



Aeronautical Society of South Africa

(Association incorporated under section 21)
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A Division of the Royal Aeronautical Society

AeSSA Newsletter – September 2005

Editorial

The recent announcement of continuing massive losses by Denel is bad news for those intending to make a career of aerospace engineering in this country, but the good news is that the new (relatively speaking) CEO has a good grasp of what is required to change the situation. Fundamental change, in fact, is what is needed, according to Shaun Liebenberg and he points to the fact that the company has failed to change in two decades. The kind of change that he is talking about is what started in Europe and the USA more than 30 years ago. Small companies which produced complete aircraft either amalgamated and pooled their resources or simply disappeared – and not only small companies. How many of our members remember the name Handley Page; a major aircraft manufacturer right up to the 1960s when it was at the forefront of research into boundary layer control for reducing wing drag. However, innovative ideas could not save it when it tried to buck the trend of consolidation of the UK aircraft industry into the two government approved conglomerates, British Aircraft Corporation and Hawker Siddeley. Similar moves occurred in the other aircraft producing European countries and the consolidation of the aircraft industry that started separately in each European country and in the USA soon became a global consolidation that is continuing to this day.

Until a few years ago Denel had survived because of the governments desire to maintain the independence of what it saw as a strategic industry but this has become too expensive and Liebenberg recognises that the only way ahead is to “work with international giants such as UK’s BAE Systems or Sweden’s Saab to produce individual components... (quote from Business Report)”. As a company Denel certainly has the facilities and experience to play a vital role in the international aerospace industry. It’s future will depend largely on maintaining a qualified and trained workforce and to do that they must be able to offer todays students the prospect of a worthwhile and fulfilling career path.

Events Programme

Since taking office in May, Council members have worked very hard to try and set up a programme of lectures and visits for this year and have generally received excellent cooperation from the individuals approached. However, for a variety of reasons, one after another of the provisional arrangements had to be postponed so we now have several events telescoped into the last quarter of the year.

17 Sept. SAAF Museum AIRSHOW. Swartkop AFB. Starting 08:00

29 Sept. Lecture “UK Aviation and Aerospace - where now” by David Marshall, Chairman of the External Affairs Board of the RaeS. 18:30 at Denel Aerospace Systems (formerly Kentron). This is a rare opportunity to hear someone who has an intimate knowledge of the status and future direction of the UK industry which may very well have a large influence on the future of the South African Industry.

08 Oct. Base Fighter Meet. Makhado AFB (formerly Louis Trichardt). This will be the first ever “fighter meet” in Africa and will attract military aircraft from all Southern African countries. “World Airnews”, September edition has a 2 page preview of this event and describes it as an “African version of the Royal International Air Tattoo in England”. A bus trip to Makhado is being organised. The present plan is to leave from RAU at 06:30, then to call at Wits and Tukkies before heading to Makhado. Watch your emails for further details.

15 Oct. Lecture and Flying Demo by Glen Dell, World Aerobatic Champion. Provisionally arranged at Waterkloof AFB but still to be confirmed. Watch for further details by email.

25-27 Nov. Visit to TFDC. This visit is still being negotiated and the hosts are very willing but transport from Gauteng has yet to be confirmed.

2-3 Dec. Ysterplaat Air Show not to be missed if you are in, or can get to, the Cape.

The 2005 Society AGM

As is now customary, only a handful of members attended this year's AGM. To be exact 17 members signed the register while another 18 recorded their apologies. It is true that AGMs are not the most exciting or entertaining of meetings and as a Society we are not alone in experiencing a low percentage turnout, so grateful thanks are due to those who attended and made sure that we had a quorum. For those who could not attend, here are the highlights:

Outgoing President's Report

The outgoing President, Dr Rob Hurlin reported in his usual relaxed, spontaneous style guided only by the notes he had prepared to ensure that he did not overlook anything. From these notes our dedicated minutes secretary prepared this report:

“Dr Hurlin stated that the approval by the RAeS head office of the Society's proposed name change had been the highlight of the past year. Brig Gen Wesley had assisted him in preparing the presentation to London. We were generously assisted by Scott

Phillips of the London office and David Marshall (chairman of the External Affairs Board). As a result of this interaction we established a good relationship with David Marshall. He will be visiting South Africa in September and will make a presentation on the UK Aerospace Industry. The RAeS Divisional HQ meeting will also be held in South Africa while he is here, possibly on 28 September 2005.

