

Steel Authority of India Limited

Performance Highlights Q4 FY16 and FY16



PERFORMANCE HIGHLIGHTS FY16

FINANCIAL PERFORMANCE

- ❖ Net Sales : Rs.38514 Crore
- ❖ EBITDA : Rs.(-)3052 Crore
- ❖ PBT : Rs.(-)7198 Crore
- ❖ PAT : Rs.(-)4137 Crore

PRODUCTION & SALES PERFORMANCE

- ❖ Hot Metal Production : 15.7 MT
- ❖ Crude Steel Production : 14.3 MT
- ❖ Saleable Steel Production : 12.4 MT
- ❖ Semis component in production : 26% of saleable steel
- ❖ Value Added Production : 5.1 MT
- ❖ Production through concast route : 10.8 MT
- ❖ Saleable Steel Sales : 12.1 MT

FINANCIAL PERFORMANCE

Annual Performance

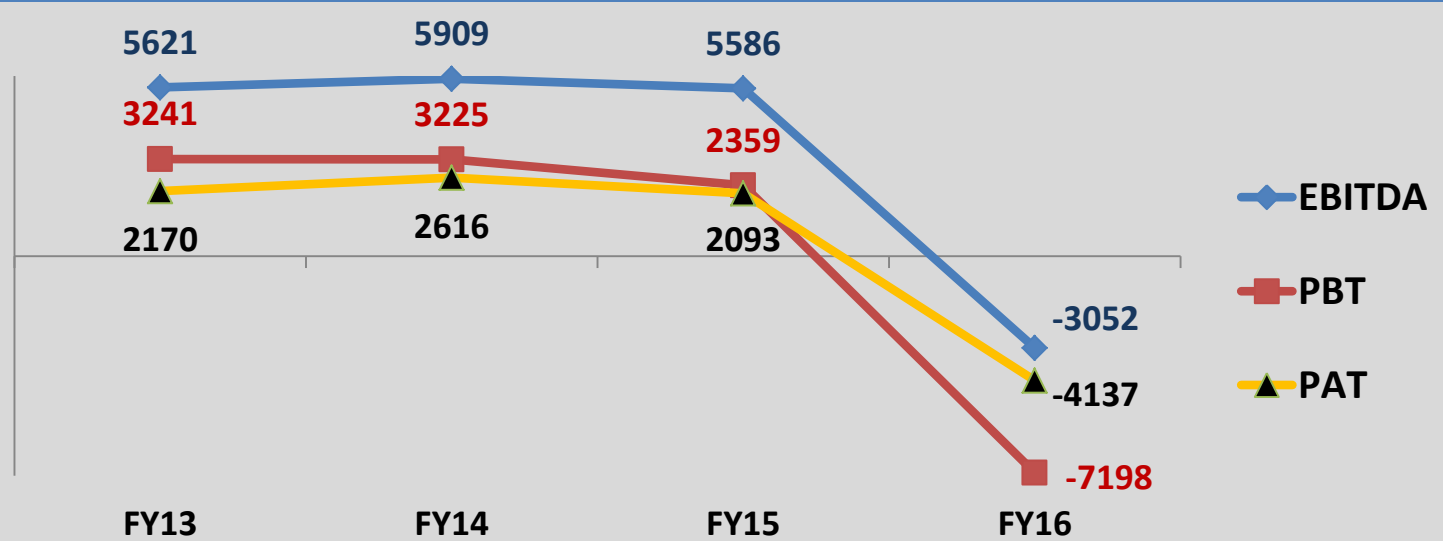
Rs. Crore	FY16	FY15	% Change
Net Sales	38514	45208	(-)15%
EBITDA	(-)3052	5586	(-)155%
PBT	(-)7198	2359	(-)405%
PAT	(-)4137	2093	(-)298%

Quarterly Performance

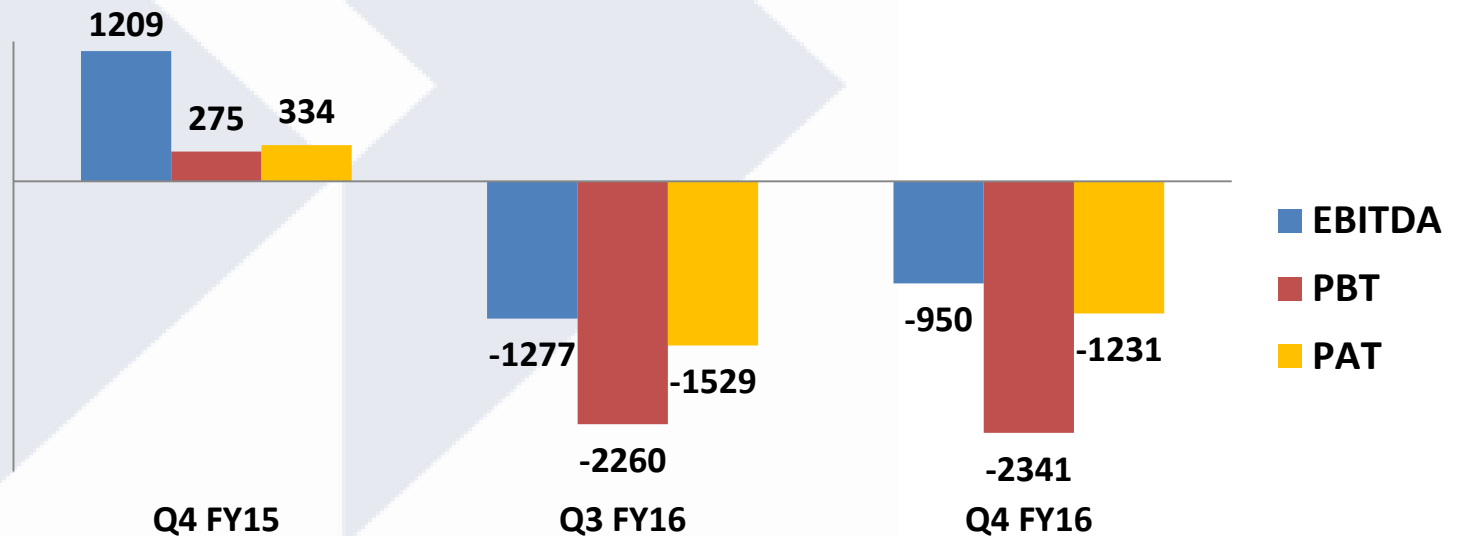
Rs. Crore	Q4 FY16	Q4 FY15	% Change
Net Sales	11212	11470	(-)2%
EBITDA	(-)950	1209	(-)179%
PBT	(-)2341	275	(-)951%
PAT	(-)1231	334	(-)468%

