

India's machinery makers embrace challenges

The plastics industry is one of India's major engines of growth that looks ahead to a year of increasing growth rate and expanding markets, adapting well to the flux as opportunities for varied applications for plastics continue to rise, all this against the background of a slowing GDP, the demonetising policies introduced last year and the impending implementation of GST this year.

For many economies worldwide, the previous year, emblematic of events that challenge established beliefs and standardised political frameworks, has epitomised the axiom that the only permanent thing (on earth) is change.

The new year brings a mixed bag of opportunities. On the one hand it has traces of the spillover impact of 2016, yet at the same time there are cues for a more optimistic outcome. Fortunately for the Asia-Pacific region, likewise vulnerable to global risks, it is able to maintain its momentum amid soft growth prospects.

In the region and the world, India has become a benchmark for growth. But again, what has been "set in stone" for many years in the past has been challenged after the Indian government demonetised high value currencies (in a bid to crack down on corruption and terrorism) last year. Though the move, critics say, may keel over India's "world's fastest economic growth" claim, especially since the **International Monetary Fund (IMF)** has downgraded the country's growth projection, yet there are more positive than negative outcomes from this strategy. Economists at the **Moody's Investors Service** and India-based affiliate **ICRA Ltd** project that the disruption is only short-term; and by mid-year, India's economy will start to pick up.

As for the country's plastics industry, consultancy firm **Lucintel** forecasts the plastic pipe market to grow at a CAGR of 10.4% from 2016 to 2021, owing to the growth of the building/construction and infrastructure sectors.

Engineering plastics have a potential CAGR of over 13% from 2015-2020 report, finds **TechSci Research**. It attributes this growth to demand from diverse industries including automotive, electrical & electronics, construction, and others.

As well, the country has a lucrative demand for high-performance plastics, notwithstanding its burgeoning requirement for plastic packaging, forecast to reach US\$73 billion by 2020, according to the **Federation of Indian Chambers of Commerce and Industry (FICCI)** and **Tata Strategic Management Group (TSMG)**.

Metamorphosis to a global leadership

Extrusion and thermoforming machinery maker **Rajoo Engineers** is an example of success that follows changes. The Gujarat-based manufacturer describes its more than three decades of providing technology solutions for the plastics industry as a "quick metamorphosis" from its modest beginnings in 1986 in the Gujarat town of Rajkot to its current global status with offices in India and overseas.

Technology-driven, Rajoo Engineers ushers in 2017 with new developments that will help sustain the growth of the plastics industry.

Sunil Jain, President of Rajoo, says the company is contributing to skills development in the plastics sector by setting up an innovation centre

In an interview with PRA, Sunil Jain, President of Rajoo, when asked what Rajoo expects as well as aims for this year, replied, "At Rajoo, in 2017, our focus will be on high-output barrier and non-barrier films lines, in addition to high-output sheet extrusion lines. Thus, offering a complete barrier packaging solution to the industry, an application poised for exponential growth owing to the entry of organised retail in India. At the same time, our focus on exports will be further increased."

While Rajoo has forged strategic partnerships with firms like Italian pipe machinery maker **Bausano**, German blown film machine maker **Hosokawa Alpine** and **Meaf Machines** of Netherlands, Sunil says the company is continuing to chalk up other plus points.

"Rajoo has several firsts to its credit, not now but since its inception. We have brought world-class affordable technologies to the industry in India, even in the past, and we continue to do so now. Offering import substitution to the industry has been our forte. Our sister company has successfully introduced machines for producing WPC (Wood Plastic Composite), which is a substitute for wood. Yet, another environment friendly technology offered by our company."

As regards plasticulture, Sunil says the firm is now executing a project for an Indian customer for a seven-layer barrier, 4.2 m-wide blown film line to



produce all polyolefin films for packaging, which are fully recyclable unlike films with barrier polymers. "It also offers benefits of down-gauging, thus reducing the overall usage of plastics. Energy consumption is yet another eco-friendly parameter and this line has been certified by TUV at a never before 0.3001 kWh/kg of film," claimed Sunil.

As for industry 4.0 or IoT-ready technologies, Sunil remarked, "From the perspective of Rajoo Engineers, there are two focus domains: automation and data exchange in manufacturing technologies in making machines on one hand and our machines being automated and using cyber technology controls."

He adds that the firm has taken steps in both directions. "Cloud-based ERP for creating a virtual factory is already under implementation. Further, our customers using high-output blown film lines already get internet-based remote support. Similar technologies are also being introduced in our complete range of machines. However, bandwidth and speed for internet access continues to be challenge."

Dealing with skills shortages

While the availability of technology is aplenty, India's plastics sector has a downside though as explained by Sunil. "The skills pool to support the plastics manufacturing industry in India is scarce and it has reached a critical stage and is a major issue. While the government of India and our association – **Plastics Machinery Manufacturers Association of India (PMMAI)** – of which we are one of the founder members, have taken effective steps in this direction, Rajoo on its own has launched a unique initiative, a first by an Asian plastics machinery manufacturer in the blown film and sheet extrusion segment."

The company is in the midst of setting up the Rajoo Innovation Centre, based in Rajkot, to be up and running in the middle of 2017. "It will be equipped with a state-of-the-art seven-layer blown film line and a barrier sheet extrusion line and will impart training to develop a skills pool for the industry. In addition to contemporary testing facilities, it will also provide an impetus for development of barrier packaging materials," revealed Sunil.

While there are challenges on the horizon, Sunil is optimistic of the future. "The demonetisation drive launched by the government of India may have been disruptive but it is a bold step forward. We foresee it affecting the whole economy in the short term including the growth of the plastics industry. The introduction of GST, yet another major economic reform to be introduced in 2017, will positively enhance the "ease of doing business". Our targets for 2017 will factor the above major initiatives in the country," he concluded.



produce agriculture films. "This will yet be another first in the industry in Asia from Rajoo. The slated output to produce barrier film is 1,500 kg/hour and is targeted for various applications – FIBC liners, canal lining and agriculture films." Meanwhile, its other latest technology, Pentafoil five-layer barrier film line, introduced at the K2016, is specifically

Rajoo's five-layer Pentafoil line shown at K2016 last year