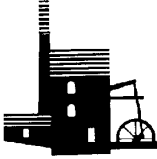


NEWSLETTER 123 JANUARY 2004

THE TREVITHICK SOCIETY



CHAIRMAN'S ADDRESS

The Society is very aware that it has two major responsibilities. One is to the industrial archaeology of Cornwall and the other is to its members. You will each know in which order you would like these to be placed!

In the beginning, the responsibility was to the Cornish engines and their houses but that has since widened to encompass all of Cornwall's industrial past. In recent years the past has been linked with the present and now there are plans for the future.

I expect you have felt proud to see the Society's engine team appear frequently on television, establishing Cornwall's industrial history in homes throughout the nation. The arrival of the excellent new £2 coin from the Royal Mint confirms the establishment's acceptance of all our claims. It is important that this coin should remain in circulation for as long as possible. Consider whether you vote for the Euro.

The Society is in discussions with the Heritage Lottery Fund and local regeneration groups to re-establish, preserve and display the artefacts of Cornwall's remarkable industrial history.

Sue Maunder, your membership secretary, is delighted with the response to her questionnaire. It is clear that you have appreciated her approach and have been willing to respond. Sue has received many interesting replies and it will take some time to reply to those that require an answer.

There were many offers of assistance but several included the proviso that the writer considered himself to be in his declining years. Please do not let that stop you. You have a great deal to offer and the average age around the council table is probably similar to that of the Society itself.

A wide range of ages and enthusiasm is required to enable this Society to undertake the very busy programme that lies ahead. As we accomplish more we will be able to provide a greater service to Cornish industrial archaeology and our membership. To paraphrase the late President Kennedy, 'Ask not what your society can do for you, ask what you can do for your society'. Happy 2004.

P.M. Hosken

EDITORIAL

In the December issue of the Cornwall Today magazine, the old Society website was highlighted as the "website of the month". This has delayed the shutting down of the old site, however, it does direct surfers to see the new site created by Pete Joseph.

I must apologise to Ken Brown for scanning the wrong side of his transparency on the Mountain Mine man-engine house in Ireland, which appeared on page 4 of Newsletter no 122. This mistake meant that the published photograph was a mirror image of what it should have been, making a nonsense of the caption.

Congratulations to Stuart Smith who was made an OBE in the New Years Honours List, for services to industrial archaeology. This was in recognition of the many years he has worked in the field; at the Beamish Open Air Museum, Ironbridge Gorge Museum and as chief executive of the Trevithick Trust. He has been a member of this Society for many years and represented the Trevithick Trust at Council Meetings of this Society until his retirement as chief executive.

At 24 pages, this is the largest Newsletter I have edited. I do hope our Treasurer, Stephen Thomas, makes a full and rapid recovery after the shock of the additional printing costs!

Copy date for next issue is March 12th, 2004

Colin French

LETTERS TO THE EDITOR

Dear Editor,

I was intrigued by the short article by PMH concerning the description of the three cylinder opposed piston two stroke diesel engine and wondered if he was describing the Rootes Commer TS3 engine made during the 1950s and 60s?

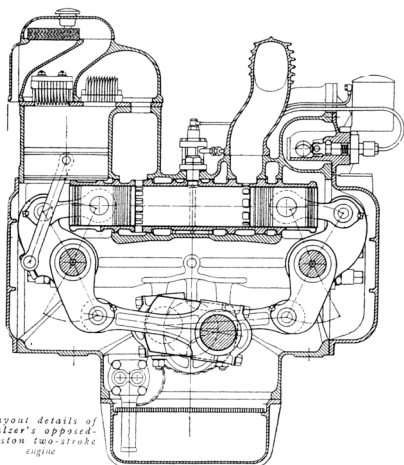
I was apprenticed at Tilling-Stevens in Maidstone, Kent, where the above engine was made and where the design and development offices were also located.

I subsequently learnt that the design was heavily based on the 1930s Sulzer and Junkers design (see copy of cross section). One major difference was that the scavenging was done by a Rootes impellor-type compressor mounted on the front rather than the piston device on the top, as shown, and this resulted in a very low and compact engine.

The Engineering Manager was a Dr. Stransky, who spoke with a heavy Eastern European accent, and I have since wondered whether the Rootes Group had 'inherited' the design as part of the WW2 reparations - as per the famous BSA Bantam motorcycle!

Bryan Collins,
31 Surrenden Road, Staplehurst,
Tonbridge, Kent. TN12 0LY

Dear Editor,



*Layout details of
Sulzer's opposed
piston two-stroke
engine*

May I appeal through your columns to anyone who may have any copies of the Engine Reporters tucked away. Even if they are just the odd single issue, they can perhaps fill a gap in our knowledge, and a photocopy would be most valuable. There is a finding list at the back of my recent book on "Mr Lean and the Engine Reporters". This shows what is missing from the set at the Cornish Studies Library in Redruth - a collection which came from the Trevithick Society, when it was the Cornish Engine Preservation Society.

I should be extremely grateful if anyone who thinks they can help would be so kind as to get in touch with me. Should anyone perchance have copies of Browne's - or even Tonkin's - Reporters, I would be even more excited.

So, do please, look in your old files.

Bridget Howard,
Flat 2, The Gate House,
Edinburgh Square, Midhurst,
West Sussex. GU29 9NL

Dear Editor,

Bridget Howard's fascinating book on Lean and the Engine Reporters published by the Society, makes for me a notable contribution to the knowledge of West of England engineering history.

I first heard of the "Engine Reporters" many years ago while visiting Kendal Andrew in St. Austell: this opened up yet another 'romance' for me with its details on, now long gone, incredible machines.

It was with surprise that I read Lynn Willies' review - which seemed to inhabit a different world from that which I associated with Cornish engineering and the Reporters. Bridget Howard's reply - in the latest Trevithick Society journal - did bring a welcome confirmation of my thoughts. Her comments regarding who should review a book should be well taken. Also, the need to have someone who understands the 'nuances' of a region's philosophy (culture). West of England miners and engineers surely had a different outlook from those of other areas: Black Forest miners had different values from say, Scottish miners; although "a mine is a mine", but one only

DOLCOATH MYSTERY

has to study details of their work to realise the differences, let alone work with them.

It is all too easy to try to empathise with an insecure base. A great deal of misleading information in written accounts suffer from such unsound influences: discussions over operations purporting to be of one district but 'lifted' from some account of another leads to poor research. Ideally, a researcher should have worked - not merely visited - in different mines or works to understand the dismay I felt on reading the review. Even if the operation being researched is hundreds of years old, such contact with present day sites results in 'sympathy' with the work.

Bridget Howard's reply in the latest Journal to the reviewer has comments that underscore the dismay I felt about the review and holds much that should be considered to support the point of view I outline.

Bryan Earl,
Heathercliffe,
Sennen, Penzance. TR19 7AX

Dear Editor,

I am a numismatist and believe that copper extracted from Cornwall eventually made its way into the coinage of the thirteen U.S. colonies in the eighteenth century for copper circulating coinage. Any information that would assist in substantiating this belief would be most appreciated. I am aware of metallurgical analysis, Oxford University, etc., as a tool to help prove this claim.

John Lorenzo,
Midland Park,
New Jersey,
USA

In frigid, and torrid, and temperate zones.

George B. Airy 1801-1892
(Sixth Astronomer Royal, 1836-1881)

At first glance the poem above appears to have no relevance whatsoever to Cornwall, until one realises that it is entitled "Dolcoath". Airy was from Alnwick, Northumberland, and I can see no connection between that and the use of the word Dolcoath in his poem. I wonder whether any member can shed light on this mystery.

The mention of Dolcoath prompts me to raise another point. There is, in mid Wales, a very ancient mine - purported to have been worked by the Romans - which I have visited. That part, which is easily accessible, is mainly a series of levels driven into a hillside. This mine is known as Dolaucothi, which is very reminiscent of Dolcoath. My Welsh is no better than my Cornish, but they appear to mean the same thing.

I hope that some member will be able to help with point one, and perhaps reveal whether Dolcoath and Dolaucothi are of similar meaning.

