Indian Ferro Alloys Industry

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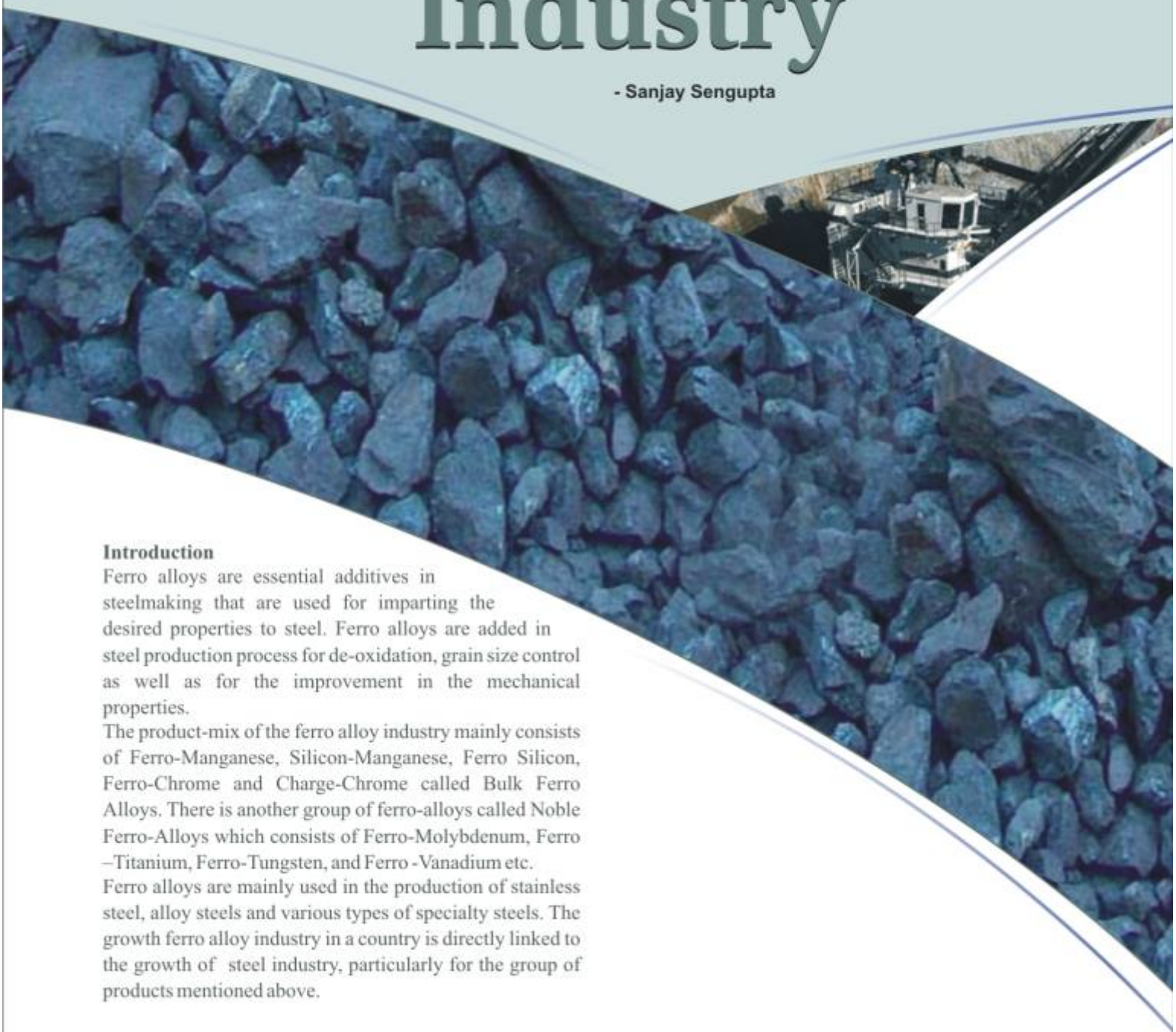

Introduction

Ferro alloys are essential additives in steelmaking that are used for imparting the desired properties to steel. Ferro alloys are added in steel production process for de-oxidation, grain size control as well as for the improvement in the mechanical properties.

