

STEEL AUTHORITY OF INDIA LIMITED



Performance Highlights FY2016-17



PERFORMANCE HIGHLIGHTS : FY 2016-17



FINANCIAL PERFORMANCE

- ❖ Net Sales : Rs 43866 Crore
- ❖ EBITDA : Rs 672 Crore
- ❖ PBT : Rs (-) 4851 Crore
- ❖ PAT : Rs (-) 2833 Crore

PRODUCTION & SALES PERFORMANCE

- ❖ Hot Metal Production : 15.726 MT
- ❖ Crude Steel Production : 14.495 MT
- ❖ Saleable Steel Production : 13.868 MT
- ❖ Semis component in production : 22.9% of saleable steel
- ❖ Value Added Production : 5.82 MT
- ❖ Production through concast route : 11.77 MT
- ❖ Saleable Steel Sales : 13.110 MT

PERFORMANCE HIGHLIGHTS : Q4 FY17



FINANCIAL PERFORMANCE

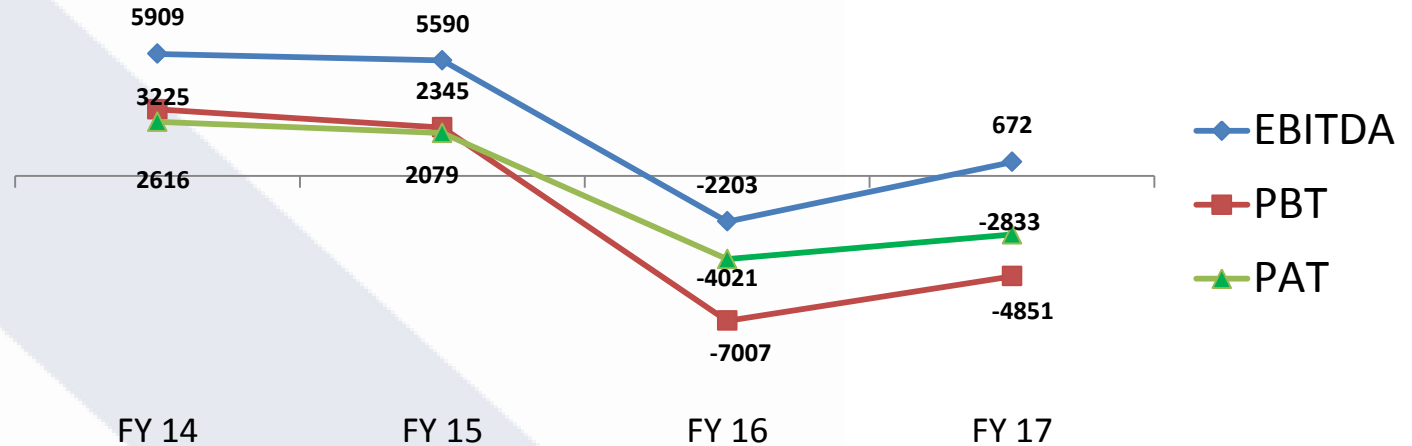
- ❖ Net Sales : Rs 12535 Crore
- ❖ EBITDA : Rs 143 Crore
- ❖ PBT : Rs (-) 1419 Crore
- ❖ PAT : Rs (-) 771 Crore

PRODUCTION & SALES PERFORMANCE

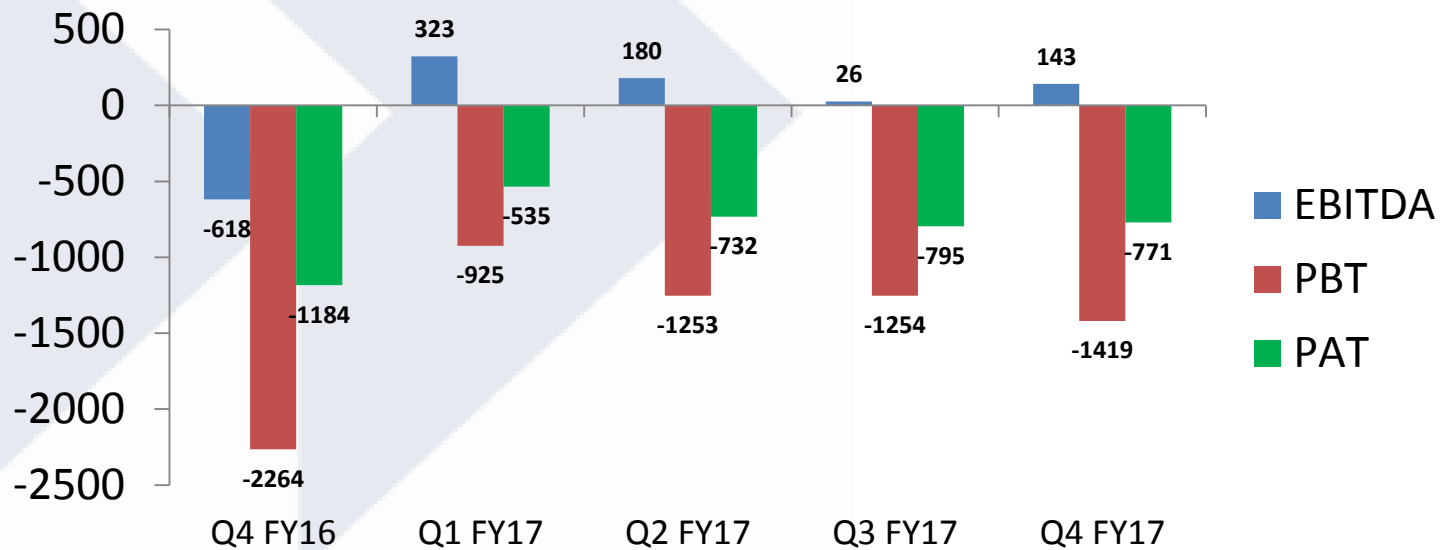
- ❖ Hot Metal Production : 4.057 MT
- ❖ Crude Steel Production : 3.789 MT
- ❖ Saleable Steel Production : 3.626 MT
- ❖ Semis component in production : 19.4% of saleable steel
- ❖ Value Added Production : 1.57 MT
- ❖ Production through concast route : 3.166 MT
- ❖ Saleable Steel Sales : 3.446 MT

