

STEEL AUTHORITY OF INDIA LIMITED



Performance Highlights H-1 FY17



PERFORMANCE HIGHLIGHTS : H1 FY17



FINANCIAL PERFORMANCE

- ❖ Net Sales : Rs 22611 Crore
- ❖ EBITDA : Rs 503 Crore
- ❖ PBT : Rs (-) 2179 Crore
- ❖ PAT : Rs (-) 1267 Crore

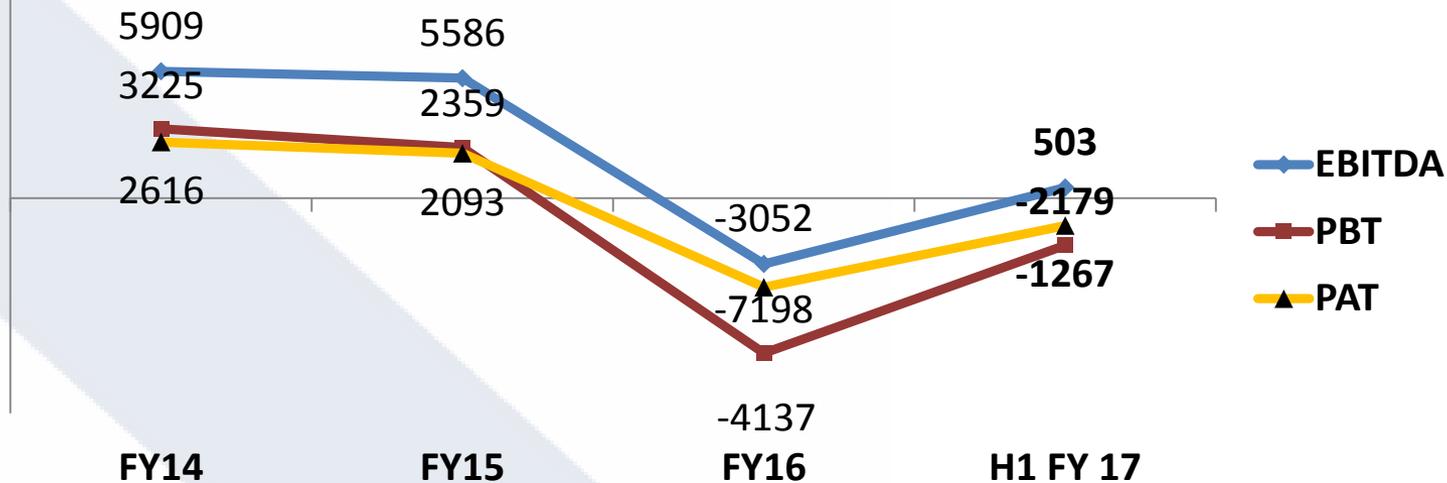
PRODUCTION & SALES PERFORMANCE

- ❖ Hot Metal Production : 7.74 MT
- ❖ Crude Steel Production : 7.1 MT
- ❖ Saleable Steel Production : 6.93 MT
- ❖ Semis component in production : 25.6% of saleable steel
- ❖ Value Added Production : 2.9 MT
- ❖ Production through concast route : 5.65 MT
- ❖ Saleable Steel Sales : 6.4 MT

