NEWSLETTER

RETIRED CHARTERED ENGINEERS ASSOCIATION
WORTHING

Hon. Secretary: S. Oliver. Elphin, North Drive, Angmering, BN16 4JJ ☎ 01903 787116

FORTHCOMING EVENTS

19th Oct	Thursday	Coffee - at Three Crowns, East Preston
19th Oct	Thursday	**Annual Dinner** 7 for 7.30 p.m. at the Beach Hotel
26th Oct	Thursday	Coffee - with Ladies at Beach Hotel, Worthing
1st Nov	Wednesday	Coffee - at Albion Inn, 110 Church Road, Hove
8th Nov	Tuesday	**Visit** to Allenwest-Brentford at 2.30 p.m
16th Nov	Thursday	Coffee - at Three Crowns, East Preston
24th Nov	Friday	**Cooch Memorial Lecture** 2.30 p.m. Worthing Library North Sea Gas by Borg Juren
30th Nov	Thursday	Coffee - with Ladies at Beach Hotel, Worthing
6th Dec	Wednesday	Coffee - at Albion Inn, 110 Church Road, Hove
11th Dec	Monday	Copy date for next Newsletter
13th Dec	Wednesday	**Talk** - "Lloyds register-particularly cranes" by E.B. Trotter, member 2.30 p.m. Durrington C.C.
21st Dec	Thursday	Coffee - at Three Crowns, East Preston Publication of next Newsletter
28th Dec	Thursday	Coffee - with Ladies at Beach Hotel, Worthing
Every	Monday	Coffee at Laing's Arcade Cafe, Montague Street, Worthing

Coffee mornings commence at 10.30 a.m., except at The Beach, which is from 10.45 a.m.

Annual Subscriptions

These are now due. Please send your cheques for £8 to the Hon. Treasurer, D.R. Collard, 9 Meadway, Rustington, Littlehampton, BN16 2DD. If you are not sure whether you have already paid, and to save sending out reminders, please contact the Hon. Treasurer on 01903 785580.

Membership

We are sad to have to report the death of **A.H. Rudd** who was a committee member.

44th Annual General Meeting - 13th September 1995

The retiring President, S.R. Renew opened the 44th Annual General Meeting in the presence of 41 members, with apologies for absence being received from 11 members. The minutes of the 42nd A.G.M. were read and approved. The Treasurer, D.R. Collard, presented his report. The Secretary's Report was presented and accepted. The following officers and committee were elected for the year 1994/95:

Vice President	K.J. Wheeler
Hon Secretary	S. Oliver
Asst. Hon. Sec	R.G. Bailey
Hon. Treasurer	D.R. Collard
Asst. Hon. Treasurer	J.L. Wigley
Committee members	S.R. Renew
	T.J. Morgan
	E.B. Trotter
	D.J. Fuller
	W.T.F. Bond
	D.M. Lewis
	E.T. Besley
Spring Break Organiser	J.L. Fowler
Membership Secretary	E.W. Ayling
Auditor	A.G. Standbridge

President B.R. Knight

Retiring President's address

The retiring president, S.R. Renew, thanked the officers and committee for their help during the year and, in particular, D.H. Lear, Asst. Treasurer who is retiring and had collected £400 in copper over the last 5 years for cancer. The copper collection will be given to the local Hospice in future.

President's address

In taking office as President for the 1995/96 year, I am reminded of the memorable words by Captain Bligh of H.M. Ship Bounty to his first Officer: "Now Mr. Christian you will do your duty at all times!"

A resumé of my experience in support of the office was given at the AGM on 13th September, 1995, with parts forgotten on that occasion, but included in the following expanded summary.

My endeavour for the year will be to ensure a response that will uphold the RCEA tradition and the office of President.

