

Leading with mettle

Tata Advanced Materials (TAML) is charting a vibrant course to future growth as it prepares to expand its business in the defence, industrial composites and aerospace sector. Chief operating officer of TAML since 2000, **Hemant Achaya** has served in other Tata companies in various capacities since over two decades. He spoke about the transformation of TAML, its presence in varied areas and his vision for the company to *Christabelle Noronha*.

Tata Advanced Materials (TAML) was once a sick company. That was in the past; the company has now gained a lot in strength and performance. Could you take us through this transformation?

TAML's original vision was to design and manufacture composite products for the aircraft and space industries. However these industries were closed to the private sector, as both ISRO and HAL made all their requirements in-house. The products that TAML subsequently chose when it embarked on its journey into composites (bulletproof vests, rigid composite armour and composite lattice structures for masts) were products that were ahead of their time in 1992, and required a lot of concept selling. Moreover, bulletproof vests were procured through global defence tenders that were unpredictable and fiercely competitive. The government did not provide any protection for Indian manufacturers.

TAML introduced several other products — composite antenna reflectors, mobile containers, telecom shelters — but these products served markets that were not large enough to sustain the company. This was the reason for the company sliding into sickness.

The next decade saw two favourable developments in the markets. Post Kargil, the Indian Army started buying bulletproof jackets in much larger numbers and more regularly. Also, ISRO and HAL commenced outsourcing composite compo-

nents to the private sector. TAML was well-poised to take advantage of both these developments. However, it is still early days, and I believe the company has a few challenges ahead — broad-basing the product range in the defence segment in order to smoothen out uncertainties and making a major thrust in exporting aircraft parts — before it can claim to be out of the woods.

TAML is present in six very different market segments. Which of these is your focus and why?

TAML operates through two divisions: aerospace division, and defence and industrial composites division. As I stated earlier, the defence segment is unpredictable and so we decided to support the product line by entering into the industrial composites segment where long-term contracts are possible. We manufacture composite components for GE Healthcare and have recently commenced business with Siemens for solutions for HV transformers. We are also exploring the promising wind energy, gas cylinder and railway interior markets.

What is the work that you do in the aerospace industry? Are there any collaborative ventures here with Indian and foreign space organisations?

We began our foray into aerospace composites with a long-term contract with ISRO for making critical satellite parts in 2003. We have since supplied critical parts for the ISRO launch vehicles also. I am proud that parts made by TAML have been successfully deployed in space for the last two years.

ISRO now considers TAML a strategic partner and we expect much more business from them.

Our first order from HAL came in 2005 for supplying around 165 components for the Advanced Light Helicopter (ALH). Thereafter, HAL has given us more orders, and this year we will be supplying more than 500 of the 800 parts per helicopter that HAL needs. HAL has also entrusted us with supplying sophisticated carbon fibre tools for their new helicopter programme.



Hemant Achaya



TAML designs and manufactures composite components for defense, aerospace and industrial applications

Based on our experience with HAL and ISRO, several US and European companies have expressed interest in working with TAML. We have contracts with Boeing for the 787 Dreamliner programme, with Pratt & Whitney (P&W) for critical jet engine components, and with Goodrich for interior parts for the Airbus. We have also supplied parts that go into first class and business class seats on the Boeing 767 and 777 airplanes. These were supplied to BE Aerospace, the largest manufacturer of seating systems in the world.

What about the company's involvement in the defence segment? What kind of standards and qualification criteria does the company have to go through to become a defence contractor?

We are the largest manufacturer of bulletproof vests for the Indian Army, having supplied more than 160,000 out of their total procurement of 200,000 vests. As this is a critical life-saving item, the tests conducted are extremely stringent. In fact, these tests were jointly developed by TAML and the Ministry of defence (MoD), as they did not have previous experience in procuring lightweight vests.

We have exported vests and helmets to Sri Lanka, Algeria and Nepal. We design and manufacture lightweight composite parts for the Indian main battle tank, Arjun and transportation containers for the Prithvi and Akash missile systems. Since last year, we are also supplying launcher tubes for the Pinaka missile system.

Last year, we also commenced a new activity of making composite solutions for armoured vehicles for various platforms and threat levels. TAML has developed new high-tech products in the body armour segment such as ultra light weight hybrid armour, 360° all-round protection solutions. Solutions for aircraft, helicopters and ships are in the offing.

Many Tata companies are now involved in supplying products and services to the Indian armed forces. Is

there a joint effort, in this context, by the Tata group? Does TAML, for example, collaborate with other Tata companies to supply the defence sector?