D.G. Attwood,
83 Holt Drive,
Loughborough,
Leics. LE11 3HZ

When the greatest of England's bold voyagers perished,
'Twas the ear of a savage that heard his last groans
And, far from the land where his memory is cherished,
On a tropical island are scattered his bones:
Unjust was the fate that arrested his motion,
Who with vigour unequalled, unyielding devotion,
Surveyed every coast and explored every ocean,

HARVEY AND BRUNEL'S ATMOSPHERIC RAILWAY

A synopsis of the principle of the atmospheric system of train propulsion can be found inside of the front cover sheet of Charles Hadfield's book *Atmospheric Railways — a Victorian venture in silent speed*: "Within fifteen years of the opening of the Liverpool and Manchester Railway in 1830, Victorians were seeking an alternative to the steam engine, something cheaper, faster, more powerful on gradients, safer and cleaner. In atmospheric railways they almost found it. Atmospheric traction used the pressure of the air to drive a piston, attached to the train, along a tube laid between the rails, in which a vacuum had been created by lineside pumping engines. Four such railways were built and operated at times between 1844 and 1860, the South Devon between Exeter and Newton Abbot, the London and Croydon, the Kingstown and Dalkey in Ireland, and the Saint Germain line near Paris. In other forms the system powered experimental underground railways and post office internal communications". The book gives a clear and easy to read account of this railway method of propulsion.¹

In August 1844, Isambard Kingdom Brunel, the engineer of the South Devon Railway company recommended the trustees adopt the atmospheric system of propulsion on the line between Exeter and Plymouth. The construction of just a single working line would save much outlay and this proposal was agreed to.

"The idea of the atmospheric system was to make the pressure of the atmosphere available as a propelling force. For this purpose Clegg and Samuda patented in 1839 an apparatus of which the essential parts may be described as follows:

A cast iron pipe (on the South Devon, 15" in diameter) in which a close-fitting piston travelled, was laid between the rails. At intervals along the line stationary steam engines were erected to work large air pumps, whereby the air could be exhausted from the pipe and a partial vacuum created within it. To enable the piston to be

connected with the carriage to which the train was attached, the top of the pipe had a continuous slit, about 2½" wide, closed by a flap of leather strengthened with iron plates, and secured to the pipe on one side of the slit. One edge of this longitudinal valve, as it was called, thus formed a continuous hinge, whilst the other edge, where it closed the pipe, was sealed with a composition of grease to render it airtight. A frame of iron plates, about 10 foot long, carried a series of small wheels, these pressed against and so opened the longitudinal valves. A small roller fixed behind the carriage closed the valve as it passed. The air in the pipe in front of the piston was pumped out by the stationary engines. The piston was driven forward by the atmospheric pressure behind, carrying with it the carriage and the train, and leaving the longitudinal valve closed and the pipe ready to be again exhausted for the next train. Brunel's specification of the steam engines and vacuum pumps were for high pressure condensing engines, fitted with double-seated expansion valves, having boilers proved to 100 lbs. per square inch."²

The atmospheric trains commenced trial runs between Exeter and Teignmouth in July 1847, and into a regular service by September 1847 between Exeter and Newton Abbot, but difficulties in operation soon arose. Amongst other faults, the leather valves caused problems due to the leather perishing and being eaten by rats, this leading to the valves not closing tightly, thereby not being completely airtight. Thus the pumps were unable to produce the vacuum required in the pipes. Train speeds from 30 to 40 m.p.h. were the norm when the system was working correctly. For the year September 1847 to September 1848, the railway worked quite regularly, but due to many problems, which reduced the reliability of the service, the attempt was finally abandoned with a loss of about £350,000.³

A brief reference to Harvey's involvement with this new system of propulsion on the railways was found in the Royal Cornwall Gazette dated 8th August, 1845. It stated that Harvey's had nearly completed an order for 6 flywheels for the stationary

engines required by the South Devon Atmospheric Railway. Each flywheel measured 20 feet in diameter and weighed approximately 14 tons. Two of the wheels had been despatched to their required location, and the other four were nearly ready for sending to Devon.⁴

No direct account of Messrs. Harvey and Company with the South Devon Railway Company was found. However, a letter dated 20th September, 1845 from Rennie and Company's agent Mr. Humphreys, enquired as to how soon two similar flywheels that Harvey's had made previously for Rennie and Company, to supply to the South Devon Railway Company, could be made for them and the price charged for delivery of the same to London. This letter thus indicates quite clearly that Harvey's were sub-contracted by Rennie and Company to make the six flywheels.⁵ Rennie's account with Harvey's establishes their involvement with the atmospheric railway being constructed by I.K. Brunel in Devon.

In early 1845, 2 flywheels and three boilers were delivered to Devon by Harvey's own smack The Trelissick.⁶ The flywheels were cast in three parts, each bored and turned to size. Each wheel, along with the required tongues, cutters and rings needed for assembly, cost £134-10-0 and weighed just over 13 tons. At the same time 3 wrought iron boilers, made of Shropshire plates and best tough iron, with a steam chest on each, angle rings faced and holes bored, all weighing over 37 tons, were also despatched, along with fire bars, sleepers and ashes plates. The remaining 4 flywheels were despatched, again by The Trelissick, later in the year, these costing a total of £561-18-1.⁷

In 1847 Harvey's became suppliers by contract to the South Devon Railway Company. A Mr. E. Blewett, an employee of Messrs. Harvey, was sent as an advisor to Totnes, and Harvey's were receiving various sums of money for work carried out. On March 31st, 1844, the account book reveals that two pair of vacuum engines with 80 and 48 inch cylinders, 9 foot stroke, with 4 boilers for each pair of engines was supplied. A number of sundry items for a partly finished 6 inch force pump

were made, and also in the previous year, May 9th 1844, the railway company was supplied with an engine counter and its box, at a cost of £5-10-0. Due to the closure of the company none of this engine machinery, made by Harvey's was ever installed or used. In total the work cost £12784-9-0.

The monthly ledger shows that Harvey's in lieu of a cash payment received 400 tons of broken cast iron atmospheric pipe at £2-16-0 per cwt (total £1200), and also took two boilers back for a cost of £333-13-0. The two boilers were later sold to a Mr. Whin.⁸

Hadfield calculated the total expenditure on the South Devon Railway line at £433,941-4-8. In June 1849, the sale of engine houses, engine tubes and valve leather began. This continued until 1852-53. Approximately £81,000 was recovered leaving a debit of £353,000. The breakdown of the expenditure was:

Harvey's share of the total expenditure was 3.316%

Only four engine-makers supplied the railway. Their share of the work was:

Harvey's share of this work was nearly 11%.

A letter (see appendix) appeared in the Mining Journal on the 18/02/1905 written

	£	s	d
Tubes	194,503	10	10
Continuous valve and fastenings	27,976	9	1
Composition for valve	9,219	12	5
Section valves, starting gear, etc.	3,846	10	7
Apparatus	18,688	4	9
Piston gear	2,786	1	9
Machinery, tools, etc.	1,684	10	4
Newton workshop	203	8	0
Engine houses	48,610	19	10
Engines and vacuum pumps	117,721	17	1
Patent rights	8,750	0	0
Total	433,991	4	8

by Wm. J. Vivian of Reskadinnick, near Camborne, stating that Mr William West of St. Blazey Foundry 'designed and supplied the stationary engines, of which there was a considerable number erected at regular intervals along the line, —'. These

	£	s	d
Boulton and Watt	75,319	14	1
G. and J. Rennie	18,510	11	0
Harvey and Co.	12,767	0	0
Maudslay, Son and Field	11,124	11	11
Total	117,720	17	0

engines were for the South Devon Atmospheric Railway between Exeter and Plymouth. He also states that 'Mr West's engines were admirably adapted for the purpose for which they were designed'. No proof of Mr West receiving a contract and constructing such engines has been found to support this letter.