Other highlights of the year were:

- The registration of a domain and the development of the draft website.
- Finalisation of the Administration Standards Document.
- The development of a grading guideline for South Africa.
- Presentation of awards and bursaries to Wits University, RAU, University of Pretoria and University of Stellenbosch, as well as the Vaal Technikon and Escom Young Scientists Fair.
- At this point in his report Dr Hurlin presented a bursary of R7 000,00 to the successful applicant, Tristan McMillan, a student at Wits University.
- The Wits Student Society of the AeSSA was being resurrected amid great enthusiasm.
- The Corporate Partnership Scheme has been re-structured for South African companies and the CSIR has already applied. Dr Hurlin stressed that the future of the Society depended on building a broader membership base.
- The relationship with ECSA was good – the Society provided the interviewers for several professional reviews during the year. We also serve on the Council of ECSA and are in the process of nominating 3 people for the next term of office.
- The Society had a stand at AAD 2004, which was well supported. Dr Hurlin expressed the Society's thanks to the Council members for their support and especially to Prof Japie van Wyk for all his hard work at the stand.
- Dr Hurlin read a report by Dr Alan Nelson, the Chairman of the Western Cape Chapter of the Society, which detailed their growth and activity.
- The Department of Trade and Industry process for the establishment of an Aero Industry Strategy was monitoring through the involvement of Brig Gen John Wesley.
- Rob Jonkers gave the Frank Carnell Memorial Lecture on the Rooivalk, which was an outstanding event and very well supported.
- At this point Dr Hurlin presented Rob Jonkers with the Neels van Niekerk gold medal award for his outstanding contribution to Aeronautical Engineering in South Africa. In particular his leadership in the production and commissioning of the Rooivalk helicopter to the SAAF was cited.
- Upcoming events being planned: Talk & demonstration by Glen Dell – World Aerobatic Champion, a visit to the TFDC in November, hopefully a visit to the Louis Trichardt AFB and finally the Maj Miller lecture (hopefully the SAA technical department).

Dr Hurlin thanked the Council members for their hard work during the past year, especially Brig Gen John Wesley and Rob Reid, as they were standing down from Council. Dr Hurlin led a round of applause in appreciation.”

Notification of Council Election

In terms of Clause 54 of the Constitution the three longest serving members of Council are required to retire. Therefore the following Council members were required to retire from Council at the AGM: Mr Gert Jansen van Rensburg, Mr Chris Purnell and Prof Japie van Wyk.

In terms of Clause 55 (a) retiring Council members are eligible for re-election. All three have indicated that they would be prepared to serve on Council for 2005/2006. The resignations of Rob Reid and Brig Gen J Wesley have been received. Dr Hurlin thanked the members who had resigned for their hard work. Special thanks and appreciation were extended to Brig Gen Wesley for having led the society through the transition from the old Institute to the new Society.

Written nominations were received for Rob Jonkers and Prof Josua Meyer. Since the number of nominations was less than the number of positions available, the nominees were automatically elected.

Notification of Officers for the Next Year

The following ten Council members will serve for the next term:

Dr R S Hurlin (M)	Mr G G Corderley (M)
Mr G H Jansen van Rensburg (M)	Mr K P King (M)
Mr C M Purnell (M)	Prof A J van Wyk (F)
Mr P L Dippenaar (M)	Dr C Law (AM)
Mr I McFadyen (M)	Dr A Nelson (M)

They will be joined by the newly elected Council members, Rob Jonkers and Prof Josua Meyer.