The product-mix of the ferro alloy industry mainly consists of Ferro-Manganese, Silicon-Manganese, Ferro Silicon, Ferro-Chrome and Charge-Chrome called Bulk Ferro Alloys. There is another group of ferro-alloys called Noble Ferro-Alloys which consists of Ferro-Molybdenum, Ferro –Titanium, Ferro-Tungsten, and Ferro -Vanadium etc.

Ferro alloys are mainly used in the production of stainless steel, alloy steels and various types of specialty steels. The growth ferro alloy industry in a country is directly linked to the growth of steel industry, particularly for the group of products mentioned above.

Role of Ferro Alloys as De-Oxidant for Steel Melting

Ferro alloys are used for de-oxidation of the steel melt and as an alloying element addition depending on the type of ferro alloy. It is the relative affinity of the alloying elements/de-oxidisers towards oxygen at different temperatures that determine the method and time of addition for achieving the optimum recovery.

Table – 1 Global Production and Consumption of some important Ferro Alloys ('000tons)

Product	2005			2006 f			2007f		
	Prodn (P)	cons (C)	% of C to P	Prodn (P)	cons (C)	% of C to P	Prodn (P)	cons (C)	% of C to P
Ferro-silicon	3575	3443	96.3	3625	3770	104.0	3880	3885	100.1
H. C. Ferro Manganese (Mn. Content)	2788	2834	101.7	2893	2924	101.1	3061	3010	98.3
Silicon – Manganese (Mn. Content)	4131	4193	101.5	4492	4480	99.7	4697	4610	98.2
Ferro-Chrome	5877	5897	100.3	6420	6616	103.1	7015	6966	99.3
Nickel (Refined)	1279	1226	95.9	1298	1323	101.9	1397	1395	99.9
Primary									
Molybdenum	392*	361	92.1	396*	393	99.2	407*	402	98.7

Data Source: MBR Ferro-alloys monthly, November, 2006.
*Notes : F = Forecast, * = Global Supply*

In general, the loss of ferro alloys is higher when introduced in the furnace than when added to the jet of steel or to the ladle on tapping. De-oxidants like Si-Mn, Fe-Mn, Fe Si and Al are used singly or in combination depending upon the quality of steel to be produced.

For achieving lowest level of oxygen in steels, aluminium de-oxidation is preferred. Also, for reducing the silicate inclusions in steel, Si-Mn and Al are used for de-oxidation. However, complex de-oxidation, which involves use of a combination of de-oxidations, results in effective de-oxidation. The steel melt should be free from oxidising slag for effective de-oxidation. Effective de-oxidation helps in de- sulphurisation through lime addition followed by argon/ nitrogen stirring that help in better slag to metal interaction.

Global Production & Consumption of Ferro Alloys

Both production and consumption of ferro-alloys has been projected to grow globally as the forecast of Metal Bulletin Research (MBR). The production of some important ferro –alloys along with their consumption in the world in 2005 with projections for the year 2006 and 2007 are furnished in Table. 1

An analysis of the above table reveals that the growth in production and consumption in 2007 (Forecast) over 2005 for the aforesaid ferro-alloys would be as follows in percentage terms:

Product	% growth in 2007 over 2005	
	Production	Consumption
Ferro-silicon	8.53	12.84
H. C. Ferro Manganese (Mn. Content)	9.79	6.25
Silicon – Manganese (Mn. Content)	13.70	9.95
Ferro-chrome	19.36	18.13
Nickel (Refined) Primary	9.23	13.78
Molybdenum	3.83	11.36

Data Source: MBR

N. B. for Primary Molybdenum, production is based on global supply which is arrived at Global Mined Production minus conversion losses to oxide (1.5 percent) plus recovery from catalysts.

