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INDIAN PLASTIC INDUSTRY: PAST, PRESENT AND FUTURE

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ABSTRACT
The Plastic Industry has emerged as a leading industrial sector in India. In the history of India's industrial revolution, no industry has taken such great rides as the plastic industry. The plastic industry shapes the world we live in today whether it is industrial, technological or commodities used on regular basis. Since last decade with the advent of new and improved technologies, the industry has gained greater importance with the production of better and improved quality of plastics which has supported the radical change in human life and its day to day activities and even the plastic culture is dominant to every part of Indian economy. The paper is mainly focused on the past performance and present scenario of plastic industry in India and also put light on the future prospect of this industry. The contribution of plastic industry to the economic development of the country since its inception has been discussed with the reference of historical background and the present status of it. For the general reader it can imbibe a holistic idea of the Indian Plastic Industry along with its current strengths and limitations.

KEYWORDS
Indian plastic industry, polymer, historical background, present scenario, future forecast.

INTRODUCTION
The Indian Plastic Industry is one of the fastest growing industries in India at present and offering great investment opportunities. India is a favoured destination for overseas investors and offers the advantages of an open economy, increasing liberalization, a stable democratic political scenario, highly skilled work force with fluency in English. Various overseas players wish to explore the Indian market and invest in opportunities thrown open by the country, projected to be world number 3 in plastics consumption in coming years.

The Indian Plastic Industry has made promising beginning with the production of polystyrene in 1957 and thereafter, significant progress has been made and the industry has grown and diversified rapidly. Currently, the Indian plastics industry is spread across the country, employing about 4 million people and over 2,000 exporters. It operates more than 30,000 processing units, of which 85 per cent to 90 per cent are small and medium enterprises (SMEs). Such potential Indian market has motivated the entrepreneurs in the country to acquire technical expertise, achieve high quality standards and build capacities in various facets of the booming plastic industry. The Phenomenal developments in the plastic machinery sector are coupled with the developments in the petrochemical sector, both of which support the plastic processing sector. The Indian plastic industry has taken great strides and in the past few decades, the industry has grown to the status of a leading sector in the country with a sizable base.

After liberalization, the Government of India has been quite supportive and made several policies to promote plastic industry. The Petrochemical Department of India is in the process of setting up a development council to promote the development of downstream sectors in India. This clearly illustrates that the Government of India is quite positive and supportive to new investments in India. In fact, many foreign entrepreneurs have been able to set up 100% owned companies in India in the plastics processing and machinery industry sectors. Foreign equity participation in the petrochemical industry has been increased to a 51% stake.

REVIEW OF LITERATURE
The Indian Plastic Industry has undergone dramatic changes since its inception be in the form of government initiatives or be it the number of players entering or their fluctuations in their operating scale. In the coming days, plastic will definitely have a bigger role to play particularly because of its wide utilization areas and diverse applicability. Although some controversies have crept in due to inadequate knowledge of the production techniques and their extent of adverse effects; still the industry believes that modern R & D efforts and government initiatives encouraging plastic usage will definitely help in overcoming these discrepancies. The plastic industry in India is highly heterogeneous in nature due to the diverse nature and size of firms playing in the field.

Since independence, plastic industry in India has been playing a predominant role in shaping our lives. As it an indispensable item in our day to day activity, so its importance cannot be undermined. Since last decade with the advent of new and improved technologies, the industry has gained greater importance with the production of better and improved quality of polymers (plastics) which has supported the radical change in human life and its day to day activities. The name "plastic" has been coined from "plastikos"- a Greek word meaning capable of being shaped or molded. The material is formed by repeating units of monomers forming long chains consisting of large molecules and characterized by light weight, high corrosion resistance and low melting points. Presently, there exist about 50 different types of plastics. Broadly plastics can be classified into two types namely (a) Thermosetting (can be softened or molded into a particular shape by applying heat and pressure only once) and (b) Thermoplastic.

India is one of the most promising exporters of plastics among developing countries. The Indian plastics industry produces and exports a wide range of raw materials, plastic moulded extruded goods, polyester films, laminates, moulded/ soft luggage items, writing instruments, plastic woven sacks and bags, PVC leather cloth and sheeting, packaging, consumer goods, sanitary fittings, electrical accessories, laboratory/ medical surgical ware and travel ware, among other products.

