

Dec 2015 - Jan 2016 • Issue 2.2 • ₹ 150

# POLYMERS

*Communiqué*

**Harsh Mariwala**  
Chairman  
Marico Limited

## **Manufacturing** It's All About Transformation

**3-D Printing of Plastics**  
Era of Digital Manufacturing

**OPal's USD 4.5 bn Project**  
A Look Into

**Clear Barriers,**  
to Barrier Packaging

# Inefficiency

## A Hurdle to Overcome for Plastics Processing



**Mahendra Sanghvi**  
Executive Chairman  
Shaily Engineering Plastics  
Limited, Vadodara

We should take it upon ourselves to continuously make improvements through implementation, adherence to right systems and processes as well as through innovation in manufacturing methods for enhanced efficiency, views Mahendra Sanghvi.

### Growth of the Plastics Industry

The plastics industry in India is in its nascent stage; when compared to the US and China, India's per capita plastics consumption stands at 9.7 kg v/s 109 kg in the US and 45 kg in China - purely based on India's population and growing middle class. India's per capita plastics consumption is projected to more than double over the next 5 years. In order to cater to this additional demand, the plastics processing industry will need to grow from a current installed processing capacity of 30 MMT to 45 MMT per annum by 2020.

Bulk of the additional demand is going to be driven by three sections; packaging, infrastructure and agriculture. Therefore, from a technology perspective, it is believed that the processors which are primarily focused on implementation of newer technologies can help to save power and labour. The two most important priorities for manufacturing should



be focused on efficiencies of the current installed capacity and workforce.

## Efficiency in Manufacturing

The most important factors that affect the plastics processing industry are power, logistics, infrastructure and labour. From which, power and labour are elaborated here.

### Power

When it comes to power, we are aware of the shortage that our country faces. Many of whom I have interacted with in the manufacturing sector have always affirmed their inconvenience of not having consistent power and, therefore, feel the need to run manufacturing operations on a DG sets.

### Labour

We, at Shaily, have developed several training programmes to educate the workforce highlighting the importance of their work. For example, we manufacture an insulin pen for Sanofi that is basically used by diabetics for injecting insulin. Insulin can be both, life saving and life threatening if under dosed or over dosed; therefore, it is absolutely critical that every pen that leaves Shaily is of the highest quality. In order to ensure that our workers who are assembling the drug delivery device are paying extra attention to their work, we devised a training programme which showed them the implications of their actions and how important it is to be

diligent in their work. We have several such programmes where we educate our workforce on cGMP, injection moulding and quality control. I believe that 'Skill India' is one of the most important factors for the future of manufacturing in India and a great deal of responsibility lies on the shoulders of manufacturers, like us, to contribute towards achieving that task.

To put it in numbers, a study conducted by the Boston Consulting Group in 2013 pegged India's productivity per labour at USD 3000 v/s USD 67,000 in China and USD 155,000 in the US.

## Factors to Improve Customer Delight

In our experience, global giants are looking for suppliers who can offer sustainable prices; besides lower prices, the right quality, on-time delivery, ability to manage end-to-end supply chains and also be innovative enough to bring about cost reduction through either improvement in process or design or material or a combination are requirements which were not the case in the past. Indian manufacturers over the last 10 years had to compete primarily on costs, which was a difficult situation for Indian plastics processors to get business from the global customers. No amount of technology, skills and infrastructure can help if a company does not excel in performance. Any organisation's marketing / business development tool is its proven performance. Having said that, today customers have become extremely demanding in terms of their requirements as compared to 10 or 20 years ago. Today, it is absolutely essential that we deliver on our commitments without any deviations either on timelines, quality or cost.

Therefore, new opportunities will depend on historical performance. Conversion of new opportunities will depend on how much value you are able to bring to your customer through innovation and finally, both revenue generations and, therefore, profitability will depend on both, the quality of project execution as well as the time within which it is executed.

## A New Dimension to Innovation

With both, performance and project execution being fairly self-explanatory, explained here is a novel approach to innovative manufacturing.

Innovation does not necessarily mean high level of technology and automation; rather it is the right combination of labour, technology and automation. For example, at Shaily, we had taken on a project for a customer to manufacture household brushes with a 2 colour handle. While we were awarded the project based on price, however it was the innovative manufacturing setup that resulted in that price. While others were using high tech 2 colour moulding machines for moulding of the handles and then a fully automated assembly process for bristling, we looked at several options before concluding that for this particular product, it is best to do over moulding on two separate machines (traditional simple technology), with external cooling apparatus and then investing in the fastest bristling machine for manufacturing the brush.

When we look at the new role of manufacturing in the plastics processing industry, the biggest challenge to overcome is going to be inefficiency, whether it is less productive labour, equipment, lack of systems and processes or lack of innovation.

### Success @ Shaily

If someone were to ask me what is the key to Shaily's success, I would have to say that it is a combination of varied factors; performance on existing operations, cost effectiveness through innovative manufacturing solutions, on-time and within cost delivery of new projects. These are important not only to delight your customer, but also for your growth and improved profitability.

**In order to cater to the increased demand of plastics consumption, the plastics processing industry will need to grow from a current installed processing capacity of 30 MMT to 45 MMT per annum by 2020.**

This setup was, therefore, a combination of old fashioned simple technology and in-house innovation for reducing cycle times and high technology / automation for bristling. Therefore, it is very important going forward that plastics processors evaluate various options of manufacturing a given product in order to come up with the most cost effective and efficient setup.

Some realities of India when it comes to the plastics processing sector are unfortunately such that the environment does not promote innovation. Injection moulding, for instance, is viewed as a conversion business, where most customers are agreeing to buy a capacity and are paying purely for conversion; this unfortunately does not promote innovation at the processor's place. In the past few years, we have tried to position Shaily as a service provider than a manufacturer and we have also been fairly successful in this endeavour. The reason

I say this is because there are essentially no barriers to entry in injection moulding given that money is available. However, any company will only grow if they are able to add value to the customer apart from the lowest price or shift rate.

### **Eminence and Acquiescence**

Quality and compliance is one area that will differentiate between a quality moulder and me-too moulder. It is very important to understand that having the right quality management system and ensuring compliance to that system will only benefit the manufacturer. While a lot of companies use certifications only as a marketing tool, one should be more focused on ensuring that the system is adequately adapted and followed within

the organisation to ensure consistency in manufacturing both, from quality and cost perspectives.

Quality assurance is a function that in the plastics processing industry is viewed simply as a necessity for compliance; however, this cannot be further from the truth. For profitable growth of any organisation, it was essential that all processes within the organisation are developed and validated by our QA department. This not only helped us become process-oriented rather than people-oriented, but also helped us reduce our costs of poor quality, helped increase our efficiencies and also had other intangible savings.

### **To Summarise**

I would like to reiterate that when we look at the new role of manufacturing in the plastics processing industry, the biggest challenge to overcome is going to be inefficiency, whether it is less productive labour, equipment, lack of systems and processes or lack of innovation. As an industry, we should take it upon ourselves to provide the necessary skills to our workforce, to ensure equipment efficiency through proper maintenance and to continuously make improvements through implementation, adherence to right systems and processes as well as through innovation in manufacturing methods.

It's our country, let's keep it clean!

**POLYMERS™**  
*Communiqué*