

HISTELEC NEWS!

NEWSLETTER OF THE SOUTH WESTERN ELECTRICITY HISTORICAL SOCIETY

No. 16

HAPPY NEW MILLENNIUM

We hope that you had a super family Christmas by the time you receive this, and then we can all look forward in the new year to some fine weather (and the Annual Luncheon). If not, maybe, we will wish to join Cyril Gardner for a month in the Canaries.

ANNUAL LUNCHEON AT BUCKFASTLEIGH

The notice for the Annual Luncheon, this year at the Dartbridge Inn, Buckfastleigh on 27th January 2001, is enclosed. It is a superb venue as you may see from the photograph reproduced with the notice.

SNOWDONIA WEEKEND

The response to this weekend (19th/20th/21st October 2001) has been overwhelming with 59 members signing up. Sadly there are no more places left now. We are indebted to Chris Buck, David Hutton, Mike Williams and their wives for the on the spot research undertaken in October this year in order to iron out any wrinkles.

CHARITY STATUS

Your Chairman Barrie Phillips has put together a draft structure involving a Trust Committee and rule changes associated with us obtaining Charity Status next year.

WEB SITE

We were pleased to see that "Power Lines" has mentioned the SWEHS Web site, which should give current employees an opportunity to see what we are about.

THURSDAY GET-TOGETHERS

Don't forget the Redland Get-togethers at the Archives/Museum will be on the second Thursday morning in the month from January 2001. Look forward to seeing lots of you, especially in the Cambridge Arms.

LEB ARCHIVES

The LEB Archives have been transferred to the Corporation of London's Metropolitan Archives at Clerkenwell. The Archival Material relates to the municipal undertakings prior to 1948, which made up the LEB. It will be cleaned, repaired and re-indexed, before being made available to researchers.

CCD AGAIN!

DECEMBER 2000

Following articles in the last two newsletters about CCD, we have had a number of letters. Here is a comment by Steve Cole :-

"I was surprised to read that Don Horn set it up. I did not go to work at CCD as a graduate, until the summer of 1950, but at that time the man in charge was Frank Richardson. I know Don Horn worked there at that time, but what his responsibility was I am not sure. I most remember that a bit of grass would lead him to get a golf club out to practice his swing. I seem to remember that the man in charge in the drawing/design office was called Boulting, or something like that. My memory for names has always been bad, but my memory for people good. It was a case of "design" for overhead lines in those days - no standard construction manual - often cutting our own sag templates. The manual was being worked on in Head Office Drawing Office. I had been drawing some standard construction components previously - mostly pinched from the Edmundson's catalogue. A lot of co-ordination meetings seemed to take place in the evenings at the pub, where various members of staff were often given a public and embarrassing roasting by Richardson - and I am not referring to a BBQ! I don't think that I would have bought many beers because most of my money was spent on digs and lunches - no lodging allowance then.

One job I had, was helping to supervise contractors installing some 33kV U/G cables across the Tone at French Weir. What an experience! One Saturday morning a trench down from Bishop's Hull was being back-filled - with what seemed like soggy clay - and temporarily reinstated with a thin superficial layer of tarmac. When being rammed the clay kept pushing up through the tarmac. The contractor's men gradually disappeared, leaving me doing my best with what I always refer to as a "kadunk machine". It didn't do my one and only suit much good, and it was made even worse by my next experience! That was when I went torench Weir late one evening and found the exhaust manifold of the big pump keeping the water back from the new concrete glowing white hot. With some help filling a lot of sandbags and wading into the river to place them, we managed to stop the concrete being washed away".

Steve Cole

ABOUT CHRISTYS

Following the Supplement on Christys with Histelec News No.15, we have received a fascinating letter from an ex-

employee of Christy Bros. His name is Bill Ellicott, who now lives in Bristol and writes as follows :-

"I started work at Bude Power station in 1927 as an apprentice and I well remember the two 60HP gas engines. Part of my job was to climb the steel ladder to the hopper with a bucket of anthracite to feed the boiler for the gas and watching out for a blow-back, which was common event.

