

## Chief Engineer Retires

### The Lab's Tribute to Mr PJ Bowles OBE

*Photo: A 'This is Your Life' representation in cartoon form, produced by one of the RL 'card specialists, amuses and intrigues the Director and Mr & Mrs Bowles. Prominently featured - a Co-op 'bike' and a Mermaid.*



A cheerful crowd gathered in the Lecture Theatre on Friday, 29 July, to wish Percy Bowles a long and happy retirement. They came back from retirement, from AERE and from the RL to hear the Director speak of Percy's long and distinguished career and to see the presentation of gifts, contributed by friends and colleagues.

Speaking to many old colleagues, one is struck by the similarity of their remarks and the emphasis placed, not so much on his academic achievements or indeed the variety of projects he had successfully undertaken, but on his human relationships. Repeatedly one heard of his keen interest in young engineers and apprentices, of his willingness to discuss problems with his staff and his relationship with trade union officials, both local and national and of his understanding of their problems; he had a particular gift in this field. Above all Percy believed, and still does, in the dignity of a person.

To understand those attributes and how, during his working life, he undertook successfully such a wide variety of challenging assignments, it is necessary to go back to the beginning of his career in 1928.

#### Climbing the Ladder

Percy left school at the age of 14 and his first job as a glorified office boy with a firm of builders, lasted about 7 months. Pay - 6/- a week. There followed an electrical apprenticeship with the Burnley Co-op which in those days had its own generating plant and a variety of electrical apparatus. As a 'closed shop' was operated he joined the ETU, his subs being 3d a week. Pocket money was one penny for each shilling earned so as his pay was 7/6 a week, he recalls having a rounded up figure of 8d a week. He also attended night school, obtaining a National Certificate by the age of 17.

While at Burnley he won an Edwards Stokes-Massey

scholarship worth £100 a year to go to university only to discover he was unqualified to take it up. So - six months hard work and TWO matriculations allowed him to enter Manchester University where eventually he was to obtain a First Class Honours degree. In passing, it should be mentioned that by the age of 20 Percy had obtained Higher National Certificates in electrical and mechanical engineering, also a Final City and Guilds Certificate in electrical engineering.

In pre-war days, the General Manager of Rolls Royce, later to become Lord Hives, Chairman of RR, offered two apprenticeships to graduates in mechanical and electrical engineering from each university, expecting only 40% to stay the 2 year course. Percy became a Rolls Royce man in 1938 at the princely sum of £5 a week.

#### The War Years

The war brought big changes at RR and plenty of opportunities and Percy soon became a member of a group dealing with many unusual problems. This period was both exciting and exacting; it was also a time of great strain. On behalf of RR, he took out many patents - on wire strain gauges, high frequency ignition systems, torque motors for measuring aircraft engine performance in flight, etc, and was confronted with many difficult problems ranging from high altitude performance of the famous Merlin engine used in the Hurricane and Spitfire fighters, to the problems of mounting cannons on these famous aircraft.

On a naval vessel, if a gun tore away from its



mounting, one added a few hundred weight of metal and all was well - not so in an aircraft, especially a fighter. His work on 'impulsive loads in flight' provided material for an external thesis and his M.Sc. Later he was to turn to the development of the NENE and DERWENT jet engines, successors to Whittle's first jet, and again on behalf of RR, took out a number of patents. During this period he was elected a Member of the IEE and the I Mech E, later in life to be elected a Fellow of these Institutions and to become active in both; other appointments included the Southern Electricity Consultative Council and Appointments Board Reading University.

### The Post War Challenge

After the war ended and having worked at RR from 1938 to 1947, Percy sought a change. An open competition for established PSO posts in science and engineering at the newly established Atomic Energy Research Establishment, Harwell, attracted him and he was successful in his application. After early work with Doug Allen (now Prof Allen of Reading University and RL) on both the small and large EM plants, he took over the Services and Operations Engineering Group and was responsible for the 'tank farm', this is the effluent plant for the treatment and disposal of radio-active waste, and the pipe-line to the Thames. Other projects undertaken were Buildings 220 and 351 - in fact, getting Harwell built in conjunction with the Ministry of Works. Percy moved over to the other major engineering group, Design and Manufacturing, and following the merger of these groups, became Head of Engineering Division which at its peak reached a strength of 2200 staff. He was later to become Deputy Chief Engineer of AERE, Harwell.

