HISTELEC NEWS

NEWSLETTER OF THE SOUTH WESTERN ELECTRICITY HISTORICAL SOCIETY

No. 32 **APRIL 2006**

A SPRING IN YOUR STEP?

We wish you all - a sunshine smile after the dullness of Winter. ***Peter Lamb***

ANNUAL GENERAL MEETING

Some 30 members and friends attended the AGM of the Society held at Taunton on 18th March. Chairman Roger Hughes gave a summary of the activities over the last year and Clive Goodman presents the Society's accounts. The following members were elected to the Committee:

Chairman : Roger Hughes
Vice-chairman : John Heath
Treasurer : Clive Goodman
Secretary : Peter Lamb
Committee : Chris Buck, John Gale, David Hutton, David Peacock, Marcus Palmen
South Sub-Committee (SSC)
Chairman : David Hole (also on Main Committee)
Committee : John Ferrier, Keith Morgan Ted Luscombe, Geoff Setter
Ex-officio
Membership Secretary : Paul Hulbert

We would like to thank Ted Luscombe for leading the activities in Devon & Cornwall for the last 4 years and welcome David Hole to the task. We welcome Marcus Palmen, our webmaster, to stand on the main committee, since it is apparent that the Web Site is becoming a major part of the SWEHS archival activity (see below).

AGM Review continued overleaf

WEB SITE

Not only have the archival enquiries doubled this year, but the level of hits is very high from 110 to 140 a month, which illustrates the importance of the web site as an accessible address on electricity history within the UK although it could be said to be international in view of the many enquiries outside of the UK and the lack of similar web sites globally. Are we unique? Certainly the site is the largest, since Marcus has managed to compress so much information onto the site. Most enquiries come from UK, but recently one has come from Brazil and another from Berlin. Marcus Palmen has had to make some adjustments to the Web Site to enable a more easily downloading of some of our articles, and in particular those on Tramways in the South West are very popular.

REQUESTS FOR PICTURES

1.A group in South Wales is building a Centre for remote generating stations using Rolls Royce Proteus engine and are looking for pictures of Datafonic Control panels, in order to rebuild similar panels.

2. Following the visit to Electricity House and our provision of photographs from our Archive, the present owners are disappointed that there are no internal photographs showing the front stairway and corridors, which have all gone.

Is there anyone, who can help these two enquirers? Please contact the Secretary.

SEVERN BARRAGE

This subject is again in the Bristol papers, following a lobbying activity in South Wales. Bristol City Council has given it their full support. I bet they wouldn't put any money up front however. It would appear that the main motivation may be to prevent more Nuclear stations on the Severn Estuary.

HISTELEC NEWS

Following the letter sent by the Secretary to members in Devon & Cornwall asking for volunteers for the South Sub-Committee, he was surprised to receive many letters saying sorry, but praising the Newsletter. Everyone's comments were much appreciated – thank you. To cap it all, member Bill Tincknell has offered to finance the binding of the Histelec News.

CAIRNS ROAD MUSEUM

We have received many new items recently and it has been decided by a few loyal members to add an additional shelf to the wall-mounted displays. This will increase the amount of space for displaying items. Also following the gaining of adequate insurance, we are proposing to invite groups to visit the Museum, which will probably include giving them a talk. Any volunteers out there who would like to give a talk on an electrical subject matter to entertain our visitors? Please contact the Secretary.

CRAGSIDE REWIRED

The National Trust is embarking on a massive rewiring job at Cragside, the original home of Sir William Armstrong. The house, in Northumberland, was the first domestic property in the World to have a permanent electricity supply powered by a hydro-electric generator.

AGM REVIEW Continued
Following the AGM we had another entertaining talk from Pat Hase entitled "When Weston was a Village".