IMPORTANCE OF THE STUDY
Plastic material is gaining notable importance in different spheres of activity and the per capita consumption is increasing at a fast pace. Continuous advancements and developments in Plastic technology, processing machineries, expertise, and cost effective manufacturing is fast replacing the typical materials. On the basis of value added share, the Indian Plastic industry is about 0.5% of India's GDP. The export of plastic products also yields about 1% of the country's exports. The sector has a large presence of small scale companies in the industry, which account for more than 50% turnover of the industry and provides employment to an estimated 0.4 million people in the country. Approximately Rs.100 billion are invested in the form of fixed assets in the plastic processing industry. The contribution of the plastic industry in the economic growth of countries the world has been great. Apart the contribution in the economic development, it is playing a vital role in the growth of various key sectors in the country such as: Automotive, Construction, Electronics, Healthcare, Textiles, and FMCG etc. Its demand has been growing rapidly.

STATEMENT OF THE PROBLEM
The plastic goods industry in India has bright prospects and at the same time serious problems stored for it in the time to come. The Indian Plastic industry is facing severe demand crunch in the domestic industry for quite some time. Demand for major polymers was 10% lower in the present financial year as compared to the same period last year. The slowdown demand is adversely affecting the industry comprising of 15 raw material producers and there are about 26,000 processing units in the country with adverse impact on the employment of 3.3 million people associated with this industry. There are tremendous investment opportunities in downstream investments to the tune of $ 3.7 billion in coming few years. This will create millions of unskilled and semi-skilled jobs and change the export profile

from raw materials to value added plastics products. But the unprecedented growth in the use of plastics as a packing material has created a serious problem of solid waste disposal. Plastic is a non-biodegradable substance and creates problems of environmental pollution.

Many advanced countries are seriously thinking of reverting back to conventional packing materials, thereby dealing big blow to this industry. However, Indian plastic industry may thrive on the recycling of the used plastic material for which ragpickers can make valuable contribution. Recycling solves the problem of waste disposal, lessens the burden on raw materials, lightens the pressure on the biosphere and provides jobs to millions. It may be mentioned here that this process needs technological development and upgradation.

In the light of above conceptual facts and figure, the main problems under study are understanding of the present scenario Plastic Industries in India with the reference of past performance and estimate the future prospects of Plastic Industry in India.

OBJECTIVES OF THE STUDY

The Indian plastic industry clearly has the potential to continue its fast growth. However, over the next few years, competition in the industry is expected to increase considerably, as a result of global trends, which will become applicable to the liberalizing economy of country. To survive the competition, both polymer manufacturers and processors will need to adopt radically new methods and approaches to reduce costs, improve market and customer service and management of performance. The per capita consumption of plastics in India is well below the world average. However it also reflects the many years growth ahead, as the country's economy continues to grow and upgrade the usage of products. Translating the expected growth rate into incremental demand, it is obvious that the country will remain one of the largest sources of additional demand for almost all kinds of plastics.

In this context, a study of the cause of maximum employment generation and poor production in Indian plastic industry and suggest proper measure for better manufacturing planning system of management through perspective planning is needed.

RESEARCH METHODOLOGY

The research is being conducted with the help of standard statistics and references. We have taken help of both sources of data viz, Primary Data and Secondary Data. While collecting primary data, interview method has been executed. While drafting the paper, literary portion has compiled with the help of different Books, Journals, Newspapers / Economic Dailies, Government Publications and Websites etc.

DISCUSSION

HISTORICAL BACKGROUND

Indian plastic industry has made significant achievements in the country ever since it made a promising beginning with the start of production of polystyrene in 1957. The industry is growing at a rapid pace and the per capita consumption of plastics in the country has increased several times as compared to the earlier decade. The chronology of production of polymers is summarized as under

- 1957 - Polystyrene
- 1959 - LDPE
- 1961 - PVC
- 1968 - HDPE
- 1978 – Polypropylene

The immense potential of Indian plastic industry has motivated Indian manufacturers to acquire technical expertise, achieve superior quality standards and build capacities in different facets of the booming plastic industry. Substantial developments in the plastic machinery sector coupled with matching developments in the petrochemical sector, both of which support the plastic processing industry, have facilitated the plastic processors to develop capacities to cater both the domestic as well as overseas exports.