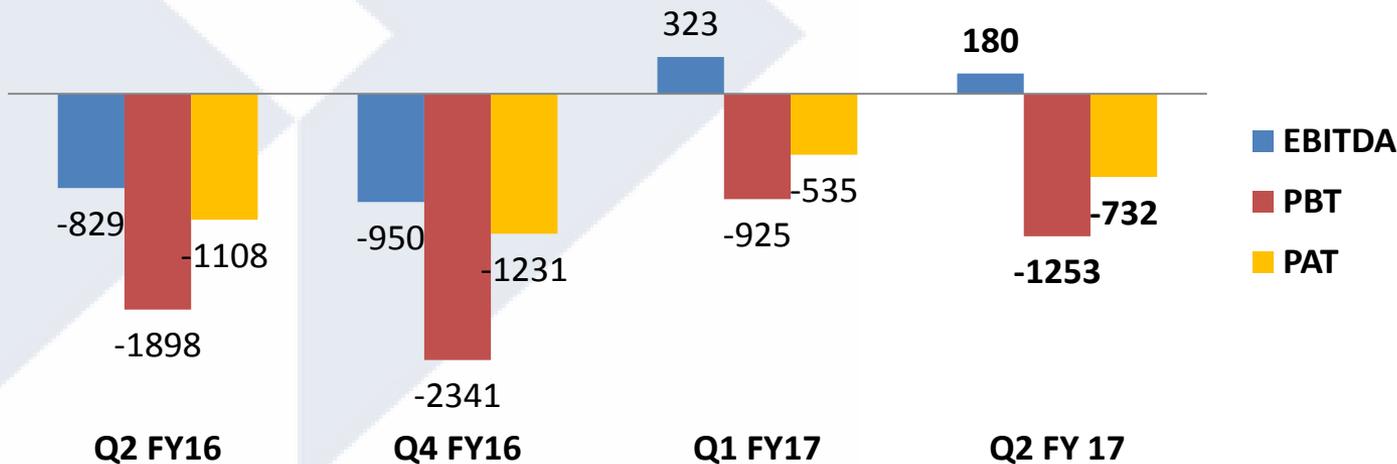
FINANCIAL PERFORMANCE



Profit Trend



Quarterly Profits

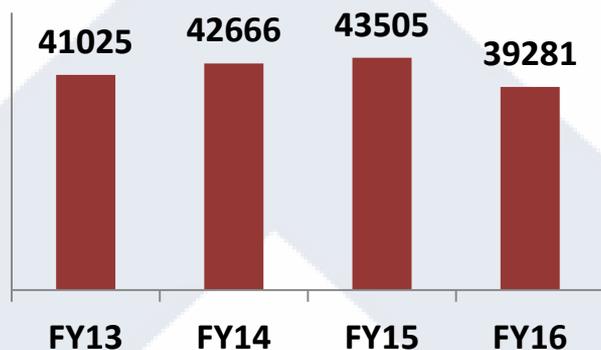


All figures in Rs Crores

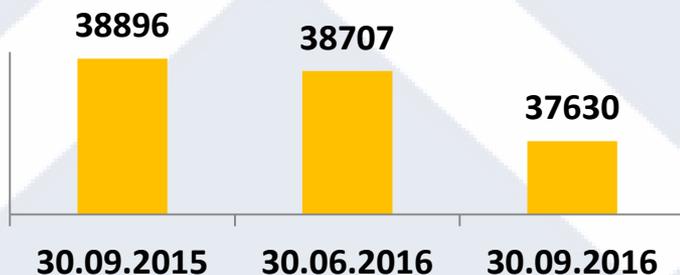
FINANCIAL PERFORMANCE



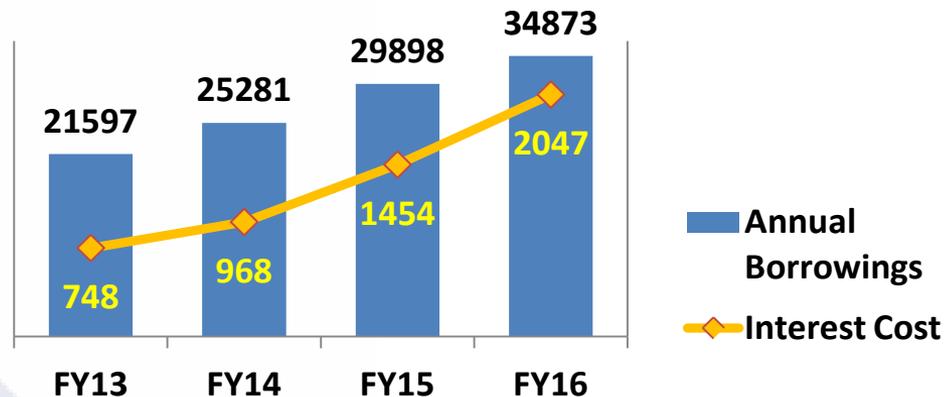
Net Worth (Rs. Crore)



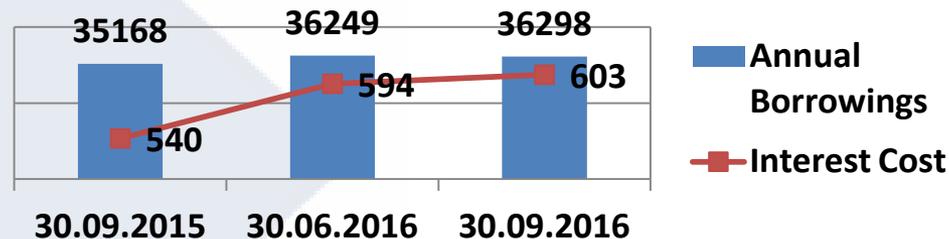
Qtly Net Worth



Borrowings and Interest Cost (Rs. Crore)



