

AUSTRALIAN ASSOCIATION OF LIVE STEAMERS TROPHY 2017

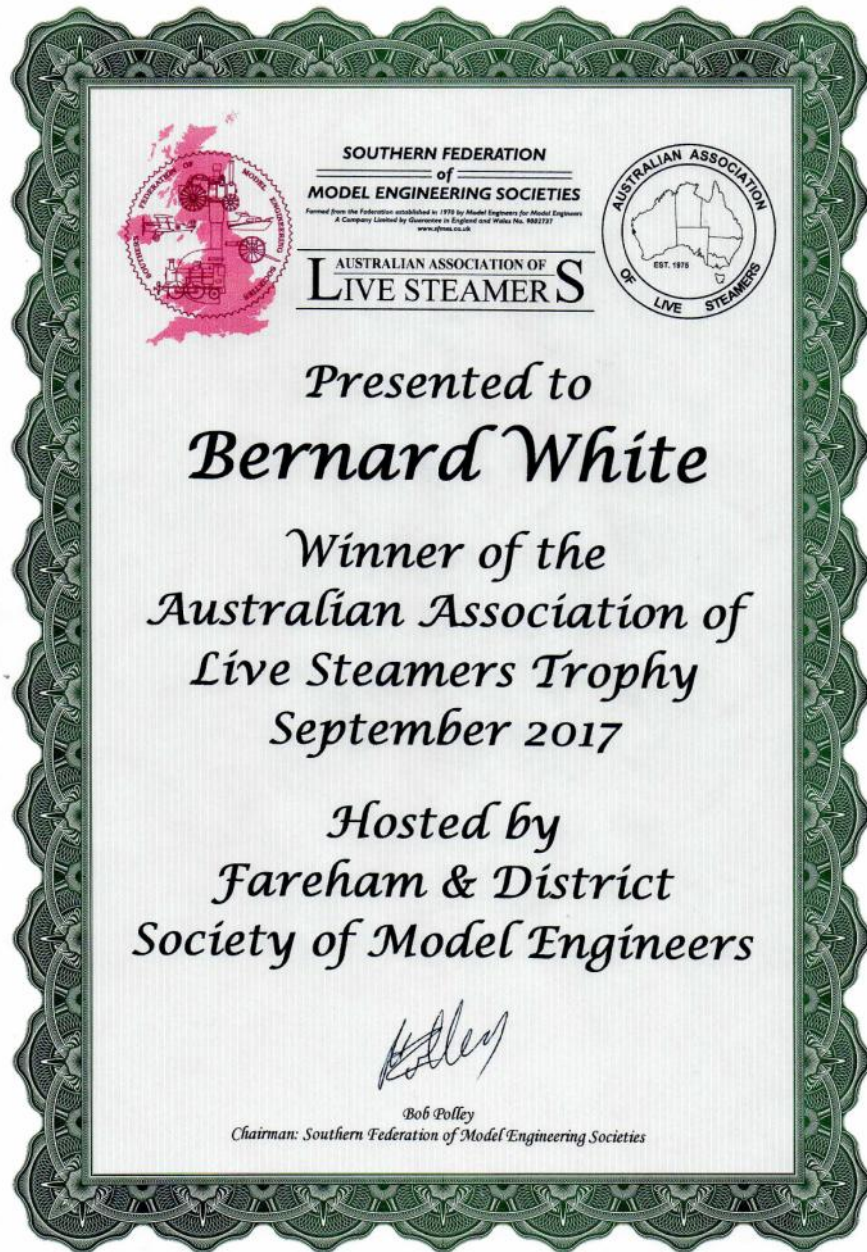
AUSTRALIAN ASSOCIATION OF LIVE STEAMERS TROPHY

The AALS Trophy is presented to SFMES to commemorate the affiliation of the two Associations. It is presented for annual competition at the Southern Federation MES Autumn Rally under the following rules:

- The AALS Trophy is to be awarded annually to the miniature working steam locomotive judged to be the best example of a Commonwealth prototype in any gauge between and including 2½in. and 7¼ inch.
- Competition for the AALS Trophy is open to all members of Clubs and Societies affiliated to SFMES and such members may nominate their locomotive for judging. If deemed appropriate, the Judges may include other locomotives present but not nominated on the day.
- SFMES will arrange a suitable panel of Judges.
- In the event that the Judges do not consider a required standard has been attained they may decline to award the AALS Trophy.
- The winner will hold the AALS Trophy for a period of twelve months or less as directed by SFMES. The winner will receive a suitably inscribed memento of the award which will carry his name and a brief description of the winning locomotive.
- A locomotive may only win the AALS Trophy once.
- Only the owner and builder of a locomotive is eligible to compete but may nominate a driver for the event.
- Professional model engineers are not eligible to compete
- AALS requests to be informed of the outcome each year, whether or not the AALS Trophy is awarded.
- AALS requests a photographic record of each winner for their records. Photographs should show the builder with the AALS Trophy and views of the locomotive.
- The Judges' decision is final and no correspondence will be entered into by either SFMES or AALS.



The 2017 competition for the Australian Association of Live Steamers Trophy was held at a Southern Federation Rally hosted by Fareham & District Model Engineering Society on 9th September.



A popular member of Maidstone MES, Bernard (Bernie) White ran his 5in. gauge rebuilt Bulleid Pacific No.35008 at the 2017 Southern Federation Autumn Rally held at Fareham DSME's raised track on their Railway Field in Hampshire.

To Keith Wilson's *Ariel* design, Bernie named his locomotive *Orient Line* because, journeying to the UK with his parents from Australia at the age of four, he sailed on SS *Orontes*, an Orient Line vessel.

5in. gauge Rebuilt Merchant Navy Class No. 35008 *Orient Line* built by Bernard White of Maidstone Model Engineering Society

Introduction

Bernard's great interest in all things to do with railways developed between the ages of 7 and 14, while he lived in Kent adjacent to Southern Railway tracks. Soon after the family moved to Maidstone in 1949 he joined Maidstone MES, set up a workshop in an old coal shed, saved up and for the princely sum of £65 purchased a brand new Myford ML7 lathe with motor, 3- and 4-jaw chucks and a vertical slide, all of which he still has.

While working as a junior chemist at brewers Style & Winch, Bernard built a 3½in. gauge *Juliet*. Preferring engineering to chemistry as a career, he transferred to A.E. Gardeners in Maidstone and became time served. Two years National Service followed during which LBSC described *Britannia* in 3½in. gauge. Bernard purchased BR outline drawings and started work. Slow progress during subsequent years resulted from many stops and starts but, on retirement, he made a big push to finish the loco in 2000, in time for the Model Engineer Exhibition where it won a Silver Medal and the J.N. Maskelyne Trophy. It won the Australian Association of Live Steamers Trophy at the Autumn 2003 Southern Federation MES Rally and the LBSC (Curly) Bowl in 2004

Bernard's fancy was taken by Keith Wilson's 5in. gauge *Ariel*. Rebuilt S.R. Merchant Navies are similar to Brits which borrowed much from Bulleid's design. A complex project, Bernard realised *Ariel* would test all his skills, and it certainly did! The prototype was designed for all-welded construction, challenging Bernard's ingenuity to make his 1:12 scale version appear to have been welded. He and fellow Maidstone MES member Adrian Gurr both started work on Merchant Navies as parallel projects, but sadly Adrian died of a brain tumour. Bernard's locomotive has been built partly in Adrian's memory and hopefully, one day Adrian's loco will be completed by fellow Maidstone man Tom Parham to whom the part-built loco was left.

Bernard named his loco No. 35008 *Orient Line* because, returning from Australia in 1936 as a 4 year old, he sailed with his parents on the SS *Orontes* which was an Orient Line liner.

Construction

Construction began in 1990 when sets of wheels were cast locally to open patterns. They were machined to receive water cut inserts to give the correct Boxpok effect. Balance weights were added and tender, bogie and trailing wheels were given similar treatment. By 2001, the main, bogie and tender frames were water cut to profile. Chassis stays, outside motion brackets and outside guide bar brackets were formed on alloy formers. All parts were hand profiled, 25-30 pieces each, to suit brazing. Assembly fixtures were made and each unit was silver brazed on its fixture in a single heating then sand blasted and primed.