INDIAN PLASTICS INDUSTRY DURING 1992-2010

The historical growth of the plastics industry over the last few decades is at an impressive 12-14%, which is twice the GDP growth. The major driver of this growth is the increased standard of living of people in India. It is estimated that almost 35% of the 1 billion populations has a purchasing power equivalent to that in European countries. After liberalization of the economy in 1992, the Government of India has been quite supportive of industry in general, taking many steps over the years for the conducive growth of business. These measures favouring economic growth are being continuously taken by the Indian Government, irrespective of the change in power. The Government of India is endeavouring to achieve GDP growth of more than 7% in the next 10 years. It is quite possible that plastics could grow at 14%, based on historical performance. The Indian plastics industry is quite upbeat about the future potential of plastics in India, believing that the Plastics industry was expected to grow between 10% to 12% during this period. At that time, the present per capita consumption was 4 Kgs, likely to reach beyond 7 Kgs by 2010. Consumption level, which was expected to reach 8 million tons by 2010, could touch 10 million tons, if some of the constraints such as infrastructure etc are eliminated.

The Indian plastics industry functions with its unique market dynamics, of which, www.plastemart.com has been a successful part. www.plastemart.com has attempted to address these queries in "Synopsis of the Indian Plastics Industry: 1992-2010"; the past 18 years and what the future holds for the overseas investors.

INDIAN PLASTIC INDUSTRY DURING 2011 - 2015

The Indian Plastic industry witnessed strong growth, with strong off-take from industries like packaging, automotive and infrastructure sector during the financial year of 2012-13. However, the consumption of Plastics in India increased by only 6% in the year 2011-12, which shows significant slowdown in the consumption of Plastics in our country in the last year. The Indian plastic processing sector comprises three segments namely injection molding, blow molding and extrusion, catering to the requirements of a wide array of applications like packaging, automobile, consumer durables, healthcare, among others. According to the All India Plastics Manufacturers' Association (AIPMA), domestic consumption of plastic has been growing at 10-12% CAGR over the last decade. Plastic consumption in India is estimated to reach the 12.5 million tonnes mark making India the 3rd largest consumer of plastics in 2012 after US and China. The size of the plastic processing industry, which currently stands at Rs. 850 billion (9 million tones), is expected to touch Rs 1 trillion (12.5 million tones) in 2013 and Rs 1.3 trillion (18.9 million tones) by 2015. Employment increased close to 4 million in 2012 and is estimated to be 7 million by 2015 from the current 3.5 million-plus people.

In 2014, exports of Indian plastics stood at around US$ 7,916.94 million, compared to US$ 7,088.08 million in 2013. Indian plastics exports have grown at a rate of 11.69 per cent in 2014, compared to the previous financial year. China is the major importer of plastic products from India which was estimated at around US$ 869 million in 2014, followed by USA at US$ 819.93 million and UAE at US$ 386.18 million. Products from the Indian plastics industry are exported to more than 150 countries across the globe. China is the major importer of plastic products from India which was estimated at around US$ 869 million in 2014, followed by USA at US$ 819.93 million and UAE at US$ 386.18 million.

PLASTIC INDUSTRIES IN INDIA: PRESENT SCENARIO

The Indian Plastic industry is at the verge of high growth rate over about 10%-12% which is contributed by high growth rates, in turn, from the end-user industries. This trend has mainly been driving the automotive sector, since the economy is already showing signs of recovery from the downturn. As the Plastic industry is heavily dependent on automotive sector, launching of new cars in the small segments are expected to drive the demand for plastics. India is likely to dominate the rest of the world's Plastic with the domestic per capita consumption. Indian government has identified the petrochemicals industry as a 'high priority' sector, as it is owing to the fact that plastics play an important role in providing the basic necessities for everyday use, while it is conserving the scarce natural resources. Plastic plays a significant role in the key sectors of the economy, including agriculture, water management, automobiles, transportation, construction, telecom-munication and electronics, besides defence and aerospace, computers and power transmissions.

As of now the Indian Plastic industry has enormous potential for growth as polymer use in India is far below the world level. With increasing competition in the global market and the constant drive to improve our living standards, the scope for use of plastics is bound to increase manifold and make the production double in the coming years.

A wide variety of plastics raw materials are produced to meet the material needs of different sectors of the economy. These polymeric materials are broadly categorized as commodity, engineering and specialty plastics. Commodity plastics are the major products that account for bulk of the plastics and in turn for petrochemical industry. Commodity plastics comprise of Polyethylene (PE), Polypropylene (PP), Polyvinyl Chloride (PVC) and Polystyrene. While engineering and specialty plastics are plastics that exhibit superior mechanical and thermal properties in a wide range of conditions over and above more commonly used commodity plastics and are used for specific purpose. These include styrene derivatives (PS/EPS &SAN/ABS), polycarbonate, poly methyl methacrylate, polycarbonates, poly oxymethylene (POM) plastics etc.

