

## **PRIVATE SECTOR**

Private Sector is playing a dominant role in augmenting the steel availability in the country. Their contribution in finished steel production increased to 68% in 2000-01 as compared to 45% in 1992-93. Similarly, the private sector is also playing a significant role in the production of pig iron and sponge iron.

During pre-liberalization phase, there was only one integrated steel plant in the private sector in the country. This was the unit of the Tata Iron & Steel Co. Ltd. existing since 1907. In addition, there were a large number of Mini Steel Plants (Electric Arc Furnace Units) and Steel Processing Units (i.e. stand alone Hot/Cold Rolling Mills, Galvanising and Colour Coating Units etc.), a few sponge iron units and one pig iron unit. In Post-liberalization phase, the scenario changed with the setting up of several new/green field iron/steel plants. This was associated with structural changes in the sector. While steel plants based on world class capacity and state-of-the-art technologies (viz. Corex Technology for iron making, Twin Shell Electric Arc Furnace and thin Slab Casting Compact Strip Mill, Energy Optimising Furnaces) were commissioned, the inefficient & non-competitive units continued to close down.

A profile of the major private sector plant is given below: -

### **TATA IRON & STEEL COMPANY LIMITED**

The Tata Iron and Steel Company Ltd. (TISCO) was established by Shri J.N. Tata in 1907 as Asia's first and India's largest integrated private sector steel company. Consequent to the implementation of a four-phase Modernization Program, Tata Steel has emerged as one of the most modern steel making facilities in the world. Its productive blast furnaces, LD Converters, continuous casting facilities and state of the art finishing mills drive Tata Steel in its quest for achieving its vision of becoming the world's lowest cost producers of steel.

The currently underway Fifth Phase of Modernization, Modernization of the Mind, endeavors to realize Tata Steel's vision of attaining leadership through people. The primary elements of this initiative include the institution of a Performance Ethic Program, the creation of Knowledge Management Systems and the facilitation of E-Commerce initiatives.

The Performance Ethic Program strives to redesign current structures and processes to create a high performing organization of motivated and energized managers. The Program proposes a new organizational structure to nurture growth businesses, provide greater decision-making flexibility and encourage high levels of teamwork among managers and units. Furthermore, it seeks to introduce a Performance Management System(PMS) which fosters a meritocracy

to identify and reward strong performers and provide development opportunities for everyone\*.

Knowledge Management in Tata Steel seeks to build superior capabilities to leverage internal and external expertise and develop intangible assets including brand, technology and know-how. This, in turn, is expected to reinforce performance that will enable local and collective learning in identifying growth opportunities and aligning functional agenda with business goals\*.

Tata Steel has ventured into E-Commerce to strengthen its existing processes, by employing Internet technologies to enhance connectivity amongst stakeholders\*.

Tata Steel's environmental policy commits it to comply with all regulations for the preservation of its environment and to prevent wasteful use of natural resources. Tata Steel, an ISO 14001 certified company, perceives Environment Management as a route to greater competitive advantage beyond mere compliance. Tata Steel is one of three participating steel plants in the Life Cycle Assessment Project initiated by the Ministry of Environment and Forests of the Government of India. Extending beyond the boundaries of statutory requirements, the company has proactively replaced all pollution prone units in its works with state-of-the-art facilities and processes that have significantly improved the quality of ambient air and effluent water.

Tata Steel was awarded with the PM's trophy for the Best Integrated Steel Plant for 1999-2000. World Steel Dynamics has ranked Tata Steel as the best amongst the 12 identified World Class Steel Makers in the world. Tata Steel also bagged the ET Company of the Year Award for the year 2001.