Russ Webber

REFERENCES

- 1 Charles Hadfield *Atmospheric Railways—A Victorian venture in silent speed*. David & Charles, Newton Abbot, 1967.
- 2 Michael William, secretary of the Brunel Society. His article entitled "Atmospheric system of train propulsion - applied by Brunel to the South Devon Railway 1844-8", Newsletter No. 27, March 1979.
- 3 Charles Hadfield - as ref. 1. Chapters 9 and 10, pp. 143-176.
- 4 RCG-8/8/1845.
- 5 CRO. H/1/35 (155).
- 6 Smack-sloop esp. for fishing. Sloop - small one-masted fore and aft-rigged vessel with mainsail and jib, and uses gaft topsail and forestay sail (ref. The Concise Oxford Dictionary).
- 7 CRO. H/3/19.

8 CRO. H/4/2 and CRO. H/3/20.

APPENDIX

RCG. 8/8/1845 (p.2 col. 6.)

Messrs Harvey and Co. have nearly executed the order for six fly wheels for the stationary engines of the South Devon Atmospheric Railway, measuring 20 feet in diameter, and each weighing near 14 tons. Two of them have been sent to their place of destination, and the other four are in a great state of forwardness and will be sent off soon.

CRO. H/1/35 Letter number 155.

8 Holland St. 20th Sept. 1845.
Messrs. Harvey and West,

I will thank you to inform me how soon you could undertake to deliver in London two fly wheels like those you have made for us for the South Devon Railway and at what price you will supply the same.

I am gentlemen, your ob^t. ser^t.

(EW)? Humphreys.

M.J. 3626 18/2/1905

Letter to editor entitled "Mining in Cornwall" sent by Wm. J. Vivian, making reference to William West of St. Blazey Foundry.

Mr. Austin who later became Mr. Treffry — he had a very clever manager of his mines in Captain Tom Petherick —. He also had as his mechanical engineer one who deserves notice; a man who, although rising from the ranks of the common labourer, distinguished himself by the fine steam engines and other machinery which he erected on Mr. Treffry's mines. This was William West, of St. Blazey, who commenced life in a humble capacity of a driver of horses and carts at Dolcoath mine, and raised himself by his own genius to the position of a considerable landowner, a banker, and owner of a large foundry and engine factory at St. Blazey. He also became almost sole owner of one of the largest mines of Cornwall - the Phoenix mine, in the Liskeard District. Mr. West became known to Mr. Brunel when the

great engineer of the G.W.R. was about to give a trial to the idea of propelling railway trains by atmospheric pressure applied through a tube laid between the rails. This trial was made when the South Devon Railway, between Exeter and Plymouth was constructed, and Mr. West designed and supplied the stationary engines, of which there was a considerable number erected at regular intervals along the line, and by means of which a vacuum was created in the tube, and the propelling power brought into action. Mr. West's engines were admirably adapted for the purpose for which they were designed, but it was found after the system had been at work some time that it was subject to too

many breakdowns and interruptions, and the line was worked by locomotives.

Yours truly, Wm. J. Vivian,
Reskadinnick, Feb. 8th 1905.

CRO H/3/19 Rennie and Co. account p.440

1845 June 20th	to 3 wrought iron boilers made of Shropshire plates and best tough rivet iron, with a steam chest on each, angle rings faced and holes bored, by the Trelissick 37 tons-11-2-21 D/D at 19/6		£732-17-11	
	CWT-Q-LBS			
	560 fire bars, close cast 143-2-11			
	9 sleepers, close cast 5-1-14			
	9 ashes plates, close cast 12-3- 7			
	161-2-22 D/D at 7/6		£60-12-9	
	2 flywheels in 3 parts each, CWT-Q-LBS bored and turned. 522-0-0			
	Wrought iron tongues and cutters for do. 7-0-6			
	4 do - rings for do. bored and turned 9-2-7			
	538-2-13 at 10/-		£269-6-2	£1062-16-10
1845 Nov. 15th	To 4 flywheels in 3 parts each, T-CWT-Q-LBS bored and turned, 54- 4- 0- 0 by the Trelissick.			
	12 wrought iron tongues and 48 cutters for do. 0-13- 2- 6			
	8 do rings bored and turned 0-18- 2- 7			
	55-16- 0-13 at		£558-1-2	
	10/-			
	CWT-Q-LBS		£3-16-11	£561-18-1
	18 sleepers, close cast. 10-1-0 at 7/6			

CRO H/4/2 Monthly ledger—Rennie and Co. London p.702.

DR	CR
1845 June 30th to goods £1062-16-0 £1062-16-0	1845 July 11th by cash £1062-16-0
Nov. 30th to goods £561-18-1 £561-18-1	Dec. 13th by cash £561-18-1

CRO H/4/2 South Devon Railway Company—monthly ledger p.777

DR			CR		
June 22nd 1847			June 22nd 1847		
To cash adv. E.Blewett	6-0-6		Sept. 4th 1847 by cash		2000-0-0
to Totnes as advisor			April 6th 1848 by cash		1000-0-0
June 27th 1847			May 2nd 1848 by cash		2000-0-0
to ditto	12-0-0		June 15th 1848 by cash		28-0-0
June 29th 1847			Balance		3005-12-0
to ditto	2-0-0	20-0-0			
Jan. 24th 1848					8033-12-0
to ditto		6-0-0			
July 14th 1848			Oct 27th 1848 by cash		1000-0-0
to ditto + W.Dunstan		2-0-0	Jan 22nd 1849 by cash		500-0-0
			Jan 31st 1849 by cash of 2		2000-0-0
			bonds		
			Balance		4284-9-0
March 31st 1849					
to goods	8000-0-0	8000-0-0			
May 31st					7784-9-0
to goods	5-12-0	5-12-0			=====
			April 30th 1849 by cash bond		1500-0-0
			May 11th 1849 by cash cheque		30-16-0
			May 11th 1849 by cash bond		1300-0-0
March 31st 1849					
to balance		3000-12-0	May 31st 1849 by foundry for		
March 31st 1849			broken atmospheric pipes per		
to goods	4762-0-0		inv. book 400 tons at		
to goods	11-17-0	4778-17-0	£2-16-0		1120-0-0
			Mar. 30th 1850 by foundry		
			for two boilers taken by us		333-13-0
			as agreed (afterwards sold		
			to Mr. Whin)		
to balance		£4284-9-0			£4284-9-0

CRO H/3/20 South Devon Railway account p.392

1848	To charge on a/c of contract			8000-0-0	8000-0-0
March 31st					
1848	To an engine counter per Cornwall steamer to Bristol then hence per railway to Exeter care of Mr. James Pearson.			5-10-0	
May 9th					
	A box			2-0	5-12-0
1849	To two pair of vacuum engines 80 and 40 inch cylinders, 9 ft stroke with 4 boilers each pair per contract.		13800-0-0		
March 31st					
	Less charge on a/c 31st March 1848.	8000-0-0			
	Less non completion of work.	1033-0-0	9033-0-0	4767-0-0	
	Sundry parts of a 6 inch force pump partly finished per waste book.		25-14-6		
	Less deduction (if left on our book)		13-17-6	11-17-0	4778-17-0
					12784-9-0

TREVITHICK MAKES MONEY

Richard Trevithick's historic achievement of 1804 is to be commemorated by the Royal Mint in 2004. In January, the Royal Mint will launch a new two-pound coin for 2004.

The new design, approved by HM The Queen, will be a celebration of Richard Trevithick's building of the world's first railway locomotive in 1804. It is the latest in the Royal Mint's anniversary series.

The issue of this new coin is significant recognition of Richard Trevithick (1771-1833) and the excellent quality of Cornish engineering in the nineteenth and twentieth centuries. Trevithick's very major achievements in the world of engineering is as great, if not more important, than those of Watt and Stephenson.

Frank Trevithick Okuno, a direct descendant of the great engineer and a lifelong proponent of his rightful place in history, said, "I am delighted about the coin. It has eventually given Richard the permanent public recognition that he so richly deserves."

There has been a long held opinion in Cornwall that Trevithick never received the credit for having designed and built the first high pressure steam engine. James Watt said Trevithick should have been hanged for what he did. Nevertheless, his invention powered the Industrial Revolution and world transport for over a century.