FINANCIAL PERFORMANCE

Profit Trend

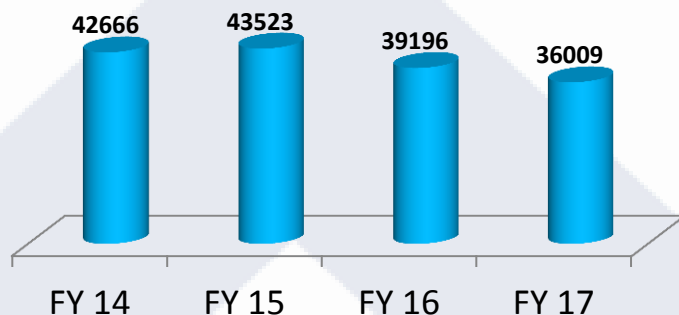


Quarterly Profits

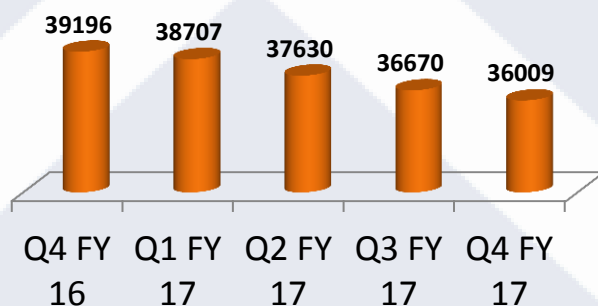


All figures in Rs crore

Annual Net Worth

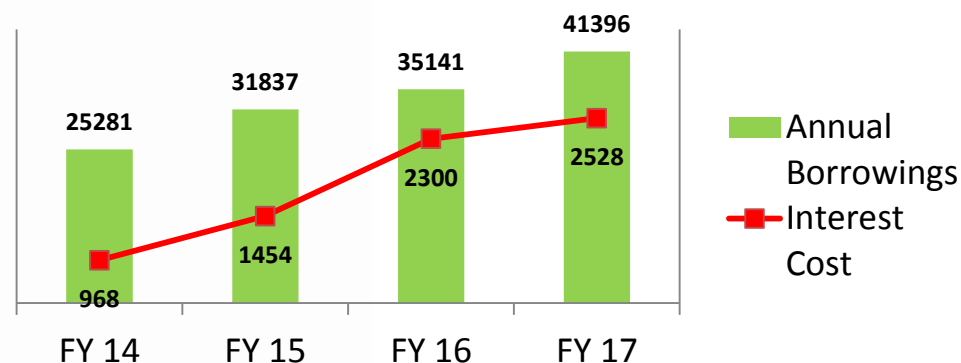


Quarterly Net Worth

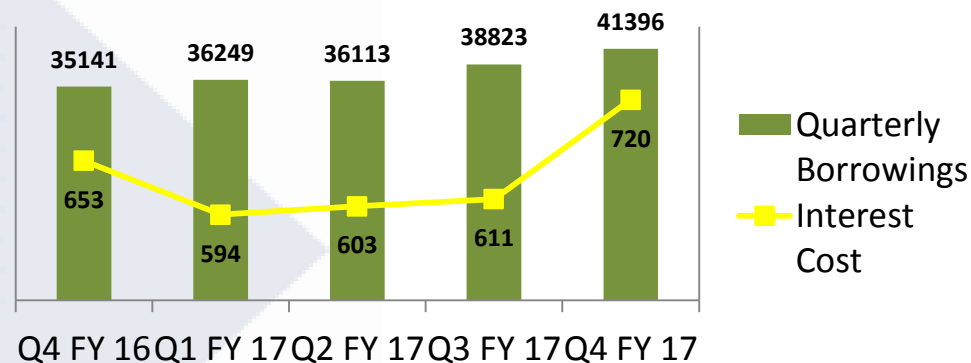


All figures in Rs. crore

Annual Borrowings & Interest cost



Quarterly Borrowings & Interest cost



Debt Equity Ratio

31/03/2015	31/03/2016	30/06/2016	30/09/2016	31/12/2016	31/03/2017
0.73	0.90	0.94	0.96	1.06	1.15

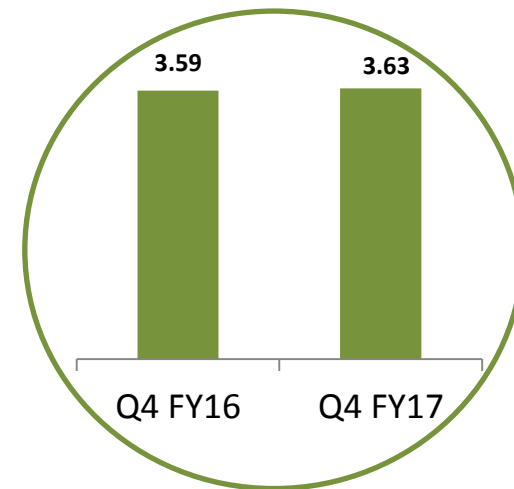
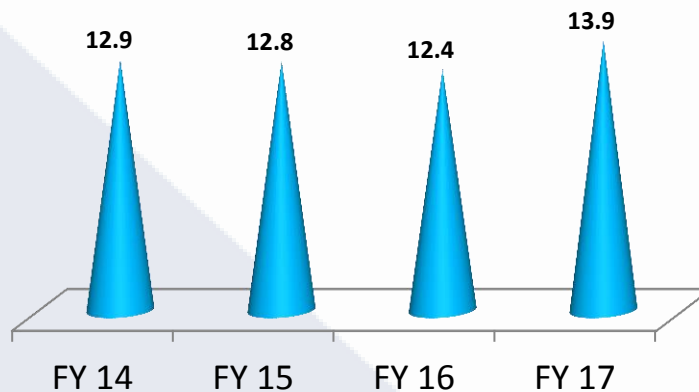
FINANCIAL PERFORMANCE

Rs. Crore (INDAS Compliant figures)	FY 17	Q4 FY 17	FY 16	Q4 FY 16
Gross Sales	49180	14079	43294	12593
Net Sales	43866	12535	38471	11193
EBITDA	672	143	-2201	-615
Depreciation	2680	744	2402	892
Finance Cost	2528	720	2300	653
PBT Before Exceptional Items	-4536	-1321	-6904	-2160
Exceptional/Abnormal Items (VRS/Suspended Operations)	315	98	101	101
PBT After Exceptional Items	-4851	-1419	-7005	-2261
Tax	-2018	-648	-2986	-1079
Profit After Tax	-2833	-771	-4019	-1182

PRODUCTION PERFORMANCE

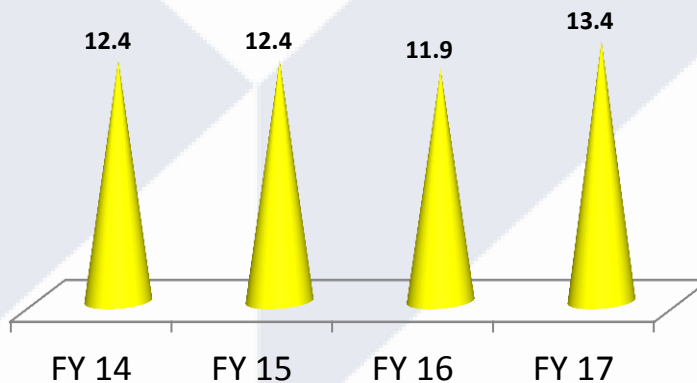
All figures In Million Tonne

SALEABLE STEEL PRODUCTION (incl. SSPs)

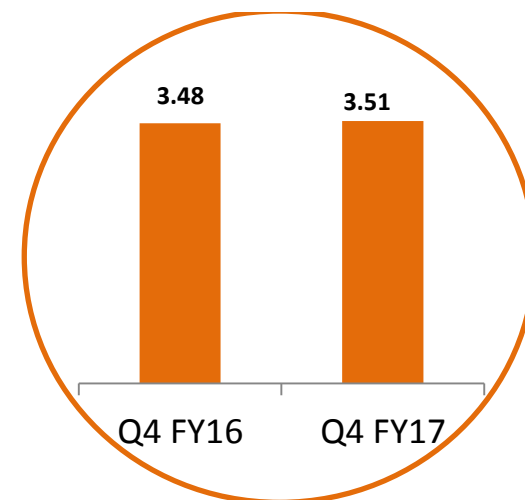


Annual

SALEABLE STEEL PRODUCTION (5 ISPs)



