



A LTHOUGH the advertising campaigns for "package" holidays to the sunspots of the Mediterranean and more exotic and expensive places farther afield have been bombarding us from all types of media recently, more than thirty million of us will still spend our holidays in Britain during 1973.

At the same time, the British Tourist Authority estimates that some seven million overseas visitors will flock into Britain to counter-balance the "emigrants' who go to far away places for their annual holiday.

The hotels and caterers in this country are therefore 'on their toes' and we in MANWEB have embarked on a programme of exhibitions designed to make sure that all the advantages of



The Mayor of Wrexham, Councillor Silas Davies, tries his hand at cooking after officially opening the exhibition. Also in the picture, from left to right are: The Mayoress, Mrs. Davies, Mr. Peter Milne (general assistant engineer), Miss Alison Cowap and Mrs. Gaynor Phillips, energy sales demonstrators.

electric catering with its speed, cleanliness and efficiency, are brought to their attention.

Starting last month, we had an excellent show in the City Library Building at Bangor. Then followed our participation in the Southport Hotel and Guest House Association's Catering exhibition.

Again, with our own show at the Memorial Hall, Wrexham, many important people 'in the trade' took the opportunity of seeing what we had to offer. In the three days of this exhibition, business was very good.

At the time of going to press we shall be at the Llandudno Catering Exhibition at the Winter Gardens. Then on to Warrington with our own exhibition before taking part in the sponsored exhibitions at Colwyn Bay and Prestatyn.

Electric catering appliances on display will include back bar and visual equipment, a range of medium duty appliances including a forced-air convection oven, high speed fryers, steakhouse grills, hot cupboards, microwave ovens, freezers and refrigerators, beverage equipment, ice-cube makers and many pieces of ancillary equipment such as toasters, waffle makers

and dishwashers.

OUR COVER PIC-TURE shows Miss June Berry, left and Miss Alison Cowap, two of our energy sales demonstrators in their attractive new-style catering gear.

At the Bangor exhibition, energy sales demonstrator Mrs. Eirlys Hughes does the cooking watched by, from left to right: Mrs. E. I. J. Lloyd (wife of the Clerk to the Council), Mrs. Pat Reed ("Girl from MAN-WEB''), Mrs. Joan Dittrich (Catering Engineer) and Councillor Mrs. Jean Christie, the Mayor of Bangor.





THE STAFF MAGAZINE OF THE MERSEYSIDE AND NORTH WALES ELECTRICITY BOARD

CONTACT

Vol. 25 No. 2

February 1973

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-Editorial Staff — Keith Baldwin John F. Perry Sam Doughty

EDITORIAL

Real Medals

IN RECENT years, ever-greater numbers of motor vehicles of all types have poured on to our increasingly-crowded roads. As a direct result, more and more effort and money have been thrown into the fight to try to cope with the problems which the motor age has produced.

The high-speed, uncluttered motorway, has spread across the land. Uncluttered, that is, except when its own particular species of human lemming has produced carnage and destruction on a

scale hitherto undreamed of!

Every town and city has been compelled to take drastic action to avoid total motor strangulation. Forests of parking meters, thousands of miles of yellow lines, and armies of unpopular men and women in yellow-banded hats have appeared on the streets.

As one bottleneck is forced upon, at much expense in labour and money, so another narrows. The Mersey Tunnel has temporarily lost most of its terrors—but the Queensferry by-pass has become a daily nightmare.

The products of our factories are designed to go faster and faster, while the drivers of these high-powered and expensive pieces of machinery rarely find the opportunity to use half of the

energy which lies snarling under the bonnet.

It is against this background that anyone who drives regularly for years, without being involved in an accident, has much to be proud of. It is true that luck must play some part in all such records, but luck alone is far from enough. Years of accident-free driving really do constitute a testimonial to the skill, care and foresight of the person concerned. The exercise of these qualities can do much to avoid the kind of accident which might later be described as 'a piece of bad luck.'

All credit, therefore, to the scores of MANWEB drivers—many handling large and heavy commercial vehicles—whose names appear in this number of *Contact* as the recipients of ROSPA

Safe Driving Awards.

These awards are not what fighting soldiers once contemptuously described as 'NAAFI medals'—they are a very real tribute to the balance and responsibility of the people who have earned them. These people set an example to us all.

ORDERS SIGNED FOR ELECTRIC

CITY CARS

A contract for 60 Enfield 8000 Electric City Cars has been signed by The Electricity Council on behalf of the Electricity Boards in England and Wales, and Enfield Automotive Ltd., manufacturers of the cars.

The cars will be delivered to The Electricity Council, the Central Electricity Generating Board and to the twelve Electricity Boards in England and Wales. The Boards will carry out large scale operational research on the performance and use of the cars, including the effect of different battery charging routines. Delivery is expected to commence midway through 1973.

The cars have alumimium bodies and incorporate standard



The Enfield 8000 Electric City Car.

commercially available components. They are powered by conventional lead acid batteries. The maximum speed of the vehicles is 40 m.p.h., with general cruising speed of 30 m.p.h. On a typical city run their range is about 60 miles.

New Battery for Electric Vehicles

ELECTRICITY Council scientists working on the electric battery have made a breakthrough which could mean that electricity

may be a major force in transport propulsion within five years.

The sodium sulphur battery is a relatively new discovery, and has been developed at the Council's Research Centre at Capenhurst. A prototype of the new style battery has been installed in an 18 cwt, van fitted with an electric motor. The van can be driven at speeds in excess of 40 m.p.h. and has a range in the quiet lanes of Cheshire of about 100 miles. In towns they anticipate a range of 65 miles.

The bulky prototype weighs only one fifth that of a similar capacity lead acid battery. Production models could be considerably reduced in weight and experiments show that the bulk can be halved on production models, making it compact enough to fit into a properly designed van.

The breakthrough came with the discovery of a new formula electrolyte. The principle that ions flow between sodium and sulphur when these elements are heated has been known for some time, the difficulty has been the separation medium.

In tests the new electrolyte has proved satisfactory and has given the Capenhurst boffins real hope of producing a really viable commercial battery to help power pollution free traffic in just a few years.

The First in the World-with the new battery.



Electricity's Tasks in the Years Ahead

SIR PETER MENZIES AT HARROGATE CONFERENCE

The decisions and judgements which the electricity supply industry will have to make in the next 25 years or so were described recently as 'extremely challenging' by Sir Peter Menzies, Chairman of the Electricity Council.

He told a supply industry conference in Harrogate that in simple terms the industry's statutory duty was to make electricity available at the lowest price compatible with security of supply and the cost of providing it. But he added: "We must surely do much more than this.

"We must take even more according

"We must take even more account of the anxieties of people about the siting of our power stations and transmission lines. We must care even more about the problems of the householder and the maintenance of his electrical appliances. We must ensure that the service given to all our customers—limited as they are in their choice of supplier—is recognised as the best service possible."