FINANCIAL PERFORMANCE

Profit Trend

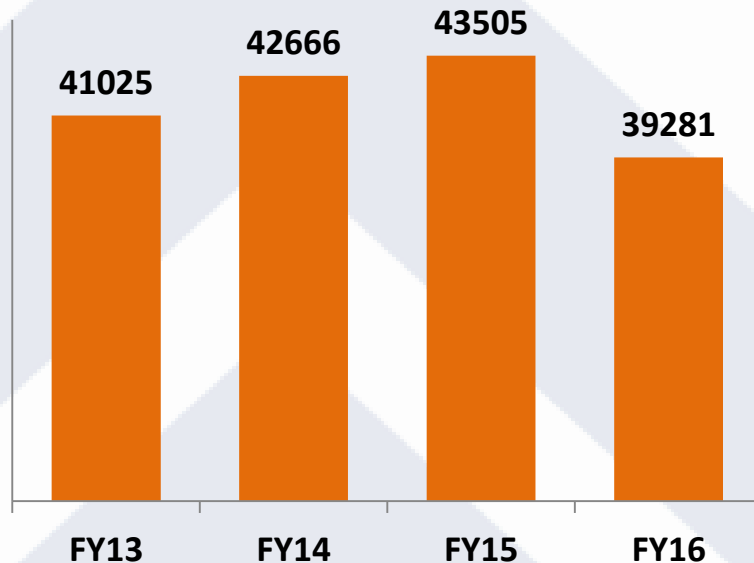


Quarterly Profits

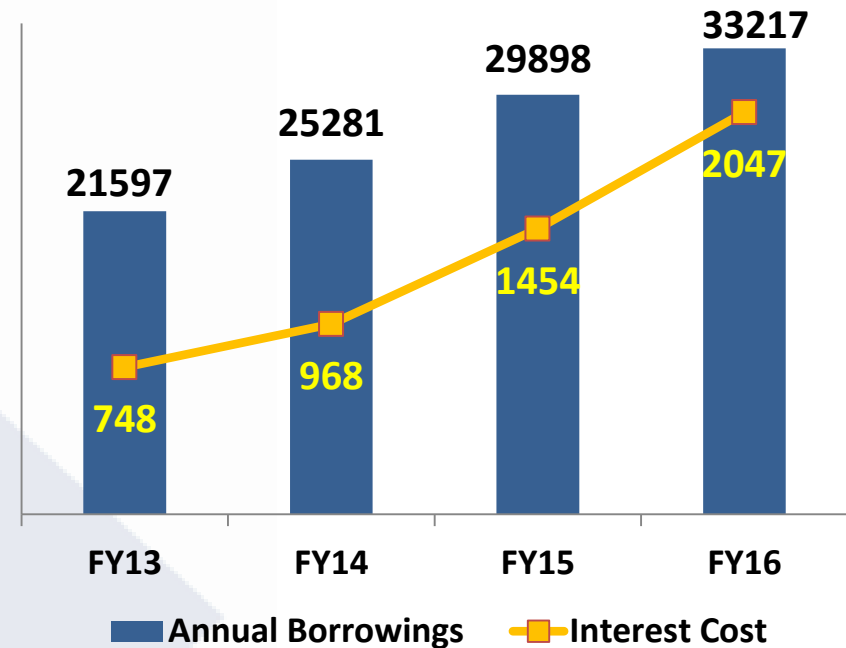


FINANCIAL PERFORMANCE

Net Worth (Rs. Crore)



Borrowings and Interest Cost (Rs. Crore)



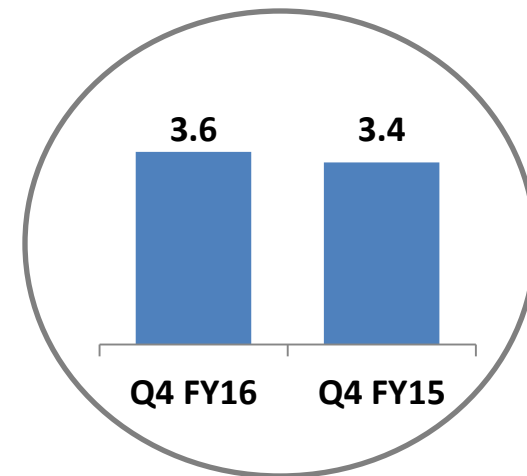
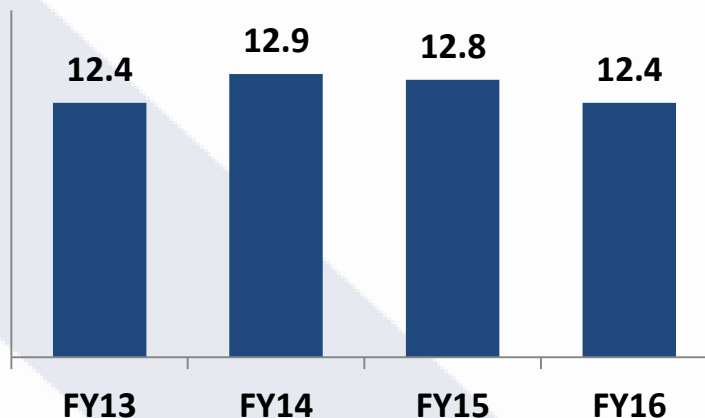
The ongoing CAPEX is being financed through a Debt-Equity Ratio of 1:1

Debt Equity Ratio			
31/03/2013	31/03/2014	31/03/2015	31/03/2016
0.53	0.59	0.69	0.85

