

THE TREVITHICK SOCIETY

NEWSLETTER NO. 9

MAY 1975

Edited by J. Hodge at Trannack House, Penzance



The Tolvaddon Stacks, Tuckingmill
(photo by courtesy of the editor of the Camborne-Redruth Packet)

The stacks were blown up on 8 April, despite the efforts, of the County Council, the Society and others to save them, as they were considered dangerous in view of their close proximity to the new Camborne bypass, and the cost of repairs was estimated at £15,000. They were built about 100 years ago for arsenic extraction and were 110 feet high and contained about 1600 tons of masonry. Demolition was carried out by Mr. Don Wilkins, himself a member of the Society, who said "They were put up by better craftsmen than I, but as they had to come down I would rather I did it."

Summer Meeting

A visit has been arranged to see the Crofton beam engines at Great Bedwyn, Wilts, on Sat. June 28th. The pumping station is on the Kennet and Avon Canal (between Hungerford and Marlborough) and houses two engines, one originally by Boulton and Watt (1812) and the other by Harveys (1845). The engines and the house have been magnificently restored and are operated on steam each month in the summer, including the day of our visit. The older engine is said to be the oldest working beam engine in the world.

The coach will pick up members and friends at Camborne Free Car Park at 7.00 a.m. Truro Bypass (opposite Harveys) at 7.20 a.m., St. Austell Bypass (Cattle Market Roundabout) at 7.45 a.m. The cost will be £2.50 per head including admission to the engines. Applications for tickets, accompanied by remittance and s.a.e. for reply please, to our meetings organiser, D. Ingham, 25 Barripper Road, Camborne, to reach him not later than Sat. June 14th. The coach is expected to get back to Camborne about 10 p.m. allowing about three hours at Crofton, (1.00p.m. - 4p.m.). Members should take their own lunch etc., Unless we have a minimum of 35 acceptances, the trip will have to be cancelled and money returned.

Cornish Industry 100 years ago

Royal Cornwall Gazette - April-June 1875

3rd April

The death of Mr. William Shilson of Tremough, Nr. Penryn, head of Shilson Coode & Co., Solicitors, St. Austell, and of the banking firm of the same title, was announced. "Regarded as one of the leaders of the legal profession in the County"..... and "was the proprietor of the extensive gunpowder manufactory at Kennal Vale"..... "holding a larger and perhaps more widely disposed interest in Cornish mines, from the Land's End to the Tamar, than any other gentlemen." He was one of the leaders of the Liberal Party, and inherited Nanswhayden under the will of the late Mr. Benjamin Sampson.

10th April

To be let - by tender for 7 or 14 years from Michaelmas next - Point Flour and Grist Mills, Gwennap, with dwellinghouse, garden, stable, piggeries and yard; with or without adjoining meadows. The Mills have 3 pairs of stones, a wire flour machine, smut machine, hoist, and constant supplies of water.

Phoenix Silver Lead Mining Co. Ltd.- for sale,

66" cylinder pumping engine, with 2 x 14 ton tube boilers.

42" cylinder pumping engine, with 1 x 11 ton tube boiler.

26" cylinder steam winding engine, with 1 x 10 ton tube boiler.

26" Cornish Crusher.

17th April

North Jane Mine, Kenwyn:- sale of materials, including 28" cylinder pumping engine, 20' water wheel, 2 sets of six and three head stamps. To view, apply to Capt. Harper.

For Sale by tender, Roseladden Stream Works, situate near the Porthleven tollgate in the parish of Breage.

Notice of formation of limited liability company to work the Wheal Wrey, Ludcott, and North Trelawney Mines, Near Liskeard, for silver.

Advert - "Wanted, 70-inch pumping engine and 25 fms. of 24 in. Drawing Lift. Address, Francis Dingey, Truro Foundry."

Note in "Mining Intelligence" (p. 5) and "Jottings by Tregeagle" (p. 4) on cost of coals in County as a result of endeavours of Mr. W.H. Rule.

Blue Hills Mine:- at the quarterly meeting, held in London, the balance against the mine in the last quarter was stated to be £641. The mine could now be drained by working the engine during the day only.

1st May

North Wheal Metal and Harriet Mines, Crown Town, Sithney, for sale, including a 32" cylinder rotary pumping and winding engine with 1 x 10 ton boiler.

Wheal Mary Ann Mine, for sale, including a 22" cylinder winding engine of 5' stroke with 1 x 18 ton boiler, large and small water wheels, buddles and frames, 900 fms best steel wire rope 3½", rail iron, tram wagons.

Death announced of death of Mr. William Hosking on Feb. 18th at Gipps Land, Australia, but formerly of the Town Mill Foundry, Redruth. Mr. Hosking had been prospecting in Australia, and left a wife and family in the colony.

Petition presented to the Lord Chancellor by the Cornwall Minerals Railway Company on 27th April for the winding up of The Cornwall Consolidated Iron Mines Corporation Limited.

Description of plant and working of New Consols Mine, in parish of Stoke-Climsland, about 3 miles from the Tamar, partly owned by Captain Richard Pryor of Redruth.

15th May

Order made for winding up of the Cornwall Consolidated Iron Mines Corporation Ltd. Offer had been made to purchase mines for £125,000. Only 42 shareholders with 20,000 shares out of capital of £600,000 divided into 30,000 shares. Main creditor was Cornwall Minerals Railway for £5,331.

Account of wreck of barquentine "Aberdour" of London - p. 6.