Sir Peter said he was heartened by the fact that so many of the 175,000 men and women who worked in the electricity supply industry maintained this sense of serving the public.

"In fact, I get a little tired at times of critics who continually harp about the 'bureaucratic heartlessness' of a State industry. Things go wrong, we make mistakes, but surely the sort of criticism I have mentioned should be balanced by remembering, for example, that there are occasions during appalling weather when our linesmen go out in hazardous conditions to repair the transmission and distribution lines—and working at the top of a tower or pole in a blizzard requires a real sense of service to the public.

"It is this overall sense of duty and of team work that must form the main base for our future plans."

Sir Peter pointed out that Electricity Supply was without doubt one of the greatest team industries of all. The range of employments and skills utilised, the scope of the industry's functions, the depth of the specialisms needed—all these highlighted the interdependence which existed between the various members of the team.

"This vital sense of interdependence can only be preserved if industrial relations policies successfully reflect changing industrial and social trends, while maintaining fair treatment between man and man and between one group of staff and another within a reasonably balanced total structure of remuneration and conditions of service.

"We are fortunate here in the co-operation we receive from our trade unions—in their sense of responsibility, and in the vision they have shown. It is to the credit of our joint negotiating bodies that, faced with so delicate a responsibility they have not been lulled into excessive caution but have played a creative role in, for example, the areas of productivity improvement and staff status, and in promoting successful adaptation to changes in organisation and environment."

The joint consultative bodies with the unions and staff, he said, had advisory powers only, but they had acted responsibly and their recommendations had usually proved acceptable to the industry.

"I see no reason why we should not now step by step begin a process of granting our joint consultative bodies greater responsibility, at least in regard to such matters as education and training and safety, health and welfare.

"Provided that Electricity Boards are consulted adequately at the stage when recommendations are formulated, this system should work successfully and would remove current criticism sometimes levelled at us that the joint consultative bodies are unimportant because of their limited powers," said Sir Peter.

Financial Problems

Turning to the financial problems faced by the industry, he said it had suffered greatly in the ebb and flow of the battle against inflation waged by successive Governments.

"This industry is too important, and by tradition too responsible, to stand apart from the national interest on such large issues. The customers to whom we are responsible must benefit from any success attendant upon Government efforts and we must do our best to give reasonable co-operation."

Unfortunately the adverse consequences had been particularly severe and Sir Peter warned that the way back to viability would be hard.

"For two years already our costs have been rising whilst tariffs have been artificially restrained. This means that a precipice has to be climbed to make good the cumulative effects, and the longer price restraint continues the steeper the precipice will become.

"Less obvious, but of considerable importance, are the burden of increased borrowings needed to maintain cash flow against a background of tariff restraint and the problems set by inflation in the field of depreciation policy.

"Against this difficult background firm financial guidelines must be re-established if the industry is to produce a coherent plan linking investment decisions with a proper pricing structure.

"Only in this way can we continue to justify our claim, as a large, still expanding and increasingly capital-intensive industry, upon the available investment resources of the nation. In this sense the industry's aim to be free to behave commercially is at one with its tradition of behaving responsibly."

Dealing with the problem of availability of energy resources, Sir Peter said the share of the energy market held by oil would no doubt be falling by the turn of the century. Reliable estimates of natural gas resources in the North Sea were not yet complete, and the high cost of manpower in coal production unfortunately made this sort of energy exceptionally prone to inflation. By comparison, he pointed out that nuclear fuel resources, especially with the advent of the fast breeder reactor, were not seen as constituting a problem.

While it was Government policy which would

determine how fast things happened, the eventual run-down of oil would have to be taken up by nuclear electricity, and the speed at which the process took place might depend on whether further significant supplies of natural gas were discovered.

"Nevertheless, our industry can have a significant effect on its own destiny," he stated. "Our research, and that of others, may come up with some or many technological advances. The year 2000 could even see an economically viable fusion reactor working which will enable us to extend our fuel resources far into the future."

The present load estimates made it look essential for nuclear power to take over the lion's share of new plant capacity by the early 1980's, and he stressed: "It must be remembered that this form of energy can be introduced into the national fuel structure only through the medium of electricity generation."

Summing up, Sir Peter said: "Electricity permeates every aspect of life: entertainment, comfort and convenience in our homes; power, processing and control in industry; many aspects of public entertainment; food storage and preparation; communication of every kind. And so, in collaboration with our trade allies, we are really in the business of supplying all these amenities, necessities, comforts and pleasures."

He felt confident in the future of the industry—
"a confidence that we shall be able to supply all
these benefits not only in quantity, but also with
quality and with a respect for our staff and the
people they serve."

TWENTY SOCKET OUTLETS

-FOR MODERNISED HOUSES

At least 20 double socket outlets to provide for electrical appliances now in everyday use should be provided in every five-person council house when it is modernised. This was the minimum recommended by the Electricity Council on their stand at the recent Institute of Housing Managers Exhibition.

"Too many appliances for the available sockets means inconvenience," says the Electricity Council. "Worse still are the contrived solutions to a socket shortage—long trip wires, over-loaded wiring, and dangerous growths of adaptors."

At leats four sockets are required in a kitchen to supply appliances such as kettles, irons, food mixers, refrigerators, washing machines, dishwashers and clothes dryers which are now widely used.

Lounge-dining rooms require a minimum of seven sockets if dangerous trailing wires are to be avoided.

TV sets, radiant fires, and the increased use of standard and spot lamps, require individual sockets. Vacuum cleaners, sewing machines and record players all have to be provided for.

Wiring regulations outlaw all sockets in bathrooms with the exception of those for shavers which are specially designed for that purpose only. Wall mounted infra-red heaters require special mountings and are operated, like the lights, by pull cords. Electric towel rails are usually switched outside the bathroom.

Three socket outlets are advocated for the main bedroom and two for others. This number may need to be increased in a teenagers bedroom however where radios, record players, tape recorders and even electric guitars are becoming almost commonplace.



Our picture shows, from left to right: Messrs. T. Hodge, A. Briscoe, J. E. Marland (Installation Engineer), C. Hough, S. Paul, H. Telfer (Group Manager), P. Moore, A. G. Whaite (Road Safety Officer), G. Shoesmith (District Administrative Officer), A. W. Hawley (District Engineer), W. Owen and P. Quinn.

Proud Record for Drivers at North Mersey

WELL OVER 400 years of accident-free driving was the proud achievement of the 81 members of our North Mersey District staff who qualified for their Safe Driving Awards recently.

Bootle Road Safety Officer, Mr. M. Whaite, joined the drivers and senior officers from the District, at a Maghull hotel where he congratulated the men on their magnificent record before presenting them with their awards.

