"The woven polymer industry has a bright future in India"

...avers Makrand Appalwar, Chairman & Managing Director, Emmbi Polyarns Ltd. Among the prominent players in India's woven polymer processing industry, Emmbi Polyarns has keen interests in applications ranging from flexible packaging to agriculture. With experience gained over a decade in the world of woven polymers, Appalwar shares his ideas and insights in this exclusive interaction with **Annabel Dsouza**.

Current market dynamics and demand drivers in India

The Indian Polymer Industry can be divided broadly into various segments such as extrusion & films, moulding, pipe, automotive and others. The growth drivers for each segment are unique and growing. The global size of the polymer industry is estimated at 10.5 million metric tonne.

Emmbi is a prominent player in the field of extrusion and film manufacturing. The major growth driver for the company is increasing exports and growth in Indian Fast Moving Consumer Goods (FMCG) and other consumer markets. In the past 25 years, the extrusion and film industry has matured in the country. The industry had initially progressed in the 1970s in developed economies like the US and European Union. Multifold increase in the cost of wages forced the industry to shift its base to satellite countries such as Mexico and other South American countries for the US market and East European countries for the European market. This shift took place during 1985-1995.

With the increase in popularity in the North American Free Trade Agreement (NAFTA) and formation of 'European Union', the wages in these satellite countries skyrocketed and the highly labour-intensive packaging industry started looking for a new place to settle. This was the period when India experienced the 'Polymer Revolution'.

Innovations and R&D initiatives

At Emmbi Polyarns, we believe that water is one of the most scarce resources, and hence offers a major challenge. This lends an opportunity to conserve and distribute this precious resource in the most efficient manner. We are particularly focussed on various Research and Development (R&D) initiatives related to water conservation.

In the past 12 months, we have launched a range of water conservation products under the brand 'Aqua Save'. This product range focusses on water conservation and is one of the biggest achievements of the company.

The company has commissioned a pilot project for its most innovative product 'Canal Liner' in the Goki Irrigation Project in Maharashtra. The product has been tested and approved by the Department of Irrigation, Government of Maharashtra.

Technical advancements for effective processing

The new-generation machines that offer better speed and temperature controls are more polymer-friendly and less waste-generating. Improvements in the drives from normal two-dimensional drives could only control voltage and current, but with the introduction of vector drives, the third parameter of frequency has also come under control.

One can achieve precise control over speed while keeping the voltage and current constant. The newly introduced SSR technology displays the required stability in the temperature control mechanism. In short, modern machines are sharper and leaner than the earlier ones.

Cost-quality ratio and solutions for India's flexi-packaging industry

With advancements in various additives and catalysts in polyolefin, the modern polymer is ready for processing at much higher line speeds. This has improved the ratio of power consumption to per kilogram output of the polymer. Today, polymers can not only be processed at a higher line speed, but these also offer considerably higher tenacity and elongation if all parameters are adjusted correctly.

The base product manufactured by Emmbi remains as the 'Technical Textile'. For this base product, value-added usages are being developed by the company, which may also be developed along with the users. Currently, the company produces different types of packaging material for domestic as well as export markets. In the domestic market, the company remains one of the most active players for the packaging needs of FMCG products such as detergent powder, branded salt and wheat flour. In recent years, the company has acquired substantial share in the export market for various packaging needs for products like construction aggregates, chemicals, seeds, fertilisers, cement, food grains, etc.

Some of the products manufactured by the company with highest value addition include car/automobile covers, container liners, anti-corrosive packaging, electrically conductive polymer-based packaging, etc.

Efforts towards sustainable manufacturing

At Emmbi, we continuously work on our manufacturing processes and product designs to reduce the manufacturing cycle time. The shorter cycle time offers us the required reduction in power consumption. In the past 5 years, we have been able to bring down our power consumption from 1.1 unit per kg of polymer processed to 0.85 unit per kg of polymer processed.

We have also started an online process waste recovery system to further reduce our manufacturing waste during production. We use the larger cuts of plastics materials to make 'Rural shopping bags', thus reducing our material wastage.

Recent Government legislation against flexible packaging

The fact that the legislation is not against any packaging, is appreciable. The law recommends that we must improve our ability for recycling. Most of the Indian recycling industry work in the unorganised sector. In order to give them enough opportunity to earn their daily living, they must be provided with a specific mass of polymers. Only then, recycling of trash will be a viable option for them.

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Coping with rising raw material prices

In order to cope with the volatility in polymer prices, we have started buying raw materials from global suppliers. Nearly 40 per cent of our polymer raw materials comes from various suppliers around the world. Generally, we enter into 'Fixed Price Contracts' on a specific volume with our domestic suppliers immediately after booking the order. We also maintain a critical stock level to a certain percentage of our booked orders.

Export market potential of Indian woven polymers

The export market for the woven polymer is growing fast. Emmbi is ranked among the top three players of woven polypropylene or polyethylene products, with strong foothold in over 30 countries worldwide.

Polymers enhancing agricultural productivity...

Emmbi has a unique product line for the agriculture sector. It is called the protective irrigation system. In this system, the rain water is channelised though poly-lined mini-canals to a small pond in the corner of the field. Farmers can use Emmbi Flexible tank to lift the water for irrigating the field during the 'Dry Spell'. This system had won an award for New Concept product from the Institute of Economic Studies in 2008. Emmbi canal liners are effective in saving precious water from percolation loss. The efficiency of the product is to the tune of 98 per cent in terms of percolation losses. The canal liner is just adjacent to the canal, and also protects the land from over-watering. This increases the net cultivable gross domestic product of the nation.

Challenges faced

The major challenges are overburdened infrastructure in terms of power, roads and ports. The country needs to work more aggressively to improve the state of affairs in all three areas.

Future of woven polymers in India

We believe that the woven polymer industry has a bright future in India. The industry has the potential to grow to the level of 1,500 KT by the end of 2015. The industry has already attracted investment close to ₹ 3,500 crore, and helped create employment for over 3.5 lakh people.