1934 Workshop apprentice - Southern Railway

1936 Workshop and District apprentice - Brighton Gas

1938 Staff Showroom Assistant, Brighton Tech College (Part-time)

1940 Joined R.A.F. - Air Gunner-Remustired Pilot - Training Western Canada

1941 31 Elementary Flying School, Calgary Tiger Moths (53 hours). 32 Service Flying School, Moosejaw Saskatewan, Harvards (90 hours). Staff Pilot, 31 Bombing & Gunning Picton Ontario, Fairy Battles

1942 Staff Pilot, 32 General Reconnaissance School Charlotte Town, Prince Edward Island. Avro Ansons. Ship Convoy duty. Specialist Navigation Course. Use of Astronomical Navigation Tables (A.N.T.S.). Relative sea square search procedure. Dead Reckoning Navigation and Sea fixing position for long haul sea flights. (850 flying hours to date).

1943 Return to U.K. AFU - (Advanced Flying Unit, Ternhill, Master Aircraft Mks I II and III). Night flying Cross Countries formation flying & aerobatics. OTU Operational Training Unit DYCE, Aberdeen. Photographic Reconnaissance Unit. Mosquito aircraft. Vertical line overlaps Mosaics & obliques at high level (40,000') R.A.F. Station Benson for flying duties Europe. Detached Benson to Lyneham Transport Command, Ferry Duties. Ferry Mosquito Aircraft U.K. to Cairo. Outside Spanish Territorial waters, to North Africa and via desert staging posts to Cairo West Airport. Return flight by Transport Command Aircraft via Gibralta to U.K. Joined 680 squadron PRU Middle East then to Bombay for 684 squadron at Dumdum, Calcutta.

1944 A jungle School course in the Western Ghats to find how to eat and remain alive on "walking back" from an operational flight. Tracking with native Kyatts and marching compass routes by day and hammock for night. Dealing with leeches was also useful. Mauripur airfield Karachi and more Ferry Aircraft duties; landings were made at Poona, Delhi, Allahabad, Madras, Calcutta, Risalpur, Lahore, Nagpur and Jodpur .

1945 A departure from high level flying to low level was made when posted to 110(H) Squadron, then at Yellow Hanker, southern India. The Squadron was being formed to fly Mosquitos VIs for ground attack, bombing and strafing in support of the 14th Army in Burma. We trained for the necessary requirements and then moved to Coxes Bazaar in the Arakan, and commenced operations for the Army. Briefings were always given in the Operations Room by both R.A.F. Staff I.O's and an Army Captain Intelligence Officer. Targets were generally Japanese Army strong points holding up the British advance, which were dealt with usually by two aircraft visually directed on to the target by a VCP (Visual Control Post) on the ground with the Army. Bridges, Arms dumps, Jap supply lines were also given "the treatment" in daylight flights. We acted as "spotters" for Army Artillery when asked on the VHF to do so. We could observe where the shells were falling relative to the target by the "splash" they made in the monsoon soaked ground, which was usually water-logged.

We could also see momentarily where the guns were by a puff of white smoke which floated up in the air after the firing. After V.J. Day the squadron flew from Burma into Singapore on V.J. + 2. Pilots were given new tasks (all officers were given a second duty). As Squadron Welfare Officer, I was sent to find out what was happening to P.O.W.'s in Changi Jail. The Army had matters well in hand. However, I had to arrange a reception centre for P.O.W.'s, visiting the town from a top flat in "Clathay Building" with another pilot from Tengah airfield, and several "on loan" airmen.

1946-48 Three months followed as Duty Pilot at Kalang Airport, and then communication flights to Penang Island, Batavia in Java (now Indonesia) and then adjutant on Labuan Island off the coast of Brunei in Sarawak. A flight as second pilot on a Sunderland flying boat, to transport a number of Japanese convicted war criminals to be in jail on Dutch soil at Pontianoc in Dutch West Borneo was near the last assignment. Flying back to Singapore in a Mosquito (on the first leg of the journey home) of which the spar was to be repaired. I made a "careful" landing. Later the ground crew came and told me the spare had "split" and the aircraft was reclassified to category "c", which was a "write off". As a passenger in a jeep which became involved in a "pile-up", I was delayed in Singapore for several months. In due course boarded the "Emperors of Japan", renamed "Empress of Scotland", and reached England in August, 1946.