**Production of TISCO during the last two years are highlighted in the table given below: -**

**(In Million Tonnes)**

<b>Products</b>	<b>1999-2000</b>	<b>2000-2001</b>	<b>Apr.-Sept. 2000</b>	<b>Apr. –Sept. 2001</b>
Crude Steel	3.434	3.57	1.79	1.84
Saleable Steel	3.287	3.43	1.70	1.47
Finished Steel	2.672	2.78	1.33	1.75
<b>Performance Indices</b>				
A-F Productivity	1.40	1.41	1.44	1.42
G Furnace Product	2.25	2.28	2.07	2.21
Coke Rate( Kg/tonne Hot Metal)	541	559	553	569
Sp. Energy Consumption(G. cal/tcs)	7.78	7.4	7.43	7.46

## **NEW STEEL PROJECTS**

The New Industrial Policy announced in July, 1991 has completely opened the iron & steel industry for private investment. Today, there are 19 new/green field steel projects sanctioned by the Financial Institutions involving a total capacity of approx. 13 million tonnes (Saleable Steel). The aggregate investment is about Rs. 31,666 crore.

So far 9 units have been fully commissioned with a 5.75 million tonnes per year capacity, out of these one plant is lying closed and rest are reportedly in production. Three more units covering a capacity of 2.2 million tonnes per year have been partially commissioned of which two are lying close and one in production. Some of remaining projects are at various stages of implementation. With the setting up of these new steel plants, contribution of the private sector units is gradually increasing and it will keep on increasing in the years to come.

### **Brief Profile Of a few Plants**

#### **JINDAL VIJAYANAGAR STEEL LIMITED**

Jindal Vijayanagar Steel Ltd. (JVSL), with a turnover of Rs. 1500 Crores, is conceived as the most modern, technologically efficient and eco-friendly green field integrated steel plant with a capacity of 1.60 million tonnes per annum Hot Rolled Flat Steel Products. The production facilities comprise of 2 X Corex C-2000 iron making, 2 X 120 T converters, 1300 T mixer & 2 X Single Stand Slab Casters. The entire capacity realisation of 1.60 million tonnes per annum through the technology route, namely, Pellet Plant – Corex – BOF – CCP – HSM, has been established from April 2001 onwards. JVSL has been accredited with ISO 9002 & ISO 14001 for entire integrated plant operation.

JVSL's joint venture companies, Jindal Tractebel Power Company Ltd. (JTPCL) has set up a Power Plant of 2X130 MW and Jindal Praxair Oxygen Company Ltd. (JPOCL) has installed the world's largest air separation plant of 2 X 2500 tpd adjacent to the steel plant. Joint venture partners being Tractebel S.A., Belgium and Praxair Inc., USA respectively. JVSL and Mysore Minerals Ltd. (MML), a Government of Karnataka undertaking has formed a joint venture company Vijayanager Minerals Private Ltd., (VMPL) for an initial production of 1.0 million tonnes per annum capacity ROM iron ore by developing Thimmappanagudi Iron Ore Mines.

The Pellet Plant was commissioned in November 2000 and COREX II was commissioned in April 2001. Within one week of its commissioning, COREX II has touched rated capacity production and is now operating at more than rated capacity, consistently. Overall, COREX performance has been exceeding the design capacity. On a daily basis, it has reached 127 t/hr capacity, against a nameplate capacity of 100 t/hr. The quality of hot metal produced is a delight to

the steel makers with low sulphur, phosphorus, silicon and high carbon at high temperature.

The performance of the melting shop has been excellent, surpassing the Indian records. The lining life of converter achieved is 2720 heats; average number of sequence in continuous casting is 7.4 heats. Refractory consumption per tonne of liquid steel is 10.25 kg.

During the year, hot strip mill has developed a number of steel grades including medium carbon steels, micro-alloyed steels etc. JVSL has produced 850,000 tonnes of Hot Rolled Coils in 2000-2001 and has already produced and marketed 930,000 tonnes of finished steel in the first 9 months of operation in 2001-2002. JVSL has already made its mark in the international market. During the financial year 2000-01, about 72,400 tonnes of Hot Rolled Coils and 174,000 tonnes of GP/GC, converted through its sister concern, JISCO, had been exported, earning valuable foreign exchange for the country. Besides, JVSL has also exported Pellets to China. This was possible due to establishment of a quality management system in the plant.

