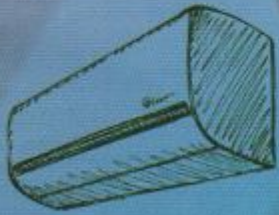


THE ECONOMIC TIMES

# POLYMERS

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**FURNITURE**  
SOLUTIONS FOR  
FUNCTIONAL DESIGN



**ADDITIVE  
MANUFACTURING**  
CREATING FUTURE



**AGRICULTURE**  
VOICE OF CUSTOMER IS  
THE MOST CRITICAL FACTOR



*Plastics in  
White Goods*

Defining appearance, shape and functionality of the appliances





# Voice of Customer is the most critical factor



**SANJAY V RAUT** – PRESIDENT, TECHNICAL & NEW BUSINESS, GARWARE -WALL ROPES LTD SPEAKS TO ET POLYMERS ABOUT THE COMPANY'S BUSINESS IN THE SECTORS OF AGRICULTURE AND AQUACULTURE.

By Swati Deshpande

**Polymer is an important material in the fields of agriculture and aquaculture. Can you please elaborate on the company's products made of polymers?**

Polymers are versatile by nature and thereof are a very vital material for the technical textile industry as they can be tailored to meet specific performance requirements of end customers.

We at Garware-Wall Ropes Ltd., understand polymers to the core. Our years of expertise in engineering of polymers and in-depth knowledge of customer needs, is what enables us to offer differentiated application-focused solutions across sectors including deep-sea fishing, aquaculture, shipping, agriculture, sports, coated fabrics, geosynthetics and defence segments in more than 75 countries globally.

We have integrated state-of-the-art manufacturing facilities in Pune and Wai, where we design and manufacture a range of products including ropes, nets for mechanised fishing, aquaculture cages, nets for all kinds of sports; insect and shade nets for protected agriculture amongst others.

Our major products include 'Garfil' range of fishing nets for trawl fishing; 'Star' and 'Sapphire Excel' net cages for eco-friendly fish farming; and predator nets like 'Sapphire Sealpro' and 'Sapphire Ultracore' to protect aquaculture farms from predator attacks.

We recently launched our X2 Aqua Mooring ropes for aquaculture mooring applications. These ropes are very light in weight



**Innovation has always been the key driver for us. We have a long history of innovation and have filed over 20 patents across all the segments.**

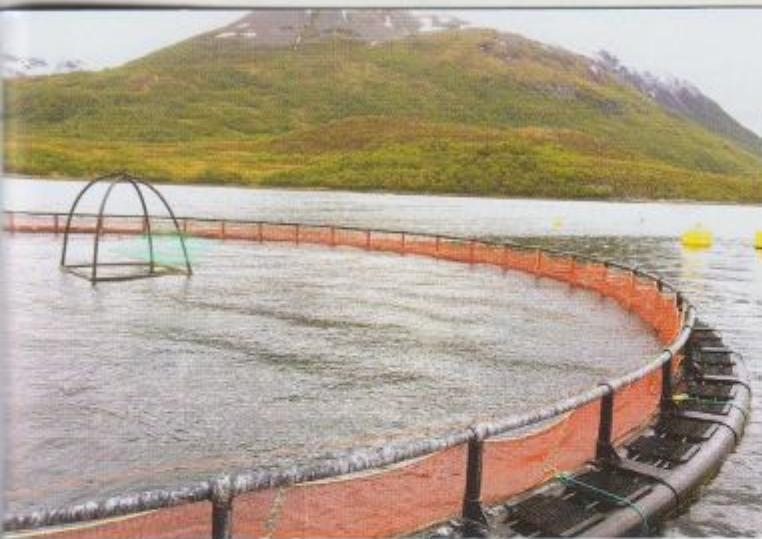
in comparison to traditional ropes and at the same time deliver better performance.

In the agriculture segment, post intensive research with farmers, we have developed a wide range of products, which includes anti-bird nets, insect nets, shade nets, crop support nets, sericulture nets, anti-hail nets, floriculture nets and grape nets to protect and enhance the yield and quality of crops.

**Tell us about your manufacturing capabilities with regard to agriculture and aquaculture products.**

Garware has state-of-the-art manufacturing facilities in Wai and Pune providing solutions to diversified sectors. The Pune plant encompassing 29 acres of land manufactures ropes, PPMF (Polypropylene multifilament) and Geo Textile products. Our Wai plant spread over 40 acres of land undertakes the manufacturing





of all types of twines, knotted and knotless nettings, coated fabrics and defence related products. Both our plants are ISO certified and follow global practices of operational excellence like JH, TQM, Kaizen, 5S framework etc.

We possess in-house capability for extrusion, knitting, wet-processing, fabric weaving, coating and fabrication of end products catering to the agriculture as well as the aquaculture segments. Our dedicated R&D unit (recognised by the Dept. of Science & Technology, Govt. of India) coupled with excellent manufacturing capabilities enable us to offer highly customised value added products to our customers.

#### Tell us about one of the innovations in this segment that gained most popularity

Innovation has always been the key driver for us. We have a long history of innovation and filed over 20 patents across all the segments. In aquaculture, traditionally nylon cages were used to farm fish in the oceans. Nylon cages absorb water, shrink and their strength drops as soon as the cages are installed in the water. Also, nylon nets are susceptible to bio fouling which block water exchange leading to reduced fish growth. Post understanding customer needs, our R&D team innovated to develop STAR net

cages with better wet abrasion resistance, no shrinkage, lower adhesion strengths of fouling and easy net washing properties. Our patent pending technology has revolutionised the aquaculture industry and fish grown in our 'green' cages are healthier and have a better growth rate.


With regards to agriculture, traditionally tape net has been used for protected cultivation. We have popularised the use of Monofilament nets for shade nets as these possess higher strength and longer life. We also introduced woven Insect protection nets which aid in keeping the insects away from the crops.

Many new products are in the pipeline across business segments and we are hopeful that in the foreseeable future, 30-40 percent of our revenues would emanate from these new products.

#### Tell us about your R&D efforts in this segment

Our R&D team comprises of people with multi-disciplinary expertise in various fields like polymers, textile, chemicals, etc. and have been the key to various innovations done at Garware. This is ably aided by the in-depth knowledge of applications for various sectors like fishing, aquaculture, agriculture and many others garnered through intensive customer visits.

We follow a robust innovation process to create a funnel of products to develop application focused solutions that deliver immense value to our customers. Each of our products undergoes various gates with voice of customer being the most critical point for developmental activities. Before commercial launch, our products are put through a stringent testing in various reputed Indian and International research institutes and laboratories and field trials.

With relentless focus on innovation, we have developed various differentiated value added solutions making us the preferred partner of our customers globally. 

## PRODUCTS

### Guide systems that are four times quieter than recirculating ball bearing guides

#### NOISE TEST ILLUSTRATES DIFFERENCES IN THE DESIGN PRINCIPLES



**W**hether in laboratory technology, furniture technology or fitness machines – in applications where precision in the tenth of a millimetre range is sufficient, but very quiet operation is required, linear guide with sliding

elements made of plastic are very impressive. In contrast to recirculating ball bearing guides no metallic bodies are rolled here, which causes vibrations and thus increases decibel levels. In the video the motion plastics specialist igus shows the comparison of different drylin guide systems with dimensionally identical alternatives. On average, the linear guides from igus are about 20 decibels quieter. This corresponds roughly to the difference between a running refrigerator (-50 dB) and a vacuum cleaner (-70 dB).

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