



International Copper Promotion Council (India)

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Shining Prospects of Copper in the SME sector

Copper being one of mankind's most useful and valuable materials has superior properties such as its benchmark in electrical and thermal conductivity make it very difficult to substitute without sacrificing performance and energy efficiency. India needs to conserve all the Electrical Power it can, as this is one of the biggest infrastructural bottlenecks in achieving sustained high economic growth and alleviating poverty. Furthermore, Global Climate Change is a concern and it is necessary to reduce Greenhouse Gas emissions by using energy in the most efficient way. These objectives can only be achieved by using Copper. Copper also has incomparable mechanical properties like malleability, ductility and corrosion resistance which make its position unique for electrical and thermal applications.

According to data published by CRU, India's refined Copper production in 2007 was 710 Thousand Tons while its consumption was 545 Thousand Tons. The present Copper production capacity in India is adequate to serve anticipated domestic demand in the short term.

SME's can look forward to deriving opportunities from the following long term drivers for copper growth in India:

Building construction

1. Growth in the construction industry - The average expected growth of the construction industry of approx 7% - 9% PA will continue to drive the demand for copper building wires. In view of the growth in per capita disposable income the standard of living will improve; that will increase the density of copper usage in building wires as well.

2. New electric connections in rural areas – As per government statistics 56% of rural houses (total 138 million) are still deprived of access to electrical energy . The Government of India has targeted 100% electrification of all rural houses by 2012.This will drive additional growth in the building wire segment; though the density of usage in rural houses will be lower than in urban houses.

3. Growth in tele density & IT industry – The Government has, by allowing Foreign Direct Investment in this sector ranging from 49% to 100% from basic telephony to providing gateways has accelerated the tele-density from 0.4% to 9% in the span of the last 10 years. This growth was always been supported by continuously evolving policies & thus a drastic reduction in the cost per consumer. In view of this success, mainly achieved with private sector participation; now the target set for 2007 is 22% for the tele density & broadband connectivity of 10 million subscribers will create a huge opportunity for copper in the last mile in the form of structured wiring and coaxial cables in India. The expected density of usage could be lower in developed countries as the lower prices of competing technologies like wireless & fiber optic cables will reduce the share of copper even in the last mile.

4. Cooking Gas – Due to discoveries of large Natural Gas deposits within the country, the Government is pursuing a policy of substitution of Liquefied Petroleum Gas which is imported. With this, the method of delivery would change from Cylinders to Piping, giving opportunities for Copper tubes in the last mile.

Power & industry infrastructure:

1. Energy availability – To support the average GDP growth of approx. 7% during the last 3 years there has been a considerable increase in primary energy demand. The growth in a secondary source such as electricity was more than 10%. This has increased the peak load shortage. Therefore the country has set a priority to:

- a. Increase availability by adding additional 70% percent of generation capacity by 2012. (Existing capacity 124 GW)
- b. Strengthening the inter-regional power transmission back-bone with 30 GW capacities by 2012 from the existing capacity of 8.1 GW & inviting a private partnership to achieve this target.
- c. Improve supply side efficiency by strengthening the distribution system & reducing the system efficiency by creating an incentive mechanism for distribution utilities & adopting an open access policy along with 100% private participation in distribution business. In addition to this, 100% rural electrification will result in an increase in the distribution network in rural areas. All this will result in an increase in demand for copper in the power generation, transmission & distribution sectors such as magnet wire used in generators, instrument transformers, power & distribution transformers, busbars, power & control cables & switch gears. The density of the usage is also expected to grow due to the focus on supply side efficiency.

2. Off – grid connections – In order to achieve 100% rural electrification target & by creating an open access policy it is expected to create the growth in off – grid connections based on oil as the primary source of energy & renewable energies like wind, solar cell, co-generation & mini or micro hydel power plants.

3. Industrialization – For last 3 years the industry production is growing at average rate of 7% to 8%. It is expected to have a similar growth rate in the future. Indian industry is also gearing itself to demonstrate global competitiveness by improving efficiency in the core sector of industry. The energy conservation act 2001 has created special focus on energy conservation in the industry sector. As industry needs more reliable electricity at cheaper cost, and also to improve the overall efficiency there will be growth in the captive co-generation capacity using fossil fuel & waste as a source of energy.

This will create demand for more & energy efficient motor driven systems, transformers, power cables & wires, bus-bars. There could be additional potential in heat exchanger products as well.

Energy efficiency & climate change:

1. Energy conservation – After establishing the national energy conservation office (BEE) under energy conservation act; government has set a target of saving the equivalent of 23,700 MW in power generation capacity by investing in energy conservation initiatives. Under this the focus is on Indian Industry Programmes for Energy Conservation, Demand Side Energy Management, Standards and Labelling Programme, Energy Efficiency in Buildings and Establishments, Energy Conservation Building Codes, green building, Professional Certification and Accreditation, Manuals and Codes, Energy Efficiency, Policy Research Programme, Delivery Mechanisms for Energy Efficiency Services. This will create additional demand for copper used in products, systems & appliances.

2. Renewable energy – With an installed capacity of 4,200 MW till date, wind power installed capacity has grown by 12 times in 10 years. With the strong driver from wind mill manufactures the central & state governments have created policies that will keep up a similar growth trend. As per the new & renewable policy statement 2005, Ministry of Non – conventional Energy Sources

is targeting wind, solar, biomass, Hydro & nuclear power sources to achieve the targets defined in the Kyoto protocols.

Transport sector:

1. Automobiles – The automobile sector in India was approx. USD 23 billion in 2004 & is growing at the rate of 16% PA. There are more than 14 big industry players in the market, which contributes 17% of the total in-direct tax collection. It is expected to have similar growth in the future. The increase in sophistication and size of Passenger vehicles will give rise to a higher density of Auto-wiring harnesses. Further, the swapping of fuel from imported Petroleum Oil derivatives to locally available Natural gas will create more opportunities for copper tubes in this sector.

2. Mass rapid transport & railway network – Conversion from oil fuel to electricity has created a niche for copper in railway sector. The railway electrification will continue in next 5 years. Additional copper demand will be created in urban mass rapid transport to reduce the traffic jams in crowded cities like Mumbai, Delhi & Bangalore. This will create opportunity for copper in underground trains & sky train projects announced recently.

Appliances:

The penetration of air-con & refrigerators in India is 13% and 1% of house holds in India. This is much lower than other countries in the region. (Refrigerators – Australia, Hong Kong, Singapore, Malaysia, Korea 90%; Philippines, China 40%, Vietnam, Indonesia 20%. Air con – Indonesia 20%, China 24%, and Malaysia 45%) With the increase in per-capita earnings in the country it is expected to be similar other countries in the region. The current growth rate in appliances market is about 20% PA and it is expected to growth with minimum same pace for the next 5 years. Today, Chinese & Korean brands entering in the market are creating healthier competition by reducing the market prices which may lead to increase in market growth of appliances industry. There is a large potential for improvement in the levels of Energy Efficiency which would increase the density of Copper usage.

Thus, Copper fabricators and allied SME's in India have a number of business opportunities to expand in their market segments. Copper and its' alloys while having intrinsic values need to be aggressively marketed by SME's. The new and emerging applications of copper such as those based on copper's anti-microbial properties should to be exploited fully and completely. The export market *is* another sector where Indian SME's can aggressively market a range of copper products - from cables to artifacts in the global market, instead of being an importer of finished goods, SME's can together with their manufacturing base make the country an exporter in the finished product segment.
