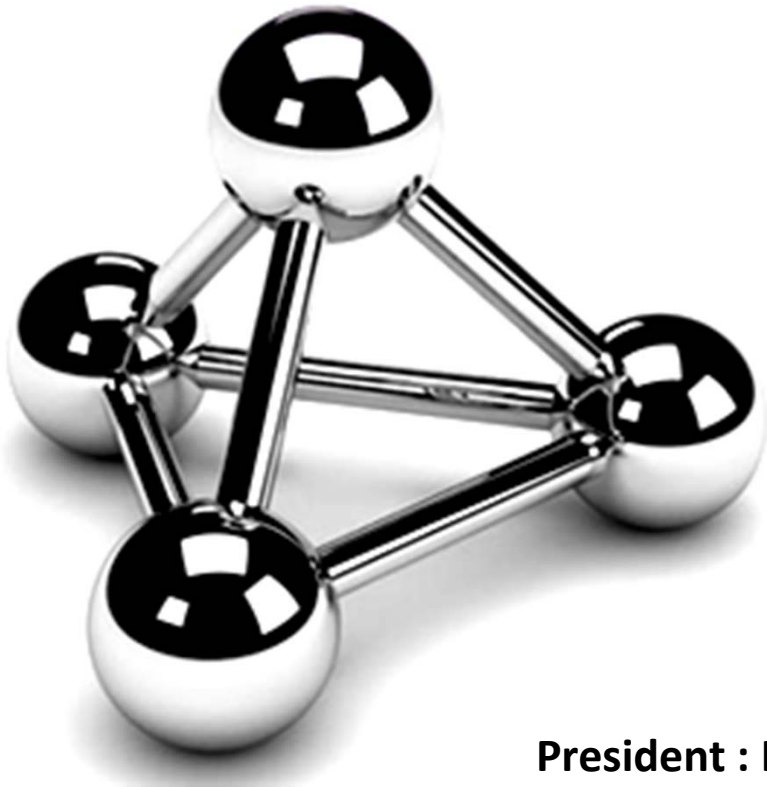


Annual Forward looking Session

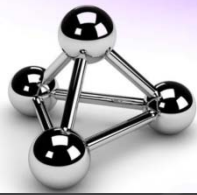
Indian Stainless Steel Market

30th September 2013



Presented by :
N.C. Mathur

President : Indian Stainless Steel Development Association (ISSDA)



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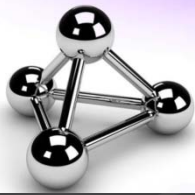
Indian Stainless Steel Scenario

Stainless Steel Show Case : Delhi Metro

Stainless Steel Growth Drivers in India

Watch For...

