MAKE IN INDIA: BUILDING A WORLD CLASS ECOSYSTEM FOR AEROSPACE MANUFACTURING

VISIT AT C-2.7

The aerospace industry spends over USD 20 billion annually on machined parts globally. The demand for new aircrafts has increased phenomenally in the Asia-Pacific, Middle-East and Latin America and commercial aircraft sector is expected to see a growth rate of over 4 per cent in the coming year. This increased growth has driven aircraft backlog to an all-time high. This, coupled with pricing pressure, has led industry OEMs to look towards extending their supply chain eastward, primarily in Asia.

Advantage India

The changing dynamics of the aerospace industry has also put India in the spotlight. India is poised to be the third largest aviation market by 2025, according to IATA. The country is forecast to have a demand for a record 2100 new aircrafts in the next 2 decades, worth USD 290 billion, with the majority being single-aisle planes. This massive induction of aircraft is expected to place considerable demands on India's airport infrastructure. This sector is receiving a good deal of attention from the government, which is framing policies that are designed to ensure the emergence of India as a global aviation hub.

'Make in India' initiative has brought in changes pertaining to how the private sector is perceived today. Innovation, indigenous manufacturing and self-reliance are the key aspects to the success of 'Make in India'. At the same time, favourable policies in states, like Karnataka, are opening doors for private manufacturers to make inroads into the supply chain of global OEMs. Karnataka accounts for over 70 per cent of the supplier base of the sector making it the most sought-after destination in India.

Global aerospace ecosystem

India's aerospace manufacturing industry was still in its nascent stage even a decade ago and was traditionally dominated by defense-related manufacturing. Aequs Aerospace came into existence with a vision to build an aerospace ecosystem in India that would increase in-country value, generate employment, and stimulate the country's economy by increasing exports. This sustainable and globally competitive ecosystem, unmatched elsewhere in the industry, facilitates the entire manufacturing process – from forging and precision machining to surface treatment and assembly. The philosophy of Aequs it to boost the quality of manufacturing through collaboration and partnership that ultimately help build an efficient global delivery ecosystem.

Embracing technology for agility and scalability

Aequs' core competency lies in precision machining which has immense scope for scalability. There are billions of dollars' worth of machined components in the commercial aircraft market. With OEM's looking very systematically at every capability their suppliers possess – from the methods they use to manufacture essential components and technologies used to sustainable business models – Aequs embraces the challenges in the sector by staying agile. The first Flexible Manufacturing System (FMS), installed in Aequs Special Economic Zone in Belagavi, is an endeavor to economically solve the challenges of machining relatively high mix, low volume product variety we currently see in aerospace manufacturing.

Precision machining for a safe flight

Aequs Aerospace manufactures detailed parts – structural and system parts – and assemblies that get used downstream by its OEM customers. Structural parts are those which are used to construct the structural sections of an aircraft. In this category, the company produces parts for aircraft wing, fuselage, control surfaces and landing gear. One other area, where structural parts are used, is in the cargo compartment and the aircraft cabin (interior), specifically seating. For all of these aircraft sections, Aequs delivers detailed parts to OEM customers who then assemble them into respective sections of the aircraft. This also includes parts that are delivered directly to the major aircraft OEMs, such as Airbus and Boeing.

In the category of system parts, Aequs delivers performance critical actuation system parts and engine components to major systems OEMs like Airbus, Honeywell aerospace, Collins aerospace (formerly UTC Aero Systems), Eaton, Parker, among many others. Actuation parts tend to be much more complex than any typical structural part.

The award-winning aerospace ecosystem hosted by Aequs SEZ in Belagavi, Karnataka, has successfully integrated vital stages of the manufacturing supply chain that helps customers reduce time-to-market and save on logistics costs, the two essential business aspects of modern-day aerospace manufacturing.

— Aravind Melligeri
Chairman & CEO, Aequs

"The JV will localise the manufacture of Ka-226Ts in India"

Russian Helicopters, Rosoboronexport and HAL Corporation joint venture will ensure the timely launch of the project for the manufacture of 200 Ka-226Ts for the Indian armed forces, says Russian Helicopters' Press Service and points out that Russian Helicopters has completed all the paper work for the naval version of the Ka-226T

What is the present status of the Ka-226T programme and how many will be built in Russia?

Arrangements for helicopter production at the Ulan-Ude Aviation Plant, where the first 60 machines will be made, are under way and fully compliant with the project schedule. We expect that the arrangements for pilot production will be complete this year. Facilities for commercial production are expected to be in place by the beginning of 2020. As regards Tumkur, the platform for making 140 Ka-226T helicopters, it is the responsibility of our Indian partners.

What is the existing partnership shared by Russian Helicopters with HAL?

In May 2017, we registered a joint Russian-Indian company in Bangalore with the participation of Russian Helicopters, Rosoboronexport and HAL Corporation. This company will be used as a platform for localising the manufacture of Ka-226Ts in India. It is our priority today to timely launch the project for the manufacture of 200 Ka-226Ts for the Indian armed forces. However, we may well see growing cooperation with our partners from HAL, and this was one of the options we discussed in the course of negotiations.

Please elaborate on the offer of the naval version of the Ka-226 to India?

Russian Helicopters has done all the paper work for the naval Ka-226T and sent it over to Rosoboronexport given that military tenders run by foreign contractors are in their remit. In terms of flight performance parameters this helicopter deserves special mention. Given its small size it can be used on ships and boats of light displacement. The naval Ka-226T can be used for search-and-rescue or transportation in any weather condition 24/7. It is used by government customers in Russia and has proven itself in an aggressive sea environment. The naval version of the Ka-226T is particularly interesting to Indian customers, because it could be manufactured by the plant currently under construction in Tumkur. This plant is expected to be making a land-based version under the Make In India Programme.

Please elaborate on the Mi-17 family of helicopters currently operational in India?

India is currently operating more than 280 Mi-8/17 helicopters, mostly for military purposes. To date, the Mi-17B-5 is the backbone of India's Air Force transport fleet and has been used repeatedly for the most complex operations, including humanitarian aid and disaster relief. Also, given its absolute ceiling of 6,000 m, this helicopter can be used for making regular supplies to the Indian army units stationed on the Siachen glacier in the Himalayas.

As regards civil operators, we are offering them the Mi-171A2. It is a combination of more than half a century of expertise in Mi-8/17 development and the cutting-edge technical solutions. We have already signed the virgin contract for the supply of this helicopter to India, with an option for another one. Work is under way with the Indian aviation authorities to have the Mi-171A2 certified in India. It meets all present-day requirements for reliability, safety and comfort. By its technical parameters and capabilities the Mi-171A2 is greatly different from its predecessors. Its key features are probably the new frame and the more economical and more powerful engines that ensure a 10 per cent increase in cruising and maximum speeds and a 25 per cent increase in load capacity. The passenger version of the Mi-171A2 can seat up to 24 people. It can be used effectively 24/7, in highland conditions, at low and high temperatures, in high humidity and above water.

What are the in-country maintenance and training facilities that have been set up by Russian Helicopters in India for Mi17 family helicopters?

Together with Rosoboronexport we are completing a project to set up overhaul lines for 16 units used in the Mi-17-B5 type at a maintenance park in Chandigarh. We are in the final stage of installing additional facilities for repairing BK-2500 engines and transmission. On top of that, talks are under way to establish a maintenance-and-repair centre for overhauling Mi-17B-5-type airframes and units.