The coin is beautifully designed and the three words, 'invention, industry' and 'progress' clearly illustrate the message that it carries. This is a fitting tribute to one of Britain's greatest inventors by one of its leading institutions."

The coin commemorates Trevithick's achievement in designing and operating the first self-propelled railway locomotive. It ran in February 1804 between Penydarren, Merthyr Tydfil and Abercynon in South Wales.

"I have the satisfaction to inform you the Tram Road Engine goes off very well - we have made a Journey on our Tram Road nine and a half miles in length - it took 10 Tons long wts of Iron & about 60

or 70 people riding on the Trams which added 4 or 5 tons more to the wt - it goes very easy 4 miles an hour, & is as tractable as a Horse, will back its load, & move it forward as little (& slow) at a time as you please - with this Engine we can manage the different tryals" so wrote Samuel Homfray to Simon Goodrich following the successful operation of the first steam locomotive in the world to haul a load on rails.

Uncirculated coins in presentation packs will be available from January 2004. Order forms and details from the Trevithick Society, PO Box 62, Camborne TR14 7ZN.

A group called Trevithick 2004 and led by Merthyr Tydfil County Borough Council will celebrate the bi-centenary of this historic first journey by organising an amazing array of events and exhibitions in South Wales between February and September next year.

The National Railway Museum at York is organising a 200th Anniversary Railfest between the 29th May and 6th June 2004.

Trevithick was quite undaunted by the fortunes he lost by embarking upon more inventions. He was not disheartened but undertook more ventures and went on to invent many things that we take for granted today. He spent eleven years in South America and made a fortune that he had to discard when civil war broke out. He returned penniless to Britain and worked in Dartford where he died and is buried.

It is fitting that Trevithick should have eventually ended up in the money, although not in a way that even his fertile imagination would have considered likely!

Details from
www.trevithick-society.org.uk
Trevithick Society
www.trevithick2004.co.uk
Merthyr organisers
www.nrm.org.uk National
Railway Museum

Philip M Hosken
marrack@zoom.co.uk

FILMS ON CORNISH SUBJECTS

Roger Langley, whilst 'weeding out' old papers came across programmes for two film shows arranged by his father, John Langley, for the Midland Cornish Association in 1956 and 1957. It would be fascinating to know which ones are still in existence.

Films on Cornwall and Cornish Subjects

1. Cornish Valley The third film in 'Pattern of Britain' series made with assistance of the Ministry of Agriculture for the Central Office of Information during the last War. Made in Coombe Valley, North Cornwall. 17 minutes.

2. Cornish Ramble Paramount. 1946. 17 minutes. A general tour of Cornwall.

3. Falmouth A colour film in Kodochrome sponsored by the Falmouth Corporation. It is a publicity film for the resort and the country of the surrounding district. (A silent film to which background music is provided.) 30 minutes.

4. Men, Mines and Machinery (By courtesy of Holman Bros Ltd) This film – Ford Magazine No 24 – has interesting shots of derelict and operating mines. Camborne School of Mines, and Holman Bros works and own mines. 11 minutes.

5. Cornish China Clay (By courtesy of English China Clays Ltd). This 30 minute sound, colour film – Cinechrome production – deals in detail with this industry; background music is provided by the massed choirs of the English China Clay industry conducted by Captain J L Stanway. It deals with the geology of the area, the discovery of China Clay, the processes involved in the separation of the clay, its' grading and bi-products, testing for colour and necessary properties, research work (including use of the electron microscope) and dealing with the end products.

6. West Country Journey 1953. British Transport Film Board. Colour. 26 minutes.

By rail from London to the West. After passing through Devon, the Tamar is crossed and we see glimpses of the little fishing villages and sandy beaches of Cornwall. The shots are linked by a commentary from 'Literature of the West'. (The land approach to the County.)

7. Cornwall Calling Austin Motor Co Ltd. 15 minutes. A cruise by yacht, along the South Cornish coast, beginning at Plymouth and ending at Land's End, calling at Looe, Polperro, Mevagissey, Falmouth, passing the Lizard, Kynance Cove, St Michael's Mount, Mousehole, Porthgarra, Mill Bay, and Land's End. Britain's finest stretch of coastline as seen from the sea.

8. Cornwall A David Hand travelogue. Colour. 8 minutes. One of a series produced by GB to bring to the screen tales and legends from many parts of Britain. Primarily designed for children, but has interesting narration about Cornwall.

9. Coastal Village GB. Instructional for British Council. 11 minutes. Produced in 1943, this is a film of a Cornish fishing village – Newlyn in Mount's Bay – and shows the life of the village and the fishermen. Shots are included of deep sea Herring Fishing.

10. The Cornish Engine Shell Film Unit. 1949. 35 minutes. This film pays a tribute to the invention of the Cornish Steam pumping engine without which Cornish mines would have been unable to cope with the problem of water seepage. The development of the engine is shown by lucid animated diagrams and a beautifully photographed demonstration sequence. This is one of the most striking films on Scientific Engineering made for many years.

11. SOS British Council. 1940. 14 minutes. A subject – the work of Lifeboats – of familiarity to Cornish folk. The lifeboatmen are Cornish and the film shows them putting to sea in response to an SOS from a Tramp Steamer, and after the storm, they return to their normal job of fishing.

12. Figures in a Landscape Arts Council. 1953. Colour. 16 minutes. St Ives has long been an artist's haunt. This film deals with the work of Barbara Hepworth, the Sculptress, and shows how her works derive from the surrounding scenery. This film is notable for the beautiful shots of Cornwall, as such, and as background for her work. The commentary by Jacquetta Hawkes is spoken by Cecil Day Lewis.

'Twas Friday, 7th November and the writer had Terry Pinnington's lorry loaded with rocks, blocks and assorted iron and plastic. Many people would have thought, "There's Rickard off to United Downs tip". Not so. The precious cargo was the

NOT ANOTHER LOAD OF ***!**

Trevithick Society moving its artefacts from Messrs CompAir's works to King Edward Mine for storage. Due to the imminent closure of CompAir, better known locally as Holman's, we had hired a lorry for the removal, which turned out to be three loads. We had obtained from CompAir two cutaway demonstration compressors, several breakers and rock drills, numerous lengths of useful steel, pipe, flexible hose, both hydraulic and air and many more small items, either for display or for use in conservation. Probably the saddest item was a sign that proclaimed "CompAir Holman, Works Entrance".

One of the largest items moved was a Paynter drill testing machine last used in 1985 and originally at the Climax works at Pool, and then moved to Camborne. The cast iron base carries the foundry mark "Paynter Grass Valley, California".

While we had the transport we also moved our battery mine locomotive from Cornish Engines to King Edward Mine, where it was placed on a short length of track preparatory to a clean up and repaint.

Thanks are due to Messrs CompAir and their staff and King Edward volunteers Peter Benbow, David Blight, Gerald Bodilly and Willie Uren. Unfortunately absent was Tony Brooks, smitten with the lurgy at the last minute.

Wednesday, 19th November saw the little group in action once again, and augmented

by the now recovered Tony Brooks and with Frank Kneebone replacing David Blight. This time the meeting place was Poldark Mine, Wendron and the object of their affections was the Holman-built model of the Dolcoath William's shaft traversing winder, dubbed the "travesty engine" by the group due to the fact that we had had two abortive attempts to fetch it previously, and parts had also become lost, the engine having resided in undergrowth for a number of years at Poldark. Many members will remember it displayed originally at the Holman Museum at Camborne. The model, now at King Edward Mine to undergo refurbishment, is on extended loan to the Society from Poldark Mine. Thanks are due to Richard Williams of Poldark for his help and cooperation with the transfer.

Members wishing to see any of the artefacts, or indeed, wishing to help with restoration work are welcome at King Edward Mine any Sunday morning between 9 am and 1 pm. No particular skills are required other than the ability to "muck in". For further information ring Tony Brooks on 01209 713506 or E-mail tbrooks@telinco.co.uk.

