“Chemical Industry 2020 – Vision & Action”
Specialty Chemicals

June 4th, 2010
Dr. Joerg Strassburger, Country Speaker and Managing Director, LANXESS India Pvt. Ltd.
LANXESS – A leading specialty chemicals company based on three powerful segments

LANXESS – Energizing Chemistry

**Performance Polymers**
- Globally No.1–3
- Global Technology Leader in Synthetic rubber and polyamide
- Supporting trends
  - Mobility, growing population in Asia
  - High performance Tires
  - Vehicle weight reduction
  - Tire-labeling, replacement pick-up

**Advanced Intermediates**
- Europe No.1–2
- Leading supplier of custom synthesis and basic chemicals (agrochem-related)
- Supporting trends
  - Increasing crop demand based on growing world population
  - Need of farmers to raise yields
  - Industry consolidation

**Performance Chemicals**
- No.1-4 in Niches
- Application – oriented specialty chemicals
- Strong brands and technology leader
- Supporting trends
  - Scarcity of purified water
  - Rising middle class in APAC
  - Ongoing market consolidation

Competitiveness across the portfolio

"Chemical Industry 2020 – Vision & Action"
June 4th, 2010
Dr. Joerg Strassburger
LANXESS India is a leading supplier of specialty chemicals to customers in India and the SAARC countries

Current India Position

- 771 crore sales
- 4 Sales Offices
- 3 Production sites
- 612 employees (29th May 2010)
- 13 Business Units
- >5000 products
- >1700 customers
LANXESS bullish on Indian market: Significant investments in both organic and inorganic growth

**Acquisition of Assets of Gwalior Chemicals**
- Stock-listed basic and specialty chemicals company
- Permanent employees: approx. 350
- Sales of approx. EUR 45.7 million, above-peer
- EBITDA margin approx. 18% (9 M FY2009*)
- Major client industries: agro, pharma and flavor & fragrance

**New production site in Jhagadia, Gujarat**
- Investment of EUR 50 million
- Additional employment of approx. 230 colleagues
- Relocation of rubber chemicals plant from Thane
- Construction of modern Ion Exchange Resins plant serving growing demand for water treatment chemicals

"Chemical Industry 2020 – Vision & Action"
June 4th, 2010
LANXESS strongly believe that Green transformation is way forward for growth & sustainability of specialty chemical industry

LANXESS India steps towards green transformation

**Energy and water conservation**

- Investments in co-gen plant at Jhagadia site
- Six windmills of 4.425mw
- Off Gas incineration for environment protection at Jhagadia and Nagda sites
- Water conservation system – treatment of domestic sewage water to remove organic fouling and sediments to make it useful as make-up water for cooling towers. And part of it is further purified through R.O, and then through mixed bed resins to meet the requirement of boiling feed water
- Investments in waste water treatment system to take water quality up to German standards
Global Chemical Industry: Market shift from US and Europe to Asia Pacific Region

- Global companies are moving part of their business into high growth Asian markets.
- APAC has emerged as the largest contributor to Global chemical industry in the recent years.
- China has emerged as the biggest and India as most promising market for chemical industry.
- Consumption of commodity chemicals has seen a market shift towards Asia, as key consuming industries move their manufacturing base into low cost labor regions.

Source: Global Insight WIM August 2009

*Pharmaceuticals, Rubber- and Plastic processing excluded

"Chemical Industry 2020 – Vision & Action"
June 4th, 2010

Dr. Joerg Strassburger
Asia pacific has been the fastest growing region for chemical production in the last one decade before crisis came in....

---

**Avg. growth p.a (1997 to 2007)**

- Asia Pacific 5.7%
- Latin America 3.2%
- NAFTA 1.4%
- EU 1.3%

Source: Cefic chemdata International
and is expected to drive the global production levels of chemical industry in coming decade

**Chemical industry output region wise**

- **World wide**: Overall outlook for industry is neutral for 2010 except China and India
- **APAC**: Most of Asia shows sign of recovery with the emerging countries leading the growth
- **EMEA**: Trough is expected to persist in 2010
- **Americas**: Latin America is expected to grow again in 2010

![Diagram showing chemical industry output region wise]
Indian chemical industry production levels has recovered quickly and will continue to grow strongly

- Indian chemical industry has registered growth of more than 9% in last 5 years
- Slowdown in the user industry demand has impacted the performance in 2008-09, but the industry has recovered strongly in 2009-10
Vision 2020: India can target large chunk of the global specialty chemical industry on the basis of cost competitiveness.

- Global specialty chemical industry is dominated which constitute more than 80% of the specialty chemical market
- India and China only account for 7 – 10% of the global specialty chemical industry
- Major part of the specialty chemical profit poll could move to Asia (China & India) over the next few years based on cost competition
- Targets for Asian competition include APIs, adhesives and sealants, specialty surfactants, flavors and many more segments

Source: SCI data, McKinsey analysis
well positioned on leading critical success factors for specialty chemicals

