



# “Tata Power SED has the skills and wherewithal to be the Prime bidder in Global Defence tenders and emerge as L1 and have proven this by winning two MoD bids against established Global competitors”

**RAHUL CHAUDHRY, CEO, Tata Power SED**

**Please share with our readers the progress that has been achieved in the IAF's MAFI project that you are executing in the last over five years, along with the timelines for the completion of the project. What is the scale and scope of work that's still to be completed in MAFI?**

Tata Power SED is currently executing MAFI-I order for modernising 30 Air Field of Indian Air Force. This modernisation is required to handle the latest class of aircrafts (transport as well as fighter). In fact, we just delivered the Yelahanka air base, venue of Aero India 2017, after modernization under MAFI-I.

By March '17, eighteen airfields would have been handed over leaving only 2 batches of 12 airfields (6 in each batch) to be completed. SED is on target to complete all 30 MAFI-I airfields by Oct '17.

**You are also installing the Futuristic Automatic Data Handling System at 16 Air Defence sites. Could you please share the scale and scope of this project and how much has been achieved till now?**

The project scope was to build command and control system for Air Defence where in 16 Air Force sites were networked. The system design architecture is highly scalable in nature to meet any future demands (adding new sites). The project was completed few years ago and is now fully operational.

**It is 10 years since you secured and executed production orders for the prestigious Pinaka Multi Barrel Rocket Launchers, the latest one in late 2016. Now, there is a talk of offering this rocket for export to friendly foreign nations. What opportunities do you think will accrue if the government allows export of Pinaka?**

India is the largest importer of arms in the world; we import almost 70 percent of our requirements. This not only drains our dollar reserves but also give away the economic benefit of jobs and growth to Foreign Countries. China recently had turned the table and

is becoming one of the largest arms exporters from being the largest importer during 2006.

We should take cue from China's turnaround and look to improve our defence exports. Our Defence Minister has set a target of USD 2 Billion revenue from exports by 2019-20 and India is exploring the options of exporting proven missile systems like BrahMos, Akash and Pinaka to friendly nations like Vietnam, Bangladesh and UAE.

This will for sure bring in opportunities for Private Players who have been part of the success of these weapon systems. However, export of complex systems such as Pinaka MBRL can only be successfully achieved if we have the entire system being developed and manufactured by the private sector, as opposed to just the launchers and command post. Foreign buyers would buy only if they can see 100% reliability in the entire system – that is in the command post and launchers as well as ammunition.

**What are the offsets work in the aerospace segment that Tata Power SED is currently working on? Does this include the Rafale deal that India signed in 2016? What is the nature of offset work that you are doing in the Rafale deal, considering that you had signed an MoU with Thales in 2008 keeping the then MMRCA tender in mind.**

Since we haven't concluded any deals at this juncture, we won't be able to comment on this.

**What has been Tata Power's share of work in the Akash and Agni series of missiles?**

**Akash:** Akash Missile Program was initiated and developed as part of Integrated Guided Missile Development Programme initiated by India in July 1983. Tata Power SED's association with the programme dates back to early 1990s. Tata Power SED supplied launchers for the missiles in record time.

**Akash Air Force Launchers (AAFL)** is a fully containerized trailer mounted, independently deployed air defence

system equipped with ready to fire medium range Surface-to-Air Akash Missiles. It has multi directional, multi target, area defence capability. The individual launch system are networked over a command and control system with a set of combat flights forming the combat squadrons with its own surveillance and tracking and fire control radars. The weapon system is cost effective in comparison with the equivalent systems and has cross country mobility can be deployed by air, road and rail.

The system went through lot of grueling trials and became one the major indigenous programmes to be cleared for production.

**Agni:** Tata Power SED so far have only supplied On board MIUs for Agni Missile. However for Ground Systems we have supplied

- ▶ LIU (Launcher Interface Unit)
- ▶ TCT (Transport cum Tilt) for A5 - Hydraulic System with Mechanisms and Electronic Controller
- ▶ Rugged Launch Computer Complex ( Missile Check Out Systems)
- ▶ Dual Redundant Rugged Controller (DRRC)

**What is your capability in the missile segment of the defence sector?**

Tata Power SED can deliver an entire Missile Defence System by leveraging its capability in end-to-end Systems engineering of the Solution with complete life cycle support. In fact, we are already partners with MoD on three Missile programs and carry the experience, acumen and credentials from such an association.

