



Interview



Digitisation Journey in Plastics Processing Industry..

A face to face Interaction with Mr. Vinod Vaswani(VV), President, A.T.E. Enterprises, BU: EcoAxis to Mr. Ginu Joseph (GJ) Editor Chief and CEO, Modern Plastics India and Modern Plastics TV.

GJ : How is digitisation and Industry 4.0 relevant to the Plastics Industry in India?



VV : India's plastics processing market is growing at a CAGR of approx 11% and is expected to be a 1,500 BNR or 21 BUS\$ market by 2020.

There are approximately 200,000 machines currently installed in the market place with nothing less than 10-12,000 machines getting added every year.

This growth rate comes at a point where consumption of processed plastics is around 12 kg per capita v/s a global average of 28 kg per capita, consumptions in China/Brazil being in the range of 35 kg per capita. This is a clear indication that there is a huge market growth potential.

With automobiles starting to move towards electric vehicles, there will be much fewer metal parts and many more plastics parts. As we can see, these are just early days for plastic processing.

Additionally, competition and cost pressures will continue to demand operational improvements from every

market player. Companies who have been early adopters of this technology have reaped in financial gains between 10-30% mainly in wastage reduction, efficiency improvement, improvement in uptime / availability, energy savings etc

As an average, digitisation with Industry 4.0 can bring anything above 15% operational benefits- translating into a 3 billion USD operational gain opportunity per year! This is pretty huge.

GJ : Could you describe a few applications that could bring benefits to customers?

VV : Let's look at the opportunities for both end users as well as for machinery OEMs. End users would directly gain from deploying IoT and benefiting from improved operations of their plants. End users typically invest in multiple



technologies and various brands of machines. What this means is that they would expect the Industry 4.0 solution provider to be able to offer a solution which is machine as well as technology agnostic. In other words, the Industry 4.0 technology should be able to cover the entire spectrum of the installed machines also covering injection, blow molding,

extrusion as processes, utilities etc. OEMs would play a major role and ensure that their machines are enabled for digitisation and Industry 4.0. This way, the customer can invest money without getting troubled about whether the machine will digitally communicate with the external world!

One of the most common use cases for OEMs is the reduction in cost of warranty delivery via service offerings using data analytics. OEMs have an even more interesting opportunity with some of them using analytics to change the way they do their business - selling equipment as a service for example (opex model) v/s selling them as capital equipment. OEMs can use IOT to deliver better service using analytics. This would include maintenance management and predictive maintenance.

They have an even more interesting opportunity of selling equipment as a service (opex model) rather than selling it as capital equipment (capex model). This could be hugely disruptive for manufacturers eyeing a game changing situation.

GJ : Can you elaborate some direct benefits to users?

VV : Digitisation at the core has enormous benefits for users. In a competitive world, it is impossible to be able to perform optimally unless relevant information is available to the decision maker at the right time and place. Having said that, Industry 4.0 applications also benefit end users in several direct ways:

- direct operational performance
- reduced downtime and superior quality of product



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- distinctly improved planning of production
- high level of material reconciliation
- improved resource consumption performance (e.g. energy, labour)
- costs towards technology adoption are variable costs and not fixed costs
- integrated decision making (ERP, material tracking, maintenance and operations all interconnected)

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measure analyze improve

- early warning including failure prediction of machinery.

GJ : What are the challenges in the implementation of Industry 4.0?

VV : There are of course some challenges. Biggest of them being use of data analysis of a much deeper kind for decision making.

Data connectivity of the installed base (existing machines of older technology) is easily one of the most serious

challenges. Customers look for solution providers to be able to offer solutions for all types of machines - whether digitally enabled or not.

Majority of data collection and compilation being manual, it automatically has some limitations imposed on the user organisations. There is only a given level of data crunching that can happen manually and not beyond. This becomes a challenge for Industry 4.0 implementation because the extent of data access and insights is of such a level that it needs a quantum leap from the manual systems.

Another serious challenge that is faced by users is behavioral change management of the people who start to use this new technology. This usually is a long drawn process consuming months before all stakeholders are aligned and focused on maximising returns on their investments made towards Industry 4.0.

GJ :How do you see the future of Industry 4.0 for Plastics Industry in India?

VV : There are several users who have

now used this technology for a few years. This proves that once the user has an understanding of how this technology helps and supports them for operational gains, customers would like to adopt this technology.

From the OEM perspective, as businesses get more competitive, OEMs need to continuously find newer ways to be ahead of the curve as compared to competition. Providing Industry 4 enabled machines is one sure way of being ahead. Manufacturers like Windsor, Toshiba, Milacron, Fanuc etc are leading examples.

In terms of usage, it is still early days as far as the plastics industry is concerned but surely and steadily customers are showing eagerness to adopt this technology for the immense benefits it provides.

Out of the total installed base of more than 200,000 machines, only about five thousand machines currently have deployed Industry 4.0, which tells us that there is a large potential to be explored in the market place.

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