

OVERCOMING THE CHALLENGES FACED BY COCHIN IRON & STEEL LTD, COCHIN

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INTRODUCTION

The Indian steel industry has a history of about 100 years. Tata and SAIL are the major players in India. India is the world's fourth largest producer of crude steel. The Iron and steel industries do not have a very long history in Kerala. All most all iron and steel industries units were commenced during 1991-92. Before that, Kerala's demand for iron and steel were satisfied by the manufacturers outside Kerala. The Cochin Iron & Steel Ltd (CIS), was commenced in 1996 with the main objective of satisfying demands from Kerala. It recognized all over south India as a high-class manufacture of quality steel products with ISI certification, the company is in constant pursuit of excellence in every field through the earnest effort of a core of technocrats and a devoted workforce. The group has been technology-driven and a board products portfolio. It aims to be a global player. In pursuance of its objectives, it is committed to maintain world-class quality standards, efficient delivery schedules, competitive price and excellent after sales service. Cochin Iron & Steel Ltd, an ISO 9001:2000 organization is capable of supplying internationally acceptable quality steel products.

The Cochin Iron & Steel Ltd was started with a capital investment of 4 cores. The company is a composite steel plant having M.S. ingots making unit and M.S. rods making unit. The capacity is 24000 TPA for each unit. M.S. rods are mainly using in the construction field and the M.S. ingots are using as a raw material for various products. M.S. ingots are used as a raw material for producing M.S. rods.

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Tracking and adopting the latest in world technology: anticipating customers' needs with cost efficient, reliable solutions and promoting engineers skill and manpower caliber is the success of the Cochin Iron & Steel Ltd (CIS). The need for perfection begins in the workforce's mind itself. Quality control is a challenge that The Cochin Iron & Steel Ltd (CIS), has overcome through diligence and discipline and by encouraging its employees to develop a sense of pride in their job. The Cochin Iron & Steel Ltd (CIS) has been technology-driven and a board products portfolio. It aims to be a global player. In pursuance of its objectives, it is committed to maintain world-class quality standards, efficient delivery schedules, competitive price and excellent after sales service.

Quality of Cochin Iron & Steel Ltd means not only product quality or service quality but also cost, delivery and after sales service which goes with it. Responding to this concept of quality Cochin Iron & Steel Ltd has adopted quality system appropriate to its client. The bright steel bars of Cochin Iron & Steel Ltd are free from scale and harmful imperfection, tight dimensional tolerance, superior straightness and higher strength than hot-rolled products. They are ideally suited to machining and shafting applications.

The economic reform initiated in 1991 paved the path of economic growth in the country. The concept of LPG and other policies initiative give the impetus for the entry of new players in steel industry. The developing country like Indian, steel sector plays a vibrant and dynamic role in economy development. The socio-economic development of the country can be measured through per capita steel consumption. The per capita steel consumption in India has risen from 45 kg in 2008-09 to about 60 kg in 2013-14. If we talk about the steel production, India has 4th position in crude steel production and is expected to become 2nd largest steel producer in the world by 2016.

The production has risen from 65.84 million tons per annum in 2009-10 to 81.54 in 2013-14 at a Compound Annual Growth Rate (CAGR) of 7% (Chatterjee, 2000). The domestic demand of steel is expected to grow at an annual average growth rate of 10%. The contribution of steel sector in country GDP is approx. 2% and provides an employment to more than 6 lakh people. Being a key contributor, the Government of India allow 100% FDI in this sector.

With the passage of time and global changes, the National Steel Policy, 2005 required changes. To make the National Steel Policy more effective, the Ministry of Steel, GOI proposed a draft of New National Steel Policy to replace the existing National Steel Policy, 2005 to cater the current requirement and targeted the production of crude steel to 300 MPTA. Today the industry is facing numerous challenges such as.

- Huge Capital Required
- Lack of Technology
- Production process
- Low productivity
- CO2 Emission
- Human Exposure Through Food, Air, And Water

HUGE CAPITAL REQUIREMENT

Iron and steel industry want huge investment for starting up their plant. It is very important problem faced by iron and steel industry sector in world wide. The Cochin Iron & Steel Ltd (CIS) doesn't faced such type of problems because company is started in small scale with advanced technology. At that time, industry have good economic condition so that shareholders are ready to invest in business. Capital invested, market size, rate of growth, relative costs like labor, fuel, government taxation and subsidy policies all will influence the profitability of company. New national steel policy makes many alternatives and many liberation in raising up of capital in this sector. Government is allowing 100% FDI on iron and steel industry sector in India. But it is also not making any huge impact on this industry sector.

LACK OF TECHNOLOGY

Throughout the 1960s and up to the oil crisis in mid – 1970s, India steel industry was characterized by a high degree of technological efficiency. This technology was mainly was mainly from abroad. But during the following two decades after the oil crises, steel hike in energy cost and escalation of cost of other inputs, reduced the margin of profit of the steel plants.

