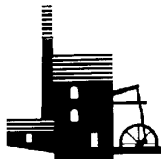


THE TREVITHICK SOCIETY



The Holman crusher set on a plinth outside the CompAir UK Holman Factory after being cleaned and painted by members Arthur Young and Kingsley Rickard.

CHAIRMAN'S ADDRESS

Perhaps the most momentous news I have ever had to announce during my chairmanship is that the Society has become the custodian of what is now referred to as the Holman -Trevithick Archive. While working on the Holman bi-centenary book I became aware that archival material had survived the break-up of the Holman Museum and the company purges of anything old or historic during the 1980s. At an early date I made an approach to the company on behalf of the Trevithick Society suggesting that the Society was a fit and proper body to ensure that this material, a record of the skill, dedication and enterprise of generations of "Holmans Men" would be preserved for posterity. After formal negotiations the Society has now taken charge of the archive, whose sheer size and complexity I never envisaged even though I spent a winter rummaging around CompAir. I will not steal our curator's thunder but this is certainly the last great Cornish engineering archive; the films from the Holman Museum are already recognised as of national importance (and of supreme Cornish importance) while a brief glance through the sea of negatives has revealed amazing mining and engineering scenes. To our debt to CompAir management for their wholehearted support of the Road Locomotive Project must now be added their active co-operation in creating the Holman - Trevithick Archive.

To this major success for the Society we have also, thanks to the diligence of Pete Joseph, our Hon. Curator, recovered a selection of papers relating to the great Trevithick himself. These languished in a solicitors office for many years but are now back in possession of the Society. They include such gems as the wills of Trevithick snr. and Henry Harvey, and the agreement signed by Don Francisco Uville and Richard Trevithick regarding the engines for Peru.

There may be other artefacts and material coming to the Trevithick Society and this raises a long held thought that the Society should have a permanent home as we did back in the days of the Cornish Engine and Preservation Society and the Holman Museum. I know that many societies, more eminent though far less energetic than us, are content with a 'care of'. Yet I feel that we should have somewhere that the Society could conduct its affairs (definitely no Count House dinners!) and launch a programme of restoration and conservation of a collection of artefacts. Considering the prestige and vigour of the Society these days I do not see this as a very radical step, but I would like the opinion of members.

Your Council has also delegated a sub-committee to revise and update the constitution of the Society, something which has not been seriously examined for a great many years. They are due to report soon and their suggestions will be discussed and then placed before the membership at the AGM, which this year will be held at the Geevor Mining Heritage Centre.

Clive Carter

Clive Carter

EDITORIAL

There is a tremendous air of optimism within the Society, having had such a successful year in 2001, and this, coupled with the arrival of the Holman-Trevithick archive, has injected fresh impetus into Council meetings. Members opinions are very much requested as to how the Society should progress and suggestions for future projects would be very welcome in helping to formulate decisions at Council.

Copy date for next issue is July 12th, 2002

Colin French

LETTERS TO THE EDITOR

Dear Editor

North Quay, Hayle.

Having recorded the history of bromine production by British Ethyl Corp and Associated Octel at North Quay Hayle I am now in the process of collecting information on the previous occupants of this site. It is in this regard that I seek the assistance of fellow members of the Society.

The following occupants have been identified, to date.

- Late 20's / early 30's Mr Tapper, Banana Import and Distribution business
- (also known as Tapper of Truro).
- 1920 -1925 Pentowan Glass Bottle Co.Ltd.
- 1917 - 1920 Cornish Glass Co. Ltd.
- Circa 1875-1910 Pentowan Calcining Works.

Any information, in any form or detail, about these organisations would be greatly appreciated. I would be pleased to hear from any member having information by letter , phone, fax or e-mail. Tel/Fax is 01628 639080 and e-mail is: arthur.fairhurst@virgin.net

Arthur Fairhurst

"Trelissick"
9,Chiltern Rd.,
Bray,
Maidenhead,
Berks. SL61XA

Dear Editor,

My wife and I are about to make a trip "home" to Cornwall. My wife's maiden name was Joan Lukey. Her grandfathers and great-grandfathers were all in the mining industry in Cornwall, Spain and South Africa. Her maternal grandfather, John Richards, was once the captain of

Giew Mine and then of Consols Mine in St. Ives.

In our family archives there are a few photographs of mine sites, men, and equipment... whether they're unusual or ordinary, I can't say. However, we did find we have an intriguing artefact, brought here from my wife's family home 15 years ago. It's the diary of a mining engineer, running from January to June of 1888. He *may* have been a relative of my wife's family, but we don't know for sure because nowhere did he record his own name. At the beginning, he tells of visiting mines, meeting with people whom he mentions by name but doesn't otherwise identify, and preparing for a long trip. On a rare personal note, the night before he leaves, he goes to visit his fiancée and stays all night. Then we follow him to London, where he visits some business contacts before taking a train for Southampton. Boarding a ship, he travels to Barbados, and thence to Demerara (Georgetown, in what was then British Guyana).

In Georgetown he hires 13 men, buys equipment and supplies, and takes them up the Orinoco to an undeveloped mine site. The men set to work surveying and clearing the ground, and build a house for him. Then over a period of three months, they begin mining. The diary shows that its writer was totally focussed on managing the mine: it speaks only of the men and their work, relating almost nothing of their personal situations and experiences. The mine, however, proves to be unproductive. The men become restive; some become sick, others are disciplined or dismissed.

Then the writer himself falls ill. The local doctor visits him, but fails to effect any improvement. He struggles to work but becomes progressively worse. He goes to Georgetown, suffers increasingly, then takes ship for Barbados where there are more doctors. He stays in a hotel... can't eat, has pain all the time, gains no benefit from the doctors, and is eventually sent to the house of a lady who has undertaken to care for him. (At this point, one realizes one is reading the diary of a dying man.) Finally he takes a ship back to Georgetown, puts up at the hotel... still writing his diary every day, in an increasingly spidery hand... They bring him beef soup one evening; he can't

take any of it, but hopes to feel better in the morning. On the next day, there is only a blank page.