One year integrated operation of the steel complex alongwith power and oxygen plant has demonstrated the basic success of the technology-cum-management concept. The pioneering efforts of Jindal Vijayanagar Steel Ltd., in introducing a revolutionary technology and a concept in India has been rewarded with an estimated cost of production of hot metal at \$ 100 and Hot Rolled Coils at \$ 170 per tonne, making it one of the most cost competitive plants in the world. Competitiveness of the steel complex will improve further with incremental improvement in performance of the new technology route.

## **JINDAL STEEL & POWER LTD.**

Jindal Steel & Power Ltd. (JSPL) has its manufacturing operations located at Raigarh and Raipur in Chhattisgarh, with captive iron ore and coal mines in Orissa and Raigarh. The Raigarh plant was awarded the first prize in the IIM Awards 2001 for quality by the Indian Institute of Metals and the company is nominated as one of the emerging companies by the Economic Times. During the year ending March 31, 2001, the net turnover increased by 27% to Rs. 507.73 crores while profit before tax at Rs. 111.43 crores recorded an increase of 24%.

During 2000-01, JSPL successfully installed and commenced production of its 6<sup>th</sup> rotary kiln for the manufacture of sponge iron thereby augmenting the total production capacity to 6,50,000 tonnes. With this addition, JSPL has the largest coal-based sponge iron capacity in the world. The Company was able to produce 5,02,614 tonnes of sponge iron which is higher by 17% from that of last year on annualised basis.

Another major highlight during the year was the stabilization of the Steel Melting Shop, which commenced production in November 1999. The focus continues to be on high value-added products in steel, namely, alloy steel rounds and HT grade slabs. The total production of slabs and rounds during the year was 1,08,810 tonnes.

The generation of power increased to 5603.19 lac Kwh units, which is higher by 7% from that of last year on annualised basis. The implementation of additional captive power plant of 55 MW has been completed in October 2001, six months ahead of schedule. JSPL is one of India's most economical power producers as a result of utilisation of Coal Washery rejects and Char (a by-product of sponge iron).

A state-of-the-art Rail and Universal Beam Mill is being established to produce world class rails for Indian and global markets. It will manufacture 122 meter long rails, the longest produced anywhere in the world. The mill will also manufacture parallel flange beams in larger sizes for the first time in India.

A Mini Blast Furnace with a capacity of 2.5 lakh million tonnes of hot metal will be commissioned by March 2002. The combination of Mini Blast Furnace and Electric Arc Furnace will ensure lower cost of production of steel enabling the company to compete globally in terms of quality and price.

To ensure the availability of good grade coal for its sponge iron production, JSPL is setting up a new Coal Washery of 2.5 million tonnes at the coal mine. The new Coal Washery is envisaged to treat coal with ash content of up to 48%. The operations of coal mines at Mand area of Raigarh (Chhattisgarh) and iron ore mines at Tensa (Orissa) improved substantially resulting in higher production of iron ore and coal. The captive availability of iron ore and coal at lower rates has resulted in lower cost of production of sponge iron.

## **ISPAT INDUSTRIES LTD.**

Ispat Industries Ltd. (IIL) with its associated companies has set up one of the largest Integrated Steel Plant (ISP) in the private sector in India at Dolvi, Dist. Raigad in Maharashtra with a capacity to manufacture 3 million tonnes per annum of Hot Rolled Steel Coils (HRC) with a total investment of approx. Rs. 10,000 crores. They are also manufacturing sponge iron and pig iron in their Dolvi Complex.

The integrated steel plant is using the Electric Arc Furnace route to produce steel by using modern Twin Shell Electric Arc Furnace and CONARC process. In this project, IIL have uniquely combined the use of Hot Metal and DRI (sponge iron) in the Electric Arc Furnace for production of liquid steel for the first time in India. Accordingly, the complex also envisages a Blast Furnace and a DRI plant together with Electric Arc Furnaces and a Captive Power Plant. For

down stream casting and rolling of the liquid steel, IIL have incorporated State of the Art Compact Strip Production (CSP) process, which has also been installed for the first time in India and which produces high quality and specifically very thin grades of HRC.

