



August 2004

Encouraging Young Model Engineers — Owen Chin

by Steve Reeves

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Above: The finished model with its competition entry form, ready for the judges.

All photos by Steve Reeves.

Owen Chin is possibly Perth's youngest active Model Engineer.

It all started last October when his father approached me about helping Owen finish a steam engine he had begun at school.

Owen had completed all the year's projects in his metalwork class by the end of the third term, so he was free to choose a project of his own for fourth term. He chose to build one of Elmer



Owen Chin receives his award from AME's David Proctor at the Bunbury Convention.

Verberg's stationary engines, from his 'Show Case Series' published in Live Steam magazine during the 1980s.

This engine is a single-cylinder horizontal type of 12mm bore x 16mm stroke using Hackworth valve gear.

Owen had already obtained drawings, with his father giving him enough material to start the base.

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CALENDAR OF EVENTS

General Meeting	Club Meeting Room Vasto PI, Balcatta	8:00 pm	Friday 13 August
Club Work Day & Run Day	Club Track Site Vasto PI, Balcatta	8:00 am—12:00 pm Run 12:00 onwards	Sunday 15 August
Public Run Day	Club Track Site Vasto PI, Balcatta	11:00 am—3:00 pm	Sunday 29 August
General Meeting	Club Meeting Room Vasto PI, Balcatta	8:00 pm	Friday 10 September

Minutes of July General Meeting

by Milton Smith

The meeting was opened at 8.00 pm with the President Richard Langford in the chair. This meeting being a "show and tell" was not formal, and after receiving the following apologies, the President invited members to raise items for discussion.

Apologies – J. Crawford, P. Gibbons, C. Chapman, B. Tanner, P. James, K. Austin and T. Cain.

Several members took advantage of this offer and their comments and observations are hereunder:

Allan Mathie said that he had been in discussion with a teacher at Rossmoyne Senior High School regarding the CAD-driven workstation that they had and the problem that the teacher had of getting any government help for the development of a course. The opportunity was open to the Society to become involved and also benefit by being able to use the facility.

Bruce Weir-Smith dealt with legal matters and applauded the informative article in the last *Steamlines*. As members we need to be conversant with our obligations and to this end constitutional matters need to be openly discussed so that we know what we are agreeing to when we vote on a new constitution. The document needs to be in clear language avoiding legalese.

See attachment to this issue.

Russell Dunn asked about insurance. John Shugg indicated that we are awaiting information from the AALS, and that there was a web site available.

Ron Date advised members that we had received one quote so far for \$3,800 for tree pruning and that a further quote would be sought. The potential of school groups using our facilities was also mentioned as we had had enquiries. There was the strong likelihood of a school group of about 85 coming in a couple of months or so.

MODEL ENGINEERING

Alan Mathie brought along a powder coating device, together with some examples of what it could do. Temperature is an important factor in producing a suitable finish. Too much tended to produce an orange-peel effect. The powder is available in a small range of colours including Brunswick Green.

Jim Clark showed the cab for his *Britannia*. This is an impressive piece of fabrication. The complex shape, with its various angled plates, beautifully fitted was a pleasure to see. Cardboard shaped with the aid of CAD drawing paste-ons helped in the construction. Jim also had the reversing gear-box together with the shaft. The shaft had an interesting universal joint to enable the shaft to follow the contours of the plate-work.

Steve Reeves has been working on the completion of a WAGR Pr class loco from a deceased estate. The tender is now complete and has a lot of detail added. Photos have been very helpful here.

A vacuum brake hose from Doug Hewson (UK) added a nice touch to the rear buffer beam. Steve has painted this red, an educated guess, because there seem to be no colour photos of the full size loco's tender. Steve has also commenced work on a 7¼" Rainhill and presented an assembled tender chassis and one engine frame for our perusal.

John Martin's back tool post for a Myford lathe was interesting in that it could have attachments fitted. Indexing is accomplished by aligning the attachments with the body. John needed to make this example, because an earlier one was showing signs of wear. This example has three "T's" to aid in stability.

Stu Martyn's engine for his Stanley Steamer is an impressive piece of work. He outlined some of the problems of design he has had in this project, as there are no working drawings as such available. Some calculations were necessary to determine boiler design and gas-burners. Steering matters were also explained.

Andrew Manning displayed and discussed the manufacture and use of an 85mm lap used to dress the bore of a turret mill head after re-boring. The exercise was to recover a badly worn quill assembly. The head was re-bored, but to get a good finish and a parallel bore a purpose built cylindrical lap was required.

Andrew found that allowing the lapping head to float in a horizontal plane made for a high degree of accuracy. The head was attached to a hand held power-drill by a universal joint.

Clive Jarman has completed a quarter-size hit-and-miss engine. It was well presented on a wooden stand, which held the electronics for the ignition. Clive needed to make a jig to test the sealing of the valves, and also had to experiment with the compression ratio, as well as the piston itself to actually get compression.

The engine was "fired up" during supper, and ran well. *See photo on page 3.*

George Palmer had an interesting little box to show us. It turned out to contain the gears of a failed drill. George's C38 is a rather heavy loco, being difficult to manhandle. The box will form the basis of a winch to facilitate moving the big green engine. A good example of "re-cycling."

The meeting concluded about 9.45pm.

Milton Smith

Rules of Association Notes

by Bruce Weir-Smith

A Supplement to Steam Lines has been provided which is another draft of the new Rules of Association to replace the existing Rules that have been in place for many years. The background as to why the existing Rules are being reviewed stems from when some earlier changes to allow for how the Society currently operates, failed to be registered in time (it happens). As a result, the existing Rules are now being reviewed in detail to identify activities that have changed and also, where current practice is in contradiction to them.

