

Directors' Report

TO THE MEMBERS,

The Directors hereby present their Ninety-fifth annual report on the business and operations of the Company and the financial accounts for the year ended 31st March, 2002.

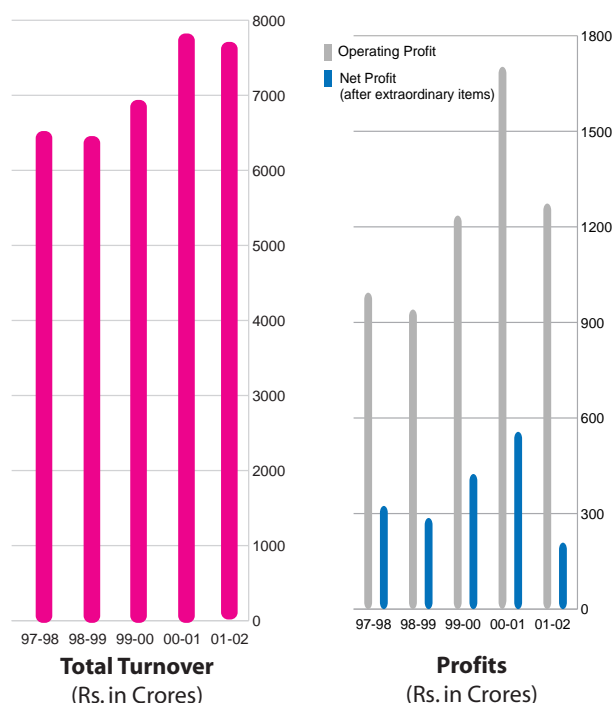
1. Financial Results

	Rupees Crores	<i>Previous Year Rupees Crores</i>
(a) Net Sales/Income	7607.48	7759.44
(b) Total Expenditure	6336.30	6052.91
(c) Operating Profit	1271.18	1706.53
(d) <i>Add</i> : Dividend and Other Income	85.63	50.61
(e) Profit before Interest, Depreciation, Extraordinary items and Taxes	1356.81	1757.14
(f) <i>Less</i> : Interest	369.75	376.61
(g) Profit before Depreciation, Extraordinary items and Taxes	987.06	1380.53
(h) <i>Less</i> : Depreciation	524.75	492.25
(i) Profit before Extraordinary items and Taxes	462.31	888.28
(j) <i>Less</i> : Extraordinary items	211.31	285.84
(k) Profit before Taxes	251.00	602.44
(l) <i>Less</i> : Provision for Taxes	15.50	49.00
(m) <i>Less</i> : Provision for Deferred Taxation	30.60	—
(n) Profit after Taxes	204.90	553.44
(o) <i>Add</i> : Transfer from Debenture Redemption Reserve	310.00	—
(p) <i>Add</i> : Transfer from Investment Allowance (utilised) Reserve	75.55	—
(q) <i>Less</i> : Transfer to Debenture Redemption Reserve	—	100.00
(r) <i>Less</i> : Transfer to Capital Redemption Reserve	140.00	10.00
	450.45	443.44
(s) <i>Add</i> : Balance brought forward from the previous year	214.76	188.93
(t) Balance	665.21	632.37
which the Directors have appropriated as under, to :		
(i) Interim Dividend on Preference Shares	2.07	12.20
(ii) Interim Dividend on Ordinary Shares	147.11	—
(iii) Proposed Dividend	—	183.89
(iv) Tax on Dividend	0.21	21.52
(v) Contingency Reserve	—	100.00
(vi) General Reserve	300.00	100.00
TOTAL	449.39	417.61
leaving a balance of	215.82	214.76
to be carried forward		

FINANCIAL RESULTS

Despite a severe slump in the steel industry, the Company achieved all time record production and sales volumes. Total revenues decreased by 1.5% from Rs. 7,810.05 crores to Rs. 7,693.11 crores on account of lower prices. Product-mix was, however, better due to substantially higher sale of cold rolled products.

Recessionary conditions prevailed in most global steel markets, in what was the worst year for the steel industry in a decade. Flagging demand coupled with high supply levels brought about a precipitous fall in prices. For instance, international prices of hot rolled coils dropped by as much as 40% from the peak levels of first quarter of fiscal year 2001. The imposition of anti-dumping duty by the U.S. on hot rolled coils effectively closed the largest steel market in the world to Indian exports. Increased supply in the domestic market and weak demand sent domestic prices sliding to levels which were not adequate to cover costs for most steel companies. While the Company lost heavily through lower price realisations, it recouped a part of the losses by cost cutting initiatives, higher sales volumes and increased sales of value-added cold rolled coils, including galvanised sheets. Amongst the other major Profit Centres, Ferro Chrome and Chrome Ore/Concentrate business was the worst affected. Reduction in global stainless steel production and high inventory levels brought down ferro chrome prices to historic lows.