Blair Martin

bm@giew.org
001 613-547-5054
1000 King Street West, Apt. 1506
Kingston, Ontario K7M 8H3
Canada

[Kingsley Rickard met Blair and his wife during their visit and found the diary particularly fascinating. We have obtained a copy for the Society archive.]

Dear Editor,

I believe your Society may be interested in the work of the Neath Abbey Iron Works Engineers. There are in the region of 7500 original drawings of the products from the Neath Abbey Iron Works, still in existence. I am a model maker and work exclusively from the original drawings. You may care to have a look at my web site:- www.rpreston51.fsnet.co.uk where you will see I have started with their locomotives. However the following is a list of what they made for Cornwall. I believe is quite possible that there may be other engines they made apart from these.

1806, Wheal Crenver and Abraham. A Trevithick high pressure whim engine working at 60psi.

1809, Mr Williams, Scorrier House. 16" Beam Engine.

1814, Wheal Abraham. 45" x 7', 24" x 4, 3" Woolf compound pumping engine.

1814, Wheal Vor. 53" x 9', 28" x 6' Woolf compound pumping engine.

1815, Dolcoath Mine, 76" condensing beam engine.

1816, Herland Mine, 19" x 3' 6" Beam Engine.

1819, Consolidated Mine Adventurers. Two 90" Beam Pumping Engines.

1821, Poldice Mine. 90" x 10' Condensing Beam Pumping Engine.

1823, Wheal Sparnon, Consolidated Mine Adventurers. 70" Beam Pumping Engine.

1828, Fox, Williams & Co., Perran Wharf. Rotative Beam Engine for driving rolling mill 1837. Great Wheal Prosper. 60" Condensing Beam Engine.

Also, there is mention of Wheal Alfred mine and Falmouth Quay.

I am in the process of conducting research into the possibly of making fine working miniatures of these and other Cornish Beam Engines.

Rob Preston.

Dear Editor,

I have just finished reading the excellent book *Trevithick First in steam 1801-2001*. I was surprised and mystified by no mention of the Middleton railway, Leeds, which was the first successful steam hauled railway in the world. The locomotives were pure Trevithick, being 'Catch me who can' type with two cylinders. The first of four locos being completed in 1811.

Charles Brandling, the coal owner, visited 'Catch me who can', at Euston, and probably saw the slipping of the single axle drive. With his mine manager, Blenkinsop, and Murray of the Round Foundry, Leeds, a loco was designed and built by Murray. The loco was gear and rack drive to prevent slipping. (The track was built for horse haulage and a heavy loco would have broken the rails). Loads of 90 tons were regularly hauled by steam. A section of the rail track and loco axle are at York railway museum.

I am at present building a model of Trevithick's 1805 Gateshead loco in gauge 1.

Brian Harfield,

3 Woodland View,
Bromley Cross,
Bolton, BL7 9NS.

Under this title the renowned but now disbanded group of volunteers became known. I have gone through my own collection of press cuttings and the Trevithick Society's Newsletters for the period during which the volunteers restored the Levant engine, but cannot find when the phrase was first used. Can any reader help?

THE GREASY GANG

Work began in 1984, and at first a convener was appointed annually to recruit volunteers and to make a programme for their attendance. Clive Carter arranged the first two meetings on the mine and was succeeded as convener by Bill Newby in the summer of 1987. In the spring of 1988 Milton Thomas, who had been on the Society's committee from 1985, took over. His reports to the Newsletter began in August 1988, when he first used the title of Greaser-in-Chief and noted that the following were members of the 'greasy gang':

- B. Miles ... propane bottle expert
- R. Hobbs ... valve lapper
- I. Goodman ... parallel motion and eccentric specialist
- K. Brown ... technical
- B. Newby ... photography
- T. Barr ... rocker king
- J. Corin and ... filers and scrapers
- Myself

[signed] Greaser-in-Chief, Milton Thomas

Outside help was obtained from Bolitho Marine Engineering, N.Holman & Sons of Penzance and from Hattam Engineering of Pool, and from William and Susan Kennedy of Lancashire. Until Milton Thomas took over, the progress of restoration received little space in the Society's Newsletters, apart from references in the Secretary's column, which noted the restoration of the engine-house, the removal of asbestos, and the undercoat of paint on the engine.

After seven years' work the first stage of

the restoration was complete, and the installation of a compressed air plant, brought the engine back to life in mid-November 1991. That year, in recognition of his great contribution to the restoration, both as convener and supervising engineer, Milton Thomas was awarded the Trevithick Society's Gold Medal, an exceedingly rare honour, the last of which had been granted in 1974 to the late Dr A.K. Hamilton-Jenkin.

Meanwhile, in November 1991, and on several later occasions, the Newsletter referred to the volunteers as "Levancers", no connection with the act of disappearing being implied, and, following the building of a replica of the original boiler-house to modern standards, a steam-raising plant was installed and successful steam trials were made in April 1993. This progress was recorded on the front pages of the Newsletters from August 1990 to August 1993 by Milton Thomas.

The local press was slow to record the events at Levant. The Daily Telegraph got wind of the work and in May and August 1992 carried articles about "The Greasy Gang". The Western Morning News referred to it as "The Grease Gang", while "The Greasy Gang" was mentioned in the Cornishman in November 1998 and June 2000, and in the Western Morning News in June 2000.

Milton Thomas can therefore be regarded as the originator of Greaser-in-Chief, and for The Greasy Gang. As noted above, I would value any comments which members may care to make.

Justin Brooke.

[Justin has kept and now indexed a twelve volume press-cutting archive. Members are welcome to consult it. Contact 01736 710468]

LOCAL GOVERNMENT LIAISON

Update on the various cases in hand at April 2002 plus any new cases.