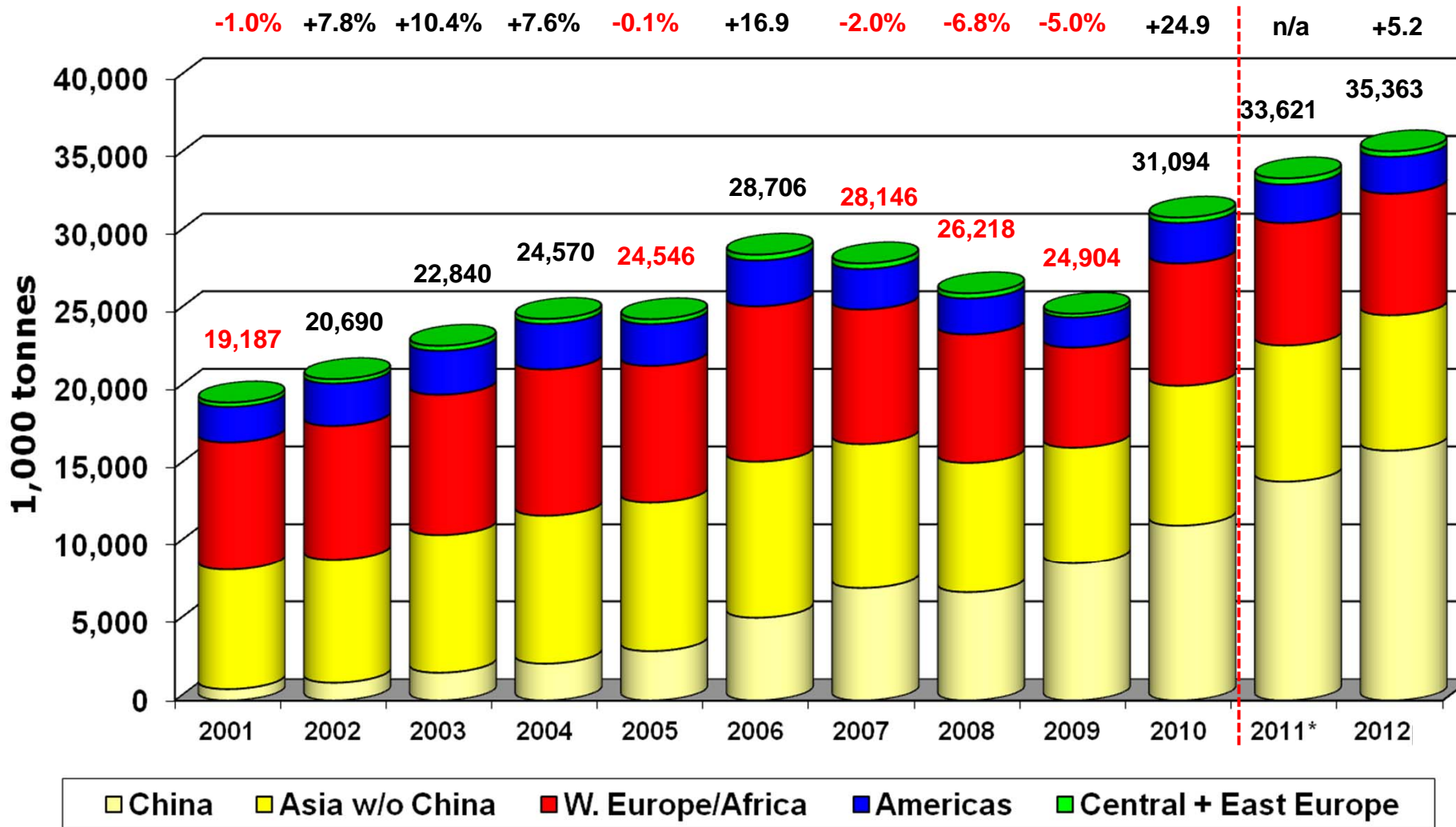
Summing Up++



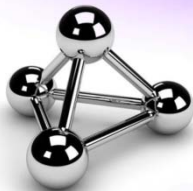
Global Stainless Steel Scenario



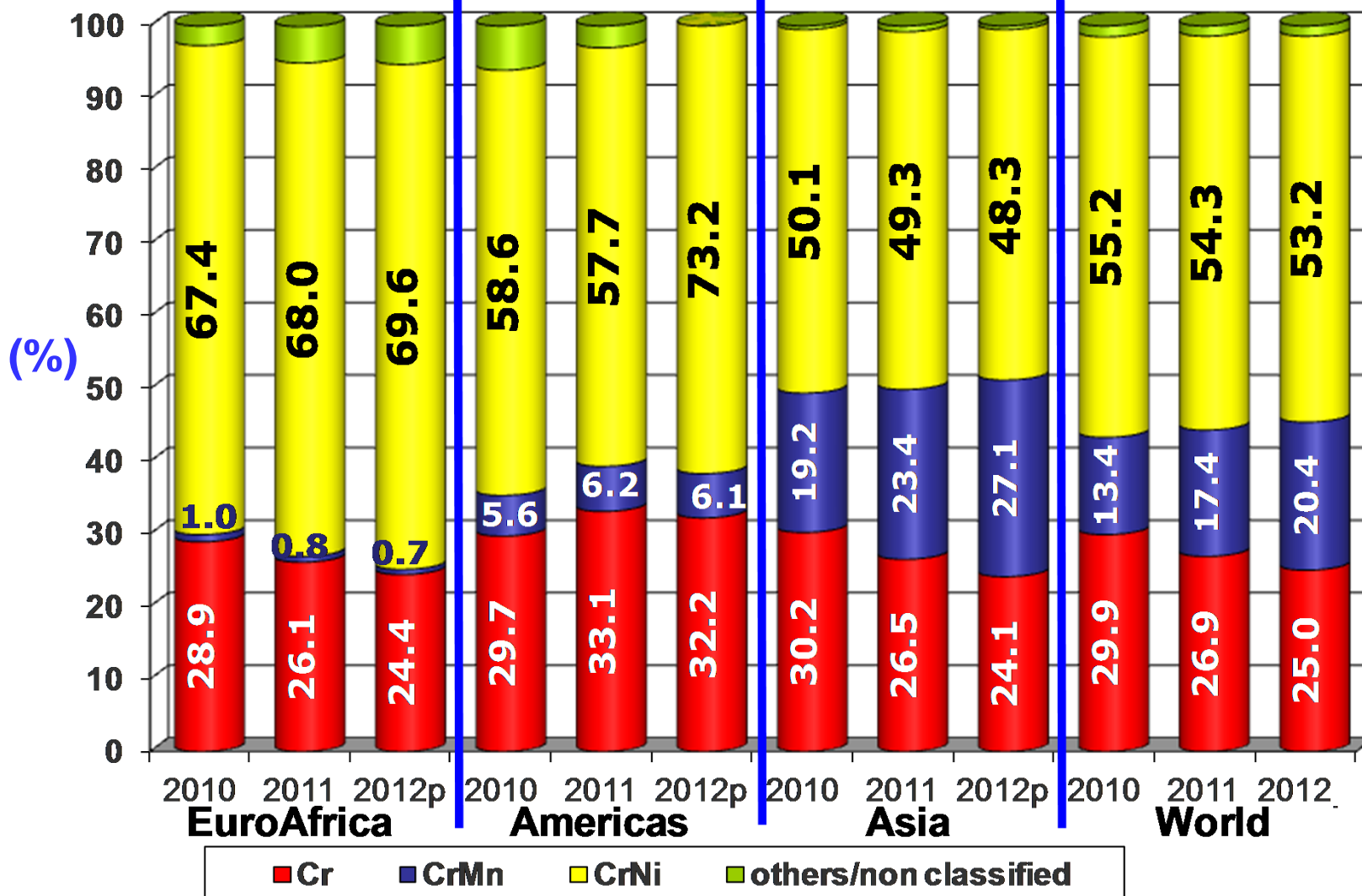
Stainless Steel Crude Production



* Major correction of Chinese figure for 2011, therefore not comparable with previous years

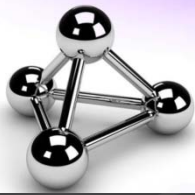


Stainless Crude Steel Production (By Categories)



Note: Due to major corrections of Chinese figures since 2011 not fully comparable with 2010, for CrMn steels in particular

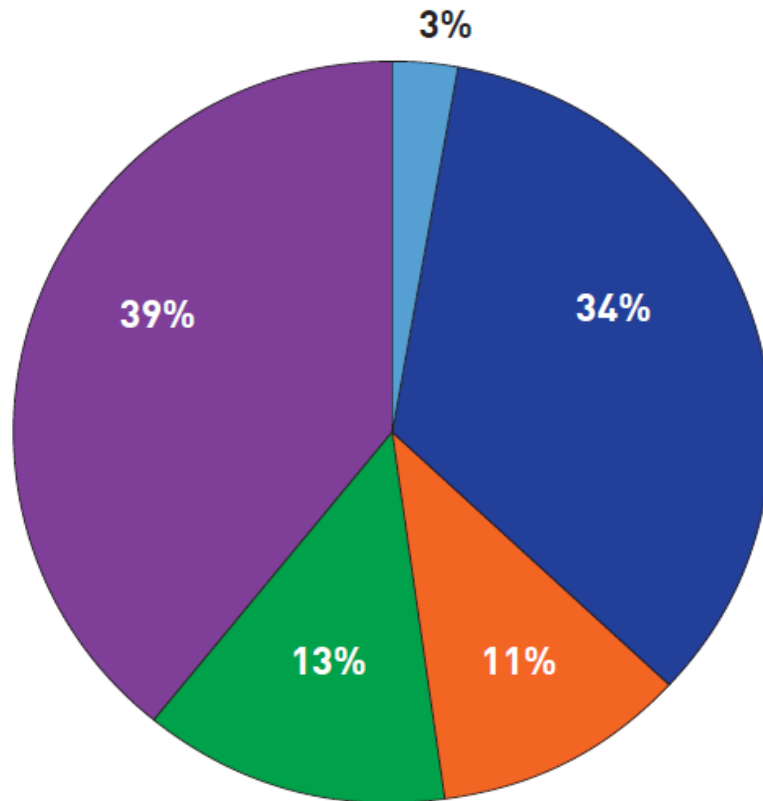
Source: ISSF



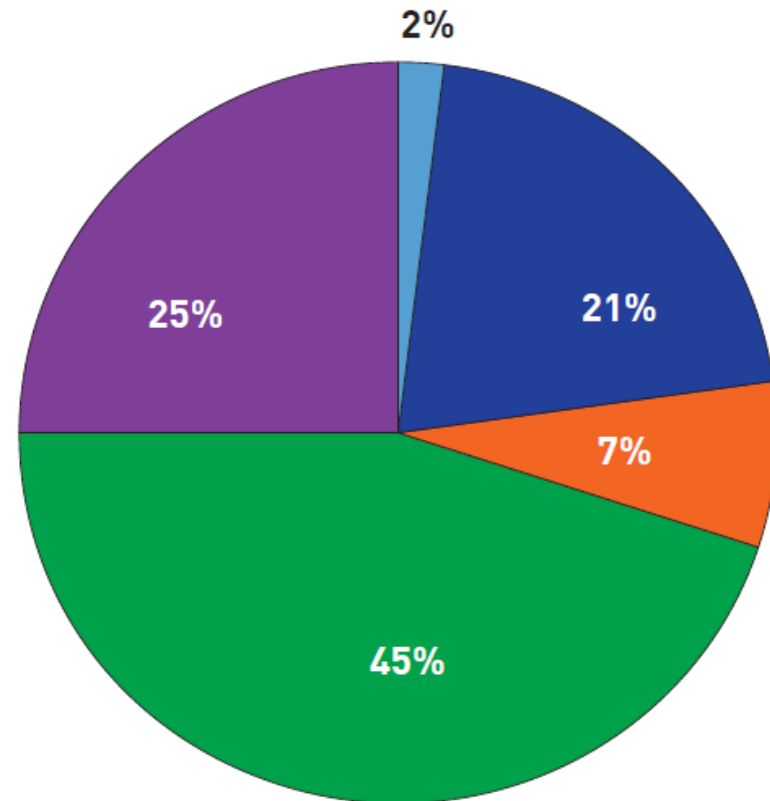
Regional Share of Stainless Steel Production



Year 2005



Year 2012



■ EU-27

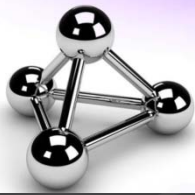
■ Americas

■ Other Asia
(excluding China)