He urged all drivers to make a resoultion to become a 'WASBAAT'—wear a seat belt at all times—when travelling in a vehicle on the road. He said that if wearing seat belts was made compulsary, then we would see a great reduction in the number of casualties, probably resulting in the saving of some 1,500 lives each year.

The top honour this year went to Mr. Peter Moore of Southport, who was awarded the Silver Cross and Lapel Badge for 25 years of safe driving. Other awards were presented as follows:

Bar to 15-Year Medal: Messrs. R. Armstrong and T. H. Hodge.

Bar to 10-Year Medal: Messrs. A. W. Briscoe, E. V. Harrison, C. Hough, W. S. Owen, S. Paul and P. J. F. Quinn.

10-Year Medal: Messrs. K. Cooper, K. Sproat and W. J. L. Taunton.

Bar to 5-Year Medal: Messrs. J. A. Bell, E. Brimelow, H. Cooper, A. H. Evans, W. Halfpenny, R. W. Harley, R. S. Harper, G. C.

Heaton, G. J. Hughes, B. King, I. D. Ledson, J. W. Lennon, L. G. Lloyd, J. McAvoy, F. N. McHugh, S. Mumford, W. J. Owen, J. P. Pritchard, F. Sheehan, B. Stephens, K. Stewart and H. Woods.

5-Year Medal: Messrs. B. H. Cummins, J. Johnson, J. Kelly, T. Lawrenson, A. Ormerod, J. Rimmer, M. Stevenson, M. H. V. Stubbs and E. J. Willan.

Diploma: Messrs. B. F. Baldwin, J. Baldwin, W. V. Benbow, J. Bingham, J. Browne, D. Burleigh, M. J. Connor, B. E. Cunliffe, J. S. Cushing, L. M. Fallows, W. Gibbs, P. N. Guppy, A. Harrop, N. Hart, J. R. Hessam, F. Illingworth, L. Jackson, A. E. Johnson, G. Johnston, F. R. Jones, W. E. Jones, J. Leatherbarrow, P. J. Lee, R. D. Mellor, K. Morris, R. Mosses, E. J. Murphy, J. O'Meara, V. O'Sullivan, J. Pownall, L. Riley, D. S. Rimmer, R. Simms, R. Sutton, P. Tew, W. J. Wilson, J. P. Williams and S. Woods.

Exemption Certificates: Messrs. D. Grice, J. Lee, R. N. Moore, H. Reynolds, W. Riding and N. Robertson.

Electric Supply Cricket Section

DANCE

to the

Merseysippi Jazz Band

at the

Thingwall Road Clubhouse

on 28th April, 1973

8.00 p.m. to 11.45 p.m. (late bar applied for)

Tickets 40p each from Mr. Mal Cooper, Energy Sales Section, Lister Drive. Tel. 97.763



NEW DISTRICT OFFICE BLOCK FOR OSWESTRY

TOWARDS the end of 1972, our colleagues in the Oswestry District began their move into the new office block which had been built on a site in Maesbury Road on the edge of town. It has taken a few weeks for the 130-odd members of the staff to settle in their new surroundings, but now the cramped and dingy working conditions they had at Oswald Road and above the shop in Salop Road are now but memories.

Geographically, the Oswestry District is MAN-WEB's largest. It is more than 1,000 square miles in extent and includes the Boroughs of Oswestry, Llanfyllin, Llanidloes, Montgomery and Welshpool, the Urban Districts of Newtown and Llanllwchaiarn and the Rural Districts of North Shropshire, Oswestry, Forden, Llanfyllin, Newtown and Llanidloes, Overton, Wem and parts of Ceiriog and Drayton.

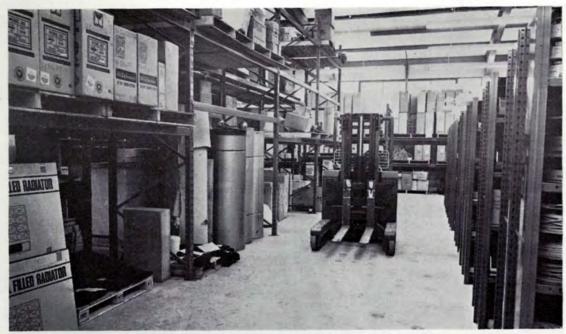
In 1948, the District served some 10,000 electricity consumers. Today there are more than 43,000 consumers, the cable network having expanded enormously as a result of the work

carried out under MANWEB's rural electrification programme. In the light of the growth which has taken place, it had become evident that the District could not effectively be administered

(continued on page 35)



Keeping the lines of communication open—on the telephone exchange and at the reception window.



Part of the new spacious stores section at Maesbury Road.

At the rear of the new office block, showing the stores and workshops and ample parking space for vehicles.





One of the open-plan areas with a high level of artificial illumination.

Plenty of daylight here in this section housing "The Wheel."



from the original inadequate accommodation over the Salop Road Shop and the temporary "stop gap" accommodation in Oswald Road. The decision to build new accommodation was inescapable and in selecting the Maesbury Road site, the Board have given active support to the Local Authority's policy to develop this particular area as an Industrial/Commercial Estate.

The new office block is of the "open plan" design which permits maximum flexibility of space allocation. It will accommodate engineering, commercial and administrative staff and ancillary services. Behind the office block are stores and workshop areas and a vehicle servicing bay, together with accommodation for operational workers. Employees will be well catered for by a compact all-electric kitchen which has been designed for economy of operation and cleanliness.

The opportunity has been taken to effect considerable improvements to communication facilities. For example, more external telephone exchange lines have been provided in the new office and direct telephone and teleprinter links established with the Board's Head Office, at Chester. These and other measures will be of direct benefit to MANWEB's customers in the District.

As might be expected, the buildings will be heated efficiently and economically by electricity. The under-floor heating method is used with electric cables embedded in the concrete floors. This method, together with the water heating, uses low cost off-peak electricity. Fluorescent lighting is used throughout the new offices, providing a high level of illumination also at low cost.

Trading will, of course, continue from the main shop in Salop Road, Oswestry, and other shops within the District at Newtown, Welshpool and Whitchurch.

The District management team is unchanged. The Engineer, who is responsible for the distribution network is Mr. G. E. Davies, who started his career with Oswestry Corporation. Mr. R. A. Williams, the Commercial Engineer, is responsible for consumer related matters and the Administrative Officer is Mr. W. J. Thompson. All three have long experience in their respective fields.

The dining room for all members of the Oswestry District staff at Maesbury Road.





Mr. Gwyn, second from left, congratulates the Study Prize Award winners, from left to right: Messrs. P. G. Thomas, A. T. Butler, P. Ramsey and C. Blundell.

A SHORT time ago, some 20 young men came into Head Office for a lunch party with Mr. D. G. Gwyn (*Deputy Chairman*) and then to receive Certificates of Completion of their student apprenticeships and Study Prize Awards.