BELOWDA & GOONVEAN ENGINE HOUSES (RBC)

Nothing further from Restormel BC.

MAKER WITH RAME EXPERIMENTAL WINDFARM (C&WDD)

Objection lodged but no outcome.

HALLENBEAGLE INDUSTRIAL ESTATE (CDC)

Following a fairly boisterous public meeting in Chacewater, the Planning Committee deferred their decision on the case owing to a certain paucity of information. The local opposition group are making a video to send to all members of the Planning Committee prior to the meeting where the case comes up.

CAMBORNE & REDRUTH REGENERATION PROJECT (KDC)

Considerable opposition to the proposed relief road south of Camborne and Pool which crosses Dolcoath. The Society is keeping in touch with this issue.

PORTREATH "SMUGGLERS COTTAGE" (KDC)

Application refused but, from the local press, it would seem that the applicants will make further representations.

CARVEDRAS SMELTING WORKS.

A further application has been made to convert part of the first floor of the building into two flats. On the face of it this appears to be a reasonable application, provided it is adhered to, but accidents can happen. It transpires that this building has been put forward for inclusion in the Cornish Mining World Heritage Site Bid. Carvedras Smelter is not a listed building and, because of the

numerous alterations that have occurred over the years, is most unlikely to become so. It is hoped that Carrick DC will heed the World Heritage Bid attitude.

CORNISH MINING WORLD HERITAGE SITE BID.

The Society is represented on the Partnership body of this and progress towards the actual application is proceeding. Part of the process is the formation of seven panels to consider what is included in the various mining areas. The composition of the panels is predominantly local authority based but the Society has been called upon to provide a representative on each of the panels. It transpires that the Trevithick Society is the only named body to appear in the Panel Composition document.

LGLC members are as shown below:

Caradon & West Devon	C&WDD
John Badger	01752 786398
Carrick	CDC
Phil Corbett	01209 890897
Kerrier	KDC
Kingsley Rickard	01209 716811
North Cornwall	NCDC
Vernon Baldry	01209 822311
Penwith	PDC
Peter Joseph	01736 364619

Restormel **RBC**



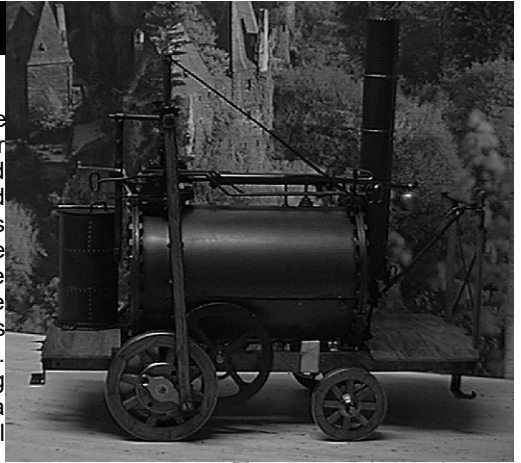
MODEL OF CAMBORNE LOCO

When the Camborne Road Locomotive was under construction at the CompAir Holman factory, a Dutchman came and saw the progress of the work, and photographed and took copious measurements of the engine, with the intention of building a working model. The photographs of his model shown here, are of the almost complete model and a 'gas car' he has made to tow behind the engine. This contains a small gas bottle (camping gas), a regulator for the pressure, and a battery to power the radio control equipment (two channels) .

Lodewijk has made a very faithful working model of the Camborne engine, which is all the more remarkable because of the relatively little opportunity he had to observe the replica. On Trevithick Day he visited Camborne and demonstrated his remarkable model in the Society Tent.

He is contactable at the following address.

Lodewijk Färber
Hoofdweg
69 1058AZ
Amsterdam
Holland



A SPANISH ENIGMA



The mining remains of Southern Spain have been fascinating me for nearly 30 years. Often their remote locations coupled with an excellent climate for preservation



have meant that some sites have hardly been disturbed (apart from the removal of machinery) since they were last worked. It came as no surprise to me when I found on a Spanish Internet site (<http://www.asafal.com/artSierraAlmagreraAgo2001.htm>) reference to a horizontal winding engine still in situ at a mine site in the Sierra Almagrera, Almeria, south-east Spain. I had previously visited the area several times. The Sierra occupies the coastal strip to the north of Mojacar. The landward side is studded with mine workings whilst the seaward side contains the remains of smelters and loading pier installations. I contacted the owner of the Internet site and he forwarded a location plan.

In November 2001 I visited the mine engine. To reach it you must turn off the N332 Road (north of Cuevas de Almanzora) into Los Lobos. At the southern end of the village park your car near a shop / bar, walk west and cross the dried up (not in November) bed of the river valley. On the far side of the riverbed go south-west along an obvious valley adjacent to a small farmstead. Continue and stay on the valley track for about 1.5km. When the obvious buildings of the Barranco Jarosa mine come into view turn right onto a track at a point where a chain is stretched across the main track. Follow this new track for about 1km. After passing a large stone headgear turn left off the track

into the next side valley and the wooden headgear and square chimney associated with the engine is visible.

