India – A driver of Stainless Steel Growth

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President : ISSDA ( Indian Stainless Steel Development Association )
Global SS Scenario
Indian SS Scenario
JSL Profile
Watch for
Summing up
Global SS Production: Growth Slowdown

-1.0%  +7.8%  +10.6%  +7.5%  -1.0%  +16.8%  -2%  -6.9%  -5.2%

<table>
<thead>
<tr>
<th>Year</th>
<th>Asia</th>
<th>W. Europe/Africa</th>
<th>Americas</th>
<th>Central + Eastern Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>19,167</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>20,663</td>
<td></td>
<td></td>
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<tr>
<td>2003</td>
<td>22,861</td>
<td></td>
<td></td>
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<tr>
<td>2004</td>
<td>24,583</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>24,320</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2006</td>
<td>28,400</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2007</td>
<td>27,836</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>25,913</td>
<td></td>
<td></td>
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<tr>
<td>2009</td>
<td>24,579</td>
<td></td>
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</tr>
</tbody>
</table>

ISSF
Global SS Production: Coming back…

Q1
- 2009: 4830
- 2010: 7625

Q2
- 2009: 6028
- 2010: 8023

ISSF
• Significant recovery: Q1 & Q2, 2010
• Growth in H1, 2010: 44% over H1, 2009
• Production 2010: Expected to reach 30 Mill Tons
• Growth Region: China and other Asia
• Significant grade shift in SS, Steady increase in share of 200 & 400 series
Indian Stainless Scenario
India : Macro Economic Overview

- GDP growth 6.7% (FY 2008-09)
- Projected @ 8--9% over next 5 years
- Overall Steel Consumption to grow at 1.2 times GDP
- Planned Infrastructure Investment in 5 years: USD 440 billion
## Indian SS Melt Capacity (Flat Products)

<table>
<thead>
<tr>
<th>Company</th>
<th>2008-09</th>
<th>2009-10</th>
<th>2010-11</th>
<th>2011-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSL-Hisar</td>
<td>720</td>
<td>720</td>
<td>720</td>
<td>720</td>
</tr>
<tr>
<td>JSL-Orissa</td>
<td></td>
<td></td>
<td></td>
<td><strong>800</strong></td>
</tr>
<tr>
<td>Sail-Durgapur</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Sail-Salem</td>
<td></td>
<td></td>
<td>180</td>
<td>180</td>
</tr>
<tr>
<td>Others</td>
<td>1410</td>
<td>1480</td>
<td>1550</td>
<td>1550</td>
</tr>
<tr>
<td><strong>Sub Total</strong></td>
<td><strong>2180</strong></td>
<td><strong>2250</strong></td>
<td><strong>2500</strong></td>
<td><strong>3300</strong></td>
</tr>
</tbody>
</table>

*Others include the melting capacity of unorganized Utensil Grade sector*
### Indian Cold Rolling Capacity (Flat Products)

<table>
<thead>
<tr>
<th>Company</th>
<th>2008-09</th>
<th>2009-10</th>
<th>2010-11</th>
<th>2011-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSL-Hisar</td>
<td>275</td>
<td>275</td>
<td>275</td>
<td>275</td>
</tr>
<tr>
<td>JSL-Orissa</td>
<td></td>
<td></td>
<td></td>
<td>400</td>
</tr>
<tr>
<td>Sail-Salem</td>
<td>70</td>
<td>70</td>
<td>140</td>
<td>140</td>
</tr>
<tr>
<td>Others</td>
<td>1170</td>
<td>1220</td>
<td>1275</td>
<td>1275</td>
</tr>
<tr>
<td><strong>Sub Total</strong></td>
<td><strong>1515</strong></td>
<td><strong>1565</strong></td>
<td><strong>1688</strong></td>
<td><strong>2088</strong></td>
</tr>
</tbody>
</table>

*Others include the unorganized Utensil Grade (Patta Sector)*
Indian Stainless Steel: By Series

200 Series continues to be dominant, 400 series share rising
India: SS Growth Drivers

- Railways
- Architectural Building & Construction
- Industrial (Power, Process, Industries)
- Automotive White Goods
Railways

- New Stainless Steel Wagons & Coaches
- Refurbishing Railway Stations with world class facilities
- Development of Metro Rail projects and street infrastructure

Delhi Metro
SS in Railways

Railway Stations: Cladding, Roofing, Structures, Decoration, Selling Carts, Display Boards, Ticketing Area, Seating Space, Floor Tiles...
ABC

• Urban Renewal in the form of Street furniture e.g. Bus Shelters
  • Shopping Malls, organized retail is growing at rapid pace.
  • Modular kitchens
  • Airports

Delhi Bus Shelter
New age applications in Household

Kitchen Applications

- Bathroom Accessories
- White Goods
- Lifestyle Products
- Interior Decoration

SS Modular Kitchen by J-ARC
SS in ABC
Airports

Wall Cladding, Roofing, Check in Area, Seating Spaces, Immigration Area, Railings, Display Boards, Lounge, Booths, Duty Free Area, Signage, Decorative, Elevators, Escalators, Travelators, Food Courts....
SS in Industrial Applications

Industrial Applications

- Power
- Process Industry
SS in Auto & white Goods

Automotive and White goods

- India a leading automobile hub in S.Asia, specially for two wheelers and small cars
- Increase usage of Stainless Steel in exhaust, wheel rims etc.
- Large middle class driving White Goods market
Indian Automotive : Growth Prospects

- India destined as a major Automotive hub in South Asia.
- A large manufacturing base for Two wheelers / Small cars / Steel and Stainless Steel components for automobiles.