Illustrated by slides of old pictures and maps, Pat took us through the development of Weston from a small fishing village in the early 1800s, when the population was 105, to the beginning of the 1900s when the population had grown to 18,000. Weston was now a place to visit for a holiday. Originally it was only the rich, who could afford to visit Weston and many retired there. The Royal Hotel was built in 1811, the Knightstone Baths in 1830, the Royal Crescent in 1840, Birnbeck Pier in 1870 and the Grand Atlantic Hotel in 1888. Finally the Grand Pier was constructed in 1904. The railway arrived in 1841 and this allowed visitors from Bristol and afar to make the journey and take advantage of the sea air. One advertisement for Weston pointed out that the mortality rate was only 9.6/1,000, considerably lower than other towns!

So how did Weston become Weston super Mare? Well it turns out that it was a way of distinguishing the various "Westons" in Somerset from each other and was suggested by a Clerk to the Bishop of Bath & Wells.

After Pat's talk, John Coneybeare showed us two of the plaques that the Retired Engineers Club were arranging to have erected at @ Bristol to commemorate famous Bristol Engineers. One to Sir Archibald Russell who designed Concorde, and the other to William Patterson, who built the Great Western, the Great Britain and the Demerara. ***David Hutton***

REVIEW OF ANNUAL LUNCHEON
ANNUAL LUNCHEON AT TORQUAY
To be truthful Saturday 28th January was a day to enjoy an extra hour in bed, a day for hot drinks in a fireside chair, a lukewarm pint in the local "snug" not a day to go venturing out into the icy chill of Winter. However 47 members and friends did venture out to attend our Annual Winter Luncheon in glorious, but cold, Devon and very worthwhile it was too.

We met at 10.30 in Pengelly's Café, part of the Torquay Museum, for coffee prior to our prepaid visit. Coffee and conversation were equally enjoyed. Soon conversation took precedence and there was a degree of reluctance to go into the Museum. We were rewarded with a most interesting time. The initial exhibit was a giant Kite capable of lifting off an armed warrior. Apart from the Kite the other most unusual exhibit was the Agatha Christie Collection, which was of particular interest due to her books and films and of course that she was born in Torquay.

Some walked and some drove up to the Bishops Court Hotel for the luncheon. We assembled at 12.30pm and enjoyed drinks and more conversation (One does come across so many old colleagues and friends at these events). Our meal was good, plentiful and in particular the roast potatoes were the best I've tasted whilst eating out.It is usual for one to feel drowsy and to adopt a position avoiding the speaker's eye! On this occasion this strategy was not necessary. Richard Paine, ex-Financial Director of SWEB, proved to be extremely entertaining and informative. He held the attention of his audience with ease (Get him to tell you the one about the clever pig, if you missed it!) His talk was entitled " The Good, the Bad and the Ugly of Privatisation" was excellent – one of those occasions when I would have liked to hear some more. We must thank Ted Luscombe and Peter Lamb for organising such a good day, as those who came will know – for those of you who missed it – well what a pity!! ***David Hole***

WEST GATE Alias Electricity House
32 members took the opportunity to look around West Gate on Thursday 16 February courtesy of Royal and Sun Alliance, the present occupiers. To most of us, it will always be Electricity House – "the white house".

The building has Grade 2 listing and was designed by Sir Giles Gilbert Scott in 1935 for the Bristol Corporation Electricity Department. Work on the ship shaped building reflecting that the city water front once extended to this area started in 1937, but was slowed by the war. In 1941 the completed shell was taken over by the Bristol Aeroplane Company for the manufacture of aero engines. After the war the building wasn't handed back until 1948 and was then occupied by SWEB until the move to Aztec West in 1989.The building was then sold and refurbished by Royal Insurance (later Royal and Sun Alliance).