I well remember too, the battery system and the work involved in clearing up after a cell had burst its sides in the night. I was still around when the Paxman & Ruston diesels came into being and the 11kV links with Mary Tavy, especially the knack of switching-in when synchronising was a work of art on the diesel governors. When not on shift work, I was engaged on pole and line erection, involving a common practice of splicing and soldering overhead cables in situ. I was involved in indoor wiring work with capping and casing, which was almost a carpenter's work with cross-over bridges and mitre joints under floors.

Tavistock and Cullompton were among my bases with Bill Tincknell and Harry Knapp as my bosses. Six years in the Army was a considerable gap, but necessary and eventually back to Bude as Manager, taking over Holsworthy as well, when Les Millman retired. I noted with interest that his son was at the Okehampton reunion recently.

I am now very disabled and use a wheel-chair and a scooter, so my outings are restricted, but I look forward to reading the Histelec News from time to time. The old photograph taken in 1937 shows the old Power Station staff at the time with Frank Christy and his son Geoff Christy and of course yours truly". **Bill Ellicott**



Bill Ellicott has donated this photo to the Archives. It shows Frank Christy seated centre and Geoff. Christy.

DAM GOOD NEWS

Your Secretary has been visiting a foreign dam once again. Last year it was the Hoover Dam, this year the Aswan High Dam. This was built by 1972 at a height of over 100 metres high. It's span is nearly 4km wide and has created Lake Nasser, which is 500 miles long. There are 12 turbines, which produce 2500 million KWH per year.

The original turbines were Russian manufacture but were replaced with American units after 10 years at no charge!!

REVIEW OF HINKLEY POINT VISIT

On Saturday 30th September, some 28 members and guests, from far afield as Falmouth and Penarth, assembled at *The Friendly Spirit*, Cannington for lunch. After which we drove to Hinkley Point to visit British Energy's "B" AGR Power Station.

However recently notified work on the station prevented access to "B" Station. After profuse apologies we settled down to an introductory film and a tour of Magnox "A" Station's turbine hall and control room.

The method of generating electricity at nuclear stations is basically the same as at any other large power station - only the method of heating the water to make steam varies. The term *Magnox* is derived from the magnesium alloy used to make the long cylindrical fluted fuel cans containing natural uranium. These cans are stacked in a graphite moderator in a strong containment vessel. Pressurised carbon dioxide is pumped through the reactor to remove the heat of the nuclear reaction and the CO₂, on passing through the boiler tubes, boils the water to raise the steam.

Despite having ceased generation some time ago, "A" Station continues to be manned, albeit with a reduced staff, until the decommissioning has been completed.

With a hundred nuclear reactors world-wide now shut-down, decommissioning will follow an established pattern. First defuelling removes 99% of radioactivity. Second, redundant ancillary plant and buildings are removed and the reactor complex made secure and weatherproof. Long term maintenance and monitoring is then put in place. Finally the reactor is dismantled allowing the site to be reused.

Despite our disappointment, the eerie silence of the turbine hall allowed us to hear our guides comments. At least one ex-power station member had a trip down memory lane and was heard explaining the steam cycle etc. Some us, who had had manufacturer's training at Stafford, enjoyed seeing "English Electric" emblazoned on the alternator casings. (*and one would have liked to unscrew a plate for the Museum! Ed.*)

Whilst nuclear power is no longer popular, despite negligible emissions and suiting some aspects of the environmental lobby, it should not be written off. When fossil fuels run out, it may make a comeback.

Barrie Phillips

GEORGE EVELEIGH

We were sad to learn that one of our oldest members has died at the age of 97. George was born and bred in the centre of Bristol, going to St. Mary Redcliffe School. He joined BCED in 1916 and retired from the ESI in 1966, having completed 50 years. He started with the jointers

and transferred into the drawing office, where he worked his way up finally becoming Chief Draughtsman at SWEB Head Office. He was a colourful character full of interesting tales, many of which entertained us at the Archive or afterwards in the pub and these have been recorded for posterity by John Ashton. He will be missed.

WET & WINDY

We met in Exeter for John Coneybeare's talk "The Renaissance of Windpower" on an appropriately wet and windy day. Barrie Phillips reminded us that it was only a day after the 40th anniversary of the major floods of 1960. Little did we realise that within a day the South West would be subject to equally bad floods again.