It is evident from the above table that the growth in production and consumption of ferro-chrome has been projected at high levels amongst the ferro-alloys globally.

According to International Stainless Steel Forum (ISSF), the global stainless and Heat - Resisting crude steel production at 27.67 mt in 2007 was lower by 2.6 percent over 28.4 mt in 2006. This included a stock draw of more than 1 mt. During 2007, the basic global demand for stainless steel increased by more than 8 percent maintains ISSF. According to its projection, the global production of stainless and Heat- Resisting crude steel product would go up by 6 percent over 2007 output and likely to reach a level of 29.32 mt. However, the current global financial crisis may hinder the growth.

Asia led by china continues to be highest stainless steel producing

region in the world. However, due to the current global financial crisis, world production of stainless steel may not grow significantly in 2008.

The Indian Scenario

The Indian ferro alloys Industry was worst heat in 2001-02, when the global prices of ferro alloys came down sharply. Ferro alloy is a power intensive industry. High prices of power and a depressed market forced many Indian producers to cut back production and the capacity utilisation of the industry came down to 30 percent- an all time low. A number of units were referred to the B. I. F. R.

By the end of 2002, production of stainless and specialty steels in India increased to some extend and the demand for ferro alloys got a boost and the producers saw higher prices.

Thing began to brighten up in 2003 -04 when India's stainless steel production reached 1.25 mt. The capacity utilisation of the Indian ferro alloy industry rose to 70 percent. The domestic stainless steel production of stainless steel reached 1.71 mt in 2004-05. The improved situation led to the restart of many closed ferro alloy units, expansion of capabilities and setting up of many greenfield projects.

The installed capacity of Buck Ferro Alloys in 2005-06 was 2.04 mtpy and that of Noble Ferro Alloys was 45,000 tons. According to industry experts in 2007-08, these have increased to an estimated level of 2.8 mt and 65,000 Mtpy respectively. The production of stainless steel in India in 2007-08 is estimated at 2.71 mt with a growth of 7.55 percent over the previous year.

Due to the ensuring financial and economic crisis in the country, the Indian ferro-alloy industry may not grow at a high rate as projected earlier due to an anticipated lower growth of the domestic stainless steel production in 2008-09.

Table – 2 Major Ferro Alloy Producers in India

Name Of Producer Major Products	
A) Ferro Alloys Corporation Ltd Vijianagram, A. P.	Ferro Manganese, Ferro Chrome.
B) Maharashtra Electromelt Ltd., Chandrapur, (a Sail Subsidiary) Maharashtra.	Ferro Manganese, Silico Manganese
C) Universal Ferro And Allied Chemicals Ltd., Bhandara, Maharashtra (Units 1 & 2)	Ferro Manganese, Silico Manganese. Ferro Silicon
D) Sandur Manganese & Iron Ore Ltd., Hospet, Karnataka	Ferro Manganese, Ferro Chrome
E) Ispat Alloys Ltd., Dist. Balasore, Orissa	Ferro Manganese, Silico Manganese
F) K. F. A Corporation Ltd., Khandelwal Nagar, Maharashtra.	Ferro Chrome, Ferro Manganese
G) *Indian Charge Chrome Ltd., Choudwar, Dist. Cuttuck, Orissa.	Charge Chrome, Ferro Chrome
H) Ferro Alloyed Corporation Ltd., Dist Balasore, Orissa.	Chrome, Hc, Ferro Chrome
I) Indian Metals & Ferro Alloys Ltd., Rayagara, Koraput, Orissa	Ferro Chrome, Charge Chrome Ferro Silicon
J) * Tata Steel Ferro Alloys Plant, Bamlipal, Dt. Kendujhar, Orissa	Hc Ferro Chrome, Charge Chrome
K) Jindal Ferro Alloys Ltd., Koltavasala, Andhra Pradesh	Ferro Chrome
L) Jindal Stainless Ltd., Raigarh, Chhattisgarh	Ferro Chrome
M) Tata Steel Ferro Alloy Plant, Goda, Dist. Kendujhar, Orissa.	Silico Manganese, Ferro Manganese
N) Tata Steel Ferro Alloy Plant, Rawmet, Orissa	Hc Ferro Chrome
O) Nav Chrome Ltd., Raipur, Chattisgarh	Ferro Manganese, Silico Manganese
P) Ferro Chrome Ltd., Orissa	Ferro Chrome
Q) Jeypur Sugar Ltd., Orissa	Ferro Chrome
R) Visvesvaraya Iron & Steel Ltd., Bhadravati, Karnataka (sail Unit)	Ferro Silicon
S) Nava Bharat Ferro Alloys Ltd., Palencha, Andhra Pradesh.	Ferro Chrome, Silico Manganese
T) Rohit Ferro Tech. Ltd., Dt Bankura, W. Bengal	Ferro Chrome