Source: FICCI Nov 2009
What Next ?
Applications - Arriving shortly… (India)

- Bus Body
- LPG Cylinder
- Cycle Rim
- Plumbing
- Hospital Furniture
- Water Tanks
- Modular Toilet in Trains
Applications - Arriving shortly… (India)
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Bus Body
Modular Toilet in Trains

Applications - Arriving shortly… ( India )
But ? ???
Challenges Ahead

- Inadequate Infrastructure – Energy, logistics, ports etc. not conducive to growth of manufacturing sector
- Infrastructure projects subject to delays and financial constraints
- Budget constraints vs Life Cycle benefits of Stainless Steel
- Dependence on imports for certain raw material – Nickel, SS Scrap, Moly
JSL: Indian face of Stainless
India’s largest and fully integrated Stainless Steel manufacturer in Flat Products

Leading global supplier of Precision strips, Razor blade steel and Coin blanks

Substantial Market share for high end applications
**Manufacturing Locations**

**HISAR**
- SS Melting / HR - 720,000 tpa
- Cold Rolling - 275,000 tpa
- Special Products and Coin Blank – 35,000

**ORISSA**
- Ferro Alloys – 250,000 tpa
- Thermal Power Plant – 250 MW
- Coke Oven - 430,000 tpa
- Integrated SS Phase – I (by Mid 2011)
  - Capacity - 0.8 mtpa
- Integrated SS Phase – II
  - Total Capacity – 1.6 mtpa

**VIZAG**
- FeCr - 40,000 tpa integrated with Chrome Ore Mines in Orissa

**INDONESIA**
- Cold Rolling – 150,000 tpa
Hisar Plant

- India’s largest and fully Integrated SS Plant of 720,000 tpa capacity with Twin Stand Steckel Mill and Cold Rolling Complex.
- Special products Complex with facilities for precision strips, razor blade and coin blanks
Orissa Plant

- Energy efficient operations
- Captive thermal power
- Cost competitive stainless steel player globally
- Integrated Value Chain
- Port based facilities
- Proximity to raw materials
Meltshop (SMS-Demag, Germany)
- 0.8 mtpa - Liquid Steel and Liquid Ferro Chrome route
- EAF, Chrome pre-melter, AOD - 150t, LF & Slab Caster

Hotstrip Mill (Siemens VAI, Austria)
- Tandem mill, with capacity of 3.2 mtpa
- Coils upto 1650 mm and 36 tons weight
- Plates of 1600 mm for critical applications such as nuclear

Cold Rolling Complex (Andritz, Austria)
- 1 mtpa HRAP No 1 & 2E with 1-stand in-line rolling
- 0.5 mtpa CRAP with 3 Stands in-line rolling
Meltshop expansion to 1.6 mtpa

Power Plant/ Ferro Alloys / Coke Oven expansion

Subsequent plans to expand to 3.2 mtpa
Service Centre Network

Spain - Service Centre
In JV with FAGOR

Gurgaon, Vadodara, Mumbai, Chennai - 135,000 tpa each

Jajpur (Orissa) - Proposed Service Centre in the SS Industrial Park
Watch For !!
Changes in the market place……..

<table>
<thead>
<tr>
<th>Railway</th>
<th>Increasing ABC applications</th>
<th>India as export hub for</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Metro in major cities</td>
<td>• Selective Rebar's</td>
<td>• Auto Components</td>
</tr>
<tr>
<td>• Railway Wagons</td>
<td>• Door &amp; Windows</td>
<td>• Appliances</td>
</tr>
<tr>
<td>• Coach Up-gradation</td>
<td>• Cladding</td>
<td>• Mill Products</td>
</tr>
<tr>
<td>• SS usage in Platforms</td>
<td>• Signage's</td>
<td>• High Quality Value Added Engineering Products</td>
</tr>
<tr>
<td></td>
<td>• Street Furniture</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Fasteners</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Life Style products</td>
<td></td>
</tr>
</tbody>
</table>
Movements In environment………

• RM Price Fluctuations ( Ni, Cr, Scrap )

• Grade / Series Substitution in Industry

• Standardization ( e.g Ikea/ Whirlpool / Electrolux moving to 400 Series )
Opportunities

• Increase in Consumption Levels / Market Size
• Increasing Downstream Applications
• New products / segments being created
Summing up ++
Summing Up

**Indian Stainless Steel Market**

- SS Production will up to 4 Million Tons by 2015
- Overcapacity in the market .. export boost up
- Double digit growth in SS Consumption (10-12%)  
  (Growth in SS Consumption is about 1.2 Times GDP)
- New applications will emerge very fast
- Opportunities for business in downstream industries
- SS will change the face of India
Summing up

**International SS Market**

- Stainless Steel markets recovering, growth led by Asia.
- India to play major role in Asian market as China sets to stabilize
- JSL all set to take challenges of future India
  - Established plant at Hisar
  - Greenfield 0.8 MMT plant in Orissa (by 2011)
  - Enhanced reach by Service centre network
  - Opportunities for growth
  - Indian face of Stainless
Thanks .......