

Running A Well Oiled Machine

AVI Oil: A Success Story of Indigenisation

[ASHWANI SHARMA]



AVI-OIL, NYCO and SNP officials with senior hierarchy of the Armed Forces at the symposium

The national capital is witness to large number of symposiums and seminars almost every day on a range of topics and themes. So, when I received an invite from AVI-OIL for a half day event on 11 Oct, I expected another series of presentations aimed at promoting a certain product or technology. One of course always learns a thing or two at such gatherings and for the curious, there is always a bag full of knowledge and information which is invariably put together by the organisers, speakers and panelists. Being a former army officer with an engineering background I was keen to learn about the world of oils and lubricants. But what I came back with was much more.

To begin with, it's a success story of indigenisation through sheer dint of dedication, determination, teamwork and leadership. It is about a bunch of people who combined technical excellence with diligence and will to succeed and maneuvered the complex space to carve out a niche for the company. Lubricants and oils is a highly competitive market as I learnt that afternoon and supplying high grade lubricants for military and aerospace hardware demands that very high quality

standards be maintained as there is no room for error. This demands maintaining the competitive edge at all times and ensuring that the end user receives just what the engineer prescribed. Making use of the opportunity, AVI-OIL and its partners, NYCO and SNP put their end users wise on issues like storage and maintenance of oils and lubricants. For the uninitiated as well as the entire team of professionals present in the audience, it was good education to understand the intricacies of what 'a well-oiled machine' is all about !



VK Mathew, CEO, AVI-OIL welcomes the delegates

Just two sessions in the afternoon kept the event crisp and focused. VK Mathew, CEO, AVI-OIL started the proceedings with his welcome address, presented a quick overview and set the stage for the day's proceedings. It was followed by a detailed 'Introduction to AVI-OIL' by Dilip Chaurasia (see box for highlights). It was followed by a presentation on 'Latest Technologies in Defence Lubricants' by Jean-Louis Mansoux, Product Manager of NYCO. The Session after tea break consisted of two more presentations by Ilnar Urmeev of SNP and Thomas Danial, VP, AVI-OIL. While Ilnar spoke of

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Senior officers of all the defence services attended the event

'Russian Technologies in Aviation Lubrication', Thomas focused on 'Technical Expertise as a Key Differentiator'. Thomas, speaking on behalf of AVI-OIL and its partners raised some key issues which deserve to be highlighted as they represent the essence of the half day symposium.

AVI-OIL's efforts over the years have resulted in timely supply of products to the Defence Services and reduced the inventory at user level. In addition, they have ensured provision of technical services and creation of the basic facility without which the country would have continued to rely on imports. All the synthetic esters, the base oil required for synthetic lubricants are currently manufactured in India, this is a major step towards self-reliance.

CEO Mathews was loudly cheered when he informed the packed house that AVI-OIL has met more than 85% requirements of aviation lubricants for defence customers which include the following :-

- Indian Air Force
- Indian Navy
- Indian Army
- Indian Coast Guard
- Border Security Force
- Hindustan Aeronautics Ltd

The journey so far has been a roller coaster ride with its fair share of ups and downs. There have been a number of challenges that the company has faced and many of them exist even now. Some of them were discussed during the symposium. These issues are listed as under:

Technical Challenges

- Lack of technical know-how.
- Lack of equipment for evaluation of aviation lubricants.
- To obtain 'Qualifications or Approvals' from the designated authorities in foreign countries is cumbersome, time consuming and extremely costly.
- Non-availability of certain base-stocks.

Commercial Challenges

- Testing & certification and obtaining OEM approval are very expensive and time consuming.
- Volumes involved in some cases are rather low.
- No guarantees for supply.
- Investment for infrastructure is huge for the potential business opportunity.