Before making the presentations, Mr. Gwyn talked to the recipients and after congratulating them on their fine achievements, offered some very helpful advice on the paths to take in their future careers.

A Senior Study Prize Award went to Mr. Phillip Ramsey who started his career with the Board as a craft apprentice at Hoylake. He went on to obtain the Ordinary National Diploma at the Birkenhead Technical College and then

YOUNG MEN WITH A FUTURE



The nine who studied at Salford University, from left to right: Messrs. T. Gopsill, P. Wrigley, I. Basford, A. Bunnell, D. Williams, D. Booth, R. Stafford, P. Milne and J. Hampson.

Others on the way up the ladder of success, from left to right: Messrs. D. Oultram, J. A. Walker, G. Monks, M. Bellis, P. Burrows, C. Tigwell and E. Hughes.



gained a place at Salford University where after cramming for four years he came out as the top student with a 1st Class Honours Degree in Electrical Engineering. Phillip is now working as a third assistant engineer in the Technical Department at Head Office.

The three winners of Junior Study Prize Awards were Messrs. Colin Blundell of Liverpool, Albert Butler, also of Liverpool and Peter G. Thomas of Warrington. All three are former craft apprentices from the Hoylake School who worked for their OND at Birkenhead. They are now in their second year at Salford University.

Nine of the group who received their Completion Certificates all studied at Salford University. Here the top man was Mr. John Hampson who came out with a 1st Class Honours Degree in Electrical Engineering. John started from scratch as a craft apprentice in 1965 and gained his OND at Birkenhead. Last year, on completion of his studies at Salford, he was the only one from the course of 46 students to gain a 1st Class Honours Degree. He is now working as a general assistant engineer in our Liverpool District.

Other MANWEB colleagues at Salford were: Mr. Ian Basford from Crewe, who was awarded a 3rd Class Honours Degree. He is now a general assistant engineer in the Gwynedd District.

Mr. David Booth, an "A" level entrant to the Board, obtained a 2nd Class Honours Degree. He is the son of Mr. Percy Booth, who for many years worked for us at Northwich. David is now a general assistant engineer in the South Lancashire District.

Mr. Alan Bunnell, who hails from Chester, was a craft apprentice who worked for his OND at Birkenhead. He then went on to gain a 3rd Class Honours Degree and is now a general assistant engineer at Oswestry.

Mr. Terry Gopsill, from Wallasey, was a sponsored student. He was awarded a 2nd Class Honours Degree and is now a 4th assistant engineer in the Technical Department at Head Office.

Mr. Peter Milne, whose home town is Liverpool, was an "O" level entrant with the Board, and gained his OND at Birkenhead then gained a 2nd Class Honours Degree. He is now a general assistant engineer in our Dee Valley District.

Mr. Richard Stafford, an ex-craft apprentice who worked for his OND at Birkenhead then gained a 3rd Class Honours Degree. His home town is Winsford and he now works as a general assistant engineer in our Dee Valley District.

Mr. David Williams, who comes from Wrexham, was an "A" level entrant who studied for and gained a 2nd Class Honours Degree. He now works in the Aberystwyth District as a general assistant engineer.

Mr. Peter Wrigley, another "A" level entrant, comes from Liverpool. He was awarded an Ordinary Degree and is now a 4th assistant engineer in the Commercial Department of our North Mersey District.

The seven other former student engineers who received their Completion Certificates were:

Mr. John Anthony Walker, who came up the hard way and reached the top. An apprentice electrical fitter with the Board at Hoylake in 1961, he completed his apprenticeship at New Crane Street, Chester, qualifying as a fitter in 1966. Some time later he applied for entry into the Manual Workers Training Scheme and was accepted. He gained his City and Guilds and Higher National Certificates and then applied for an Electricity Supply Scholarship. He was successful and went to Liverpool University to study Electrical Engineering. After three years, he completed the course and was awarded a 1st Class Honours Degree. John is now a 3rd assistant engineer with our Oswestry District.

Mr. Mervyn Bellis, who comes from Wrexham, gained his OND at Birkenhead and then went on for his Higher National Diploma at the Denbighshire Technical College. He now works as a general assistant engineer in North Wirral District.

Mr. Phillip Burrows, a former manual worker trainee from St. Helens, gained his HND at the St. Helens Technical College. He is now a 4th assistant engineer in the Commercial Department at our Liverpool District.

Mr. Emrys Hughes, from Tudweiliog, Pwllheli, was an "O" level entrant who worked for his OND at Bangor Technical College and then went on for his HND at Denbighshire Technical College. He is now a general assistant engineer working from Head Office.

Mr. Geoffrey Monks, an ex-craft apprentice who gained his OND at Birkenhead and his HND at St. Helens. He is now a general assistant engineer at Oswestry.

Mr. David Oultram, another "O" level entrant with his OND at Birkenhead and HND at St. Helens well and truly behind him. His hometown is Northwich, but he now works as a general assistant engineer in our Clwyd District.

Mr. Christopher Tigwell, joined the Board as a University Scholarship entrant and obtained a degree from Sussex University. Chris is now a general assistant engineer in Gwynedd District.



From left to right, top: Messrs. D. R. Mellor (District Commercial Engineer), K. Helliwell (Group Manager and L.A.C. Chairman) and L. Griffiths (District Engineer). Below: Messrs. K. Griffiths (Principal Assistant Admin. and L.A.C. Secretary) and G. D. Cooksley (District Administrative Officer)

JOINT CONSULTATION

TO promote and encourage measures affecting the safety, health and welfare of persons employed by the Board, and to discuss other matters of mutual interest. To afford a means of consultation between the Board and appropriate organisations.

This is the mandate of the electricity supply industry's Local Advisory Committees, and those who take the trouble to read the minutes of the LAC meetings—normally displayed on notice boards at workplaces—will quickly discover just how much quiet, behind-the-scenes work actually goes on in the interests of keeping the industry running smoothly.

On these Committees—at MANWEB we have one for Head Office and one for each District—the Board is represented by management personnel. In the case of Head Office these are drawn from each of the four main departments, while the Board's District nominees are normally the three District senior officers.

From the staff side come elected representatives drawn from all walks of life, and these people put in a great deal of spare time effort in the interests of their colleagues' welfare.

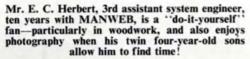
From Clwyd District come these pictures of the members of the District LAC, showing most of them engaged on their workaday activities.

The LAC was formed after the merger of the former Clwyd and Conway Valley Districts, and many of those pictured on these pages had previously served on the LAC's which served those Districts.

Many subjects including safety, transfer arrangements connected with centralisation at the District office at Rhuddlan, office accommodation and environment, oil handling, first aid equipment, tools, safety goggles, and a host of minor subjects have already occupied the attention of this active and representative LAC.