AN OVERVIEW OF INDIAN PROCESSING INDUSTRY

- India Per Capita Consumption of Virgin 11 kg & Recycled 3.8 kg
- Virgin Polymer consumption in the year 14-15 - 14 MMT
- No. of Converting / Processing units – in organised sector - 30,000 plus in unorganized sector 20,000
- No of processing Machines - 113,000
- Processing Capacity - 30 MMT
- Processing Capacity CARG - 13 % last 5 years
- No. of Plastics Machinery Manufacturing units in India 200 plus
- Investment in Machinery US$ 5 Billion Investment required for next 5 years around 10 Billion US$ (Project Investments)
- Size of Plastic & Polymer Industry –Rupees 1,44,000 Crores

FUTURE FORECAST OF GROWTH IN INDIAN PLASTIC INDUSTRY

The Indian plastic industry is quite upbeat about the future potential of plastics in India. The plastic sector in India has expanded at 9% CAGR (Compound Annual Growth Rate) over the last five years and is the biggest contributor to India's GDP growth. It is estimated that the sector will grow at a rate of 15% per annum in next few years. The industry currently provides employment to 3 million people. However, with per capita consumption increasing rapidly, which is likely to reach 12.3 million tons, the sector has potential to generate more employment in coming years. High growth in retail packaging, pipes, bulk packaging and agricultural use has triggered the polymer demand.

The per capita consumption of plastics in India is well below the world average and it also reflects the many years of growth ahead, as the country's economy continues to grow and upgrade the usage of products. Translating the expected growth rate into incremental demand, it is obvious that the country will remain one of the largest sources of additional demand for almost all kinds of plastics. Also, with the huge investments in infrastructure development happening in the recent times, the plastic industry will emerge as a giant in the industrial scenario of India.

Hence, it is clear that plastics will continue to be a growth industry, with boosting prospects for fresh investments in polymerization and downstream processing capacity. This is in contrast to the situation sin various other countries, where growth prospects are limited, either because of stagnant demand or due to the historical over building. In such countries, the overall outlook would be far less promising, with the key imperatives being cost cutting and capacity rationalization.

FINDINGS

The plastic goods have universal acceptability and their production and use will grow unhindered. The per capita consumption of plastics in India at 3.6 kg is far below the global average of 21.5 kg. Thus there is great scope for expanding this industry. Products from the Indian plastics industry are exported to more than 150 countries with the major trading partners being China, the US, the UAE, Turkey, Italy, the UK, Indonesia, Germany, Vietnam, Bangladesh, Nigeria, Pakistan, South Africa, Brazil, Singapore, Saudi Arabia, Nepal, Egypt, Sri Lanka and the Netherlands. With per capita consumption of plastics expected to grow rapidly to 20 kgs by 2020 from the current 8 kgs, the processing industry is looking at growth to cater to the increasing demand from across India.

Currently, the Indian plastic industry is highly fragmented with an estimate of around 30,000 firms and over 4 million employees. The top 100 players of Indian plastic industry account for just 20% of the industry turnover. Barring 10 to 15% of the firms that can be categorized as medium scale enterprises, most of the units operate on a small – scale basis.

CONCLUSION

To conclude, we may opine that huge growth opportunities in India for plastics due to lower per capita consumption as compared to world average. Flexible packaging industry poised for strong growth, insulated from the current economic scenario due to huge and diversified consumer base. New applications and innovations in packaging development is driving growth in India which is ably supported by the current and upcoming domestic PE Capacities. The major uses of plastics are in the packaging industry, building industry and in the manufacturing of pipes, fittings, electrical accessories, consumer goods, house-ware, toys, and furniture and in host of other spheres of life. The per capita consumption of plastics in India increasing rapidly and the sector has potential to generate more employment in coming years. The high growth in the different plastic products has triggered the polymer demand. It is expected that plastics will continue to grow dynamically.

A time has come when plastics industry has the capacity to influence the progress of all other sectors. Plastic industry is regarded as 'sunrise' industry due to its increasing versatility and burgeoning worldwide demand. No wonder we are living in the plastic age. On the whole plastics are essential for today's standard of living and they help in improving the quality of life.

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Sd/-
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