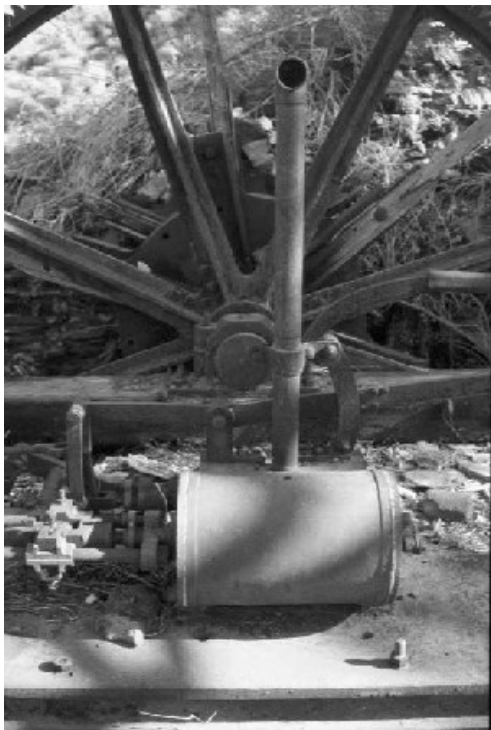
The horizontal engine has a cylinder about 10 inches diameter by about 20 inches long. It was used for winding. The remains of the two flat rope reels (common method in Spain) are still

attached to the engine drive gearing. Levers and valves are still present as are the two boilers complete with safety valves. The engine bears the makers as:-

P. Colson, Ingenieur.
Reading Iron Works Limited
Constructeurs
Angleterre.

I believe, from the information I have gleaned that the Reading Ironworks operated under the partnership of Barrett, Exall and Andrewes between 1818 and 1864. It became the Reading Ironworks Limited in 1864 but went into liquidation in 1888 during the agricultural slump. There is no P. Colson listed in the 1871 census of Reading. This may suggest that the engine was manufactured in the late 1860s. The company obviously produced a variety of steam engines; between 1851 and 1874 they won numerous prizes at exhibitions for their portable, semi-portable and fixed engines. It is possible that the engine is second-hand, as the makers name plate states the company is in Angleterre (French) rather than Inglaterra (Spanish). English companies did operate in the area. One company, the Sierra Almagrera Company Limited, was formed in 1872 and may have been responsible in bringing the engine into the area.

Any thoughts that members have about



this Spanish enigma would be most welcome.

Rob Vernon,
78, Oakenshaw Lane,
Walton, Wakefield,

West Yorkshire
WF2 6NH. UK
(rbrtvernon@aol.com)



J.C. BURROW, F.R.P.S

Following the recent viewing of *Cornish Underground Scenes* by Paul Deakin, members may be interested to hear what one of Cornwall's greatest exponents of mining photography had to say. J.C. Burrow was one of the chief contributors to the *Cyclopaedia of Photography* (Waverley Book Company, London, 1912) and wrote.

"With the advent of the dry plate, the modern lens and the actinic flash powders, photography in mines has become much more easy. The use of flashlight mixtures answers well in the tin mines of Cornwall, which are deep, hot, smoky, wet and dirty, with grease, mud and slime in abundance, in some places stagnant air in which the tallow candles will not burn, in others a draught so strong that naked flames cannot be kept alight. The hanging walls from which water drips from every jagged point of rock, the slippery footwalls, open stopes, deep gunnies, perpendicular ladders with iron staves, the low, narrow levels, etc., present the most unpromising conditions for successful photography. The miners work by the light of tallow candles stuck in a lump of clay, which adheres to the hard

hat they wear, or against the rock on arriving at the scene of operations. These candles give out little illumination, but plenty of smoke. The angular rocks of a dull brown, non-actinic colour require powerful illuminants to bring out their structure. The mine photographer should be something of a mining engineer so as to grasp intelligently the idea which the photograph is intended to illustrate. In Cornwall he becomes familiar with mineral lodes and cross-courses, shafts, levels and winzes, air currents and ventilation. The principal features of mining, or the natural position of the miner at his work, must not be sacrificed in order to compose an artistic or sensational picture. Neither must he be fastidious about his dress, hands or apparatus, nor object to crawl on his hands and knees over the rough rocks, through narrow openings and oftentimes dangerous places. The camera must be strong and well made, capable of enduring without serious damage the inevitable contact with points of rock. Double dark-slides filled with plates sufficient for the day's use should be taken. Plates could be changed underground as absolute darkness exists when the candles are extinguished, and it is quite easy to feel to do this work, but other conditions are not favourable to this



GLASS PLATE SCANNED FROM HOLMAN-TREVITHICK COLLECTION

course. It rarely happens that more than six plates can be exposed in one "shift", and as a rule only one exposure can be made in one place by reason of the smoke caused by the combustion of magnesium. At least three lenses are necessary, respectively of 10 in., 7 in., and 5 in. focal lengths.¹ The greatest trouble with lenses is caused by moisture condensing on their cold surfaces, and in order to avoid this as much as possible they should be carried in the inner pocket of the flannel shirt next to the skin. As soon as the cap is put on after focussing, condensation immediately

covers the front of the lens, and this can scarcely be wondered at in a temperature exceeding 100 degrees F with steam rising from the water which runs at one's feet, or dropping from the jagged points of rock above the camera. A piece of soft silk kept in the trousers pocket should be used to wipe the lenses. In some places, where the heat is almost unbearable, drawers are the only garments worn by the miners at work.

In the past magnesium ribbon and the oxy-hydrogen light were used; now, after repeated experiments, flash lamps² of great power have been found to give the best results. From two to four of these lamps are generally sufficient, with an exposure of about three to four seconds. By a judicious use of lamps some unique lighting effects can be obtained, but special attention must be given to air currents, which, if possible, should be upward, or else towards the camera. When it is not possible to photograph a gunnies from one standpoint, it is often the answer to move the camera to the other end. This is probably due to the admission of good air at one end driving the foul air to the other, which, although not perceptible to the eye, is revealed by the lens and produces a foggy effect.

The most sensitive plates are not the best for the purpose, because of their tendency to fog in forced development; there is usually more than enough of fog surrounding the object itself. A plate of medium speed, say 100 H. and D.,³ backed, has been found to possess all the qualities necessary. J.C.B."

Taking photographs underground is difficult enough with modern cameras and electronic flash equipment. One must admire the work of photographers 100 years ago; to carry such bulky and heavy equipment underground required great stamina and determination. To operate such equipment required experience and consummate skill.

1. The focal length of a standard lens is approximately equal to the diagonal of the plate. A standard lens of 7 ins focal length would cover a "half-plate" of 6½ ins by 4¾ ins.