**Installed Capacity and Production of various products are as under :-  
(In Tonnes)**

<b>Product Name</b>	<b>Installed Capacity</b>	<b>1998-99</b>	<b>1999-2000</b>	<b>2000-01</b>
Direct Reduced Iron	1,200,000	1,074,276	1,162,957	1,160,775
Hot Rolled Coils	1,500,000	355,898	788,864	884,484
HR Skinpass	0	6,056	15,467	3,206
Cold Rolled Carbon Steel Sheets/Coils	300,000	259,588	269,499	242,069
Galvanised Coils/Sheets	225,000	182,326	195,154	184,224
PVC Coated Sheets	50,000	19,568	19,084	18,616
By Products (Zinc Ash/Zinc Dross)	0	797	1,259	1,658

The company effected a sale of 1.18 million tonnes of DRI including captive consumption in the year ended 31<sup>st</sup> March 2001. With increased usage for HR coil whose production was ramped up, availability was curtailed in domestic segment, resulting into sales of 2.39 lakhs. Further, HR sales stood at 8.90 lakh tonnes including 2.18 lakh tonnes for their captive consumption. The company's focus on the cold rolled segment and value added segments such as LPG grade helped us to sustain this volume of sales. Though company focussed on exports in the first half, it declined in the second half of the financial year due to very depressed price scenario. Thus, total export of HR coil were 54017 million tonnes only which worked out to 6.07% of total sales.

Segment wise sales of downstream value added products of in the financial year ended 31<sup>st</sup> March 2001 was:

<b>Value added products</b>	<b>Sales (%age)</b>
Cold Rolled Steel	21%
Galvanised Steel	44%
Colour Coated Steel	7%
Export	28%

In light of the overall market scenario, which continued to exhibit a depressed outlook, the strategy of the company would be to focus on sale of Hot Rolled Coils to Cold Rollers/Galvanisers in the freight economic zones to leverage peak seasonal demands in galvanisers segment, focus on the value chain by boosting export initiatives such as export of value added galvanised and colour coated steel, besides export of value added special grades of HR where prices will be remunerative.

The capacity of the value added downstream units of the company at Kalmeshwar are being augmented by retrofitting the galvanising and colour coated lines and modifying the same to enable processing of 1250 mm width as against a maximum of upto 1000 mm earlier. This would give the much wanted flexibility in product range, enhance productivity / capacity and at the same time, enable exploit market opportunities in these segments.

The focus of the company would also be on drastically reducing costs by optimising usage of Hot Metal from the blast furnace in the complex, thereby significantly reducing the energy costs and other related costs. The two pronged strategies of reducing costs and focussing on value added grade of HR thereby fetching higher NSR would only render their products competitive in domestic and international area.

## **ESSAR STEEL LIMITED**

Essar Steel Limited (ESL) has set up a state-of-the-art hot rolled coil steel plant of capacity 2 million MT per annum (MTPA) at Hazira, Gujarat which has subsequently been enhanced to 2.4 MTPA and is the fourth largest private sector company in terms of assets in the country. It is also the largest fully integrated manufacturer of high quality flat products in Western India.

ESL manufactures steel incorporating the latest technology through Arc Furnace route and is the largest of its kind in India. It is also the largest exporter of flat steel products from India and earned a Star Trading House status from Ministry of Commerce & Industry, Govt. of India, within a span of only 4 years since it commenced exports.

The operating costs of Essar are relatively low, when judged by global standards. It also enjoys a decided advantage with respect to its port based location, which is good for bringing in raw materials, and also helps in servicing of domestic and export customers better. Outstanding performance has been observed with respect to the 3 DRI - HBI modules of the company. Operating costs are likely to reduce in future via savings through hot DRI charging. Expected benefits include energy savings at both the HBI plant and in the melt shop, better yield at the HBI plant, cost savings from hot briquetting and improved input of hot DRI over cold DRI. Essar is likely to go in for capacity expansion and improved utilization to produce higher volumes, which will then ensure fixed over head recovery at a higher rate. Better yields are expected from Essar with an increase in the use of GICC Pellets. It is expected that the grade of Pellet will be improved from 65.5 - 65.6% Fe to about 67.5% Fe. The company enjoys decided cost advantage regarding its manpower - which is less than \$10 per tonne even though it has highly skilled work force. Electricity cost is also as low as 5 cents per KWH - and it does not purchase power from the national and the regional grids.