Emerging Scenario

Briefly put, with the continuous induction of new aircraft and military equipment from abroad, product requirements change, and the use of locally produced products is again



Delegates examining products on display

subject to approval by foreign OEMs. Therefore, it is important to make requests for approval during the period of negotiations for buying platforms. At that juncture the requests are more likely to be accepted. Inevitably it will ease a number of avoidable issues that get raised later and have to be dealt with through a long-winded process. However, If the aircraft/platforms are inducted without clearance to use indigenous products, in times to come we may have to again depend on foreign sources for these critical items.

In conclusion, Defence Services have created the joint venture in times of their need and must now support its viability. **SA**



AVI-OIL in Brief

The marketing support and the experience of indigenisation, Balmer Lawrie has the strength in project engineering and NYCO of France provides the technical know-how on a continuous basis for a wide range of lubricants required for aircraft and allied military equipment of Western and Russian Origin.

The AVI-OIL plant is located at village Piyala, district Faridabad, Haryana and comprises of a blending unit for aviation oils, an ester manufacturing unit for production of synthetic basestocks, Quality Assurance, filling and packaging facilities. Products of AVI-OIL include a wide range of high performance lubricating oils, hydraulic fluids, greases, protectives and specialities designed to meet the stringent requirements of aircraft operation over a wide temperature range and often hostile environment.

AVI-OIL has been supplying aviation lubricants to the Indian Defence Services since 1994; and its products are "TYPE APPROVED" by the Centre for Military Airworthiness and Certification (CEMILAC), Ministry of Defence, DRDO. AVI-OIL is registered with the Directorate General of Aeronautical Quality Assurance (DGAQA), Ministry of Defence as an eligible manufacturer of aeronautical stores (aviation lubricants), covering the approval of the company's Quality Management System.

Products of AVI-OIL/NYCO are approved by major aircraft design bureaux like MiG, Kamov, Antonov, MiL, Ilyushin, Tupolev, Sukhoi, Pilatus, British Aerospace, Embraer, Dassault, Eurocopter and engine manufacturers like Rolls-Royce, Turbomeca, International Aero Engines, Snecma, CFM International, Pratt & Whitney Canada, Teledyne Continental motors, Motor Sich, Klimov, Saturn-Lyulka and ZMKB Progress.

A comprehensive range of oils and greases for all military aircraft operating in India are available including the

Su-30 MKI, IL-78M Flight Refuelling Aircraft, BAe Hawk Mk 132, C130J, the Advanced Light Helicopter (Dhruv) designed and produced by Hindustan Aeronautics Ltd., the Light Combat Aircraft (Tejas), the VVIP transport aircraft Embraer BJ-135 and Boeing Business Jet, Phalcon AWACS, the MiG- 29K/KUB and the Boeing P-8i of the Indian Navy, and the recently inducted Pilatus PC-7 MK II trainer of the Indian Air Force.

For the Civil Aviation sector AVI-OIL has the products for the Airbus and Boeing aircraft fleet operating in India, which are powered by either the CFM 56 or IAE V2500 aero engines. An entire range of products for helicopters of Eurocopter, Bell and the Russian MIL-Mi series is also available including the recently inducted Mi-17V5 helicopters of the IAF. In addition, a variety of piston engine aircraft oils, greases and specialties for use on smaller aircraft operated by the flying clubs, pilot training schools and agricultural aviation are available. AVI-OIL is approved by the Director General of Civil Aviation (DGCA) under Civil Airworthiness Requirements (CAR) Series E.

AVI-OIL is dedicated towards the conservation and protection of the environment and also markets for industrial applications a range of bio-degradable ester base stocks and lubricants such as fire resistant hydraulic fluids, non-flammable dielectric liquids and oils for the eco-friendly refrigeration compressor systems.

Development of new products for the Defence and Industry is a continuous process at AVI-OIL, through the efforts of its Research and Development Unit, which is recognised by the Department of Scientific and Industrial Research Ministry of Science & Technology. The emergence of AVI-OIL compliments the efforts of the aerospace industry by providing the strategic products for self-reliance and industrial sector's need for efficient, energy conserving and eco-friendly lubricants. **SA**