2. A simple flash lamp may be made with a short metal pipe bent to a right angle, the short vertical length surrounded with cotton wool soaked in methylated spirits. A charge of powdered magnesium is placed in the pipe, and the free end is attached to a rubber tube terminating in a ball. The spirit is then lit, and pressure on the ball at the desired moment drives the magnesium into the flame and ignites. A number of such lamps may be arranged to flash simultaneously by connecting all the pipes to a single large ball, a pair of bellows, a bicycle pump, or an air reservoir. A popular commercial flash lamp which gives an instantaneous or a continuous flash consists of a metal chamber connected to the rubber tube and half filled with magnesium powder; this is surrounded by a separate reservoir containing methylated spirits. The rubber tube is then closed by means of a spring clip and the bladder inflated. The wick having been lit, a flash of the required duration can now be obtained by pressing the clip thus allowing the magnesium powder to be blown into the flame. For instantaneous flash photographs a mixture of magnesium powder and potassium chlorate was sometimes used. This was usually ignited with touch paper, but could only be used in small quantities because it was highly explosive.
3. H. and D., Hunter and Driffield, gave their name to a film speed rating system now long obsolete. 100 H. & D. would today be regarded as a very slow film. A 'backed' plate would have the back of the plate coated to prevent reflections which cause halation. Caramel was often used!

Bill Newby.

HOLMAN-TREVITHICK ARCHIVE

I'm pleased that my first submission to the Newsletter is such an optimistic one, although it probably goes on a bit. Following Clive Carter's negotiations at Holman's I was invited along to briefly list the material available so it could be moved to Taylor's engine house for storage. This was followed by several other visits, each apparently more frenetic than the last as ever more bits and pieces were brought out of dark cupboards and from beneath desks. Several people eventually gave help, the team comprising myself, Clive, Kingsley Rickard, Arthur Young and Phil Hosken. With some exceptions, notably heavy machinery, everything is now in the basement at Taylor's, waiting for proper cataloguing, a task which will doubtless take some time to accomplish.

As Clive also mentions, I have been successful in retrieving about a dozen historic documents which have been in storage with a Truro solicitor for nearly 30 years. Getting them back was complicated because the partnership was dissolved and four different solicitors came from it. The documents will probably go to the County Record Office, however it would be useful

for the Society to have transcriptions (work already in hand) and images of the originals.

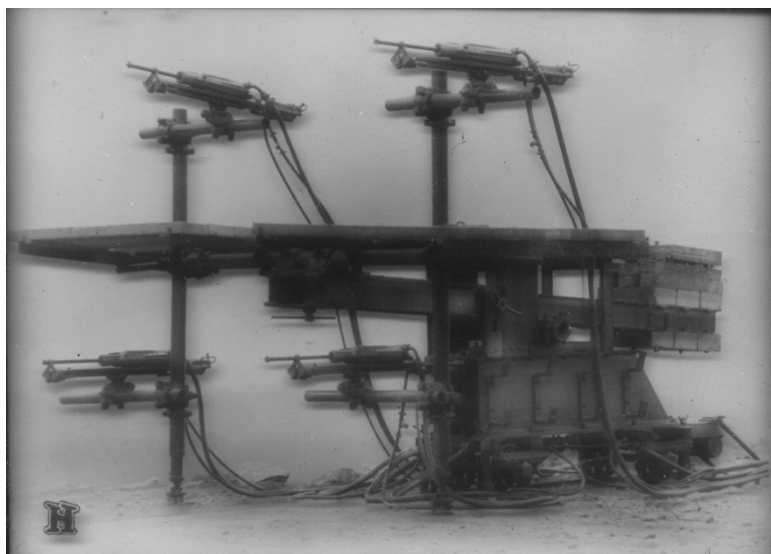
Here are the lists, firstly, the Trevithick-Harvey documents:

- Copy of the Will of John Harvey of St Columb Major
- Copy of the Will and probate of Richard Trevithick of Camborne
- Letter from Richard Trevithick to Mr Clark
- Translation of the agreement between Don Fransisco Uville and Richard Trevithick dated 1814 for latter to take first engines to South America
- The will of Elizabeth Harvey of Hayle
- Copy of the will and probate of Henry Harvey of Hayle Foundry
- Letter from Henry Harvey to his bank
- Residuary account of the estate of Henry Harvey, deceased
- Copy of the will of Jane Trevithick of St Erth
- Copy of the will of J H Trevithick (with unsigned codicil)
- Copy of a letter from the Rector of Illogan to C Trevithick recording the baptism of (inter alia) Richard Trevithick

HOLMAN-TREVITHICK ARCHIVE - this is a précis!

Paperwork

Several boxes and two filing cabinets, realistically of dubious value but needs to be checked (also includes various Holman magazines, parts lists and instructions, many duplicates) Quantity of machine drawings



A4 to A0 (possibly bigger) mostly copies but some originals, we have 605 of these in a map chest.

Poster-type illustrations of equipment cutaways, many of which are coloured: 142.

Large quantity of original acetate artwork for promotional materials.

Large quantity of miscellaneous photographs, promotional, instructional and other.



OHPs

Probably all instructional, mostly machine assemblies but some lecture notes: at least 1,000

Cine film

Appears to be mix of 8 and 16mm film of various lengths (to 1800 feet), most appears to be in reasonable condition. We have 157 films, which includes 1930s film of Holman's works. The TSW film archive regards this collection as probably being of national importance, not just regional.

35mm colour slides

Mostly promotional and instructional, including machine assembling: at least 4,500.

Plate-glass negatives

Black and white, various subjects dating from 1900: 225. The two photographs (above and previous page) are scanned from this collection.

Mixed size negatives

These include some plate-glass

negatives, all black and white, single frame, 1/4 plate (4x5-inch) and smaller. Much promotional material but also many photos of staff. Also includes six out of seven record books; although the numbers suggest there should be on the order of 12,000 of these, this is probably incorrect and I think that twice this is more realistic.