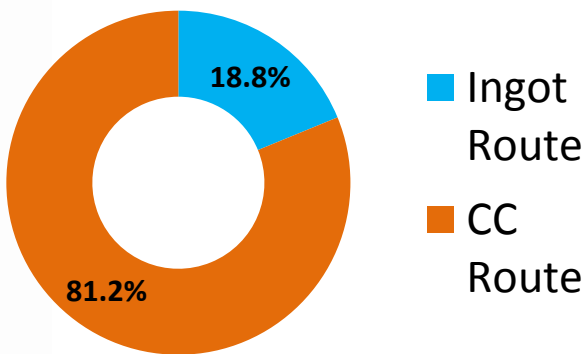
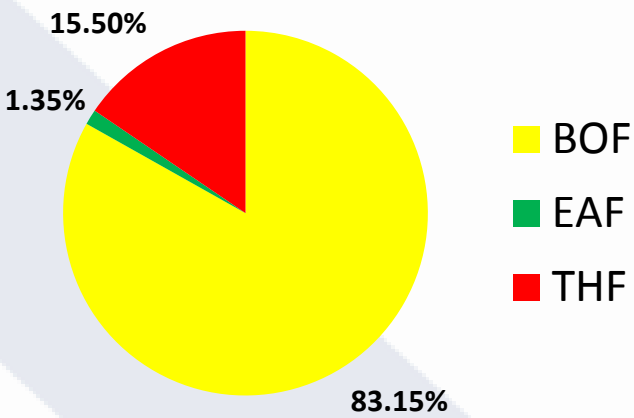
Quarterly



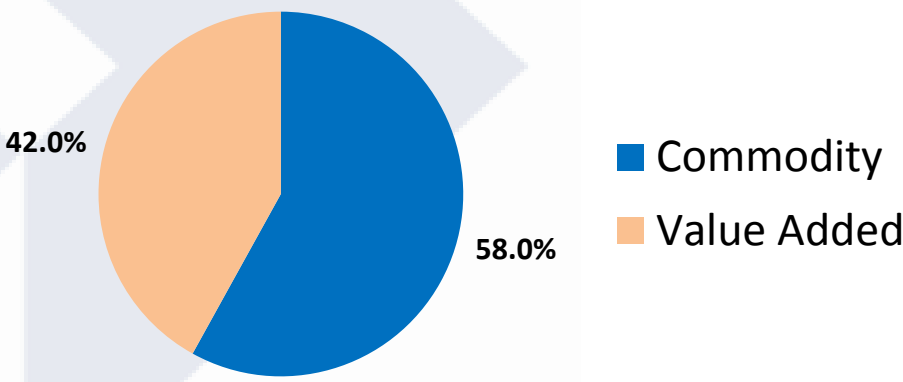
PRODUCTION PERFORMANCE : FY17



CRUDE STEEL PRODUCTION BY PROCESS

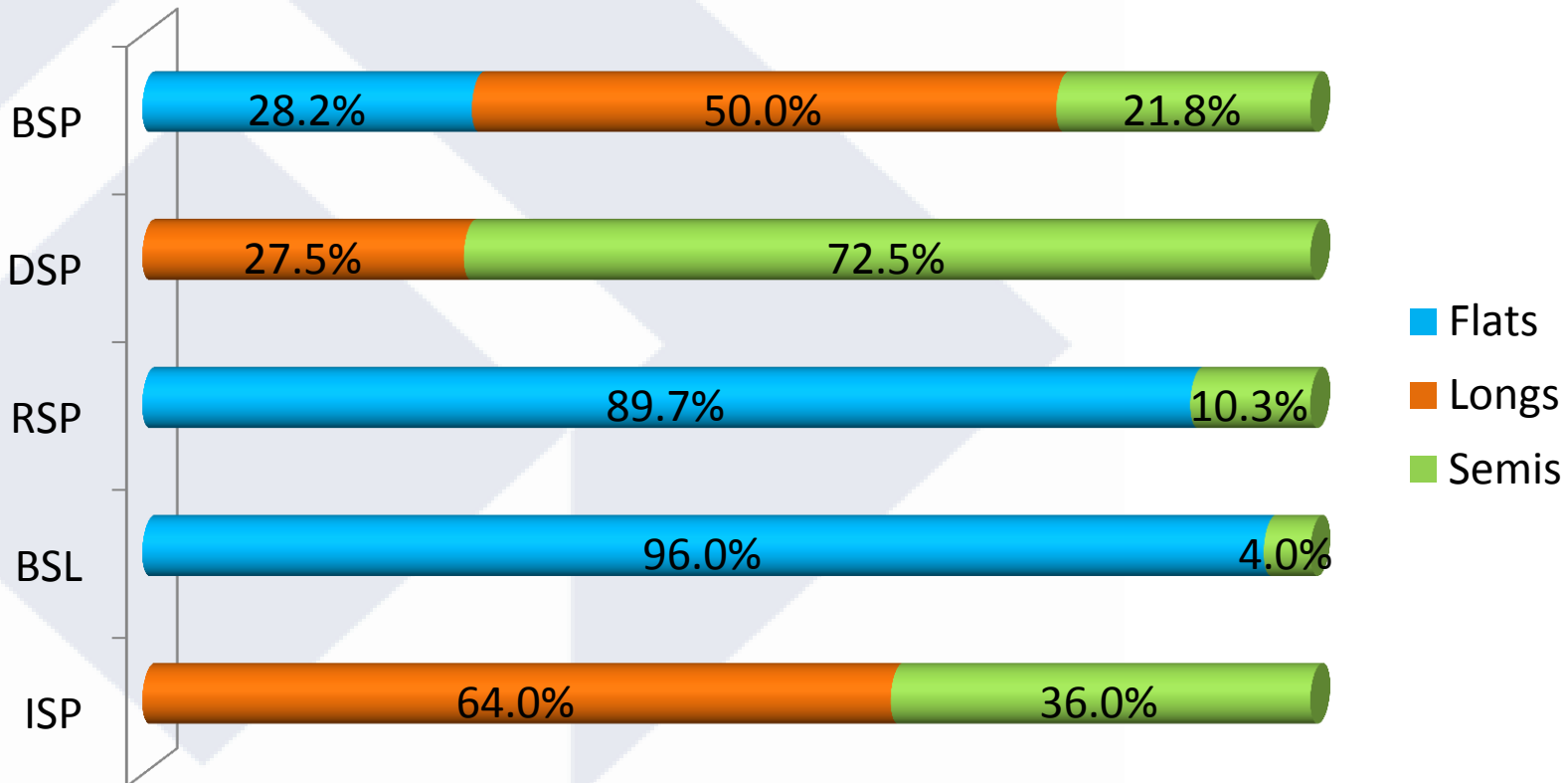
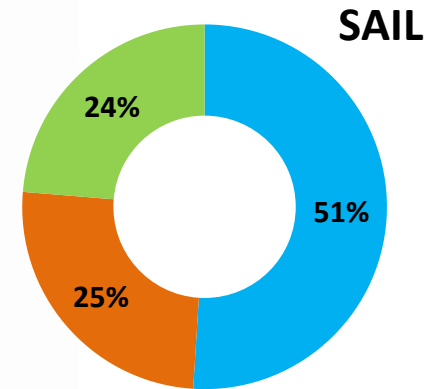


SALEABLE STEEL PRODUCTION BY PROCESS (5 ISPs)



PRODUCTION PERFORMANCE : FY 2016-17

PRODUCT MIX : 5 ISPs

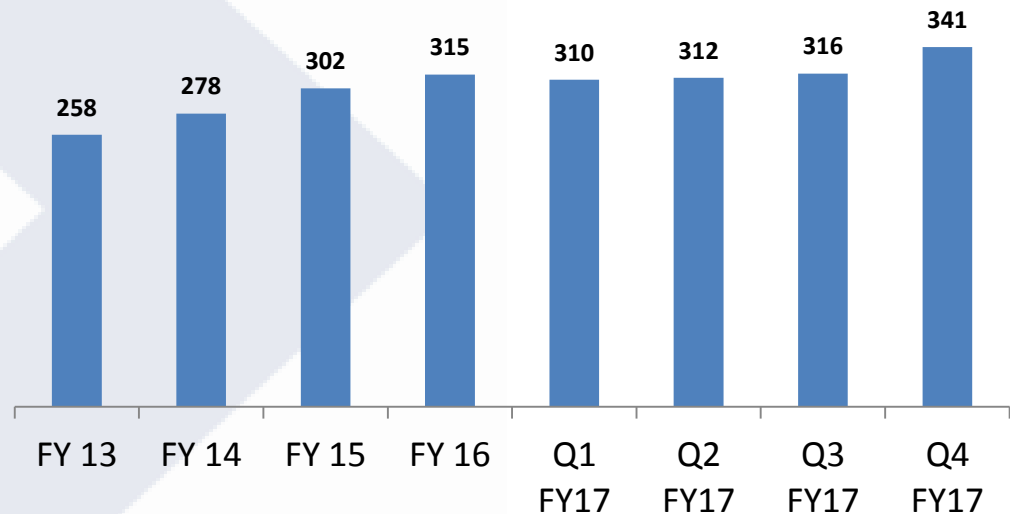


PRODUCTION PERFORMANCE

MAJOR TECHNO-ECONOMIC PARAMETERS FY 2016-17

Parameter	2016-17	2015-16
Coke Rate (kg/thm)	473	489
Fuel Rate (kg/tcs)	559	564
Sp. Energy Consumption (GCal/TCS)	6.60	6.51
BF Productivity (T/m ³ /day)	1.67	1.58

