although there has been no significant shift in best practice operating procedures highlighted by the review to compromise the status of the MOP to

reflect best practise, two issues have been identified as needing addressing.

- The use of safety chains. It is felt that current NZ best practice on the use of safety chains is not adequately reflected by the MOP. (MOP section 6 6.1 6.3)
- The regulation of speed. All of our miniature railways have a max speed set by the inspecting safety auditor or engineer as well as speed restricted areas. It is acknowledged that excessive speed is a safety issue. It is felt that none of the reviewed documents address how the speed of individual trains operating on a miniature railway is regulated. The executive suggest that best practice should involve the use of speed recording device on all locomotives or driving trolleys.

### **Feedback**

MEANZ member clubs are asked to consider these proposals and any other issues that you feel need addressing by the MOP review.

### **Richard Lockett (President MEANZ)**

#### **Fusible Plugs.**

Many in our hobby may not be aware, or have not read, of the incident involving a fusible plug that happened at The Beer Heights Light Railway, Pecorama in East Devon, England in 2014.

A fusible plug let go in the firebox of a 7¼" steam loco causing the driver (in training)

to be sprayed with hot water and ashes causing severe burns to his legs. The resultant Health and Safety Executive (similar to Worksafe NZ) inquiry, found the Boiler Inspector, in their view, had not properly inspected the fusible plug when the boiler was having its periodic inspection and proceeded with a prosecution.

From evidence at the trial from experts, over three days, it was found that the threads to secure the fusible plug into the crown sheet boss had corroded to such an extent that they were unable to retain the fusible plug cylindrical body in place against the pressure in the boiler. This condition caused the whole fusible plug body to blow out once the boiler reached at or near its working pressure, causing the hot ash and water blowout from the firebox.

After a three-day hearing in Exeter Magistrates Court concluded, the Inspecting Engineer was found not guilty of a charge of Failure to Discharge his Duty. He was found to have conducted his inspection in a thorough and professional manner, and from this concluded that the pressure system was in a serviceable condition.

### **Lessons and Learnings for MEANZ Boiler Inspectors.**

From the evidence in this case the Boiler Inspector did not remove the fusible plug and examine the retaining threads in the boss.

For boilers being inspected in New Zealand under the current MEANZ AMBSC Codes, fusible plugs, where fitted, should be removed so the inspectors can check the condition of the threads in the mounting

boss. Not only fusible plugs but all threads of threaded fittings can degrade over time. Safety valves, wash out plugs etc. all need checked.

### **Steam & Cinders '18 –**

4th to 8th January 2018.

Plans are going well and Registrations are starting to come in. For more information or to get a Registration Form please email Tracy: [steamandcinders18@gmail.com](mailto:steamandcinders18@gmail.com).

### **MEANZ Biannual General Meeting**

First off a huge thankyou to Tracy and Nigel and the members of the Nelson Society of Modellers for agreeing to host the 2018 convention.

The MEANZ meeting will be held in the Nelson Society of Modelers grounds in the Marquee on the 6<sup>th</sup> of January starting at 9am. Stuart Write from Worksafe will address attendees about “where Duplex is at” followed by the BGM. Remits need to be in by the 8<sup>th</sup> of December. This will give clubs time to discuss their response. Remits need to be sent in from clubs not individuals.

The Auditors meeting will be held on Sunday the 7<sup>th</sup> of January at 9am in the Nelson Society of Modelers clubrooms.

### **Meeting with Worksafe**

In March this year. Rob Wilson and Richard Lockett met with Worksafe Richard Steel and Maurice Flood. Richard Steel stated that with new resources the turnaround time now for Amusement Device Registration applications should be 20 days. Worksafe are now upgrading digital platform for so in the near future club

registrations will be "on-line".

New Regulations: - Ministry of Business Innovation and Employment (MoBIE) is soon to announce anticipated changes. This time "industry" is going to be asked by Worksafe at Forums to provide a collective view. The new regulation will be known as Hazardous Plant and Structures. Richard Steel and Maurice Flood like the Australian example of: High Risk - requires Licensing. They look forward to MEANZ playing their part in the forums and being part of the dialogue for the new Regulations

Rob and Richard L went on to have a meeting with Stuart Wright. He (Stuart) will prepare for dissemination, a "Technical Bulletin" regarding the use in the mean time for boilers using Duplex. The bulletin will have all Terms and Conditions that must be adhered to, very clearly outlined. Owing to work pressures this bulletin was not ready for this Update. An invitation has been given to Stuart to speak at the Nelson Convention to update those who attend on where Duplex is at.



## **An Explanation of what is required of clubs to complete their Amusement Device Application for Registration.**

**By Rob Wilson**

1. All clubs must have had a MEANZ Audit within the previous 3 months of lodging an Application for Registration. This Audit does not have to accompany the Application for AD Registration.

2. Each club to have their own Club Secretary or President fill out and sign off the details on the Amended ADR's Form 1.

3. Each club to complete 1 of the following: (their choice)

Use Form 2 (from Amended ADR's) and use a Chartered Mechanical Engineer to complete using the 18 Condition and Requirement Form 2. Or: Use Form 2A (available shortly from MEANZ website) and use a "Competent Person" from another club to fill out/complete, (can be the MEANZ Auditor who recently completed the required Audit). You must use the 18 Condition and Requirement Form 2A.

4. Information to be included with Application: a. A complete list of all the club and privately owned locos that regularly pull passenger trolleys that convey the public on Open or Running days, in the following format: (You can use Excel Spreadsheet)

Loco I.D.Number	Type	Colour	Wheel Arrangement
Wa 192	Steam loco	Black	2-6-2
UP	Diesel	Yellow/ Red/ grey	2 x 6 wheel bogies

b. A complete list of all the club and privately owned passenger Ride-On trolleys that convey the public on Open or Running days, in the following format:

Wagon I.D. Number	Type	Major Colour	Wheel arrangement.
CSMEE #1	Straddle type ride wagon	Green	2 x 4wheel bogies.
RCW #2	Gondola type ride wagon	Blue	2 x 4 wheel bogies.

(You can use Excel Spreadsheet.)

2. Two, (2) clear photos from two different angles showing the station with made-up trains as would be seen at an Open or Running day. Two photos of typical club steam locos. Two photos of typical club electric locos Two photos of typical club IC locs Two photos of typical club passenger carriages. **A total of 10 photos.** (These can be printed with computer 6" by 4")

d. Attach a list of all your locos and carriages that may visit other MEANZ affiliated clubs to run and convey the public on any given Open or Running day. (travelling locos) Note 1: This list will be collated and sent to Worksafe with applications after every club has provided to the MEANZ Secretary a list (as above) of their own club or members equipment that may wish (or do) travel to attend other tracks. Note 2: The privately owned equipment on the "Travelers List" (for want of a better name) does not have to be accompanied by the owner's name or any other personal details.

5. A cheque to cover the \$34.50 cost of the application made out to Worksafe NZ.

Send all of the above to the MEANZ Secretary, 154 Scott Street, Waverley, Dunedin, 9013. The application will be forwarded to the relevant Workplace Safety Person, Registrar of Amusement Devices.

**Heather Wilson**

MEANZ Sec/Treas  
August 2017.