For three years an unsuccessful search for another site resulted in a request by the Director, Sir John Cockcroft for Percy to see what he could turn up. Within his own stated time of 3 months he had selected a site in Dorset which was to become the Winfrith Reactor Research Establishment. Amongst a whole range of problems, the most important was the disposal of radio-active waste and following many tests involving the use of naval vessels and helicopters, including Percy donning a diving suit and inspecting the sea bed, he came up with the answer, a 2 mile pipe line out to sea.

### The Nimrod Era

A number of other major projects came along but Percy has no doubt that the construction of Nimrod was the biggest job ever tackled by Harwell. He became the project engineer for Nimrod in 1957 arriving on site with a complement of 9 engineers. He says that 'Nimrod was a

demon to build'. There were so many problems not least being the vacuum chamber made of an epoxy resin glass-fibre laminate. The successful completion of the project was recognised in 1963 when he was invited to give the Hunter Memorial Lecture at the IEE and later, by the award of the OBE in the 1966 New Year's Honours.

Both in the Nimrod and other major projects, one senses the individual approach and maybe, the dislike of the 'committee' syndrome. He himself admits that although there are often several ways of approaching any given project, having chosen a particular path, one should endeavour to pursue this to its conclusion. This approach requires a broad based knowledge of electrical, mechanical and civil engineering which he undoubtedly demonstrated during his career.

### The Presentation

Dr Stafford remarked that it was a great pleasure to see so many old colleagues present, from AERE as well as the RL, in particular, Gerry and Lal Pickavance. After briefly reviewing his career, Dr Stafford emphasised the good relationship Percy had built up with the Trade Union Side and his Chairmanship of the LJCC for many years.

Before presenting farewell gifts, Dr Stafford said, "The first thing to give you is a letter which establishes once and for all that you have retired" - a remark which produced a lot of laughter. After presenting Mrs Bowles with a gorgeous bouquet of flowers, Dr Stafford took on the mantle of a conjuror producing from the side of the stage a succession of gifts. These included one of Phil Crane's special trays before producing the main gift, a splendid Dent's Carriage Clock.

In reply Percy reminisced a bit about his 50 years and of some of the more unusual jobs he had undertaken, in particular during his time with RR. As regards the clock, this was something he had always wanted, however everytime he thought he could afford one, the price had risen. Now at last he had got one - and at the right price. Percy ended by paying a tribute to his wife, Florence, who had always given him so much support.

Percy will still be seen around as he has to complete one major project for the SRC, the new headquarters at Swindon. This will still leave him more time for his outside interests which over the years have included ballroom dancing, cycling, radio and TV (built his own sets) and of course, cars. Percy claims he has never had anyone in his house to do a single job or to repair his car - but then as a Rolls Royce man - well!

## John Wilkins Prizes

At his July Staff Meeting the Director presented John Wilkins Awards to Alan David Marshall, the most promising Student Engineer 1974-75 and to Michael Wallace Ellwood, the most promising Assistant Scientific Officer, 1974-75.

ALAN DAVID MARSHALL was educated at Daniel Stewart's and Melville College, Edinburgh and when he joined the Laboratory's Student Engineer Scheme in January 1974 he already had five grade A passes in the Scottish Certificate of Sixth Year Studies and an Open Scholarship to Pembroke College, Cambridge. Between January and September 1974 he completed the usual programme of preliminary training, partly in the AERE Apprentice School and partly in engineering departments in the Laboratory. In September 1974 he went up to Pembroke where he has continued his record of academic success. He was awarded First Class Honours in the Preliminary Examination to Part I of the Engineering Tripos in 1975, First Class Honours in Part I of the Engineering Tripos in 1976 and First Class Honours in the Electrical Sciences Tripos this year. Alan has now returned to the Laboratory to continue his practical training as a Graduate Engineer working on the design of the beam transport system between the 70 MeV injection and SNS. So he has come back at a very timely moment and he well deserves this years John Wilkins prize. He has chosen the Oxford Book, of Quotations and Roget's Thesaurus.

The JOHN WILKINS PRIZE for the most promising Assistant Scientific Officer goes to:

MICHAEL WALLACE ELLWOOD, He was educated at Edmund Campion School, Oxford and worked for the Longworth Scientific Instrument Co, Abingdon and at Culham Laboratory before joining the Laboratory's Computer Operations Group as an ASO in December 1972. He was promoted to SO and became a Deputy Shift Leader in January 1975. He receives the ASO Prize for 1974-75 under the rule which permits an award to an ASO promoted from that grade during the academic year under review. In fact he has since been promoted (in June 1976) to HSO, and that's pretty fast promotion, and he is now a Shift Leader in the Computer Operations Group.