LABOUR PRODUCTIVITY

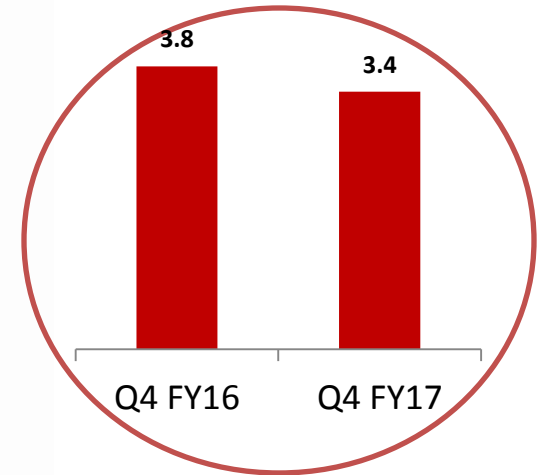
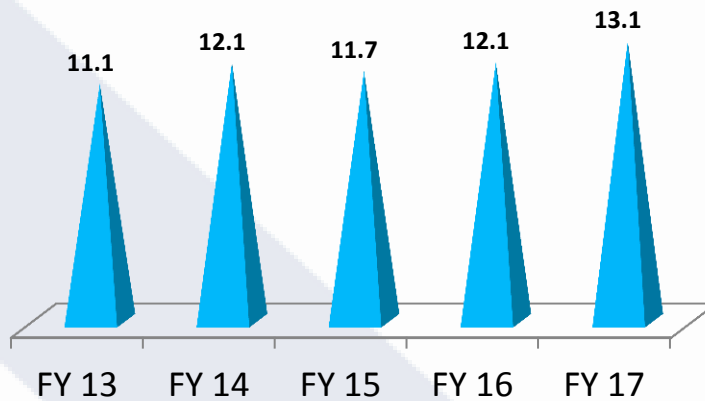


Total manpower as on 01.04.2017: **82,964**

SALES PERFORMANCE

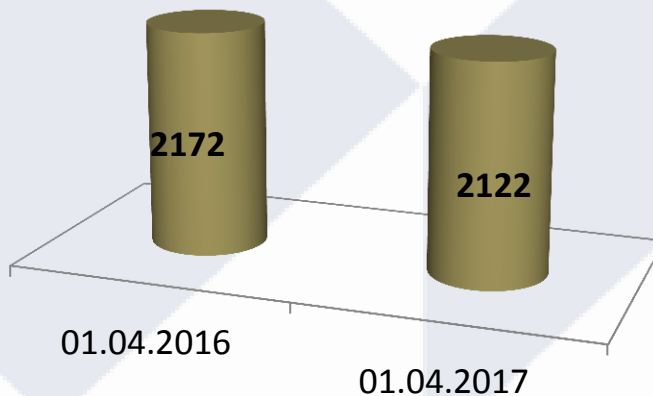
SALEABLE STEEL SALES

(Million Tonne)