*= 100 Percent Export Oriented units (EOUs)

Major Producers of Ferro-Alloys in India

The names and product – mix ferro alloy producers in India is shown in table – 2.

Typical Grades & Compositions of Indian Ferro-Alloys

The typical and usual grades and chemical compositions of Ferro alloys Used in India are tabulated in Table – 3

According to expert metallurgists, steel composition is very important for attaining the desired properties. The elements which are almost completely lost in air during re-melting are Al, B, Ti and Zn. Those which are lost in vacuum are H, Pb, N and Zn. The elements that are partially lost during re-melting in air are C, Nb, Cr, Fe, Pb, Mn, Si, V and W. Those which are partially lost in vacuum are As, Bi, Cr, Cu, Mn, O, Sn and N and in inert atmosphere are Pb, Bi, H, N and Mn, Bi. H, N and Mn. Except for the residual contribution of un-oxidisable/partly oxidisable alloying elements from scrap, most of the elements are added at

suitable stages of steelmaking.

Manganese Alloys

The total reserves of manganese are in India as on 1-4-2000 was 406 mt with a recoverable reserve of 191 mt. Major reserves are of blast furnace grade. India is the seventh highest producer of manganese ore in the world. Orissa, Chhattisgarh, Maharashtra and Karnataka are major producer of manganese alloys and these four states jointly have a share of over 94 percent of India total reserves of manganese ore.

Manganese is an essential requisite for steel production due to its capability for sulphur fixing, de-oxidising and good alloying properties. Manganese alloy is introduced in steelmaking and for other purpose in the form of ferro-manganese, silico-manganese and manganese metal. These are produced by the reduction of manganese ore with carbon/ silicon at high temperatures in blast furnaces and electric are furnaces.

Table – 3 Typical Grades and Chemical compositions of Indian Ferro –Alloys.

A) Ferro Manganese

	Grade	Mn (%)	Si (%)	C (%)	P (%)	S (%)
HC Ferro Manganese	HC Fe Mn 65	65 (Min)	1.5 (Max)	6-8	0.85	1.03
	HC Fe MN 70	70 (Min)	1.5 (Max)	6-8	0.35(Max)	0.03 (Max)
	HC Fe MN 75	75 (Min)	1.5 (Max)	6-8	0.35(Max)	0.03 (Max)
HC Ferro Manganese	HC Fe Mn 70	70 (Min)	1.5 (Max)	6-8	0.15-0.20	0.03 (Max)
(Low Phasphorus)	(L.P)					
	HC Fe MN 75	75 (Min)	1.5 (Max)	6-8	0.15-0.20	0.03 (Max)
	(L.P)					
MC Ferro Manganese	MC Fe Mn 65	65 (Min)	1.5 (Max)	1.5 (Max)	0.35 (Max)	0.03 (Max)

