

IMLEC

95



PROGRAMME

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ENGINEERS Ltd**

present

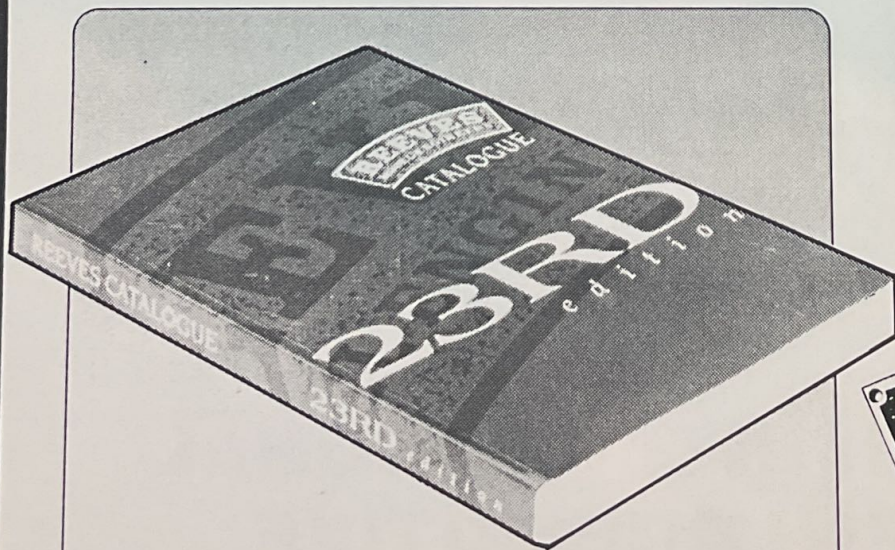
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PRESENTATION OF PRIZES

Presentations will take place at approximately

5:30pm on Sunday 9th July

by Mr Brian Edwards

of The Parish Council

1st, 2nd, 3rd & 4th Prizes

plus Best 3 $\frac{1}{2}$ If not in First Four

K.W.S.M.E. Plaques & Patterns cast by Club Members

A MESSAGE FROM THE CHAIRMAN

As Chairman of the Kinver and West Midlands Society of Model Engineers, I would like to welcome you all today to our track at the Marsh Playing Fields and to the 27th International Model Locomotive Efficiency Competition.

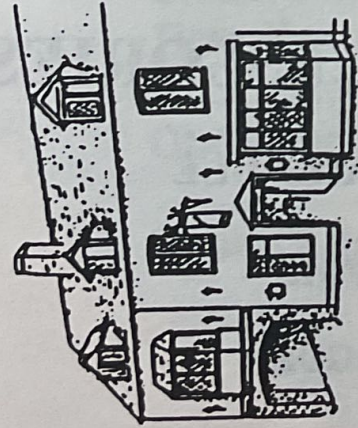
Many of you may know we decided to host the event rather late in the day. A venue had not been agreed, and the competition was in jeopardy of not running at all this year. We have all said many times "it seemed like a good idea at the time" and we therefore contacted the Model Engineer Magazine, who quickly agreed to us holding the event today.

Since that time, we have set to work and used the event as a focus for our efforts and many of the jobs that "will be done some day" have been completed, with many others besides.

We have built bridges - roofed our steam bay - re-laid paths. Repaired fences and station railings. The buildings have all had a revamp as have our grounds. We even had time to do a little maintenance on the track. In short, we have had a go at most things and hope that you feel that it was worth it as we do at Kinver.

Today, it only remains for me to wish all our visitors, whether you are a spectator or entrant, an enjoyable two days and if you are a competitor the very best of luck. May the best loco win.

Jim Piddock



Kinfayre Restaurant

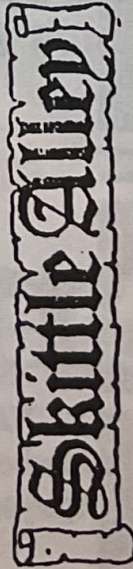
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5"G L.M.S.R. CL. 4-6-2 DUCHESS OF HAMILTON
5"G L.N.E.R. CL. A1 4-6-2 (PEPPERCORN) SEA EAGLE
5"G L.N.E.R. CL. P2 2-8-2 COCK 'O' THE NORTH
5"G L.N.E.R. CL. B17 4-6-0 SANDRINGHAM
5"G FREELANCE CL. B20 4-6-0 3CYL SHERGAR
7¹/₄"G L.N.E.R. CL. B1 4-6-0 STEMBOK

Drawings in preparation:

5"G L.N.E.R. CL. P1 2-8-2 SHAFTHOLME
5"G FREELANCE CL. R1 4-8-2 RAVENSWOOD
5"G FREELANCE CL. T2 4-8-0 ANDRE CHAPELON

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Trade Stands	Ian Priest
Exhibition	Steve Harbach
Track	Roger Bryan
Special Projects	Steve Parton, Pete Dawson Chris Woodridge & Ian Hughes
Programme	Jim Piddock

IMLEC OFFICIALS

Chief Judge	John Hurley
Calculations	Ron Taylor & Kevin Barnes
Engineers	Roger Bryan & Barry Griffin
Steam Bay Sup	John Hemmings
Time Keepers	Eric Lee, Bill Palmer Chris Wooldridge, Dave Fradgley
Observers	Mike Harrison, Steve Parton Ian Priest, Ian Hughes
Public Address	Bryan Clarke & Pete Dawson

ACKNOWLEDGEMENTS

We would like to extend our thanks for assistance to:

The Competitors without whom the competition would not be able to run. To the Bristol & Guilford Clubs for the use of their Dynamometer Car. To Gravesend-Leeds and all the other Clubs for their encouragement and help in organising the event. To our wives and helpers for assistance with some of the mundane jobs. The Red Cross and ATC for being with us throughout the two days and finally, all those club members who have worked so hard leading up to the event. And finally to Andrew Hackett for fitting all this onto the page.