Quarterly

No. of Dealers

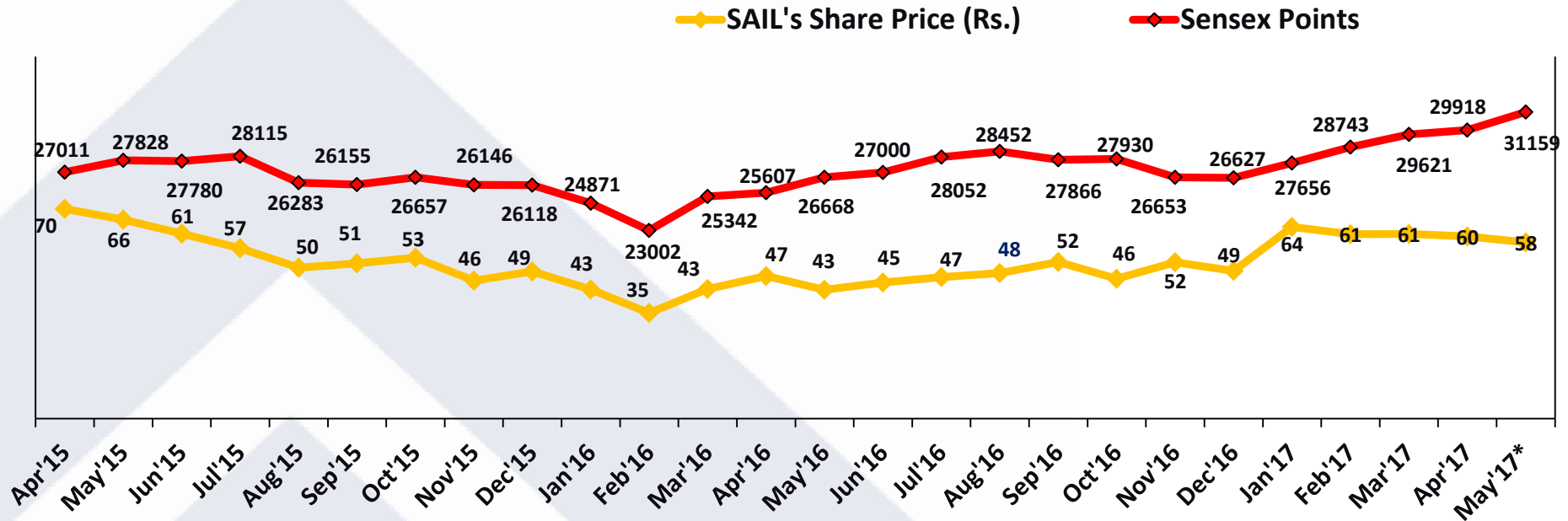


SALES THROUGH DEALER'S NETWORK

Sales through dealers
during FY17

0.815 MT vis-à-vis
0.795 MT during FY16

SAIL STOCK PRICE MOVEMENT



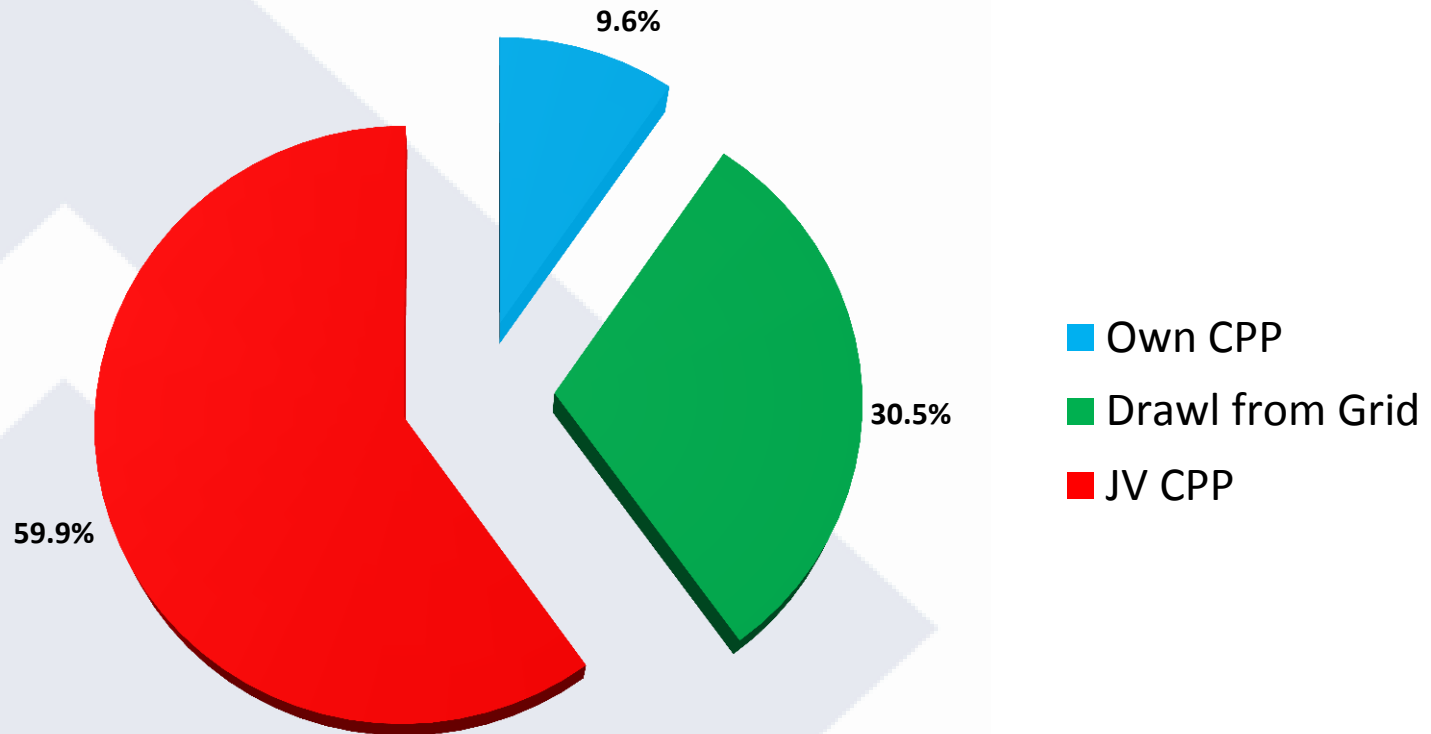
Closing Share Price and Sensex as on the last day of the month

* As on May 30, 2017

DIVIDEND PAYOUT

	Interim (%)	Final (%)	Total (%)	Dividend (Rs. crore)	Dividend Tax (Rs. crore)
FY 7	-	-	-	-	-
FY16	-	-	-	-	-
FY15	17.5	2.5	20	826	165
FY14	20.2	-	20.2	834	142
FY13	16	4	20	826	134
FY12	12	8	20	826	134

POWER CONSUMPTION –FY 2016-17



SAIL's MODERNISATION & EXPANSION PLAN

Million Tonne	Actual Production 2016-17	Capacity After On-going Expansion
Crude Steel	14.495	21.4
Saleable Steel	13.868	20.2

Technological Shift

Technology	Before Expansion	After Expansion
BOF Steel Making	79%	100%
CC Route	71%	94%
Pelletisation Plant	No	Yes
Coke Dry Quenching	Partial	Yes
Top Pressure Recovery Turbine	No	Yes
Auxiliary Fuel Injection in BF	Partial Coverage	Full Coverage
Desulphurization of Hot Metal	Partly	100 %
Beam Blank Casting	No	Yes
Coupled Pickling & Tandem Mill	No	Yes
Beneficiation Plant	Partial	Full



MODERNISATION & EXPANSION PLAN

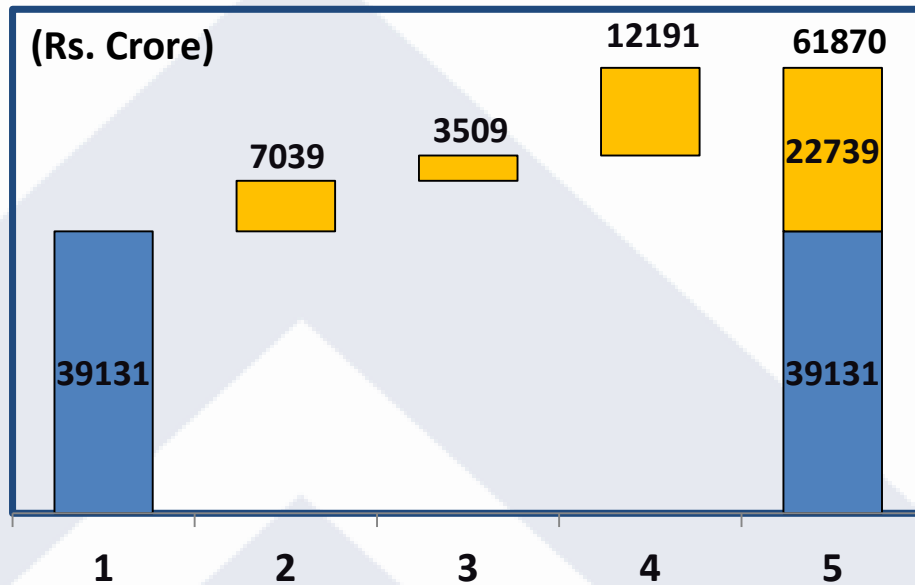
EXPECTED OUTCOME

- Production through twin-hearth furnace (THF) route to be replaced by BOF-LD converter route.
- Production through Ingot – teeming route to be replaced with continuous cast production route.
- Enhancement of Production volume by addition of 2 new 4060 m³ Blast Furnaces and one Blast Furnace of 4160 m³.
- Increased Market Share.
- World class technology and products.
- Improved Product Mix / proportion of value added products to increase.
- Enhanced Pollution Control measures, with Environmental Conservation.

PRODUCTS BEING ADDED:

- Auto grade CR Products, Galvanized Coils /Sheets.
- Plates / Pipes to meet up to API 100 Grade specification.
- Universal Beams/Heavy Beams to support increasing Infrastructural requirements.
- Rails for Metro – Railways and Dedicated Freight Corridors.
- Increased production of Rails and Wheels to meet the increasing requirements of Indian Railways.
- Quantum jump in Rounds and Structural production.
- Wider Plates in the size of 4300 mm.