Machinery

Some display cutaway demonstration models, but includes 3 compressors, a 303 drill with airleg, 2 DTH drills, a demolition pick, 18 jack hammers, a drill steel extractor and stool made from the chassis of a Holman Projector. This last item is very rare and the only one known to exist - if you have one please let us know!

I have been unable to locate a few old Society possessions, of which the remaining Trevithick medals are by far the most important. If anyone can provide any information as to their whereabouts I would be grateful.

Pete Joseph

KING EDWARD MINE

Sunday 29 April was the official opening of the newly updated shop, mill and museum. A large number crowded in to be welcomed by Trevithick Trust President Bill Newby and Property Manager Ieuan Harries, both Society members. The opening ceremony was performed by Mark Kaczmarek, a well known South Crofty miner and local councillor. All machinery, including the Californian stamps, was running and considerable interest was shown by the public. The event was the culmination of a long period of planning, scheming and coercing by Society member Tony Brooks and his band of volunteers, mostly drawn from the Carn Brea Mining Society and this Society. Congratulations are due to "Tony and his Millmen" for producing such an excellent and absorbing site. During the afternoon the mill was the unusual venue for a theatrical production. The Mikron Theatre Company staged their production "All Steamed Up", by Mike Lucas and Jim Woodland, which tells the Richard Trevithick story in words and music, emphasising that he was an "ideas man" and certainly not an entrepreneur. It was a very enjoyable, well-acted and educative production. Redruth Town Band and Hayle Male Voice Choir also entertained the crowd inside the mill, whilst outside vintage vehicles and the Mine Rescue Team were on view.

Kingsley Rickard

Members are reminded that the Members Evening will be at Cornish Engines at Pool

MEMBERS EVENING

in the audio visual hall at 7 pm on 19 July. Cars may be parked in the Safeway car park. Any member wishing to present an item requiring help please contact Kingsley Rickard on the Society chat line (01209) 716811.

LINK WITH STEPHENSON

Whilst members of the Stephenson Locomotive Society have been very welcome as frequent visitors to Camborne and the Se-Tech 2001 Conference at Falmouth the recent visit of Kingsley Rickard and Phil Hosken to a meeting of the SLS at Bristol is believed to be the first invited link between the Trevithick Society and the SLS.

The two Society members addressed the SLS and explained the background and activities of the Society. They also gave a slide show about the building and operation of the Camborne Car replica.

Upon their return Kingsley and Phil received a thoughtful letter of thanks and it is hoped that this will be just the first of future links of this nature.

[En route to the talk both of them were wearing Period Costume, and this caused much astonishment at the motorway services where they stopped for a comfort break].

AGM 2002

The Annual General Meeting will be held at the spectacularly located Geevor Mine, Pendeen on Saturday 21 September, followed by the Annual Dinner, also to be held at the mine and supported by a packed weekend programme. Full details will be published in the next Newsletter.

CYRIL MAGOR

The Society is sad to announce the sudden death of member Mr. T.C. Magor of Chacewater. Cyril, a retired electrical engineer, regularly attended lectures at the C.S.M. and closely followed all Society's activities. The Council conveys its sympathy to Cyril's family.

REFUSE DESTRUCTION IN CORNWALL

Much has been written in recent months about the proposed Refuse Destruction Plant at Roche, in Mid Cornwall.¹ Whatever the pros and cons of that scheme it would not be the first time that such a plant had been installed and operated in Cornwall. The first plant was operated for 45 years.

The Borough of Falmouth (the Corporation) obtained the Electric Lighting Order 1903, covering the whole of the borough, but decided not to run their own undertaking. Instead, they passed the Order on to The Electric Supply Corporation Ltd in an agreement dated 11:07:04 (copy survives).

This agreement required a deposit of £200, forfeitable if the plant, previously approved by the Corporation, was not completed in two years. Also, that it would include a Refuse Destructor to take "all house and trade refuse and dust of the Borough of Falmouth as the Corporation may there deliver", and that it be disposed of within 48 hours. The Company would be paid 9 pence per ton of refuse destroyed, but would have to pay the Corporation £50 per annum towards delivery.

The agreement also included maximum prices to be charged per unit to private consumers, Corporation premises, for cooking and heating and for street lighting.

The Company acquired the freehold of a plot of land on Beacon Hill, built the Electricity Works on it, and installed the plant:-

1906

No. 1 Boiler — Babcock & Wilcox water tube marine, with grate for coal and refuse. Fired by hand. 6000 lbs per hour, 180 psi, 120-150°F superheat.

No.2 Boiler — similar to No. 1 but for coal only. Coal delivered to Bunker by cart from railway goods yard. Water tank 10,000 gallons and feed water tank 3,500 gallons. Two steel stacks 75' high. Generator sets with 500v dynamos — No. 1 50kW Reavell vertical 2-cylinder, and Nos 2 & 3 120kW Belliss & Morcom compound, vertical 10" &

16" x 10". 170 BHP @ 180 psi & 450 rpm. Supply 3-wire 460/230 volts DC by 3-core cable. Tudor battery for night load.

1919

No. 3 Boiler — land type similar to No.1, with Goodrich & Hamlyn pressure furnace and Oswald Stott forced draught fan with 6 HP motor. (made in 1906).

1924

No. 4 set — 212kW Vickers-Petter vertical diesel, 340 HP @ 250 rpm. 3,400 gallon diesel fuel tank.

1934

No. 5 set — 50kW Parsons petrol-paraffin (built 1917). 400 gallon diesel fuel tank reserve. 100 gallon paraffin tank. Petrol from 5 gallon drums.

1936

Bulk supply from Cornwall Electric Power Co., 11,000/400-240 volts AC 50 cycles.² All DC motors replaced after 11kV ring laid around town and 4-core LV cables laid from new substations to feed into network. The two 120kW dynamos on the Belliss & Morcom sets replaced with 120kW alternators which could run in parallel with CEPCo.³

1939

The 212kW Vickers-Petter set sold to Falmouth Docks, where it did sterling work until the DC supply was taken from rectifiers after the SWEB AC supply was connected in 1955.

