

KEYNOTE ADDRESS : INTERNATIONAL RUBBER CONFERENCE 2010

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November 17, 2010, Mumbai

It is indeed a great privilege and honor to be invited to speak to you this morning. I thank Shri Mehul Patel, Convenor IRC 2010 for this opportunity.

I am impressed by the scale of this gathering and the breadth of topics being covered at the conference. Every aspect of the rubber, from chemistry to physics, processing to products and properties are being covered. I do hope you have a stimulating three days and leave this meeting with new ideas and insights on the subject.

Rubbers or elastomers are as old as human civilization. It is one of the oldest material used by man. Rubber gave mobility to humans, one can debate which was more critical to the ushering of the automobile revolution in the early twenties, the discovery of pneumatic tires or the Internal Combustion engine!

The birth of the modern day rubber industry was a product of necessity. For a world wholly dependent on natural rubber in the early forties, the axis of Germany and Japan to control the rubber producing regions of the world was a threat to the allied forces. This propelled, I believe, one of the most intense R&D in the US, to discover, develop and manufacture a synthetic substitute. Out of this focused and directed research emerged two major elastomers, E-SBR and butyl. In fact E-SBR was called G-SR (government) for many years!

With the emergence of petrochemical feed stocks in the early fifties, rubber became an established article of commerce. In rapid succession came, Li and Co-PBR, chloroprene, S-SBR, nitrile, EPDM and fluoroelastomers.

The rubber industry has substantially matured both in terms of technology and products. Growth is driven by demand in emerging economies, largely due to the growth of the automobile industry. The action is in India and China. There have been very few new product introductions in the field; the last major introduction was the hydrogenated nitrile, in the mid nineties. Growth has been rather subdued in the developed economies, thanks to high performance longer lasting tires.

The Indian manufacturing scene or rubber appears rather depressing. No new capacity for rubber has come up since the second polybutadiene plant at Baroda in the early eighties. This is sad because, the overall demand for rubber in India is growing at 9.5% pa, with BR and SBR growing at a scorching 20% growth. Just recently a butyl plant has

been announced. This is coming too late. Based on expected demand growth of butyl rubber a new 100,000 tpa plant will be required every four years.

On the NR front too, India has been rather complacent. The prices have doubled, close to 200 Rs/kg, a shortfall of close to 200,000 tpa is looming in 2010 and our per acre productivity of NR has remained near flat for years. NR is still treated as an agricultural commodity for small holding farmers.

We are living in turbulent but exciting times. The Indian rubber industry, needs to deeply introspect its structural deficiencies and create new strategies for growth and survival. Thinking that the growing industry can survive merely by importing the material is dangerous.

So what does the future portend?

Crude oil process will continue to harden, pushing the raw material prices up. Demand from India and China for rubber products will push prices further up. Consequently without a secure integration of rubber production with manufacturing, the industry will continue to be vulnerable.

I believe that the following will be the major drivers of future change in the rubber industry.

1. India will be a large market for rubber, driven by transportation/mobility needs of over a billion people.
2. Apart from tires, automotive/industrial markets will demand a host of specialty rubbers, nitrile, fluoroelastomers, silicones etc.
3. India will need substantial manufacturing capacity augmentation, for E-SBR, S-SBR, EPDM, Nitrile, and Butyl.
4. Global demand will be driven by sustainability issues. Tires will be labeled for fuel efficiency wet grip and noise emissions. In fact the European legislation to this effect will become effective from 2012.
5. India will not be lagging far off in pushing the sustainability envelope. Communication technologies and education is making civil society more aware and vocal. They will assert their views on industry.
6. India as the fourth largest producer of NR, one of the oldest bio-renewable resource that mankind has known. Yet, it is somewhat surprising that modern biology has not looked at this remarkable resource with greater interest. NR should be looked at as an energy crop. A rubber tree is one of the most efficient converter of CO₂ to a hydrocarbon. Only sugar cane is a better converter of CO₂ to biomass, predominantly to carbohydrates. To the best of my knowledge, the full genome mapping of the rubber tree has not been done. It is pertinent to note that the full genome mapping of *Jatropha*, an energy crop, less than two decades

old, has already been completed. We still have not fully used all the biology tools to enhance the productivity of the NR production. Genetic interventions to create stress and pest tolerant plants have not been developed. India can possibly increase its rubber production by an order of magnitude without increasing acreage.

7. Rubber productions and processing is highly energy intensive. With energy becoming scarce and expensive, special focus must be paid to reducing energy in rubber production and processing.
8. Industry must integrate backwards to raw material manufacturing, both synthetic and NR. The disconnect between, rubber product manufacturers and synthetic rubber manufacturers is no longer relevant. There is a need also to acquire NR plantation, both in India and overseas and integrate with downstream operations. Today our oil/gas companies are acquiring oil producing assets in other parts of the world. NR is one of the most important energy crop. India needs to acquire energy plantation assets abroad.
9. The India rubber industry is highly segmented into silos with little communication amongst them. There is a tendency for each one to protect their individual turf without looking at a larger picture, synthetic rubber manufacturers, NR producers and rubber product manufacturers are driven by multiple individual agenda. There is a need to bring all these stakeholders together to create a unified vision for the future of the industry.

Friends, India is at the crossroads, in terms of economics, technology, industrial and social landscape. We need to seize this moment and create a future for the robust growth of the Indian rubber industry. India has an opportunity to become a global leader. If we do not act, with a clear and unified vision, we risk becoming the handmaiden of others.

I hope this conference will address some of these challenges and concerns I have shared with you.

I wish the conference all success.