Mr. W. Silvey, a records draughtsman, has 20 years with the Board. He developed an affection for Rhyl as a wartime evacuee from Bootle, served in the Royal Navy as a telegraphist and the merchant navy as a radio operator. He is involved in sports and social activities, and enjoys fishing and golf.







Mr. T. Field, installation inspector at Mold, is an active trade unionist, a member of No. 9 D.J.A.C., and also of Ruthin Borough Council. He has been with MANWEB for 25 years.

Mr. A. W. Price, 3rd assistant engineer (public lighting), this year's L.A.C. vice-chairman, is the longest-serving of the staff's representatives, with 37 years' service to the industry. He was formerly with Revo and the North Wales Power Company. Another "do-it-yourself" expert, he relaxes by playing an electronic organ.







Mr. C. E. Parry, installation inspector at Mold, comes from a family where service to our industry is almost a way of life—he has two brothers working for the C.E.G.B. He has 24 years' service of his own to his credit. An occasional supporter of Wrexham F.C., he devotes most of his spare time to encouraging his two athlete daughters -one of whom has gained representative honours.



Mrs. P. Buckley, consumer liaison clerk at District office, joined us three years ago when her husband's job brought them to Wales from Manchester. She is captain of a Rhyl Ladies' Darts team, and secretary of the Rhyl R.A.F. Association football team.



Mr. R. Smith, installation inspector at Llandudno Junction, another 23-years'-service man, is secretary to the industrial staff's representatives on No. 7 (Clwyd) Works Committee. His spare time goes to—golf (handicap 13) and darts.

Mr. R. Collinson, a jointer's mate at Llandudno Junction, has been with MANWEB for 12 years. An ex-railwayman, Mr. Collinson is another active member of the committee who gives a great deal of time to dealing with his colleagues' problems.

Mr. J. Wilshaw, a storekeeper at Llandudno Junction, 23 years with the Board, is another ex-railwayman and construction linesman. His main hobby is gardening, and he deep-freezes his home produce for all-the-year-round enjoyment.





Mr. E. E. Evans, substation attendant, has been with us for 17 years and was formerly a construction linesman working on the Rural Development Programme.





Party Time

for the Young . .

About 50 youngsters had a great time at a party organised by the Gwynedd District Sports and Social Club'a few weeks ago. Several games were played, one of which delighted the children—a parents' wheelbarrow race!



. . and the not so young

A great number of our North Wirral District pensioners gathered together a short time ago to enjoy some seasonal fare at a Birkenhead hotel and then go on to a most enjoyable evening talking over old times. The group try to meet every three months for lunch and a jar or two, and every once in a while, they make a special effort for a big get-together. On one of these occasions recently, members and their wives had an evening in Liverpool, with dinner and theatre helping to make it a memorable 'night out'.

VALUE ADDED TAX -AND YOU

By H. J. RICHARDS

(Principal Assistant Costs)

Most people know that the introduction of Value Added Tax means a far-reaching change in our taxation system, but a surprisingly large number are still very vague about precise details of the ways in which the new system will operate.

Whether we like it or not, VAT will affect the lives of us all, and this article aims to dispel some of the clouds of uncertainty by explaining the new system in a "Question and Answer" form which most people will be able to understand.

When does VAT become effective?

The effective date is April 1st, 1973, when VAT replaces Purchase Tax and Selective Employment Tax.

At what rate will VAT be applied?

Apart from Exempt Items, there will be, initially, two rates of VAT—one the "zero" (nil) rate, and the other the "Standard Rate" currently forecast at 10%.

How will VAT be applied?

Some people have the idea that 10% will be added to every stage of manufacture of a taxable commodity. This is a myth.

In fact the tax is added in steadily increasing amounts, as the value of the product increases.

Can we have an example of this?

It works as follows	:			
Supplier of raw m	ateria	als sells	to	
manufacturer at, say				£2.00p
VAT is				£0.20p
Manufacturer assemb	les, e	tc, and	sells	
to wholesaler at				£3.50p
VAT is £0.35p, 1	ess 2	0p		£0.15p
Wholesaler sells to re	taile	r at		£4.00p
VAT is £0.40p, 1	ess 3	5p		£0.05p

Total price of finished product is £5.00, plus 50p VAT. It will thus be seen that goods are liable to VAT at 10% of their value at all stages of manufacture, but as this is collected stage by stage the ultimate final VAT paid by the consumer is still 10% of the whole.

How will prices be affected?

Retailer sells to consumer at

VAT is £0.50p, less 40p

Assuming a Standard Rate of 10% generally,

so-called 'luxury' goods, which now carry Purchase Tax at 25%, should come DOWN in price by about 8%.

Goods carrying 18% Purchase Tax should also come down in price, by about 3%, but goods in the lower tax range, carrying only 11½% Purchase Tax, will go UP by about 3%.

Goods at present carrying no Purchase Tax, but which will be subject to VAT at the Standard Rate, will go up in price by 10%.

Who will do the tax-collecting?

Basically, the Treasury! But the VAT Regulations will turn something like 1,750,000 traders into "tax collectors." (So did PAYE when it was introduced for Income Tax).

Dearer or cheaper?

Examples of items likely to be affected in overall price to the ultimate consumer are:

Increases

Clothing, furniture, kitchen utensils, repair charges, telephone accounts, hairdressing, eating out in restaurants, entertainments, car parking, medicinal products (unless prescribed), electric cookers and freezers.

Decreases

Cosmetics, soaps and toiletries, writing paper, cards, bedding, refrigerators, TV and radio, record players, etc.

No change

Foodstuffs, books and newspapers, postage, fuel and power (including electricity), rents, rates and water charges, financing, insurance premiums (excluding motor insurance).

What about cars?

Generally, if you are buying a new car and trading in your present vehicle, VAT will make no difference to the deal you are likely to get before or after April 1st.

New cars are subject to a car tax in addition to VAT, and price reductions (if not absorbed by a manufacturer's increase) are likely to be only minimal on cars now retailing below £1,300.

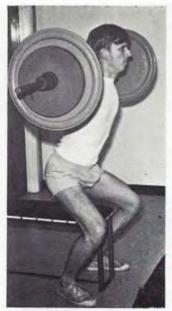
However, if you can get discount for full payment in cash, you should wait. VAT is chargeable only on the final selling price, and £30 off could mean another £3 in your pocket!

The "Freeze"

£5.00p

£0.10p

Examples quoted here are subject to the basic prices of goods remaining unchanged. It is possible that some of the benefits which might be gained by the abolition of Purchase Tax could be absorbed in a supplier's price increase as soon as current restrictions are eased.





WEIGHT FOR IT!

Above right:
Nigel Crossley
demonstrates
'sit-ups' on the
inclined bench.
Top left: the 'squat'
shown by Reg
Morris.

WHEN Russian weightlifting champion, Vasily Alexeyev, forced 500 and something pounds above his massive frame in the Munich Olympics, it was the equivalent of hoisting aloft the three MANWEB group managers in one go!