Account of wreck of Steamship "Schiller" on Scillies - p. 7.

22nd May

For sale:- 13 shares of £37-10s. each, fully paid, in the Truro Gas Co. - the whole being in 320 shares - on which regular dividends of 10% have been paid.

Camborne Gas Co. announced a reduction in the price of gas from 6s. to 5s. per thousand feet to take effect from September next.

While men engaged in cleaning pipes at Harvey & Co's Gas Works, Hayle, a quantity of tar ran among some burning coke, "and in a moment the place was ablaze. Fortunately the fire was soon got under, and little damage was done".

Old Tincroft is being re-worked by a London Company, and with marked success".

29th May

Brewer & Co., organ builders at Castle Street, Truro, announcing the current construction of the largest organ ever built in Cornwall.

5th June

Cider - a few hogsheads of prime cider in brandy and wine casks for sale: apply John Gill, Great Treworgie, Probus.

For sale, freehold, Laveddon Mills, between the old and new roads to St. Austell at Bodmin. In occupation of John Lobb, and consisting of a dwelling house, Mill house, piggeries, outhouses and 9 acres of meadow, orchard and garden land, about a mile from the town. Proprietor:-

Mr. P. Sibley, St. Laurence.

For sale at the Wharnccliffe Delabole Slate Quarry, near Camelford, a 20" cylinder engine with winding cage and crank.

Truro Gas Co.:- Sale of 13 shares at auction (see above) by Mr. Mayne attracted numerous bids, the successful ones being between £60 and £62 each. The shares fetched a total of £896 - valuing company at £19,520.

Proposal by Penzance Town Council to extend gaslighting to Madron.

The Fowey Gas Consumers Company Ltd. is to be voluntarily wound up in liquidation.

12th June

Truro Gas Co.:- proposed to reduce price to private consumers from 1st July to 6s. 3d. per 1000 ft. with a 25% discount to consumers of over 10,000 ft. per quarter, and 20% of lesser quantities if payment made within 1 month of each quarter day. Effect was to reduce these prices to 4s. 8d. and 5s. respectively per thousand feet.

An iron steamer, built for towing purposes for Mr. W. Jewell of Falmouth, was launched on thursday evening from the shipbuilding yard of Messrs. Harvey & Co., Hayle. The dimensions of the vessel, which was named Victor, by Miss Jewell, the daughter of the owner are:- length overall, 80'; moulded breadth, 16'; depth of hold, 9'; and the vessel is fitted with surface condensing engines of 24 nominal horsepower.

19th June

For sale; Materials at Bodennick Iron Mine, St. Stephens-in-Branwell, including a horse whim, 2 horse whim kibbles, 1 iron tram wagon, 285 yards of railroad and tramway.

Gas Co. at Penzance about to lay a new gas main along Albert Pier, the old one being defective.

26th June

At the County Court in Penzance the Gulval Ice Company, manufacturers of aerated waters, recovered £22-13-2 from John Martin of Camborne for unreturned bottles.

The Ship Inn, Lelant, put up for sale by Mr. Ellis, Brewer, of Helston and sold for £120.

Leasehold, there is only 1 life on this property and he is in America. The conventional rent is £15 and the rack rent is £6.

Account of Report of Dr. Foster, Government Inspector of Mines, on Mines of Cornwall - p. 6.

Paul Stephens.

The article on the Cornish gas industry in newsletter No. 8 by Peter Laws has prompted several additional notes by members, adding to the information already given.

From E. W. A. Edmonds, 'Newlands', Tarrandean Lane, Perranwell Station, Truro.

I read with interest the article about gas in Cornwall in Newsletter No. 8 but vainly looked for a mention about the Cornwall Electric Power Co owning one of those undertakings!

The Liskeard Gas & Electricity Co Ltd was formed to adopt an agreement with F. T. Dupree & others to manufacture, sell, supply and distribute light, heat and power. It obtained a Special Order in 1929 and was purchased by CEPCo in 1931. Under the Cornwall Electric Power Act 1936 it and the other individual companies were incorporated into the enlarged CEPCo, with one set of accounts.

Supply was first given in December 1925 at 200v D. C.

With nationalisation the gas undertaking was hived off and taken over by SWGB.

From the Recorder of Par Old Cornwall Society.

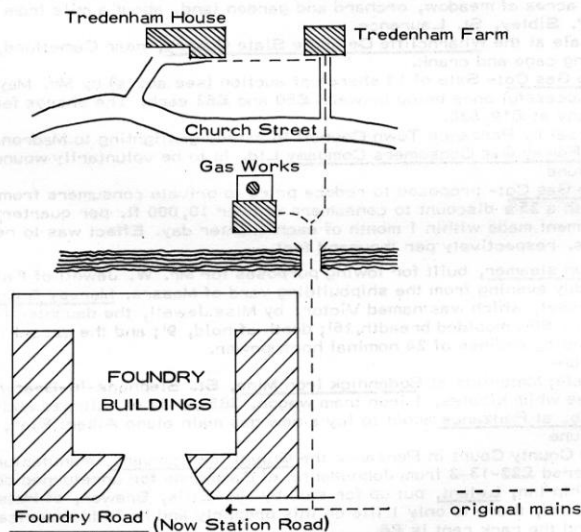
St. Blazey Gasworks

Originally built by Mr. William West for supplying gas light to his foundry (c. 1860). A main pipe was laid through the main street of St. Blazey and also to Tredenham House, Mr. West's residence. This latter main ran from the gasworks through a small meadow at the rear across Church Street and up a lane leading to Tredenham Farm (see map).