K.J.T.Rickard



A.I.A. CONFERENCE

Delegates to the 2003 A.I.A. conference at Cardiff University's Cefn Coed campus enjoyed a packed programme of goodies from 8th to 11th September.

Proceedings opened, as is now usual, with a seminar day on the Friday, this year's theme being "Industrial landscapes - research, recording and regeneration".

Terry Evans gave the welcome to the conference on behalf of the Welsh Mines Preservation trust; Saturday morning's lectures were followed by a choice of three field trips - to Rhondda Heritage centre; to Newport for the transporter bridge; or to Cyfarthfa and Merthyr Tydfil. In the evening the annual dinner was held, with guest speaker Alan Pugh, the Welsh National assembly minister for culture, sport and the language.

On Sunday I.G.M.T.'s David de Haan delivered the Rolt Memorial lecture on the construction and structure of the ironbridge (to be published), then field visits went to Blaenavon, or Mellingriffith and Treforest, or Barry and the Vale of Glamorgan railway. Evening lectures featured the Vale of Glamorgan canal, and the restoration and rebuilding of an unusual 1840 bottle kiln at Nantgarw.

All-day trips started on Monday, offering two choices - Cefn Cribwr and Tondy ironworks, followed by sites around Barry docks, or a boat trip out to Flat Holm (the sub shone, and the sea was calm as a millpond); alternatively investigating Blaenavon in depth. In the evening a buffet was laid on for us at the museum of Welsh life at St. Fagans.

Next day the choice was to explore Cardiff, including the docks, barrage and Bains' brewery, or visiting Llanwern strip mill, Sudbrook and Chepstow. The evening lecture covered the rescue of Mellingriffith (1974-1989), and now let fall into decay again by the city of Cardiff, followed by short films of I.A. interest.

Wednesday featured a choice of the upper Taff valley, starting at Dowlais, or a very scenic tour of the Eastern valleys. After dinner we were regaled by the chairman of the Vale of Glamorgan railway,

followed by the astonishing discovery of an almost complete 15th century ship, on a building site at Newport - this was the final lecture of the conference.

Thursday, the last day, saw one coach going to the Rhymney valley, whilst the highlight of the other trip was a conducted surface tour of the only remaining deep mine in Wales - Tower at Hirwaun, which the workforce purchased (for £12 million) from British coal in 1993-4.

All in all a truly superb conference, thanks to organisers Michael Messenger, Terry Evans, and hosts Oxford House Industrial History society. For 2004 the dates have been brought forward slightly to August 13th-19th, the venue will be Hertfordshire and the Lea Valley.

Roger Ford.

Gerald Williams (2003) gives us a view of the mines and mining of the Drift Valley.

In describing the development of East Balleswidden United Mines (2003, 76),

ON TREGAVARA DOWNS, AND THE BORLASE MINING INTEREST

including Borlase's Old Whim Shaft. Later the set was taken up again, under the name The Borlase Consols Tin Mining Company (Williams 2003, 77). Borlase is the name of a well known Penwith family. What, if any, are the connections?

Pool (1986) outlines the early history of the Borlase family. Some time after 1602 when Walter Borlase of Trannack in Swithney died, one of his younger sons received £100 as his inheritance.

"John used it to buy some tin-bounds at Tregavara Downs in the parish of Madron, which proved so successful that in 1637 he bought Pendeen House in St. Just ..." (Pool 1986, 11).

Here then is the Borlase connection, and here is evidence for the profitable working of the deposits in the early seventeenth century - to John Borlase at least.

John Borlase was succeeded at Pendeen House in 1664 by his son John, and in 1693 by his grandson, also John. This third John (1666-1755) was known as John of

Pendeen, and was the father of William the antiquarian and Rector of Ludgvan (1696-1772) and Walter, the eldest surviving son, who became vicar of Madron and lived at Castle Horneck (1694-1776). In May 1718 John of Pendeen valued his assets, ascribing £500 to his tin bounds, "... but would not take double". (Pool 1986, 17)

Walter has acquired a bad press in Methodist historiography as the persecutor of John and Charles Wesley and the early Wesleyan preachers. As John of Pendeen's heir, Walter probably inherited his bounds. Halliday (1975, 265) quotes a letter from Walter to Dr. Oliver of Bath, "I have a share in a very promising tin mine". And although there might be a suspicion that the unreferenced quotation might have been a letter of William's, rather than Walter's, it remains evidence for the retention of interest within the family. Walter later became vice-Warden of the Stannaries (1756-76), and Pennington (1973, 50) notes that he retained his holdings in streamworks and mines during this period, whereas his successor realised the inconsistency of this, and relinquished his holdings. [Pennington (1973, 50) also quotes Walter Borlase's holdings as including "Ding Dong ... and Boscaswell and Botallack ..." but Williams (1996) has no mention of Borlase in connection with Ding Dong].

The emergence of the Borlase name on the East Balleswidden set might suggest that the bounds John Borlase purchased are to be located within this particular area.

However, the Borlase interests may have been wider. Williams (2003, 79) refers to a third share in Wheal-an-Madren held by William Tremenheere (1) who married Mary Borlase, daughter of John of Pendeen, and who died in 1744 (Borlase 1888). William Tremenheere (2) (1732-80) married Catherine, daughter of William Borlase the antiquarian. Thus, William Tremenheere (2) was a grandson of John of Pendeen, and he married his cousin, another Borlase. The Tremenheeres could be said to be part of the 'Borlase interest' and the share of Wheal-an-Madren may go back to the John who died in 1664.

These references are secondary, but valuable nonetheless. They reveal the

Borlase interest in the area, although if that interest did include holdings in Ding Dong, Boscaswell and Botallack, it may be that the Tregavara Downs bounds were only minor contributors to the family wealth. Further research is in hand to better define the work and interests of Walter Borlase. In 1860, when Borlase Consols became active, there were still Borlases living at Castle Horneck in Madron parish, and the name might reflect continuing family holdings.

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Colin C. Short

MYSTERY BOTTLES UPDATE

The mystery bottles (See Newsletter No.121) have provoked much thought and head scratching. Many theories have been put forward, and because it was glass bottles the thoughts were naturally pharmaceutical. The first article intimated that we thought the yellowish substance in the bottles was picric acid and, following our thought line, explored the medical uses. Picric acid, otherwise trinitrophenol, was used in the treatment of first and second degree burns, although not on large areas as toxic absorption occurred. An elderly retired South Crofty employee recently confirmed it being used there for burns. As a lotion it was used to treat eczema and other skin conditions and hyperhidrosis of the feet. Another use was as a vermifuge against roundworm and tapeworm, however, all the forgoing uses have been abandoned in favour of more effective and less dangerous modern drugs. Referring to the original article and its illustrations it will be seen the bottles had a deep groove down the side which was thought could have held a pipette, and, along with the word "Patent", suggested it could have been some proprietary device to treat burns using the the pipette to withdraw and apply the solution. Mitigating against this was the fact that the neck of the bottle was so small that filling and cleaning etc. would have been difficult. Having found the bottles in an area subject to much arsenic burning and brick making did lend some credence to the burn theory. Upon examination the bottle contents did not appear pure, as would have been required in medicine so it was felt that a much wider consideration needed to be given bearing in mind the strange shape of the bottles. Alternative ideas included possible uses in photography, horticulture, a performance boosting petrol additive or even dyeing. A constant problem in trying to "fit" their use was the shape of the bottles which was strangely complicated for any of these applications, with the possible exception of the pipette theory for burns, and even that looked unlikely. As the samples had been found in an old mine dump serious thought