THE KINVER AND WEST MIDLANDS SOCIETY OF MODEL ENGINEERS

A BRIEF CLUB HISTORY

The Kinver & West Midlands Society of Model Engineers has been on its present site for 33 years and in that time has gained a reputation for fine model making but you may be interested to know how it all started.

Back in the 1920's a group of men interested in Boats and Steam Locomotives formed themselves into the West Midlands M.E.S. whose headquarters were at Kingswinford, near Stourbridge. They built a 3 $\frac{1}{2}$ " gauge track around an existing pool and activities continued there until the Second World War.

Several members lived in Wolverhampton and because of travelling difficulties formed an allied group which was known as the West Midland Model Engineers, Wolverhampton Branch. They held their meetings in Wolverhampton Library and sometimes at members homes. At a meeting held at Wolverhampton Library in May, 1943, it was proposed and accepted that the Society became the Wolverhampton Model Engineering Society and continued to operate as such, despite poor membership, until 1951.

In 1951, under the guidance of the Secretary, Mr B Princep, the Society formed itself into a Limited Company and was known as the Wolverhampton S.M.E. Ltd. The reason for this change was to obviate insurance problems, which in retrospect was unique for this period as a good many Societies today are seeking to do the same.

From 1946 up to 1961 the Society flourished at Wombourne with a 600ft Multi-Gauge Track at the rear of the Mount Pleasant Inn and then had to move due to the sale of the land for building purposes. In 1962, and after many problems, management of the Society secured a 20 year lease on an acre of land here, at the Marsh Playing Fields. In 1970, as our interests now lay in Kinver, by a majority vote the Society became known as the Kinver and West Midlands Society of Model Engineers Limited. The following year, 1971, the track was extended to 1,200 ft. Again in 1986 the track was extended to approximately half a mile.

For the future it is hoped to develop the 7 $\frac{1}{4}$ " gauge ground level track outside existing boundaries so that larger models can negotiate larger radius track.

Membership is now around 100 strong and the Society holds regular meetings every Friday. Models can be seen in steam on most Sundays after Easter and up to November from 2:00 to 5:00pm. We are now pleased to hold I M L E C for the second time at this track.

Jim Piddock, Chairman

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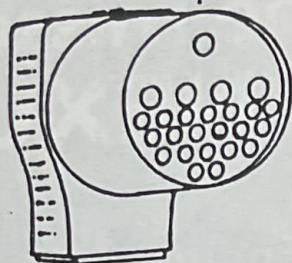
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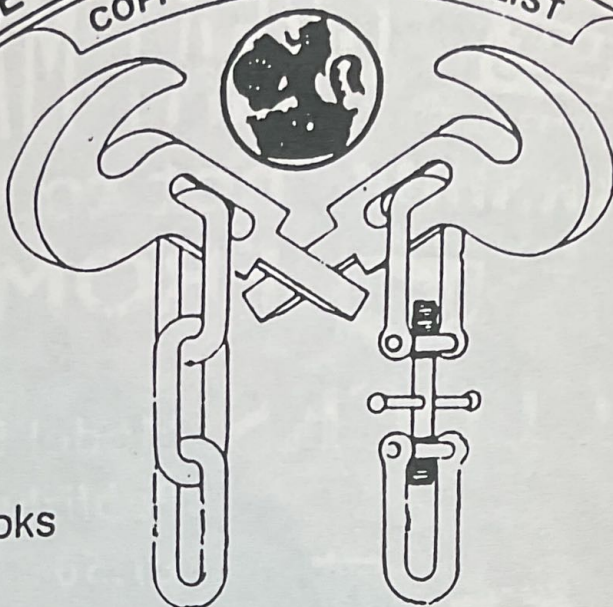
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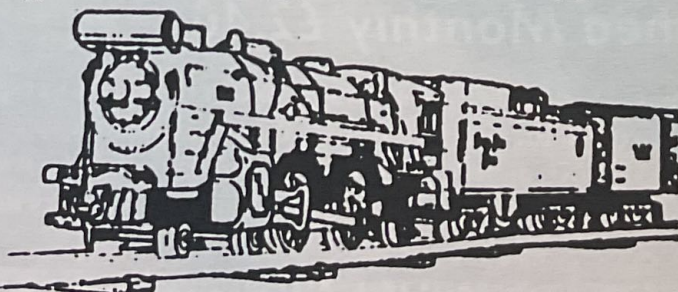
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1969 - PREVIOUS IMLEC WINNERS - 1994