<table>
<thead>
<tr>
<th>Critical success factors</th>
<th>India’s position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical size of domestic market</td>
<td>▪ Domestic market in excess of US10Bn</td>
</tr>
<tr>
<td></td>
<td>▪ Market expected to grow at ~ 15%p.a</td>
</tr>
<tr>
<td></td>
<td>▪ Robust growth driven by macroeconomic trends</td>
</tr>
<tr>
<td></td>
<td>▪ Significant scope of import substitution</td>
</tr>
<tr>
<td>Customized application development</td>
<td>▪ Unique local customer needs evolving in consumer segments</td>
</tr>
<tr>
<td>Strong R&amp;D capabilities</td>
<td>▪ Large pool of scientist</td>
</tr>
<tr>
<td></td>
<td>▪ IP protection regulation / mechanism in place</td>
</tr>
<tr>
<td>Established process know-how</td>
<td>▪ Cost efficient process capabilities</td>
</tr>
<tr>
<td>Availability of chemicals / petrochemicals cluster</td>
<td>▪ Establishment of PCPIR’s and other chemical clusters to act as docking points for specialty chemicals industry</td>
</tr>
</tbody>
</table>
rising middle class & increase in discretionary domestic spending will keep on driving the growth of specialty chemicals

### Rising upper middle class (Million people)

<table>
<thead>
<tr>
<th>Year</th>
<th>1995</th>
<th>2005</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 15 times</td>
<td>17</td>
<td>52</td>
<td>270</td>
</tr>
</tbody>
</table>

- HH Income > US $5K per annum

### Share of average household consumption

<table>
<thead>
<tr>
<th>Category</th>
<th>1995</th>
<th>2005E</th>
<th>2015F</th>
<th>2025F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discretionary spending</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Necessities</td>
<td>4</td>
<td>7</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Health care</td>
<td>11</td>
<td>7</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Education and recreation</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Communication</td>
<td></td>
<td></td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Transportation</td>
<td></td>
<td></td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Personal products and services</td>
<td></td>
<td></td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>Household products</td>
<td></td>
<td>14</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Housing &amp; Utilities</td>
<td></td>
<td>17</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>Apparel</td>
<td></td>
<td>8</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>Food, Beverages &amp; Tobacco</td>
<td>56</td>
<td>42</td>
<td>34</td>
<td>25</td>
</tr>
</tbody>
</table>

Source: McKinsey Global Institute

"Chemical Industry 2020 – Vision & Action"
June 4th, 2010

Dr. Joerg Strassburger
## Key user industry growth are intact as economy is booming

<table>
<thead>
<tr>
<th>Industry</th>
<th>Growth projections 2010 to 2012</th>
<th>Growth Drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive</td>
<td>12 – 14%</td>
<td>Rising middle class will drive the high demand for passenger cars and 2 wheelers</td>
</tr>
<tr>
<td>Construction</td>
<td>13 -15%</td>
<td>Increase Govt. spending on Infrastructure</td>
</tr>
<tr>
<td>Electronics</td>
<td>12 – 15%</td>
<td>Emerging middle class, penetration into rural India will be key driver in coming decade</td>
</tr>
<tr>
<td>Water treatment</td>
<td>10 - 12%</td>
<td>Growing population and urbanization will put the pressure of water resources</td>
</tr>
<tr>
<td>Paint &amp; Coating’s</td>
<td>11 – 14%</td>
<td>High growth in Real estate and Automobile sector will keep the demand intact</td>
</tr>
<tr>
<td>Tyre</td>
<td>8 - 9%</td>
<td>Investment in highway will drive the strong demand in replacement market for tire</td>
</tr>
<tr>
<td>APIs</td>
<td>15 - 20%</td>
<td>Driven by exports (90% of total APIs manufactured in India are exported to Europe, USA and Japan) Rising population and higher spend on healthcare will drive the demand</td>
</tr>
</tbody>
</table>
....but there are challenges which need to be overcome

<table>
<thead>
<tr>
<th>Competing successfully in global specialty chemical landscape</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Global footprints to attain critical size</td>
</tr>
<tr>
<td>2. Securing petrochemical Raw Material and other key base chemicals</td>
</tr>
<tr>
<td>3. Rising prices of inputs for industry as the global economy recovers</td>
</tr>
<tr>
<td>4. Focus on Green transformation (Green products and processes for long term sustainability)</td>
</tr>
<tr>
<td>5. Logistics cost – way to high in India compared to other places</td>
</tr>
</tbody>
</table>
Strong governmental support required, if Indian specialty chemical industry has to make global footprints

- Set up of integrated PCPIRs – Good policy in driving India’s chemical sector, but require significant push to increase the pace of development

- Development of Chemical zones with single clearance window for all activities

- Environment regulation in line with European countries, but not to target stringent regulation above European standards - that can make industry uncompetitive

- Upgradation of basic infrastructure like ports and road connectivity – important for export driven industry
Conclusion: India presents an emerging and exciting growth opportunities in many of the specialty chemical businesses

1. Indian specialty chemicals demand is rising based on strong economic development and further sophistication of industry and consumer demand.

2. Besides opportunities in India, adjoining markets and even world markets present a potential based on the cost advantage.

3. Framework conditions like domestic markets of critical size, solid IP protection and strong intellectual capabilities are favorable to successfully produce specialty chemical in India.

4. Indian players need to identify segments where it can utilize its strategic infrastructure and assets, raw materials, organization structure and other business levers for competitive production in India.

5. Investments in safety and environment protection would be critical for long term sustainability of Indian companies.
Responsibility for drinking water treatment in India.
Responsibility for environmental protection, safer cars and better fuels.
Responsibility for chemicals that enhance life.
www.lanxess.in

Our chemistry creates responsibility.

Thank You for Your Attention