

MRO in focus – Epsilon Aerospace

“Epsilon Aerospace is a leading aircraft cabin interior solutions provider for airlines. We believe in Safety First, Quality Always.” – Naveen Chawla, Ceo, Epsilon Aerospace Private Limited

Cabin Interiors is one of the most important maintenance elements in an aircraft. It comprises of design of aircraft interior systems and components like aircraft lighting, seats, galley, lavatory, IFE, stowage bins etc. A soiled, battered or torn seat cover on an aircraft is more than an eye sore. It could also lead to a safety hazard. Hence, it is a highly specialized job that needs a sharp eye with pinpoint perfection. Also, attention to details and quality along with deep understanding of material, air safety, regulations, design, engineering and finest workmanship.

‘Epsilon Aerospace Private Limited’ is one such MRO that is built on strong ethos of safety & quality, encompassing all of the above. Recently, Epsilon Aerospace achieved its ISO 9001:2015 accreditation from TUV SUD for ‘Manufacturing and repair of aircraft cabin furnishing parts’. This indicates a robust Quality Monitoring System implemented by Epsilon Aerospace.

“This certification is testimonial to the highest quality standards deployed by Epsilon Aerospace team in terms of repair & manufacturing for our aviation customers,’ says Naveen.

A Step beyond cabin refurbishments ...

Epsilon Aerospace provides a turn-key solution to airlines for aircraft interiors. This ranges from industrial design, to engineering, manufacturing, and retrofit or refurbishment services. Epsilon Aerospace has expertise in all types of materials for passenger seat covers like leather, fabric, e-leather, Ultraleather & Enduralite. They also successfully delivered covers for crew seats. Epsilon Aerospace offers nose-to-tail solutions related to the aircraft cabin in collaboration with EASA DOA partners.

Epsilon Aerospace is one of the first facilities in India to produce Passenger and Crew seat covers with DGCA 21G certification in India. The approval is as per the 21G of the Civil Aviation Requirements, or CAR, which lays down guidelines and procedures for the aviation sector. CAR 21G covers an aircraft cabin and its parts. Until recently, MRO players in India only had the CAR 145 approval. This allowed them to repair a seat cover instead of replacing it with a new one. Apart from seat covers, the approval also covers carpets, curtains and other parts that are used in the seats or in the cabin.

Commenting on this milestone certification Naveen adds, “We are extremely thankful to the DGCA India for this certification. The entire journey of getting a Part 21G approval has been a great learning experience. I sincerely appreciate the efforts put in by all the officials of DCGA India in supporting us, and our team for implementing it within the current DGCA regulations.”

“The challenge however lies with the operators understanding the difference between a Part 21G organization versus a Part 145 organization. As the operators in India are still more focussed on cost-savings, they are a bit slow in adapting to the quality standards of Part 21G organization,” he further adds.

This approval also enables manufacturing of plastic parts used in an aircraft cabin like the seat trays and armrests.

Epsilon Aerospace is therefore a DGCA approved facility for the repair of seat plastic components. It is one of the few companies to have a dedicated paint-booth for painting of repaired components. Besides, they provide aircraft operators with serge carpet along with engineering solutions to change the original carpet for a more lightweight or as per the customer's preference.

The future of aircraft interior market is glazed and shiny. As aircraft interiors evolved over time, it has only become more sophisticated with smart galley, re-configurable cabin seating, autonomous business aircraft, electric propulsion, urban air mobility etc. When asked about the market competition and how Epsilon deals with challenges, Naveen says, "We take the competition in a positive stride. Aviation market is on a growth trajectory in India and in the Indian Sub-continent region. All Indian MRO service providers will therefore play a key role to support the industry's growth, region-wide."

Currently, a large part of MRO work is outsourced out of India. This is primarily because of the supply chain and regulations. "However, we see it as a huge opportunity at Epsilon, as we are the pioneers in this industry. Epsilon Aerospace is firmly positioned to provide global standards with regards to the material used along with the designs and the fabrication," he further adds.

Cabin Interiors Markets

The Global aircraft cabin interiors market is projected to grow USD 32.7 billion by 2025, at a CAGR of 13.2 per cent as per the aircraft cabin interior report published in 2020.

Commenting on the history of Indian aircraft interiors segment, Naveen says, "The aircraft cabin market in India is bifurcated into two major segments. First segment comprises of operators that have identified a safe and clean cabin as a hallmark for brand positioning. While, there might be other operators that identify aircraft cabin as the first element where significant amount of cost reductions takes place. This might at times lead them to use sub-standard, non-approved material for repairs, local fabrications or simply allowing broken cabins to be cannibalised. In those scenarios, it might present a challenge for such aircraft operators."

However, with time the airlines are slowly and steadily recognizing the impact of a clean and airworthy aircraft cabin. Regulators have realised the importance of safety measures, designs and challenging aspects of an aircraft cabin.

"We believe that regulatory developments will lead to a renewed focus on the safety parameters of the aircraft cabin. This will only standardise the industry in terms of performance requirement. Unlike in other areas of maintenance where high level of standardisation exists, currently there is a lack of standardization in aircraft cabin repair & maintenance. We expect improvement in the standardization in the aircraft cabin arena as well. We foresee Indian aircraft interior companies gaining the capability of manufacturing cabin parts locally; and providing them at a comparative rate," comments Naveen on evolving Indian markets.

The COVID-19 impact

Post COVID-19 pandemic businessmen, politicians, celebs and even tourists are opting to travel by private charters and air-taxis as a safer, more comfortable and convenient option for travel. Due to this the demand for luxury and comfortable seating, healthy and hygienic lavatories, and efficient in-flight connectivity is steadily rising. This has definitely pushed the aircraft interiors markets towards greener pastures. But is the picture rosier for all aircraft interior companies as it looks?

When asked about the impact on pandemic on Epsilon Aerospace Naveen thoughtfully comments, “The current events have been both positive and otherwise, for us. The positive effect was that with a lot of aircraft being re-delivered, the requirements from lessors to standardise the cabin at EASA level created significant opportunities. It led to business improvement for us as component MRO, and also for other Indian MRO’s. The downside is definitely the operating uncertainty that effected aviation industry, worldwide. However, Epsilon Aerospace Team continued to work tirelessly with the aircraft operators in maintaining their cabin-standards, at all times.”

Increasing demand for in-flight entertainment systems, rise in premium economy seats, emerging markets in the aviation industry are some of the key factors driving market growth.

Expansion plans

Commenting on the expansion plans for Epsilon, Naveen says, “We will continue to focus on maintaining our niche. Our expertise lies in aircraft cabin design, engineering and refurbishment. We will continue to provide full cabin management solutions to the airlines, with highest standards of safety and quality, always.” Naveen signs off....

Epsilon Aerospace launched aircraft cabin solution services that were limited to seat covers. However, they have come a long way since then in positioning itself as one of the leading Aviation MRO in aircraft cabin refurbishment.