

L.2 : PROBLEMS & PROSPECTS OF INDIAN FOUNDRY INDUSTRIES UNDER S.S.I.

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Introduction

The foundry industry is the backbone for other industries and growth of industrialisation, and industrial prosperity can be measured by the growth of this industry. Foundry Industry has been identified as one of the major thrust area with substantial export potential. Stringent restriction imposed on foundries in Europe and the U.S. and the positive trend being witnessed in the automotive industry worldwide augurs well for the industry with our highly skilled technical manpower, committed employees and management. The Indian Foundry Industry has good prospects even in International competition. Worldwide production for Grey Iron Casting is given hereunder :

World wide production of Grey Iron Castings (1991-92)

Name of the country	Production
India	2,000,000
Brazil	697,140
Canada	334,922
China	7,276,000
Taiwan	907,900
Czechoslovakia	909,520
Egypt	243,300
France	991,230
Germany	2,310,000

Italy	1,160,000
Japan	3,925,176
Korea	867,900
Mexico	525,000
Poland	608,650
Romania	576,987
Spain	390,000
Sweden	193,000
Turkey	405,000
United Kingdom	633,000
United States	3,946,500

In India there are around 1200 C.I. Foundries mostly in small scale sector with an installed capacity of around 4 - 4.5 million tonnes but the present production of Iron Casting is around 2.3 million tonnes thus we have a spare capacity of around 2.2 million tonnes. Now is the time that we can improve upon this aspect provided the industry thinks whether something needed to be done and I feel foundry industry would think in terms of restructuring. Government is trying to change its attitude towards bureaucracy and the same is also reflected in the industrial policies.

Domestic market for foundry industry is also poised for a vertical growth. The excellent market conditions, particularly in the major consumer industries, such as automobile and machinery manufacture have brought about a growth in the demand for foundry products throughout the world, and India is no exception. A careful forecast of the iron casting up to the year 2000 was carried out by the Institute for Economic Research in Germany and it predicted that there will be atleast five percent growth in the production of cast materials during the nineties.

Raw material - particularly pig iron availability is improving every day, More and more new private sector plants, are coming with pig iron and these new plants are capable of producing quality foundry grade pig iron which was in perennial short supply since independence. The day is not far off when a foundryman in India can think of purchasing pig iron of desired quality and specification.

Technical know-how for modernisation

Foundry plants and machinery are available locally and its quality have also improved, still improvement is required. Nevertheless in view of globalisation, liberalisation there is no problem to have technology transfer from the western world which will help in the reduction of the development time and to sell our castings to them at competitive prices by meeting the international quality standards.

Modern foundry plants and equipment like high productive sand units, shell core making, sand reclamation plants, mould handling facilities etc. are few example of machines which give higher productivity and also reduces the fatigue and effort of the workmen. Improvement in finishing operations in castings with the use of special devices, grinders and brushes have helped in attaining higher dimensional accuracies through metallurgical, chemical, and non-destructive testing techniques which have been introduced successfully.

PROBLEMS

Cupola

Cupola is the most economic means to melt the iron in foundries. An efficient cupola will cut down the melting cost on one hand and less polluting the atmosphere on the other hand. In view of non-availability of low ash coke in our country an efficient cupola is a must for any foundryman.

Innovations such as divided blast, oxygen enrichment, hot blast are a few examples. Beside proper design of an ordinary cupola can improve the hot metal quality. Ratio of Tuyers Area V/S furnace area is a vital factor. A standard charging system should be adopted side by side.

Modernisation, consistency in quality, quantity and delivery schedule

In the emerging scenario, one thing is becoming quite clear, to make use of the opportunity of supply to foreign buyer the quality casting. The ISO 9000 certification will be an added advantage for Indian Foundryman.

It will not be out of place to mention that the major strength of a foundry depends on its moulding and casting technology, concentration on production of high quality castings, reliability in delivery dates and highly skilled technical personnel.

While foundries in Japan have a productivity of 10-12 tonnes per worker per month the corresponding figure for Indian Foundries is only about one tonne.

The Indian foundry industry is mostly made up of small and medium sized foundries catering to small volume markets. Some of the medium sized foundries have technologically upgraded themselves and in terms of quality, are at par with the foundries abroad, if not in the volume of production and productivity. By modernising suitability, this problem can also be solved.

Material Handling

There can be only few industries in which raw materials, semifinished products and completed components are moved in and around the plants as much as in the foundry industry. In the foundry a general saying is still heard that the 'old methods are the best' even though that progressive advancement

in the material handling has taken place. Most of the foundries have been slow to adopt new technology towards storage and material handling. A reason for this is a lack of awareness of new developments and a feeling that nothing new is there in the material handling system. If one looks to the automatic material handling system without prejudice, a lot benefits could be had by applying the techniques to streamline an entire industrial production within a foundry.

LAST but not the least for better utilisation of any material handling system in the foundry, proper house keeping is a must. Cleanliness of the shop floor and keeping the material at its proper place at the first time should become the way of life for any foundrymen.

Pig Iron & Hard Coke

Shortage in pig iron and hard coke have been major hurdles for the foundry industry and efforts to import these materials did not provide adequate solution to the problem. However, due to the pig iron plants promoted in the private sector during the last couple of years the pig iron problem related to quality and quantity is more or less over. But availability of good quality coke i.e., low ash content coke, is a far cry.

Other problem area as regards foundry inputs include sand, foundry chemicals, refractories. It is common knowledge that the quality of sand significantly influences the quality of casting produced. But even today, for various reasons, foundries do not have easy access to graded and washed sand. A suitable sand survey is required which can be done on Government level.

Funds

The foundry industry is the highly capital intensive industry and upgrading requires still huge funds, considering high rate of interest in our country, delay in getting the funds from financial institution due to procedural

problems' makes an SSI foundrymen to feel that all these modernisation, high productivity and quality is not for him. Serious thinking is required on this count. Government of India have recently promoted M/s Small Industries Development Bank of India (SIDBI) to solve the problem of SSI sector. It is premature to comment on the performance of SIDBI.

Foundries have to pay for a majority of its inputs in advance or without credit, whereas the domestic casting market operates on credit ranging from 30 to 120 days. The recent introduction of excise duty on castings has aggravated the situation by eroding working capital. Besides, disallowance of modvat on certain items used in the manufacturing process cause hardship.

BIGGEST Blow to the foundry industry came from the judgement of the supreme court in April 1993, following the decision in the case of M/s Bengal Iron Corporation vs Commercial Tax Officer, AP. This judgement has had the effect of taking iron casting from out of the list of declared goods enjoying the protection of a single point ceiling of 4% in the matter of levy of sales tax. The opportunity has been seized by some State Governments not only to lift the ceiling in the rate of sales tax on iron castings but also to levy additional sales tax. Iron foundries which have for long been operating under sub-optimal conditions now faced with a levy which will definitely add to their cost burdens. However, some states have shown wisdom and have taken measure to restore status quo i.e. no additional levy on iron castings will be applicable in those states.

On the export front, the requirements are for large volumes. Many of the foundries are geared up for this requirement but the expectation of the foreign buyers are towards machined components and subassemblies. Barring very few, a majority of the Indian Foundries are not equipped with in house facilities for machining, and therefore are loosing markets. In addition practically all the incentives for export have been withdrawn. Last But not the least is the selection of product or standardisation of product which has all along been neglected by SSI foundries. Selection of product varies from foundry to foundry. Proper selection of product will optimise the production at lower cost and improve the quality of the product.