■ China

■ Rest of world

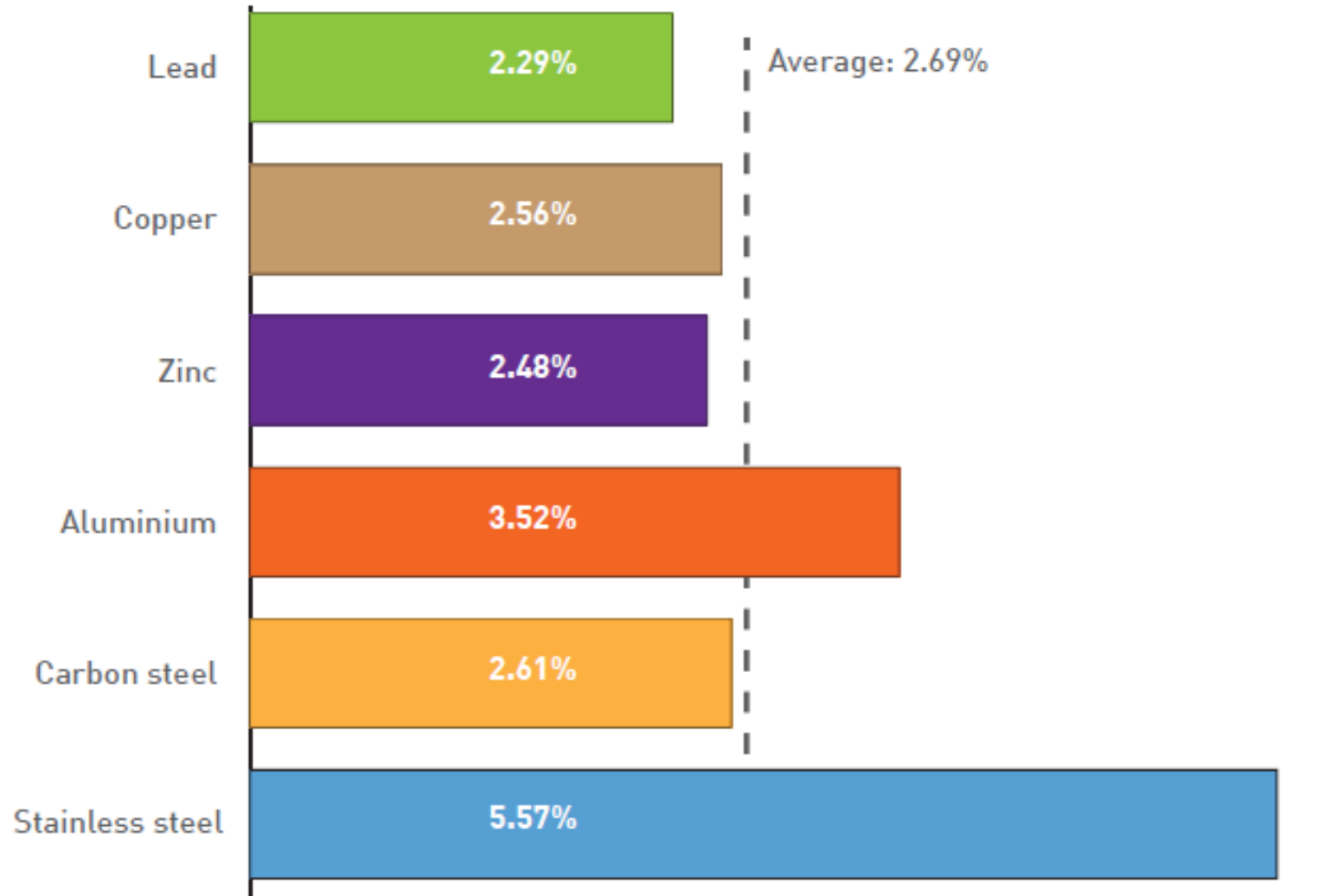
Source: ISSF



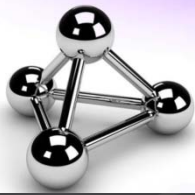
Stainless Steel ... a Growth Material



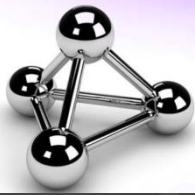
Compound Annual Growth Rate of major metals (%/year): 1980 - 2012