PRODUCTION PERFORMANCE

In Million Tonne

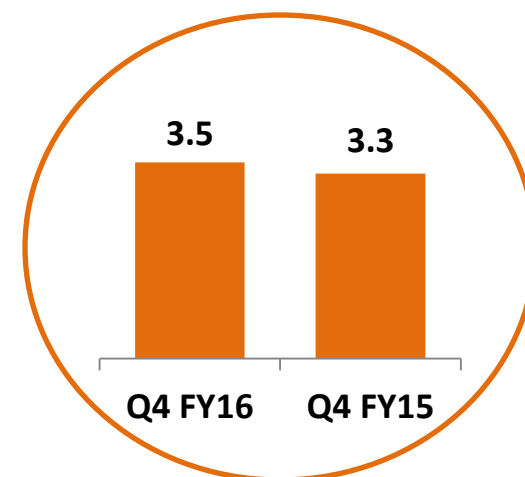
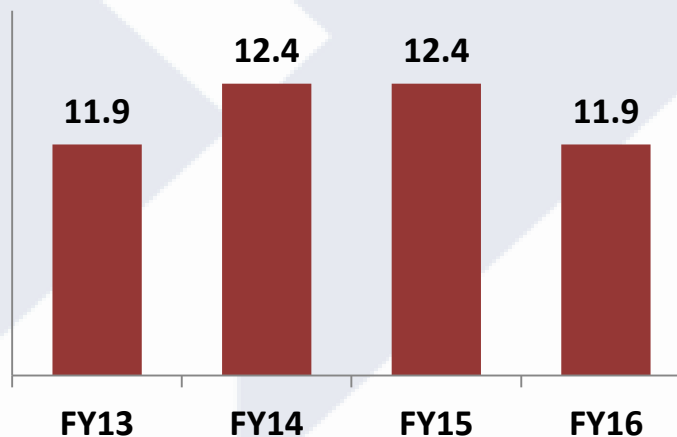
**SALEABLE
STEEL
PRODUCTION**
(incl. SSPs)



Annual

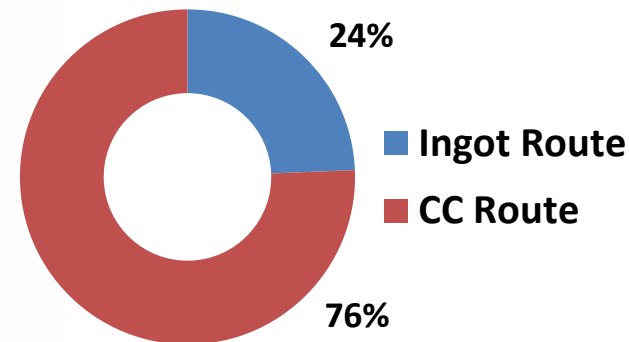
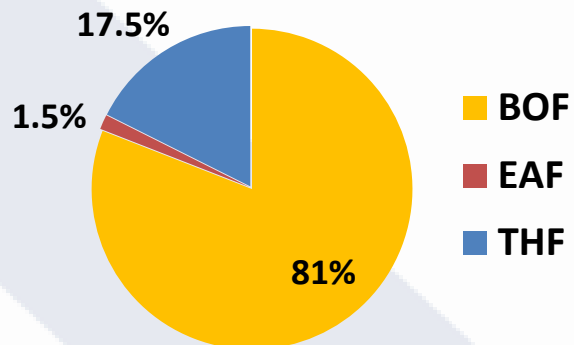
Quarterly

**SALEABLE
STEEL
PRODUCTION**
(5 ISPs)

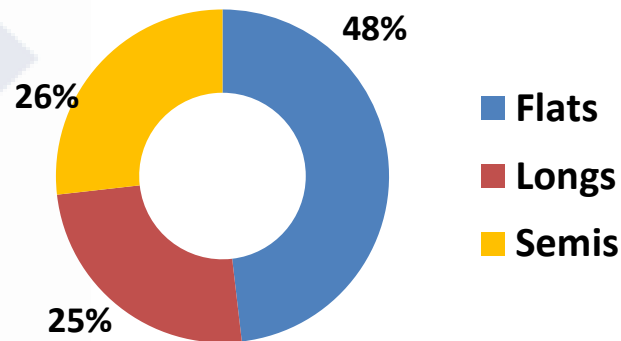
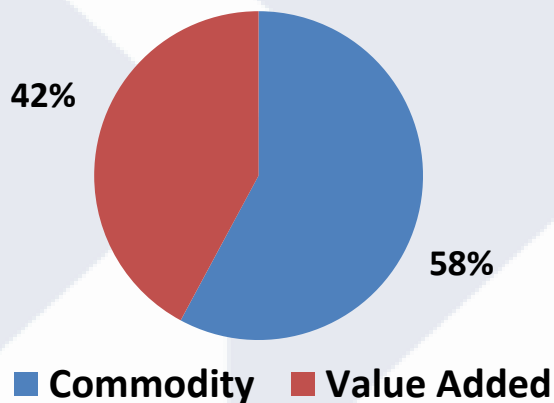