Year	Host Club	Engine	Gauge	Effy.	Driver/Society
1969	Birmingham	Royal Scot	5in	?	J Drury, Birmingham
1970	Whitney	Firefly	5in	?	L Labram, Birmingham
1971	Southampton	Dean Single	5in	?	A Haydon, Newton Abbott
1972	Tyneside	GWR 57XX	5in	1.066%	N Spink, Chesterfield
1973	Chingford	LNER L1 Tank	5in	1.60%	B Longstaff, S Durham
1974	Bristol	'Nigel Gresley'	5in	2.54%	F Winsall, Rugby
1975	Tyneside	GWR King	3 1/2in	1.55%	L Joyce, Chingford
1976	Kinver	Speedy	5in	1.58%	B Perrett, Southampton
1977	Chingford	Speedy	5in	2.32%	B Perrett, Southampton
1978	Guildford	'Maid of Kent'	5in	1.61%	P Wood, Chingford
1979	Bristol	Stirling Single	5in	2.17%	D Morris, Urmston
1980	Bedford	BR Class 7	3.5in	1.37%	P Wood p/e
1981	Bournemouth	LNER J39	5in	2.41%	P Wood, Chingford
1982	Leyland	GWR de Glen	5in	1.50%	R Amsbury, Derby Compound
1983	Guildford	Royal Scot	5in	1.35%	L Prichard, Harlington
1984	Bristol	Royal Scot	5in	3.66%	L Prichard, Harlington
1985	Urmston	'Nigel Gresley'	5 in	1.85%	A Crossfield p/e
1986	Bournemouth	'Nigel Gresley'	5in	1.64%	A Crossfield p/e
1987	Birmingham	LSWR Adams	5in	2.29%	K Moonie, Chingford Tank
1988	Leeds	BR Prop. 2-8-2	5in	4.392%	L Flippance, Guildford
1989	Leyland	BR Prop. 2-8-2	5in	3.02%	L Flippance, Guildford
1990	Guildford	BR Prop. 2-8-2	5in	3.317%	L Flippance, Guildford
1991	Bristol	BR Prop. 2-8-2	5in	1.733%	K Ayling of Worthing
1992	Leeds	7FS&D	5in	1.886%	D Sutcliffe, Ribble Valley Dorset
1993	Leyland	LMS Stainer	5in	2.08%	J Heslop, Rydale Tank
1994	Gravesend	LMS Stainer	5in	1.511%	J Heslop, Rydale Tank

Kinver & West Midlands Society of Model Engineers Ltd
March Playing Fields, Kinver
27th IMLEC 8th - 9th July 1995

Rules and Organisation

1. The competition will commence at 9.00 on both Saturday and Sunday. Competitors will be allocated a run number and start time. This information will be given with the instruction pack issued after being accepted to the competition.
2. Competitors must arrive at the track at least one and a half hours before their run and report to the steaming bay reception. Competitors should present their boiler certificate and number of passengers required for the run.
3. One hour before the commencement of the run, the driver will be allocated an observer and asked for their preference of coal, size and amount required for the run. This will be weighed and allocated in his/her presence. Additional coal will be available on the run and excess will be returned and debited off the total in the driver's presence.
4. Drivers must use their discretion in when to commence lighting up, but must be ready to start their run at the time allotted. Any time slippage will be notified to the driver before lighting up.
5. When ready to raise steam for the run, the driver will be provided with as much paraffin, charcoal or wood, as required to raise steam. The driver may change over to the coal when he likes, but all coal used is included in the weighed amount for the run. The driver must have a good coal fire burning before going out onto the track.
6. The train will be prepared for the driver with the dynamometer car at the front and sufficient passenger cars to carry the number of passengers he/she requires. The track marshal will tell the driver when to back the locomotive down the spur leading to the running track and will assist in coupling the engine to the train.

The driver will tell the observer when he is ready and the time keeper will then start him.
7. Sand will be available for starting from the station and at the discretion of the judges during the run. Reversing to start the train will not be possible as trains are fitted with overrun brakes.
8. The duration of the run is a nominal 30 minutes. No time allowance will be made for stops except for derailments. A competitor may opt to stop once 25 minutes have been completed but the run must terminate in the station. Any competitor not completing 25 minutes will be deemed to have retired. A line side clock will be provided so that you can see the progress of your run. You will be advised when you have ten and five minutes to go and when on the last lap. The total period the train may stop during the run will be eight minutes. If this is exceeded the driver will be deemed to have retired.

9. Any re-un will be run under the same conditions as the original run (same number of passengers etc.)
10. The run will end at the station. Any competitor stopping short of the station because of lack of steam must raise sufficient steam to bring the train into the station before the run is deemed to be completed. All recordings will end in the station.
11. All the unused coal will be collected and weighed in your presence by one of the judges. Only the total coal burnt will be used in the calculations. No allowance will be made for any unburnt coal left in the firebox. The result will be calculated and put up onto the results board as soon as possible.
12. A maximum speed limit of 8 mph will be in operation for the competition. The dynamometer car provides a speed indication at the drivers position. The observer will give a reminder if your speed should approach 8 mph. He will give you a warning should you exceed 8 mph. Three such warnings will result in disqualification.
13. You must not lean on the locomotive/tender or apply the hand brake in such a manner as to increase the drawbar pull. Infringement of this rule will also result in disqualification.
14. The use of the handpump is not permitted except when stationary. However it may be used in emergencies when all other means of water feed have failed in which case the locomotive must be retired and the run terminated.
15. Water will be provided in suitable containers during the run to enable locomotive water tanks to be topped up without stopping. The amount of water used is not recorded or limited in any way.
16. Passengers and carriages may be dropped off during the run if the initial load proves to be too heavy, but only when the train is stationary and it is safe to do so. Additional passengers may not be added at any time.
17. No external assistance is to be given to the train in any way whatsoever at any time during the run.
18. Ballast (including water) added externally to the scale outline of the loco (or in the case of a freelance model, the likely scale outline) is not acceptable.
19. For practical reasons it may be necessary to limit the load or number of carriages pulled in the contest.
20. The decision of the Judges is final in all matters relating to the competition. The Judges are appointed by the Kinver Society of Model Engineers.