## SUB-SECTOR WISE PERFORMANCE

### 1. ELECTRIC ARC FURNACE UNITS

#### (i) Status

	<u>NUMBER</u>	CAPACITY (IN TONNES)
COMMISSIONED UNITS	188	12456860
CLOSED UNITS	150	5758860
WORKING UNITS	38	6698000

#### (ii) Production

Category	1998-99	1999-2000	2000-01	(In `000 tonnes)
				2001-02 (Apr.-Sept., 2001)
Mild Steel	1119.5	932.5	1162.6	529.2
Medium/High Carbon Steel	1223.2	1313.8	1386.3	556.3
Alloy Steel	769.5	966.8	740.6	338.2
Stainless Steel	314.3	382.1	455.2	218.6
Others	92.2	108.9	165.8	92.6
Total Reported	3518.7	3704.1	3910.5	1734.9
Total Estimated	129.6	931.2	924.1	480.0
<b>Grand Total</b>	<b>3648.3</b>	<b>4635.3</b>	<b>4834.6</b>	<b>2214.9</b>

### 2. HOT ROLLED LONG PRODUCTS UNITS

#### (i) Status

	NUMBER	CAPACITY (IN TONNES)
COMMISSIONED UNITS	1246	24225838
CLOSED UNITS	469	8872209
WORKING UNITS	777	15353629

#### (ii) Production

Production of Hot Rolled Long Product manufacturing units which are reporting their production to the office of the Development Commissioner for Iron & Steel, during the last three years and current year is as under: -

(In `000 tonnes)

Category	1998-99	1999-2000	2000-01	2001-02 (Apr.- Sept., 2001)
Bars/Rods (Incl. Squares)	2108.0	2257.7	2227.0	118.2
Wire Rods	935.2	774.1	787.8	393.8
Structural	969.4	877.9	875.2	416.3
Hoops	6.0	14.1	7.7	3.8
Special Sections	270.0	239.5	233.4	110.9
Slabs/Plates	406.6	534.5	570.6	288.7
Total Reported	4695.2	4697.8	4701.7	1331.7
Total Estimated	1873.1	2072.5	1692.7	896.7
<b>Grand Total</b>	<b>6568.3</b>	<b>6770.3</b>	<b>6394.4</b>	<b>2228.4</b>

### 3. HOT ROLLING MILLS(FOR FLAT PRODUCTS)

#### (i) Status

	NUMBER	CAPACITY (IN TONNES)
COMMISSIONED UNITS	12	6302500
CLOSED UNITS	5	262500
WORKING UNITS	7	6040000

#### (ii) Production

Production of Hot Rolled Steel Sheets/Strips, which are reporting their production to the office of the Development Commissioner for Iron & Steel, during the last three years and current year is as under: -

(In `000 tonnes)

Category	1998-99	1999-2000	2000-01	2001-02 (Apr.- Sept., 2001)
Hot Rolled Steel Sheets/Strips	2604.9	3897.2	3843.7	2049.0
Plates	228.8	279.8	308.5	129.8
Total Reported	2833.7	4177.0	4152.2	2178.8

### 4. STEEL WIRE DRAWING UNITS

#### (i) Status

	NUMBER	CAPACITY (IN TONNES)
COMMISSIONED UNITS	92	1205205
CLOSED UNITS	49	619467
WORKING UNITS	43	585738

**(ii) Production**

Production of Steel Wire Drawing Units, which are reporting their production to the office of the Development Commissioner for Iron & Steel, during the last three years and current year is as under: -

(In `000 tonnes)

