

Just One Question ?

The Chemical Industry in India has come a long way in the last 25 years. There were many turning points. Some were game changers. There will be game changers in the future too which could take the industry to greater heights. What could these be?

Three points of view are presented here in response to Chemical Industry Digest's 'Just One Question':

If you have to name three major happenings that were game changers for the Indian chemical industry in the last twenty five years what would those be? What could be the three major game changers for the chemical industry in the next 25 years? or What are the three major developments you would like to see happen for the chemical industry in the future?

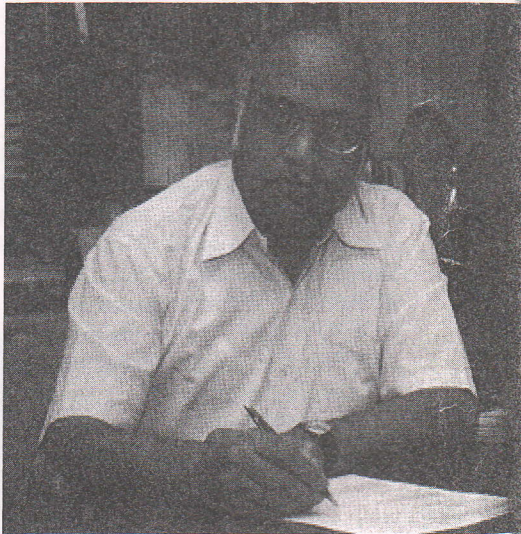
Dr S Sivaram's view point

Three game changer events for the chemical industry in the last twenty five years.

- Emergence of Reliance Industries Ltd as a major manufacturer of fuels, chemicals and polymers, with global scale and world class project execution capabilities.
- The economic reforms of 1991, unleashing the competitive entrepreneurial energy of the Indian chemical industry; the chemical industry emerged from the shadow of "import substitution and indigenous manufacturing" to building globally competitive manufacturing and marketing capabilities with an ability to, both, export and compete with imports.
- Indian Patent Law 2005, allowing composition of matter or product patents in India, reversing a thirty five year law which offered protection to Indian manufacturers of API. The Indian pharma industry ramped up its R&D capability and showed ambitions of vaulting into the big league with innovative discovery driven R&D.

Three major game changers in the Indian chemical industry for the next twenty five years

- Consolidation of Indian fine chemicals, specialties and API industries in terms of scale and technologies; preparing to meet increasing competition from countries which are resource rich in terms of raw material, labor etc.
- Greater focus on sustainability in the use of natural



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resources by the chemical industry; realization that cost of water, energy/raw materials derived from fossil fuels and management of wastes will become increasingly important in defining the cost of manufacturing.

- Fine and specialty chemicals industry will move from mere manufacturing to providing services to customers in terms of formulated products for demanding end applications

Three major developments I would like to see happen in the Indian Chemical Industry

- Assuming leadership in building a sustainable chemical industry based on renewable resources such as ligno-cellulosics/waste products of agriculture, making agriculture a key stake holder of the chemical industry and vice versa.

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to produce low volumes with high cost efficiency.

- Development of products for the underserved sectors of the Indian market using the 70:50:30 principle, namely, seventy percent of performance at fifty percent of price and thirty percent of cost, compared to equivalent products available elsewhere.

- To build chemical plants which are modular, easily reconfigurable and have small physical footprints based on innovative chemical process engineering and design; to disrupt the well known relationship between scale of operation/capital cost and manufacturing cost; in summary ability