**What has been Tata Power SED's contribution to India in the aviation and defence sector over the last two years in terms of investment, jobs creation, skill development and technology? How do you plan to contribute on these parameters in India over the next two years?**

With over four decades of ex-

perience in delivering solutions to India's security needs, Tata Power Strategic Engineering Division (Tata Power SED) has evolved into one of the largest Indian private sector prime contractor with eligibility to participate in all MAKE & Make-like Programs of Indian MoD. Having executed Pinaka Multi Barrel Rocket Launcher, Akash Medium-Range Mobile Surface-To-Air Missile Launcher (for both Army and Air Force), Strategic Missile Launchers, Integrated Electronic Warfare Systems (IEWS), et al. Tata Power SED has emerged as a Land Systems Prime and continues to focus on the Land Systems Programs such as Guns, Precision Guidance, Fuzes, Armour Programs, Tank Upgrades, Radars, Night Vision devices, UAVs, Communication Systems and Power Systems, etc.

Tata Power SED has the skills and wherewithal to be the Prime bidder in Global Defence tenders and emerge as L1 and have proven this by winning two MoD bids against established Global competitors. Further, Tata Power SED is also one of the only two private companies to have been successfully down selected for both the MAKE programmes, Tactical Communication System (TCS) & Battlefield Management System (BMS) programs for the Indian Army, announced so far.

In the last two years, we have executed Orders worth over ₹800 Cr and have added close to 400 employees to our man power. As per NASSCOM's study on impact of hi-tech industry on employment generation, the 400 jobs we created would indirectly add an additional 1600 jobs in the low-tech sector.

It's also a known fact that across the world its the SME and MSMEs who create more jobs per unit of investment and is not different in India who are expected to emerge as hot spots for job creation. Hence, even the country's major initiative like 'Make in India' is not only looking at encouraging big corporate but also MSMEs. Thus,

to enhance their capability DPP 2016 has included funding options for MSMEs for product development. Their innovative capabilities in niche manufacturing, higher flexibility, lower costs and the ability to learn and utilize new technologies make them attractive option for large corporate as well. For instance, Tata Power SED has more than 2500 active registered vendors to support its programs, thus playing a critical part in job creation through its business association with SME and MSMEs.

Through our advanced development programs Tata Power SED was able to create more than 100 Sub-Systems over the years in order to qualify for the programmes that SED is intended to target in near future or to cater for the ongoing programmes. In last two years (FY15 & FY16) alone it had spent over ₹100 Cr in R&D in developing technologies. Besides, Tata Power SED has currently more than 100 technology partnership agreements with leading companies around the world. This not only enables us to participate in large defence program but also allows us to absorb some of the critical technologies over time.

In addition to capability building, Tata Power SED continues to focus on capacity expansion through significant investments (Approx. ₹350 Cr in Phase I) in state-of-the-art greenfield manufacturing and testing facility in Vemagal, Karnataka and world-class design, development and testing facility for prototyping and production at Electronic City, Bengaluru. Tata Power SED will continue to contribute through investments and job creation besides equipping Indian Armed Forces with Indigenous Products by successfully participating in various defence programs. It had recently bagged ₹200 Cr repeat order of Pinaka MBRL and had successfully overcome the monopoly in supplying Night Vision devices (optronics) to by bagging an Order from Ministry of Home Affairs (to supply to Border Security Forces).

## OPINION



**ARAVIND MELLIGERI, CEO & Chairman, Aequus**

**A**equus is a significant player in the Indian commercial aerospace manufacturing sector. Our recent acquisitions in France and North America along with our new contract with Airbus for titanium parts have strengthened our position further, apart from being close to customers. We have attracted global investments and defined robust process oriented manufacturing standards in the Indian aerospace industry. The amends in gov-

ernment policies have helped facilitate exchange of modern technology and encouraged more investments from established aerospace leaders in the country. In a growing market like India the focus is towards building capabilities and developing skills. This will be instrumental in the growth of the industry and maturity of the geo into a trusted market for aerospace parts, components and machines.

We have expanded our fa-

cility in Belgaum to suit future needs and technologies. The employees on the shop floor are trained to be experts in their fields hence shaping Aequus as a hub for aerospace manufacturing. Our contribution to Belgaum has been lauded by the community and our partners of all sizes. We are almost set to launch the Aerospace Knowledge Centre which will provide technical expertise and skills to our employees and aspiring students. By collaborating

with technical institutes in the region, we will train youngsters and equip them with knowledge and the skill set to grow in this industry. We have recently opened up our SEZ in Belgaum to encourage more IT companies to set up their facilities. While we provide them with infrastructural advantage and service support, they will in turn encourage more investment in Tier II cities and also increase career opportunities for local talent.