<b>Category</b>	<b>1998-99</b>	<b>1999-2000</b>	<b>2000-01</b>	<b>2001-02 (Apr.-Sept., 2001)</b>
Mild Steel	128.1	118.3	117.9	59.3
Medium/High Carbon Steel	204.6	210.9	196.3	100.6
Alloy Steel	10.4	10.2	11.1	5.4
Stainless Steel	13.5	11.4	11.0	5.3
Others	12.3	6.6	10.7	7.7
Total Reported	368.9	357.4	347.0	178.3
Total Estimated	48.8	32.8	171.6	15.9
<b>Grand Total</b>	<b>417.7</b>	<b>390.2</b>	<b>518.6</b>	<b>194.2</b>

**5. COLD ROLLED MILLS**

**(i) Status**

	<b>NUMBER</b>	<b>CAPACITY (IN TONNES)</b>
COMMISSIONED UNITS	85	4378521
CLOSED UNITS	21	446580
WORKING UNITS	64	3931941

**(ii) Production**

Production of Cold Rolled Steel Sheets/Strips Units, which are reporting their production to the Office of the Development Commissioner for Iron & Steel, during the last three years and current year is as under: -

(In `000 tonnes)

Category	1998-99	1999-2000	2000-01	2001-02 (Apr.-Sept., 2001)
Mild Steel	1960.0	2417.4	2418.7	1323.5
Medium Carbon Steel	55.7	106.1	413.9	53.6
High Carbon Steel	--	-	--	--
Alloy Steels	1.3	0.7	0.3	0.2
Stainless Steel	29.3	33.7	69.1	24.2
Others	43.4	163.0	151.4	105.1
Total Reported	2089.7	2720.9	3053.4	1506.6
Total Estimated	228.2	212.1	81.4	49.2
<b>Grand Total</b>	<b>2317.9</b>	<b>2933.0</b>	<b>3134.8</b>	<b>1555.8</b>

## 6. GP/GC, PVC/VINYLE COATED SHEETS/STRIPS UNITS

### (i) Status

	NUMBER	CAPACITY (IN TONNES)
COMMISSIONED UNITS	21	2173250
CLOSED UNITS	3	84500
WORKING UNITS	18	2088750

### (ii) Production

Production of GP/GC Sheets/Strips Units, which are reporting their production to the office of the Development Commissioner for Iron & Steel, during the last three years and current year is given below: -

(In `000 tonnes)

Category	1998-99	1999-2000	2000-01	2001-02 (Apr.-Sept., 2001)
GP/GC Sheets/Strips (including colour coated)	911.1	1144.1	1500.4	741.7
Total Reported	911.1	1144.1	1500.4	741.7

## 7. TIN PLATE UNITS

### (i) Status

	NUMBER	CAPACITY (IN TONNES)
COMMISSIONED UNITS	3	151638
CLOSED UNITS	1	60000
WORKING UNITS	2	91638

## (ii) Production

Production of Tin Plate Units, which are reporting their production to the office of the Development Commissioner for Iron & Steel, during the last three years and current year is as under: -

(In `000 tonnes)

Category	1998-99	1999-2000	2000-01	2001-02 (Apr.-Sept., 2001)
Oil Can Size	66.7	92.9	102.0	50.1
Non Oil Can Size	-	-	-	-
Total Reported	66.7	92.9	102.0	50.1

### **PIG IRON INDUSTRY:**

Pig Iron is one of the basic raw materials required by the foundry and casting industry for manufacture of various types of castings for the engineering sector.

In the post liberalization, considerable interest was shown by a large number of entrepreneurs, for setting up Mini blast Furnaces for production of hot metal/pig iron. The Financial Institutions/Commercial Banks have sanctioned financial assistance to 21 units with gross hot metal capacity exceeding 4.8 million tonnes per annum. So far, 19 units have already been commissioned, 2 remaining units are at various stages of implementation.

