

R.A.Jeffs' DGEng BUGLE – Some Memories

Some of the people's potted histories in *The Bugle* have prompted me to ask the question 'How on earth did I get involved with that gang in DGEng and what did I do for the good of humanity through them?'



R.A.JEFFS

My aviation career started in 1925, being brought up in the middle of the old Croydon Airport where my father earned the title of 'Air Traffic Control Officer No 1.' Incidentally, how many of you are members of the Croydon Airport Society, trying to preserve the 1929 Control Tower as a museum? I then encountered C.P.Snow, who was sorting out for HMG which new graduates should go into the Armed Forces and who should go into Industry because they didn't want

to waste time training potential Officers at that stage in the war. I was told in no uncertain terms that my wish to join the Fleet Air Arm after my degree in 1944 was denied even though my father had

been in the Royal Naval Air Service - Short 184s from Ramsgate in World War 1 and my brother flew Swordfish from Merchant Aircraft Carrier ships in World War 2 and how did that compare with being a corporal in the University Officer's Training Corps? -

"Industry for you, my Boy" was my instruction. I was 19 and in those wartime days you worked where you were told. So it was agreed that I could seek to join Frank Whittle and in August both Jim Andrews and I, both from Queen Mary College like Geoff Ainley and Don Harper, 2 esteemed men from MOD, duly reported to Wg/Cdr Daddy Lees who was the Power Jets recruitment man, to work in the Aerodynamics Department under A.G. Smith and Raymond (Taffy) Howell. Indeed, digs were sufficiently hard to get in Leicester that I had the honour for a little while of sharing a bed with Jim!! Shortly after learning how to strip and reassemble an early Whittle centrifugal engine - my main memory is the million and one little bolts holding the compressor casing together - doing a bit of work on Type 16 diffusers and trying to explain to some baffled tabloid pressman what the difference was between 'an axial and a centrifugal'. I then found myself moving from Whetstone to Pyestock, partly 'cos Taffy wanted one of us down there and partly 'cos it was nearer my girlfriend.

Thus began 21 years of 'research' into most bits of a gas turbine propulsion system and some without the turbo bits in the form of ramjets. I well remember arguing 'as an air-breathing man' with the Rocketeers about using turbojets and

ramjets for the launching phase of space vehicles - and who remembers the LACE or Liquid Air Cycle Engine? I then found myself joining DGEEng in July 1965 as the Engine Project Officer (EPO) on the Olympus 593. 18 months of Anglo-French 'collaboration' just about 150 years after Waterloo (but, we discovered 6 months later, 900 years after the battle of Hastings) included such highlights as managing to avoid destroying all the Olympus engines for TSR2 by calling them Olympus 593Ds (D for Demonstrator), persuading BAEL (Rolls Royce Bristol to you youngsters) to get some real data from the first 593 and not just scream it to death to get the highest possible thrust, working with the French and the Americans on FAUSSST (work that out!) on airworthiness requirements for supersonic aircraft, visits to the Treasury with Patrick Shovelton, then US(Air), to persuade them that we knew what we were doing and that our cost estimates were meaningful(!). And that the duty-free allowance was only ½ litre of brandy. Those were the early days of Dennis Mallinson as DEngl. A very useful man; if you had a problem, you would go and see him, talk about the weather and the 'pelms' going past outside his window, and then leave feeling much better. I've forgotten what his basic qualifications were - maths and geology, I think - but an engineer with real human insight.

Norman Dimmock took over from me in January 1967, determined to understand the French in their own tongue - I'd been told that I spoke my French like a good Swiss, which was flattery really since my wife was of Swiss stock. I took over as AD/XR, a post which had been moved from London to Pyestock with Harold Taylor to encourage some intimacy between the intra- and extra-mural research programmes funded through DGEEng. Indeed Stan Gray, Teddy Jones (not Roger), and (?) Whitehead in London were told to work themselves out of a job inside 2 years. You learn to wear 2 hats

with the appearance of comfort when you're responsible to Peter Lloyd as DGEEng for 'finance and policy' and to Bob Weir as D/NGTE for 'programme content and management'. I have to admit that I was glad that Ivor Davidson, as DD (Research) at Pyestock, did not get involved in the extramural stuff for several years. It was this job and the Olympus 593 one that taught me to be absolutely clear about what you thought you were doing, why you were doing it, what the programme was, what its costs and timescales were and the major risks thereto, and what the potential applications of your work were expected to be. I took great pleasure in telling some bigwig from London that our programmes were based around those concepts - and he believed me!