ONGOING PROJECTS (CAPEX)

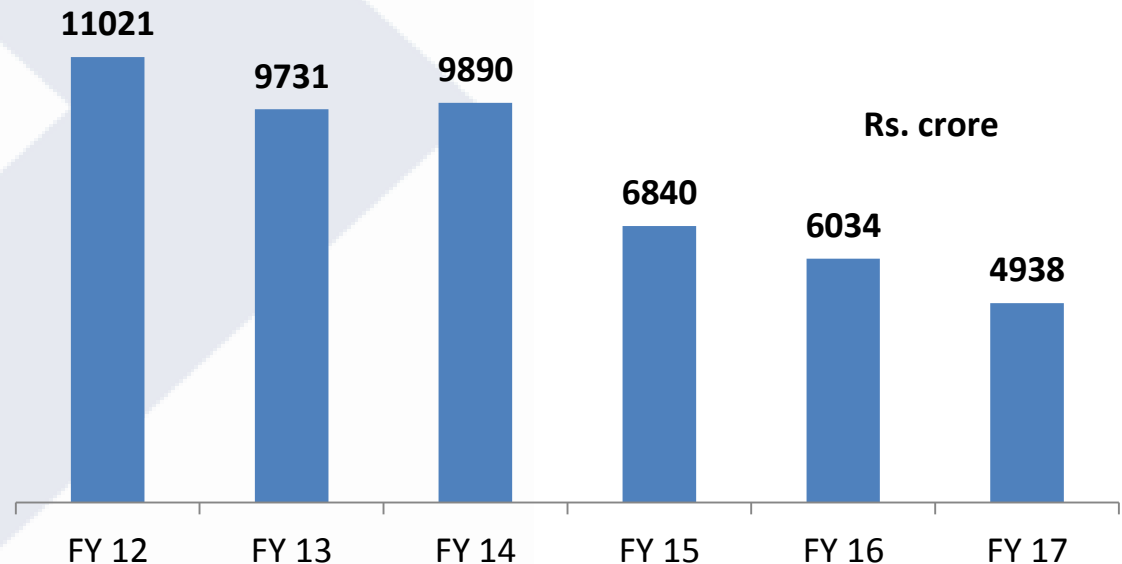


- 1 Expansion of existing capacity
- 2 Value-addition / Product-mix improvement
- 3 Technological up gradation / Modernization
- 4 Sustenance including de-bottlenecking, AMR & Environment
- 5 Total Estimated Cost

In addition, a Capex Plan of Rs. 10264 crore has been made for augmentation of Raw material facilities.

TOTAL CAPEX
(INCL. ON MODERNISATION & EXPANSION)

Capex Plan for FY17 was
Rs.4000 Crore

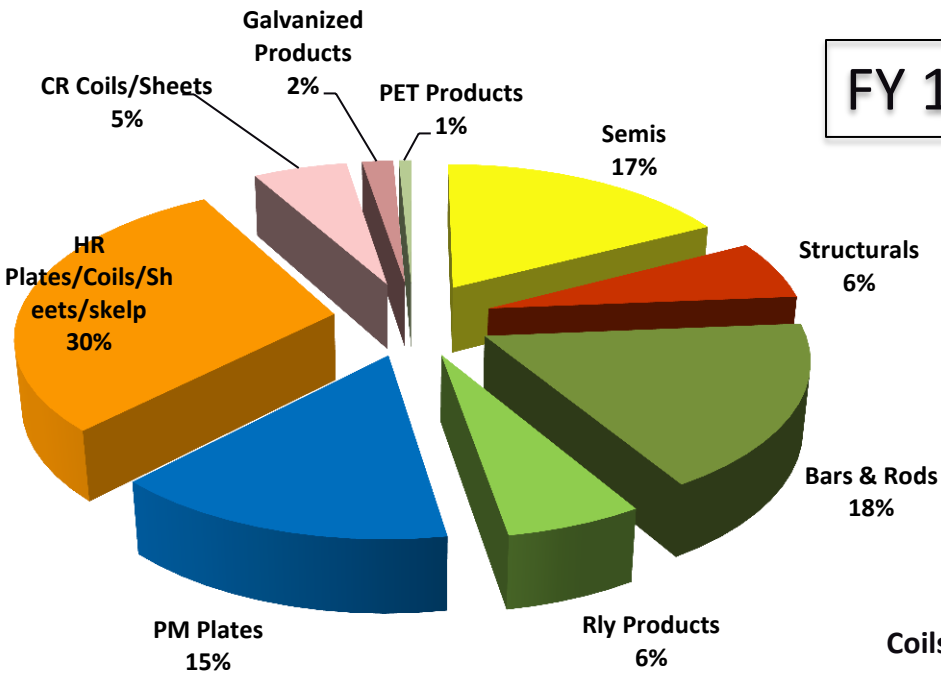


CAPACITY AFTER EXPANSION

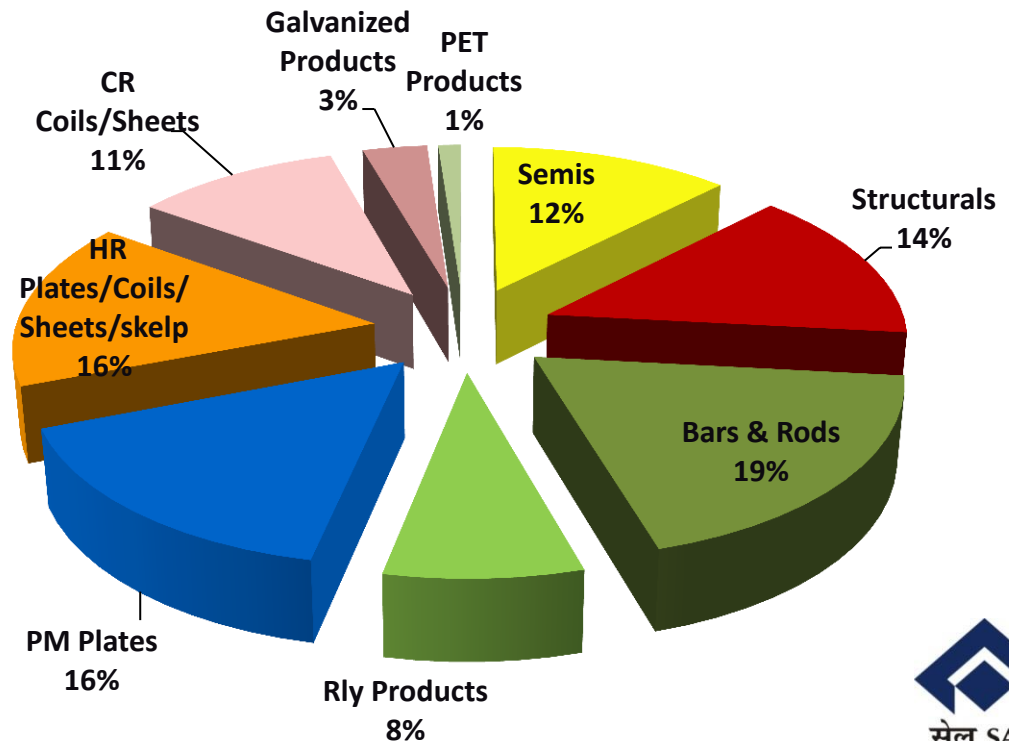
Plant	Hot Metal (MTPA)		Crude Steel (MTPA)		Saleable Steel (MTPA)	
	2016-17	After Expansion	2016-17	After Expansion	2016-17	After Expansion
BSP	5.0	7.5	4.7	7.0	4.0	6.6
DSP	2.3	2.5	2.0	2.2	1.9	2.1
RSP	3.1	4.5	2.9	4.2	2.7	4.0
BSL	3.4	5.8	3.2	4.6	3.4	4.2
ISP	1.8	2.9	1.4	2.5	1.3	2.4
VISL	0.1	0.3	0.0	0.2	0.0	0.2
ASP	-	-	0.1	0.5	0.1	0.4
SSP	-	-	0.1	0.2	0.4	0.3
TOTAL	15.7	23.5	14.5	21.4	13.9	20.2

PRODUCT MIX POST EXPANSION – SALEABLE STEEL

FY 17



Post
Ongoing Expansion



MODERNISATION & EXPANSION PLAN - SALEM STEEL PLANT

Facilities added:

- Steel melting Shop – Electric Arc Furnace (55 T); AOD Converter (60 T); Ladle Furnace (60 T); Single Strand Slab Caster.
- Roll Grinder for Hot Rolling Mill
- Cold Rolling Mill Complex
 - 20-high Sendzimir Mill

Production (MTPA) :

Item	2016-17 (Actual)	After Expansion
Crude Steel	0.11	0.18
Saleable Steel	0.37	0.34

