

THE SYNERGY BETWEEN MANUFACTURING & SUSTAINABILITY IN INDIA

This report focuses on 5 small and medium sized manufacturing companies in India and explores the extent to which sustainability has been inculcated in their supply chain.

**BY VEDIKA SHAH
January-September 2024
CAID 42410581**



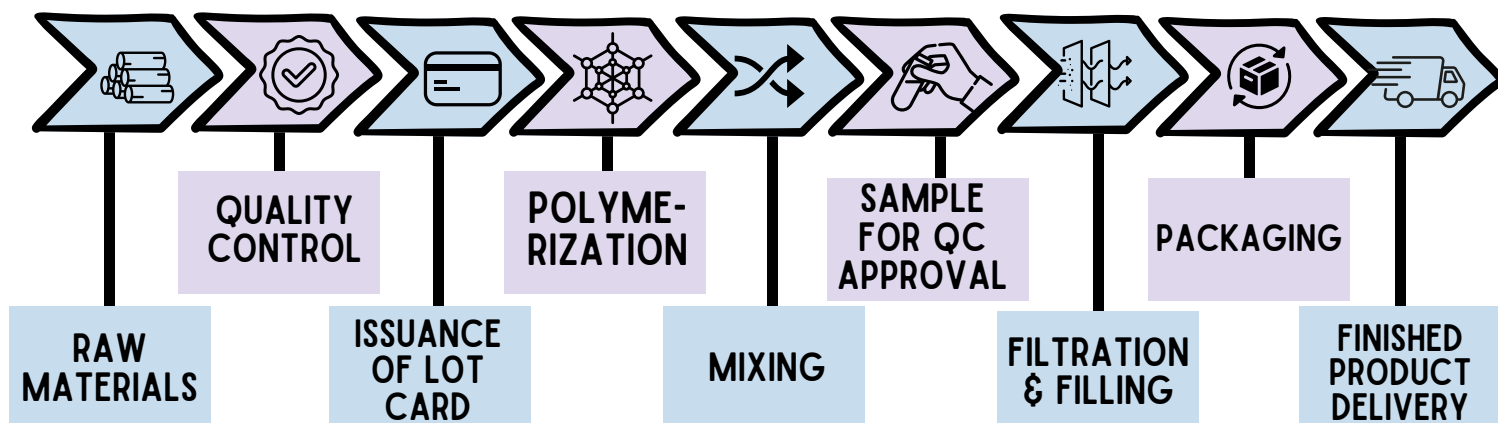
ABOUT THE COMPANY

Chem Sell is a pioneer of green thinking in the performance chemicals sector. Its products play a vital role in green value chain since they are safer and less carbon intensive products

PRODUCTS

- paints and coatings
- textiles
- adhesives
- dyes and pigments

MANUFACTURING PROCESS



WHAT SUSTAINABILITY PRACTICES HAS YOUR COMPANY IMPLEMENTED?

At Chem Sell our plants are designed such that we have zero discharge and zero effluent. Hence we protect the environment by not generating wastage at all. This is the most sustainable business practice we follow. Further we also measure Carbon footprint of total organisation and have designed our processes such that we are close to carbon neutral. Also our Raw Materials used are eco friendly and biodegradable. Hence we deliver sustainability through our process, products and practices.



WHAT ARE THE MAJOR CHALLENGES FACED BY MANUFACTURING COMPANIES IN ORDER TO ACHIEVE SUSTAINABILITY?

Most important challenge for sustainability is a change in mindset and investing time and money in the short term. All companies need to invest first in change in attitude, process and systems. In the short term this may require a lot of effort and results and benefits will be seen in the long run.

WHY DO YOU THINK SUSTAINABLE MANUFACTURING IS IMPORTANT?

Sustainable Manufacturing is not just important but is the need of the hour. Companies not looking at Sustainable practices in every department will soon become non competitive and would have to shut their businesses. Building Sustainability in every process not just improves the quality and value of an organisation but also helps to increase profits in the long term.