The burning of refuse had never been satisfactory because of the inconsistency in the calorific value of the refuse — rubbish, carpets, dead dogs, old boots etc. This often resulted in a sudden drop in steam pressure, and, when running in parallel with CEPCo, the Frequency Control Relay tripping out the alternators.

At Vesting Day, 1948, the Station came under control of the British Electricity Authority, who had decided that all small local stations would be closed. Falmouth was closed in 1951, after the BEA had agreed to pay the Corporation £17,000 to buy out the remaining period of the contract

for burning the refuse.

The site became a store and report centre and was cleared recently and sold for residential purposes.

REFERENCES

- 1 WMN 4 & 6 Oct 2001
- 2 CEPCo Records — Supply Agreement dated 23:12:35
- 3 CEPCo Records — Schedule of plant & assets rendered unsuitable by change of supply.

Eric Edmonds

The council has been aware for some time that our constitution was "ageing" and that the Government was making changes to the rules for running charities. Therefore a sub-committee has been examining the regulation changes to determine the effect

EXTRACTS FROM THE SOCIETY NEWSLETTER

No.15 Nov.76 p18

Trevithick Models - reports a Italian 1/43 scale Camborne Road Locomotive.

[Ed. The Society has a plastic Italian model of the London Road Carriage which has four wheels, unlike Tom Brogden's full size replica which has only three.]

No.12 Feb. 76 p1/2

Proposed Trevithick Locomotive - no declared author!

Outlines possible locomotive which could have replicas. Dismisses the 1801 as practically no details known! strongly recommends the Newcastle loco (that and 'Catch me who can' are the only ones that do not have a replica!! (I.R.S. not convinced that Newcastle loco was built - if it was others, e.g. Hackworth, may have built it locally to Trevithick's drawings).

Incidentally have you noticed how Hackworth's locomotives are similar to 2001 and 'Catch me who can' and not the Penydarren/Coalbrookdale locos! as I said before just change the Wheels and paint the chassis metal coloured to get 'Catch me who can'.

Geoff Smith-Grogan

SOCIETY CONSTITUTION

on the Society.

The changes will in effect require complete restructuring of the Society as for instance, no form of speculation is permitted (such as book publishing - a constant source of income for the Society). These issues can be addressed by the setting up of a nominally independent non charitable trading company (similar to Cornish Steam and Engineering which was set up to build the Camborne Road locomotive).

This process also implies that some of the roles carried out by council members may be transferred to the trading company leading to a smaller and leaner council. It is hoped that the changes can be carried out by a seamless transfer to the new organisation as far as the membership is concerned.

To achieve this it is proposed to submit the new constitution to the membership for approval at the AGM as only on receipt of the membership's approval can we formally submit the revisions to the Charity Commission for acceptance. There must be no doubt that the Society cannot continue with its existing constitution without losing its charitable status and all the benefits that it brings in access to funding for projects.

On a personal note it never fails to amaze me that the Society has such a broad range of experience available through its membership - the sub-committee consists of an accountant, a solicitor, a business man and a very senior engineer with training and experience in civil law.

Geoff Smith-Grogan

TREVITHICK 2001 PROJECT

Trevithick Day was a tremendous success and Camborne was thronging with large crowds enjoying the festivities. Although blasted by a continuous cold wind, the day was almost completely dry and there was masses for everyone to see and do, ranging from watching the street entertainers, viewing the parades, seeing the exhibitions and, of course, mingling with the traction engines.

Preparations for our replica went well. The boiler was inspected and everything inside and out had been thoroughly cleaned. One modification made, was an extension to the man stand at the rear, so that the coal basket could be moved giving unhindered access to the toolbox.

Soon after seven in the morning on the day itself, the writer accompanied by Colin

French, George Wilson and Arthur Young, were to be found erecting the Society tent in Basset Road, Camborne. John Sawle arrived soon after with coal for the Trevithick

replica and then the engine crew were on their way to the CompAir UK Holman factory to light up and raise steam. Meanwhile, back at the tent, George Wilson was busy getting the display ready while awaiting the arrival of Vernon Baldry and Eric King. At ten o'clock with 75 psi. indicated the engine moved off from Holmans towards Basset Road. It was then noticed that there was a small crack in the

rear nearside tyre, along the line of a weld. This got marginally worse by the time we had reached the tent, where we were to be on static display until 1-45 pm. We were then to lead the parade through the town, which we did, through the clapping and cheering crowds, to the eastern end of Trelowarren street, where the tyre cracked across its entire width, on a cobbled speed bump. It was decided to retire gracefully and so we headed for CompAir and, being unable to raise Ray Tilling, the welder who has helped us so much, we resigned ourselves to the fact that we would not be attempting the Camborne Hill run the next day.

Kingsley Rickard



The Camborne Road Locomotive leading the parade through Cross Street. Photo: N. Bird

LEVANT REPORT

A pre-season meeting of volunteers was held at Botallack Count House on 21st March to give them an opportunity to meet the National Trust staff members, to set the scene for operations in 2002 and describe the current activities of NT in Cornwall and the changes taking place in the organisation. The Levant volunteers also met Anthony Sandham, who is responsible for Health and Safety on NT sites, who stressed the need for all working on the site to promote the safe operation and safety of all staff and visitors.

The steam boiler has been stripped, checked, reassembled and steamed by the Fulton's engineer and approved by the Boiler Inspector. The pressure-reducing valve has been rebuilt with a set of factory spares. An electrically operated safety steam cut-off valve has been installed to enable steam to be shut off from the engine house and contained in the boiler in the event of an emergency on the engine or old pipe work in the engine house. The engine was run to prove that this work was satisfactory. Some drivers have since reported difficulty in starting the engine and feel that this might be related to the installation of the safety cut-off valve.