IMLEC at**Saturday 8th July**

Run Number	Locomotive Type	Gauge (inches)	Wheels o-o-o	Entrant and/or Driver	Society
1	RAILMOTOR	5"	0-4-0	Don Cordall	PRIVATE
2	FREELANCE	5"	2-4-2	Ronald Painter	NORTH STAFFS
3	SIMPLEX	5"	0-6-0	David Haddock	WIGAN
4	LION	5"	0-4-0	Alan Bibby	LEYLAND
5	RAILMOTOR	5"	0-4-0	Paul Thompkins	PRIVATE
6	SPRINGBOK	5"	4-6-0	John Wilkins	ANDOVER
7	BRITANNIA	5"	4-6-2	Denis Cross	NORTHOLT
8	SPEEDY	5"	0-6-0	Martin Pearson	PRIVATE
9	MANOR	5"	4-6-0	Alan Crossfield	LEYLAND
10	FREELANCE	5"	0-4-0	D Gregson	PRIVATE
11	P2 LNER	5"	2-8-2	John Heslop	RYEDALE
12	SIMPLEX	5"	0-6-0	Barbara Milton	PRIVATE
13	LNER B1	5"	4-6-0	Tom Rowlands	MERTHYR TYDFIL
14	G.W.R.S. TANK	5"	0-6-0	Geoff Moore	GUILDFORD
15	LNER B1	5"	4-6-0	Fred Dodden	TAUNTON
	LMS TANK	5"	2-6-4	Steven Papworth	RESERVE

Sunday 9th July

Run Number	Locomotive Type	Gauge (inches)	Wheels o-o-o	Entrant and/or Driver	Society
1	BRITANNIA	3.5"	4-6-2	K Morris	RUGELEY
2	V4 BANTAM COCK	3.5"	2-6-2	Paul Pavier	PRIVATE
3	MOUNTAINEER	3.5"	2-6-2	Richard Kellaway	TIVERTON
4	BRITANNIA	5"	4-6-2	John Thomas	WHITCHURCH
5	ARMSTRONG	5"	0-6-0	Julian Atkins	ISLE of WIGHT
6	MANOR	5"	4-6-0	Victor Newport	BRACKNELL
7	SHIRE CLASS	5"	4-4-0	Les Dalton	CHELMSFORD
8	LNER B1	5"	4-6-0	David Wainwright	BRIGHOUSE/HALIFAX
9	BAUREIHE23 (DB)	5"	2-6-2	Jan Gravemaker	HOLLAND
10	SOMERSET DORSET	5"	2-8-0	David Sutcliff	RIBBLE VALLEY
11	38 XX CLASS	5"	2-8-0	John Coleman	BRISTOL
12	1500 CLASS B12	5"	4-6-0	Ronald Heathcote	GRAVESEND
13	GWR KING	5"	4-6-0	Bill Beverage	URMSTON

KINVER 1995

Passengers (excluding crew)	Distance Run (feet)	Total Work (ft.lbs)	unnin Time (mins)	Coal Used (lbs)	Average Drawbar (hp)	Coal Consump Rate	Specific Fuel Consumption (lbs.DBHP/hr)	Thermal Efficiency (%)	Final Position

Passengers (excluding crew)	Distance Run (feet)	Total Work (ft.lbs)	unnin Time (mins)	Coal Used (lbs)	Average Drawbar (hp)	Coal Consump Rate	Specific Fuel Consumption (lbs.DBHP/hr)	Thermal Efficiency (%)	Final Position

About the Competitors...

Don Cordall is a private entry but is also very much involved with Bristol Society being the current Chairman. The rail motor to Don Young's design is Don's first model and a regular passenger hauler Don says he always comes last - we shall see!

Ronald Painter representing North Staffs Society built his freelance uniflow engine in 1989. The driver will be Michael Barnett. The engine when driven by Ronald at Leyland came 2nd in 1993.

David Haddock of Wigan M.E.S. built his Simplex from 1988 - 1993 and will drive the engine himself in the competition. At 25 years of age he will be one of the younger entrants today.

Alan Bibby representing Leyland SME built his 'Lion' locomotive from 1987 - 1990 and will drive it today. The loco to LBSC design has modified valve gear and other details as well as redesigned tender.

Paul Tompkins who is a private entry was lucky enough to have his rail motor No. 2 built for him and given as a Christmas present. At 15 years of age he is the youngest competitor today. Paul is looking forward to a career in engineering when he leaves school this year. Good luck with that and the competition!

John Wilkins represents Andover and District M.E.S. with his Springbok, his third engine to date. John who is retired has been a member of Andover Society for the past 25 years.

Denis Cross, representing Northolt Society, built his Britannia locomotive in two years, a fine record even for a toolmaker all his life. In the 1991 IMLEC Denis was placed 13th and represents his society again today.

Martin Pearson is a private entry from Dyfed. His loco, a 5" speedy took him from 1990 to 1994 to complete. Martin only took up model engineering in 1990.

Alan Crossfield representing Leyland Society built his fine model of a Manor locomotive over eight years. This loco was awarded the Reeves Trophy at the Midlands M.E. Exhibition in 1994. Alan has a fine record with his other loco - Nigel Gresley at previous IMLECS.

David Gregson - A private entry of Chorley Lancashire, built his Freelance Saddle Tank engine in 1989. The engine built on 'Ajax' frames ran in the Leeds IMLEC of 1989. David, a member of Leyland SME has entered IMLEC in four previous years.

John Heslop represents Ryedale Society of Model Engineers. John built his LNER p2 'Earl Marischal' over a period of 16 years from 1976. This engine has won many accolades including AALS trophy, Reeves Challenge Cup, Gold Medal and Crebbin memorial cup and the Duke of Edinburgh Award.

Barbara Milton, a private entry from Almondsbury, who is driving a Simplex loco built by members of the Bristol Society over a period of 12 years. The loco was completed in 1994 and will be named 'Ashton' prior to this year's IMLEC. Barbara has won the Welsh and Bristol Club IMLECS.