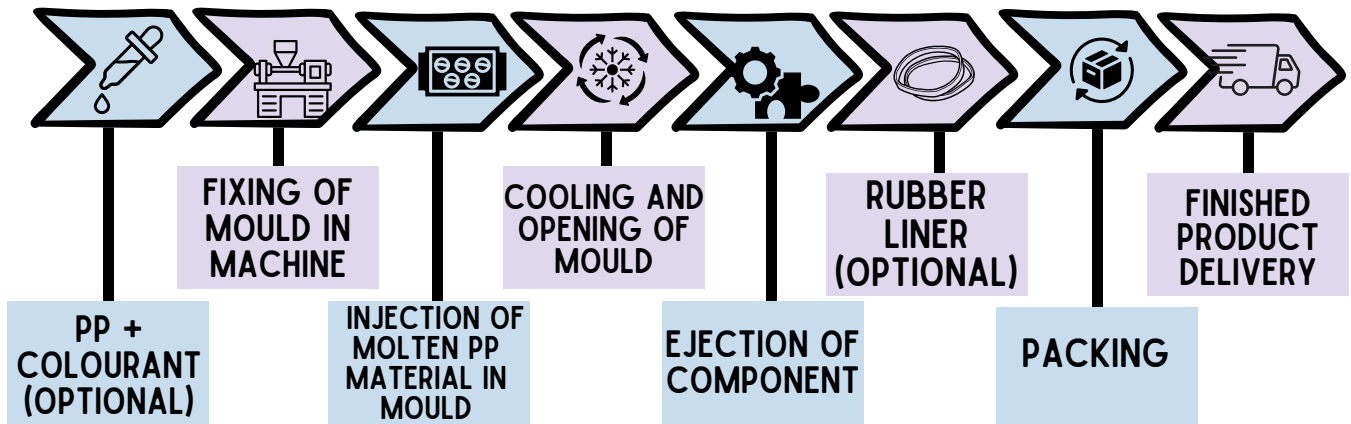
ABOUT THE COMPANY

a leading business entity representing global manufacturers, providing innovative solutions to the specialty needs of the food, pharmaceutical, nutraceutical, animal nutrition and textile industries of our country.

PRODUCTS

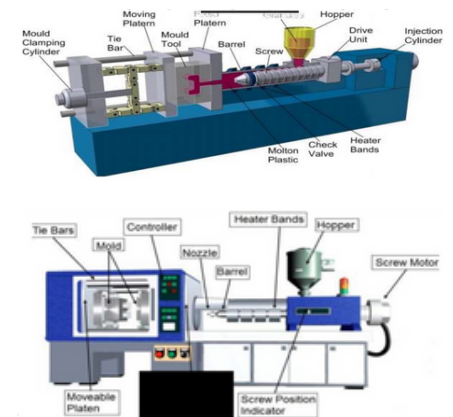
- food
- pharmaceutical,
- nutraceutical,
- animal nutrition
- textile industries

MANUFACTURING PROCESS



WHAT SUSTAINABILITY PRACTICES HAS YOUR COMPANY IMPLEMENTED?

We ensure that there is proper segregation of waste. One of our techniques for this is composting. This reduces greenhouse gas emission and puts carbon back into the soil. Secondly, with India taking a lead in solar power, we have also introduced this in many of our plants. This has an added benefit of being cheaper compared to gas or coal.



WHAT ARE THE MAJOR CHALLENGES FACED BY MANUFACTURING COMPANIES IN ORDER TO ACHIEVE SUSTAINABILITY?

To achieve sustainability we require various machinery to change our manufacturing practices. This is a large investment and proves to be difficult considering the constant fluctuations in the economy due to inflation, energy cost hikes, raw material price volatility and rising interest rates.

WHY DO YOU THINK SUSTAINABLE MANUFACTURING IS IMPORTANT?