For some time, it had been difficult to run the engine slowly because vacuum was lost. It was thought that the packing on the piston was failing or that the rubber seals on the lower sections of the air pump had perished. On April 9th, John Treloar and Chris Quick checked the condition of the lower section of the air pump. They found that the top collar was only being held by one of the three nuts and when removed that the top seal was perished. The shaft packing below was in good condition, but the wedge through the shaft holding the brass plate keeping the lower seal against the lower seat was missing. It could not be found so a new one was made and secured by a split pin. The lower rubber seal was split. New seals were cut from 20 mm material, as the original 0.875 in. was not available and the air pump assembly was re-installed in the engine. The engine was tested on 12th April and maintained vacuum

at a reduced speed with more water being pumped, showing that the new seals were now working correctly.

On 17th April, with the agreement of the boiler inspector, John Treloar and Chris Quick increased the engine steam pressure to 35 psi for a trial period to compensate for the effect of the new safety cut off valve. The LP steam safety valve setting was increased from 30 psi to 40 psi.

In 2002, the engine will be running on: -

- Tuesdays, Fridays in May
- Wednesdays, Thursdays, Fridays, Sundays in June and 3rd and 4th of June
- Every day except Saturdays in July, August and September
- Tuesdays and Fridays in October

Eric Mason is the Custodian of the engine. He lives at "Anchor Watch", Rospletha Cliff, PORTHCURNO, PENZANCE TR19 6JS, Telephone 01736 810717. He is also the organiser of the Drivers and Stewards rota. Please contact him if you wish to help as a Driver or Steward at any time during 2002. Training is provided.

The "Greasy Gang" meets at the Engine House most Fridays to work on the engine or at the site. Members and visitors are most welcome to lend a hand at whatever work is under way.

W. E. H. King

The café at Lands End Airport, near St. Just, is well known to travellers who have to wait before their journey by fixed-wing aircraft to the beautiful Isles of Scilly.

HISTORY OF LANDS END AIRPORT

Rose Sayer Smith, who runs the popular café, is researching the history of the airport and would be most grateful for any information on early activities on the site, especially wartime or pre-war stories.

For your information, Rose Smith can be contacted at the Choxaway Cafe on 01 736 785229 or <mailto:roseevsmith@hotmail.com>

BOOK REVIEW

The development of rotary motion by steam power by David K. Hulse. Published by TEE Publishing, Leamington Spa, pp 146, 92 illustrations. Casebound

Despite the somewhat grandiose title, this is the second offering from the pen of an author whose motivation is making accurate models of early steam engines. Two rotative engines inspired the present work: a 1779 atmospheric engine fitted with a crank by James Pickard in 1780, and James Watt's 'Lap' engine of 1788, which worked at the Soho Foundry for 70 years. Both models were made to one sixteenth scale.

Prior to 1780 there were only two ways of producing rotary motion from a beam engine. One was to pass water pumped by the engine over a waterwheel, a reliable if cumbersome method, and one which was employed at some Cornish mines up to the mid-19th century. The other was to use a system of ratchets attached to the pump rod engaging gears, but the resulting rotation was decidedly jerky. The Frenchman, Cugnot, incidentally, used ratchets more or less successfully in his steam carriage of 1769.

Like the author's other models, the two subjects of this book exhibit extraordinary attention to detail. Indeed it is his descriptions and sketches showing how he used the same materials as in the original for the various components that is the true value of his work. Even the bricks in the model engine houses were made individually. In the case of the engine fitted with Pickard's patented crank in 1780 he was unable to find any drawings, so his representation of it remains largely conjectural despite nearly 20 years of patient inquiry.

The 'Lap' engine was less of a problem though information obtained after the model's completion involved the author in a number of changes in order to represent its original condition. The actual engine is preserved at South Kensington but without its boiler which turned out to have been of the wagon type: the author had assumed a

beehive. Other details were changed on advice from the Museum authorities. The engine was so named because of the polishing machinery it drove, and is a characteristic Watt double-acting condensing engine with sun-and-planet gear. The latter was used by Watt to circumvent the Pickard patent and had the curious effect of causing the driven shaft to rotate at twice the speed of the engine.

If there is one criticism the reviewer has, it is that better quality paper should have been used. Many of the half-tones are dull and some of the sketches blotchy. However, this scarcely detracts from the quality of the information given. The models themselves can be viewed on the author's website:

www.btinternet.com/~historical.engines

This book is available from D.K. Hulse, 133 Oulton Road, Stone, Staffs. ST15 8DS. Price £12.50 incl. p. & p.

KB.

Richard Trevithick, Giant of Steam by Anthony Burton sold out in the hardback edition but will shortly be available in soft cover. It is a record of the extraordinary life of the brilliant Cornish Engineer and inventor who gave the world its first steam powered vehicle two hundred years ago. The cover price of this edition will be £9.99 subject to Members terms from Willow Books. (see back cover).

SUBSCRIPTIONS

Members are reminded that their subscriptions are now overdue. If not paid by Bankers Order I will be very happy to send any members the necessary form. This saves members and the Secretary much time, effort and the postage, all of which are becoming more important to everyone.

Paul Smith.

71 St. Norbert Drive,
Kirk Hallam,
Ilkeston, Derbyshire. DE7 4EF

TREVITHICK SOCIETY EVENTS AND CONTACTS

MAY 21st—CSM

Levant. Video presentation by John Potter.

MAY 24th—East Cornwall

Underground Mining in Cornwall.

By Bob Le Marchant

MAY 25th—Danescombe Valley Field Trip

JUNE 21st—CSM

Cornish Miners and their Internal Immigration.

By Bernard Deakon.

JULY 19th—MEMBERS EVENING

7.00 p.m. at Cornish Engines, East Pool

*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.

Subscriptions 2002:-

Single members	£15
Family (husband & wife)	£18
Overseas members	£18
Corporate members	£18
Student members	£5