AeSSA COUNCIL MEMBERS FOR 2005



FROM LEFT: Prof Japie van Wyk; Dr Rob Hurlin; Dr Craig Law; Rob Jonkers; Chris Purnell; Pierre Dipenaar; Keith King



Gary Corderly



Iain McFadyen



Dr Alan Nelson



Prof Josua Meyer



Gert Jansen van Rensburg

Incoming President's Induction

According to the Memorandum and Articles of Association the new President is elected by Council at the meeting before the AGM. The Vice-President will be chosen at the Council meeting after the AGM. Dr Hurlin notified the meeting that Prof Japie van Wyk had been elected to serve as President for 2005/2006. Unfortunately he was overseas and had asked Dr Hurlin to read his report, which follows:

“As President I will strive to promote the following during my term of office in the Aeronautical Professions:

Manpower training for Engineers, Technologists and Technicians (including continuous professional development)

Expanding the technology base in South Africa at Industries, Universities and Technikons.

Holding a bi-annual Aeronautical Conference coinciding with the Africa Aerospace and Defence Exhibition. Application for papers submitted for this Conference (ISOAB and ICAS) will be made for publishing in the Journal of the Royal Aeronautical Society (for getting academic credits).“

Society Name Change

Having obtained approval from the Royal Aeronautical Society head office in London it remained to gain the formal approval of the local Society membership to change the name of the society to Aeronautical Society of South Africa. Although this was the last item on the agenda it was possibly the most important of the whole meeting. The result was as follows:

Dr Hurlin read the following Resolution as proposed in the Agenda: That the Memorandum and Articles of Association are changed to reflect the company name as “Aeronautical Society of South Africa” instead of “Royal Aeronautical Society of South Africa.” Dr C Law proposed acceptance of the Resolution, which was seconded by Mr P Dippenaar. The motion was carried unanimously.

Society Website

A website for our Society has been under construction for some time now but as a result of the impending name change it was held back until that matter was finalised. Now that we are officially the “Aeronautical Society of South Africa” we are proud to announce the unveiling of the Society website at www.aessa.org.za

Like all good websites we intend that it should be a “living” site which will be updated regularly and, in order to achieve this, an earnest request is made to all members to supply news and information which can be used on the site for the “edutainment” of members (hasn’t the IT world devised some wonderful new words!). The council member responsible for the site is Iain McFadyen and any useful material can be sent to him at Iain.McFadyen@kentron.co.za .

“African Adventures”

From the Preston Branch of the RaeS in England we have received a report from Craig Eckersley (who produces a very professional newsletter) of the recent experiences of one of their former members, Derek Rhee, who was the Director of Flight Operations at BAe Systems until the end of 2004 when he left to fly for the Mission Aviation Fellowship (MAF) programme, in and around Kenya. Derek’s account of his experiences of African civil aviation procedures, rules and regulations, not to mention the hair raising conditions he meets on his flights make for compulsive reading and should make us feel glad that we are in a more advanced African country.

Craig has very kindly obtained Derek’s permission for us to publish this report and also more background information on Derek and his work. The latter will appear in the next newsletter as this one is already running to 7 pages. I am sure that when you have read this story you will be eager to learn more about this remarkable man. So here is the first instalment:

We've now been in Nairobi for 3 months and I've just become 'operational', flying aid flights around Kenya and into Somalia and Sudan. I thought that you, as aviation professionals, might be interested in an initial perspective on this type of flying.