The boiler was built using Bernard's own formers, silver brazed using oxy/propane and tested to 200psi. Four radiant superheaters were fitted and the ashpan made from 20swg stainless steel. A complicated item, it was silver brazed with working vent and ash release.

The cylinders were to have been fabricated but by 2004, to reduce time and complexity in the confined space, castings were purchased from MJ Engineering. Very nice examples of foundry work, they were machined on Bernard's Myford ML7 and Senior M1 Mill. The bores were honed, piston rings made and piston valves machined just with oil grooves.

Bogie and trailing frames were fabricated and brazed in fixtures using oxy/propane gear. Inside and outside coupling and connecting rods were made from bright bar heat treated in the domestic log fire. A milling fixture was made to hold the rods during manufacture. Both sides of the rods were fluted to the appropriate profiles using a homemade tool steel cutter. The machining process seemed to result in more swarf than components!

Wheels were successfully set to 3-cylinder angles by using a dividing head and slip blocks to avoid the need for a large fixture. All leaf springs were hand made from ¾in. wide 20swg phosphor bronze strip. Axles run in needle roller bearings and expansion links on ball bearings. By 2005, the tender chassis was completed with full vacuum braking as prototype and by 2007 the brass tender body was soft soldered with baffle plates, working cupboards and coal hood to finish. The front section lifts out to facilitate access for driving.

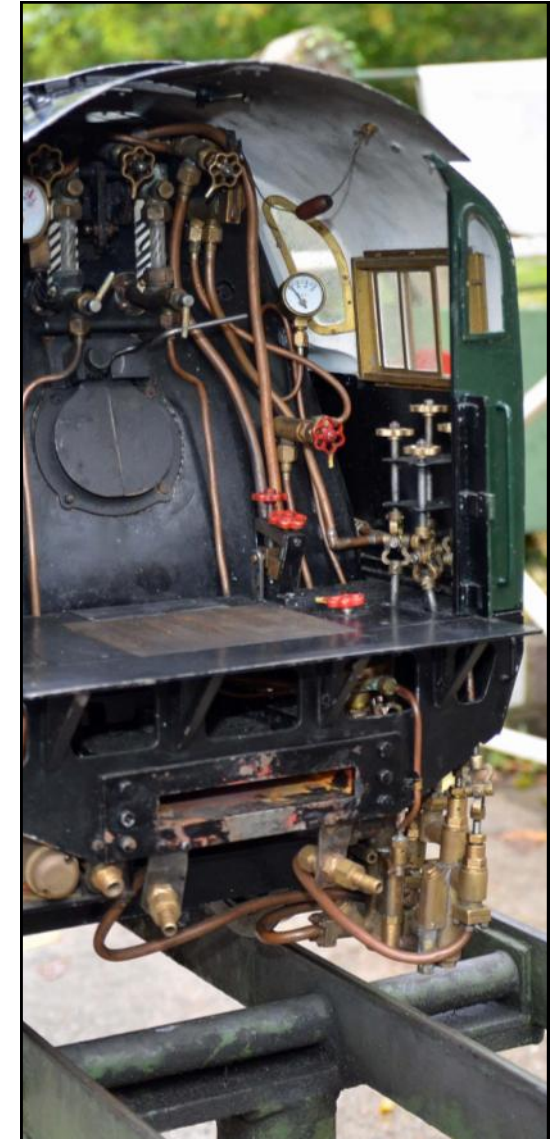
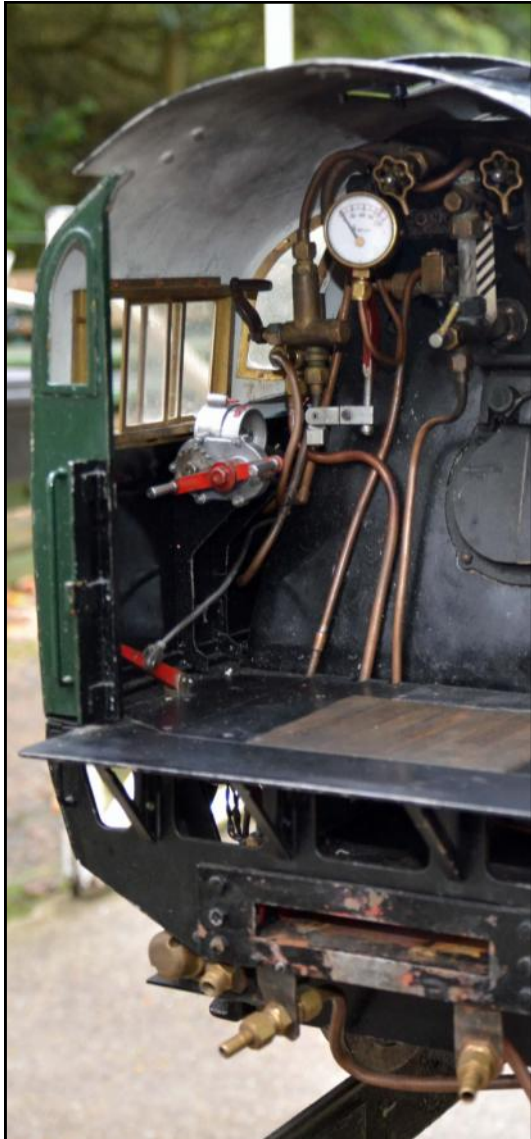
Rebuilt in 1957, sadly the full size No. 35008 was scrapped in 1965. Bernard's miniature was completed, painted, lined and tested in December 2012. It now commemorates its namesake by steaming in the Southern UK heartland for passenger hauling and charity events.