The rather grotesque shapes of some of these 18 stone plus super-heavyweights give the wrong impression of the result of 'messing about' with

weights.

There is a big difference between weight lifting and weight training. The weight lifter trains to lift as much weight in one lift as he can. The weight trainer does exercises with weights. Bodybuilders make use of weights to develop each of their muscles to it's ultimate size.

Most sportsmen—and sportswomen—use weights to help improve their performances, and the higher the level of competition the greater the need for the benefits weight training can bring.

A variety of MANWEB sportsmen are making use of the facilities provided by the weight training section of the MANWEB Chester Sports and Social Club. Despite the cramped conditions they have at Sealand Road the section is growing in (pardon the pun) strength, and welcomes new members.

Instructor, Hugh Farrow, a Head Office engineer can devise a routine to suit any particular sport, or one just to suit the keep-fit fan. The section



Centre left:
Hugh Farrow
demonstrates
the inclined
bench press,
which
develops the
upper chest
and arms.

Bottom left
Jim
Willoughby
makes use of
the weighted
boots to
strengthen
leg muscles.



Lord strengthens his arm muscles with 'curls.'



has amassed an array of equipment, some provided out of club funds and others improvised by the members themselves.

Some equipment is reminiscent of mediaeval torture implements. Masses of weights are piled on the leg-press machine, and lying on your back you try to force the bar upwards with your feet. The multi-purpose bench is used for a variety of exercises, while the weighted boots are ideal for strengthening leg muscles.

The section is affiliated to the N.A.B.B.A. (the National Amateur Bodybuilding Association) although none of the members seem to aspire to become the future Mr. Universe. Most wish to get themselves fit or improve their strength for their chosen sport.

Quotes from MANWEB weight trainers:

Badminton player Reg Morris "Weight training has helped. Now I last through games without tiring and my shots have a lot more power."

Barry Lord, golfer, says "I've put at least 10 yards on my drive, I get more power playing out of the rough, and my legs don't get tired even after two rounds of golf."

Cyclist Bill Rogers, "I reckon I have increased my speed by at least 25% since I started training with weights, and I have cut down drastically the number of miles I need to do to maintain my fitness."

Karate instructor Jim Willoughby, "I use weight to increase strength without producing bulky muscles. I tend to repeat exercises rather than increase the weights, this gives strength and suppleness, and so enhances agility and helps to maintain posture."

Judo expert John Roberts says, "My fitness has improved overall but I do notice I have increased strength, especially in the arms and shoulders where it is needed for the throws."

Footballer Nigel Crossley, "I feel stronger generally and I have more stamina, I notice I can last through the whole match without tiring."

Steve Murphy, keep fit enthusiast, "I feel great, my breathing is better, I have more energy and I feel more alert."

Summing up, instructor Hugh Farrow says, "Weight training is recognised by the medical profession and coaches in most sports as a means to all round fitness and health. It strengthens muscles and exercises heart, lungs and other organs of the body. Anyone can gain from weight training, whether he be sportsman or someone just interested in keeping healthy.

"A programme can be devised to suit the individual to do just as much as he or she wants. A couple of hours per week is all that is needed to get really fit."



Above: cyclist Bill Rogers piles on the weights on the leg-press machine while below, Steve Murphy performs a 'bench press,' with Ellis Parrry and John Roberts standing by.





LORD MAYOR OF LIVERPOOL PAYS INFORMAL VISIT TO HEAD OFFICE

The Lord Mayor and Lady Mayoress of Liverpool (Alderman and Mrs. Robert Meadows) were recent guests of the Board at Head Office. Our picture, above, shows our visitors together with senior officers looking over the model of the building before they toured the offices. From left to right: Mr. D. G. Gwyn (Deputy Chairman), Mr. M. Parker (Secretary and Solicitor), Alderman Robert Meadows, Mrs. D. G. Dodds (wife of our Chairman), Mr. H. Telfer (Group Manager), Mrs. Meadows, Mr. D. G. Dodds (Chairman), Mr. A. P. Whyte (Chief Accountant) and Mr. F. J. Brown (Chief Engineer).

Didn't they do well?

In a letter, sent to Mr. J. A. Winchester (District Commercial Engineer), a very satisfied customer from our Dee Valley District thanked Mr. Peter Roylance (electrician) and Willie Stringer (apprentice) for their courtesy and efficiency and mentioned that they worked very hard—"they did not stop for more than ten minutes for lunch"—in order to have the work completed in one day.

These two men happened to be 'on loan' from the Mid-Cheshire District, so two D.C.E's. have good reason to be proud.

Our customer also thanked Mr. Barry Griffiths, a sales representative from Dee Valley, who took the trouble to call in at the end of the day to confirm that everything was satisfactory.

UNDERSTANDING ELECTRICITY

A new educational information service, is being launched by the Electricity Council to provide a central source from which schools and colleges can obtain audio-visual and other teaching aids. Its aim is to improve the knowledge of young people about basic electrical principles and some of the practical applications of these associated with their daily lives.

The first Understanding Electricity catalogue lists a series

Six berth caravan to let from April to October. Situated on permanent site at Lligwy Beach, Anglesey.

For details write to: Mr. K. Jones, 55 Llanerch Road West, Colwyn Bay, N. Wales or telephone Col. Bay 44696, of eight new short films; eight new filmstrips with titles complementary to the films; two series of specially written information sheets on 12 different subjects; supply industry publications likely to interest educationists; and details of films illustrating the utilisation of energy for agricultural, commercial, domestic and industrial purposes.

Great care has been taken to ensure that all the material offered by the new series is applicable to modern educational methods.

Understanding Electricity catalogues may be obtained from the Catalogue Dept., Guild Sound and Vision Ltd., Kingston Road. London SW1 9NR. who are handling the distribution of the service for the Electricity Council.

Well-earned Awards by Gwynedd District Drivers

IN RECENT years the Government had introduced many new laws in an effort to reduce the number of accidents on the roads. The very effective legislation with regard to tyres, the drink/ driving deterrent and the law concerning the fitting of seat belts have all met with degrees of success.

This was said to members of our Gwynedd District staff recently by Mr. Eric Jones, the Road Safety Officer for Caernarvon when he accepted the invitation to present Safe Driving Awards to our staff.

Mr. Jones congratulated the award winners for their fine efforts and said how pleased he was that the Board were participating in the Rospa scheme. He said that all the drivers who earned awards helped to make road safety effective and they set a fine example to other road users.

He also gave some startling figures on the cost of fatal accidents, serious injury, minor injuries and non-injury accidents, adding that the average cost of each accident worked out at around £1,100.

He then presented awards as follows:

Drivers based at Caernarvon:

Special Bar to 15-Year Brooch: Messrs. Robert Ivor Morris and John Charles Williams.