Gross profit was lower at Rs. 1,356.81 crores as against Rs. 1,757.14 crores in the previous year, a reduction of 23%. Besides lower realisations, operating cost increased due to the additional impact of new wage agreements signed with the Company's Unions covering the unionised employees. Also, a full year's operation of the Cold Rolling Mill impacted overall costs. Though gross interest charges were substantially lower at Rs. 419.16 crores (2000-01: Rs. 481.90 crores), net interest charges decreased by only Rs. 6.86 crores to Rs. 369.75 crores (2000-01: Rs. 376.61 crores) on account of lower capitalisation during the year. Higher depreciation at Rs. 524.75 crores (2000-2001: Rs. 492.25 crores), due to full charge on additions of over Rs. 2,000 crores of assets in the previous year and pro-rata charge on CGL-2

assets commissioned during the year on 1st July, 2001, and expenses towards employee separation compensation of Rs. 227.02 crores (2000-2001:Rs. 201.52 crores) respectively, resulted in lower profit before taxes of Rs. 251.00 crores (2000-2001: Rs. 602.44 crores) (after providing for extra-ordinary items). After providing Rs. 15.50 crores towards taxes and Rs. 30.60 crores for deferred tax liability, profit after taxes decreased by 63% to Rs. 204.90 crores.

As required under the new Accounting Standards, segment-wise financial statements, related party transactions, calculation of earnings per share, provision of deferred tax liability and Consolidated Accounts of the Company and its seven subsidiaries are made a part of the Annual Report.

DIVIDEND

Preference Shares

The Board had declared a proportionate interim dividend of Rs. 1.48 per share on 14,000,000 8.42% Cumulative Redeemable Preference Shares for the period 1st April, 2001 to 3rd June, 2001. These Preference Shares were redeemed on 4th June, 2001.

Ordinary Shares

The Board had declared an interim dividend on Ordinary Shares @ 40% (Rs. 4.00 per share) for the year ended 31st March, 2002. Keeping in view the interim dividend, the Directors decided not to recommend any final dividend. The interim dividend will be paid as follows:

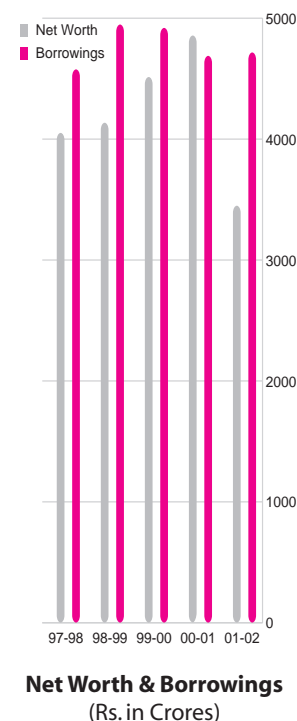
On 367,771,901 Ordinary Shares at Rs. 4.00 per share, subject to tax (2000-2001: Final dividend on 367,771,901 Ordinary Shares at Rs. 5.00 per share).

In the Finance Bill for the fiscal year 2002-03, the Finance Minister has amended Section 10(33) of the Income Tax Act, by withdrawing exemption from tax on dividend in the hands of the recipient, with effect from 1st April, 2002. The Schedule to the Finance Act, 2002 also provides for deduction of tax at source @ 10% (excluding surcharge) of the gross dividend amount exceeding Rs.1000, in the case of individual shareholders.

FINANCE

The Indian Corporate Sector has, for long, suffered from a high interest rate structure. In a welcome

development, this trend has now been reversed. During the past two years, Reserve Bank of India has cut key benchmark rates, signaling its intention of ushering in a regime of lower interest rates. The Company has restructured its debt portfolio by prepaying some of the high interest bearing loans



and raising new loans with lower coupon rates. The effect of this could be seen in lower gross interest charges of Rs. 419.16 crores as against Rs. 481.90 crores in the previous year. Net interest has not decreased proportionately due to substantial lower capitalisation of interest, with the completion of the Cold Rolling Mill Project.

The Company exercised its call option and redeemed, on 1st November 2001, the Secured Redeemable Non-Convertible Bonds of Rs. 500 crores issued in 1996, along with accrued interest of Rs. 212 crores, together aggregating Rs. 712 crores, the largest single redemption of any debt in the history of the Company. The Company also redeemed, by exercising its call option, 13.5% and 14% Secured Redeemable Non-convertible Debentures of Rs. 100 crores and Rs. 50 crores in June 2001 and August 2001 respectively. The company had arranged fresh long-term loans of Rs. 700 crores, by way of debentures, at substantially lower interest rates to, in part, meet the redemption liability. After taking into account other loans repaid, there has been a net reduction in the long-term borrowings outstanding by Rs. 88 crores. Short-term borrowings have increased by Rs. 124 crores over the previous year. Overall borrowings have increased by Rs. 36 crores as compared to the end of the earlier fiscal year.