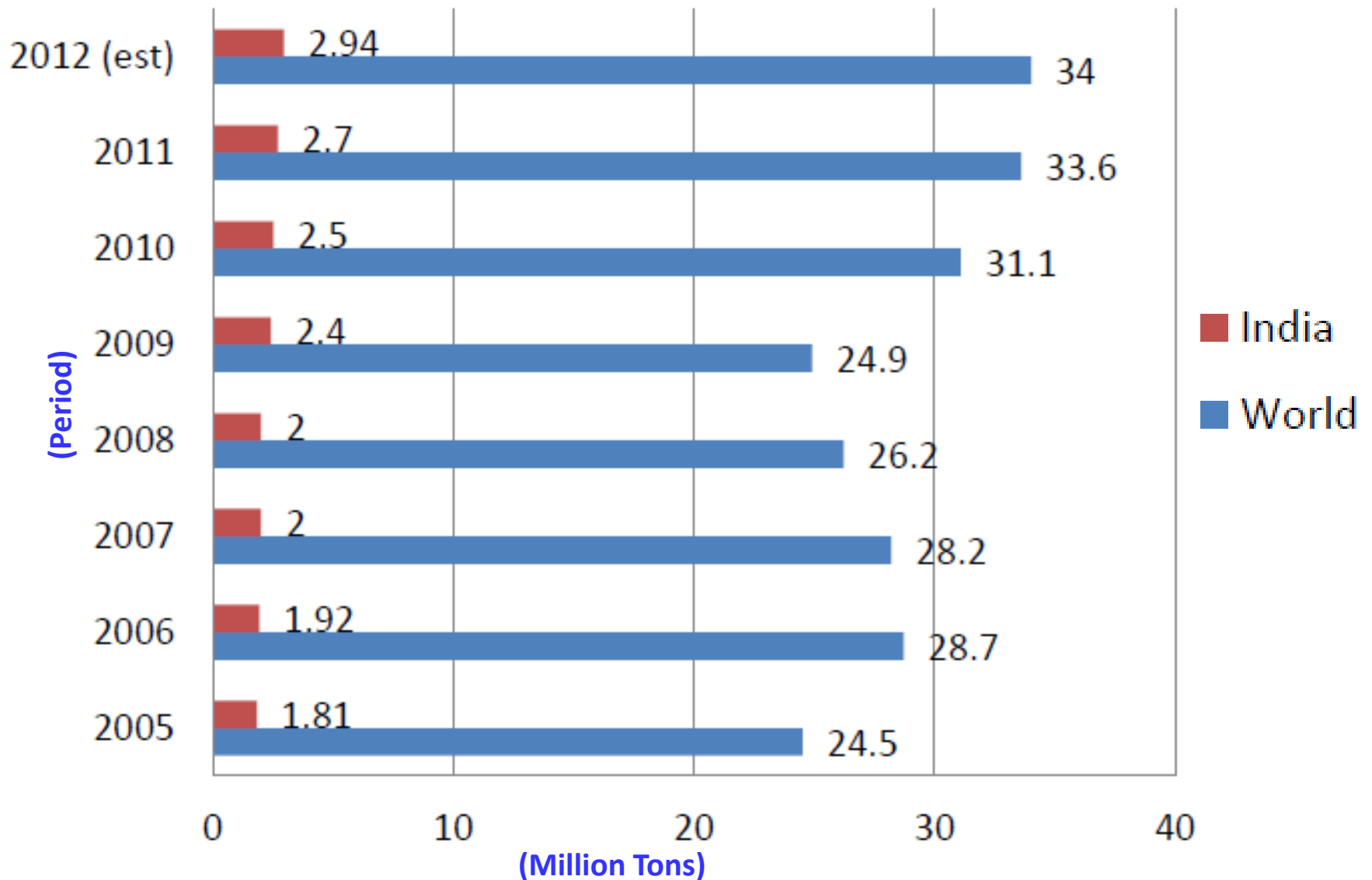
Source: ISSF

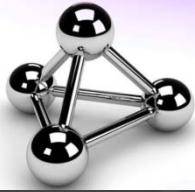


Indian Stainless Steel Scenario

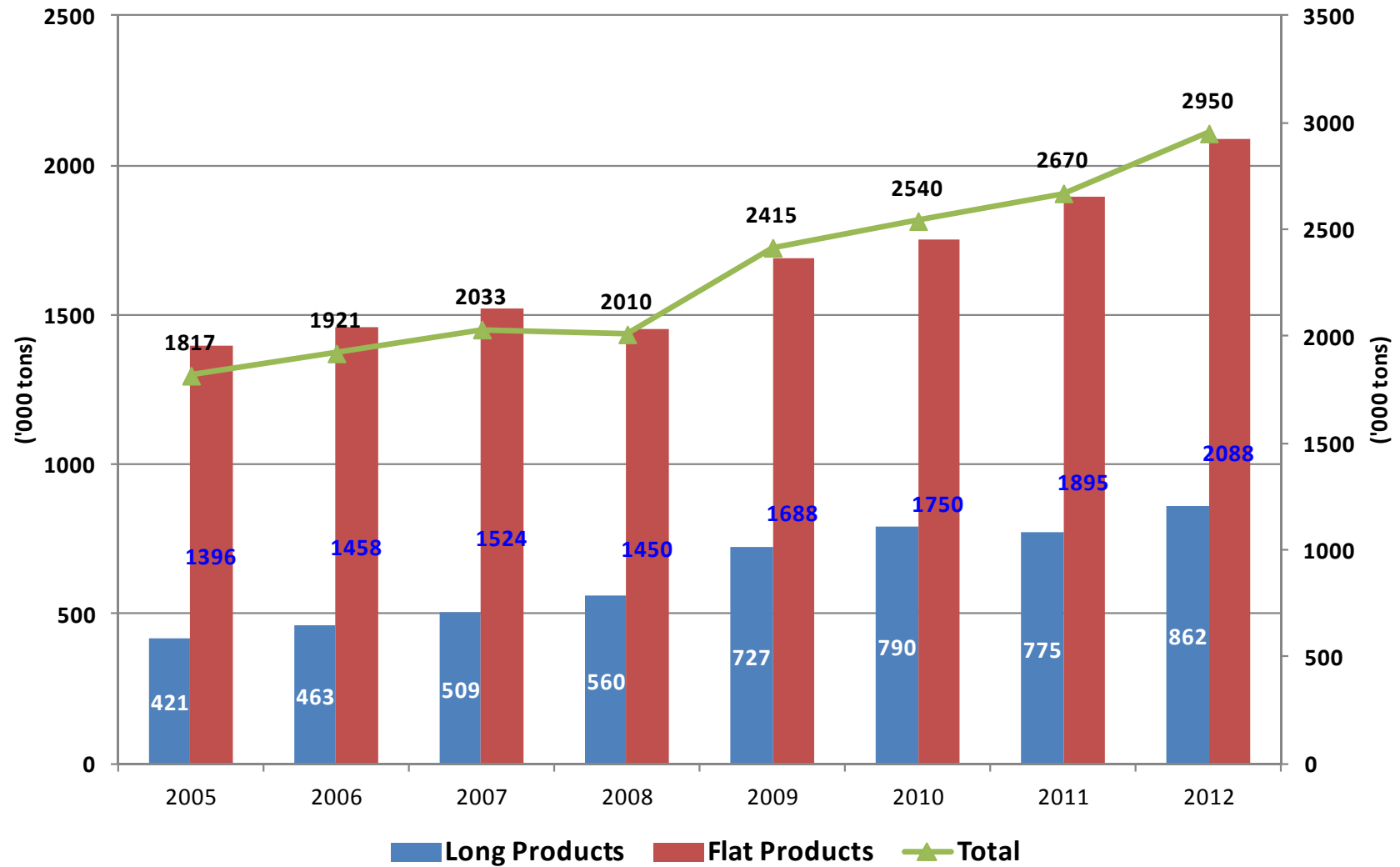


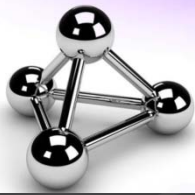
Crude Stainless Steel Production World Vs. Share of India



