

HISTELEC NEWS !

NEWSLETTER OF THE SOUTH WESTERN ELECTRICITY HISTORICAL SOCIETY

No. 15

HAPPY AUTUMN

Hope that you managed to survive the rotten Summer and have managed to getaway to warmer climes. Let's hope that the Autumn will give us better weather.

ANNUAL LUNCHEON AT BUCKFASTLEIGH

The Dartbridge Inn (a renowned hostelry) has been booked for the Annual Luncheon on 27th January 2001. This will be preceded by a visit to Buckfast Abbey in the morning. Due to the success of this year's Annual Luncheon north of Exeter, we thought that we would move south for 2001, to encourage more members from S. Devon and Cornwall to join us. There's a challenge!

WEEKEND AWAY

Details of the Weekend in Snowdonia in October 2001 are being sent to you very shortly. The hotel requires a decision this year for next. The dates are 19th/20th/21st October 2001. Put them in your diary now!!

Thanks to Chris Buck and David Hutton who have put the super package together.

CAIRNS ROAD EDUCATION/VISITOR CENTRE

Having obtained financial agreement with WPD Management, the process for the redevelopment of the second room grinds on. At present an updated quotation for the works and planning approval is being obtained.

CHARITY STATUS

The committee has agreed with WPD that obtaining charity status for the Society would be beneficial for a number of reasons. So that some rule changes may be necessary to effect at the next AGM in March 2001.

WEB SITE

Our webmaster, Marcus Palmen, has constructed a simpler access to our web site. Most e-mail members have been advised. For those who haven't received the "magic" signal yet and also for those who would like to see it on their offspring's computer, it is as follows :-

<http://go.to/swehs> or

<http://swehs.go.to>

Also if you would like to leave a message for others to read in the "notice board", you will need a password for members use only, it is **Faraday** (with a capital letter).

THURSDAY GET-TOGETHERS

AUGUST 2000

Following representation from some members, the committee has agreed to move the Cairns Road monthly meetings/pub visits to the 2nd Thursday in the month as from the January 2001.

This will enable as many people as possible to indulge in the superb bacon & mushroom baguettes and meet our delightful and friendly barmaid, Emma, at our regular watering hole, the Cambridge Arms. See picture below.



EMMA (picture by Marcus Palmen)

WHAT IS CCD?

Following articles in the last two newsletters, a few, not associated with SWEB's past, have asked the above question. Graham Warburton attempts to inform you.

"Unbelievably there are those amongst us who do not know the origins of C.C.D. or what C.C.D. stood for so your Editor has asked me for a brief explanation! The Central Construction Department of the South Western Electricity Board was the brainchild of S.W.E.Bs first Chief Engineer, G.O. McLean. He realised the tremendous task the Board faced, not only knitting together the twenty-one undertakings, now made one, but also the need to take "power to the people" with rural development, which in turn required new primary substations and mains to feed them.

So, in the early summer of 1949, Don Horn was requested to set up C.C.D., which he duly did, starting on the 4th July 1949. Much more on the early years of C.C.D. will be told in a forthcoming supplement on Rural Development".

Graham Warburton

2nd COMMENT ON POCKET POWER STATIONS

I so enjoyed John Gale's supplement to the December Histelec News that I refrained from making a small comment. Graham Warburton's recent PR job for CCD has reminded me that CCD did not operate in Cornwall!!

Major 33 and 11kV projects in Cornwall were carried out by Cornwall Group Construction staff from Pool, including the twin turbine station at Roseland. I think they also built a 132kV standard double circuit tower line. As a Student Engineer undergoing Electrical Fitting training, I spent many a happy weeks helping (and occasionally hindering) the Roseland Project. Names that spring to mind include Glasson Richards (Electrical Fitter), Treve Strut (Mate), and David Wright, a fellow Student Engineer at the time. Lionel Libby was the Engineer, who in his red and black Mini-Cooper often arrived on site from Bristol before the fitting team from Pool - we had to cope with an overloaded and under powered J2 van and the King Harry Ferry!

Like Graham I indulge in memories of the good old days, but CCD really did stop at the Tamar! **Barrie Phillips**

UNDERFALL YARD VISIT REVIEW

Like so many people; I have been over and around the Cumberland Basin area many hundreds, if not thousands, of times without thinking about the engineering behind the water and bridge systems. Hence I was very keen to join the party who met on a cold and wet April Saturday morning.