B) Silico Manganese

HC Silico Manganese	HC Si 15 Mn 60	60 (Min)	15 (Min)	2.0 (Max)	0.30 (Max)	0.03 (Max)
	HC Si 17 Mn 65	65 (Min)	17 (Min)	2.0 (Max)	0.30 (Max)	0.03 (Max)
HC Silico Manganese	HC Si 15 Mn 60	60 (Min)	15 (Min)	2.0 (Max)	0.15-0.20	0.03 (Max)
(Low Phasphorus)	(L.P)					
	HC Si 17 Mn 65	65 (Min)	17 (Min)	2.0 (Max)	0.15-0.20	0.03 (Max)
	(L.P.)					
MC Silico Manganese	MC Si 20Mn 58	55-60	20 (Min)	0.50 (Max)	0.15 (Max)	0.03 (Max)
LC Silico Manganese	LC Si 24 Mn 53	50-55	24 (Min)	0.10 (Max)	0.10 (Max)	0.03 (Max)

C) Ferro Silicon

Ferro Silicon		Si (%)	C (%)	S (%)	P (%)	AL (%)
Ferro Silicon (Normal Al)	Fe Si 70	70 (Min	0.15(Max)	0.05(Max)	0.05 (Max)	2.0 (Max)
Ferro Silicon (Low Al)	Fe Si 70 (Low Al)	70 (Min)	0.15(Max)	0.05(Max)	0.05 (Max)	1.0 (Max)
Ferro Silicon	Fe Si 70	70	0.15	0.05	0.05	0.5
(Extra Low Al)	(Extra Low Al)	(Min)	(Max)	(Max)	(Max)	(Max)

D) Ferro-Chrome Grade

Ferro-Chrome	Grade	Cr (%)	C (%)	Si (Max)
	7 Fe Cr 65	60-70	6-8	1.5
	5 Fe Cr 58	55-60	4-6	1.5
	7 Fe Cr 58	55-60	6-8	4.0
	Fe Cr 58	55-60	4-6	6.0

For production of one ton of ferro- manganese, inputs required are: 2.6 tons of manganese ore, 0.5 ton of reluctant and 3 MWH of electricity. Silico- manganese production is carried out by the reduction of manganese ore, quartzite and manganese slag with coke.

Stainless steel accounts for about 5/6 percent of the total production of ferro- manganese and silico-manganese in India at present. The average consumption of manganese alloys by the Indian stainless steel industry is about 105 kg per ton. With the increasing production of stainless steel, which is slated to grow at the rate of 11 percent per year in future (ISSDA estimates), the consumption of manganese in India id expected to grow substantially.

According to industry experts, the India manganese alloy industry possesses the potential meet global challenges despites various constraints. With the necessary supportive measures, the industry can move fast towards the path of sustainable growth and meet the higher requirement of the Indian steel industry.

Chrome Ore

The estimated reserve of chrome ore in India as on 1-4-

The three major producers of HC Ferro-Chrome in the country have their leasehold areas as detailed below:

Name of the Company	Mine Locations
Ferro Alloy Corporation Ltd.	Baula, kathpal, Ostapal.
Tata steel	sukinda
IMFA/ ICCL	Nausali, Chingudipal and new mining area
	adjoining Nausali

2000 was 114mt of which the shares of proved, probable and possible categories were about 32 percent, 37 percent and 31 percent respectively. About 97 percent of the total recoverable reserve in India occurs in the state of Orissa. Out of the available reserves, about 49 percent is of metallurgical grade and 30 percent is of charge chrome grade.

Orissa Mining Corporation (OMC) holds the largest mining lease of chrome ore in the country in Cuttack, Dhenkanal and kendujhar district of Orissa.

HC Ferro-chrome charge chrome occupies a dominant position amongst all other ferro-alloys produced in India. It had a share of about 41 percent in production and 61 percent in export of all ferro-alloys in the country on 2006-07.