As ever, when arriving in a new country there is a whole realm of bureaucracy to encounter before you can fly the nation's registered aircraft. In the USA this is straightforward and presenting one's current documentation will get you an equivalent US licence within hours. Unfortunately, Kenya, with its British colonial history, has adopted the worst UK CAA practices of the 1950s. Hence, getting one's flying experience recognised and a UK licence converted to its Kenyan equivalent is challenging. Having a UK or a JAA ATPL helps, and although it is treated with suspicion, the licences are recognised. In my case the Kenyan authorities would only accept flying hours in civil registered aircraft. Hence my 5000+ military flying hours were ignored. Fortunately, the 1000 or so civil hours that I have is sufficient for a Kenyan CPL, which is all I need to fly the aircraft types operated by MAF. Having held a UK ATPL for 20 years it was another necessary personal lesson in patience and humility. Colleagues arriving with CPLs from Australia or the USA have an even harder time. I was only required to pass exams in Kenyan Air Law and for the aircraft type (Cessna 208B - Grand Caravan). They are required to sit the full spectrum of CPL exams.

Having passed the written exams and gone through the MAF type conversion to the 208B the final hurdle was an 'initial instrument rating test' taken with a Kenyan CAA flight examiner and just as nerve-wracking as its UK equivalent. However, all has gone well and I now possess a brand new Kenyan CPL in only 3 months which I am told is a lot quicker than normal.

I have been impressed with the training that I have received with MAF. Before going to Kenya I underwent a comprehensive 45 hour flight standardisation course in the USA on the Cessna 206. This introduced me to mountain flying and operating from short semi-prepared airstrips. Here in Kenya, I've had a 20 hour type conversion to the 208B which concentrated on the flying skills needed in the field - my first landing was on a gravel strip. This has been followed by 25 hours of line orientated flying training, which has involved operational flights with real passengers and freight, with me as 'pilot in command' under the supervision of a training captain in the right hand seat. Most of this part of the training took place in Sudan flying medical teams, missionaries and supplies to a variety of airstrips in the upper Nile region.

I have also been impressed with the Cessna Caravan as an aircraft operating in this role. Without getting into an ETPS report on the aircraft, its overall handling qualities are good especially when landing on tight short strips where accurate line-up and touchdown are essential. The aircraft can carry 13 passengers; typical payloads are about 1 tonne - usually a mix of passengers and freight - which can be taken about 450nm with diversion fuel reserves and safely landed on a 500 metre strip. MAF have equipped the aircraft well for single pilot operations - auto-pilot (certified for coupled Cat 1 approaches), weather radar, twin VOR/ILS, NDB, and twin GPS which can be displayed in colour map format on the weather radar screen.

Where possible MAF have adopted 'airline best practice' as their benchmark. In the past couple of years documentation has been based on and complies with JAR-OPS standards. Of course operating from airstrips rather than airports has a degree of risk that exceeds what a normal airline would accept. Nevertheless, over the years MAF have developed some excellent procedures that mitigate this additional risk and their safety record is outstanding in this sector of aviation. Every take-off and landing is properly calculated with check speeds and abort points identified. And we are neurotic about weight and balance - especially important in a sector where many operators are prepared to operate well beyond the airworthiness mass and CG limits and often take off with no idea of the aircraft's weight. MAF operate in a highly professional manner.

The flying is as challenging as any that I have undertaken in my 30+ year career. Nairobi, 5500 ft above sea level, has a poor weather factor for about 6 months of the year. Hence, on occasions we do fly ILS approaches down to minimums, with the necessary fuel reserves to divert to either Kilimanjaro (100 nm) or Mombasa (300nm). Major thunderstorms are generated over much of the region, especially in the vicinity of the upper Nile in southern Sudan. Hence we are frequently threading around large areas of red and magenta on the weather radar. Overnight rain can turn yesterday's benign safe landing strip into an un-landable mire with a consequent unplanned diversion. Detailed weather forecasting is non-existent and one is often reduced to the 'smiley-faced' weather maps from the internet. And finally, I still find rolling out on final with a 600 metre dirt strip in front of me, rather than a mile and a half of tarmac, somewhat puckering.

I'll write again in a few months time with more details of the work carried out by the charities and missions that MAF supports with its Kenya programme.

I am sure that all our members will want to wish Derek "God Speed" in this vital charity work