Upon entering the front main entrance to the building, the first thing you notice is that the lift on the right hand side has gone and there is now a enquiry desk located between the main doors to what used to be the shop and is now office space. Part of the area where the demonstration theatre used to be is now a meeting area with display boards giving the history of the building (courtesy of SWEHS). The building has been remodelled quite extensively internally, gone are the corridors to create extra work-space. An open plan layout has been adopted and extra space created by building partly into the atrium on each floor using cantilever construction whilst still retaining open aspect of the atrium as a focal feature. The roof area is now used for building services plant and also provides a cover to the atrium. The building is used as the Royal and Sun Alliance main insurance centre with a high density of occupancy of between 850 – 1100 people, against around 350 in SWEB days.

It was an interesting visit to a unique building that brought back many different and fond memories. Some of us recalled working in different departments on several floors whilst others worked for their entire time in the building on one floor. But, gone are the days of the shop (always handy to get to), the friendly lift attendants, the tea ladies with their trolleys and the daily climb to the top floor for lunch.

After thanking the very helpful Royal and Sun Assurance staff we adjourned to the Commercial Rooms, built in 1811, in Corn Street for lunch - a building that had the first central telegraph facility in Bristol and is now a Weatherspoons pub and eating house with plenty of historical atmosphere created by active gas lamps.
David Cousins

WATER MILLS IN NORTH DEVON

Often we receive information or get enquiries about water mills and we have little information in our Archives since our material concentrates on public electricity supplies. David Hood sent me some interesting material two years ago, which I have never published, about Weare Gifford on the River Torridge in North Devon near Bideford. There seems a greater interest in small private supplies like this nowadays, due to many of them being re-equipped to satisfy the enthusiasm for renewable energy.

The Fry family became owners of the Weare Gifford Mill in the early part of the 19th Centenary and Thomas Fry utilised the water power to turn a turbine driving a dynamo in 1889. The supply had an output of 50 volts and was capable of supplying 55 lights, using Ediswan lamps. It is claimed that this was the first electricity generation in North Devon, which I would support, since Lynmouth's public supply commenced in 1890. The article from "Industries in North Devon" by H.W. Strong dated 1889, states that Mr Fry used the Robotham System and the installation was affected by Mr Fox working for the patentee. The prime mover is described as a 30 inch Victor turbine running at 91 rpm and generating 30.1HP. It was a DC system involving Electric Power Company storage cells (i.e. large battery) for "charging and discharging". Intriguingly DC systems in these early days were shutdown and thrown over to the battery at night, but here with a continuous water supply that would not be necessary. The turbine was replaced in 1910, but nevertheless the Mill was closed in 1940 and the plant moved to Clapworthy Mill near South Molton. It is a shame that this mill has not been involved in modern times with re-establishing electricity generation.

LMS GENERATING STATIONS

Following a web site enquiry about Derby LMS Generating Station, the subject was discussed with our Railway enthusiast, Graham Warburton. He acquired a copy of a schedule listing 48 LMS generating stations, with Derby being the largest. He notes that the period of lowest units generated was 1926, the year of the General Strike! He continues that the Railways were at the forefront of the electricity generation at this time and it would be no surprise when the Chief Electrical Engineers of both the LMS (F.A.Cortez-Leigh) and Southern Railway (Herbert Jones) were asked to serve on the London Joint Electricity Authority in 1925.

PLASMA DISPLAYS

In the last issue Marcus explained the detailed workings of the LCD screens. Here he continues with an explanation of the Plasma displays.

Plasma displays work much in the same way as fluorescent and neon lights - that is, they use electricity to illuminate a gas. In the case of the plasma display, the gas is between two glass plates with transparent electrodes. When voltage is applied to one of the electrodes, a surface electrical discharge produces ultraviolet rays that excite the coloured phosphors coated inside the opposite plate of glass, emitting light through the glass plate to create an image. Because the phosphors are red, green, and blue, the image produced is in colour.