John introduced his subject by reminding us how much energy we all consume - for example, preparing lunch for the meeting and washing up would consume the equivalent of a sack of coal or a barrel of oil. The UK has one of the best wind resources in Europe. Wind generation is viable, where there are mean wind speeds of over 7 metres per second - power generated varies as the cube of the wind speed.

John described the basic construction of a wind turbine, explaining, that induction generators are used because of their cheapness, robustness and reliability. They export power, but need to import VARs for magnetisation - those, who asked what a VAR was, had to be told that there was no simple answer!

There are six wind farms in the South West, with 87 wind turbines totalling nearly 32 MW, or 7% of the demand and units consumed in Cornwall. Most are run by companies, the first (Delabole) was started ten years ago by a local farmer.

John reminded us of the complex Cornish electricity distribution network, and told us of the difficulties of arranging for the power flow to operate in reverse to accommodate the output from the wind farms. Generations of planning engineers had concentrated on peak winter demands. To connect wind farms they have to cover many more design aspects, including power flows and ratings in summer and under fault conditions.

Just as with motors, generators can cause voltage flicker on starting due to magnetising inrush current, so they may need "soft start" devices. However these cannot help flicker due to generators stopping. At first sight it might be thought that wind fluctuations would cause flicker, but turbines are usually far enough apart, so that the flicker from this source is minimal. Nevertheless there are still some current fluctuations, when the blades of a turbine pass through the "shadow effect" of the tower.

Another difficult design problem is stability, or what happens, if part of the distribution system becomes disconnected from the grid, with a consequent danger of overvoltages and abnormal frequencies, which could cause

damage. The solution to this was the new ROCOF (rate of change of frequency) relay, which disconnects the wind farm and triggers the feathering of the turbine blades and the application of the disk brakes. SWEB's work on wind farms was very much a pioneering project; John said that it was gratifying that the team's on-site research into all the technical factors had later been confirmed by a major university study.

Questions, both technical and non-technical, led into a debate on the environmental aspects of wind farms. It was noted that despite Government targets on renewable energy sources no wind farms had been constructed in Devon due to planning permission constraints, and indeed none had been built in the last six years in Cornwall. We wait to see whether or not wind power is still a technology of the future.

Thank you John for a fascinating and wide-ranging presentation.

Paul Hulbert

MEMBER'S NEWS

George Chapman has recently fallen whilst on a boat and fractured his pelvis. We wish all the best and hope to see him back in service soon.

John Ashton had an argument with his hedge cutter in the Summer and suffered a nasty injury to his right hand. The damage has been repaired sufficiently to allow John to drive again; he may have to have another operation.

David Whitehead, having celebrated both his 80th birthday and his golden wedding anniversary has been laid low for over 3 months with shingles. Very nasty, he is making slow progress however.

John Redgrove is moving from Longwell Green since he has bought a flat in Keynsham.

Peter Lamb has had a computer crash through overloading his computer. It has taken a few weeks of special treatment by Marcus Palmen to get it working properly. You nearly didn't get a newsletter this month.

SPOTTED (You cannot escape!)

Irvine Boon ex-SWEB Exeter was spotted by Marcus Palmen on holiday in Canada.

Mike & Linda Gee were spotted in September by John Coneybeare in the Scilly Isles

Kit & Tina Carder ex-SWEB Bristol were spotted at the end of October at Edfu Temple up the Nile by Peter Lamb. By coincidence, they had flown out on the same plane, so it wasn't such a big surprise. They were on different boats however, K & T on the "RaII" and P & V on the "Nile Beauty".

REVIEW OF TALK ON STREET FURNITURE

We were "bowled over" - well, we were in the skittle alley of the Rising Sun, Backwell - by the talk on "Unseen Bristol" (and a little further afield) by Julian Lea-Jones on Saturday 2nd November.

He started with the story of the Temple Local History Group, which was intrigued by the published statement

that there were only three mediaeval parish boundary markers left in Bristol. The Group found four, and then realised that most of them were different from the published ones. So they carried out a systematic survey, and found 110....(latest score is several hundred).

They even found some boundary markers in the basement car park of Electricity House, having to explain that "STJB" did not stand for "straight through junction box" as the staff believed, but "St John's Boundary"! Steep Holm island in the middle of the Bristol Channel even has adjacent boundary markers for the parishes of St Steven's (Bristol) and St Mary's (Cardiff).

