



Source: TAL Manufacturing Solutions Ltd

Aerial view of the Nagpur facility, which measures 1,21,408 m² is used to manufacture airborne components and assemblies.

Ready to Take-Off...

With its two state-of-the-art-facilities, TAL Manufacturing Solutions Ltd is serving customers in varied fields. Focusing on offering cost-effective and total solutions in the field of manufacturing engineering, TAL has commenced manufacture and supply of machined parts and advanced composite floor beam assemblies for the Boeing 787-Dreamliner; making it the only supplier outside the US to be doing so. This has not only enhanced India's stature in the global aerospace supply chain network but also demonstrates TAL's capability to absorb new technology and its commitment to be globally competitive.

TAL Manufacturing Solutions Ltd is the only Indian company to have gained necessary expertise and know-how to build advanced composite floor beams for Boeing's 787-9 Dreamliner. That's not it! The company has also developed a 5-axis machine based on a revolutionary technology that will help various industries. Today, the company's diverse client portfolio includes customers from industries such as aerospace, automobile, heavy engineering, power, defense, railways, etc.

Looking back

TAL Manufacturing Solutions Ltd was formed in the year 2000 by the merger of

Machine Tool and Growth Divisions of the Tata Engineering & Locomotive Company (TELCO). In 15 years, the company has achieved new heights, bringing advanced technologies to the field of aerospace and establishing new facilities.

"In 2007, Boeing approached Tata with a desire to partner with them to produce critical components in India for their new commercial aircraft. TAL emerged as a preferred choice within the Tata Group to develop and produce the required components. This was the genesis of the greenfield facility at Mihan SEZ, Nagpur, which is dedicated to the aerospace sector," recalled Executive Director and CEO, TAL Manufacturing Solutions Ltd, Rajesh Khatri. To elaborate on the same, Head – Aerospace Business, TAL Manufacturing Solutions Ltd, Lokesh Srivastava added, "Being the first dedicated aerospace manufacturing facility of the Tata Group, it is our responsibility and endeavor to continue to be torch-bearers of the trust associated with the Tatas and the 'Come Make in India'

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Ready to Take-Off... 



campaign. Towards this, we are working diligently to invest and grow our aerospace business to provide the global aerospace community with long-term sustainable value."

The company has two facilities—in Pune and Nagpur—that serve customers in the segments such as aerospace, railway, automotive, power, etc. Speaking about the facility in Nagpur, Khatri mentioned, "Today, it has emerged as a world-class, state-of-the-art facility, which is equipped with precision 3 and 5 axes machines, 1-lac class clean room, autoclave, CMM and critical surface treatment facilities to name a few. The facility has been developed to supply precision machined,



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welded and sheet metal parts and assemblies for aero-structures and aero-engines. Moreover, the facility has a strength of 350 employees, which is expected to grow up to 500 in the next couple of years.

Apart from Boeing, Pratt & Whitney, RUAG, Alenia Aeronautica, JCB, John Deere, VECV, Bombardier, CNH, Tata Hitachi, International Tractors, Amul, FIAL, TASL, TLMAL, Jindal, etc., are some of TAL's key customers. "Also, about 25–30 per cent of our turnover comes from exports, primarily to aerospace OEMs," informed Khatri.

Latest technology in traditional businesses

TAL continuously strives to offer products with the latest technology. TAL is the only Indian company to have introduced machines with PKM technology. In 'Parallel Kinematic Machine' (PKM) machines, the motions in X, Y and Z are performed by three or more parallel axes that give an outstanding stiffness and accuracy while maintaining flexibility and envelope. PKM provides the speed and flexibility of a robot along with accuracy and stiffness of a traditional machine."

Explaining the application of the new technology Khatri mentioned, "With less number of parts, the PKM is easy to construct and is well-suited for five or more axes applications. While the larger machines are targeted for the aerospace segment, smaller machines are finding preference in the automobile sector." Similarly, the technology can also be deployed in the power and defense sectors.

Yet again, TAL is launching its 3R (Rigid, Reliable, Rapid)—new series machines in this IMTEX. "TAL has also leveraged its mechatronics capabilities to provide low cost automation solutions. It is now all set to launch its indigenously developed cost effective articulated Robot. With its flexibility, reliability and low cost, we aspire to revolutionize automation in the MSME



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Rajesh Khatri**

segment," informed COO – Industrials Division, TAL Manufacturing Solutions Ltd, Amit Bhigurde.

Serving sensitive sectors

Apart from the aerospace segment, the company also serves to one of the most critical segment, i.e., Defense. "With its manufacturing capabilities in precision machining and fabrication, TAL has partnered with Tata Motors Ltd for manufacturing hull bodies for defense vehicles like MPV, WHAP, etc. Also, recently, the company has been working with establishments like Research & Development Establishment (Engineers), Dighi, and has designed and supplied Trailer Mounted Surface Launcher for Missiles to them," he averred.

Furthermore, Khatri is looking forward to enhance business in the same field. "With the hike in foreign direct investment (FDI) in the Defense and the impetus provided by the government, TAL is well poised to exploit the emerging opportunities in the sector," he explained.



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**Head – Aerospace Business,
TAL Manufacturing Solutions Ltd,
Lokesh Srivastava**

Vision defines future

Quality and on-time delivery being the prime requirements, TAL has adapted the global best practices in manufacturing aided by integrated systems and processes. Also, everyone employed at its Nagpur facility is a trained engineer; hence, quality and contract compliance is assured.

When a company is growing rapidly, it is important to have the right approach. In order to serve the customers better, the company is focusing on bringing excellence and customer satisfaction. Elaborating on the same Khatri said, "Being a company with a 40-year legacy, a cultural shift is necessary across the organization to affect the transformation and compete and thrive in the external market. Accountability, Customer and Product focus, Excellence and Speed (ACES) provide the framework for the culture shift."

With new technologies and a new approach, the company will grow at an accelerated pace. Speaking on it, Khatri said, "The investments are identified for capex needs of the new and growing businesses—namely, Aerospace and Robotics & Automation. A major portion of the investments will be done in aerospace to support the capex needs for the \$170 million long term contract recently signed with an aerospace company to supply them precision parts and assemblies for the Airbus A320 family of aircraft."

With this, TAL offers a great value proposition to the leading aircraft OEMs. TAL aims to become a preferred supplier in the global aerospace supply chain and is committed to transforming the Nagpur facility as a Center of Excellence for aerospace parts and assemblies! It aims to be a pioneer in cost-effective automation!

MMI



State-of-the-art machines in the facility and the qualified personnel meet the quality compliances.

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