The gasworks was erected in a small meadow at the rear of the Foundry in Station Road (then known as Foundry Road). It was a very small unit and in 1900 consisted only of two beds of three small retorts directly fired and a gas holder of about 10,000 cu. ft. capacity run by one man, who was also responsible for lighting the street lights in winter! Mr. West had been asked by the parish council to install street lighting in 1860.

On the closure of the foundry a move was made to purchase the gasworks, and within 24 hours sufficient money was promised and authority obtained to purchase the works and set up the St. Blazey Gas Works (1891).

About 1910 the company was approached with a view to supplying Par and Tywardreath with gas and a site was leased from the Treffry Estate near Par Harbour and there a new works was built. By 1911 Par and Tywardreath had a gas supply. With the building of the council estates at St. Blazey and St. Blazey Gate in 1923 the gas main was extended to St. Blazey Gate and eventually to other parts of the area so that it was necessary to erect a second gasholder at Par Harbour. In the 1930's the Company became a subsidiary of the South Western Gas and Water Corporation and in 1949 was nationalised. The works originally planned for an output of 8,000,000 cu. ft. had grown by 1952 to 40,000,000 cu. ft. In this year the St. Austell unit was in operation and the St. Blazey Gas Works ceased to exist.



From G. C. Hartland, 19 Beesley Road, Banbury.

During my 1974 holidays I explored a few of the remains of gas works in the Penzance area. These included the ones at Penzance, Helston, and Redruth.

The only remains at Penzance consist of one 250,000 cu. ft. spiral-guided holder. This holder is a three lift one contained in a steel tank 80ft in diameter and 21ft deep and was erected by Willey and Co. in 1934. Two other holders originally stood on this site, one of which I have been unable to obtain details. The other one was a column-guided two-lift holder of 90,000 cu. ft. This holder was contained in a brick tank 55ft in diameter and 21ft deep also erected by Willey and Co. in 1900.

I have been unable as yet, to obtain details of the carbonising plant and associated plant used at this works. Some 4,432 tons of coal was carbonised, and 64.5 million cubic feet of gas produced annually.

At Helston there are two holders remaining on site, and at the rear a few remains of the retort house and purification plant (1974). The holder still in use is of the guide-framed type contained in a steel tank 46ft in diameter and 18ft 6in deep. Its capacity is 52,000 cubic feet in two lifts. This holder was erected in 1928.

The redundant holder is of the column-guided type in a masonry tank 36ft 6in in diameter and 21ft deep. Capacity 20,000 cubic feet, erectors and date unknown. Coal carbonised, 720 tons per annum, gas produced annually, 7.2 million cu. ft. Gas making ceased on March 29th 1967.

I located Redruth gas works a mere five minutes walk from Murdock's house. The only remains are of two holders. One of the column-guided type, the other, of the guide-framed type. Both holders are now completely derelict, gas making having ceased here on June 21st 1954.

I should think that these two holders are almost certainly the original. The smaller one had a capacity of 38,000 cu. ft., in two lifts and is contained in a brick tank 41ft. in diameter and 16ft 8in deep. It was erected in 1870.

The large guide-framed holder had a capacity of 75,000 cu. ft., also in two lifts and contained in a brick tank 51ft 7in in diameter and 20ft 7in deep. This holder was erected in 1889. Makers of holders unknown. Annual gas production, 16 million cubic feet.

I am extremely grateful, to South West Gas, Bath, for information on the above mentioned works, also the following list of works, which I hope to visit in 1975. It is regretted that no details of the carbonising plant or ancillary equipment of these works was available. However, further research may prove more profitable.

The following is a list of other Cornish Gas Undertakings kindly supplied by Mr. J. Parker, Production Engineer, S.W.G., Bath.

TRURO GAS COMPANY

Formed 1825, 1895. Special Act 1906.

The original works

No details other than that it had one holder in a tank 66ft in diameter by 21ft 6in deep. This holder was apparently demolished in 1928 and replaced by a two-lift column-guided one, by Willey & Co., in the original tank. A new works was erected at Newham with a 750,000 cu. ft. spiral-guided holder, and brought into use in 1956.

Coal carbonised, 4,176 tons. Annual gas production, 43 million cu. ft. Coke produced, 2,502 tons. Tar, 41,000 gallons. Sulphate, 32 tons.

The new works closed down in April 1969. The 750,000 cu. ft. holder remains in use. Gas making ceased at the old works on 18th January 1957.

WADEBRIDGE

Formed in 1842.

Coal carbonised, 600 tons @ 23/- per ton. Annual gas production, 6.9 million tons sold at 4/6 per cu. ft. Coke sold at 22/- per ton. Original gas holder, capacity 11,000 cu. ft. No other details. A second holder of 20,000 cu. ft. capacity was erected by Willey & Co. in 1912. It was of the column-guided, single-lift variety contained in a steel tank 41ft 6in in diameter by 16ft 6in deep. Both holders are now redundant.

SALTASH GAS AND COKE CO. LTD.

Formed 1862.

Present gas holder No. 3. This is a spiral-guided two-lift holder in a steel tank, 77ft in diameter by 25ft deep. Built by Willey & Co., Exeter in 1949, and still in use. No further information available.

FALMOUTH GAS COMPANY

Formed 1866, Special Act 1890 and 1907.