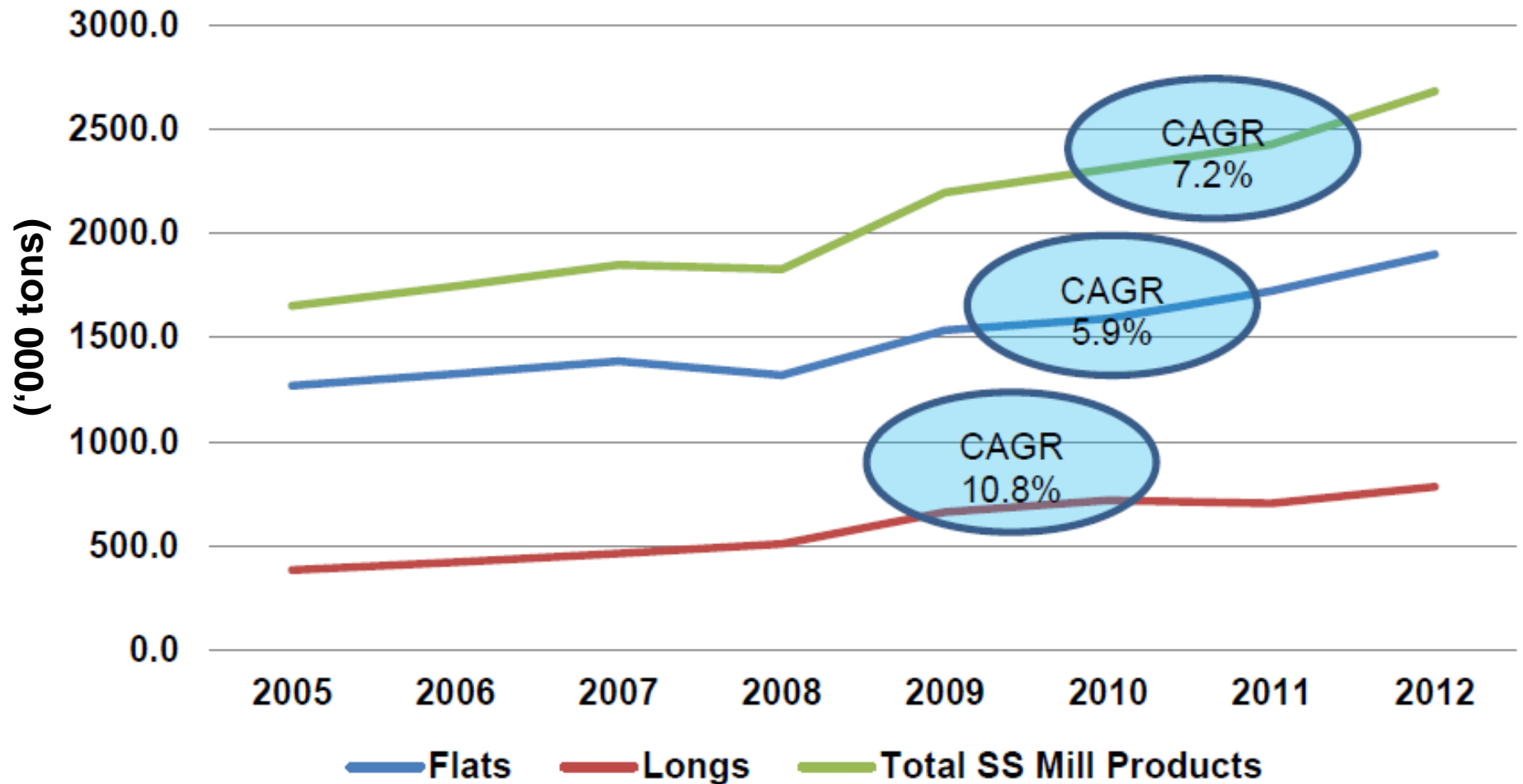


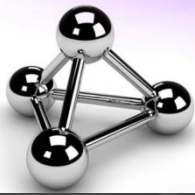
Stainless Steel Melt Production : India





Stainless Steel Mill Products Production Trends : India

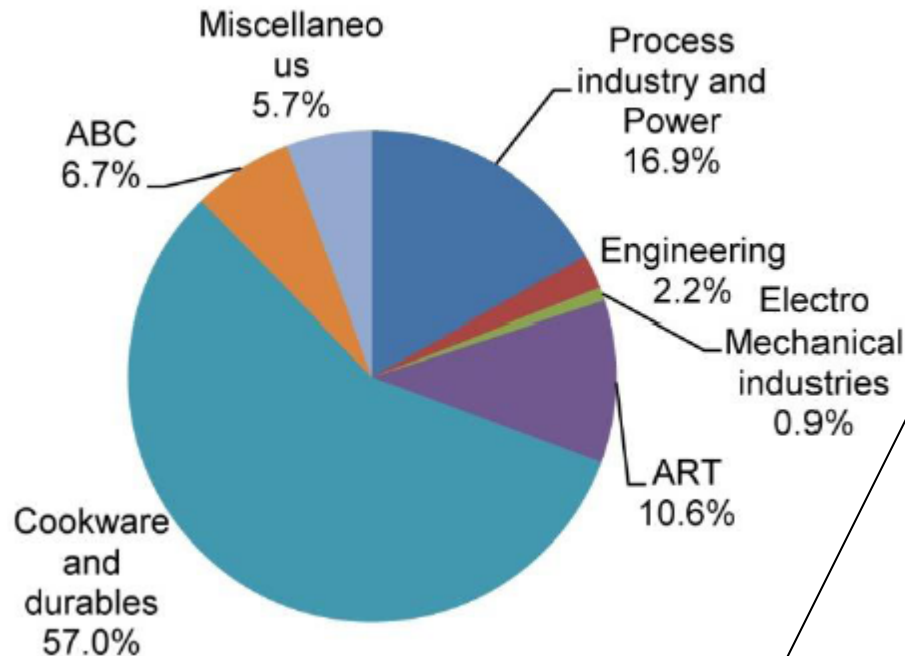




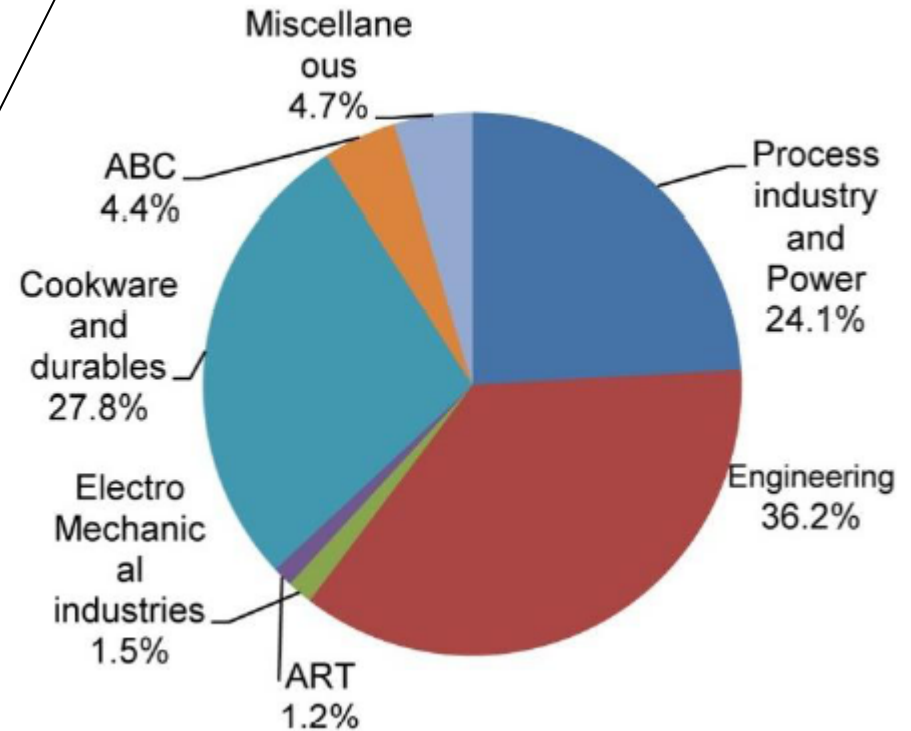
Stainless Steel Consumption by End Use India