About 80 percent of HC ferro-Chrome produced in India goes for the production of stainless steel. With the projected higher production of stainless steel in the country in future years, the domestic consumption of HC ferro-chrome will reach a much higher level. India holds a leading position in the world in production of HC ferro-chrome well as in exports.

Chrome ore is used in the production of chromium metal and various alloys of chromium with iron, nickel, cobalt, tungsten, molybdenum etc. chromium imparts strength, hardness, toughness, magnetism and offered resistance to abrasion, corrosion as well as to oxidation.

The use of chromium in steelmaking depends on the purpose of end-use. Low chromium steels with less than 5 percent chromium and small quantities of nickel is used in the production of rails, automobiles and armoured plates etc. Intermediate chromium steels containing up to 12 percent chromium along with small quantities of tungsten, molybdenum or silicon are used in high speed valves for engines and equipment which require resistance to abrasion, corrosion and oxidation.

High chromium steels are stainless steels and super stainless steels used for the manufacturing of cutlery, cooking utensils, aircrafts and high speed trains.

Performance of the Ferro Alloys industry in 2006-2007

Capacity

The manufacturing capacity of the Indian Ferro Alloy industry during 2006-07 and capacity utilisation are shown below:

('000 tonnes)

Product	Capacity 2006-07	Production during 2006-07	Capacity utilisation (%)
Manganese Alloy	1957	1080	55
Ferro Silicon	197	93	47
Chrome Alloys	1055	801	76
Noble Ferro Alloys	35	28	80
Total	**3244**	**2002**	**62**

Data Source: JPC

Production of Ferro Alloys in India

The production of Ferro alloys in India during 2007-08 vis-a- vis 2006-07 and percentage variances is shown in Table - 4

Table - 4 Production of Ferro Alloys In India (Tons)

Bulk Ferro Alloys	2006-07	2005-2006	% Variance
Hc Ferro Manganese	281013	256121	9.72
Mc Ferro Manganese	9190	11796	(-)22.91
Lc Ferro Manganese	6523	5140	26.91
Silico Manganese	738314	564633	30.76
Mc Silico Manganese	29581	27739	6.64
Lc Silico Manganese	15067	4000	276.68
Ferro Silicon	92632	90652	2.18
Hc Ferro Chrome/charge Chrome	801.138	662062	21.01
Lc Ferro Chrome	230	235	2.13
Total Bulk Ferro Alloys (a)	**1973688**	**1622378**	**21.65**
Noble Ferro Alloys			
Ferro Molybdenum	3120	2817	10.76
Ferro Vandanium	1139	877	29387
Ferro Tungsten	54	63	(-)14.29
Ferro Silico Magnesium	11387	11171	1.93
Ferro Aluminium	9947	7214	37.88
Ferro Silico Zirconium	178	87	104.60
Ferro Titanium	1761	735	139.59
Ferro Boron	80	75	6.67
Ferro Nickel Magnesium	97	Na	–
Total Noble Ferro Alloys (b)	**27763**	**23049**	**20.45**
Grand Total (a) + (b)	**2001451**	**1645427**	**21.64**

Data source: JPC

It appears from the table-4 that the y-o-y growth in total production of Bulk Ferro Alloys in 2006-07 was 21.65 percent. The highest growth in production at 176.68 percent is seen in case of L.C. Silico Manganese. HC Ferro chrome/ charge chrome had

the highest share of 40.59 percent in the total output of bulk ferro alloys in 2006-07.

Incase of Noble Ferro Alloys the y-o-y growth in production in 2006-07 was 20.45 percent. Highest growth in output of 139.59 percent occurred in case of Ferro Titanium. Ferro silico Magnesium had the highest share of 41.02 percent in the total output of noble ferro alloys in 2006-07.

Export

India's exports of Ferro Alloys in 2006-07 as compared to the previous year are shown in Table – 5.

