



# Shekhar Sardessai

Chairman & MD, Kinco Kaman Composites  
India Pvt. Ltd.

## Propelling Indigenous Innovation & Strategic Exports In Defense

In recent years, India has been making significant strides in its indigenous defense manufacturing sector, aiming to raise defense exports to ₹35,000 crore by 2024-25. At the recently held Indo-Pacific Armies Chiefs Conference (IPACC), India exhibited locally produced military hardware, including artillery guns, drones, anti-drone systems, and small arms, highlighting the nation's self-reliance and export potential. The gathering, jointly hosted by the Indian and US armies, has been the largest conference for land forces in the region, with 20 countries represented by their army chiefs and the rest by vice chiefs or deputy commanders, bringing together the top military leaders to enhance collaboration and understanding in the Indo-Pacific with the goal of promoting peace, security and prosperity across the region.



India's military exports have risen sharply, and imports have recorded a drop on the back of policy initiatives and reforms. Exports grew 23 times between 2013-14 and 2022-23 (from ₹686 crore to ₹16,000 crore), while the spending on imported weapons and systems dropped from 46% of the total expenditure in 2018-19 to 36.7% in December 2022.

India currently exports military hardware to more than 85 countries, with around 100 domestic firms involved in the exports. Its exports include missiles, artillery guns, rockets, armoured vehicles, offshore patrol vessels, personal protective gear, a variety of radars, surveillance systems and ammunition. Equipment that holds export potential includes light combat aircraft, helicopters, even tanks.

India also exports bullet-proof jackets to 34 countries including Australia, Japan, Israel and Brazil, ammunition (ranging from 5.56mm to 155mm) to around 10 countries including the United Arab Emirates, Egypt, Indonesia and Thailand, fast interceptor boats to Mauritius, Seychelles and the Maldives, and defense electronics to countries such as the US, the UK and France, according to defense ministry data.

While earlier, only government-to-government channels were used to boost exports of defense public sector undertakings, now the private sector is also emerging prominently in the picture. Indian defense attaches have been given directions to push indigenous military hardware in new markets, thereby opening new opportunities for Indian defense manufacturers.

The push for defense exports is pivotal for Indian OEM manufacturers, who can now benefit from not only the opening of new markets, but it also helps promoting self-reliance as envisioned by Atmanirbhar Bharat, and boosting collaborations between the government and private sector, thus fueling the growth of the Indian defense manufacturing industry.

In this issue, we spoke to Shekhar Sardesai, Chairman & Managing Director Kineco Kaman Composites India Private Limited, a leading manufacturer of advanced composite structural parts and assemblies for aerospace and defense applications including composite parts for aircrafts, helicopters, UAV's and spacecraft's. He talks about advancements in the industry and the significance of the Govt's push for the defense sector and its impact on the indigenous FRP industry players.

(excerpts)



How do you perceive the recent advancements in India's indigenous defense manufacturing sector and its potential impact on the manufacturing of plastic/ FRP parts/products for the defense sector?

The Department of Military Affairs and Ministry of Defense has changed the entire business dynamics of defense procurement. Under the Atmanirbhar Bharat Initiative, four positive indigenization lists of 411 products have substituted the parts which were earlier being sourced via imports. The Government has opened the door for private sector participation to provide impetus to indigenous manufacturing. These positive indigenization lists have a positive impact on the FRP Composites Industry as our components constitute a major part of the enlisted end products, majorly being Missile components, personal protective gears, bridges, helicopter components, vessels, UAVs, Loitering Munitions and many others.

Considering India's ambitious defense export target of ₹35,000 crore by 2024-25, what opportunities do you see for exporting plastic/ FRP components or products to international markets?

FRP Composite parts form an integral part of the artillery guns, UAVs, Loitering Munitions, counter unmanned aerial systems, anti-drone guns and jammers, assault weapons, sniper rifles and ballistic protection gear, advanced towed artillery gun system (ATAGS), Anti-tank Guided Missiles (ATGMs), artillery guns, rockets, armoured vehicles, offshore patrol vessels, a variety of radars, surveillance systems and ammunition. Several countries have expressed interest in procuring light combat aircraft, helicopters and tanks, fast interceptor boats, bullet-proof helmets from Indian Companies which have a fair amount of FRP Composites built into them which opens up vast new opportunities for such manufacturers.



In your opinion, what is the significance of collaborative efforts or partnerships with other defense manufacturers that your company is involved in to further enhance your capabilities or develop innovative defense-related plastic solutions?