There are several opportunities for Tata companies to work together. We work closely with Tata Motors as a sourcing partner and solution provider for their range of armoured SUVs, trucks and buses. We expect this activity to grow significantly, and there is great synergy in pooling our respective competencies in vehicle development and composites and ballistics. The launcher tubes we make are used in the launcher systems made by the Strategic Electronics Division (SED) of Tata Power. This initiative also shows promise.

On the aerospace front, the possibilities to work together are as good. We work closely with TAL Manufacturing Solutions on integrated systems that require both composites and metal. Recently we formed a consortium between TAL, TCS and TAML to bid to an aerospace major that is launching a new aircraft. We are also in discussions with Tata Technologies and Tata Power's SED on joint programmes.

It has been reported that many global aerospace companies are sourcing, or looking to source, high-end composites from TAML. What about exports as a whole?

Exports will be a major thrust area, especially in the aerospace sector. In addition to our tie-up with Boeing, Goodrich and P&W, we have finalised an agreement with Saab Aerostructures. Many more such tie-ups are in the offing. We expect that exports would comprise 60-70 per cent of our revenues in the next five years.

We recently signed an MoU with the advanced composites division of National Aerospace Laboratories, by which we will be the manufacturing centre for the products designed by them. This MoU also gives us the responsibility to market their capabilities globally.

Do you have any technology tie-ups with foreign institutions and companies?

We have a technological collaboration with CPE



Carrying out detailed design, analysis and testing

Oy, a Finnish company, to manufacture innovative 360° bulletproof vests. In addition, we have agreements with raw material suppliers for technology inputs on joint product development. Most of our long-term business agreements with both Indian and foreign aerospace companies contain a clear agreement on technology transfer for manufacture. Lastly, our MoU with NAL provides us a rich stream of technologies in the field of advanced composites that we could exploit.

What's your view on India's private industry entering the defence contracting business in a big way? What are the advantages and the drawbacks?

The Indian defence market is very large. However it is completely dominated by the public sector. This is bound to change and the government has taken several steps to open up this sector to Indian industry. I believe this will increase the options before the Indian MoD to provide a wide range of world-class products and solutions to their users. This phenomenon has happened around the world and it is a matter of time before the Indian private sector becomes a major partner of the Indian MoD on many key programmes.

The government must increase transparency and provide a level playing field to the private sector also. Having long-term contracts instead of short-term tenders would help the private sector to plan better and commit investments. Offsets, where the foreign supplier commits to procure a percentage of the sale value (usually 30-50 per cent) as counter-trade, is a tool the government must use not just in defence and aerospace, but also in other sectors like railways, shipping and capital goods.

Perhaps having an offset clause even for procurement by private airline companies would also help. The significant drawback in dealing with defence currently is the long time it takes for contracts to get finalised and the unpredictability of the business. Any entrant will have to be prepared to invest and wait out for a long period.

What are the challenges the company faces in the short

term and in the long run and how is it coping with them? Has the global recession hurt TAML and, if so, how?

The main challenges before TAML are to broad-base the product offerings in the defence and industrial composites division, and to secure major contracts in the aerospace division. On the defence side, we have stepped up our new product introduction activity substantially. We are hopeful that the armoured vehicle business will contribute significantly. We are also tying up with world leaders in composites to leapfrog the technology gap and provide world-class solutions quickly. We have strengthened the design and development teams substantially in both divisions as this is a core competence that will separate us from competition.

On the aerospace front, we are setting up a sales network to address foreign customers. We are also leveraging the Tata corporate presence in this sector to forge relationships with customers. This business requires stringent quality certification — we are AS 9100 certified and the only company in India to get the stringent NADCAP certification for composites manufacture.

Luckily, both these businesses have longer economic cycles and the recession has not yet hit us. We are hopeful that by the time we are fully ready to cater to the global industry, the current recession would be over.

In the aftermath of the Mumbai terror attack there has been plenty of criticism of the bulletproof jackets that the police used. Your company does a bit of work in this area. Could you tell us about it?

As I said earlier, there can be no compromise on the quality of bulletproof jackets. Currently there is a lot of misinformation in the market on threat perceptions and solutions. People exploit this lack of knowledge and supply sub-optimal solutions. There is a responsibility on the part of the buyers to understand the threat levels prevailing and correctly specify the product they need. There is as much responsibility on the supplier to educate the customer on the solutions for various threat levels, and provide a solution that fully meets the current and potential threats.

We do our bit in conducting seminars and product demonstrations to ensure that the customers are well-informed. There is no compromise on the quality of materials used and in the manufacturing process.

What is your vision for the company down the line, say over the next 10 years?

I see TAML as a significant global player in composite solutions in defence and aerospace, and in the global top 10 in the businesses we operate in. This would mean attaining revenues of a billion dollars, from our current level of just \$20 million. ●