Oak Leaf Bar to 10-Year Medal: Messrs. John Evans, William Trefor Jones and William Hubert Morris.

10-Year Medal: Mr. Eric Philips.

Bar to 5-Year Medal: Messrs. Oliver Edwards, Cledwyn Hughes, Eryl Jones, Richard Dennis Jones, Thomas Wyn Jones, Albert Kenneth Richardson and Hugh Idris Williams.

Diploma: Messrs. Eric Gould, Albert Edward Hewitt, John Hughes, Gwilym Jones, John Cledwyn Jones, Alwyn Pritchard and Eric Roberts.

Exemption Certificate: Mr. John Griffith Roberts.

Drivers based at Anglesey:

Oak Leaf Bar to 10-Year Medal: Mr. John Williams.

Bar to 5-Year Medal: Messrs. John Henry Davies, David Glyn Jones, Llew. Roberts and Ifor Watkin Thomas.

5-Year Medal: Mr. William Hugh Williams. Diploma: Messrs. Elfed Jones, Gwylfa Parry and Eifion Wyn Roberts.

Drivers based at Pwllheli:

15-Year Brooch: Mr. John Solomon Jones.

Bar to 10-Year Medal: Messrs. Robert Elwyn Owen, Garnet Wakefield Roberts and Richard Williams.

Bar to 5-Year Medal: Messrs. Gwyn Lloyd Hughes and Arthur Jones.

Diploma: Messrs. Robert Ivor Jones, William Austin Jones and Hedd Wyn Roberts.

Drivers based at Bleannau Ffestiniog:

15-Year Brooch: Mr. David Gwaenydd Jones. Bar to 5-Year Medal: Messrs. Glyn Jones and Robert David Jones.

Some of our Gwynedd District Safe Drivers pictured with Mr. Eric Jones, seated third from right.



Winter Sun Break

by Pauline E. Jones

'Contact' Correspondent (Gwynedd District)

SEVERAL lucky members of our Gwynedd District Sports and Social Club enjoyed a fourday Winter Sun-Break holiday a short time ago when they visited Majorca.

Our party, 30 in all, set off by coach on a Thursday evening on the first stage of the journey to Luton airport. We had travelled as far as Wolverhampton in icy cold and often foggy weather when the heating equipment in the coach failed. Another vehicle had to be hired—and at

3 a.m. on a cold and frosty morning, this proved amazingly easy. Soon, after a cheering cuppa and a tasty morsel to eat, we were on our way again.

A few hours later, we were leaving England with its freezing climate and settled down to enjoy the flight.

The small aircraft had seating for 120 passengers, but there were 121 people booked for the trip, so the odd one—who turned out to be Irfon Owen—was found a spare seat in the cockpit next to the pilot. Irfon, who is a clerk in the prepayment meter section at Caernaryon, had never flown before.

Even so, there is no truth in the rumour that it was Irfon's brilliant navigating that took the 'plane over the Pyranees and to a safe landing at Palma. There is however some substance to the story that when Mrs. Carol Ann Pritchard, our clerk/telephonist, found out where Irfon was, she fainted and had to be revived by the stewardess.

As we disembarked in Palma, those in the party who were still wearing their winter woolies must have felt distinctly uncomfortable as they stepped into a temperature of 70°F and had to shield their eyes from the brilliant sunshine. We were quickly whisked away to our



One of the party, with a beaming smile, Miss Jean Pritchard with Santa Ponsa bay in the background.

hotel in Santa Ponsa where after lunch, some sat dozing in the sunshine, others went for a swim, while others quaffed champagne. Some members of the party took the opportunity to return to Palma to shop for souvenirs and to visit the impressive cathedral.

Of the many trips that had been organised was one to Fermentor. This began with a pleasant journey through the Majorcan countryside with the first stop at a small seaside resort for lunch. After this, we went for a boat trip on the Mediterranean to a small beachside bar where many of us enjoyed a swimming session.

The return journey was vastly different with a most frightening ride down a winding, twisting mountain road. Fortunately this journey ended at a most appropiate spot—a wine cellar—where everyone managed to revive themselves as they sampled the local wines.

For those who were able to stand the pace, then night clubs were the places to go before calling it a day.

The final fling for the party was a barbeque 'up country' where we all enjoyed a welcoming aperitif called 'Sangria,' which was ideal for washing down the roasted sausages.

Then into the great Hall to eat our fill with salad, wine (red or white), chicken halves, wine, suckling pig, wine, more wine, a sweet—I can't remember it's name but it tasted marvellous—some champagne, and then, just in case any of us were still thirsty, hot rum punch was provided.

During the magnificent feast, beautiful Spanish music was played by local musicians. Later dancing was laid on in a nearby barn-like building, with music and merrymaking going on until the early hours of the morning.

Then it was time for the return journey home. Again, we had a little excitement for over Paris we ran into an electrical storm which tossed our light 'plane about. Poor Carol Ann passed out once mcre, but she was not alone.

Back in Luton, we were once again met with cold biting winds, but with the memories of a glorious holiday still fresh in our thoughts, this typically English weather didn't really bother us at all.

Due to the great success of the trip, the District Sports and Social Club intend to organise a similar Winter-Sun Break holiday towards the end of this year.

Gwynedd District Sports and Social Club held their annual Dinner/ Dance at a Llanberis hotel a few weeks ago. About 140 Club members and their friends had a most enjoyable evening as they dined and 'raved' to the entertainment of "J.C." and his disco, and the Tom Lennon band.



Great Night at

LLANBERIS















A farewell gift from his colleagues is handed over to Mr. Parry, centre left, by Mr. G. D. Cooksley (District Administrative Officer).

RETIREMENTS

Mr. J. PARRY

Over 30 years' service given by Mr. Jack Parry, came to an end a few weeks ago when he retired from his post as a clerk with our Clwyd District Commercial section.

Jack worked for many years on the clerical staff of the Engineering Construction section at Caernarvon, Llandudno Junction and Rhyl. In 1962 he transferred to the Commercial side working at Prestatyn until his recent move to the District Office at Rhuddlan.

Well known in the North Wales bowling and snooker circles, Jack is the present chairman of the Rhyl and District Snooker League.

Mr. G. BETTS

A colleague who has given a lifetime of service —45 years and eight months—in the electricity supply industry, Mr. George Betts, has now retired from his job as chargehand in the transport section at our Mid-Cheshire District Office.

George started his working life with the Electricity Distribution of North Wales and District Ltd. in 1927, transferring to MANWEB in 1948 as a fitter mechanic. His promotion to chargehand came ten years later.

At a farewell presentation ceremony, Mr. G. Zeiher (District Engineer), thanked George for

Mr. Betts, second from left, with some of his colleagues from Mid-Cheshire District garage.



his long and loyal service and on behalf of his many friends in the District, wished him a long and happy retirement. He commented that George was likely to be fully occupied in his retirement with his nine children and 14 grandchildren.