Working Capital Management

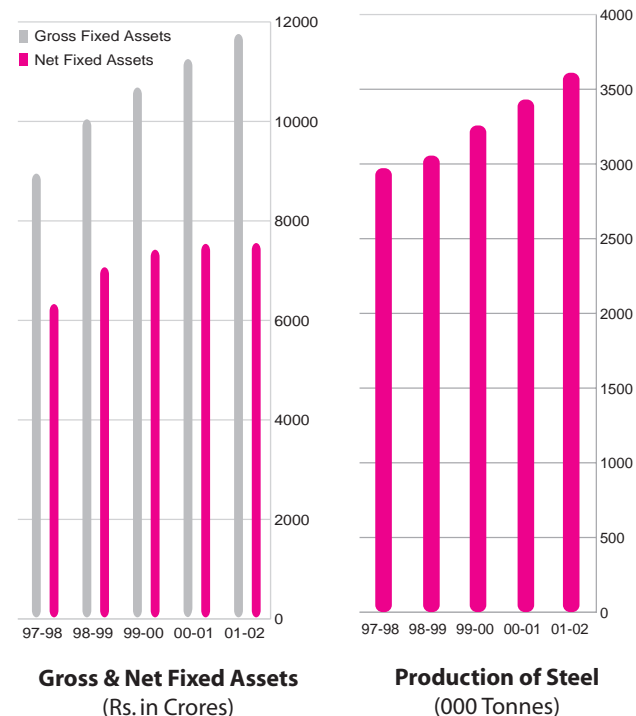
Despite a very difficult year and large volumes of cold rolled and galvanised products, which need additional stages of manufacture, the Company exercised strict discipline in extending credits and

recovery of its dues. Total debtors and average debtors in terms of number of days' sales progressively improved. Average debtors reduced from 53 days in the previous year to 50 days sales. Addition of the Cold Rolling Mill Complex reflected itself in higher inventory levels, though the holding in terms of number of days' sales was about the same as in the previous year. Over six months debtors were brought down from Rs. 384 crores at the beginning of the year to Rs. 320 crores, inspite of difficult market conditions.

CAPITAL PROJECTS

The Continuous Galvanising Line no. 2 of the Cold Rolling Mill went into commercial production from 1st July, 2001.

During the year, the Company incurred capital expenditure of Rs. 535 crores. Capital expenditure



was restricted to only essential items of replacements/renewals. Work on rebuilding and upgradation of blast furnace 'F', which commenced in February 2002, was completed in May 2002. The capacity of the blast furnace, as a consequence, has increased from 0.6 mil. tonnes to 1 mil. tonnes.

ACQUISITIONS

After Tata SSL Limited became a Subsidiary of the Company last year, the Company made two more Open Offers through which its shareholding in Tata SSL Ltd. as on 31st March, 2002 increased to 79.93%. Kalimati Investment Co. Ltd., which is a 100% subsidiary of the Company, holds a further 14.79% bringing the total shareholding to 94.72%.

SUBSIDIARIES

As of 31st March, 2002, the Company had seven Subsidiaries viz. Tata Refractories Ltd., The Tata Pigments Ltd., Kalimati Investment Company Limited, Tata Korf Engineering Services Ltd., Tata Incorporated, Stewarts and Lloyds of India Ltd. and Tata SSL Ltd.

ENERGY, TECHNOLOGY & FOREIGN EXCHANGE

Details of energy conservation and research and development activities undertaken by the Company along with the information in accordance with the provisions of Section 217(1)(e) of the Companies Act, 1956, read with the Companies (Disclosure of Particulars in the Report of Board of Directors) Rules, 1988, are given in Annexure 'A' to the Directors' Report.

DIRECTORS

Dr. J.J. Irani was appointed as an Additional Director of the Company with effect from 22nd July, 2001 and will hold office till the date of the forthcoming Annual General Meeting. A notice has been received from a Member proposing the candidature of Dr. J.J. Irani for being appointed as a Director of the Company.

Pursuant to the resolution passed by the Shareholders in the last Annual General Meeting held on 19th July, 2001, Mr. B. Muthuraman assumed charge as the Managing Director of the Company with effect from 22nd July, 2001.

Mr. F.A. Vandrevalla ceased to be a Director on the Board of the Company w.e.f 1st November, 2001 on his appointment as the Deputy Managing Director of The Tata Power Company Ltd. from the same date. The Board placed on record its appreciation of the valuable services rendered by Mr. Vandrevalla during his long association with the Company.

Industrial Development Bank of India nominated Mr. B. Jitender as the Financial Institutions' nominee on the Board with effect from 10th May, 2002 in place of Mr. S.K. Kapur. The Board placed on record its appreciation of the valuable services rendered by Mr. Kapur during his tenure as a Member of the Board.