A firm's commitment to being socially responsible is extremely important to maintain a good brand image. A firm's commitment to social responsibility involves upholding ethical standards, obeying the law, and generating profits while also contributing to the well-being of the community through monetary donations, employee time, and skill-sharing.





Since 1971

EASTMEN CHEMICALS

INTERVIEWEE: KOMAL DOSHI
(DIRECTOR OF SALES)

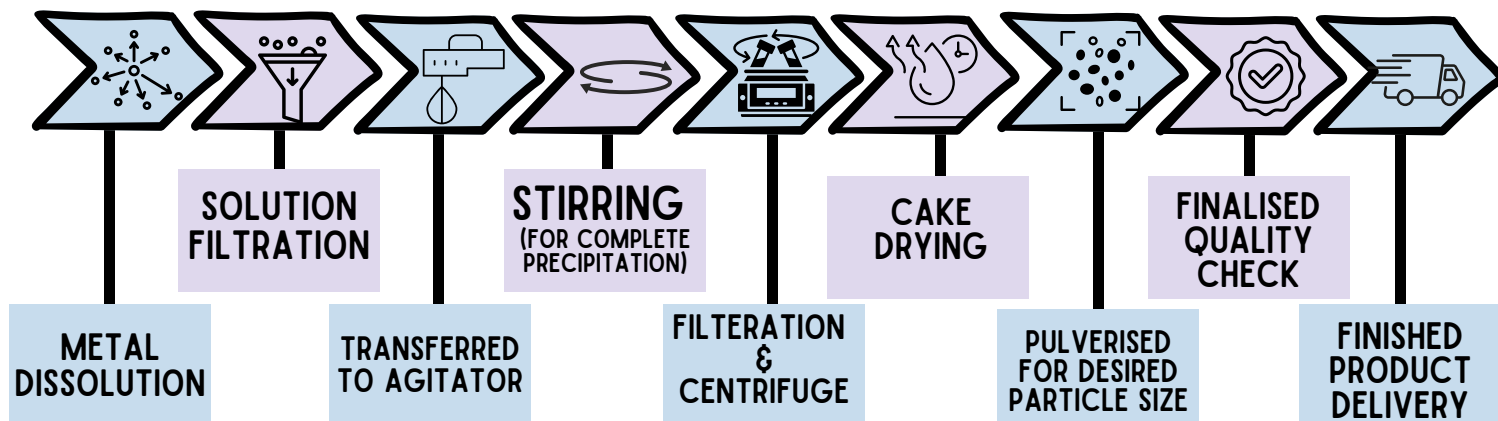
ABOUT THE COMPANY

Eastmen chemicals is a certified leader in manufacturing high purity metallic salts from virgin metals like Cobalt, Copper, Manganese, Nickel and Zinc.

PRODUCTS

- cobalt
- copper
- manganese
- zinc

MANUFACTURING PROCESS



WHAT SUSTAINABILITY PRACTICES HAS YOUR COMPANY IMPLEMENTED?

Firstly, we hope to maximise our energy efficiency by implementing solar power in our plants. Secondly, we are taking various steps to conserve water by limiting the use of water for the development of chemicals. We follow the ETP (Effluent treatment plant) process to ensure that waste water is safely disposed of or can be reused. Lastly, our raw materials are sustainable, helping us achieve our mission of reducing carbon footprint.



WHAT ARE THE MAJOR CHALLENGES FACED BY MANUFACTURING COMPANIES IN ORDER TO ACHIEVE SUSTAINABILITY?

Employing sustainable methods often requires high funding for research and development. Moreover, resources for the development of certain products may also be limited resulting in higher prices of raw materials. Since we are currently in the process of shifting to more sustainable methods, it is proving to be a little difficult since employees are not familiar with this too.

WHY DO YOU THINK SUSTAINABLE MANUFACTURING IS IMPORTANT?

Sustainable practices ensure more efficient use of materials and energy, reducing costs and preserving resources for future generations. It not only protects the environment by conserving natural resources and reducing pollution but also creates a better living environment - especially for workers who work daily in the factory. In the long term, sustainability will help boost sales and profitability.