This works comprised a retort house with horizontal retorts, coal for which, was brought by ship; a carburetted water gas plant installed by Humphreys & Glasgow, London, 3 gas holders, total storage capacity 290,000 cu. ft., including C.W.G. relief holder. The one remaining holder is at Ashfield and is column-guided, has two lifts and a capacity of 5000,000 cu. ft. Erected by Willey & Co. in 1913. Coal carbonised, 4,953 tons, Oil used for c.w.g., 21,814 gals. per year @ 4d per gal. Annual gas production, 60 million cu. ft., 25% C.W.G. sold at 3/10 per 1000 cu. ft. Coke sold 2,019 tons @ 20/- per ton. Tar 58,000, Sulphate 38 tons. No details available of other plant. I hope to acquire information regarding C.W.G. plant from Messrs Humphreys & Glasgow. Gas making ceased at Falmouth on 24th January 1957.

ST. AUSTELL GAS CO. LTD.

Formed 1870.

This works also possessed a Carburetted Water Gas Plant (no details available). Initial storage capacity was 127,000 cu. ft. contained in two holders. No other details. In 1904 a two-lift, spiral-guided holder of 107,000 cu. ft. capacity in a steel tank 63ft 9in diameter x 18ft 6in deep, was supplied by R. Dempster; and in 1932, a 127,000 cu. ft. two-lift spiral-guided holder in a steel tank 63ft 6in diameter x 23 ft deep. This holder was supplied by Firth Blakely Ltd. None of these holders are any longer in use. Coal carbonised, 2,550 tons @ 21/- per ton. Annual gas production, 29 million cu. ft. @ 4/3d per 1000 cu. ft. Revenue from coke, 20/- per ton. Gas making ceased here on 20th February 1957.

LAUNCESTON GAS CO.

Formed 1874.

Annual gas production, 14.8 million cu. ft. @ 4/- per 1000 cu. ft. Coal carbonised per annum, 1393 tons @ 25/- per ton. Initial storage capacity of works, 64,000 cu. ft. contained in three holders built c1880-1887. The remaining holder, still in use; is a 100,000 cu. ft. cap., spiral-guided two-lift type in a steel tank 60ft diameter x 21ft deep. It was erected by Willey & Co. in 1929. Gas making ceased on 29th December 1955.

NEWQUAY GAS CO. LTD.

Formed by Special Act 1894.

Initial plant at this works comprised a set of horizontal retorts with the later addition of a set of verticals. Annual gas production, 12.6 million cu. ft. @ 4/9d per 1000 cu. ft. Coal carbonised 1,165 tons. Coke made, 694 tons. Tar, 11,000 gals. Coke used in works, 102 tons. No details of two early holders. The present holder was erected in 1955 by R. Dempster. It is of the spiral-guided type in a steel tank 110ft diameter x 31ft deep, and has a capacity of 500,000 cu. ft. Gas making ceased on 18th September 1958.

ST. IVES (CORPORATION GAS CO.)

Formed by Official Act, 1895.

Existing holder is of the high pressure type and comprises a cylinder 100ft long by 25ft diameter. It has a capacity of 150,000 cu. ft. and was erected in 1937. No details of early holder other than that there were two. One of 40,000 cu. ft., and one of 70,000 cu. ft. capacity. Coal carbonised, 1,153 tons @ 23/9d per ton. Annual gas production, 12.9 million cu. ft. @ 4/9d per 1000 cu. ft. Gas making here ceased on 14th April 1954.

A comment from Michael Messenger on Roy Shambrook's "The Unacceptable Face of Capitalism" in Newsletter No. 8:-

Regarding the last example of litigation mentioned by Roy Shambrook, this actually involved the West Somerset Mineral Railway Company not the West Somerset Railway. These were two quite separate undertakings, the former running from Watchet harbour to the mines in the Brendon Hills was of standard gauge while the latter was of broad gauge from Norton Fitzwarren to Watchet being continued to Minehead by the later Minehead Railway. The WSMR had been leased by the Ebbw Vale Company Ltd, later the Ebbw Vale Steel, Iron & Coal Company Ltd, who sub-leased it to a couple of abortive undertakings for short periods in the present century. The full story is told in Roger Sellick's book "The West Somerset Mineral Railway".

Another from Justin Brooke:-

Mr. Shambrook has done a most useful job in bringing together a few of the more interesting legal cases concerning mining and "mining" in the last century. However, I feel it only fair to point out that of the six companies mentioned in the article, only three had a base of operations, or intended operations, in Cornwall or Devon.

I do not know whom Mr. Shambrook is quoting, but there is no substance behind the allegation that profits of cost-book companies were divided "up to the hill". The first bank was opened in Cornwall in about 1708, and by the end of that century it was common in all the larger concerns to use a bank account, rather than the pockets of the adventurers. It should also be remembered that financial habits of the mining companies were in a state of constant (though sometimes gentle) change, and that different districts had different accounting customs. It should also be remembered that only a minority of the tens of thousands of mining ventures ever made a profit.

Of the mining companies which had reserve funds, those in Mr. Shambrook's particular area - Caradon - include West Caradon, Phoenix, and West Rose Down. Many of the others had a big carry-forward after paying their dividends; in one case, Marke Valley, the original deed of settlement provided that a reserve fund of £5,000 should be built up before the company could pay a dividend.

A very interesting note from Colin Short, 13 Bollin Walk, South Reddish, Stockport, Cheshire.