In accordance with the provisions of the Companies Act, 1956, and the Company's Articles of Association, Mr. S.A. Sabavala, Mr. Mantosh Sondhi, Mr. S.M. Palia and Mr. Kumar Mangalam

Birla retire by rotation and are eligible for re-appointment.

PARTICULARS OF EMPLOYEES

Information in accordance with the provisions of Section 217 (2A) of the Companies Act, 1956, read with the Companies (Particulars of Employees) Rules, 1975, as amended, regarding employees is given in Annexure 'B' to the Directors' Report.

CORPORATE GOVERNANCE

Pursuant to Clause 49 of the Listing Agreements with the Stock Exchanges, a Management Discussion and Analysis, Corporate Governance Report and Auditors' Certificate regarding compliance of conditions of Corporate Governance are made a part of the Annual Report.

DIRECTORS' RESPONSIBILITY STATEMENT

Pursuant to Section 217 (2AA) of the Companies Act, 1956, the Directors, based on the representations received from the Operating Management, confirm that -

- i) in the preparation of the annual accounts, the applicable accounting standards have been followed and that there are no material departures;

- ii) that have, in the selection of the Accounting Policies, consulted the Statutory Auditors and have applied them consistently and made judgements and estimates that are reasonable and prudent so as to give a true and fair view of the state of affairs of the Company at the end of the financial year and of the profit of the Company for that period;
- iii) they have taken proper and sufficient care to the best of their knowledge and ability for the maintenance of adequate accounting records in accordance with the provisions of the Companies Act, 1956, for safeguarding the assets of the Company and for preventing and detecting fraud and other irregularities;
- iv) they have prepared the annual accounts on a going concern basis.

On behalf of the Board of Directors

Mumbai, 30th May, 2002

RATAN N TATA
Chairman

Annexure 'A' to Directors' Report

PARTICULARS REQUIRED UNDER THE COMPANIES (DISCLOSURE OF PARTICULARS IN THE REPORT OF THE BOARD OF DIRECTORS) RULES, 1988.

A. CONSERVATION OF ENERGY

a) ENERGY CONSERVATION MEASURES TAKEN :

- i) Efficient utilisation of by-product gases in the West Plant boilers to reduce middling coal and LDO consumption.
- ii) Reduction in LDO consumption at Power House #4, LD Shop #1 and Coke Plant by improved operating practices.
- iii) Coal tar injection system through tuyeres was introduced in 'C' Blast furnace to reduce coke consumption.
- iv) Reduction in steam consumption at the turbo blowers of Blast Furnaces, Coke Plants and various canteens of the Works, by improving the efficiency of turbo blowers, utilisation of waste steam at Coke Plant and reducing losses at canteens.
- v) Improvement in vacuum of 20 MW and 25 MW TG sets at Power House #4 in order to reduce steam consumption.
- vi) Reduction in the fuel rate of 'A-F' Blast Furnaces through improved operating practices.

b) ADDITIONAL INVESTMENTS AND PROPOSALS FOR REDUCTION OF CONSUMPTION OF ENERGY :

- i) Recovery of flash steam at PH #4 and its use in the deaerators of boilers.
- ii) Retrofitting of power saving device at Industrial Gases Department.
- iii) Waste heat recovery from the 'G' Blast Furnace stove exhaust gases.
- iv) Improving the availability of B.F. gas at Boiler House #1 boilers by modification in BF gas network.
- v) Modification of stoker fired boilers at Boiler House #1 and Power House #3 for by-product gases firing to reduce middling coal consumption and enhance the by-product gases utilisation.
- vi) Recovery of sensible heat of coke by installing coke dry quenching system at Coke Plant.

c) IMPACT OF THE ABOVE MEASURES :

Energy conservation measures during 2000-2001 have resulted in achieving :

- i) Lowest plant specific energy consumption of 7.260 Gcal/tcs – a reduction of 3.6%.
- ii) Lowest plant specific LDO consumption of 0.48 kg/tss – a reduction of 35%.
- iii) Lower coal (middlings) consumption of 0.864 million tonnes for steam and power generation – a reduction of 12.8%.
- iv) Lowest process steam consumption of 0.907 t/tss – a reduction of 6.7%.

d) TOTAL ENERGY CONSUMPTION AND ENERGY CONSUMPTION PER UNIT OF PRODUCTION :

Form - A enclosed.

B. TECHNOLOGY ABSORPTION

- e) Efforts made in technology absorption as per Form B: Form B enclosed.

C. FOREIGN EXCHANGE EARNINGS AND OUTGO

- f) Activities relating to exports, initiatives taken to increase exports; development of new export markets for products and services; and export plans } Mentioned in the Directors' Report.
- g) Total foreign exchange used and earned (2001-2002).