Ellwood was awarded to ONC in Sciences before he joined the Laboratory and he has since gone on to gain the HNC in Computer Studies - with Distinctions in Programming and Data Processing. The books he has chosen are The Psychology of Computer Programming by Weinberg and his second choice is Fundamental Algorithms - The Art of Computer Programming by Knuth.

Dr Stafford concluded by congratulating both prize winners on their achievements.



## Sports Day

From all accounts this report should be edged in black as no way can it be said to have been a successful day for the RL contingent. Maybe this was because there was not the usual interest although the Atlas building (and they are still considered as a separate team for Sports Day) responded fairly well.

One other point should be made, the lack of spectator support for the RL competitors - one solitary female! Atlas did somewhat better with five supporters, however reports are coming in of numbers at Chiswick being lower this year.

There appears to be some uncertainty regarding Sports Day attendance and interested people are referred to the recently issued SRC Circular No 28/77 - SRC Support for Sporting Activities, which sets out guide lines which, apply to both industrial and non-industrial employees, for participants, nominated helpers and spectators for (a) Sports Day and (b) External Competitions recognised by CSSC as being representative.

In addition, although the 1977 Sports Day has come and gone, SRC Circular No 29/77 sets out the Councils attitude and support for this annual event.

Now to turn to the 'Day' itself and who won what and why - or in the case of RL, why not.

This year there was a total of nine events and some changes. Cricket was restricted to a six-a-side contest and for the first time, Bridge was included. Although played on a separate day the Golf tournament is included as an annual event, the tournament having taken place on 23 June at Chepstow. As we hope to report separately on this, sufficient to say that the RL 'B' team won, so the Lab retains the Brian Flowers trophy.

**BRIDGE** The new event attracted nine pairs and was enjoyed by all. Appleton won the event with the RL pair, Jim Riddle and Peter Hemmings finishing in second place.

**CHES** Another second place for the RL team of Jim Riddle, Peter Hemmings and Andy Williams, losing only one game to the winners, Appleton who were the title holders. Peter Craske, Jon Guy and Rob Hambleton finished in third place losing two games.

**FOOTBALL** Four RL teams plus one from Atlas entered for the soccer competition; all fell by the wayside during the earlier rounds except the Ron Lawes team, winners for the previous two years. They put up a

tremendous fight to retain the cap, but were beaten in an exciting final by a very good, and young, London Office team who won by 3-2. This is, in fact the first time a London Office team has won anything at a Sports Day and we send congrats from RL.

**CRICKET** For some reason this sport seems to have taken a severe cut being reduced to a six-a-side, four 8-ball overs per team competition, this cut being reflected in the scores and the small number of wickets that fell. There were two leagues with four teams in each; Atlas managed to win one game but were not in contention with the other two and Appleton won their league. The RL team failed to qualify for the final despite finishing joint first in their league sharing the honours with the RGO 'A' team. However, the RGO team, beaten by RL in the league finished with more runs on the scoreboard and so qualified to meet and beat Appleton in the final.

**TENNIS** Seven pairs took part in the men's doubles. Appleton won scoring the maximum of 36 games with RGO the runners up. RL pairs came third fourth and fifth. The mixed doubles went to the RGO who won in two straight sets; our pairs were completely outclassed.

**NETBALL** Only four teams entered the netball competition this year - Atlas, RGO, Daresbury and Appleton, the RL not being able to raise a team - shame on you girls. In the end it turned out to be only a two team race between Daresbury and Atlas with the fitter Daresbury team overwhelming Atlas in the final. They breed them tough up North! Come to think of it - there has been something missing from the R20 car park this summer, the sight of athletic young ladies practicing at lunch times - a sad loss although the following announcement does raise hopes for next year.

**PROPOSED FORMATION OF RL NETBALL CLUB** To take advantage of support from the Rutherford Lab Rec Soc, it will be necessary to form an RL Netball Club. To this end, it is proposed to hold an AGM on Thursday 1 September 1977 at 'The Plough', East Hendred (meeting at 1200 in the Atlas building reception - transport can be arranged). Does this mean they are going to train on best bitter?