Classic views of Bernard's locomotive at the Maidstone MES Mote Park track reveal a wealth of detail. Construction began in 1990 with wheels cast locally, machined to receive water cut inserts bonded and screwed in place to give the correct Boxpok effect. Balance weights were added and tender, bogie and trailing wheels received similar treatment.



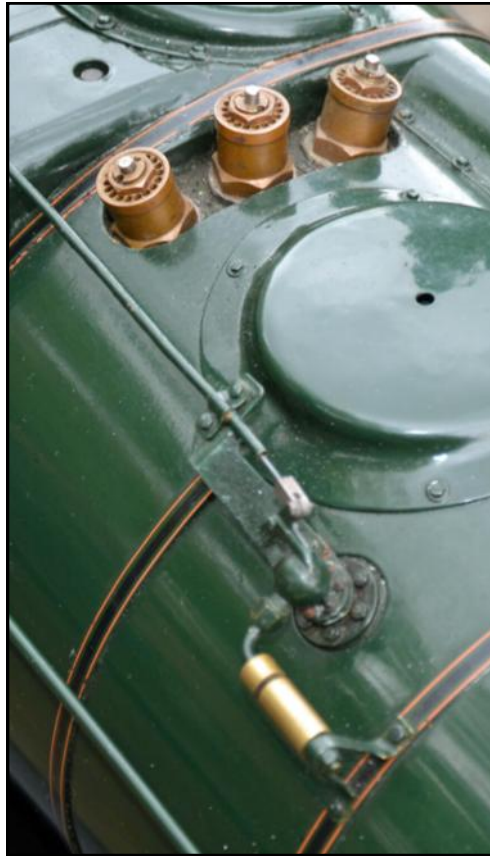
Working headlamps and cab lighting are powered by a functioning miniature steam turbine. Initial plans had been to fit switches to the lamps but their housings were too small for this to be practicable. Vacuum braking is fitted as on the prototype locomotive and the vacuum pipes visible in these views are functional.