Table - 5 Exports of Ferro Alloys in 2006-07 vis-à-vis 2005-06 (tons)

Product	Exports During 2006-07	2005-06	% change
HC Ferro Manganese	49286	28258	74.41
Silico Manganese	167882	121640	38.02
M. C. silico Manganese	909	1780	(-) 48.93
L. C. silico Manganese	4800	0	-
Ferro Silico	458	835	45.15
HC Ferro chrome/charge chrome	356,112	299680	18.83
Ferro Vanadium	15	0	–
Ferro Silico manganesium	584	1376	(-) 57.56
Ferro Titanium	374	2	-
Ferro Aluminium	738	27	2633.33
Ferro silico Zirconium	0	2	0
Total	581158	453600	28.12
Export Earning (Rs. Million)	18962	13373	41.79

Data source: JPC

During 2006-07, the Indian Ferro Alloy industry recorded highest exports surpassing over 0.5 mt of ferro alloys and registered a hefty growth of 28.12 percent over the previous year. In terms of value, export realization at Rs 18,962 million has increased by 14.79 percent over 41 percent in the above comparative period.

In view of the projected growth in production if carbon steel and stainless steel (with a slowdown in the short term due to financial crisis which may continue up to mid 2009), the ferro alloy industry suggests that exports of manganese ore and chrome ore and concentrates should be stopped immediately to conserve these ores for the domestic ferro alloy industry in future. The industry also maintain that the government should direct the geological survey of Indian and the Indian Bureau of Mines to undertake further exploration work of chrome ore deposits beyond 100 meters depth and evaluate its expected life for the country.

Imports

Imports of ferro alloy by India in 2006-07 vis-à-vis 2005-06 are shown in Table – 6

It is observed that in 2006-07, import of ferro silicon and HC/LC ferro Chrome/Charge Chrome has increased by 39.98 and 70.40 percent respectively. The high import of the latter was obviously needed to help the increased production of stainless steel in 2006-07.

Imports of ferro alloys have increased, as and when the basic customs duty is reduced. In value terms, imports were Rs. 263 crore when the duty was reduced to from 25 percent to 20 percent in 2003-04. In 2004-05 when the duty was reduced to 15 percent, the import value increased to Rs. 460 crore. In 2005-06, when the duty was reduced to 10 percent, the import value increased to Rs. 591 crore. The import value increased to about Rs. 780 crore when the basic customs duty was further reduced to 7.5 percent in 2007-08.

The industry maintains that outgo of such huge foreign exchange is unwarranted. This could have been avoided by meeting the total requirements of the domestic steel production by utilizing idle capacity. Incidentally the capacity utilization of the Indian ferro alloy industry in 2006-07 was only 62 percent.

Constraints Faced by the Industry

The Indian Ferro Alloy industry is faced with some major constraints to growth which are summed up below :

• The industry has invested about Rs. 4500 crore as capital cost by way of plant, machinery, acquiring of land etc. It employs thousands of people directly and indirectly.

Table – 6 Imports of Ferro Alloys by India in 2006-07 & 2005-06 (tonnes)

Product	Imports During 2006-07	2002-06	% change
Ferro Manganese	12037	16,102	(-) 25.25
Silico Manganese	207	1,287	(-) 83.92
Ferro Silicon	86835	62,035	39.98
HC/LC Ferro chrome/charge chrome	19054	11,182	70.40
Silico chrome	114	6	1800.00
Ferro Silico Manganesium	1758	1591	10.50
Ferro Molybdenum	262	323	(-) 18.89
Ferro vanadium	523	509	2.75
Other Ferro Alloys	6368	4299	48.13
Total	**127158**	**97334**	**30.64**
Total Value (Rs. Million)	**7798**	**5913**	**31.88**

Note : Import of Ferro Nickel is not shown as the same is not at all manufactured indigenously – JPC
Data Source : JPC

• In 2006-07, about 38 percent of the installed capacity was lying idle for want of demand, high cost and low import duty resulting in competition from imports.

• Customs Duty on ferro alloys has been reduced drastically and according to experts, even below the WTO recommended "bound" rate. This has resulted in imports of lower cost materials from china, Russia, Kazakhstan and South Africa.