Mr. G. A. CREED

Prior to joining the Crewe Corporation Electricity Department in 1947, Mr. George A. Creed served his apprenticeship as an instrument maker with a railway company at Derby. Later, during the war, he went to work making aero engines with the Rolls Royce Company at Crewe.

Following a period with the Corporation as a meter mechanic and tester, he transferred to the clerical section and for a few years was personal clerk to the former District Engineer, Mr. E. T. L. Jones.

At a farewell ceremony held a short time ago, the present District Engineer, Mr. G. Zeiher, paid tribute to George's conscientious service and then presented him with two sets of cut crystal glasses subscribed for by friends and colleagues.

Everyone expresses their sincere wishes for many years of healthy and happy retirement for George with the hope that he would now be able to devote more time to his hobby of repairing watches.

Mr. Creed, right, pictured with some of his office friends after his retirement presentation ceremony.





Mr. Evans, centre, surrounded by friends from North Wirral District on the occasion of his retirement.

Mr. J. E. EVANS

Many friends and former colleagues gathered at our North Wirral District Office in Craven Street, Birkenhead recently, to say their farewells to Mr. John E. Evans, who was retiring after 44 years' service in the industry. He was presented with a gift from the staff by Mr. D. G. Tomsett (District Administrative Officer).

Starting work as a clerk with the Birkenhead Corporation Electricity Department in 1928, he graduated through the various sections and in 1948 he was head of the Consumers' Section. On nationalisation he was appointed as District Senior Clerk at Wallasey.

When the District was re-organised in 1954 he returned to Birkenhead to take up the post as District Senior Clerk with the new North Wirral District. Again in recent years, through re-organisation, his title was changed to become Principal Assistant—Administration.

During his service with MANWEB, John has had 22 years on the Local Advisory Committee, first as an elected member and then as Secretary. He is the immediate past President of the Wirral Branch of Nalgo.

During the last war, he served in the Electricity Works Battalion of the Cheshire Home Guard prior to service with the R.A.S.C.—the 11th Armoured Division—from 1941 to 1946.

He has many and varied interests. He is a

former member of the Birkenhead Town Council (1964/70), and a Vice-President and Past Chairman of the Birkenhead Liberal Association.

He is also a Justice of the Peace, a Birkenhead magistrate and a Governor of the Middle Combined Schools Group in the Borough.

An enthusiastic sportsman and musician, John is Vice-President of the Birkenhead St. Mary's Cricket Club and a founder member and Secretary of the Birkenhead Aeolian Male Voice Choir. He is also an Executive Committee member of the Birkenhead Arts Association.

Having now recovered from a protracted period of illness, on his retirement John hopes to extend his magisterial duties and he has been invited to return to politics and stand as Liberal candidate for the re-organised Local Government Councils.

Mrs. N. WILLCOX

Mrs. Noel Willcox, energy sales demonstrator in North Wirral District retired a short time ago. She joined the Board in 1957 as an assistant demonstrator in the former Liverpool South District, becoming a senior demonstrator in 1964 in the North Wirral District.

Bidding farewell to Mrs. Willcox, Mr. George Bowers (*District Commercial Engineer*) presented her with a stainless steel coffee percolator and a liquidiser attachment for her foodmixer.

Mr. Bowers hands over some parting gifts to Mrs. Willcox.



New Edition of I.E.S. Code for Interior Lighting

The Illuminating Engineering Society have recently published a new edition of its code for interior lighting.

Enlarged, with an easier reference system than the previous edition of five years ago, the new code is an essential reference book for all concerned with specifying, buying and maintaining lighting.

The schedule of recommended illuminances now takes account of preference as well as performance. The Code gives more emphasis to quality of lighting. Important aspects such as colour appearance and rendering, veiling reflections, preferred luminance ratios and modelling are dealt with in addition to the better known limiting glare indices.

Guidance is given on the increasing practice of using daylight and electric light together, particularly in offices. The recent emphasis which has been given to emergency lighting is reflected in an additional section.

There are two basic parts to

the edition, Part 1 describes basic principles and Part 2 gives basic design data. The extensive Appendices contain sections on: illuminance and calculations, design methods for interior lighting schemes, measurement of illuminance, surface colours and reflectances, directional effects in lighting, and contrast rendering. The detailed glossary will be very useful as will be the extensive bibliography.

The 1973 Code is available from the Illuminating Engineering Society, York House, Westminster Bridge Road, London, SE1 7UN price £2 (plus 20p for packing and postage)

■ Obituary =

MR. J. FAREHAM

Among those who lost their lives when an Egyptian Ilyushin 18 airliner crashed in the mountains of Cyprus a short time ago, were Mr. John Fareham and his wife, Mrs. Elizabeth Marjory Fareham.

Mr. Fareham spent nearly all his working life in the electricity supply industry, and prior to his retirement at the end of 1969, had for many years held senior engineering posts with MANWEB.

He began his career in 1923 with Haworth Main Colliery, and then spent many years with Doncaster Corporation Electricity Department. He later worked with Battersea Borough Council, Warrington Corporation, and the British Electricity Authority, becoming a technical engineer with MANWEB after nationalisation.

In 1960, he became the Board's Area 2 Engineer, based at Sandiway, and later took over in the same capacity for the MANWEB Area 3 when the two areas were amalgamated.

John Fareham was liked and highly respected by his colleagues at Head Office, Area and Districts. Since his retirement, contact has been maintained with him, and his sudden death came as a great shock to all.

He was keenly interested in public affairs, and was a member of his local Rural Council. Mrs. Fareham was involved in the affairs of the Electrical Association for Women.

Mr. and Mrs. Fareham leave a grown-up son and daughter to whom we extend our sincere sympathies.

MR. B. HUGHES

It is with deep regret we report the premature death of Mr. Brynley Hughes, 2nd Assistant Engineer, North Mersey District, at the age of 51 years.

Bryn, as he was known to his many friends and colleagues, joined the North Wales Power Company in 1937, and served with that organisation until Nationalisation, apart from five years war service in the R.A.F. He joined Liverpool North District in 1955 as Section Engineer after service in the Area 4 Office and the Oswestry District. With the recent reorganisation he was appointed to the new North Mersey District.

He was a friendly and helpful man and Mr. A. W. Hawley, North Mersey District Engineer said, "He will be sadly missed and warmly remembered by his colleagues in this district and other parts of the Board."

We extend our sincere sympathy to his widow Mrs. Lexie Hughes and family.

Mrs. Hughes has asked that we publish the following few words....

Mrs. Lexie Hughes and family would like to thank the many friends and colleagues of her husband, the late Mr. Brynley Hughes, for all their kindnesses, consideration and practical help which were given unstintingly during his long illness, and to the many old friends who travelled long distances to pay their last respects.