It is also seen as an opportunity to provide some clarity to the document and allow Members to have a better understanding of the Society's responsibilities and management processes. The final document should be well structured and use understandable language so that it can be understood by all.

The target date to have the new document completed is for the October Meeting. However there needs to be several iterations of the document via the Membership to ensure that it captures the needs of the majority of people.

Key issues that need to be discussed at the next meeting (in principle only), are:

1. New Members
2. Expulsion of Members
3. Financial decisions.

In 1 and 2 above, the issue is, who has the final decision, the Committee of Management or the Members?

I would suggest as a starting point for discussion, that the process could be made much simpler and expedient where by the Committee in both cases makes a recommendation to the general Membership for their decision.

In respect to 3 above, the current Rules requires the Committee to seek approval for all expenditure above \$1000.00. In our case, we have a small Society with regular general meetings. I have put up for discussion my views in the attached Supplement.

Bruce Weir-Smith

Library News

More donations have been gratefully received in June/July from:

WA Model Engineering Club

1 Bound copy of Model Engineer magazine volume 133 – 1967; 4 books; 650 Loose copies of Model Engineer; 13 Loose copies of Engineering in Miniature magazine; 13 loose copies of Australian Model Engineering

Mike Lynn

8 Bound copies of Engineering in Miniature
60 Loose copies of Engineering in Miniature

Russell Dunn

3 Books – Building the Shay, The Machinist's Bedside Reader and The Willamette Locomotive
8 Loose copies of Modeltech magazine – 1987

Ron Date

9 Steam Railway videos.

All above have been catalogued and are available for loan. Please contact me for details.

John Martin - Librarian

FOR SALE

I am cleaning out my workshop and have two mills and a lathe for sale.

Light vertical mill — table 350 x 150, travel 270 x 150, height under quill 400mm. Geared head 6 speed, 2MT 1/2 hp 1ph. Includes 100mm machine vice, collet set and clamp bolts. \$750

Vertical/horizontal mill — table 900 x 200, travel 500 x 200. Height under quill 530mm. Power long travel. Vertical spindle travel 125mm. V and H spindles NT30 3ph.

Heirless SSB-11buk lathe — swing 305 x 610 BC. Belt driven BG. Excellent condition. On stand. \$1500.

Contact Andrew Manning on 9446 4825.



Clive Jarman prepares to run his beautifully finished *Rosebury* engine during coffee break at the July meeting. It ran as well as it looks.

Photo by Jim Clark



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Encouraging Young Engineers (cont). by Steve Reeves

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First stop for me was to make a parts list and then order materials from Ernie Winter, who was thrilled to know what these materials were to be used for and sent them in double quick time.

Work started by breaking each component up as one separate project and then moving on to the next.

I converted the drawings to metric and work started at my place on Saturdays. In between Owen continued in his metalwork class at school and also at home as homework.

A Fine Model Engineer Emerges

It soon became apparent that Owen has a gift in this area. Firstly his attention to detail and fine finish is extraordinary. Secondly, he could work out for himself how to go about making most parts. Some guidance was necessary, however I did not really have to make the parts for him. I could show him a way of making something and off he would go. In fact 95% of the engine has been made by him.

The finish on each part was so good that when showing me the cylinder block one day we saw a reflection of the sun (complete with sun spots!) on my yellow gondola wagon — the cylinder block acting as a perfect mirror.



The exceptionally fine finish is apparent on these partly completed pieces of the engine.

David Proctor and the Bunbury Convention

It was at this point that I realised that we had something special going on. The 2004 AALS Convention was to be held at Bunbury, so I called David Proctor, editor of Australian Model Engineering, to see if Owen could enter the AME Under-25s Encouragement Award. *Of course he can*, was David's answer.

This was in late February 2004. We were just reaching the half-way point in construction. Owen had begun Year 11 at Rossmoyne Senior High School with a very high workload, so construction began to slow down. To cut a long story short, it looked like we would not make it to the Convention.

However, two weeks before the big event Owen decided to go for it. Working Saturdays, Sundays and Friday nights both at my place and at home, he got stuck in. Sometimes he would not leave my workshop until after midnight!

Owen managed to get the last piece finished the day before the Convention and a quick air test proved the engine would go. Owen and his father carried on during Easter Friday to 2am and to 3am on Saturday. Owen and the engine arrived at Bunbury at 2pm on Easter Saturday, as the judging started!

After the evening meal was finished on Sunday night, the award presentations were made. Three out of the five awards, I am proud to say, were associated with our Society. Owen had some tough competition — a 19 year old had built a copper boiler for a 5" gauge NSW loco, and there was another stationary engine built by a younger lad around Owen's age.

So I was very proud when David Proctor announced Owen as the winner. Owen's prize is a vertical height gauge and 12 month's free subscription to AME.

Owen and his father gave an acceptance speech explaining how Owen's grandfather had built a 'Tich' loco in Malaysia single-handedly. This engine was test run at NDMES shortly before Owen's grandfather died. This engine is now with Owen's family as is the Myford Super 7 lathe that Owen has been using. The NDMES and myself were also thanked for our help and encouragement.

So what's next you ask? Well, firstly it's full on with school and study. Owen has mentioned that he would like to be a dentist, but somehow I feel he may become more involved in engineering. And during the Christmas school holidays we plan to start on something new.

Steve Reeves