On 12 February 1974 a small article appeared in (at least) the northern editions of the Daily Telegraph, concerning an intended excavation to be made at Reelfitz coal pit, Bridgefoot, Cumberland. One of the features of the site is a 5' diameter 10' stroke Newcomen engine. This, the largest known Newcomen engine in existence, is believed to be virtually complete, although having to be excavated.

The work has been undertaken by the North West Museum of Science and Industry. In recent correspondence with one of those involved, I discover that although relatively little was achieved last summer with respect to the engine, the piston was recovered. In two halves, this was lying on the surface and has been removed for safe keeping.

From the Western Morning News of 19th March 1975.

Henry Trengrouse, the inventor of the life-saving rocket apparatus, is a household name to many and especially in his home town of Helston, and yesterday the borough's flag flew from the Guildhall flag staff for the inventor's birthday.

His grandson, Mr. Trevenen Trengrouse, has instituted a dinner for the residents of Trengrouse House to be held on that day, and about 40 sat down to a four course meal yesterday.

apprentices, after leaving Hayle, are fit to go anywhere and do anything in the way of engineering, which they have learnt here with their coats off, and we are informed that practically there is never a dearth of appointments for really qualified and steady men.

The boring mill, attached to the machine fitting and erecting, is one of the oldest machine shops in England, dating back nearly a century. It was here where the large cylinders were being bored as described in the list of "work in progress" already given. The pattern shop hard by contains an immense assortment of designs for all classes of engine. The foundry where all the casting is done covers 24,000 square feet, has five cupolas, and two large air furnaces. Castings are here made up to 25 tons in weight, and a new shop has been added, entirely for light pumping work for the South African mines.

One is struck in all departments with the facilities that exist for lifting great weights. In the erecting house, for example, the main travelling crane is capable of lifting 40 tons - the motion being imparted to it by a rope pulley, and on the wharves there is a crane which can raise a weight equal to 50 tons.

No visit to the Hayle works would be complete that did not include an inspection of the shipbuilding yard. It happened the day before our visit that the steamship, Volney, had been launched. It was built for Messrs. Rogers and Bright, of Liverpool - the third vessel, we believe, constructed for this firm by the Messrs. Harvey during the past 12 months. In the course of a few weeks the Volney will be ready for sea, and the engine with which she will be fitted is of the tri-compound kind, 600-hp., weighing 35 tons. A crane in the foundry will pick up this engine, place it on trucks, and by means of a traction engine, will convey it to the side of the vessel. It will be here raised by another crane capable of lifting 50 tons and deposited in a complete form in its place in the ship - facts which will give the reader a good idea of the nature of what the Hayle works can undertake. Great alterations and additions have of late years been made in the shipbuilding yard, and the Messrs. Harvey can now build two ships at one and the same time up to 4,000 tons burden. The yard is fitted with all the latest appliances for shipbuilding - a direction in which, as in all others, the works at Hayle are making a progress that from the commencement seems to have known no interruption, and that promises in the future to be even still more rapid.

Illustrations accompanying article (not copied) Cornish Pumping Engine; Compound Pumping Engine; Single Plunger bottom and valve; Double Plunger, bottom.

(There is another account of Harveys Foundry in the Royal Cornwall Gazette, April 3, 1875, a copy of which has been provided by Paul Stephens, and it is hoped to include this in a later issue of the Newsletter)

From the Western Morning News, 10th March, 1875.

Lady of the Isles was Maid of All Work
A. J. Pawlyn

On March 9, 1875, Harvey & Co., of Hayle, launched ship number 14 from their steamship building yard. Built to the order of the West Cornwall Steamship Co., Ltd., she had been under construction since the middle of 1874.

Now she was nearly ready for sea. Only her boilers and masts remained to be fitted after the launch.

The event was advertised for five o'clock, but, due to a mis-calculation, it was after six that evening before there was enough water in the basin to allow the launch to proceed.

Eventually, all was ready and Miss Denbigh, daughter of the secretary of the company, prepared to launch the new vessel.

"At a signal from Mr. W. Husband, the designer of the vessel, a blow or two were struck (by the builders men), a contemporary account related. Miss Denbigh broke the decorated bottle, pendant from the steamer's bows, against the steamer's prow, named her Lady of the Isles, and wished her every success."

A few moments later she slid down the ways into the water, drenching a few spectators that had got too close in their enthusiasm.

New era

The launching of the Lady of the Isles marked the beginning of a new era of the West Cornwall Steamship Co. An off-shoot of the West Cornwall Railway Co., it was formed in 1869 when the paddle steamer Rover was chartered to go into competition with the established screw steamer Little Western on the Penzance-Scillies run.

It was intended that the new vessel would capture the lucrative trade of shipping mackerel to the mainland during the then expanding spring mackerel fishery.

The introduction of the Rover was advertised to the public in "The Cornish Telegraph" (later combined with "The Cornishman") of April 21, 1869. Commanded by Capt. W. Beadle, she was a fast vessel.

Augustus Smith, Lord Proprietor of the Islands, writing at the time said: "A steamer, the Rover, now runs daily for the fish traffic and makes the passage generally in three hours, The Little

Western of course don't like it, but the town of St. Mary's does, as, not only do the fishermen want many things, but very many fish-buyers also come across!"

The first season was a comparative success, and for the next year the company bought its own vessel, the Earl of Arran. A paddle steamer, like the Rover, she was slightly slower, and to make her more suitable for the stormy crossing she spent several months in the hands of Harvey's.