1946 I returned to the Gas Co. and was able to enrol on a full-time Gas Engineering Course at Brighton Tech; other participants came from various companies in the U.K. The college provided lecturers for ancillary subjects and the IGE for the main subject.

1948 Brighton Gas. Working with Heating Engineer on all aspects of heating homes, factories and industrial premises. Brighton Tech Mech. Eng. HNC Endorsement (Part Time). Lecturing (Part Time) Final Year, City and Guilds Gas Fitting Apprentices.

1950 N.W. Gas Board, *District Engineer*, South Wirral. Reconstructing underground pipe system and installing a medium pressure underground network with regulators to improve the existing poor pressure supplies to approx. 90,000 consumers.

1955 ESSO P. Co. Ltd., Fawley Refinery, *Project Engineer*. Preparation of Lump Sum Specifications and Bids for new contracts. Weekly Residence Contractors London Office. Construction drawings review/approval.

1965 ESSO London, Marketing Dept, *Site Construction Engineer*. New Plant and Tankage at various locations:- Purfleet Terminal, Dingle Terminal Liverpool, Trafford Park Manchester, Immingham Terminal, Stanwell Bulk Plant (rebuild after fire).

1968 Milford Haven Refinery. Power former Unit Expansion, *Esso Construction Engineer* for Erection by Contractors of:- Furnaces, Pumps, Towers, Control Room, Exchangers, Pipelines, Tankage, Compressors

1969 Fawley Refinery. *Resident Engineer, Head of Construction Dept*. Refinery Construction works, carried out by major contractors:- Foster Wheeler Ltd., Matthew Hall Ltd., Fluor Engineering, Davy International, Humphrey & Glasgow.

1975 ESSO Europe, *Project Manager/Construction Manager*. Capro Lactum waste product plant, Castellon, Spain. Prepare Specification and Bid Enquiry documents.

1976 ESSO Engineering Central Service, Brussels. *Construction Manager*. Major plant equipment specification reviews.

1977 Ethylene Plant, Cologne. (500,000 T/YR). *Section Resident Engineer*.

1978 Milford Haven Refinery, Visbreaker Project. *Resident Engineer/Co-ordinator*, Fluor London Office/Refinery Site.

1979 Petroleum Ministry, Riyadh (petromin), Saudi Arabia *Principle Engineer,* Bulk Plants. Approval of Consultants' Construction drawings, visits to site for Progress and Inspection of Plant, Jeddah Industrial City, Installation/Supervision tanker bunkering system.

1980 Abu Dhabi National Oil Co., Gas Separation Plant,Ruais, (ADNOC). *Chief Engineer*. Erection of all Plant and piping systems.

1981 Muscat Oman

1985 Engineering Adviser and member of Tender Board. Review of all documents and engineering detail from various ministries prepared by Consultants to invite bids. Bid Evaluation Summaries and recommendation to Board for award of Contracts.

Bernard Knight

A vote of thanks to the President for his presentation was given by Mark Markwell.

Committee Meeting held at the Durrington C.C. 27th September, 1995

Following a proposal made at the A.G.M. that a levy be imposed on members who attend meetings to help defray the cost of hiring the rooms, the committee considered the proposal and concluded that as the levy would be difficult to collect, would penalise those members who attended meetings and the association does not need the extra money, the proposal was rejected.

Technological Change - Talk by K.J. Wheeler, member, at the Durrington Community Centre on 5th October, 1995.