Quarterly Borrowing & Interest



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

Debt Equity Ratio

31/03/2014	31/03/2015	31/03/2016	30/06/2016	30/09/2016
0.59	0.69	0.89	0.94	0.96

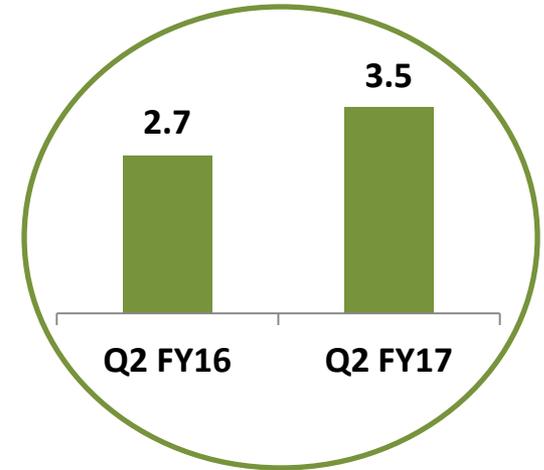
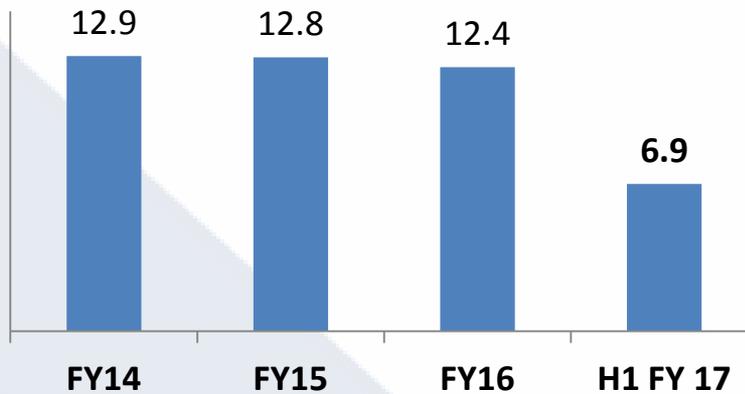
FINANCIAL PERFORMANCE

Rs. Crore (INDAS Compliant figures)	H1 FY 17	H1 FY 16
Gross Sales	22611	20773
Net Sales	20162	18472
EBIDTA	503	-534
Depreciation	1266	980
Finance Cost	1197	1048
PBT Before Exceptional Items	-1960	-2562
Exceptional Items (VRS)	-218	0
PBT After Exceptional Items	-2178	-2562
Tax	-911	-1206
Profit After Tax	-1267	-1356

PRODUCTION PERFORMANCE

In Million Tonne

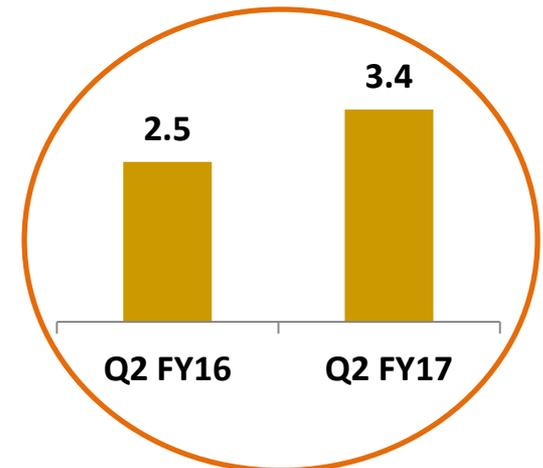
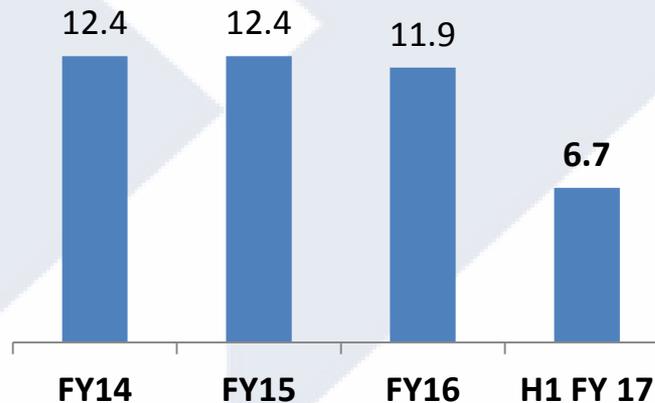
**SALEABLE
STEEL
PRODUCTION
(incl. SSPs)**