The visit started at Underfalls Sluice House, not far from Underfall Yard Substation, where Kevin Pomeroy, the Docks Engineer met us. He informed the party that the whole area was designated as an Ancient Monument in 1988. With the aid of a 1927 map, he then explained the construction of the 'Floating Harbour' and the excavation of the "New Cut" from Totterdown to Underfall Yard, where an overfall dam was constructed to maintain the levels within the 'Floating Harbour'.

In 1832, I.K. Brunel's advice was sought about the problem of siltation of the harbour. Brunel advised the construction of Underfall Sluices through the overfall dam to the river, using the hydraulic head difference between harbour and low tide level, to scour the silt. The current system was installed around 1900 and automated in 1988. Two Sluices are used to control the level of the Harbour and two to remove silt. During the Second World War modifications were made as it was realised that the whole harbour would be drained if a bomb were to directly hit the sluice house.

Then we made our way to the Machine and Blacksmiths shops, which were constructed, between 1885 and 1895. These workshops were interesting in that they are still in everyday use with machines dating from 1884 to the present day. The workshop shape was dictated by the original overhead shaft and pulley system that was used to power the machines. In the Blacksmith's shop we were

shown a punching and shearing machine and four blacksmith's forges.

Our next stop was at the Hydraulic Pump House built in 1888. This replaced the Original Pump House (now a pub) where we were to have lunch. Hydraulic power was first used in the Docks in 1870 to operate the lock gates and swing bridges at Cumberland Basin. In the 1880's the hydraulic system was considerably extended, and it was necessary to provide this Underfall Yard Pump House as we saw it. This Pump House was originally steam powered but replaced by electricity in 1907. These pumps still operate on 365 volts and when the transformer was last changed they were informed that it would be the last time that this voltage could be maintained.

After lunch we made our way to the Create Centre where Bob Broome, a retired docks diver entertained us with a talk and slide show about "The City Docks Past and Present". Bob's knowledge extended well beyond that visible to the passer by. He even knew many structures by feel, due to the colour of the water. In particular I remember the slide showing the old bucket dredger "Samuel Plimsol" which was a feature of the City docks for many years. Another slide showed the "Old Pump House" when it was used as a Slaughter House for cattle. Many of us also remembered the entrance to the River Frome from the pillar in front of Electricity House in Colston Avenue. **David C. Hood.**

Q.E.D (Quod Erat Demonstrandum)

Here is a mathematical proof that explains why "Bosses" enjoy such high salaries :-

Remember your Physics? **Power = Work/Time (1)**
It is also known that **Knowledge = Power**
And **Time = Money**
Substituting in (1) **Knowledge = Work/Money**
Therefore we get **Money = Work/Knowledge**

Thus Money approaches infinity as Knowledge approaches zero, regardless of work done!
i.e. The Less you know the More you make

We know that **Knowledge = Education X Time**
Solving for Time = **Knowledge/Education**
Substituting Time in (1)
Power = Work/Time = Work X Education/Knowledge

This is known as the MANAGEMENT EQUATION
From which you can see that the closer Knowledge gets to zero, the more Power one will have!!!
Power increases through increasing Work or Education
But doesn't have so much clout as lack of Knowledge, which proves why managers, executives, politicians and footballers get paid so much.

Submitted by Paul Hulbert

ISLES OF SCILLY ELECTRIFICATION

The "Two Johnnies" presentation on the electrification of the Isles of Scilly was held at our new venue in Exeter at the Riverside Christian Centre. This proved to be a very

successful location with convenient car parking just along the road. Whilst John Haynes and John Heath were setting up for their presentation, the rest of us tucked into a very good buffet lunch. The staff at the Christian Centre were most helpful, when it was realised that the original lecture room could not be darkened enough for slides and moved everything down into the basement.

John Haynes started the presentation with a series of slides showing the layout of the Isles of Scilly, the routing of cables from St Mary's to the outer isles and the substation equipment installed. There was a short intermission at the start, whilst the slides were put back into the carousel the right way round and Charles Isherwood gave an impromptu talk, and then we were off again. John Heath described in more detail the construction and laying of the 33kV submarine cable from the mainland to St Mary's.

A lively discussion ended the afternoon before the two Johnnies signed off with "goodbye from me and goodbye from him" and we all trooped up stairs for tea and biscuits. This ended a successful day at our new venue.

Question

Who was the 3rd Johnny involved in the Isles of Scilly electrification? Answers on a post card! *David Hutton*

REVIEW OF LYNTON & LYNMOUTH VISIT

It was not one, but two "L"s of a day, when some 25 members joined us for the visit to Lynton and Lynmouth on Sunday 25th June. Barrie Phillips had arranged for us to commence with a talk by Mr.M.Wilde, the MD of the Lynton and Lynmouth Lift Company. It was held in the splendid surroundings of the Lynton Town Hall, which was built in 1900 by Sir George Newnes, publisher of "Titbits" and "The Strand" magazines and who was also responsible for the funding of the Cliff Railway.