PRODUCTION PERFORMANCE

CRUDE STEEL PRODUCTION BY PROCESS

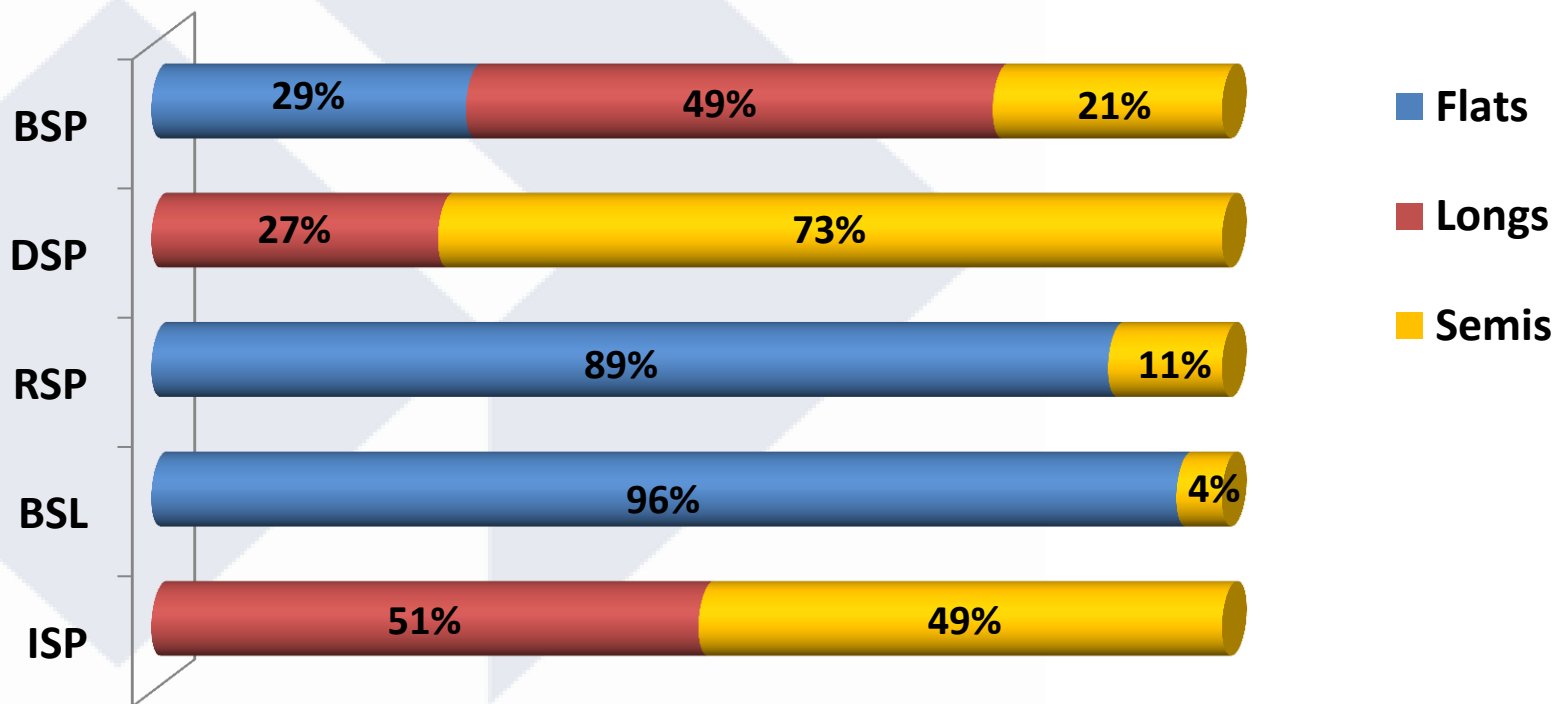
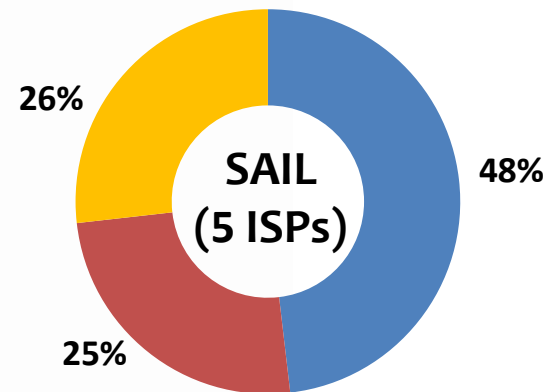


SALEABLE STEEL PRODUCTION BY PROCESS (5 ISPs)



PRODUCTION PERFORMANCE

PRODUCT MIX : 5 ISPs

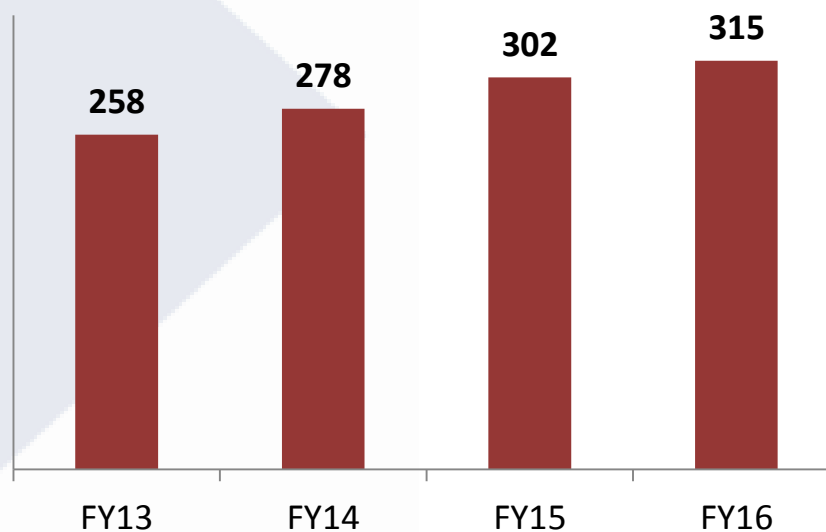


PRODUCTION PERFORMANCE

MAJOR TECHNO-ECONOMIC PARAMETERS FY16

Coke Rate	489	kg/THM
Fuel Rate	564	kg/TCS
Sp. Energy Consumption	6.51	GCal/TCS
BF Productivity	1.58	T/m3/day

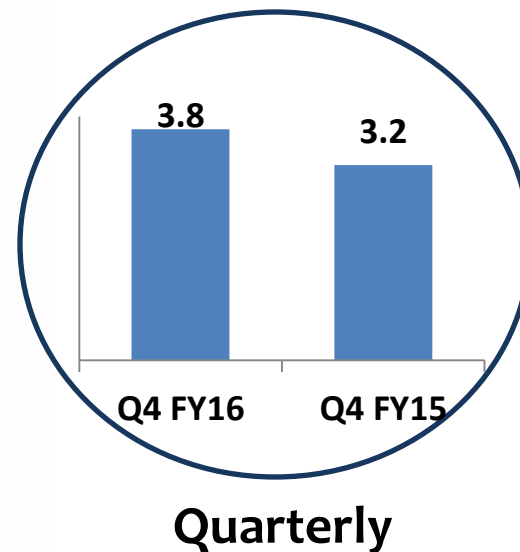
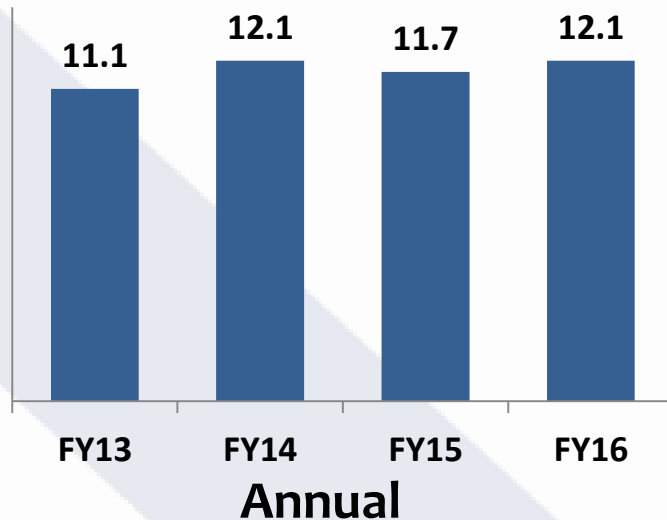
LABOUR PRODUCTIVITY