Thomas Rowland is representing Merthyr Tydfil and District M.E.S. Driving his class B.1. Springbok, the loco took him 6 years to build and was steamed for the first time in June 1994.

Geoff Moore, representing the Guildford M.E.S. is driving his Great Western Saddle Tank. The locomotive which was started by Ernie Powell was completed in 1988 by Geoff. Geoff has been both Chairman and President of Guildford and has experience of both organising and entering IMLEC in past years.

Fred Dodden represents Taunton Model Engineers with his L.N.E.R. B.1. which took four years to complete. Fred has won several club L.E.C.s with this loco and has built many others over the years.

Stephen Papworth is a reserve. Steve built his class 4 M.T. over 10 years and redesigned the loco from 'Jubilee' drawings to give a true scale outline.

Keith Morris will drive the Britannia loco built by Dave Davies as one of a pair in 1986. Keith will represent Rugeley M.E.S. this year.

Paul Pavier, a private entry from Southport, drives his V4 Bantam Cock - (enuff said), which took two years to build and four months to paint. He achieved best 3 1/2 loco at Gravesend last year.

Richard Kellaway represents Tiverton and Blundells M.E.S. with his 3.5" Mountaineer. The loco was started in 1984 to 1991 with painting a further year. Richard has been a model engineer since the age of 10.

John Thomas represents Whitchurch M.E.S. with his Britannia locomotive driven by Mark Hill, who is an apprentice to British Airways, Cardiff. The loco was completed in 1972, winning a silver medal at the London Model Engineering exhibition.

Julian Atkins represents the Ilse of Wight M.E.S. with his G.W.R. Armstrong, originally built by Arthur Grimmet in the 1950's, with a boiler made by Tom Goodhand. The engine was purchased by Julian in 1990 and a rebuild was completed in 1994.

Victor Newport represents the Bracknell Railway Society with his Manor class locomotive which took 8 years to complete. The loco will be driven as last year by David Mayall who has entered IMLEC in three previous competitions.

Les Dalton represents Chelmsford S.M.E. with his LNER D49, built between 1984 and 1989 including modified valve gear. The driving responsibility has been given to Les' son, John.

David Wainwright is representing the Brighouse and Halifax Society with his LNER B1 class locomotive. David is a seasoned model maker, starting at the age of 14. This loco took three years to complete in 1987.

Jan Gravemaker represents the Model Bouw Vereniging 'Hety' which for the uninitiated is in Amsterdam. The 3 1/2" gauge locomotive is a 23023D.B. of the Deutsche Bundesbahn. This loco is Jan's first, which has run only twice before and already Jan has decided to build the same loco again, this time in 7 1/2" gauge.

David Sutcliffe represents the Ribble Valley Live Steamers with his Somerset and Dorset 7F, which is built to as near scale as possible and yet performs well. David has built 10 locos to date, the 7F won the Leeds IMLEC of 1992.

John Coleman represents Bristol Society of Model and Experimental Engineers with his G.W.R. 38XX which was completed in April 1993. Since then the loco has done some hard public running and completed in the 1994 Gravesend IMLEC when it finished in 8th place.

Ronald Heathcote is representing Gravesend S.M.E. with his 1500 class Great Eastern Railway locomotive, which was eventually completed in 1993. The driver will be John Hazelhurst who is a model maker himself and a competent loco driver.

Bill Beverage represents Urmston Society of Model Engineers with his G.W.R. King which had the majority of work completed in 18 months. Bill will be driving today and also drives full size locos on the East Lancashire Railway.

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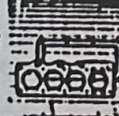





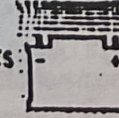


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$$\text{Overall Thermal Efficiency \%} = \frac{\text{Work Output} \times 100}{\text{Heat Input}}$$

Competitors have a choice of either **Anthracite** or **Welsh Steam** coal, the calorific yields of which have been measured.

The number of ft/lbs per B.T.U. is 778, thus:

$$\text{Overall Thermal Efficiency \%} = \frac{\text{Total Work Done} \times 100}{\text{Weight of Coal Used} \times \text{Cal. Value} \times 778}$$

The locomotive that returns the highest efficiency is the Winner.

Some interesting subsidiary calculations are:

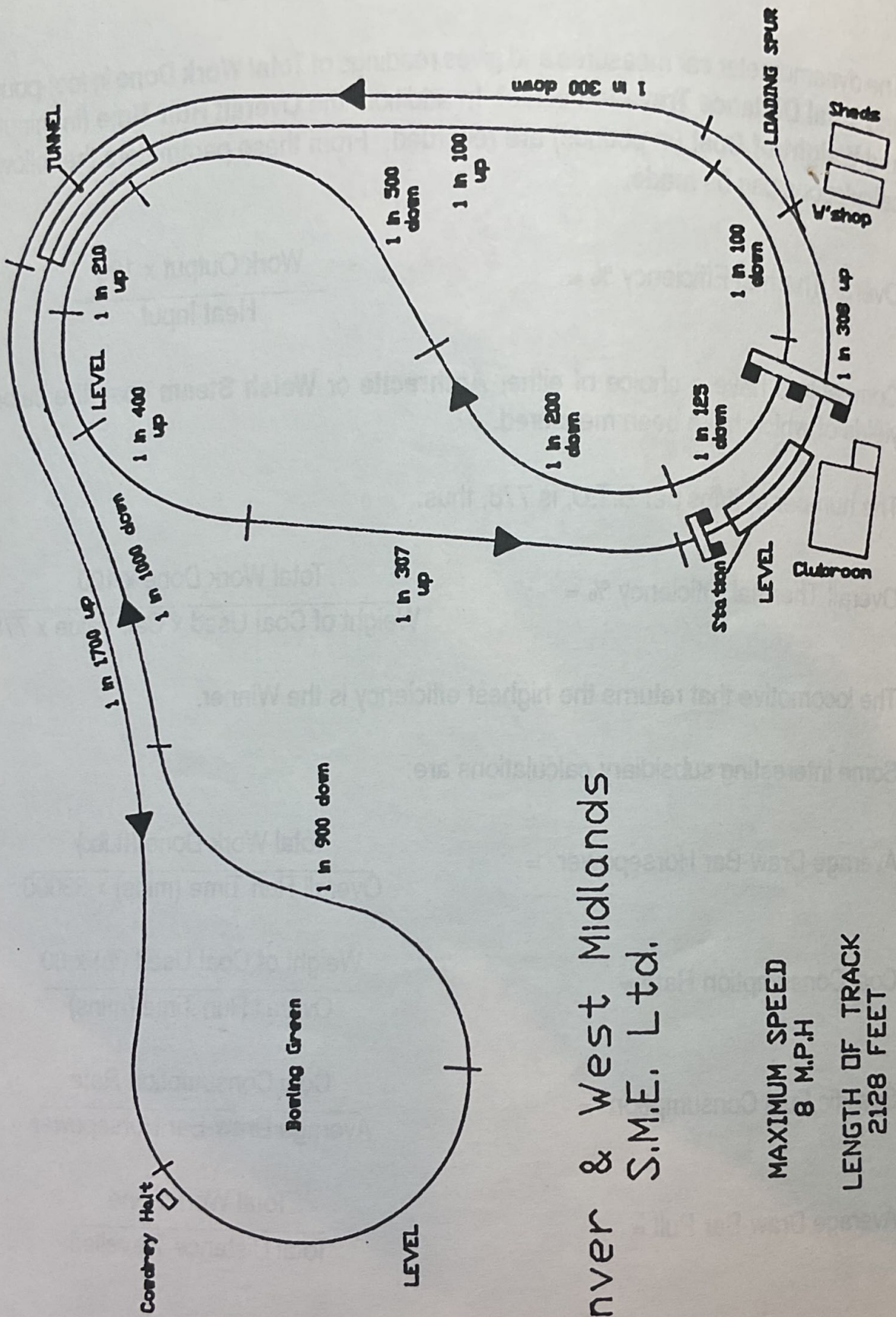
$$\text{Average Draw-Bar Horsepower} = \frac{\text{Total Work Done (ft.lb.)}}{\text{Overall Run Time (mins)} \times 33000}$$

$$\text{Coal Consumption Rate} = \frac{\text{Weight of Coal Used (lb)} \times 60}{\text{Overall Run Time (mins)}}$$

$$\text{Specific Fuel Consumption} = \frac{\text{Coal Consumption Rate}}{\text{Average Draw-Bar Horsepower}}$$

$$\text{Average Draw-Bar Pull} = \frac{\text{Total Work Done}}{\text{Total Distance Travelled}}$$

Exact figures of calorific values are as displayed on the results board.