A plasma TV is sometimes called an "emissive" display — the panel is actually self-lighting. The display consists of two transparent glass panels with a thin layer of pixels sandwiched in between. Each pixel is composed of three gas-filled cells or sub-pixels (one each for red, green and blue). A grid of tiny electrodes applies an electric current to the individual cells, causing the gas (a mix of neon and xenon) in the cells to ionize. This ionized gas (plasma) emits high-frequency UV rays, which stimulate the cells' phosphors, causing them to glow the desired colour.

Because a plasma panel is illuminated at the sub-pixel level, images are extremely accurate, and the panel's light output is both high and consistent across the entire screen area. Plasma TVs also provide very wide horizontal and vertical viewing angles. Picture quality looks sharp and bright from virtually anywhere in the room. Because plasma TV screens do use a phosphor coating (like CRT-based TVs), the potential for screen burn-in exists. It's important to follow recommendations on everyday use.

Plasma –Advantages

1) This provides large flat screens – mainly used for television (80ins)
2) Colour and brightness similar to CRT's
3) Sharp images on TV
4) Excellent viewing angles
5) Good life expectancy

Plasma – Disadvantages

1) Though thin fairly heavy
2) Fragile
3) Susceptible to screen burn-in
4) Cannot produce deep black
5) Use a lot of power
6) Small screens not available (42 ins)
7) Expensive

Summarising – The future lies with LCDs. CRTs and the stop-gap Plasma Displays are on the way out once larger size LCD's become available. We have not considered SEB's ("Surface-conduction Electron emitter Display") which are nothing more than CRT's with a gun for each pixel and which can hence work with a short path, lower voltage and a fixed beams and flat screen. Developed in the late 80's by Canon with various interested parties it has never reached the manufacturing stage and now with the growing popularity of the LCD it is not likely to.

Different manufacturers employ slightly different LC techniques in their display units and it is well worth knowing what weaknesses to look for, but over the last couple of years the improvements achieved bode well for the future. ***Marcus Palmen***

POWER CABLES

The IEE Review recently featured an article about cable manufacturers, Prysiam (lately Pirelli), when it stated the EHV cables, in the future, will be laid in tunnels or ducts as it is less disruptive in Cities and enables easier access. This may happen at Stratford, London to underground 132 & 400kV lines to allow the Olympics development. Prysium is described as UK's largest cable manufacturer of power cables – whatever was wrong with the original name, it sounds like shooting oneself in the foot!!

NEW MUSEUM ACQUISITIONS
A 1930's medical device has been donated to the Museum by a new member, Frank Whitehead. It is a Rogers Violet Ray High Frequency Vitalator and 50 so called "electrodes" are illustrated, which are vacuous glass tubes, which when plugged into the device give off high frequency electrical discharges and can be placed safely on the human body. We only have three such devices. The handbook gives 27 pages of detailed cures from blindness, deafness, intestinal diseases to beauty treatments.

Also we have acquired full sized CEGB flags from Glyn England, but haven't decided any appropriate use yet.

John Heath has more or less completed an inventory of the Museum artefacts, which is a splendid volume including photographs of nearly every item. The listing is intended to be displayed on our web site.

BUCKINGHAM PALACE
Did you know the Royals are going green? The Sunday Times informs us that the Palace is installing a geo-thermal ground energy project, involving coils beneath the ground's lake, which will provide central heating for the State rooms. Also two hydro-electric power plants are envisaged for Windsor and Balmoral Castles. At the latter the plant will ensure that the Castle is energy self-sufficient and will also provide power to 1000 local homes as well.

RON'S CONFESSIONAL
Pete Collard's contribution in the recent issue of the Histelec News refreshed memories on my part of earlier times in Dover also. Although I'd discussed public lighting on occasions with his Dad, Chairman of a local Parish Council, I hadn't realised until now that Pete himself was involved for a while in Dover District of SEEB shortly after I had left there following a 4-year spell in 1957.