• India has one of the highest power tariffs among the ferro alloy

producing countries of the world. Being a power intensive industry, the producers of the country has become the worst sufferers.

• Imports from neighbuoring countries like Bhutan and Nepal does not attract import duty, Counter Vailing Duty (CVD)/ Excise Duty, Sales Tax etc.

• Government of India is entering into Free Trade Agreements (FTAs) with many countries by reducing the Customs Duty or exempting the customs duty. This is causing higher imports against the interests of the ferro alloy producer of the country.

• Raw materials and other input costs are increasing to high levels.

• Road transportation cost and railway freight are going up during the last few years.

• Poor infrastructure is jeopardising the industry's efficiency.

• High financing costs.

• Low availability and high price of manganese pre and chromium ore within the country is hurting the industry's growth.

Conclusion

India has an abundant deposit of manganese and chromium ore which is available at about 60 percent cost of global prices. But modern techniques of mining have not been introduced in the country a wide scale. These could have yielded a higher reserves of these ore to the benefit of ferro alloy producers by reducing imports.

Ferro alloys being a power intensive industry, the producers are not able to produce in a cost competitive manner because the cost of electricity in India is one of the highest in the world. Huge loss in transmission and distribution continues unabated despite promises of the CEA and the State Electricity Boards. The required voltages are not available in many occasions.

By beneficiation of chromium ore, it is being converted to marketable chromium concentrate and exported. This should be stepped up. In the Budget for 2007-08, the Government has imposed an export duty on chrome ore of Rs. 2000 per ton. This has raised the price of exports.

Similarly, manganese ore with unusable grades of manganese can be converted to manganese concentrates, which is amen able to pelletisation and sintering and can be made a superior product for the production of manganese alloys.

If the government accepts the various proposals of the producers' association, the Indian ferro Alloy industry can become really sustainable and see better days in future. This will also enable to help the country's steel industry, particularly the producers of stainless steel, alloys steel and specialty steels.

Acknowledgements :

1. Performance Review of Iron & Steel Industry. 2006-07 – JPC.

2. Article by BVR Raja, ASP, Durgapur in JPC Monthly Bulletin, May 2007.

Quality Day 2008 Proves Informative Event for Indian Customers and Experts

From Left - Ronny Epperlein (Mesacon), Detlef Jahrling (Mesacon), Vikas Sandesara, Nicol Hoffmann, Jurgen Koch, Bikash Kumar & Rajeev Jain from EMG

EMG Automation GmbH, Vatron, Mesacon Messelektronik GmbH, LDV System and Cognex Corporation jointly organised the 'Quality Day 2008' on 29th November in Jamshedpur. The seminar provided a platform to Indian customers to meet and interact directly with the foreign companies as well as to exchange their experiences with experts of other Indian steel producing companies.

The Quality Day agenda consisted of a seminar program where each company presented its vision as well as its latest technologies. Subsequent to these presentations, all participants had the chance to discuss their needs and clarify technical details with each participant.

Commenting on the event Ashutosh Charan, General Manager, Operations of Tata BlueScope Steel said, "An event like the Quality Day is very interesting for us to get to know the systems, further technical developments as well as the customer advantages which are offered by the organizing companies. Therefore we would approve a repetition of such an event in the next years."

Quality and line management professionals inclusive of top decision makers along with experts of big Indian steel producing companies like Tata Steel Ltd., Tata BlueScope Steel Ltd., Tata Ryerson Ltd. and The Tinplate Company of India Ltd. participated in this event. Besides the Quality Day in Jamshedpur, the same event had been planned for Mumbai as well, but unfortunately, due to the terrible terror attacks that started on November 26th, 2008, one night before the event should take place, and the event got cancelled. Due to the huge number of registrations in advance and the positive feedback of the event in Jamshedpur, the Quality Day in Mumbai will be hosted next year.