MODERNISATION & EXPANSION PLAN - IISCO STEEL PLANT

Facilities Completed:

- Coal, Coke Handling and Pipe Conveyor
- Ore Handling Plant
- Base Mix Preparation Plant
- New Coke Oven Battery (0.88 Mtpa, 2 x 37 ovens, 7 m tall) –
- Coke Dry Cooling Plant
- Sinter Machines (3.88 Mtpa gross sinter production, 2x204 m²)
- Blast Furnace 4160 m³ volume (2.7Mtpa)
- 3 nos. of 150 T BOF Converters
- 2x6 Strand Billet Casters (1.67 Mtpa)
- 1x4 Strand Bloom-cum-Beam Blank Caster (0.83 Mtpa)
- Wire Rod Mill (0.5 Mtpa)
- Bar Mill (0.75 Mtpa)
- Universal Section Mill (0.6 Mtpa)

MODERNISATION & EXPANSION PLAN - IISCO STEEL PLANT

- New stream to produce 2.7 Mtpa of Hot Metal & 2.5 Mtpa of Crude Steel

Production (MTPA) :

Item	2016 -17 (Actual)	After Expansion
Crude Steel	1.397	2.50
Saleable Steel	1.339	2.39

The expanded capacity of IISCO Steel Plant has been dedicated to the Nation by the Hon'ble Prime Minister on 10.05.2015.

Current Progress of Expansion at IISCO Steel Plant



**Coke Oven
Battery**



Sinter Plant

Blast Furnace



BOF Converters



Billet Casters



Wire Rod Mill

MODERNISATION & EXPANSION PLAN– BOKARO STEEL PLANT

Facilities Completed:

- Re-building of Coke Oven Battery #1 & #2.
- Up-gradation of Blast Furnace #2 and Stoves Up-gradation of #5
- Auxiliary Fuel Injection (CDI) in Blast Furnaces #2 & #3.
- Turbo-Blower-8.
- New CRM Complex (1.2 Mtpa) except HDGL
- Up-gradation of HSM with augmentation of Roughing facility (4.5 MTPA).

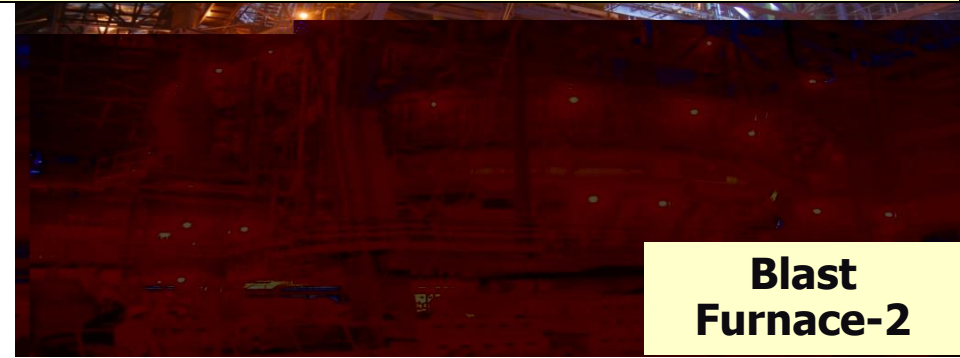
Production (MTPA) :

Item	2016 -17 (Actual)	After Expansion
Crude Steel	3.154	4.61
Saleable Steel	3.372	4.18

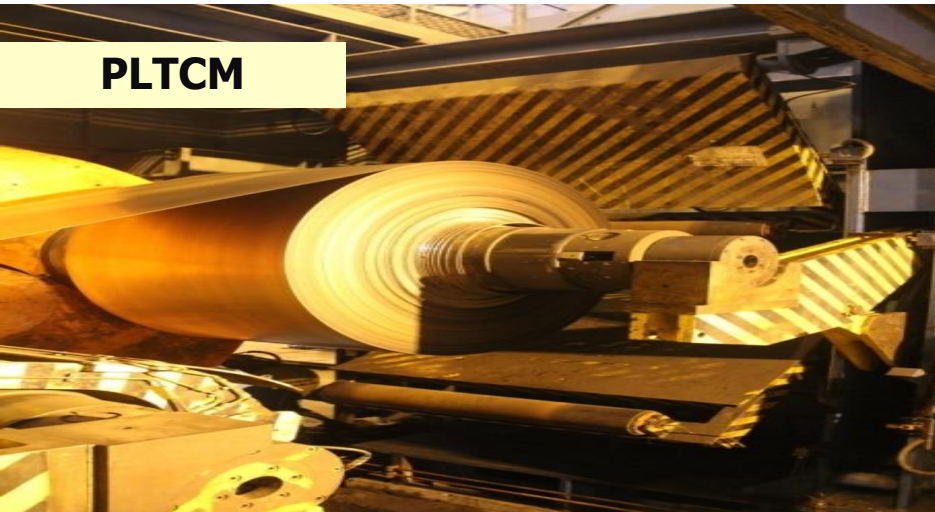
Current Progress of Expansion at Bokaro Steel Plant



**Coke Oven
battery-2**



**Blast
Furnace-2**



PLTCM



Coil Packaging Line



**Skin Pass
Mill**



Bell Annealing Furnace

MODERNISATION & EXPANSION PLAN– BHILAI STEEL PLANT

Facilities Already Completed:

- Ore Handling Plant part-A
- Second Sinter Machine in Sinter Plant-3 (3.7 MTPA)
- New Coke Oven Battery No. 11 (7 m tall, Capacity 0.881 mtpa)
- Oxygen Plant (BOO basis)
- Universal Rail Mill (1.2 MTPA)
- Rail Welding Line
- Bar Line of Bar and Rod Mill (0.9 MTPA)

Facilities Likely to be Completed During FY 17-18:

- Wire Rod Line of Bar and Rod Mill
- Blast Furnace 4060 m3.
- New Steel Melting Shop (SMS-3; 4.13 MTPA) with New Billet Casters (2X6)/Billet-cum-Bloom Caster (1X6), Beam Blank Caster (1X3)

Production (MTPA) :

Item	2016 -17 (Actual)	After Expansion
Crude Steel	4.737	7.0
Saleable Steel	4.006	6.56

Current Progress of Expansion at Bhilai Steel Plant



Sinter Machine



Coke Oven Battery - 11



Blast Furnace - 8



Continuous Caster - 1



Bar & Rod Mill



Universal Rail Mill

MODERNISATION & EXPANSION PLAN– ROURKELA STEEL PLANT

Facilities Completed:

- New Coke Oven Battery -6 (7 m tall, 1 x 67 ovens)
- New Sinter Plant -3 (1 x 360m²)
- New Blast Furnace -5, 4060 m³ useful volume
- New 3rd Single Strand Slab Caster (1.5 MTPA)
- New Oxygen Plant 2x700 tpd on BOO basis
- New 3rd BOF (150 T) Convertor
- New 4.3 meter Wide Plate Mill

Production (MTPA) :

Item	2016 -17 (Actual)	After Expansion
Crude Steel	2.932	4.20
Saleable Steel	2.742	3.99

The expanded capacity of Rourkela Steel Plant has been dedicated to the Nation by the Hon'ble Prime Minister on 01.04.2015.