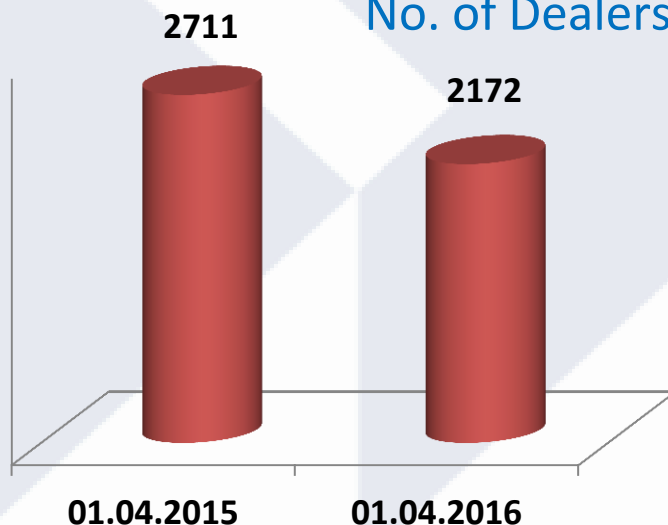
SALES PERFORMANCE

SALEABLE STEEL SALES

(Million Tonne)



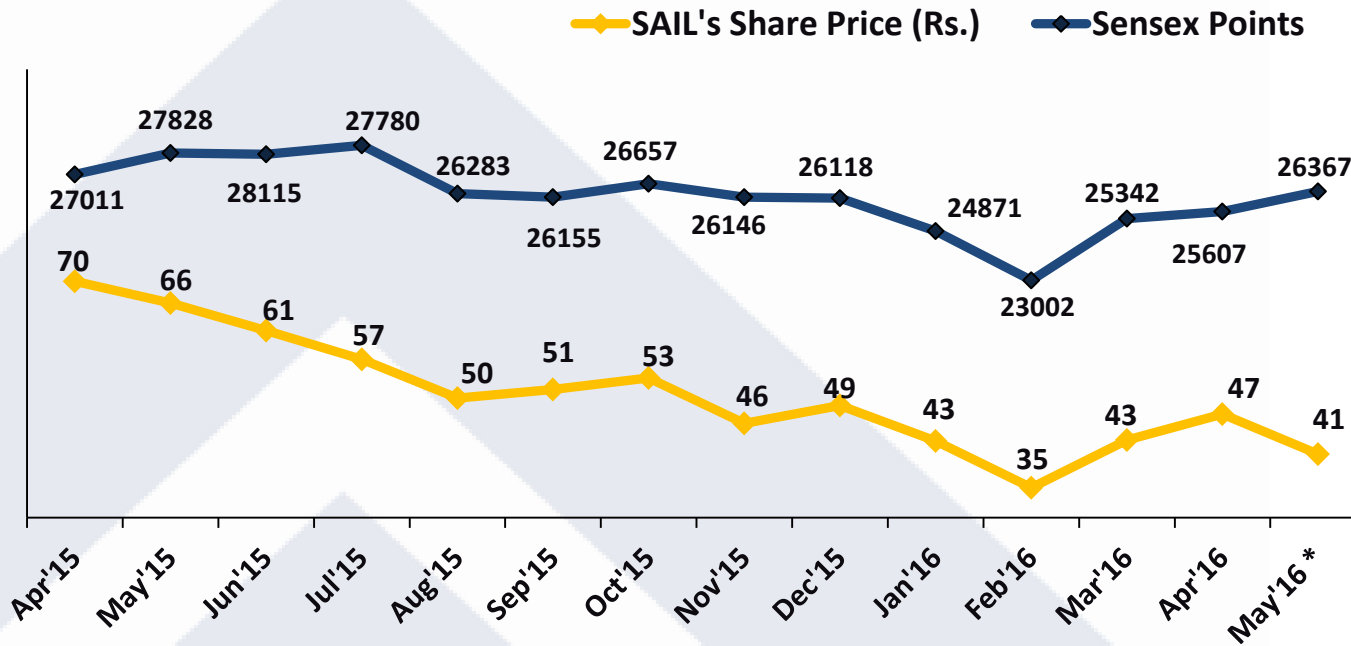
No. of Dealers



SALES THROUGH DEALER'S NETWORK

Sales through
dealers during FY16:
0.795 MT

SAIL STOCK PRICE MOVEMENT



SAIL STOCK PRICE MOVEMENT

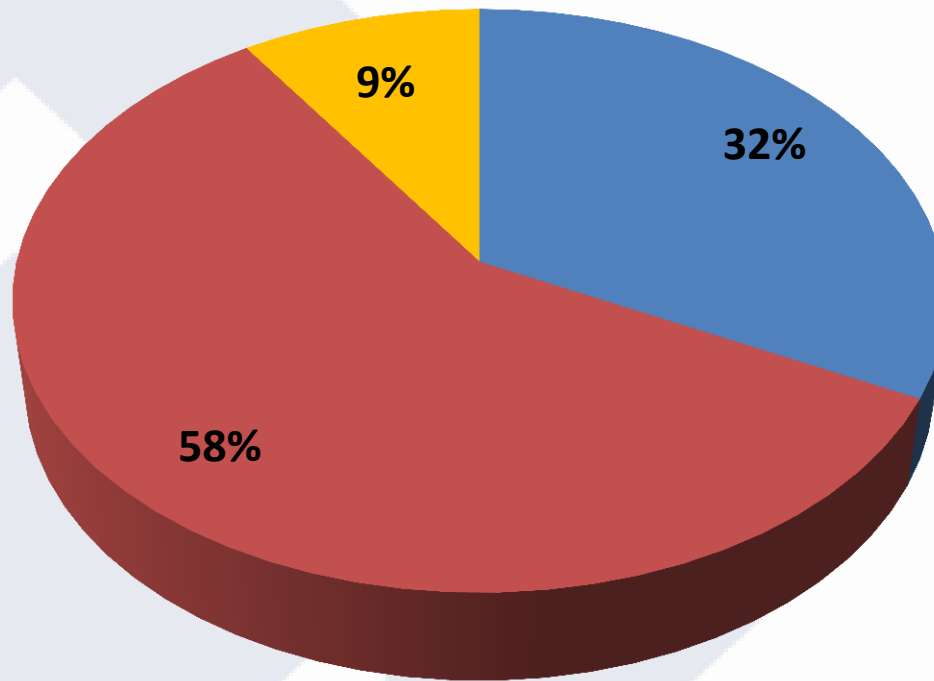
Closing Share Price and Sensex as on the last day of the month

* As on May 26

DIVIDEND PAYOUT

	Interim (%)	Final (%)	Total (%)	Dividend (Rs. crore)	Dividend Tax (Rs. crore)
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 - FY16



■ Drawal from Grid

■ JV CPP

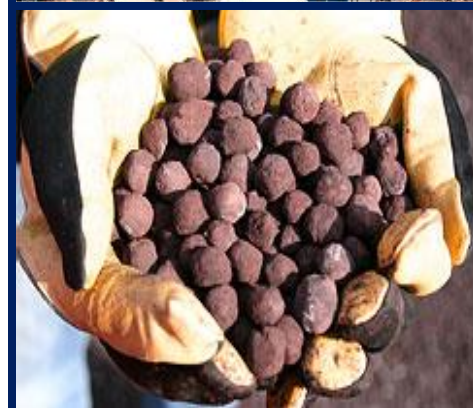