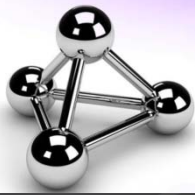


Flat Products : Year 2012

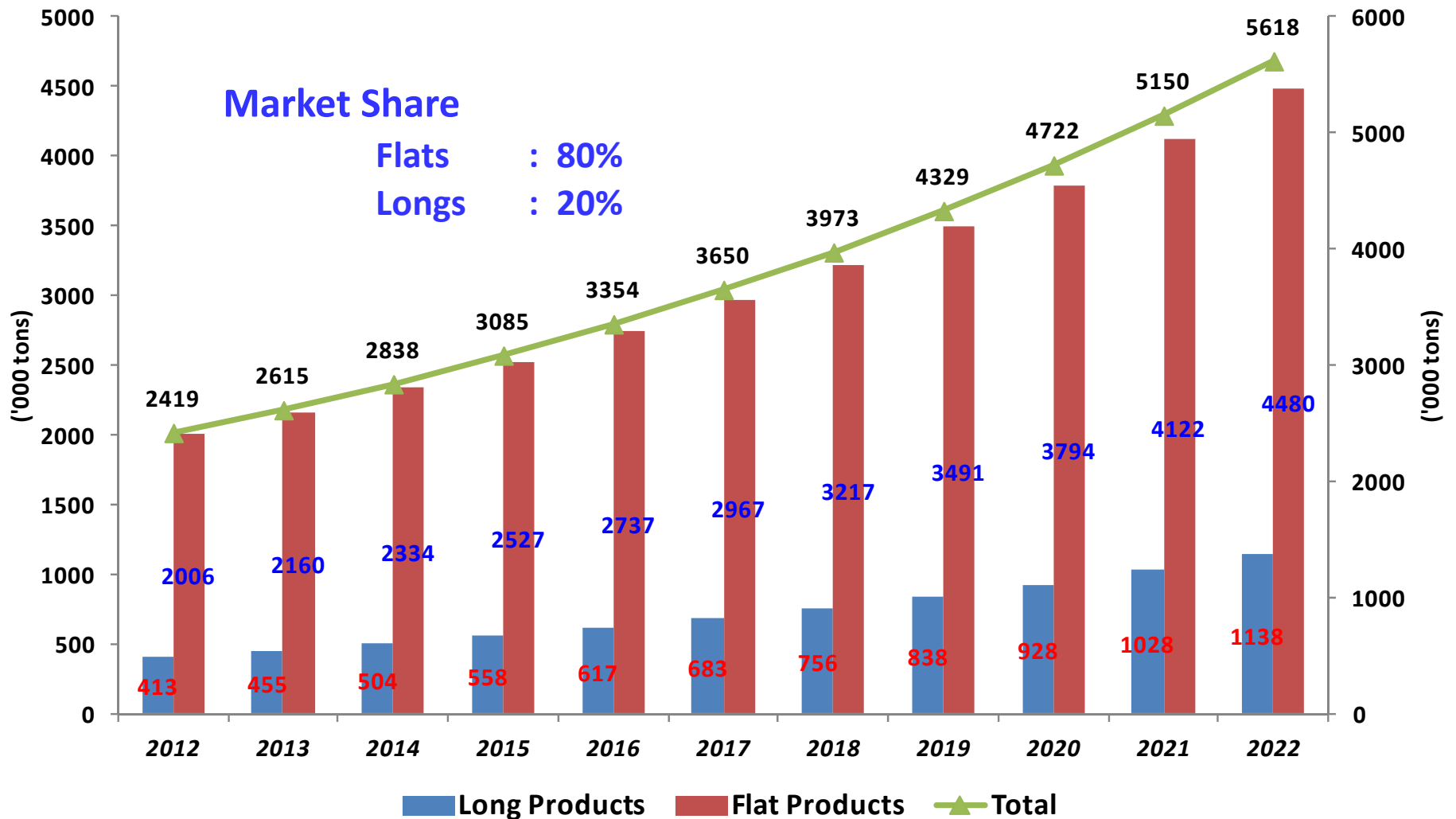


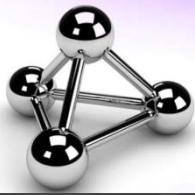
Long Products : Year 2012



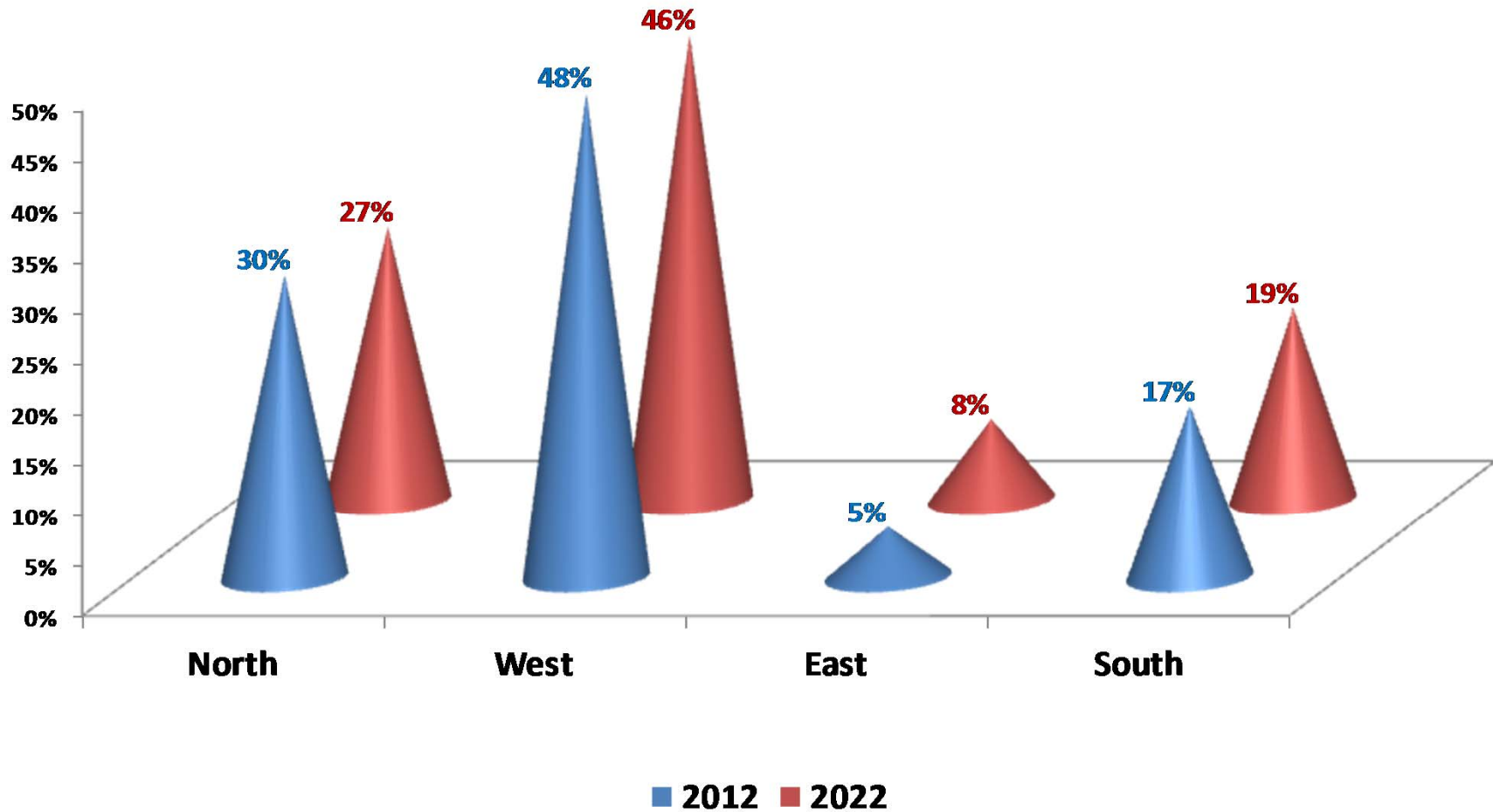


Projected Apparent Consumption of Stainless Steel in India





Projected Regional Stainless Steel Consumption in India

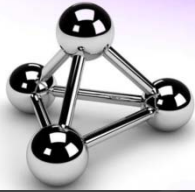




Opportunities in Indian Infrastructure Structure



- **India plans to spend US\$1 Trillion on infrastructure in next five years.**
- **Indian airports require investments worth US\$13 billion in next five years; private sector to contribute US\$10 billion.**
- **Highways sector will attract investments worth US\$123 billion in next 5 years.**
- **US\$300 billion planned to be spent on upgrading rail infrastructure (including new rail lines, double/multiple lines, high-speed rail) by 2020.**
- **Around \$55 billion worth investments planned in major and non-major ports by 2020.**

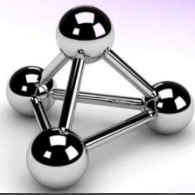


Stainless Steel Show Case : Delhi Metro



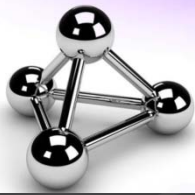
Stainless Steel Show Case : Delhi Metro





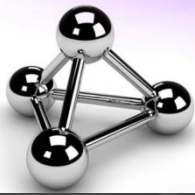
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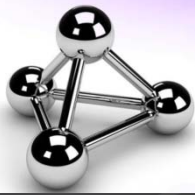
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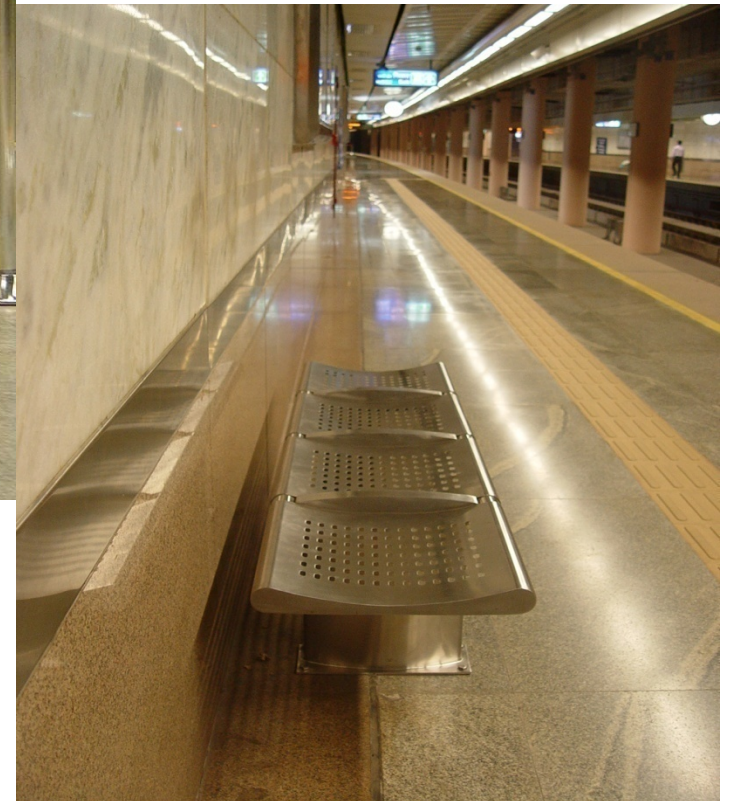


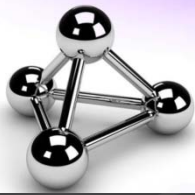
Stainless Steel Show Case : Delhi Metro



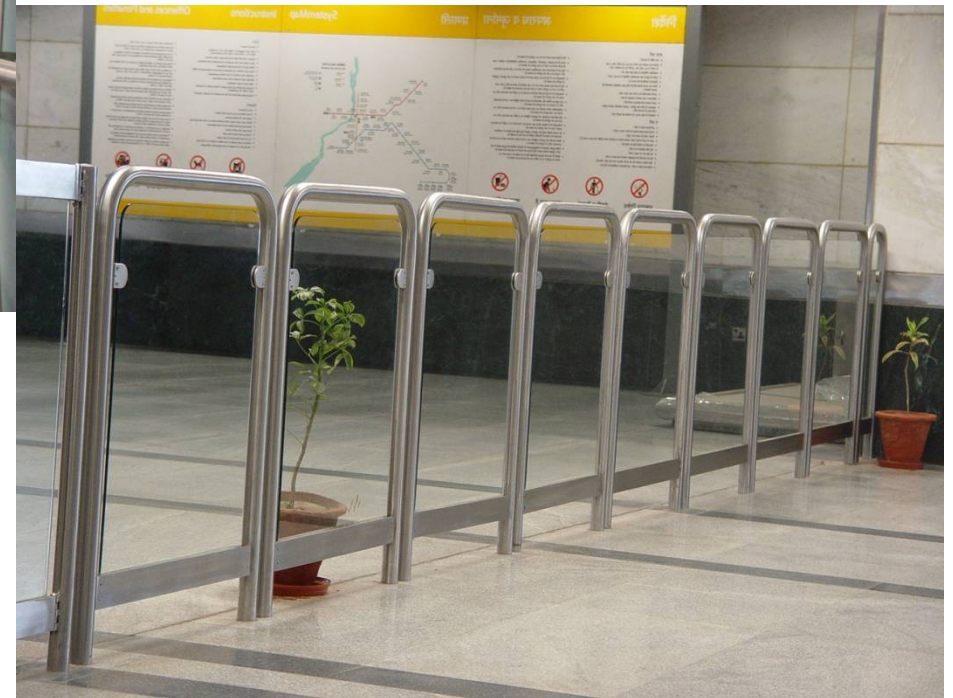


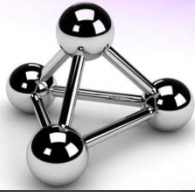
Stainless Steel Show Case : Delhi Metro



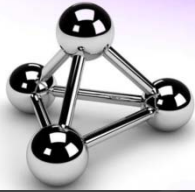


Stainless Steel Show Case : Delhi Metro





SS Growth Drivers in India



SS Growth Drivers in India



ABC

- SS roofing sheets
- Decorative and color coated SS
- Street furniture
- Escalators, elevators
- Claddings
- Railings
- Airports
- Railway station up gradation