Lynton is situated about 500ft vertically above Lynmouth and until 1890, the only way to travel and transport goods between the two communities was via a very steep and tortuous road. This severely tested the animals used to haul the loads up the hill. It was also realised that they were in danger of losing the growing holiday trade with the lack of adequate transport.

The Company was formed by an Act of Parliament in 1888 and was granted perpetual rights to take water from the River Lyn in order to power the funicular railway. This describes a railway operated by cables with ascending and descending cars and was designed by George Marks, a "disciple" of Isambard Brunel. When each car is docked with one at the top and one at the bottom, their water tanks are full. When passengers have boarded, the drivers exchange signals and the lower driver discharges his water tank, which makes the top car heavier and thus starts to descend pulling the lower car up the cliff. A reservoir

exists at the top of the cliff fed from the River Lyn. The Lynton Railway is unique in that it does not require any other form of energy.

After lunch the various groups headed for Glen Lyn Gorge, where we were met by Mr. Ken Oxenham. Our member Bill Harris gave us a brief talk on the Lynmouth Flood Disaster of 15th August 1952, since he is an expert on the subject. He explained that during that night, more water flowed through Lynmouth than flows down the Thames in 3 months. We were taken up the Gorge by Mr. Oxenham to see the Lyn Hydro Power House, which houses two turbines, one a 3 jet vertical axis Pelton Wheel made by Evans Engineering of Cornwall and the other an Ossberger cross-flow turbine from Bavaria. Normally the more efficient Pelton Wheel turbine is in use, which drives a 305kW alternator via a belt drive. Water is brought to the turbine via 20inch pipe from higher up the Gorge, which gives it a massive head, illustrated by members being invited to turn on and off taps streaming out over the valley. Members were able to explore the beautiful valley with its pleasant woodland paths during the afternoon. After thanking Mr. Oxenham for his hospitality, we returned downstream for a well-deserved cream tea.

Reflecting on a superb fine weather day, it reminded me of the good and bad facets of water. I found it difficult to imagine the scene of destruction that had claimed 34 lives some 48 years ago. *Mike Williams*

BRISTOL STREET LIGHTING

The Recent visit to Cumberland Basin also gave me the opportunity to look at the Street Lighting in the Area. As a student, in 1964, I was privileged to be a member of the small SWEB team who unsuccessfully quoted for the construction of the high level Cumberland Basin street lighting scheme. This was the first High Level Street Lighting Scheme in the Country. Each contractor was invited to quote for four specific schemes. The specification stated that MICC Cables should be used, and this caused design problems, as it also stated the maximum voltage drop allowed, was 4 to 5 volts at the end of each cable. The successful tender was submitted by Colston Electric using an 82-ft. high Swedish Column, which I remember as Udaholm. *David C. Hood*

MEMBERS SPOTTED

Roger & Anthea Christy were spotted walking along the cliff path at Trelissick in Cornwall by the Lambs and the Haynes, who were doing the same.

Mike & June Hield were spotted at Lanhydrock by Clive Goodman.

SHAKESPEARIAN SNIPPETTS

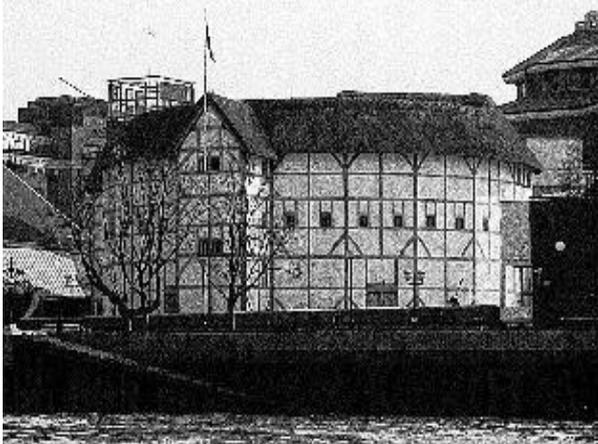
There has been a lot of publicity recently regarding London's Bankside Power Station and its conversion into the Tate Modern, and also the nearby "swaying bridge" connecting the South Bank to St. Pauls. If you're going up to visit these sights, here are a few historical tips :-

Starting from the Mansion House Tube Station, cross the Thames via Southwark Bridge. On reaching the south side, look underneath and you will find elaborate carvings commemorating the Frost Fairs, which used to be held, when the Thames froze over.