Merger

Built by Blackwood & Gordon, during 1859-60, she was 143ft. long, could carry 150 tons of cargo and yet only drew 5½ft. of water fully laden. She was not as well patronised as the Rover. The fishermen suspected the company of making undue profits and channelled their trade to the Little Western, which had been on the run since 1858, and provided for the general trade of the islands, not just the fish trade.

Realising that things were turning sour, the company approached the Scilly Isles Steam Navigation Co., owners of the Little Western, with a view to merging towards the end of 1870.

Despite the opposition of Capt. F. Tregarthen, master of the Little Western, the companies came to an informal arrangement and Capt. Tregarthen resigned. On February 24, 1871, the companies were formally amalgamated when the Little Western and Earl of Arran were valued at £1,600 and £2,100 respectively.

All now boded well for the company, but disaster struck twofold in 1872. On Tuesday, July 9, the Earl of Arran struck the Irishman's Ledge, off St. Martin's, and was run ashore on Nornour to prevent her foundering. The crew and passengers were all saved, but the Earl of Arran broke her back and became a total loss.

Three months later, disaster hit the company again when its remaining vessel, the Little Western, struck one of the Southern Wells rocks and foundered in deep water.

Total loss

Again, no one was drowned, but the ship was a total loss. Scilly pilot-cutters supplied the islands for a while and early in 1872 the company chartered another paddle steamer for the fishing season, the Guide.

In 1873 the company chartered and subsequently bought the ex-Preston paddle steamer Queen of the Bay. She served the company well for 12 years on the run, and for a further seven years on charter to other companies.

However, 1874, the year that the Queen of the Bay was purchased, the company decided that two vessels were required to provide the necessary service. Accordingly an order was placed with Harvey's of Hayle, and the Lady of the Isles was subsequently built and handed over on April 27, 1875.

The Lady of the Isles was a substantially built vessel. Her iron plates and frames made her more solid than a similar vessel constructed of steel would have been, and what the iron lacked in strength it made up in durability.

This durability was a major factor in her eventual length of life - just like the Great Britain. Measuring 130.5ft. long by 18.5ft. beam, and having a depth of hold of 9.3ft., she had a gross tonnage of 165.94. After deductions for the space taken up by her propelling machinery and other allowances, her registered tonnage was 4.2.

Power

Powered by a compound engine, with cylinders of 18 inch and 33 inch diameter, and a stroke of 21 inch, she was expected to steam at 12 knots. This she never did. Indeed, to start with she had trouble maintaining her guaranteed 9½ knots.

Her surface condensing engines, having a vacuum of 28 inch, and a working pressure of steam at 60 p. s. i., could not be worked up to full speed because the standard, weighted, safety valves allowed steam to blow off as the vessel rolled and pitched. Thus, while designed to work at 60 p. s. i. it was impossible to maintain more than 52 p. s. i. in anything worse than fine weather - more often than not on the Scillies run.

However, modifications were made to the safety valves which brought the engines up to full power. (The term engines was used on early steamers because each cylinder was regarded as an engine.) But she still did not achieve her designed speed and many attempts were made throughout her career to improve her performance.

Yacht-like

When launched, she was fitted with a three bladed propeller, 8ft. 1½ inch in diameter, and having a mean pitch of 10ft. 9 inch. In the same year a variable pitch propeller of 10ft. 6 inch mean pitch was fitted. This seems to have been a little better than the first one, but the problems of the variable pitch mechanism caused the company to plump for a solid propeller when it became necessary to change it in 1882.

Built for £7,200 the new vessel was a very fine one. "Her lines are very fine and yacht-like and yet she has a good breadth of beam, and it is confidently expected that she will behave well in rough and tumble weather."

Able to carry 90 passengers below decks, and a good number on deck with some shelter from the bridge wings, she was well able to deal with the excursion traffic of the day. But in addition to her passenger facilities, she was well equipped for cargo handling and towing.

Towing was an important financial aspect of the early steamers and in the case of the Lady of the Isles the company spared no expense on her towing gear. Indeed in this respect she was well in advance of many tugs at that time.

"Her towing apparatus combines the latest inventions. A wire rope is coiled around a capstan and secured by a powerful spring four or five feet off. This spring releases or secures the tow rope in an instant."

Second place

The reporter's description is a little vague but it is apparent that the gear was self-tensioning, an almost unheard of device at the time.

The importance of towing is brought out in the company's advertisements. "West Cornwall Steamship Co., (Ltd.), Penzance and Scilly Islands. The screw steamer Lady of the Isles, or paddle Queen of the Bay, will, on or after the 1st May, and until further notice, (wind and weather permitting) and with liberty to tow..."

When the chance of a towing job presented itself, the passengers took second place. In 1880, she brought the distressed Carfin into Scilly much against the wishes of her captain who wanted to be towed to Falmouth. Whenever possible, casualties were brought into Scilly so that the islanders would get the benefit of any temporary repair work.

Masters of vessels usually preferred to be towed to a major port where full repairs could be completed. In 1881, both the company's vessels were working on the German barque Excelsior. Run ashore some months before, she had been patched up as best the islanders could, but in towing her off the beach she suddenly began to settle in the water. The Queen of the Bay was lashed alongside and was nearly dragged under before the lashings could be cut away.

Towing jobs came in two forms - contract tows, and salvage work. In the former, the towing was pre-arranged at a fixed price, but in the latter no deal was made and claims would be made after the vessel was brought to safety.