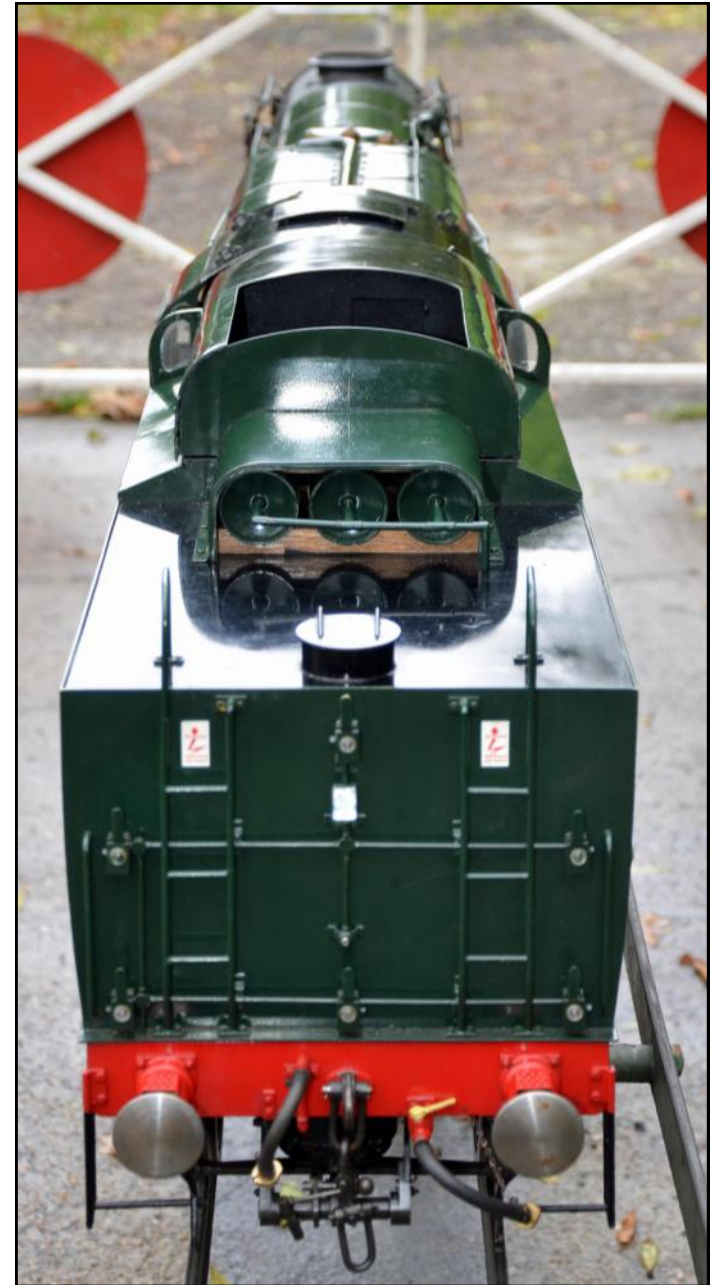
Fitted with four radiant superheaters, the boiler was built using Bernie's own formers, silver brazed using oxy/propane equipment and passed inspection and its 200psi shell test without a problem. Controls on the left of the cab include reverser, vacuum brake (top left) and pressure gauge. Controls on the right of the cab include injector, turbine and damper.



Fabricated vertical injectors (top left) are fitted with innards to DAG Brown's design and work effectively. Working dampers are fitted (top right) and the steam turbine that generates power for headlamps and cab lights is also visible. Dummy sand boxes provide access for axlebox lubrication. Nameplates were designed and etched at home and the lubricators contain working oil pumps.



Cupboard doors and doors at the front of the tender (left) all open, the whistle (centre) is a dummy but emits a wisp of steam when blown and the semi-pop safety valves are to Gordon Smith's design. Vacuum cylinders and rear lamps are fitted (right).





Southern Federation MES Awards Officer Mike Chrisp presented the Australian Association of Live Steamers Trophy to Bernie who was supported by family members including his wife Sylvia and many Maidstone MES members.



A bottle of champagne and a special cake featuring a photograph of Bernie with his locomotive printed on icing provided a fitting contribution to the celebrations.





Bernie poses with the AALS Trophy and his fine locomotive.



Bernie enjoys his run in the September sunshine.

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