Commissioned Pig Iron Units are mostly stand alone type. One unit at Jamshedpur namely, M/s. Usha Martin Industries Ltd. has integrated the Mini Blast Furnace(MBF) and is using the hot metal in the charge-mix directly for manufacture of steel. Two Units - One unit each at Karnataka (M/s. Hospet Steel, a Joint Venture of Kalyani & Mukand ) and Tamilnadu (M/s. Southern Iron & Steel Company Ltd.) has integrated their MBF with Energy Optimising Furnace (EOF) for manufacture of steel. The excess hot metal produced by them supplements the pig iron production.

Besides MBF, a COREX Plant (alternative to conventional MBF/BF) along with down-stream steel making through Basic Oxygen Furnace (BOF) which has been commissioned in Karnataka by Jindal Vijaynagar Steel Ltd., also supplements the production of pig iron. In addition, very recently, Ispat Metallics (India) Ltd. has set up a large blast furnace to produce 1.8 million tonnes per annum hot metal/pig iron. The excess hot metal after meeting the requirement of their parent company (Ispat Industries Ltd.) for manufacture of steel will be available as pig iron for sale.

The gross pig iron manufacturing capacity in the secondary sector as on October 2001 is approx. 4.346 million tonnes.

The Sector/company-wise production of pig iron during the last 5 years are given in the following table:

(Million Tonnes)						
Sl. No.	Name of the unit	1997-98	1998-99	1999-2000	2000-01	2001-02 (April-Sept.)
1.	SAIL	0.78	0.74	0.60	0.367	0.163
2.	IISCO	0.40	0.34	0.38	0.339	0.150
3.	RINL	0.52	0.27	0.25	0.258	0.184
4.	Total Main Producers	1.70 (50%)	1.35 (45%)	1.23 (39%)	0.96 (28%)	0.497 (27%)
5.	Private/ Secondary Producers	1.69 (50%)	1.64 (55%)	1.95 (61%)	2.43 (72%)	1.349 (73%)
	<b>Grand Total</b>	<b>3.39</b>	<b>2.99</b>	<b>3.18</b>	<b>3.39</b>	<b>1.846</b>

NB: The figures within brackets indicate the percentage contribution by the respective sectors.

It may be noted that the contribution of the private/secondary sector units has increased from 61% in 1999-2000 to 72% in 2000-01. During the first half of the current year also, the private/secondary sector units have achieved still higher contribution of 73% in the overall production. This is mainly because of decreasing production of pig iron by SAIL and RINL and setting up of new units in the private sector.

The Pig iron industry continues to pass through difficult times. Several blast furnaces/units remained closed down. After a recovery the industry is again faced with problems due to stagnant demand and depressed market conditions, global slump, declining price, increasing price of metallurgical coke, sharp decline in the value of Indian Rupees etc. Government have taken several measures for the benefit of the industry.

The Industry has been exempted from the purview of anti-dumping duty on imported metallurgical coke w.e.f. 19.5.2000.

## 8. SPONGE IRON UNITS

India is the world's second largest producer of Sponge Iron. The growth of sponge iron specially during last 5/6 years in terms of capacity and production has been substantial. The installed capacity of sponge iron increased from 1.52 million tonnes per annum in 1990-91 to 6.616 million tonnes per annum in 2001-2002. The production has increased from 0.9 million tonnes in 1990-91 to 5.484 million tonnes in 2000-2001. Presently there are 39 sponge iron units installed in the country having a capacity of 6.616 million tonnes per annum.

Out of these, there are 36 coal based units covering a capacity of 2.856 million tonnes per annum. Four coal based units covering a capacity of 0.306 million tonnes per annum are lying closed. There are three gas based units covering a capacity of 3.760 million tonnes per annum.

The production of sponge iron units, which are reporting their production to the Office of the Development Commissioner for Iron & Steel during the last three years and current year is given as under: -

	1998-99	1999-2000	2000-01	(In `000 tonnes) 2001-02 (Apr.-Sept., 2001)
Total Reported	5165.7	5328.4	5484.2	3790.2
Total Estimated	--	--		--
Grand Total	5165.7	5328.4	5484.2	3790.2