Unfortunately, for the company, not all salvage claims were as rewarding as could be hoped. In 1896, she brought into St. Mary's roads the apparently abandoned hulk of the Sophie. When the hulk was beached, the ship's dog was found to be aboard and well.

Ashore

At the subsequent salvage hearing, the owners of the Sophie were successful in their claim that, as the ship's dog was still on board, the vessel had not been abandoned, and the award was abated accordingly.

After 30 years on the run the Lady of the Isles nearly came to an untimely end in 1904 when, on September 1, she struck a rock off Carn-Du and was run ashore at Lamorna before she sank.

The boulder-strewn beach of Lamorna probably did as much damage as striking the rock and she was declared a total loss by her insurers. With three gaping holes under the engine-room the prospects of salvage were slim, but the locally-based Western Marine Salvage Company succeeded in getting her off and bought her.

Repaired and refitted, she now entered a new lease of life, and for the next 23 years she was present at the salvage of nearly every major wreck around the Land's End.

Together with the Greencastle, she brought in many collision victims, including the James Speir and the Zeus, and the abandoned Van Dyke in 1911. No longer so smart, or yachty, in her appearance, she became drab, but functional. The open railwork around her stern was replaced by solid bulwarks, and the little jib-boom was removed from her bows.

Mined

On November 5, 1928, she was bought by Henry Simpson and spent most of the next decade moored up alongside the Albert Pier at Penzance waiting for something to turn up.

With the outbreak of war in 1939 she was commandeered and came under the flag of the Royal Navy and Admiralty Cable Service. Based at Falmouth, she serviced the submarine telegraph cables that had been diverted to that port soon after the commencement of hostilities.

It was off Falmouth that she met her end. While proceeding to a repair on October 3, 1940, she struck a mine off the Manacles and foundered in deep water. But for this untimely accident she might still have been around today and, who knows, she might have found a berth at the Exeter Maritime Museum.

NEW BOOKS

The Old Metal Mines of Mid-Wales.

Part 2 Cardiganshire - The Rhaidol to Goginan by David E. Bick (member).

Published by the Pound House, Market Square, Newent, Glos. Price 95p post free.

Part two of the series first mentioned in Newsletter No. 6 - very interesting and well produced.

The Industrial Muse by Mathew Vicinus, published by Broom Helm, price £6.95.

A full review in the Sunday Times, 23rd February, 1975. "... absorbing and thoroughly researched survey of street ballads, miners' protest songs, chanted fiction and poetry, working class imitations of Tennyson and Wordsworth and music hall songs and patter...."

At Matlock College of Education, Matlock. Fee £24.00 residential, £6.00 non-residential.
Details from Leslie Parker, Residential Course Secretary, 14-22 Shakespeare Street, Nottingham.

Opening of the Wheal Martyn China Clay Museum

On Tuesday 25th of March the China Clay Museum at Carthew, at the head of the Trenance Valley, just north of St. Austell, was formally opened by the Lord Lieutenant of the County, Sir John Carew-Pole. Present at the ceremony were the Earl of Mount Edgcombe, Mr. Alan Dalton (Managing Director of English China Clays), the Mayoress of the borough of Restormel and many other people from the length and the breadth of the County who in any way have been concerned with or helped with the establishment of the museum. Mr. John Brock, the Chairman of the trustees of the museum, made the point that although the museum was now open it would be busy developing and expanding its activities for many years. There are already plans in hand for the restoration of the 35^{ft} water wheel.

The museum consists of the Wheal Martin and Gomm works, comprising the usual huge granite walled settling tanks, a working 18^{ft} water wheel, balance box, flat rods and wooden slurry pump, 220^l pan kiln or "dry", horsedrawn wagons, the 1899 Lee Moor No. 1 Steam Locomotive, and indoor displays showing the story of the discovery and development of China Clay in Cornwall from 1745 to the present day. There is also a short introductory slide-and-sound programme for visitors in the reception area which has been formed by covering in two of the granite settling tanks. The museum's publications counter stocks a selection of the Society's publications.

During 1975 the museum will be open every day from 10.00am to 7.00pm (with the last admission at 6.00pm) between the 27th of March and the end of October. During the winter months from the first of November 1975 to the 31st of March 1976 the museum will be open for organised parties by prior arrangement only. Admission charges are 25 pence for adults and 12 pence for children with reduced admission charges of 20 pence for adults and 10 pence for children in parties of over twelve people. Any bookings for parties or general enquiries should be made by contacting the Director, Mr. John Stengelhofen, at the Wheal Martin Museum.

Incidentally, as reported in the Western Morning News of 24th January, 1975, the stack on the Gomm dry at Wheal Martin is being rebuilt as part of the museum - not all stacks in Cornwall are being demolished.

A 32 ft. waterwheel has now been installed in the old wheel pit at Morwellham and was put into operation on 12th March, 1975. The wheel was recovered from Watts Blake and Bearne's china clay works at Headon Down on Dartmoor where it had been out of use for 20 years. It was restored by Mr. Ron Hobley of Broadclyst, near Exeter. The original wheel was used to grind manganese ore from Devon Great Consols.

It is reported (West Briton, 6th March, 1975) that Wheal Jane hopes to open a new shaft, in the Hugus valley, north east of the mine, with the aim of increasing output from 1480 tonnes in 1974 to 2000 tonnes.