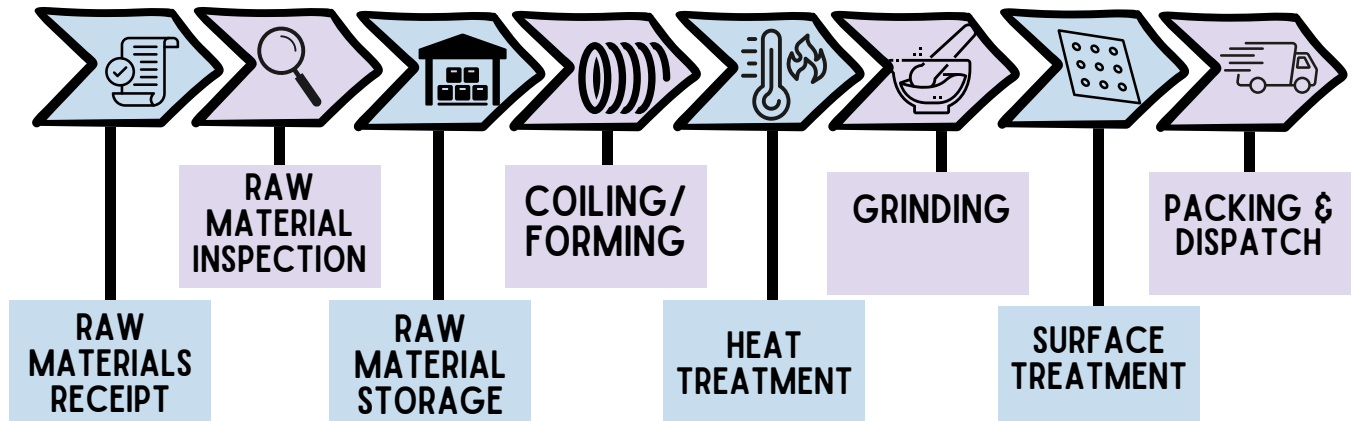
ABOUT THE COMPANY

Vikson Springs strives to be the leader with advanced technology and specialised manpower since inception in 1979. It ensures the best quality products through continuous technological development.

PRODUCTS

- compress and conical springs
- extension springs
- torsion springs
- wire forms

MANUFACTURING PROCESS



WHAT SUSTAINABILITY PRACTICES HAS YOUR COMPANY IMPLEMENTED?

We use solar power in our plants to save energy. Also, we focus on conserving water through rain harvesting. Our processes reuse water that we have collected, leading to effective use of water.



WHAT ARE THE MAJOR CHALLENGES FACED BY MANUFACTURING COMPANIES IN ORDER TO ACHIEVE SUSTAINABILITY?

I think the main challenge lies within the changes in the manufacturing process that occur to achieve sustainability. Firstly, It is important to understand the concept of sustainability and ensure that your team is well aware about this. Then, the entire manufacturing process needs to be re-examined to identify areas in which the company can improve. Lastly, in order to reduce carbon emissions, infrastructure needs to be built in a way that the company can afford the investment.

WHY DO YOU THINK SUSTAINABLE MANUFACTURING IS IMPORTANT?

Our process has become more efficient after incorporating sustainable practices. While the processes initially increased costs, it was a one off outflow in the short run. In the long term, this investment will help reduce the overall cost of operations, increasing our profit margins.