**OVERSEAS VISITS** Dr J J Thresher, to CERN, 29 July-9 Aug, to work on Hyperon experiment.  
Dr G P Gopal, to CERN, 29 July-22 Aug, to work on WA 26.  
Dr P R Norton, to CERN, 1-4 Aug, to work Exp 179 and to attend meeting of organising committee for ECFA study week.  
Mr B R Diplock, to DESY, 1-2 Aug; for TASSO Collaboration Meeting.  
Dr B Alper, to CERN, 1-5 Aug, to work on analysis of WA 3.  
Prof F R A Hopgood, to Toronto and Boston, 1-16 Aug, to attend Committee Meeting on Graphic Standardisation, IFIP '77 and to visit PRIME, Framington.  
Messrs R W Morgan and L Coulter, to CERN, 3-6 Aug, for supervision of unloading of containers from Daresbury for MUON and arrange subsequent return.  
Dr D R S Boyd to Toronto and New York, 5-20 Aug, to attend IFIP Congress '77 and visit BNL.  
Dr C J Pavelin, to Toronto and the USA, 6-21 Aug, to attend IFIP Congress '77 and visit various establishments in the States.

Dr J Barlow, to Toronto and the USA, 7-29 Aug, to attend IFIP Congress '77 and to visit SLAC.  
Dr D R Quarrie, to DESY, 8-12 Aug, for discussions and work on data acquisition system for TASSO.  
Dr M A R Kemp, to CERN, 9-14 Aug, to work on experiment Messrs K A Freestone and H A James to CERN, 14-20 Aug, to carry out work on WA 3 calorimeter.  
Dr A T Lea, to the USA, 10-28 Aug, to visit SLAC, IBM, IRAS Meeting and SHARE Conference.  
Dr C Comber, to CERN, 10-23 Aug, to work on Exp 161.  
Dr C S Cooper, to CERN, 10-23 Aug, to install some RL software on CERN 168.  
Mr J W Burren, to CERN, 10-25 Aug for discussion on experiment with 370/168 and satellite communications.  
Dr R P Hand, to CERN, 10 Aug-2 Sept, Hyperon-300 experiment.  
Dr C M Fisher, to the USSR, 14-25 Aug, to visit Dubna for discussions at the invitation of the Joint Institute for Nuclear Research.

**FILM BADGE NOTICE** It is Period 8. Colour Strip - YELLOW for 8y films and neutron packs. Please check that you are wearing the correct dosimeters and that all old ones are returned.  
Next Film Issue - Monday 8 August.

**STORES SERVICES** R55 (Hall 3) An unmanned 'Stores Delivery Point' for internal distribution of incoming goods is now available, adjacent to the South side 'Potterax' Door.

Attractive, portable electric, and other controlled items, must be routed and collected from other manned Stores.

Laundry changing will be continued in R55 by Admin R2. GASES. All orders and enquiries concerning gas supplies

(cylinder and bulk) should now be made to W Higgins, R24, Ext 6166 (or D Taylor, R40, Ext 6136).

**MISSING EQUIPMENT** The following item of equipment has been reported missing.

Wire Wrap Hand Gun, Gardner-Denver, Ser No A 385321, Label No X 002996.

Anyone with information on the present whereabouts of this item is asked to contact A Thorne, Bldg R1, Ext 6384.

**EDITORIAL NOTE** The next issue of the Bulletin will cover a period of 4 weeks, 15 August-12 September. Any enquiries regarding the Bulletin, Lecture Theatre bookings etc during the period 15-30 August should be directed to Mr F Harden, Ext 6114 as the Editor will be on leave.