The Kew Bridge Engines Trust

We reprint this news sheet as of considerable interest as well as worthy of all the support, financial or otherwise, that our members can give. Contributions, offers of help or further information from N.F. Reynolds, 11 The Vineyard, Richmond, Surrey. Tel 01-948 1577.

History of Kew Pumping Station

The history of Kew Pumping Station goes back to the early 1800's long before the Metropolitan Water Board was formed. The station was built by the Grand Junction Water Works Company which was incorporated in 1811 to supply Paddington and adjacent parishes. Works were established near what is now Paddington Station and water was originally drawn from the Grand Junction Canal. The company began to draw water from the Thames at Chelsea in 1820 but removed their intake works to Brentford in 1838. The water drawn at Kew Bridge was pumped to reservoirs at Paddington but these were abandoned after the completion of a new reservoir on Campden Hill in 1845.

In compliance with the provisions of the Metropolitan Water Act of 1852 which prohibited companies from drawing water from the Thames below Teddington Lock, a new intake was opened at Hampton. Kew Bridge Works, however, were retained as a filtration and pumping station. The Grand Junction Company's works were taken over by the Metropolitan Water Board in 1904.

The first stage in the modernisation of Kew began in 1934 when four 'temporary' diesel engines - still in operation today - were installed in a separate building. They formed part of a scheme to

supply the north and east of London with more Thames water, thus relieving the River Lea supply. This followed the drought of 1933. The final stage in modernisation was completed in 1944 when the last of the steam engines was replaced by the present-day electrically-driven pumps.

In 1942 the Works and Stores Committee of the Metropolitan Water Board approved in principle to establish a Museum Station at Kew after the war and it is entirely due to that committee's enlightened approach to its treasures and the Board's approval that we have today one of the finest collections of nineteenth century engines on one site anywhere in the world. The station is now the responsibility of the Thames Water Authority, Metropolitan Water Division.

The Engines are:-

Seventy-inch Cornish Bull engine (1859-1944)

Manufacturers: Harvey & Co., Hayle, Cornwall.
Dimensions: Seventy-inch diameter cylinder, 10-ft stroke.
Pumping Capacity: 235 gallons per stroke; 4.3 million gallons per 24 hours.

Maudslay engine (1838-1944)

Manufacturers: Maudslay & Field, Westminster Bridge Road, Lambeth.
Dimensions: Sixty-five inch diameter cylinder, 8-ft stroke.
Pumping Capacity: 136 gallons per stroke; 2.5 million gallons per 24 hours

This was the first engine to pump water from the Kew Bridge Works. Following an accident to the East Cornish engine (now removed) in 1862, instructions were given to strap the beams of this and the other engines then at the works. In spite of this reinforcement the beam fractured in October 1888 and was replaced by a new one supplied by Hunter and English in Bow in January 1889.

West Cornish engine (1820-1943)

Manufacturers: Boulton & Watt, Birmingham
Dimensions: Sixty-four inch diameter cylinder, 8-ft stroke.
Pumping Capacity: 130 gallons per stroke; 2.5 million gallons per 24 hours.

This engine and the East Cornish engine (now removed) were originally erected at the riverside near Chelsea Hospital for the Grand Junction Water Works Company. The engine was dismantled in 1839 and re-erected at the Kew Bridge Works the following year.

Ninety-inch Cornish Beam engine (1846-1943)

Manufacturers: Sandys Carne & Vivian at the Copperhouse Foundry, Hayle, Cornwall.
Dimensions: Ninety-inch diameter cylinder; 11ft stroke.
Pumping Capacity: 472 gallons per stroke; 6.5 million gallons per 24 hours.

This is the oldest Cornish-built engine in the London area. When installed it was the largest waterworks engine in existence. It was designed by Thomas Wicksteed (1806-71) who introduced the Cornish mine-pumping engine for waterworks purposes at the Old Ford Works of the East London Water Works Company in 1838.

Hundred-inch Cornish Beam engine (1871-1944)

Manufacturers: Harvey & Co., Hayle, Cornwall.
Dimensions: Hundred-inch diameter cylinder, 11ft stroke.
Pumping Capacity: 717 gallons per stroke; 10 million gallons per 24 hours.

In 1879 one side of the beam cracked while the engine was working in the usual manner at moderate speed. James Simpson & Co. provided and fixed wrought-iron straps round both sides of the beam. One of the straps snapped in May 1883 due to defective welding and was repaired by Harvey & Co. This is probably the largest single cylinder Cornish engine now in existence.

Worthington Simpson Engine (1893-1944)

Standpipe Tower (1867 - disused)

The standpipes, which are encased in the substantial brick-built tower were used in conjunction with the beam engines to maintain a constant pressure in the mains leaving the Works. The tower is 190-ft high.

Boilers

Originally there were 14 boilers: 6 Lancashire-type, 5 Cornish, 1 Galloway, 1 Lancashire and 1 Babcock and Wilcox. All were removed by the early 1950's. Both boiler houses are still standing; one is empty and the other is used as a carpenter's shop.

Michael Rix, 35 Birds Barn Road, Wolverhampton is hoping to produce a book entitled 'Cast Iron Its Own Document' consisting largely of pictures of cast iron with makers name and date, such as engine beams, milestones, gas lamps etc. If anyone can help with information or photographs please get in touch with him.

The editor apologises for having to omit several contributions from members - he has had to choose those of most general interest because of space limitations, but thanks everyone for their help. Please keep it up.