Then turn towards Westminster/Lambeth and walk along the bank with the river on the right. Note Bear Gardens on your left - the site of the last bear baiting pit in London, reputedly attended by Queen Elizabeth I. "Bird Call" whistles found nearby - believed to have been used by bear-baiting audiences.

The Globe Theatre replica is our next stop with its fascinating Visitors' Centre. You need some time to tour the displays plus 1/2 hour conducted tour of the theatre, probably led by one of the actors. The exhibition is full of interesting details, like hazelnut shells recall that medieval theatregoer's snack, like popcorn today! Also illustrated are the details of the 1613 fire, which burnt the theatre to the ground. A stage cannon was loaded with a blank round, but when it was fired, a piece of blazing wadding lodged on the thatched roof and set alight to it. The audience escaped with only one minor casualty, who "had his breeches set on fire, that would have broiled him, if he had not, by the benefit of provident wit, put it out with a bottle of ale". Members of the Company rescued costumes etc, but most importantly all the manuscript copies of Shakespeare's plays, half of which were not in print at that stage. Without quick thinking, the World would have lost the only copies of Macbeth, Othello, As You Like It, and Twelfth Night.

The new theatre was rebuilt with a tiled roof and the law was changed to ban thatched roofs in London - to this day the Globe is the only thatched roof building in the capital. (Well worth a visit, Ed.) *Paul Hulbert*



MEMBER'S NEWS

John Haynes has taken up painting. His paintings are very good for a beginner. Should be worth something in 100 years time!

John Gale & Peter Lamb have both had hernia operations. John Dike has had a bad bout of illness this year, first of all kidney stones and then Bell's Palsy. We wish him well for the future.

Roy Weston has not been well. We hope that he is now making a good recovery.

John Coneybeare has recently given a talk "Renaissance of Windpower" to the Retired Professional Engineers' Club of Bristol and is repeating it for us on 28th October.

WHAT IS A SENIOR CITIZEN WORTH

Old folks are worth a fortune with Silver in their hair,
Gold in their teeth, Stones in their kidneys,
Lead in the feet and Gas in their stomach.

Since I have become a little older,
A few changes have come into my life.
But in fact, I have become a frivolous old gal -
I am seeing six gentlemen every day.

As soon as I wake up Will Power helps me out of bed,
Then I pop along to see Johnny Loo.
Next Charlie Cramp claims a lot of attention.
When he leaves Arthur Ritis shows up,
and he is usually around all day.
He doesn't like to stay in one place for very long so he
takes walks from joint to joint.
After such a busy day I'm happy to pop into bed with
Johnny Walker.

What a life! Oh yes I'm also fighting with Al Zymmer
P.S. The Vicar called the other day and said I should be
thinking of the Hereafter.

"Oh, I do" I replied

"All the time. On my way home, upstairs, downstairs, I
keep saying to myself, WHAT AM I HERE AFTER"

PROGRAMME - THIS YEAR 2000

Thur.5th Oct. Bristol Get-together 12.15 lunch
Cambridge Arms, Coldharbour Road

**Sat. 28th Oct. "RENAISSANCE OF WINDPOWER"
by John Coneybeare at Riverside Chr. Centre, Exeter**

Thur.2nd Nov. Bristol Get-together 12.15 lunch
Cambridge Arms, Coldharbour Road

**Sat.25th Nov. "SECRETS BEHIND FACES- STREET
FURNITURE" Talk Julian Lea-Jones at Rising Sun,
Backwell, Bristol**

Thur.7th Dec. Bristol Get-together 12.15 lunch
Cambridge Arms, Coldharbour Road

NEXT EDITION

Please send information, articles, photographs or letters to
Peter Lamb at 35 Station Road, Backwell, Bristol BS48
3NH or telephone on 01275 463160.

NOT USED

CIGARETTE CARD CORNER No.5

John Haynes has a series of interesting old cigarette cards.
Here is Ogden's Applied Electricity No.16 :-

LARGE ROTARY CONVERTER & OVERSPEED DEVICE

The Rotary Converter is used to change alternating
current. It is essentially an alternating current motor and a

direct current generator combined in one machine. In the larger sizes, a small alternating current motor for starting the set is mounted on the same shaft. The picture shows the commutator for collecting the direct current at the fore end and the strating motor at the back. It also shows a device whereby, if the sdeed rises dangerously, a bolt is shot out by centrifugal force from the shaft and trips a switch, which opens the circuit breaker.

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