Kineco Group's engagement with the defense sector started with development of Igloo Shelters for the Army during and immediately following the Kargil War. We manufactured and installed over 500 Igloo Shelters in base camps and hills in Kargil and Drass areas. That was achieved with our own efforts. But we were quick to realize that in order to make a deeper impact on defense business we would need to collaborate with other defense manufacturers having enhanced technology and innovative solutions. Kineco Group is working with other stakeholders to develop an entire ecosystem of defense manufacturers which can be achieved only through collaborations and partnerships. Today is the age of collaborations wherein each partner brings its USPs to the table which can seamlessly be integrated with other partners to meet the end user's needs and there is enough business on the anvil for each of the partners.

## ► Interview

Given the government's push for self-reliance in defense manufacturing, what steps has your company taken to enhance its capabilities and contribute to the "Make in India" initiative?

Kineco has been a flag bearer of self-reliance and Make in India philosophy, even before these terms were coined or popularized. The successful development of Sonar Dome for naval warships has been hailed as one of the finest stories of 'Make in India' in Defense and has received recognition from Ministry of Defense at the hands of Hon'ble Raksha Mantri Shri Rajnath Singh. Our aerospace and defense subsidiary Kineco Kaman has supplied over 35000 parts to HAL for various indigenous helicopter platforms. Kineco volunteered to support DRDO in developing India's first full carbon fiber light weight rapid deployable, heliportable bridge for military and disaster management applications. We continually invest in enhancing our capabilities, be it in acquiring new skill sets or state of the art equipment. We have consciously taken steps to enhance our testing capabilities, acquire IP from Israel and Europe to manufacture the UAVs and Loitering Munitions in India to meet the requirements of our defense forces.



What challenges do you anticipate in meeting the growing demand for plastic/ FRP parts/products in the defense sector, and how can manufacturers address these challenges?

I do not foresee any challenges on the capacity or capability front. I have full confidence that given a fair chance, Indian FRP Composites Industry would be able to meet the growing demand of FRP products in the defense sector. However, there are external factors like dependency on key raw materials which are still imported or determined by few global players and that has been a long-term hurdle that we have failed cross. This inhibits our ability to be competitive with companies from US/ Europe and further such dependencies and long lead and IP rights vested with a handful foreign suppliers of these critical raw materials are risks particularly in a volatile geo-political environment.

The key lies in extending the 'MAKE IN INDIA' initiatives to strategic raw materials and this requires viability gap funding from governments such as the PLI scheme. I am aware that this is on the agenda of the government and Niti Aayog at this time.

India's military exports have seen significant growth recently. How has this trend affected the industry as a whole, and what strategies has your company implemented to capitalize on this growth?

I feel we are in a sweet spot as the defense sector contributes as significant part of our business portfolio. We have been catering to the requirements of the military since our early days and this growth has now opened up new vistas for us. Earlier we used to restrict ourselves to build to print opportunities, and now we are catering to design and build opportunities. Recently I visited London as part of Indian Defense delegation to DSEi, a marquee defense exhibition and I am pleased to state that we found immense opportunities for Indian companies operating in the defense sector. As mentioned earlier, we are collaborating with the technology partners who are looking for efficient manufacturing partners to produce quality products in India to meet the Indian requirements with a broader objective to export to meet the global requirements. We rely on a time and tested strategy of supplying quality products within the stipulated delivery timeline, each time, every time and that has been the mantra for our growth.



In your opinion, what kind of innovations or technological advancements in plastic/ FRP manufacturing have allowed the industry to meet the stringent quality and performance requirements of the defense sector?

I feel timely investment in technology innovations like smart systems, artificial intelligence, connected devices, supply chain applications and additive manufacturing, Robotics & Autonomous Systems, high end scanning and testing equipment has significantly contributed to meet the quality and

performance requirements of demanding defense sector.

How does the availability and reliability of raw materials for plastic/ FRP manufacturing in India that is largely import dependent impact production capacity and ability to meet export targets, and how could manufacturers manage this aspect?

Indian FRP Composite Industry is still dependent on the western countries for import of almost all the advance raw materials and specialized equipment required in defense manufacturing. The cost fluctuations and the long lead times of the imported raw materials continue to gravely impact the manufacturing capacity and ability to meet export targets. The challenge is that we cannot even store



Could you share insights into the sustainability and environmental impact considerations in the manufacturing process of plastic/ FRP components or products for the defense sector?

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