	Rs. in Crores
i) CIF value of imports	675.41
ii) Expenditure in foreign currency	122.03
iii) Foreign exchange earned (includes deemed exports)	599.61

Form - A
Form for disclosure of particulars with respect to Conservation of Energy : 2001-2002

Particulars	2001-2002	2000-2001
A. POWER AND FUEL CONSUMPTION		
1. Electricity		
a) Purchased		
Units (M. KWH)	1,371.73	1,085.62
Total Amount (Rs. Lakhs) #	36,446.51	32,077.63
Average Rate/Unit (Rs./KWH)	2.66	2.95
b) Own Generation		
i) Through Diesel Generator		
Units (M. KWH)	8.10	7.72
Units per litre of Diesel Oil (KWH)	3.63	3.35
Average Cost/Unit (Rs./KWH)	7.32	7.90
ii) Through Steam Turbine/Generator		
Units (M. KWH)	1,077.38	1,273.32
Units per tonne of Coal (KWH)	897.13	855.16
Average Cost/Unit (Rs./KWH)	1.48	1.41
(*This includes generation of PH #4 in M.KWH which is operated on by-product gases upto 95%)	375.76	458.74
2. Coal		
i) Coking Coal		
Quantity (Million Tonnes)	3.32	3.34
Total Cost (Rs. Lakhs)	66,454.05	61,993.87
Average rate (Rs./Tonne)	2,002.65	1,856.10
ii) Blast Furnace Injection Coal		
Quantity (Million Tonnes)	0.14	0.14
Total Cost (Rs. Lakhs)	4,052.61	3,862.15
Average rate (Rs./Tonne)	2,951.28	2,667.86
iii) Middling Coal and ROM		
Quantity (Million Tonnes)	0.86	0.99
Total Cost (Rs. Lakhs)	6,437.59	6,953.39
Average rate (Rs./Tonne)	750.12	702.36
3. Furnace Oil		
Quantity (Kilo Litres)	2,551.67	1,872.20
Total Amount (Rs. Lakhs)	302.62	224.44
Average rate (Rs./KL)	11,859.69	11,987.80
4. Others		
L.D.O.		
Quantity (Kilo Litres)	2,957.78	3,152.89
Total Cost (Rs. Lakhs)	389.68	351.03
Average rate (Rs./KL)	13,174.67	11,133.58

Excludes electricity duty paid on purchases

* CO gas, BF gas and LD gas (By product of Coke Plant and LD Shop) are consumed for generation of power in PH #4 steam turbine generator. Accordingly, previous year's figures have been modified.

B. CONSUMPTION PER UNIT OF PRODUCTION

Particulars	Steel (per tonne)	Tubes (per tonne)	Bearings (per no.)	Ferro Alloys (per tonne)	Rings & Agrico (per no.)	Growth Shop (per tonne)
Electricity (KWH)	464.00 (461.00)	124.00 (121.00)	1.20 (1.14)	3,791.09 (3,548.55)	0.81 (0.79)	1,214.51 (1,360.16)
Furnace Oil (Litres)				1.20 (25.83)	0.68 (0.19)	20.12 (20.35)
Coking Coal (Tonnes)	0.95 (1.00)					
Others :						
Light Diesel Oil (Litres)	0.53 (0.82)	0.06 (0.07)				

(Previous year's figures have been given in brackets and modified wherever necessary)

Form - B

Form for disclosure of particulars with respect to Technology Absorption : 2001-2002.

RESEARCH AND DEVELOPMENT

1. SPECIFIC AREAS IN WHICH R&D WAS CARRIED OUT BY THE COMPANY

Research was carried out in the areas of raw materials including coal, coke, energy conservation, waste utilisation, sintering, blast furnace productivity and phosphorous reduction, product development and improvement in life of plant and machinery.

2. BENEFITS DERIVED

Many initiatives have been taken on R & D and some work done in the past are now bearing fruit. A few instances are highlighted below:

Recommendations made to improve the performances of froth flotation circuits of Bhelatand and West Bokaro Washery 2, plant trials done. Expected increase in the clean coal yield is about 5-10%. A mathematical model has been developed for iron ore crushing operation at Noamundi. Dry circuit and phos reduction measures in classifier fines to – 0.04% are identified and recommended for Joda iron ore processing. Phos. reduction in Noamundi fines to – 0.06% is identified and recommended. Plant trials undertaken to improve chrome ore pellet strength to > 100 kgs/pellet at FAP, Bannipal. Sinter chemistry for high sinter usage during 'F' furnace shutdown has been designed and properties found suitable. Burden distribution studies with 1:10 scaled down BF model for 'F' furnace with CBLT have been carried out through in-house development. A 3-D mathematical model has been made to analyse the flow pattern within SEN in order to eliminate the stagnation zone and thereby reduce clogging tendency. The SEN bottom is redesigned for trial. An optimum TBM tuyeres location for the new vessel bottom at LD 1 has been suggested to the plant based on the water model study. This will be implemented in the middle of 2002. Causes for frequent nozzle clogging in IF steel have been identified and measures to control the same have been recommended. A software to capture metal level fluctuation installed that would relate to clogging. A comprehensive model of electromagnetic stirrer and submerged entry nozzle for billet casting is in an advanced state of development, the results would soon be used in the plant. Mathematical modelling of Stelmor for rolling of high carbon wire rod done to predict structure and properties that would lead to optimal properties. Kinetic equations for recrystallisation and precipitation during hot rolling of IF steel have been developed and are being integrated with the Offline Stimulator. This would be useful to predict loads and properties. Heat transfer model to predict coiling temperature (CT) on ROT has been done and validated. This is to be used in OPRESS (On-line Property Prediction System) to obtain mechanical properties during rolling. HR Dual phase steel for wheel rim and disc application have been developed and sent for trial. Isotropic steel with $r > 1.0$ and $r < 0.1$ has been developed in lab scale both in HR and CR conditions. The annealing parameters have been optimised for production of ULC/LC Si-free electrical steel, which would reduce processing cost at the customers' end. Low carbon Si free steel with P has been developed through CRM. A norm for eddy current inspection of high speed steel (HSS) rolls for HSM has been developed. Chromatizing process recommended by R & D has been implemented in CRM. Optimised annealing parameters developed and implemented in CGL#1 and CGL#2 resulting in increased line speed and reduced rejection rate. Superior life cycle of painted TATA GA sheet was established through in-house corrosion characterisation. An improved ULCC tundish striker pad, having adequate hot module of rupture at 1500 °c has been developed and tried at LD#1. As a result, the tundish failure due to striker pad erosion and shell puncturing has been eliminated. As an import substitution, direct bonded magnesia-chrome refractory for RH snorkel down-leg has been developed. The high temperature properties of the developed bricks e.g. spalling resistance and hot modulus of rupture are close to that of the imported Harima made refractories. The steel ladle slag zone break-out due to slag attack on the safety lining has been eliminated by replacing 42% alumina intermediate lining with magnesite split bricks. By introduction of AMC refractory in the ladle bottom, which is capable of tightening the brick joints by virtue of in situ spinel formation, metal/slag leakages and subsequent breakouts were stopped at LD#1. An improved skid supporting design of the annealing furnace of ring plant has been developed. This ensured firm alignment of the skid during pushing of the baskets. As a result, no furnace breakdown due to refractory failure has been reported till date.

3. FUTURE PLAN OF ACTION

Reduction in the treatment time at RH. Assessment of the design parameters of the slab caster of high speed casting. Design of mould cooling water circuit water for high speed casting. Calculation of tapping temperature for direct route heat at LD2 for control of super heat. Development of design parameters for non drainable trough to improve slag metal separation at 'G' blast furnace. Evaluation of high temperature properties of sinter. Optimisation of cold washing of West Bokaro. Addition of low ash carbonaceous constituents to broaden the base for stamp charging blend. Prediction of plant stamp charged coke properties using ANN. Pelletising of chrome ore for FAP, Bannipal. To identify compatible binders to improve coal cake stability to arrest cake breakage. Evaluation of coking properties of Jharia coals as and when required. Predicting stamp charged coke properties for 7 kg carbolite oven using ANN. Development of model for profile and flatness control for thinner HR coil. Development of model to eliminate deformation and micro structural changes during rolling at WRM. Development of model to obtain appropriate profile and flatness of HR coils to reduce shape defects of cold rolled sheets after cold rolling. Secondary cold work embrittlement studies in "IF" grades. Bake hardening steels: (1) Batch annealing route (2) Continuous route (3) GI/GA. Development of galvanised IF-HS product for auto body application. Establishment of best passivation/protection process for GP sheets: Development of transparent organic coating. Evaluation of soundness of shell/core bond in cast iron double poured back up rolls of SPM of CRM. Increase in prime slab yield by automatic slab length optimisation. Prediction of mechanical properties of HR strips. Development of width gauge for HR strip. Development of wire diameter gauge for WRM.

4. EXPENDITURE ON R&D

(Rs. Crores)

(a) Capital	0.52
(b) Recurring	7.00
(c) Total	7.52
(d) Total R&D expenditure as a percentage of total turnover (%)	0.10

TECHNOLOGY ABSORPTION, ADAPTATION AND INNOVATION

1. Efforts made:

Process: Design of a new submerged entry nozzle to reduce nozzle clogging. New location for TBM tuyeres suggested for steel making at LD #1. Charging matrix developed for burden distribution in the "new" 'F' blast furnace. Sinter chemistry designed for high sinter percent operation.

Product: On-line property prediction system (OPPRESS) has been developed to predict mechanical properties over the length and also through the thickness of coil, as and when it is being rolled.

2. Benefits :

Efforts have led to improved efficiencies, cost competitiveness and enhanced product range.