■ Own CPP

SAIL's MODERNISATION & EXPANSION PLAN

Million Tonne	Actual Production 2015-16	Capacity After On-going Expansion
Crude Steel	14.28	21.4
Saleable Steel	12.38	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



ONGOING PROJECTS

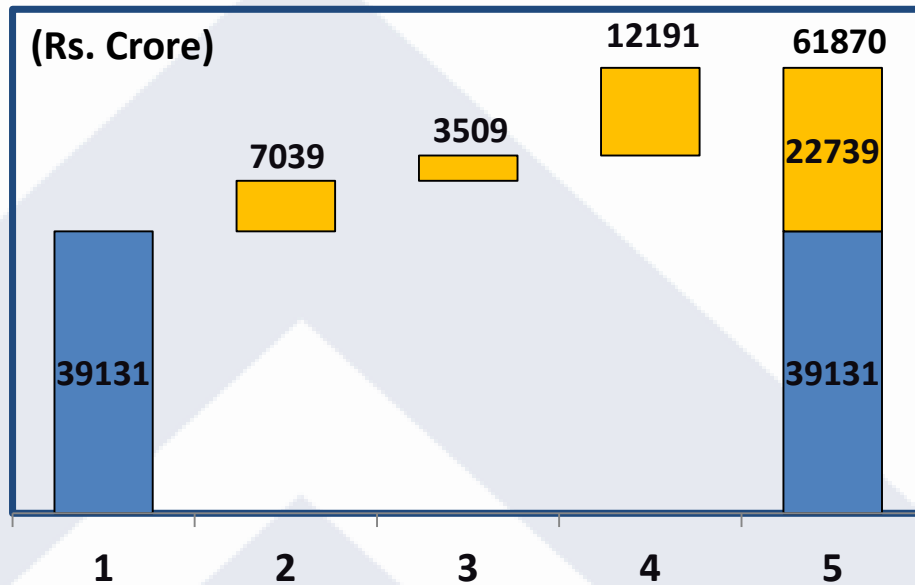
EXPECTED OUTCOME

- 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)

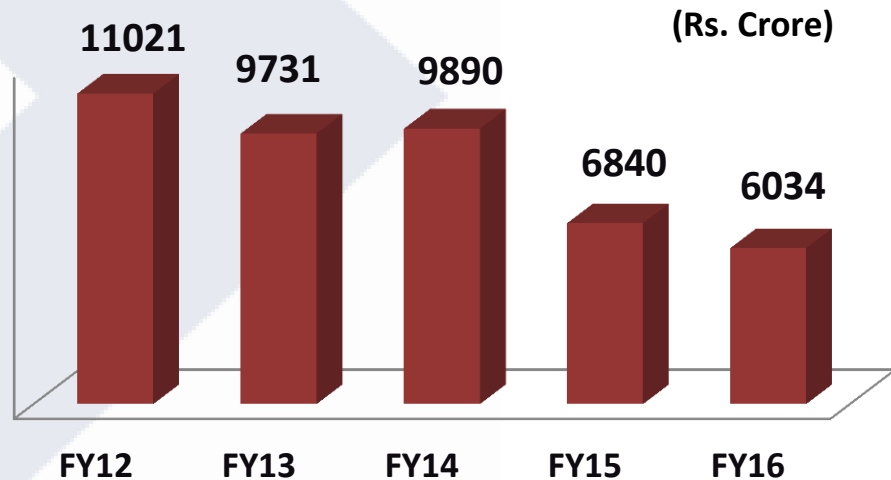


- 1 Expansion of existing capacity
- 2 Value-addition / Product-mix improvement
- 3 Technological up gradation / Modernization
- 4 Sustenance including de-bottlenecking, AMR & Environment
- 5 Total Estimated Cost