# NINA Choke for SNS

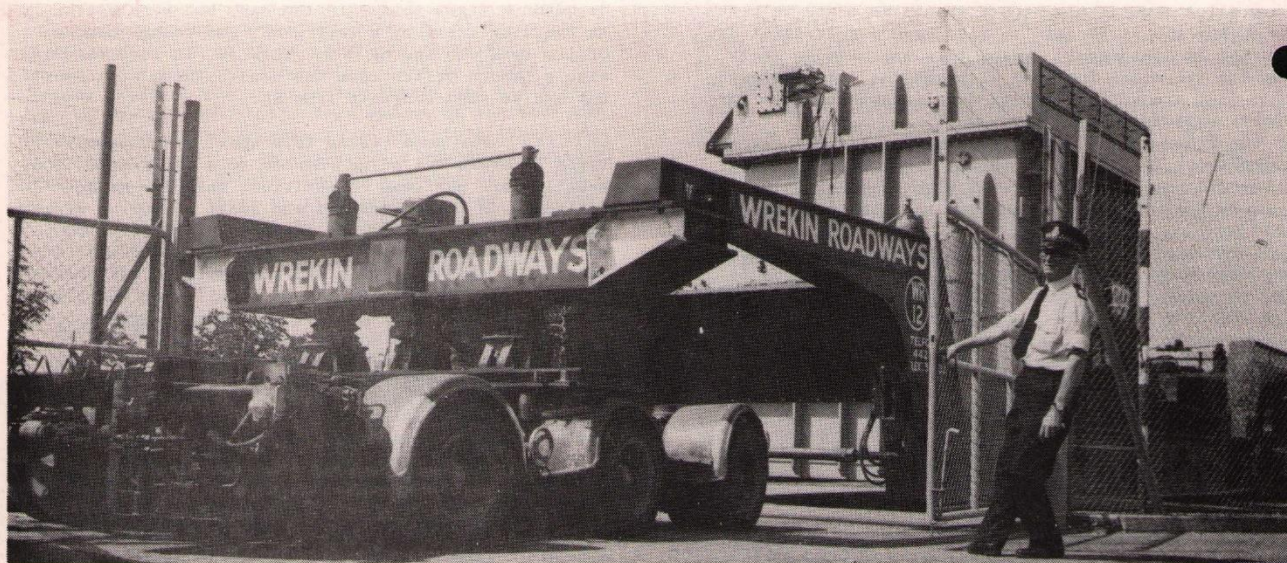


Photo: The energy storage choke, which was part of the Daresbury Synchrotron, NINA, arrived at the Rutherford Laboratory on Thursday 21 July. The choke weighs approximately 130 tons and it will now form a vital part of the power supply for the SNS accelerator to be built at the Rutherford Laboratory.

## 'he was a travelling man'

Most people, one supposes, would think twice about a car ride across the Sahara Desert; Bernard Keene estimates he covered about 75000 miles travelling back and forth through the sandy wasteland during the last war over an area ranging from Cairo to Tunisia, and all in the same lorry. None of your 4 wheel drive luxury for Bernard as his vehicle (which lasted right through the African campaign and then disintegrated) only had the conventional rear wheel drive. As he admits it was a bit hair raising at times as he was often the first lorry to attempt some particularly difficult area; if he could get his lorry across, so could everyone else which of course meant he was rather vulnerable to land mines. Nevertheless he not only dodged all such unpleasant devices, he reckons he had quite a good African campaign as being on supply with the RASC, he never went short of food.

In six years, Driver Bernard drove from El Alamein to Berlin - all with the same No 524 Company ending up as a full Corporal.

After all the excitement was over Bernard returned to the life in which he had worked for 17 years before the war to go on to complete 28 years in the wholesale and retail stationary business with local Didcot firms.

Bernard joined the RL in September 1962 to work for two years in R18 Electronics Stores before moving to R2 Admin where he stayed until his retirement at the end of June.

Although all the glamour and kudos tends to be centred around the people and achievements which are publicized, and rightly so, nevertheless there are a number of people who do a very valuable job behind the scenes. Bernard fulfilled such a function in R2 Admin

Office, carrying out a number of duties which kept the wheels turning. It is only when the Bernards of this world go missing that people realise how much they had depended on their willing help.

Fortunately, at the RL their services are publicly recognised at retirement time and it was pleasant to see people making the effort to attend Bernards presentation and to say good-bye to him. Hugh Roskell, who thanked Bernard for his valuable contribution to the work of the R2 Admin Office, wished him a long and happy retirement and presented him with gifts some of which Hugh suggested, meant hard work, such as the garden fork and long handled shears. 'However, Bernard would be able to relax when tired, sitting on his car seat cover'.

Apart from having a large garden to maintain and the usual accumulation of household chores, that everyone seems to have awaiting them on retirement, Bernard plans to do plenty of fishing, downland walking and visits to his daughter in the I of W. What he really would like to do is to take a leisurely trip through Belgian Holland and Germany and have a good look at the places he passed through during the last war. After all they were on the final itinerary of that long journey from Alamein to Berlin.

Bernard has written to say - 'I would like to thank all colleagues and friends at the Rutherford Lab who so kindly contributed towards my splendid retirement gifts. To those I did not see personally before I left, and also those I did manage to see may I wish you all the best for the future. Cheers!! and again thanks.

RUTHERFORD LABORATORY BULLETIN . Published by the Scientific Administration Group

Deadline for  
Insertions

10.00 hours Wednesday 10 August

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