3. Particulars of technology imported during the last five years :

Innovation/Technology	Year of Import/ Absorption	Status of Implementation
STEEL DIVISION		
a) Lime dosing at Sinter Plant (Lurgi, Germany)	1997	Commissioned
b) Upper Stack Gunning of "G" Blast Furnace (Vesuvius, Italy)	1997	Under Implementation
c) Stamp Charge Battery No.8 (Saarberg Interplan, Germany)	1999	Commissioned
d) Augmentation of Sinter Production (Lurgi, Germany)	1999	Commissioned
e) Third Converter and gas cleaning equipment at LD 2 (MDH, Germany)	1999	Commissioned
f) Second gas recovery system (MDH, Germany)	1999	Commissioned
g) Second desulphurisation unit at LD 2 (Thyssen, Germany)	1999	Commissioned
h) Installation of third Slab Caster at LD 2 (Davy Distington, U.K.)	1999	Commissioned
i) Electrics and automation for HSM (SMS, Germany)	1999	Commissioned
j) Thyssen bottom metallurgy technology in LD Converters (Thyssen, Germany)	1999	Commissioned
k) Split Blower for Blast Furnaces (GHH, Germany)	1999	Commissioned
l) Development of information system for CRM (Posdata Company Ltd., Korea)	1999	Under Implementation
m) Slab yard management system (Posdata Company Ltd., Korea)	1999	Commissioned
n) Coil yard management system (Posdata Company Ltd., Korea)	1999	Commissioned
o) Coil tracking and transportation system (Posdata Company Ltd., Korea)	1999	Commissioned
p) Manufacture of self-aligning clutch release bearing and rear wheel ball bearing (Nachi Fujikoshi, Japan)	1999	Under Implementation
q) Stamp Charge Battery No. 9 (Saarberg Interplan, Germany)	2000	Under Implementation
r) Ladle Furnace at LD 1 (GHH, MDH, Germany)	2000	Commissioned
s) Capacity increase at WRM (Morgan, USA)	2000	Commissioned
t) Continuous galvanising line no. 2 at CRM (CMI, Belgium)	2001	Commissioned
u) Utilisation of sensible heat from blast furnace hot stove waste gas at 'G' blast furnace in association with NEDO, Japan	2002	Under Implementation
v) Installation of electromagnetic stirrer and submerged entry nozzle in the billet caster of LD #1 (Concast, Switzerland)	2002	Under Implementation
w) Installation of probes in 'G' blast furnace to monitor various parameters to carry out intensive R & D activities and thereby acquiring in-depth knowledge of in-furnace phenomena (Paul Wurth, Luxembourg)	2002	Under Implementation

Annexure 'B' to Directors' Report

Statement pursuant to Section 217(2A) of the Companies Act, 1956 and the Companies (Particulars of Employees) Rules, 1975