ART

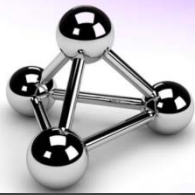
- Luxury Bus bodies
- Auto chassis, trims, suspension parts, fuel tanks, catalytic convertors
- Railway wagons and coaches
- Metro coaches

Process & Engineering

- Nuclear grade SS for fuel containment and waste handling
- Super critical boilers in power plants
- Water treatment and drinking water supply
- Desalination applications

Consumer Durables

- India as hub for white goods manufacturing
- SS used as components



Stainless Steel in Railways

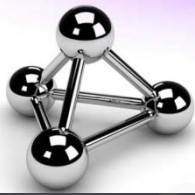


Railways

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



Delhi Metro

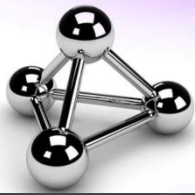


Stainless Steel in Railways



Railways

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



Stainless Steel in Architecture, Building & Construction (ABC)

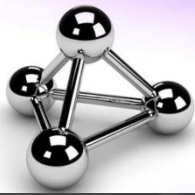


ABC

- 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



Stainless Steel in Architecture, Building & Construction (ABC)

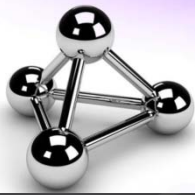


SS Modular Kitchen

New age applications in Household

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



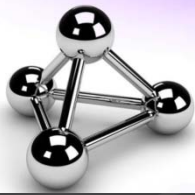


Stainless Steel in Architecture, Building & Construction (ABC)



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....



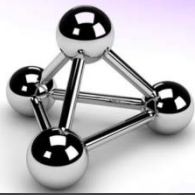
Stainless Steel in Industrial Applications



Industrial Applications

- Power
- Process Industry





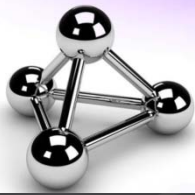
Stainless Steel in Auto and White Goods



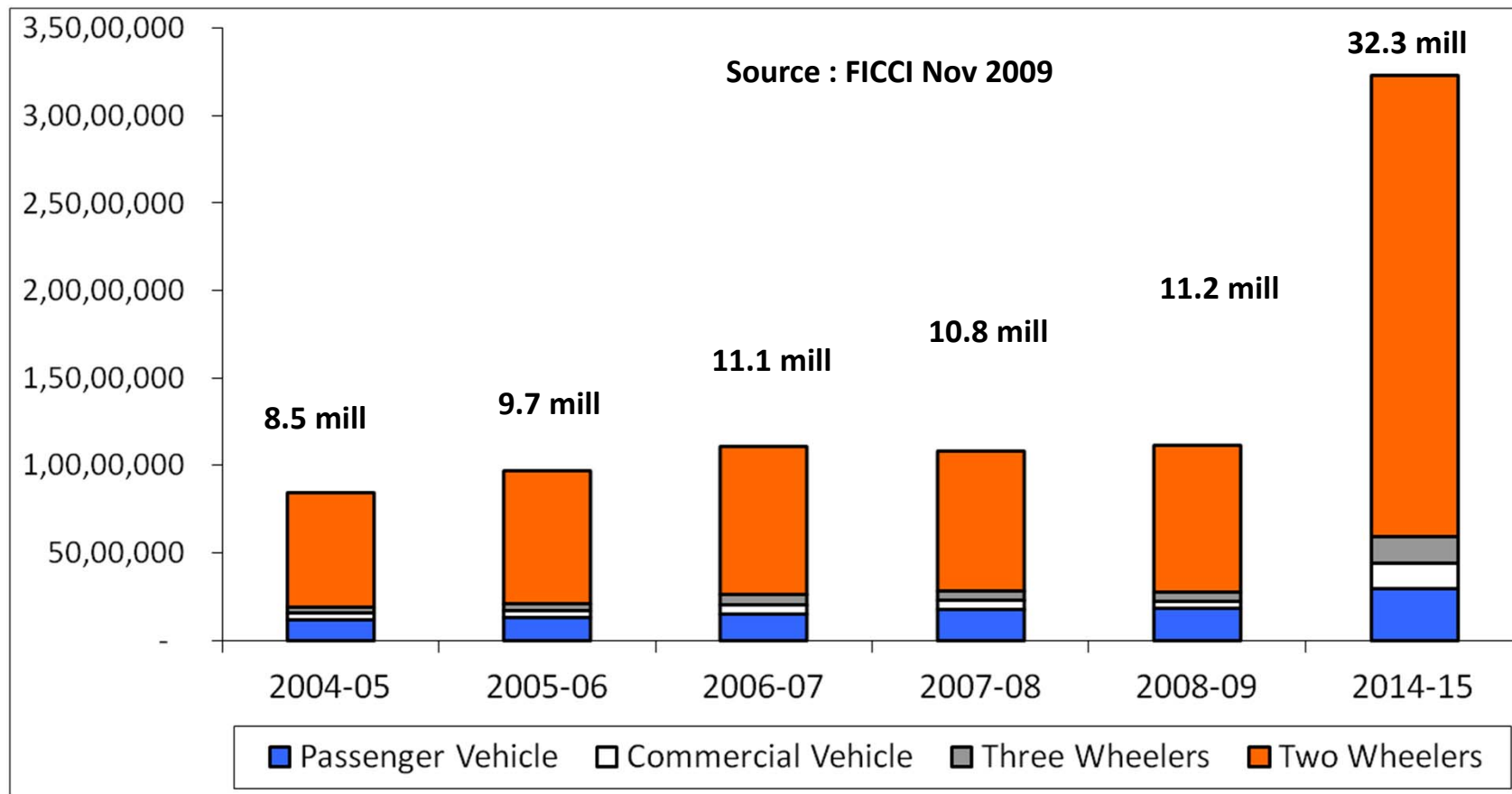
Automotive and White goods

- 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

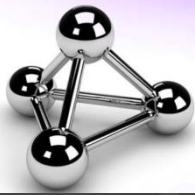




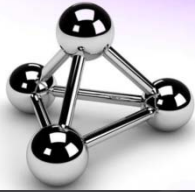
Indian Automotive : Growth Prospects



- 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.



What Next???