This resulted in lower of investment in technological developments. Consequently, the industry lost its technology edge and is now behind the advanced countries in this regard. Material value productivities in India is very low.

In Japan and Korea, less than 1.1 tones (and in several developed countries 1.05tones) of crude steel is required to produce a tone of saleable steel. In India the average is still high at 1.2 tons. Improvement in the yield at each stage of production, particular for value added products will be more important in the coming year.

PRODUCTION PROCESS

The iron and steel industry accounts for about 19% of world final energy use, about a quarter of direct CO₂ emissions from the industry sector, and roughly 3% of global GHG emissions, mainly CO₂. CO₂ emissions from iron and steel production are caused by the combustion of fossil fuels, the use of electrical energy, and the use of coal and lime as feedstock to reduce iron oxide to iron and later as an additive to strengthen steel. However, energy intensity and emissions largely depend on which processes are used in iron and steel plants. Steel is an alloy of iron and carbon containing less than 2%, and 1% manganese (and small amounts of silicon, phosphorus, sulphur and oxygen). The iron- and steel-making process can be divided into five basic stages: 1) Treatment of raw materials; 2) Iron-making; 3) Steel-making; 4) Casting; and 5) Rolling and finishing. European Union Directive 96/61/EC. A large share of the differences in energy intensities and CO₂ emissions among plants and countries can be explained by variations in the number of steps used, the quality of the materials and the type of energy used, and the cost of energy. Three dominant processes, with different energy intensity and CO₂ emissions, exist in steel-making:

- Basic oxygen furnace (BOF)
- Electric arc furnace (EAF)
- Directly reduced iron-based electric arc furnace (DRI-EAF).

LOW PRODUCTIVITY

The per capita labor productivity in India is at 90-100 tons which is one of the lowest in the world. The labor productivity in Japan, Korea and some other major steel producing countries is about 600-700 tons per man per year. At Gallant Steel a main in this, there are less than 300 employees to produce 1.2 million tons of hot rolled coils. A comparable in India employs 5000 workers. Therefore, there is an urgent need to increase the productivity which requires retraining and redevelopment of the labor force.

CO2 EMISSION

About 75% of the CO₂ emission from the steel industry is related to the combustion of coal in primary integrated steel mills. Coal is used in the production of coke, which again is used both as an energy source in the preparation of ore and as a reducing agent and an energy source in the blast furnace. Pulverized coal may also be injected directly into the blast furnace. A minor share of the carbon content of the coal is bound in steel products (<1%), but most of it is released into atmospheres CO₂.

HUMAN EXPOSURE THROUGH FOOD, AIR, AND WATER

Heavy metal pollution of surface and underground water sources result in considerable soil pollution increases when mined ores are dumped on the ground surface for manual dressing. Surface dumping exposes the metal to air and rain thereby generating much AMD. When agricultural soil is polluted, these metals are taken up by plants and consequently accumulated in their tissues. Animals that graze on such contaminated plants and drink from polluted water, as well as marine lives that breed in heavy metal polluted waters also accumulated such metals in their tissues, and milk, if lactating. In summary, all living organisms within a given ecosystem are variously contaminated along their cycles of food chain.

SWOT Analysis of Steel Industry

<p>Strengths: Plenty of raw material, Excess man power, Low labour cost</p>	<p>Weaknesses: Poor technology in mining, Poor R&D, Inadequate infrastructure, High investment, Low labour productivity</p>
<p>Opportunities: Growing demand in domestic market and global market, Low penetration into rural market</p>	<p>Threats: Fluctuating demand, Substitutes, Technological advances, High competition and Recession</p>

CONCLUSION

The Iron and Steel industry has good prospects around the world especially in India, because of growing related industries like construction, automobiles, Oil and Gas industry, and container industry. The Iron and steel industry sector contributes more that 2.0% of national GDP. But some major problems facing by iron and steel industry sector such as huge capital requirement, lack of technology, production process, low productivity, CO2 emission, makes this sector very challenging. To solve these problems industry sector and government are taking various steps. Effective utilization of resources and overcoming the above stated issues will booth the growth and profitability of the iron and steel industry in India.

QUESTIONS:

1. How does the new Steel Policy 2005 in India help the iron and steel industry sector?
2. What are the problems that cannot be solved by the new Steel Policy of India, and how can they be solved?
3. Why government is allowing 100% FDI in iron and steel industry? How will it affect domestic companies?
4. What is the role of iron and steel industry in economic and infrastructure development in India?
5. How does the iron and steel industry affect the environment?
6. Huge investment is required for iron and steel industry, how can we overcome this problem? What are the alternatives methods for solving this problem?