LAXMI ENTERPRISES

**INTERVIEWEE: UMA MASKAI
(SENIOR EXECUTIVE)**

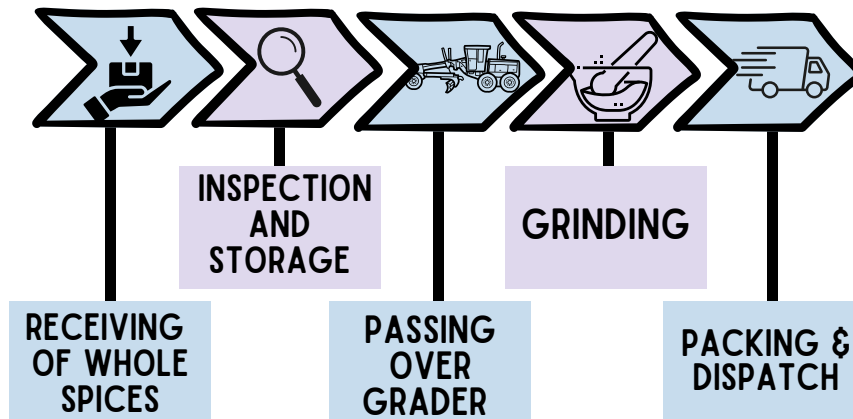
ABOUT THE COMPANY

Founded in 1892, Laxmi Enterprises is a supplier of spices to the global market. They use the high quality machines and technology in their plants to cater to the needs and demands of customers and provide them with the finest products.

PRODUCTS

- black pepper
- blends spices
- cardamom
- cassia
- celery

MANUFACTURING PROCESS



WHAT SUSTAINABILITY PRACTICES HAS YOUR COMPANY IMPLEMENTED?

We conduct field inspections at the farm to ensure that the sustainable practices are being followed. We also use analytical tools to achieve greater success of the desired product. Furthermore, at the manufacturing unit we follow rainwater harvesting, water recirculation and solar panels. All these factors make us a reliable and green company.



WHAT ARE THE MAJOR CHALLENGES FACED BY MANUFACTURING COMPANIES IN ORDER TO ACHIEVE SUSTAINABILITY?

We often face supply chain challenges such as traceability and transparency throughout the entire supply chain. Changes in even one supply chain could disrupt established systems. Moreover, due to the high initial cost for the investment we see resistance to changes at a farm level. It is difficult to balance the cost and price of sustainable products in comparison to non sustainable products, causing farmers to be hesitant about this.

WHY DO YOU THINK SUSTAINABLE MANUFACTURING IS IMPORTANT?

We are able to preserve the environment through this while also improving efficiency. For example, in organic farming we have integrated pest management which improves the health of the soil. Systems such as drip irrigation and rainwater harvesting also contribute to the conservation of resources.



CONCLUSION

Sustainability requires technological, social and business innovations supported by policy and adaptation of consumer behaviour towards responsible consumption. All manufacturing production sites should be powered exclusively by renewable energy to become sustainable.

The above research conducted shows that among Indian companies, there is a growing recognition of the need to balance economic goals with environmental goals. As one of the top carbon emitting countries, India's push towards sustainability is extremely crucial, especially given the startling data related to the health outcomes due to air pollution. It is thus becoming evident that economic growth is reliant on environmental safety.

The above companies illustrate the range of sustainable practices that are being employed in order to achieve the mission of a greener India. Thanks to mounting pressures, several chemical and biological processes have been developed for the treatment and management of wastewater. There is also a shift in the approach for wastewater treatment and the focus is resource recovery. Creating a truly circular economy and sustainability at scale will require action from all the parties throughout the supply chain. Rainwater harvesting, use of solar power, wastewater treatment and effluent treatment are some of the measures that are commonly being introduced by manufacturing companies to optimise resource use which reduces carbon footprint.

The complexity of the transition lies within the alteration of the entire process which often results in high investments. However, it is evident that technology supports a multitude of manufacturing processes, making the transition very smooth and instead resulting in improved efficiency.

The overall benefits of sustainable manufacturing can be summarised:

1. Cost saving through resource management
2. Increased customer loyalty
3. Enhanced brand reputation

It can be concluded that sustainability doesn't merely achieve environmental goals but also improves the brand image of companies. In India, Chemicals, Pharmaceutical, Food and beverages, Engineering and Automotive and Textile industries are moving towards this. As a result, a one time investment can lead to improvements in product quality, increased consumer satisfaction and greater sales, increasing the chances for higher profits.