Current Progress of Expansion at Rourkela Steel Plant



Coke Oven
Battery - 6



Sinter Plant - 3



Blast Furnace -
5 Tapping



3rd BOF Converter



3rd Slab Caster

MODERNISATION & EXPANSION PLAN– DURGAPUR STEEL PLANT

Facilities Completed:

- Rebuilding of Coke Oven Battery no-2
- New Ladle Furnace (125T)
- Coke Sorting & Coal Handling Plant
- New Dolomite Plant (300tpd)
- Bloom-cum-Round Caster 1X4 (0.75 Mtpa)
- New Medium Structural Mill (1.0 Mtpa)

Production (MTPA) :

Item	2016 -17 (Actual)	After Expansion
Crude Steel	2.041	2.20
Saleable Steel	1.932	2.12

Current Progress of Expansion at Durgapur Steel Plant



Coke Oven Battery-2



Ladle Furnace-3

Bloom cum Round Caster



Medium Structural Mill

RAW MATERIALS

Year	Hot Metal (mtpa)	Iron Ore Consumption (mtpa)	Linkages of Iron Ore
2016-17	15.73	25.332	Existing Mines
Post Expansion	23.46	39	<p>The capacity of existing mines at Kiriburu, Meghahatuburu, Bolani & Gua are being ramped up to meet the requirement of Iron Ore for post ongoing phase of expansion</p> <p>New Pellet Plants - 4 MTPA capacity at Gua, 1 MTPA at Dalli and 2 MTPA at RSP has been planned for utilization of accumulated Iron Ore Fines & Generated Fines</p> <p>In addition to the above, new mechanised Iron Ore Mines are being developed at Rowghat, Chiria and Taldih</p>

RAW MATERIALS – Iron Ore

Mine	Existing Capacity* (mtpa)	Capacity* after ongoing expansion (mtpa)	Remarks
Kiriburu	5.50	5.50	Expansion at Kiriburu has already been completed whereas Meghathaburu is being ramped up to meet the requirement of the ongoing expansion plan.
Meghathaburu	5.00	6.50	
Bolani	7.50	10.00	
Gua	4.00	10.00	At Bolani, processing plant has been upgraded to 7.5 mtpa and is under stabilization. At Gua, Stage II FC is awaited from MoEF required for expansion.
Rajhara, Dalli	8.70	7.00**	
New Pellet Plants	New	7.00	
Barsua, Kalta, Taldih	6.00	6.50	**Depleted resources and quality constraints New Pellet Plants shall use the existing reserve of fines incl. dumps & slimes at captive mines
Rowghat	New	12.00	Environment clearance obtained & FC under process for ML162 lease. Iron ore production to the tune of 1mtpa started at Taldih in Nov,2016.
Chiria	0.75	5.80	All statutory clearances have been received. MDO is being engaged.
			Stage-I Forest Clearance & EC has been obtained. Stage-II FC awaited from MoEF.








* Finished Product capacity

▪ The entire requirement of the increased capacity shall be met through captive mines

RAW MATERIALS – Coal

Year	Hot Metal (mtpa)	Coking Coal Requirement (mtpa)	Linkages of Coking Coal
2016-17	15.73	15.36	<ul style="list-style-type: none"> • Import Component – 81% • Over 90% of imported coal is sourced from Australia. • Indigenous: 19% • Domestic coal is largely sourced from Coal India Ltd. • SAIL has existing captive clean coking coal production of nearly 0.7 mtpa
Post Expansion	23.46	21.0	<ul style="list-style-type: none"> • Long term / Quarterly contracts cover 95% of Import requirements • MDO has been engaged for development of Tasra captive coal mine to produce 4 mtpa of ROM (1.8 mtpa washed coal) • Sitanala coal block allotted for a mine capacity of 0.30 mtpa of ROM (0.20 mtpa of washed coal) • Parbatpur coking coal mine allocation letter issued in March 2016 • New linkages / acquisitions are being explored



MAJOR JOINT VENTURES

FOCUS AREA	ALLIANCE PARTNER	REMARKS
STEEL	 	<ul style="list-style-type: none"> A Special Purpose Vehicle, namely, 'Chhattisgarh Mega Steel Limited' has been formed for setting-up an Ultra Mega Steel Plant (UMSP) in Bastar area of Chhattisgarh.
DOWNSTREAM STEEL PROCESSING UNITS	  	<ul style="list-style-type: none"> SAIL Bansal Service Center Limited – A JV with Bansal Metal Works Ltd. for a Flat Product service centre at Bokaro. SAIL SCL Kerala Limited – A JV with Govt. of Kerala for producing TMT Bars at Kozhikode. Prime Gold – SAIL JVC Limited – A JV with M/s Prime Gold for producing TMT Bars at Gwalior. VSL SAIL JVC Limited – A JV with M/s Velagapudi Steel Ltd. for producing TMT Bars at Ujjain.
ENERGY	 	<ul style="list-style-type: none"> JV with NTPC for operating and managing CPPs of Bhilai, Durgapur and Rourkela. JV with DVC for operating & managing CPP of Bokaro.

MAJOR JOINT VENTURES

FOCUS AREA	ALLIANCE PARTNER	REMARKS
TECHNOLOGY		<ul style="list-style-type: none"> SAIL Kobe Iron India Pvt. Ltd. – A Joint Venture Company has been formulated for setting up a 0.5 mtpa capacity Plant for producing iron nuggets based on ITmk3 technology.
RAW MATERIALS	     	<ul style="list-style-type: none"> International Coal Ventures Pvt. Ltd., a SPV of 5 leading PSUs incorporated (SAIL, RINL, CIL, NTPC & NMDC) for acquisition / operation of coal assets in overseas territories. M/s S&T Mining Company Pvt. Ltd. formed with Tata Steel for developing coking coal mines in India. M/s SAIL & MOIL Ferro Alloys (Pvt.) Ltd. formed with MOIL for production of Ferro-alloys at Bhilai.
CEMENT		<ul style="list-style-type: none"> Bhilai Jaypee Cement Ltd. -Slag based cement plant of 2.2 million tonne per annum capacity with grinding unit at Bhilai & clinkering unit at Satna.

MAJOR JOINT VENTURES

FOCUS AREA	ALLIANCE PARTNER	OBJECTIVE
WAGON MANUFACTURE	 <p>RITES THE INFRASTRUCTURE PEOPLE</p>	<ul style="list-style-type: none">▪ SAIL RITES Bengal Wagon Industry Pvt. Ltd. – A Joint Venture Company has been formed with M/s RITES for setting up Wagon Manufacturing Factory at Kulti, West Bengal.
E-PORTAL	 <p>TATA TATA STEEL</p>	<ul style="list-style-type: none">▪ JV with Tata Steel to promote e-commerce activities in steel and related areas

Abbreviations used

•	BF	Blast Furnace	•	FOB	Freight On Board
•	SMS	Steel Melting Shop	•	JPC	Joint Plant Committee
•	BOF	Basic Oxygen Furnace	•	Kg/thm	Kilo Gram Per Tonne of Hot Metal
•	THF	Twin Hearth Furnace	•	Tpd	Tonnes Per Day
•	EAF	Electric Arc Furnace	•	MT	Million Tonne
•	BSP	Bhilai Steel Plant	•	Mtpa	Million Tonne Per Annum
•	DSP	Durgapur Steel Plant	•	EBIDTA	Earnings Before Interest Depreciation ,Taxes & Amortization.
•	RSP	Rourkela Steel Plant	•	PAT	Profit After Tax
•	BSL	Bokaro Steel Limited	•	PBT	Profit Before Tax
•	SSP	Salem Steel Plant	•	RINL	Rashtriya Ispat Nigam Limited
•	VISL	Visvesvaraya Iron & Steel Plant	•	CS	Crude Steel
•	ASP	Alloy Steels Plant	•	CDI	Coal Dust Injection
•	CPLY	Corresponding Period Last Year	•	CC	Continuous Casting
•	G.Cal/tcs	Giga Calories per tonne of Crude Steel	•	BOO	Build-Own-Operate
•	ISP	Integrated Steel Plant	•	Gol	Government of India
•	HDGL	Hot Dip Galvanizing Line	•	MOEF	Ministry of Environment & Forests
•	CR	Cold Rolled			
•	HR	Hot Rolled			

Disclaimer

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