Dover, like Bath, started its electrical background in the 1890's with a 2kV system feeding a 200v network, and by the 1950's most of that system remained but was beginning to develop its own style of problems. The 2kV and LV mains were drawn through cast iron pipes, and in the centre of town, as Pete describes, the associated substations were frequently underground in the pavement with large hinged covers giving ladder access to the chamber below. LV services (4 at a time) were provided from the mains at compound-filled junction boxes installed in small pits set out at intervals along the street and equipped with individual fuse-wire connections on each service (ideal for easy disconnection of bad debt customers!).

This therefore established an interconnected pipe network over a wide area, and should even a modest amount of leaking gas gain entry into any of the underground chambers, it would gradually find its way everywhere. Then when Mrs.Smith's service fuse-wire - originally adequate for her 4 - 60w lamps, but now subject to her new 6kW cooker – blew!!

There were several such recorded events. One involved a policeman on his lonely beat along the High St. in the early hours of the morning. One can only try to imagine his confusion on hearing a muffled explosion followed by the vision of every pavement cover in sight flipping up and over in sequence!

Other memories start returning from those times, such as shutting down the entire Kent Coalfield on one occasion. Now that our pensions are secure (we trust!) is there scope for a "confessional" column in the newsletter, where we might own up to our individual "cock-ups" from the past? *(Ed. You've started one!)* ***Ron Walker***

WEEKENDS AWAY MEMBER'S CHOICE
Your Committee are confused! A couple of years ago we had complaints that we were not organising Weekends Away every year. We responded by organising one in Cornwall in between the "away from the West ones" and immediately the attendances went down. So we decided to give everyone a chance to help in the choice and disappointingly we have had only 23 replies, particularly because many of you, who have attended in the past, have not responded? Please send them, it is not too late!!

NEW BOOK
"The Portishead Coal Boats" written by Michael T. Winter – It is the history of Osborn & Wallis Ltd., the Bristol Based ship owners, whose business was built on supplying coal to the electricity generating industry around Bristol. Michael has first hand experience having worked on all eight boats owned by the company. The book is described by the local papers as highly readable, describing the boats and the intricacies of loading and unloading and especially the dangers encountered crossing the Severn estuary from South Wales to Portishead. Cost £19.95.

EDF GREEN ENERGY FUND
Did you know EDF has a Green Energy Fund? Recently they awarded almost £25,000 to the Goblin Combe Visitor Centre. Goblin Combe is a delightfully beautiful valley in the shadow of Bristol Airport. The money has been given to a biomass wood chip boiler and a solar power plant to provide heating and hot water for a 40 bedded dormitory. The Centre provides countryside experience for groups of all ages.

OBITUARIES
We have lost three members over the Winter period. They are George Chapman & John Shell from Devon and Mike Norman from Clevedon. George and Mike were regular attenders at our meetings. Mike had been suffering from Parkinson disease for some few years, which he bore with incredibly good humour. They will be greatly missed.

STOP PRESS
Your Secretary was locked up with 25 ladies at Timsbury. He had just given them a talk and when he went to leave, the door lock had jammed in the closed position. Help he cries!! We were rescued following the Chairman summoning help via mobile phone and exited via the adjacent Chapel – phew!

MEMBERS NEWS

Eric Edmonds

Eric tells me his sight has worsened such that he cannot drive, which is very frustrating for him with his many interests.

CAREERS IN ENGINEERING

Extract from a 1997 document by K. Potter :-

Science degree graduate asks - why does it work?
Engineering degree graduate asks - How does it work?
Accounting degree graduate asks -How much will it cost?
Arts degree graduate asks - Do you want fries with that?

THE BOAT RACE

John Heath submitted the following :-

Many of you will recall the frantic activity, which accompanied the efforts of the Area Boards, (by then RECs.) to turn themselves into professional businesses. This is an account of how it might have been.

This particular REC and the Japanese decided to have a competitive boat race. Both teams practiced long and hard to reach their peak performance and on the day they were as ready as could be.

The Japanese won by a mile!