Julian showed us a wonderful selection of the things we walk past every day, without noticing them, ranging from little-known commemorative statues to the decorative pythons often found supporting balconies, not to mention the gnomes of Walcot Street in Bath. He said that local authorities have adopted a policy of "If it's not broken don't replace it", our streets offer an encapsulated snapshot of the city's 19th century or earlier past.

Street furniture is not just lamp-posts and pillar boxes. Even humble gratings carry the names of many of the most famous manufacturers of previous times. And often things are re-used - miles of railway fencing made out of tubes from the boilers of old steam engines, for example. After the Napoleonic Wars cannons were recycled as bollards - hence the design of many modern bollards.

Julian ended by warning us that "Hunting out Street Furniture is addictive" but urged "If you see something unusual, record it now - it may not be there next week!"

Paul Hulbert

MEMORIES OF BRIDFORD

Ted Clapton sent in these comments on electricity contributed by members of a history group at Bridford.

1920's - The Bridford Mill waterwheel was converted to a more efficient water turbine in 1921 by the Surridges, who were quite progressive. It did mean that leaves and rubbish had to be cleared regularly from the intake and there had to be a bypass "ladder" for the salmon to swim upstream. The generator gave a 100vDC supply. This changed to 240vAC, when the mains arrived in 1950.

1930's - I can remember when the Rev. Snow come up and fixed our radio at Hedgemoor. He used to spend a lot of time fiddling with radios. His office was always full of radios in different stages of being repaired. He was a real radio ham. He used to charge all the wet batteries down there. I would carry one down when I went to school and take one back when I went home. Rev. Snow had his own generator and had electric lights. I would go down the Rectory drive and round the back to a courtyard. Right in front there were double doors and inside was the big engine that was used to charge the batteries.

That was a big night, when we switched on our electricity. But we had it before that in Bridford. At Laployd Farm,

Mr Athorpe had his own plant. He had electricity for himself and the two cottages at Littlehay, where our nephews Tim and Simon Langabeer now live.

1940's Mr Courtney had been an electrician on ships during the war and, when electricity first came to the village, he did the wiring for the Puddicombes and others. Before mains electricity, people used paraffin for lighting. One of our wedding presents was an Aladdin Lamp, which was rather nice and gave out heat as well as light. Accumulators were used for powering radios; there was a regular recharging service operated from Venn Garage.

1944 - Rev. Snow came up to see my grandmother. He was a radio ham and said he had picked up a message from another amateur in Scotland to say that my uncle Harold was on a ship in the Forth of Clyde waiting to come in to berth, safe again.

1950's - Electricity came after the war. When it was installed, I could hardly believe it. I nearly wore out the switches on the first night. Of course, during the war, we had to abide by the blackout.

Our radio worked off an accumulator. When it was running out, I remember having to put my ear up against the speaker to hear the news. We always had a spare accumulator; there was a chap called Breakspear who came along once a week to deliver paraffin and he would take the spare away for recharging.

FOUR BODIES

Once upon a time there were four bodies
and some action was needed,
Somebody was required to do it,
Anybody could do it,
Everybody was capable of doing it, but
Nobody stepped forward to do it,

Everybody thought that somebody would do it, and
Somebody suggested it was Anybody's task,
Nobody did it however.

The moral of this tale, is don't ask Anybody to do it,
DO IT YOURSELF!

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.

PROGRAMME - Start of 2001

Thur. 11th Jan. *Bristol Get-together* 12.15 lunch
Cambridge Arms, Coldharbour Road

Sat. 27th Jan. ANNUAL LUNCHEON at Dartbridge Inn, Buckfastleigh.

Thur. 8th Feb. *Bristol Get-together* 12.15 lunch
Cambridge Arms, Coldharbour Road

Thur. 8th Mar. *Bristol Get-together* 12.15 lunch
Cambridge Arms, Coldharbour Road

Sat.24th Mar. AGM + TAUNTON TRAMWAYS

Talk by John Perkins at WPD training Centre

Thur.12th Apr. *Bristol Get-together* 12.15 lunch

Cambridge Arms, Coldharbour Road

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.

1 2 3 4

1 2 3 4