# “We are attracting global investments and we are establishing international standards in the aerospace industry in India”

ARAVIND MELLIGERI, CEO & Chairman of Aequs



**In 2015, Aequs was targeting a five-fold increase in its revenues from the \$40 million that you were doing until then. What progress have you made in this regard in the last two years? How has your revenue increased and from which side of your business do you see the increase coming?** 2015 and 2016 have been very eventful for us. We have managed to grow in length and breadth of commercial manufacturing. We have managed to diversify and yet stay integrated. We entered North America by acquiring Paris, Texas-based T&K Machines and in 2016 saw the complete acquisition of SiRA Group, France. These deals have helped us cater to those regions more effectively. We grew leaps and bounds within India as well, where we inaugurated the largest aerospace manufacturing facility in 2015 and in early 2016, we expanded the dedicated Airbus facility. Aerospace has been the biggest contributor to our success. Global aerospace giant, Airbus awarded us the contract of manufacturing titanium parts for the A320neo, which is the largest in India. The company has witnessed a growth of 50% CAGR in the past 4 years, which is the greatest indicator of our progress. In fact, our goals have become even larger and we are looking to move from \$100 million Company to \$300 million Company in 4 years.

**You have three joint ventures with Saab, Aubert and Duval of France, and Megellan. What has been the major focus of these joint ventures and how have these JVs contributed in developing aerospace capabilities in Karnataka?** The SEZ provides a universal platform for OEMs, the suppliers and ancillary makers with the opportunity to set up manufacturing operations in India and so far, Aequs has successfully concluded three global joint venture partnerships (JVs).

To bring in capabilities into India, Aequs has entered into a joint venture with global companies like Magellan Aerospace Limited, to form Aerospace Processing India (API) for setting up a fully integrated, scalable facility to cater the needs of both the Indian and international aerospace manufacturing industry. Also, SQuAD Forging India Private Limited in collaboration with Aubert & Duval SA, France (A&D) and Setforge Societe Nouvelle S A S, France (Setforge). SQuAD primarily aims at the aerospace market to support major OEMs in their supply chain while contributing to their offset obligations. It will focus on aero structural parts, landing gear and braking system components in aluminium, steel, titanium or nickel base alloys. SQuAD will also handle products for other markets such as highly critical parts for automotive, power generation and oil & gas. Also, a JV agreement has been signed with global Defence and Security major Saab to set up an 'Aerostructure Assembly Joint Venture'. Further Aequs signed a JV agreement with Precihole Machine Tools to combine technological expertise and infrastructure to manufacture precision machined components for international markets.

Apart from the joint ventures, Aequs has successfully adopted the acquisition route to further expand its geographical reach and capabilities to serve global customers and create global ecosystems in true sense. Aequs has acquired Paris, Texas based T&K Machine Inc. By doing this Aequs has emerged as the first Indian aerospace company to expand in North American market. Further, the acquisition of SiRA group based in France has brought highly complementary capabilities to our Global Aerospace Ecosystem in the areas of precision machining, assembly, landing

gear, and aircraft actuation components. This development expanded our relationship with key customers in Europe such as Dassault, Safran (multiple divisions), and United Technologies Aircraft Systems. In addition to these, we have approval to work on several of their production programs.

By establishing these JVs Aequs is positioning itself in the global arena with attractive demand and supply side drivers to support it and helping India in building capabilities to emerge as a preferred destination for manufacturing of aerospace components.

**You were the first Indian company to get approval for 49 per cent FDI in December 2014 under the new rules brought in by the Narendra Modi government earlier that year. Now that rules have been eased to have up to 100 per cent FDI, what is the possibility of Aequs taking that step?**

This is great news for us. We believe that partnerships across the globe will help strengthen our technical abilities and give us access to a wealth of knowledge. The government is also looking ensure India is a major contender in aerospace by 2020 and such policies will facilitate exchange of modern technology and encourage more investments from established aerospace leaders. When it comes to aerospace, the margin of error is zero. Having machinery certified under international standards and hence being able to bring out highest quality products is one of the biggest advantages of this policy, which will benefit the industry as a whole.

**In June 2015, Aequs had taken over T&K Machines in Texas, US. Then, in February 2016, you took over the French SiRA. How did those take-overs help Aequs in terms of business, revenues and capacities over the last two years?**

In 2015, we expanded into

North America following the acquisition of T&K Machines. This facility caters to the local – global needs of Boeing and UTAS amongst many others. Acquiring France based SiRA Group in 2016 strengthened our ability to deliver to European customers like Dassault, the manufacturer of Rafale fighter jet. We are closer to global aerospace giants and we are attracting all the right attention.