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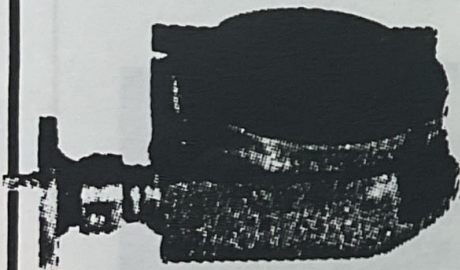
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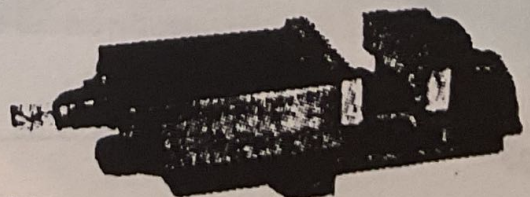
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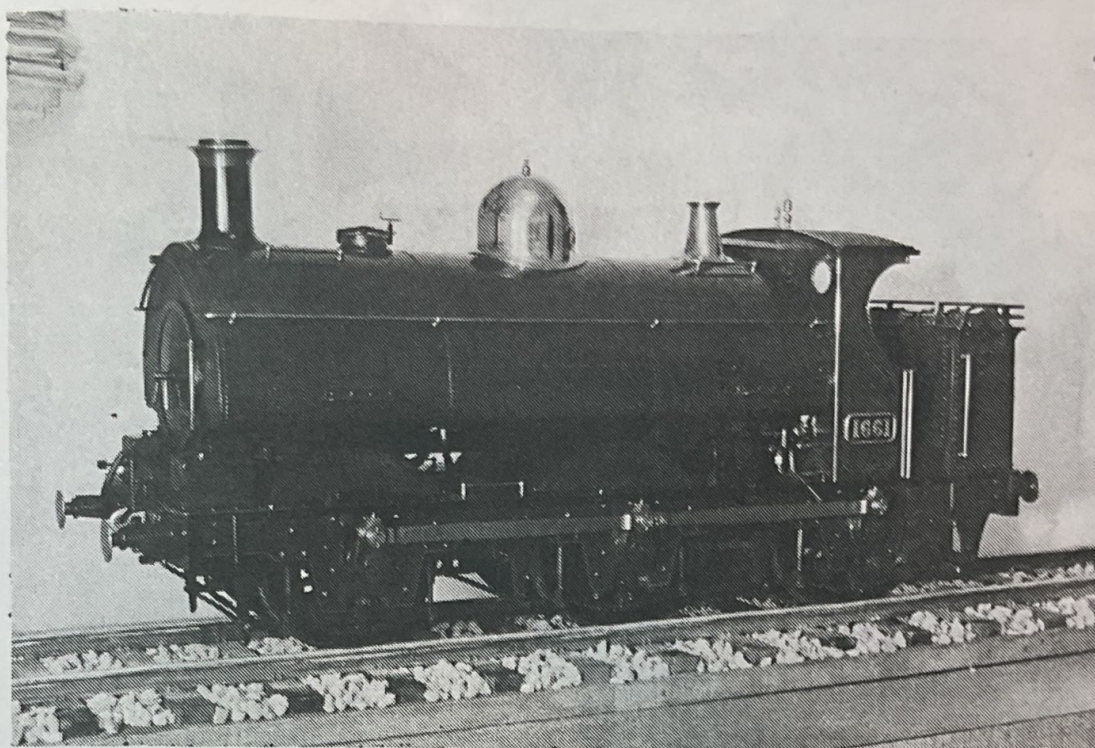
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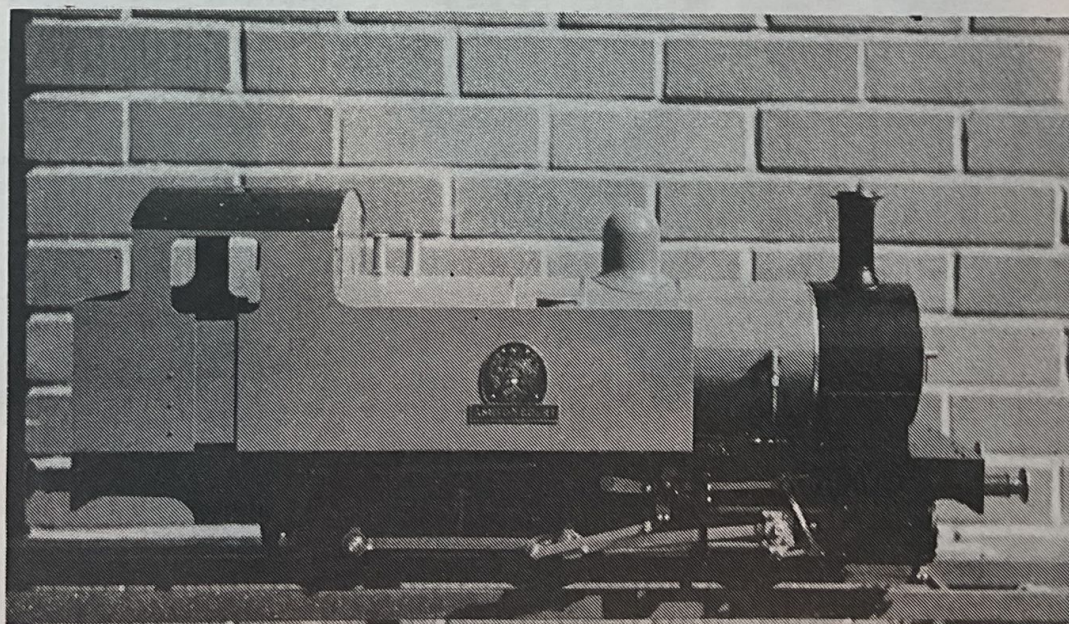
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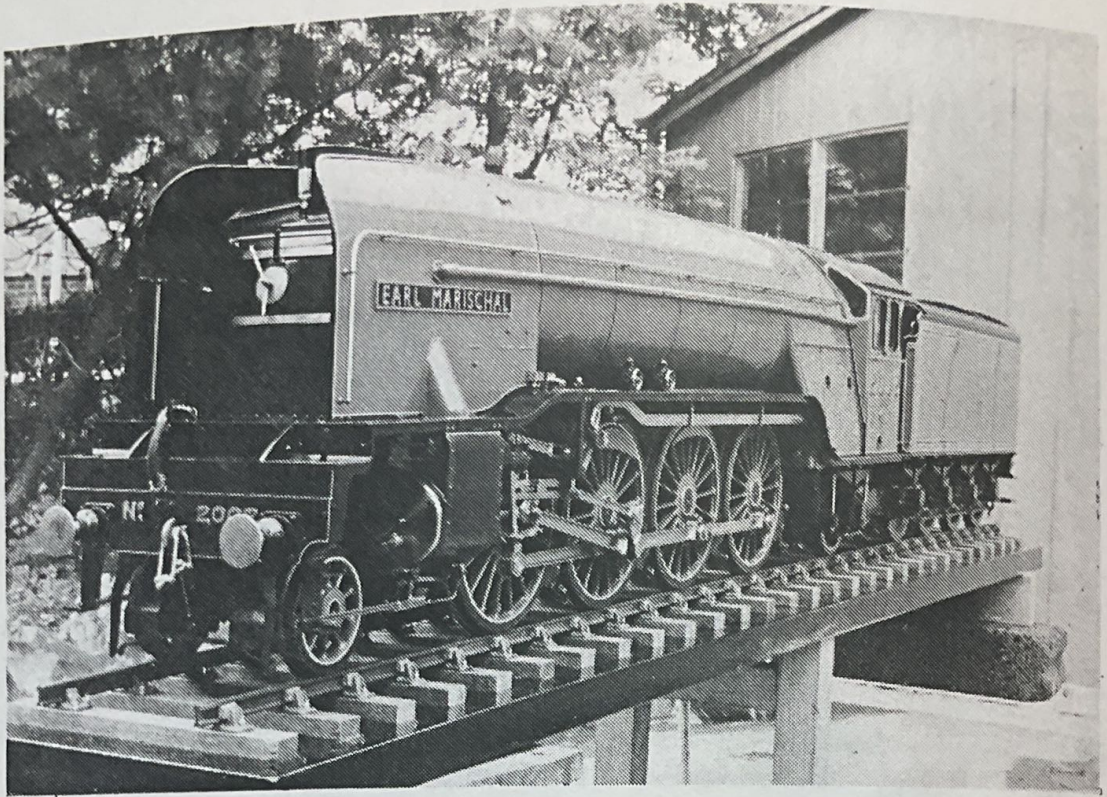
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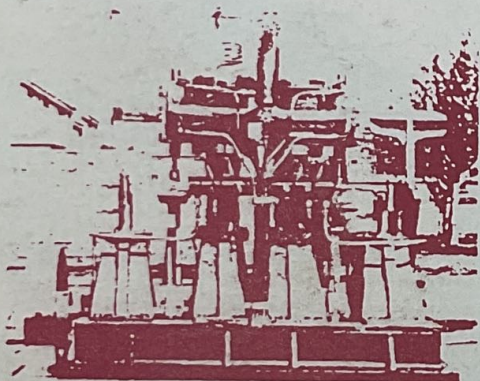
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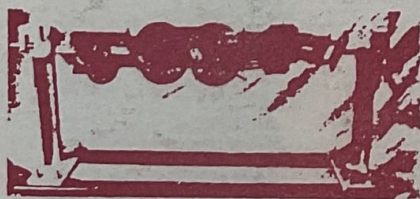