Afterwards the REC team became very discouraged by the result and morale sagged. Senior Management decided that the reason for the crushing defeat had to be found and a special project team was set up to investigate the problem and recommend appropriate action.

Their conclusion: *The problem was that the Japanese had eight people rowing and one person steering and the REC had one person rowing and eight people steering.*

Senior Management immediately hired an expensive consultancy company to do a study of the team structure. Millions of pounds and several months later, the consultancy team concluded:

Too many people were steering and not enough rowing.

To prevent losing to the Japanese again the following year, an Organisational Review was undertaken and the team structure was changed to "Four Steering Managers", Three Senior Steering Managers" and "One Executive Steering Manager". A new "Quality Performance" system was also set up for the person rowing to be given more incentive to work harder and become a "Key Performer".

"We must give him empowerment and enrichment. That ought to do it!"

The following year, the Japanese won by two miles.

The REC laid off the rower for poor performance, sold off the paddles, cancelled all the capital investment for new equipment, halted the development of a new canoe, awarded high performance awards to the consultants and distributed the money saved to Senior Directors.

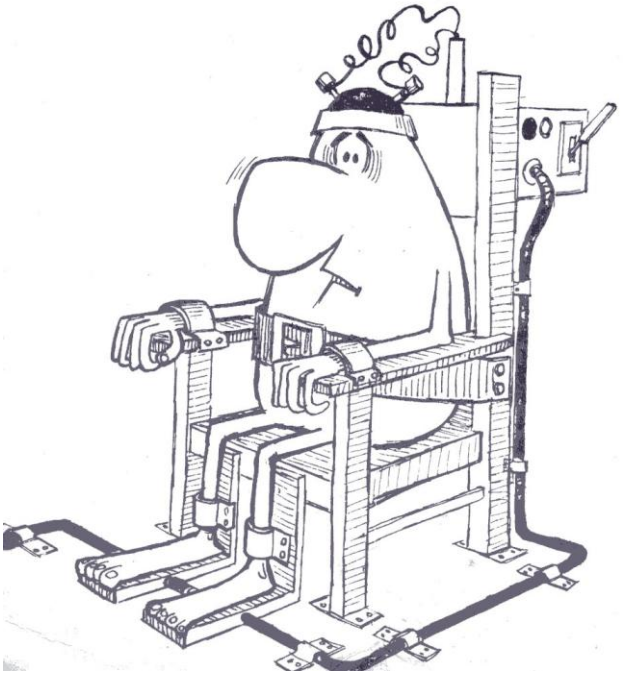
RUDYARD KIPLING

In the Autumn Marcus visited Batemans, the original home of Rudyard Kipling in Sussex. Members may be interested, since it includes its own hydro-generating station.

From a Get-Well-Card

For those who may have been ill over the Winter period, this may "cheer you up"!!

GET BETTER ELECTRICALLY



FOR YOUR DIARIES – a Reminder
PROGRAMME for the REST OF THE YEAR

Thur. 18th May **VISIT FLEET AIRARM MUSEUM, YEOVILTON** Meet at 11.00am for coffee & talk then lunch and a conducted tour at 2.00pm.

Wed. 14th Jun. **VISIT DEVONPORT DOCKYARD** All day visit including a conducted tour by coach, morning and afternoon with a lunch-break at the Dockyard Restaurant.

Thur. 5th Oct. **VISIT TO CHRISTCHURCH ELECTRICITY MUSEUM** operated by Scottish & Southern. All day visit by car, involving a lunch-break at a super pub "The Fisherman's Haunt" at Winkton.

Thurs. 9th Nov. **MEETING AT CAIRNS ROAD**
Talk "Clifton Rocks Railway" by Peter Davey.
Look around Museum from 11.30am followed by lunch at the Cock O' The North. Talk commencing 2.00pm.
First "Open Meeting" for members at Cairns Road.

NEXT EDITION

This newsletter is produced every four months. Please send information, articles, photographs or letters to :-
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