**Aequs has been expanding its facilities to include a metal processing centre, API's phase-2 facility and a free trade warehousing zone in 2016. What are the plans for 2017 in this regard?**

In our continuous endeavour to expand the Aerospace ecosystem in India, we signed a contract with All Metal Services Limited (AMS), a subsidiary of Reliance Steel & Aluminum Co to establish a metals service centre in SEZ, Belgaum, India. The facility will provide various metals, including Titanium, Aluminium and Steel, in various forms including plate, sheet and tube and related processing services for aerospace industry applications. Further, on June 10, 2016, we signed an agreement with Apollo Aerospace Components Pvt. Ltd to establish a 10000 SQFT unit for Aerospace standard parts Material distribution. This would be a part of "Free Trade Warehousing Zone (FTWZ)" in its Special Economic Zone (SEZ), Belgaum.

In order to expand our Aerospace Special Processing capabilities, Aerospace Processing India Pvt. Ltd (API) inaugurated its Phase II facility, marking yet another key milestone in the growth and development of Aerospace Manufacturing in India. API, a joint venture between Aequs and Magellan Aerospace and located at Aequs SEZ in Belgaum, Karnataka, was the first third-party facility in India to be approved by both Airbus and Boeing. This new expansion

will accommodate additional capacity and capabilities supporting water-based paint, solid film lubricant, sulphuric acid anodizing, zinc-nickel plating and additional processes under development. The current, fully integrated, modular facility utilizes ~ 45,000 sq. ft. The API facility also houses the environmentally-friendly tartaric sulphuric acid (TSA) anodizing line approved by Airbus. In addition, cadmium plating line is also coming on line this year.

**What has been Aequs' contribution to India in the aviation and defence sector over the last two years in terms of investment, jobs creation, skill development and technology? How do you plan to contribute on these parameters in India over the next two years?**

Aequs is a significant player in the Indian commercial aerospace manufacturing sector. Our recent acquisitions in France and North America along with our new contract with Airbus for titanium parts have only strengthened our position. We are attracting global investments and we are establishing international standards in the aerospace industry in India. Our contribution to Belgaum has been recognized by the citizens and is appreciated by private and public players as well. In the future, we look forward to set up an Aerospace Knowledge Centre and provide technical expertise and experience to aspiring students. By collaborating with technical institutes in the region, we will train youngsters and equip them with knowledge and the skill set to grow in this industry. We have recently opened up our SEZ in Belgaum to encourage more IT companies to set up their facilities. While we provide them with infrastructural advantage and service support, they will in turn encourage more investment in Tier II cities and also increase career opportunities for local talent.

## OPINION



**JAN WIDERSTROM,**  
Chairman and MD,  
Saab India

Saab's presence at Aero India is based on our commitment to contribute to India's ambition to build an indigenous defence industry of global standards. We see very exciting opportunities of collaboration with Indian industry. Saab officials and team will be present at Aero India to meet important stakeholders, current and potential customers as well as potential partner companies.

We firmly believe that the Indian Government's approach towards 'Make in India' has great synergies with Saab's approach to enabling development of defence industries through technology collabora-

tions.

Saab's 'Make in India' vision - for systems such as Gripen aircraft, Saab's AESA fighter radar and RBS 70 NG VSHORAD & BAMSE SRSAM missile systems - focuses on capability development from day one. It involves transfer of critical latest-generation technology to Indian industry, and defence R&D institutions. It involves working closely with Indian partner companies and suppliers at all levels, to design and develop the most advanced systems and sub-systems in India. It involves introducing processes and quality systems that are at par with the best in

the world. It involves Research and Development partnerships between Indian and Swedish universities that will enable India to design, develop, produce and support future defence systems - that are then exported to the rest of the world.

Saab's plan for Gripen also includes training programs for skills and knowledge development, which is critical to creating an aerospace ecosystem. We will not work by simply providing kits, but by providing knowledge so that we can build capability across all levels of the supply chain. In that way we can reach an indigenous capability to main-

tain, to sustain, to further develop Gripen in India. We will not simply move an assembly line; we will build development capability. We will design, develop, produce, support and innovate in India.

Our concept of technology transfer is real as we are willing to give India comprehensive system and software control. In short, Saab is not only looking at setting up a base here, but also helping in the development of aerospace and defence capability for decades to come.

We are intensifying our operations in India with a long term perspective.