had to be given to a mining application. The dimensions of the bottles could be a clue, along with the groove down the side. Could this have been some sort of blasting cartridge? The yellow contents were found to be a somewhat cohesive mass. A small sample was burnt, giving a bright yellow flame and black smoke. While burning it spluttered a little, leaving a fair amount of dark brown coke-like residue which had solidified from the molten state. It was determined that the dry crystals melted in the range 120 – 125 deg.C. and optically it was birefringent and probably bipyramidal. The solid had a rather unpleasant smell reminiscent of old, damp artificial leather furniture or stale oil. The wide melting point was probably due to contaminants. Pure picric acid is a birefringent straw yellow, free running crystalline solid with a melting point of 121.5deg.C. On ignition it burns fiercely releasing black smoke leaving little residue with no smell and crystallizes in the bipyramidal form. It stains contact materials bright yellow and has a very bitter taste, its very name coming from the Greek word for bitter. Chemically it is a pure symmetrical trinitrophenol. Originally used as a dye it was soon found to be a powerful explosive – more than TNT – and was used on a considerable scale during the First World War. It is not particularly sensitive but does form dangerously sensitive picrates, notably the lead salt. In Germany, after the First World War, surplus picric acid from munitions was used to manufacture commercial explosives. It was mixed with the tarry sulphite residue resulting from paper manufacture which produced a cohesive material readily packed into cartridges, probably of paper, the result being the blasting explosive "Sylvanite", not to be confused with "silvanite", an industrial ore of gold, silver and tellurium. It was now thought that these glass bottles were an attempt to produce blasting cartridges for mining and quarrying, the groove down the side to take the detonator crimped to safety fuse when it was used as a primer. Its use underground would have been unsatisfactory as picric acid is oxygen sensitive on detonation and so evolves large amounts of carbon monoxide and other noxious gases. The war surplus

explosive situation was repeated after the Second World War. In the Cornish context all the TNT component of “Burrowite” quarrying and opencast mining explosive was surplus. The site where “Burrowite” was manufactured is better known as “Trago Mills” today.

Maybe, however, this “genie in the bottle” has nothing to do with mining or blasting. The word “Patent” does offer a route to the solution, but our contact at the Patent Office has been unable to produce any evidence, so is our supposition correct? We would love to hear from anyone with any further ideas.

Our thanks goes to Robert Emmett, the owner of the site near Callington, who unearthed the original examples and for drawing attention to them and for also for a warm welcome and allowing site access.

Bryan Earl/Kingsley Rickard

A very well attended meeting was held on 2nd October 2003 in Pendeen Church Hall for the first viewing of an interesting video by John Potter showing the driving of a new crosscut at Rosevale Mine by Peninsular Mining Company Ltd. We were told that the

ROSEVALE MINE

miners worked the two poor narrow, steeply dipping tin lodes, which outcrop in the Foage Valley south of Zennor, by two adits driven up to 1,000 feet from the hillside

The main development was in the 19th century but not well recorded. Between 1906 and 1912 local miners worked the mine. In 1912 Rayfield Cornwall Syndicate Ltd leased the sett but it soon closed. The mine remained abandoned until 1974 when the sett was leased by the West Cornwall Mining and Mineral Club as a disused mine for renovation but disbanded a year later. The lease was continued by two of the members, Mike Shipp and Tony Bennett, who formed the Rosevale Historical Mining Society, and continue to work at the mine in their spare time.

Their aim is to continue to renovate and preserve the underground workings at Rosevale as a typical Cornish mine and as a site of industrial archaeological interest, providing an unique and realistic

environment in which people can see the equipment and techniques used in Cornish mining and appreciate the conditions under which miners had to work.

They have restored the portals of both adit levels, made safe the tunnels and stopes, relaid the rail track in No.2 Level and installed a ladderway in a narrow stope between the two levels. Lack of finance limits further renovation. Tours of Rosevale Mine are organised, on request, by the Peninsular Mining Company, but are restricted, at present, to groups of 15 – 18 people. Contact the Peninsular Mining Company Ltd, Meadowsweet Cottage, Trannack, Helston TR13 0DE (01326 565617).

WEHK

During work to extend the car park in front of the count house (now a Climber’s Club hut), in May, a shaft was discovered, covered by boulders. This was previously unknown, but lies on the line of the Carn Galver main lode. The shaft was flooded at 7.5 m depth, or about 110m above the deep adit level. Very narrow stopes were explored for some distance, and revealed

CARN GALVER MINE

further previously unrecorded shafts. These appear to pre-date the use of blasting. A full survey and report will be published in due course. Further exploration was not possible, as the shaft was capped the following day. Thanks to John Atherton of the Climber’s Club for reporting the incident and for his assistance.

Alistair Neill,

97 Mount Gould Road,
Plymouth.
PL4 7PX

CAPTAIN MICHAEL TARRANT

Mike was a long-standing member of the Society, being elected to Council in 1979 and becoming Membership Secretary in 1980, a post he held until 1993. He was meticulous in his dealings with Membership records and always made a point of welcoming new members to the Society.

Mike spent his entire working life with Trinity House, beginning as an Indentured Apprentice at the age of 17. There were seven Trinity House depots and Mike served on all districts attached to them. As a single man he lived on a tender attached to the depot, but houses were available for married couples. Transfers from one District to another happened with little or no warning and his wife Betty became adept at setting up a new home, and the Tarrant's lived at six of the seven depots.

In addition to the Pilotage Examinations carried out by one of the Elder Brethren, Mike progressed through the Service as First Officer and then Master. In addition he had to undertake the Board of Trade examinations for Mate and Master. After serving as Captain of the *Patricia*, the Trinity House flagship (with splendid accommodation for the Elder Brethren, whilst on one of their tours of inspection), Mike became shore-based as Assistant Superintendent at Harwich. His final appointment was as Superintendent of the South Coast District based at Cowes. He retired in 1983, after 44 years service and moved from Cowes to Penzance.

The fitting of helidecks above lighthouse lanterns and on light vessels to enable helicopters to take over the relief of keepers, the transport of fitters for maintenance and the delivery of all stores, came about following a proposal made by Mike to the elder brethren.

Mike was an active member of the Society, a regular attender at meetings and field events, and was one of the original volunteers on the Levant Engine restoration. He was a member of the National Trust and a supporter of the local Penwith Association. A keen golfer, he played at the West Cornwall Golf Club at Lelant. He was author of *Cornwall's*

Lighthouse Heritage, published in 1990 and second edition in 1993, and also *Trinity House, The Super Secret Service*, published in 1998.

His wife died a few years ago. He leaves two daughters and four grandchildren.

At the funeral service at St. Mary's, Penzance on 8th December the Society was represented by Eric Edmonds, Kingsley Rickard, Milton Thomas, Allen Buckley, Ros Cundick, Ken Brown and Denis Jenkin.

Bill Newby.

I feel I must comment on Courtney Rowe's observations in Newsletter 122. When he contacted the Newcomen Society,

THE 1934 PHOTOGRAPHS

he should have been told that I was recently given permission to publish the material in the two unpublished papers. Moreover, the whereabouts of the Capt. Alston album is also no secret, the Trevithick Society council agreed the loan of it to Charles Thurlow and myself with a view to publishing the material relating to the Cornish engines in the St. Austell china clay district.

I have been working on this for a while but, perhaps predictably, a lot more information has come to hand, in particular concerning engines in the area that were scrapped before the Newcomen survey was carried out in 1934. The book will appear before long, but I would not like to put a date on it. From 45 engines we now have 80-odd!

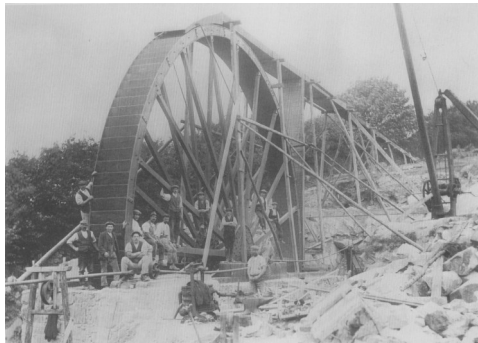
There is also a lot of information on engines outside the clay area which accounts for about 20% of the photos in the album. Most of these have been covered over the years in the Society's own survey of Cornish beam engines, but not all, notably a few that went just before WWII. There would be a good case for the next edition of the survey to be extended to include these, and I would happily assist, 'if I am spared'.

Kenneth Brown

GAWNS WATERWHEEL

More senior members of the Society may remember the Gawns Water Wheel. This wheel came to the Society via the Cornish Water Wheels Preservation Society, following the merger in 1970.