Applications - Arriving shortly... (India)



Bus Body

LPG Cylinder

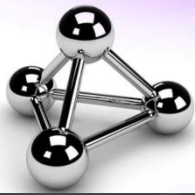
Cycle Rim

Plumbing

Hospital Furniture

Water Tanks

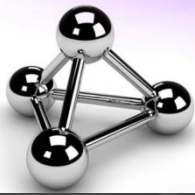
Railway Passenger
Coaches



Applications - Arriving shortly... (India)



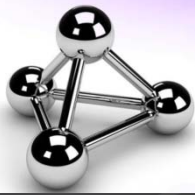
Bicycle Rim & Gas Cylinder



Applications - Arriving shortly... (India)



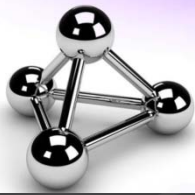
Plumbing



Applications - Arriving shortly... (India)



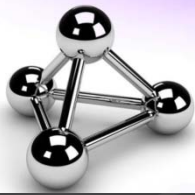
Water Storage Tank



Applications - Arriving shortly... (India)



Hospital Accessories

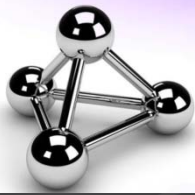


Applications - Arriving shortly... (India)



Bus Body



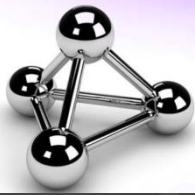


Applications - Arriving shortly... (India)



Bus Body





Applications - Arriving shortly... (India)



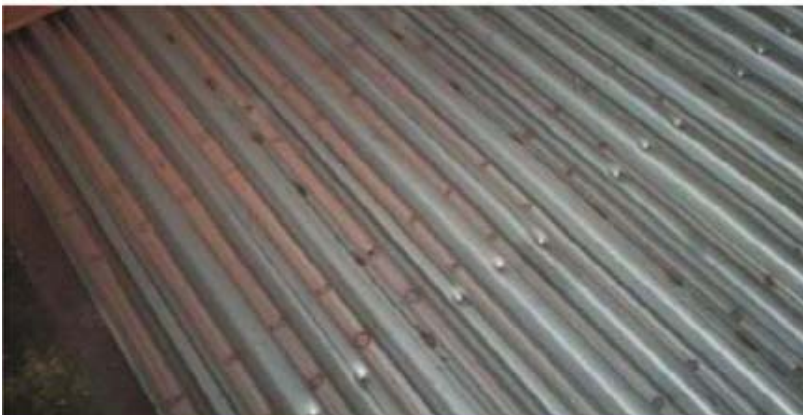
Outer Shell – Outside View



Outer Shell – Inside View



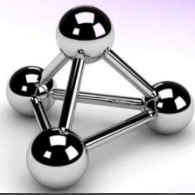
Trough Floor



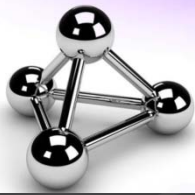
Connecting Door



Railway Passenger Coaches



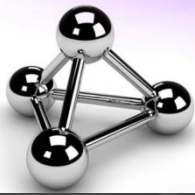
But???



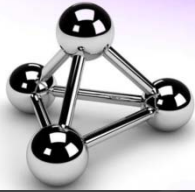
Challenges Ahead



- ❖ **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.**



Watch For....



Changes in the Market Place...



Railway

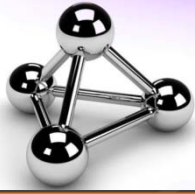
- Metro in major cities
- Railway Wagons
- Coach Up-gradation
- SS usage in Platforms

Increasing ABC applications

- Selective Rebar's
- Door & Windows
- Cladding
- Signage's
- Street Furniture
- Fasteners
- Life Style products

India as export hub for

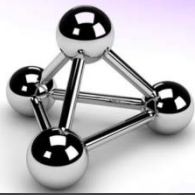
- Auto Components
- Appliances
- Mill Products
- High Quality Value Added Engineering Products



Movements in environment.....

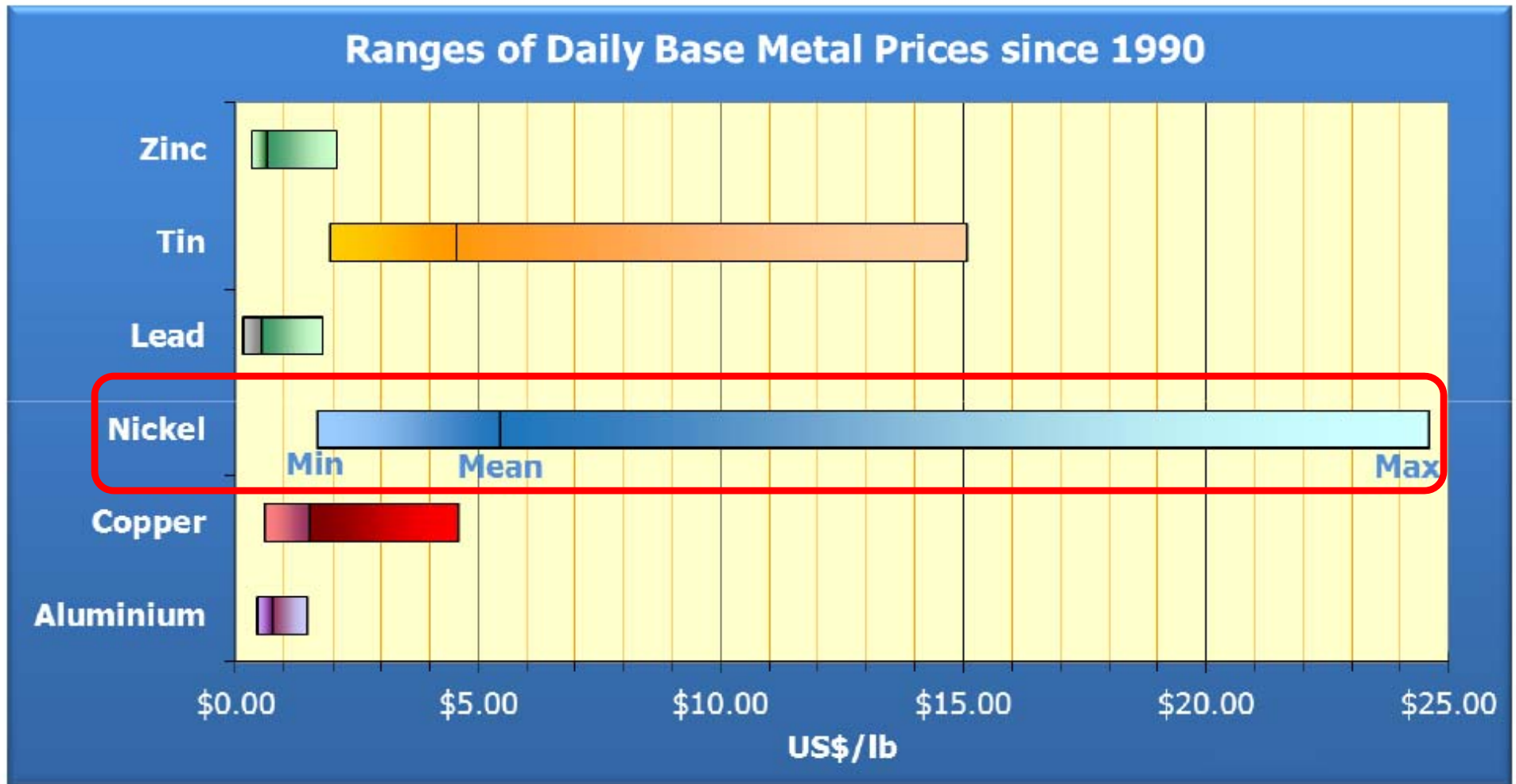


- **RM Price Fluctuations (Ni, Cr, Scrap)**
- **Grade / Series Substitution in Industry**
- **Standardization (IKEA/ Whirlpool / Electrolux moving to 400 Series)**



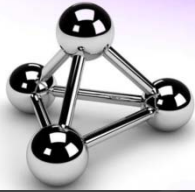
Raw Material : Price Volatility

Since 1990



Nickel (key Raw Material for Stainless Steel) trades over a wider Price Range than other base Metals.

Source : Metalytics



Indian Stainless Steel Industry Outlook



Prospects

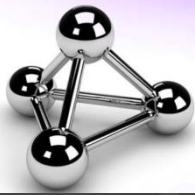
- High growth economy
- Increasing SS consumption

Growth Area

- ABC (Architecture, Building & Construction)
- Automobile
- Railways

Challenges

- Indian Infrastructure
- China Capacities
- RM Volatility



Summing up ++

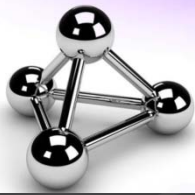


Summing Up++



Indian Stainless Steel Market

- ❖ **SS Production will go up to 4 Million Tons by 2015**
- ❖ **Overcapacity in the market .. export boost up**
- ❖ **Scope for double digit growth in SS Consumption**
(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**



Thank you!

Contact at : ncm@stainlessindia.org