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 is
Rs.4000 Crore

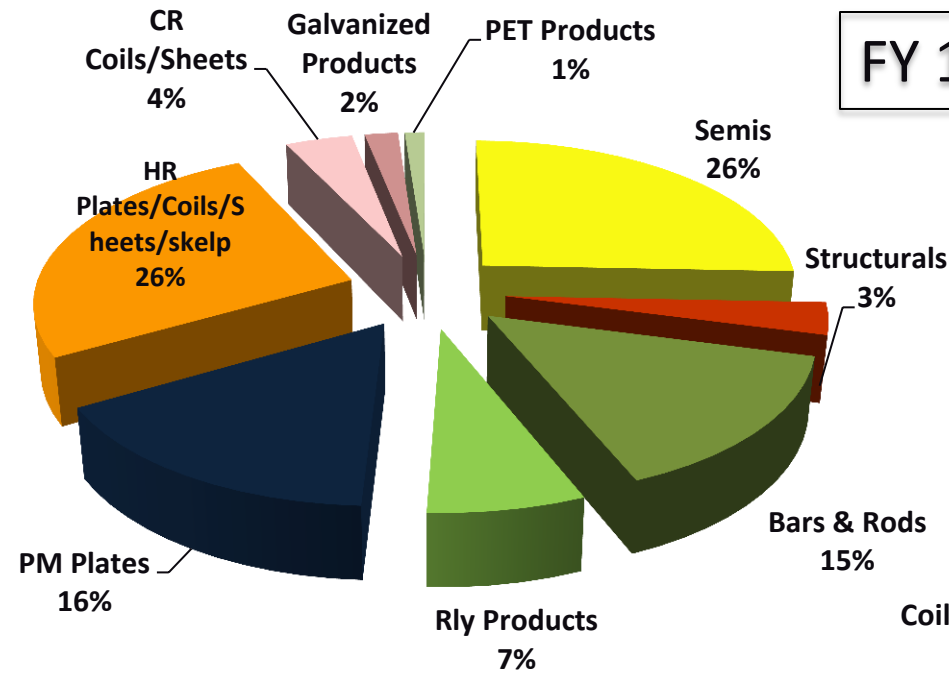


CAPACITY AFTER EXPANSION

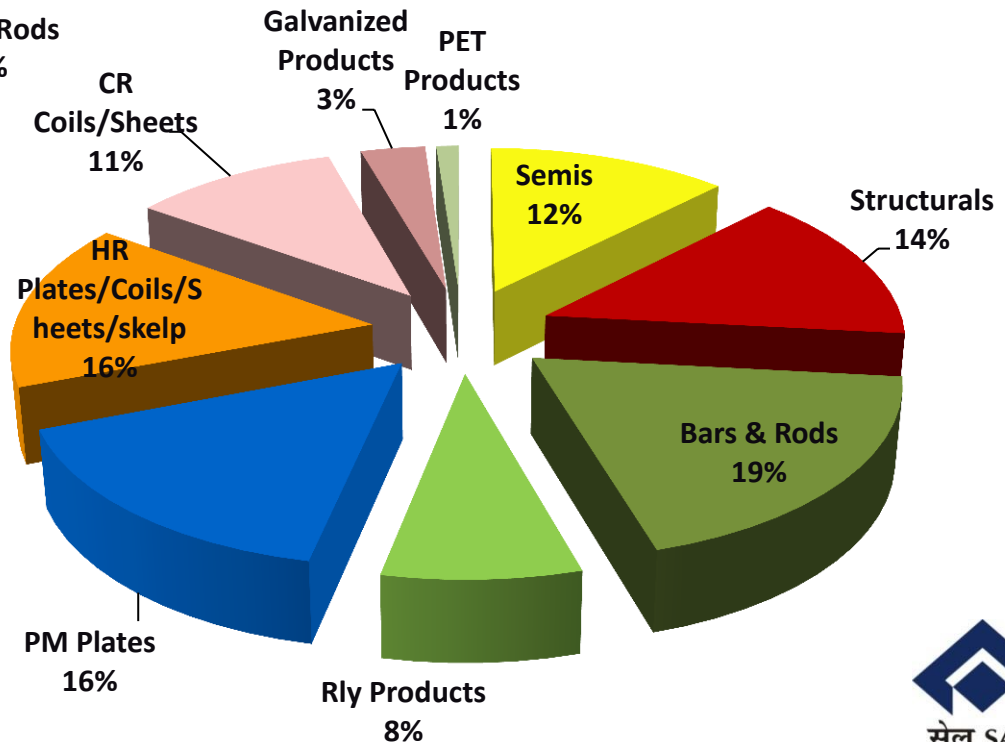
Plant	Hot Metal (MTPA)		Crude Steel (MTPA)		Saleable Steel (MTPA)	
	2015-16	After Expansion	2015-16	After Expansion	2015-16	After Expansion
BSP	5.3	7.5	5.1	7.0	4.2	6.6
DSP	2.2	2.5	2.0	2.2	1.9	2.1
RSP	3.0	4.5	2.7	4.2	2.4	4.0
BSL	3.7	5.8	3.4	4.6	2.6	4.2
ISP	1.4	2.9	0.9	2.5	0.9	2.4
VISL	0.1	0.3	0.0	0.2	0.0	0.2
ASP	-	-	0.1	0.5	0.1	0.4
SSP	-	-	0.1	0.2	0.3	0.3
TOTAL	15.7	23.5	14.3	21.4	12.4	20.2

PRODUCT MIX POST EXPANSION – SALEABLE STEEL

FY 16



Post
Ongoing Expansion



ONGOING PROJECTS - 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 under stabilisation

Production (MTPA) :

Item	2015-16 (Actual)	After Expansion
Crude Steel	0.12	0.18
Saleable Steel	0.34	0.34

ONGOING PROJECTS - IISCO STEEL PLANT

Facilities Already 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)
- 2 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)

ONGOING PROJECTS - IISCO STEEL PLANT

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

Production (MTPA) :

Item	2015 -16 (Actual)	After Expansion
Crude Steel	0.871	2.50
Saleable Steel	0.855	2.40

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 Converter
- 3 & 2**



Caster-1 & 2



Wire Rod Mill

ONGOING PROJECTS – BOKARO STEEL PLANT

Facilities Already 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 and Skin Pass Mill
- Up-gradation of HSM with augmentation of Roughing facility.