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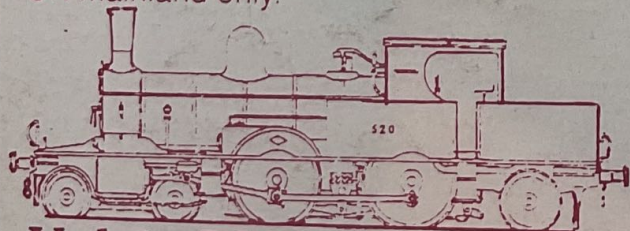
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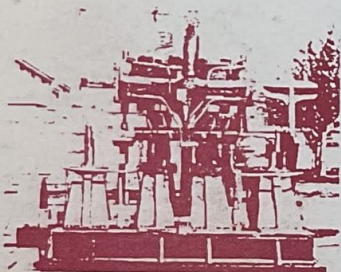
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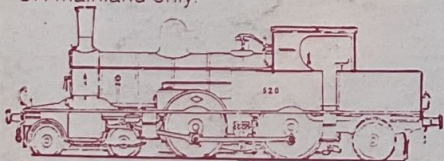
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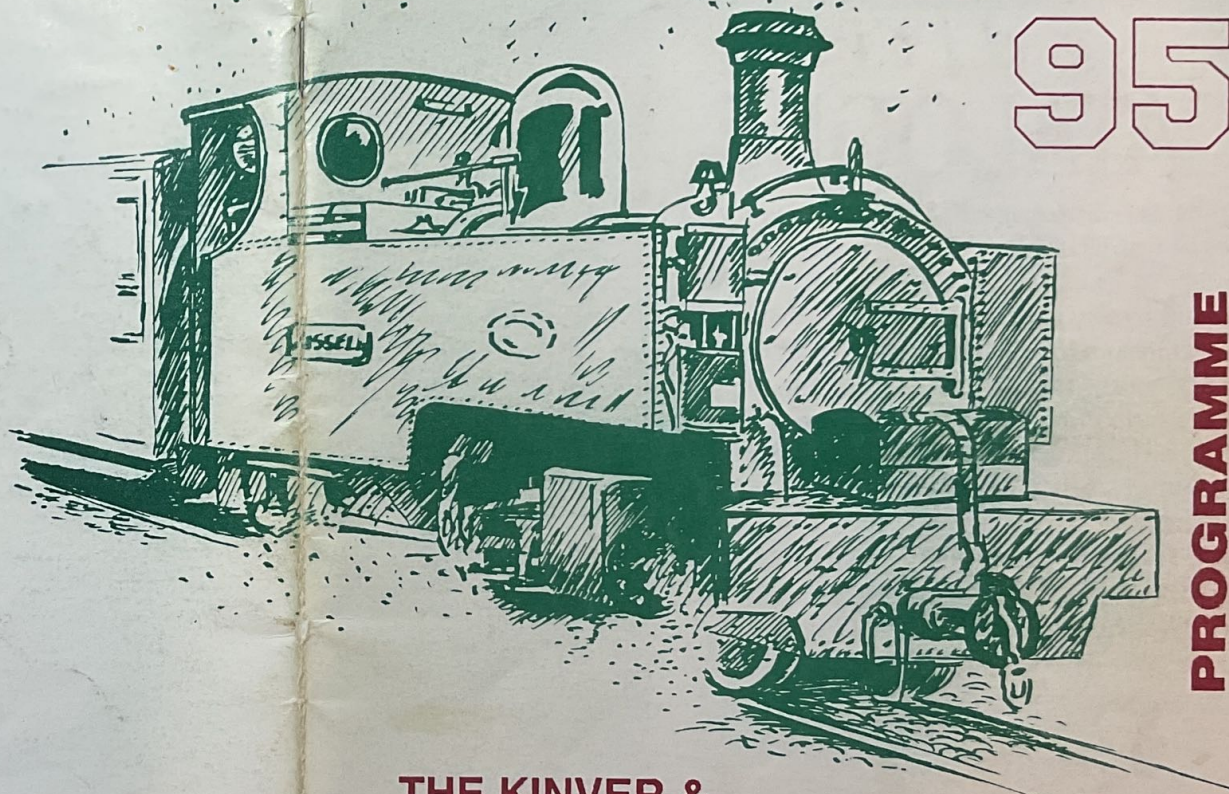
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