The wheel was originally erected at the



Snaefell Mine, Isle of Man, in 1865; at that time it was called Ellan Vannin. In 1920 the wheel was acquired to pump slurry from Temple Clay Works on the south side of the A30 on Bodmin Moor. The wheel itself was erected about 1¼ miles away at Gawns, near Blisland. Initially the wheel operated flat-rods but at a later date it was connected to a generator to power electric pumps. The copper wire was stolen shortly after this (it was replaced) and the operation abandoned around 1934. After being dismantled by engineers from ECC in 1971 the wheel was put into storage as there was nowhere in Cornwall to erect it.

Following an approach by the Mid Wales Mining Museum (at Llywernog) in 1976 it was decided, for reasons which are not clear after this time, even with access to the Society's records, to allow the wheel to leave the county. It must be said that this decision was not popular with Council members at that time and it is unlikely that the same decision would be made today. Accordingly, the wheel left the county at the end of 1976, before many members of the Society were aware it was going.

The wheel was never erected at Llywernog; various members of the Society (and from others) visited the mine over the years to report on the condition of the

wheel and correspondence between the two organisations was swapped. There are various reasons why the wheel could not be erected at Llywernog; these are beyond the scope of this item but we do understand and hold no blame on the management. Early this year I was given permission by the Council to start negotiations for the return of the wheel.

Shrouds stacked against a wall

However, and quite coincidentally, shortly



after this (in March) we were approached by a representative of the Laxey Mines Research Group, which had recently been made aware that the wheel was in Wales and disassembled. The Group wanted to re-erect the wheel at Laxey in time for the 150th anniversary of the Lady Isabella.

The last group of the first group of shrouds ready to be lifted

It was agreed unanimously by the Council to consent with the request and



negotiations commenced between myself

and the manager and owner at Llywernog, Peter Harvey-Jones. It was finally agreed that the wheel be removed on September 20th.

Loading in progress on the 30-tonner

Accordingly, Kingsley Rickard, Kevin Baker (Carn Brea Mines Society; he is



connected with the Laxey group) and myself went up to Aberaeron on Friday the 19th where we met some of the Laxey contingent. These included Pete Geddes, project coordinator, and Fred Connan, former loM Clerk of Works and now clerk of works for the project; at one time Fred looked after the Lady Isabella wheel. The evening was quite tedious and we were forced to be taken out for dinner and be plying with drinks afterwards. You will be pleased to know that your officers bore this treatment with stoic bravery. But seriously, the evening was a pleasant one and it was good to get to know the Laxey people and hear their plans first-hand.

The Trevithick Society group arrived at Llywernog at 10.10 the next day (without hangovers!); a grey, overcast day that never got round to raining, fortunately. Other members of the Laxey group were already there, as was the 30-ton capacity lorry which was to take the pieces to Liverpool. Pete Geddes and party arrived five minutes later and the 15-ton mobile crane five minutes after them. We got to work straight away; three people rigging and loading and three people de-rigging and unloading. One person from each group recorded the exercise (I took 244 digital images). The whole operation went smoothly and was completed in 2¼ hours,

the pieces comprising 2.9-ton axle, two 2¼-ton hubs and the shrouds (about 40) 2¼-cwt each; three other pieces weighed about a ton each. About half of this time was spent moving the shrouds.

Kingsley Rickard and Kevin Baker checking the loading of the huge axle

Work on the wheel will commence as soon as possible. The project is being well supported on the island; the Manx



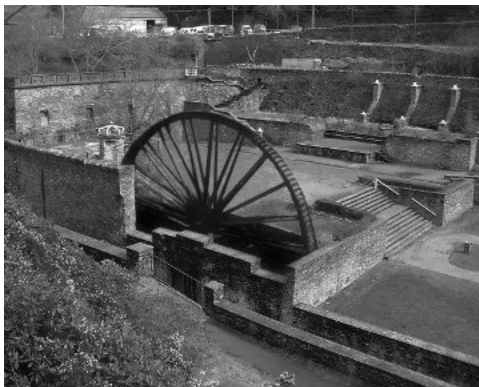
government is behind it and there has been, or will be, support from organisations such as the Isle of Man Steam Packet, the DOT and the Isle of Man Water Authority while some of the work will be carried out by DTI apprentices. A wide-spread advertising campaign will start shortly to look for finance from local businesses, for example sponsorship for specific parts of the wheel.

The wheel will be erected on the washing floors, about 500 metres from the Lady Isabella and will have a plaque stating that it is on loan from the Trevithick Society; as the Great Wheel gets about 100,000 visitors per year this will be good advertising for us. It is hoped that the

Gawns Wheel will be erected in time for the 150th anniversary celebrations of the Lady Isabella, however the pieces were found to be in a poorer condition than anticipated (none of the wooden buckets have survived) and more work will be required – we will have to cross our fingers that it can be completed in time.

Job done – the wheel off to Liverpool

Artist's impression of the wheel in its new home (Sue Jones)



future. Some members of the Laxey group may visit us in 2004, in which case it may be possible for them to give a presentation to the Society.

Pete Joseph



Information on the wheel and progress reports on the project can be found online (for those with internet access) at www.snaefellwheel.com. It is hoped that a web camera will be set up in the near

SOCIETY WEBSITE

Various updates have been made to the new website (www.trevithick-society.org.uk) including some free downloads (screensavers and wallpapers) for members. For those members who have internet access this should be your first point of contact for the Society; any news will be posted here before it appears in the newsletter. All contact information for Council members is also here. Please use this facility for letting us have your views on what we do, don't or should; please also let us have your feedback on the website.

Pete Joseph

TREVITHICK MEMORIAL TABLET

CORNISH INSTITUTE OF ENGINEERS
in conjunction with
THE NEWCOMEN SOCIETY

The unveiling of the Trevithick Memorial tablet, October 16th 1948 at 3.0 pm.

The tablet was publicly unveiled by Mr R.E. Trevithick. Dr H. W. Dickinson read the eulogy. Afterwards the President handed over the memorial to the Chairman of the Urban District Council (Mr J. Pascoe). A vote of thanks to Mr Trevithick and Dr Dickinson was proposed by Mr Berryman and seconded by Mr J. Harris. A

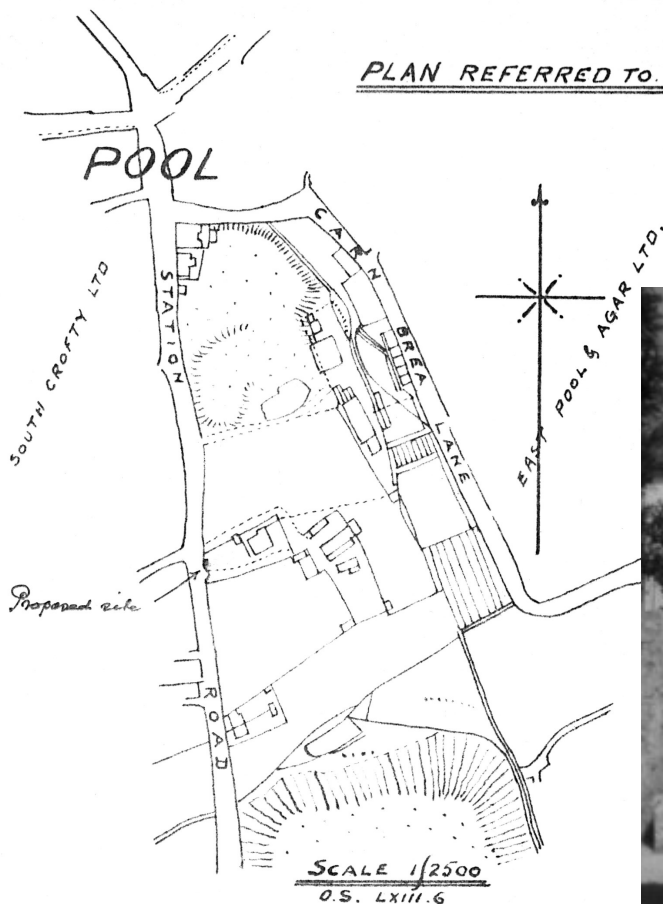
vote of thanks to those who kindly assisted during the negotiations was proposed by JB Michell and seconded by Mr J. Hutchin.