Sr. No.	Name	Age (Years)	Designation/ Nature of Duties	Gross Remuneration	Net Remuneration	Qualifications	Total Experience (Years)	Date of Commencement of Employment	Last employment held Designation – Period for which post held
				Rs.	Rs.				
1.	Bajjal A.D.	54	Executive-in-Charge (Raw Material & Iron Making)	17,86,539	10,91,987	B.Sc. Engg. (Met.), P.G.D.B.M.	32	13-12-69	—
2.	Chakraborty Sandipan	52	General Manager (Sales)	13,59,285	9,84,415	B.Tech. (Hons) Mech., M. Tech. (IE&OR)	29	01-10-75	Shalimar Paints, Management Assistant, — 3 years
3.	Chatterjee Dr. Amit	57	Chief Technology Officer	17,25,037	10,42,286	B.Sc. (Met. Eng.), Ph.D (London), D.Sc. (Eng.) (London)	31	10-07-72	Thyssen, Germany, Research Manager — 2 years
4.	Chaturvedi U.K.	52	Executive-in-Charge (Long Products)	20,39,589	12,37,015	B.Sc.	32	25-10-69	—
5.	Dhillon A.S.	60	Senior General Manager (Energy)	24,84,919	15,24,707	B.Sc. (Hons.) Mech.	39	15-12-62	—
6.	Ghose P.K.	51	Chief Strategic Finance	19,74,715	12,36,027	B.Com. (Hons), A.I.C.W.A., A.C.S.	28	04-06-73	—
7.	Gupta S.K.	55	Executive-In-Charge	13,93,397	8,44,935	B.Tech. (Hons), P.G.D.B.M. (I.I.M.C.)	31	15-05-70	—
8.	Hussain Syed Manzer	51	General Manager (Town Services)	17,54,387	10,42,645	B. Tech. (Hons) Met., P.G.D.B.M.	28	03-10-72	—
9.	Irani Dr. J.J.*	65	Managing Director	93,13,934	61,89,576	Ph.D. (Sheffield), M. Met. (Sheffield), M.Sc.	39	13-01-68	British Iron & Steel Research Association (Sheffield), Group Leader — 3 years
10.	Jha P.K.	58	Chief Financial Controller (Corporate)	19,72,274	12,09,016	B.Com. (Hons), F.C.A.	34	24-05-67	—
11.	Jha Varun Kumar	50	Chief Information Officer	20,02,305	11,94,217	B.Tech. (Hons), P.G.D.B.M.	29	03-10-72	—
12.	Kochhar V.R.*	63	Senior General Manager (Raw Material Division)	14,89,176	8,66,262	B.Sc. (Elect. Engg.)	42	19-12-59	—
13.	Mahanty Niroop Kumar	52	Vice President (Human Resources Management)	21,62,070	13,30,397	B.A. (Hons), M.B.A.	26	18-12-75	—
14.	Mahapatra S.K.	62	Chief (Rural Marketing)	20,64,792	12,70,908	B.Tech. (Hons.), P.G.D.B.M.	41	24-12-60	Titagarh Paper Mills Ltd., Assistant — 4 months
15.	Mukherjee Dr. T.	59	Deputy Managing Director (Steel)	53,58,716	32,61,182	B.E. (Met.), M. Met. (Sheffield), Ph. D. (Sheffield)	34	17-05-71	British Steel Corpn., Asst. Manager, New Products Dev., — 1 year – 6 months
16.	Muthuraman B.	58	Managing Director	56,02,654	33,59,464	B. Tech. (Met.), P.G.D.B.M.	35	14-11-66	—
17.	Nandrajog R.C.	57	Vice President (Finance)	28,97,724	17,83,297	B.Sc. Engg. (Mech.), A.I.C.W.A M.B.A.	35	12-11-66	—
18.	Nerurkar H.M.	53	Executive-In-Charge (Flat Products)	21,82,206	12,89,308	B. Tech. (Met.)	30	01-02-82	Tata Steel, Asst. Research Engg., — 5 years U.M.I. Ltd. Manager (QC) — 5 years
19.	Pandey Sachidanand*	64	Advisor to Managing Director	19,35,827	11,54,429	B.A. (Hons) Economics, M.A. (Economics), Dip. in Social Work	41	08-09-93	SAIL, G.M. (P&A) — 27 years – 2 months Rashtriya Ispat Nigam Ltd. Visakhapatnam, Director (Personnel) — 5 years – 9 months
20.	Prasad Avinash	54	General Manager (West Bokaro)	16,92,266	9,86,381	B.E. (Met.)	30	14-06-71	—
21.	Sengupta D.	56	Executive-in-Charge (Shared Services)	21,65,610	12,94,606	B.E. (Electrical)	34	30-12-67	—
22.	Singh A. N.	55	Deputy Managing Director (Corporate Services)	53,60,909	32,33,696	B.A. (Hons) Pol. Science	31	05-10-90	Deputy Inspector General of Police, Bihar — 6 years
23.	Singh R.P.	57	Executive-in-Charge (Engg. Services & Projects)	19,63,510	11,37,294	B.Sc. Engg. (Mech.)	36	01-03-96	SAIL & RINL, General Manager (Projects) — 30 years
24.	Sinha N.P.*	63	Vice President (Raw Materials)	16,47,818	11,15,084	B.Sc. Engg. (Elect.), P.G.D.M.I. & S.	43	27-12-58	—
25.	Sinha Ranaveer	47	Executive-in-Charge (Tubes)	16,91,984	10,01,367	B.E., (Mech), P.G.D.B.M.	23	15-05-78	—
26.	Sri Ramulu P.	59	Chief (Corporate Audit)	19,74,964	11,96,515	B.Com., A.C.A., A.I.C.W.A.	35	01-10-70	A.F. Ferguson & Co., Audit Officer, — 4 years
27.	Tyagi R. P.*	62	Senior General Manager (MD's Office)	9,97,515	6,86,166	B.Sc., B.Sc. (Mech. Engg.)	38	24-08-63	—
28.	Uppal Ashok	56	Executive-in-Charge (Growth Shop)	12,73,596	7,47,057	B.Sc., (Mech. Engg.)	34	01-12-67	Tata Metaliks, General Manager, — 1 year, — 9 Months
29.	Vandrevala F.A.*	51	Deputy Managing Director (New & Allied Businesses)	45,04,926	28,36,931	B.Tech. (Hons), P.G.D.B.M.	29	01-10-72	—

* Indicates earnings for part of the year.

- Notes : (1) Gross remuneration comprises salary, allowances, monetary value of perquisites, commission to the Directors and the Company's contribution to Provident and Superannuation Funds but excludes contribution to Gratuity Fund on the basis of actuarial valuation as separate figures are not available.
(2) Net remuneration is after tax and is exclusive of Company's contribution to Provident and Superannuation Funds and monetary value of non-cash perquisites.
(3) The nature of employment in all cases is contractual.
(4) None of the employees mentioned above is a relative of any Director of the Company.

On behalf of the Board of Directors

RATAN N. TATA
Chairman

Mumbai, 30th May, 2002.