Then came February 1971 and a research review meeting at Derby, when our hosts lost all interest in us - they were all far more interested in whether the Receiver would keep them employed. So we left them and worried what the impact on us would be. What it meant for me was a call one night from Eric Carter, then DGEEng, telling me to be at Derby by 0830 hrs the following morning. So I picked up Johnny Drabble, given the dubious honour of escorting me, and went north, trying to destroy a motor scooter and its rider in the early morning mist on the way. We believed we helped to keep the RB211 development programme going while carving a 5-month hole in the production programme without sending all their sub-contractors to the wall - however much fuss Rolls Royce made about the owners taking back their doormats, they were sitting pretty with little effect on their employment because the RAF were screaming about lateness in their military work. There were some interesting moments, like wondering what to do if a bad-tempered creditor threatened to 'nail his flag to the mast' of an engine you were trying to deliver to Lockheed to get their flight programme going.

With the end of the Receivership and the creation of Rolls Royce (71), the old methods of working between London and Derby were reinstated. Selig Finklaire took over my job at Derby, with some changes; Les Airey became AD/XR and I became ADEngD/Civil in St. Giles Court for a little while until Jim Hamilton sorted out his team in the Department of Trade and Industry (DTI) to run the aerospace programmes funded from the Government's civil budget. I joined him to become Director, Aerospace Assessment and Research 2, (but without the Space or Assessment work). This title changed from time to time more than the job did. At one stage, it was Director, Space and Air Research or D/SAR - and I was put in my place at one of those gatherings where you wear a badge on your lapel; someone asked "What does SAR stand for?" And some bright spark replied 'Sod All, Really'. And there I stayed for 7 years, trying to persuade the Powers- That-Be in DTI and the Treasury that DTI really was controlling the work whose detailed management we 'contracted' to MOD, including research and technology demonstrator work in industry (aircraft simulators, quiet fans, High Temperature Demonstrator Unit) and research in MOD Establishments and Universities, defending the money needed in a period of real financial difficulty - we were the first and, I suspect, the only team fully 'Fultonised' with responsibilities for finance, policy and the guts of programme management in the engine, airframe and equipment areas. We even looked after drafting answers to PQ's and initiating public honours in industry. And because the 'Admin' boys thought the aerospace industry consisted only of Rolls Royce, who were just trouble, and the aircraft companies like BAC and HSA, whom they had been told to prepare to nationalise, we became 'Sponsors' of the aircraft equipment folk including Lucas, Smiths, Flight Refuelling, Dowty, etc., trying to encourage politicians to believe that these relatively little organisations were important too

Change had to come. Geoff Ainley left DGen for higher things and, in 1978, I came back to MOD and took over as DEngD with a suite of programmes, some tiny, some very expensive like the RB 199, which other people had set up. We seemed to spend a lot of time defending the 199 and its costs from the Public Accounts Committee and I remember being told by the then CA that a paper Norman Bever and I had sweated blood over achieved its purpose and made the engine programme look b y good - compared with the radar!! Some praise!! We did manage to get some real programmes to put digital engine control onto real engines - in Concorde, Harrier and one of the helicopters, though the latter fell by the wayside because they ran out of money. The Pegasus support programme, jointly funded with the Americans, was interesting because they blatantly wanted higher performance and the AV8B whereas the RAF were only allowed to want better reliability - though they bought the Harrier 2 with the uprated engine. And we did duly celebrate that programme one July 4th by raising a glass to - - my mother's birthday. It took a 2nd glass to calm the Americans down.

But more change was coming. Apart from the strengthening moves in MOD(PE) towards integrated project teams, which really didn't seem to need an independent specialist engine division - ask Mike Neale about that one ! - my spine was letting me down. Indeed, my dearly beloved was heard to explain, when I was forced to take some sick leave, that I used to be a pain in the a .. se but was now just a pain in the neck. So I took early retirement in October 1984. One consolation was that the 3 replacement Engine Directors, to replace Eric Lewis, Tony Piercey (who had just died in service) and I were my 3 ADs.

End of story. Approximately one quarter of my life getting qualified, a quarter on research; a quarter on R and D management and a quarter on 'spending time with my family' i.e. supporting elderly parents and thoroughly enjoying the next 3 generations (number 8 grandchild has just earned his place at Cambridge, number 4 great-grandchild imminent), Scout treasurer for 20 years, governor of the local school for some years including chair for 5 of them. And the really sad bit - my wife of nearly 62 years has just died.

R.A.JEFFS

Here is the lady who shared Alan's adventures over the years at their Golden Wedding Anniversary.



Thank you Alan for a super story.

DGEng BUGLE No 16
MARCH 2010