Unfortunately, heavy rain fell during the ceremony, but in spite of the weather there was a large crowd in attendance.

After tea at Holmans' Bros canteen, films of the Cornish Pumping engine were shown, made by the Shell Film Unit. Mr Treve Holman acted a Chairman supported by the President who proposed a vote of thanks to Shell Oil Co. and to Messrs Holman Bros Ltd, which was seconded by Mr J. H. Trounson. During the showing of the films Mr A. Elton remarked on the making of the films and Mr J. H. Trounson gave a commentary on the silent films.

Allen Buckley kindly sent in the above notes which he had received from the Cornish Institute of Engineers, along with a copy of the Programme of Proceedings of the unveiling ceremony.

PLAN REFERRED TO.



CAMBORNE ROAD LOCOMOTIVE

The replica Trevithick Road Locomotive remains on station in the former CompAir Holman factory. R.T.Quaife Engineering Ltd. of Otford, Sevenoaks, who specialize in gearboxes has taken over part of the factory complex including the No.5 shop where the Road Loco was built and is now stored. Messrs Quaife have kindly allowed us to continue to occupy our corner. We record our grateful thanks to them and the "new man in charge", Paul Doble, who is no stranger to the site having been originally with CompAir. R.T.Quaife will initially employ 12 former Holman's men but hope to expand. The other good news for the Holman site is that the sheet metal shop is to be taken by a Scottish company thus creating further jobs.

Over the winter the spare cylinder block has been machined and it is hoped to fit the winch and tool boxes to the trailer shortly. The winch will make it much easier to load the engine on the trailer. The spare cylinder block will now be used for display but will provide a useful starting point should the Society decide to build another replica Trevithick engine.

The engine has also undergone its annual boiler check and has been steamed a couple of times so that television film crews could get further footage.

This year the 200th anniversary celebrations of the Penydarren locomotive should help consolidate Trevithick's position as the true father of railway locomotion. The replica will be in Merthyr Tydfil during the first week in July to take part in the celebrations there. Part of their festivities will be a gathering of Trevithick replicas.

The replica's next public outing will be Trevithick Day - the last Saturday in April.

The engine is only open to the public on Fridays, and the annual maintenance

LEVANT REPORT

programme has begun. The steam condensate piping is being overhauled and

largely replaced. Some fittings for an automatic boiler water dosing system have been delivered. A new key for the inland winding drum has been made and fitting is nearly complete. It is hoped that this will fix the drum on the shaft and prevent the recurrent noise problem.

An interlock has been designed and fitted to the Skip Shaft hoist drum motor controller to prevent an inexperienced driver changing between the raise and lower operation without stopping the drum and causing damage to the drive.

Volunteers are working hard on the 1:12 scale model of the 80" W. H. Mitchell designed pumping engine, which was started by Society member Mr Gordon Boulden, and given to the Society.

The National Trust and the St Just Heritage Area Regeneration Project has been granted funding to carry out remedial safety works arising from mining and other activities along the coast (at Levant, Botallack, Cape Cornwall, Carn Glouce, Kenidjack Valley, and Cot Valley) by the South West Regional Development Agency and the European Regional Development Fund (Objective 1). The first phase at Levant has been for contractors to refurbish the derelict Mine Drawing Office building for use by Levant staff and this has been completed. Doors and windows have been replaced and a ceiling installed. Volunteers are decorating the interior.

The second part of the project is now under way to reinstate the Zawn Brinney cliff retaining wall, using traditional construction methods, as the made-up ground is slowly sliding towards the cliff edge. Ground has been excavated on each side of the slip and anchors on the rock at each side have been constructed to hold the new retaining wall in place.

Lighting and power supplies have not yet been installed in the Mine Drawing Office or in the Man Engine Tunnel.

W. E. H. King

BOOK REVIEWS

Devon Great Consols. A collection of contemporary articles and reports. Compiled by R.J. Stewart. Tamar Mining Press. A4 60pp. ISBN 0-9546093-0-1. Price £6.00.

This compilation comprises the following:

- *The Devonshire Great Consolidated Copper Mines*, 1850, J.H. Murchison.
- *Devon Great Consols*, 1857, J.H. Murchison.
- *A Descriptive Account of the Devonshire Great Consolidated Mines*, 1860, H.C. Salmon.
- *Devon Great Consols*, 1864, Anon.
- *Devon Great Consols*, 1865, T. Spargo.
- *Mines and Mining in the Tavistock Region*, M. Bawden.
- *Devon Great Consols 1923-1930*, C.F. Barclay.

These papers previously appeared in a mixture of publications ranging from the Mining Journal to the Tavistock Gazette. They have been re-typed in a large and easily readable font and do succeed in providing "a number of snapshots throughout the working life of the mine" as the author intended.

Obtainable at £6.00 plus £1.00 p&p from:
Rick Stewart,
Tamar Mining Press,
Patchway Cottage, Tamar Place,
Calstock. PL18 9QB

The Ball Clays of Devon and Dorset, by the Ball Clay Heritage Society. Cornish Hillside Publications, 2003. 52pp, 61 illus. paperback £3.99. ISBN 1 900147 300.

At last, a comprehensive little primer on ball clay. Written by members of the recently formed Ball Clay Heritage Society and published by Cornish Hillside Publications, as one has come to expect, this 52 page, A5 booklet is well laid out and reasonably priced at £3.99. Well illustrated with photographs and diagrams, its

authoritative text defines ball clay and describes how it came to be laid down where it is. It covers its uses, the history of its working and the methods and the tools used; there are several good underground photographs and many clear old prints with explanatory captions. The changes in the ways in which the clay is won and prepared for its various markets are explained clearly. The development of the transport system to cope with the expanding industry and the companies involved, receive attention.

All three major ball clay fields are covered with a surprising amount of detail for such as apparently small book. The need for such a publication is well illustrated by the brevity of the bibliography. No one seriously interested in the general industrial history of Devonshire should be without this little volume on his or her bookshelf. A thoroughly rewarding read.

WJT.

The Cornish Institute of Engineers invite you to attend their lecture evenings at CSM from 7pm to 9pm.

Thursday Jan 15 - Recycling minerals.

DIARY DATES

by T.R.Jones.

Thursday Feb. 19 - Process Simulation.
Getting it all right by computer simulation before you build the plant.
by Steve Frankland.

Thursday March 11 - Lime an essential mineral for mankind. by Prof. P.W. Scott.

Thursday April 29 - Annual General Meeting at 7pm followed by a lecture at 7.30 pm. *Early uses of China Clay in the Paper and Cotton Industries*, by Charles Thurlow.

www.ex.ac.uk/CSM/CIE

TREVITHICK SOCIETY EVENTS AND CONTACTS

Cornwall. TR15 3DS

FEBRUARY 20th - CSM

The Cornish in Mexico, by Terry Dudley.

MARCH 19th - CSM

The Forgotten Industry - Coal Gas, by Eric King.

MARCH 26th - East Cornwall

Trevithick, the Building of his Engine and the future of Steam Power. by Phil Hosken.

*Meetings are held in the Lecture Theatre,
Camborne School of Mines at 7pm.*

*East Cornwall Branch meetings will be held
at the Public Hall Complex, Liskeard at 7.30pm.*

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The Trevithick Society, a registered charity, is a recognised body of the study of industrial archaeology in Cornwall. Membership is open to all who are interested in the region's great industrial past, whether or not they live in Cornwall. The Society takes its name from one of Britain's foremost inventors and pioneers of the Industrial Revolution, Richard Trevithick, a Cornishman whose name is inseparable from the development of steam power.

This Newsletter is published quarterly and, together with the annual Journal, is distributed free to members. Letters and contributions are always welcome and should be sent direct to the editor. The views expressed in this Newsletter are those of the authors and not necessarily those of the Trevithick Society.

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