Production (MTPA) :

Item	2015 -16 (Actual)	After Expansion
Crude Steel	3.39	4.61
Saleable Steel	2.60	4.18

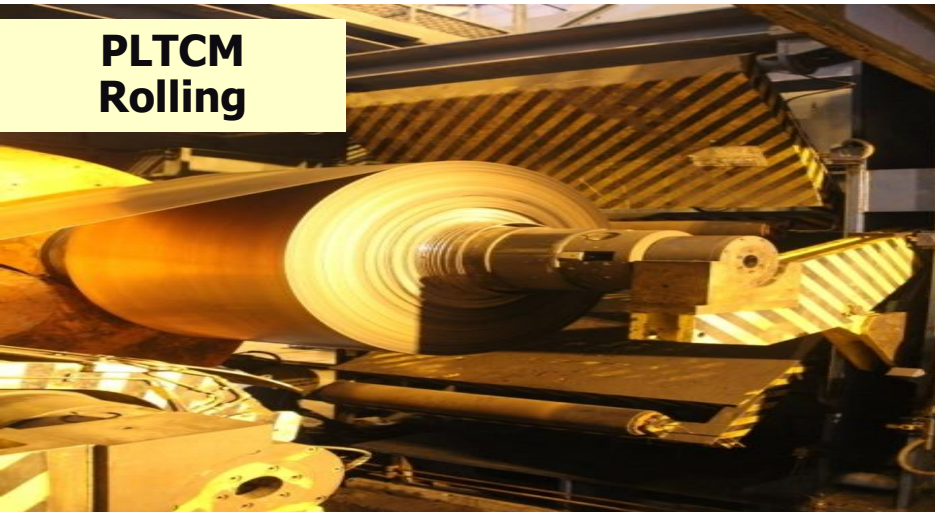
Current Progress of Expansion at Bokaro Steel Plant



**Coke Oven
battery-2**



**Blast
Furnace-2**



**PLTCM
Rolling**



Coil Packaging Line



**Skin Pass
Mill**



Bell Annealing Furnace

ONGOING PROJECTS – BHILAI STEEL PLANT

Facilities Already Completed:

- Ore Handling Plant part-A
- Second Sinter Machine in Sinter Plant-3
- New Coke Oven Battery No. 11 (7 m tall, Capacity 0.881 mtpa)
- Oxygen Plant (BOO basis)

Facilities Likely to be Completed During FY 16-17:

- Blast Furnace 4060 m3.
- New Steel Melting Shop (SMS-3) with New Billet Casters/Billet-cum-Bloom Caster, Beam Blank Caster
- Universal Rail Mill
- Bar and Rod Mill

Production (MTPA) :

Item	2015 -16 (Actual)	After Expansion
Crude Steel	5.06	7.0
Saleable Steel	4.16	6.56

Current Progress of Expansion at Bhilai Steel Plant



ONGOING PROJECTS – ROURKELA STEEL PLANT

Facilities Already 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, (PCI started in July 2014).
- New 3rd Single Strand Slab Caster
- New Oxygen Plant 2x700 tpd on BOO basis
- New 3rd BOF (150 T) Convertor
- New 4.3 meter Wide Plate Mill

Production (MTPA) :

Item	2015 -16 (Actual)	After Expansion
Crude Steel	2.73	4.20
Saleable Steel	2.42	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
Tapping**



BOF Converter



Slab Caster

ONGOING PROJECTS – DURGAPUR STEEL PLANT

Facilities Already 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	2015 -16 (Actual)	After Expansion
Crude Steel	1.98	2.20
Saleable Steel	1.88	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
2015-16	15.72	24.97	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>Three new Pellet Plants - 4 mtpa capacity at Gua, 2 mtpa capacity at RSP & 1 mtpa capacity at Dalli) have been planned for better utilisation of Iron Ore Fines</p> <p>In addition to the above, iron ore shall be mined from new mines at Rowghat, Chiria and Taldih</p>








RAW MATERIALS

Mine	Existing Capacity (mtpa)	Capacity after ongoing expansion (mtpa)	Remarks
Kiriburu	5.50	5.50	Expansion at Kiriburu has already been completed whereas at Meghahatuburu is being ramped up to meet the requirement of the ongoing expansion plan. At Bolani, processing plant has upgraded to 7.5 mtpa and is under stabilization.
Meghahatuburu	5.00	6.50	
Bolani	5.50	10.00	
Gua	4.00	10.00	
Rajhara, Dalli	8.70	7.00*	*Depleted resources and quality constraints The entire requirement of the increased capacity shall be met through captive mines The timeline for mines expansion is expected to be in line with Steel Plants expansion New Pellet Plant shall use the existing reserve of fines incl. dumps & slimes at captive mines
New Pellet Plants	New	7.0	
Barsua, Kalta, Taldih	3.31	6.5	Environment clearance & FC received from MOEF
Rowghat	New	12.0	All statutory clearances have been received. MDO is being engaged.
Chiria	0.75	5.8	Stage-I Forest Clearance& EC has been obtained. Stage-II FC awaited from MoEF.

RAW MATERIALS

Year	Hot Metal (mtpa)	Coking Coal Requirement (mtpa)	Linkages of Coking Coal
2015-16	15.72	15.6	<ul style="list-style-type: none"> • Import Component – 87% • Over 90% of imported coal is sourced from Australia. • Indigenous: 13% • Domestic coal is largely sourced from Coal India Ltd. • SAIL has existing captive coking coal production of nearly 0.5 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 to produce 4 mtpa of ROM (2 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 allocated to SAIL in Oct '15 • 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 Kerla 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 CPPs 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
SHIPPING		<ul style="list-style-type: none">Joint Venture Company 'SAIL SCI Shipping Pvt. Ltd.' to cater to SAIL requirements of shipping imports of coal.
WAGON MANUFACTURE		<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		<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 & Ammortization.
• 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
• CPL	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	• GoI	Government of India
• HDGL	Hot Dip Galvanizing Line	• MOEF	Ministry of Environment & Forests
• CR	Cold Rolled		
• HR	Hot Rolled		

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