Talk given by our Vice President, Ken Wheeler, on how technological change has developed over the time from the Agrarian Revolution in the Middle Ages, which followed the rise in population after the Black Death, which had in its time reduced the British people by two-thirds. In the early 1700's we had the most economically advanced economy in Europe, preceding the onset of the indigenous Industrial Revolution around 1735, when the improvement of Newcomen's steam engine by James Watt, Arkwright's factory system and Darby's smelting of iron, using coke rather than charcoal, led to the clustering of industries local to the new sources of fuel and materials, free from the constraints of forests and streams for waterwheels. There were many pioneers, but only the most effective are remembered.

The relationship between performance and effort (time) in a qualitative form was explained in the graph of an "S" curve where, from a slow start, a successful venture would attain rapid growth, due to the effects of positive feedback, only to decline when maturity is reached. Meanwhile, another venture had already started with its own "S" curve reaching a

higher performance level than that previously achieved, thus superseding the previous venture.

The aero gas turbine engine was presented as a case study where the "S" curve for the piston aero engine was defeated by that engine's inability to compete on thrust, the performance metric required in war. Subsequently, having produced adequate thrust, the performance metric changed to fuel economy, prompted by the need for low price air travel at speed for everyone, and this resulted in the ducted fan used to-day, a development predicted by Whittle and von Ohain, using Whittle's original performance equations, which are still used to-day.

The aero gas turbine is now a mature industry towards the top of its "S" curve, and the talk concluded with an illustration of the dilemma facing engine makers at this phase in history.

Ken Wheeler

Recordings of Meetings

An audio tape cassette is made of all talks and addresses at each of our General Meetings, thanks to the good services of Eric Roubaud. These tapes are available from the Hon. Sec., but they only go back about two years as the cassettes are reused.

Cooch Memorial Lecture - **"North Sea Gas"** by Borg Juren at the Worthing Library Lecture Theatre on Friday, 25th November, 2.30 p.m.

After the lecture the R.C.E.A.prize will be presented to Mr Gary Jones, who is studying for an M.Eng. at the University of Brighton.

THE INSTITUTION OF ELECTRICAL ENGINEERS

FARADAY LECTURE 1995/96

The Dome, Brighton. 1030, 1400 &1900

Thursday, 30th November, 1995

From 'a' to 'b' without 'c' *presented by Eurotunnel plc*

Eurotunnel takes you on a journey that has been the dream of travellers for centuries. The lecture describes some of the extraordinary technological achievements which have made this dream a reality and illustrates the wide range of disciplines that were brought together to design, build, commission and operate what will be the busiest railway system in the world. The local presentation will be at the Dome, Brighton on Thursday, 30th

November, 1995. There will be three sessions: 10.30 a.m., 2 p.m. and 7 p.m. Admission is by **free ticket,** all being welcome. Application for tickets - group or single - (please enclose SAE) stating session to B. Gregory, Dept of Electron. & Elec. Engineering, University of Brighton, Lewes Road, Brighton, BN2 4GJ.

Lloyds Register - particularly cranes - Talk by E.B. Trotter, member, at the Durrington Community Centre on 13th December, 1995.

By way of introduction, a brief history of Lloyds register will be given, explaining how they became involved in crane design and inspection.

The talk mainly concerns the nineteen sixties and nineteen seventies, when cranes were developed for use on off-shore oil rigs and the goliath cranes were introduced in the shipyards. Time permitting, the container crane, strand-jacking, superlifts, etc., will be mentioned.

Urgently needs volunteers

Remap is a nationwide organisation of local panels of professional engineers and remedial therapists, who design and make "one off" appliances for disabled people unable to obtain suitable equipment by any other means. Several Association members belong to the Chichester and Worthing panel and we are now seeking the help of engineers in the Brighton/Hove area to strengthen the Brighton panel.

No regular commitment is required; members simply give as much or as little of their time as they wish. If you are interested in helping, please contact Remap's S.E. Regional Organiser, Ted Lane, 2 Garrard Road, Banstead, Surrey, SM7 2ER, Telephone 01737 355388.