Annual

Quarterly

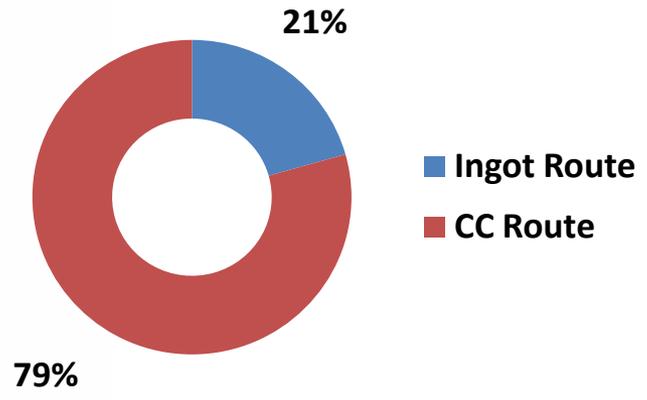
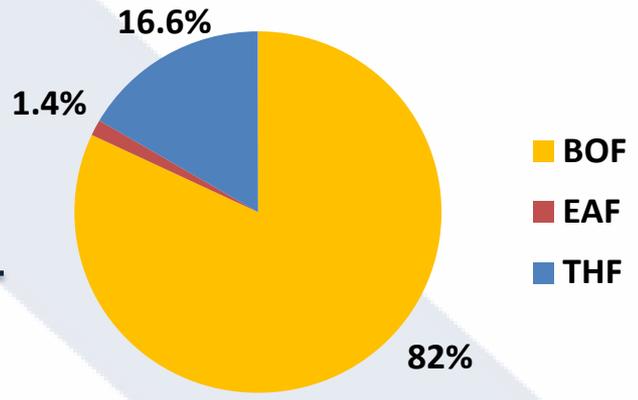
**SALEABLE
STEEL
PRODUCTION
(5 ISPs)**



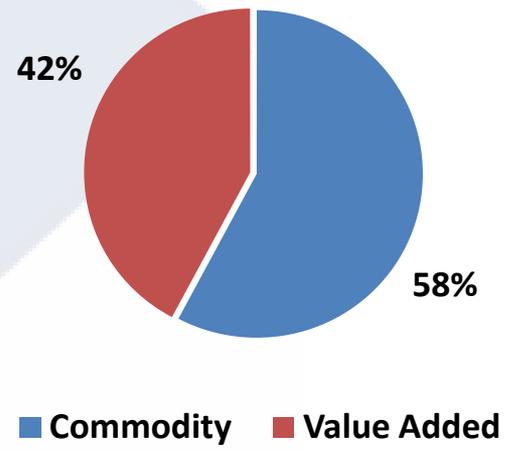
PRODUCTION PERFORMANCE : H1 FY17



CRUDE STEEL PRODUCTION BY PROCESS



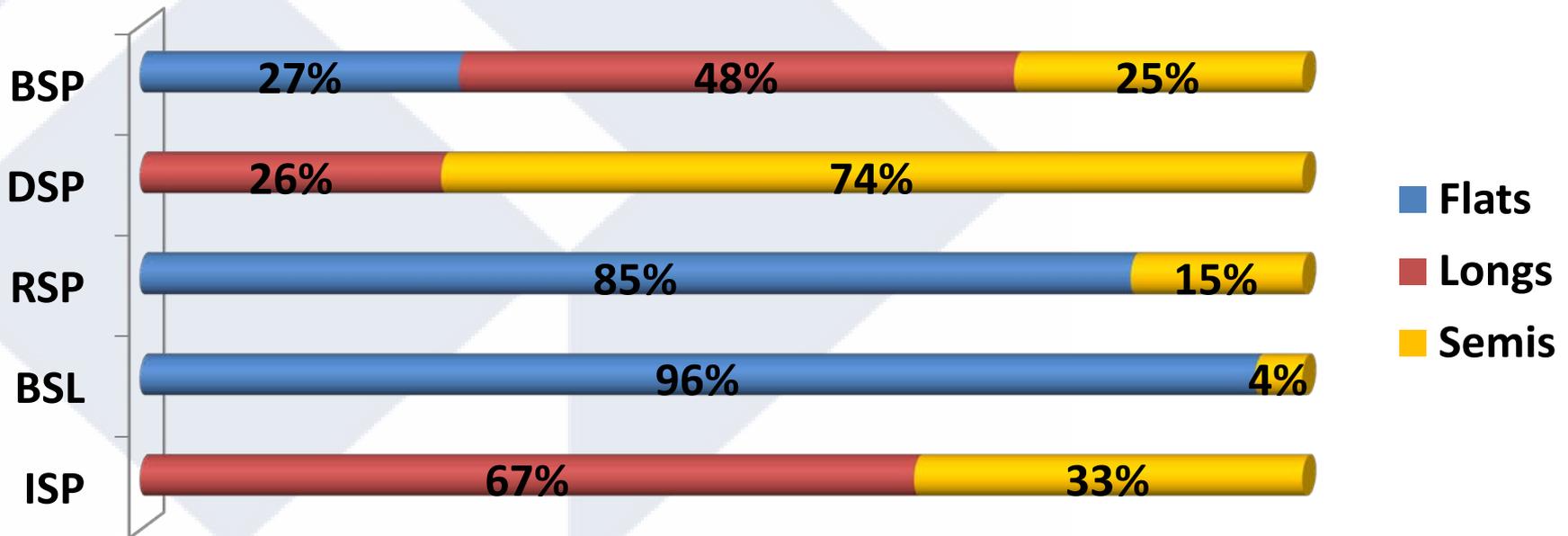
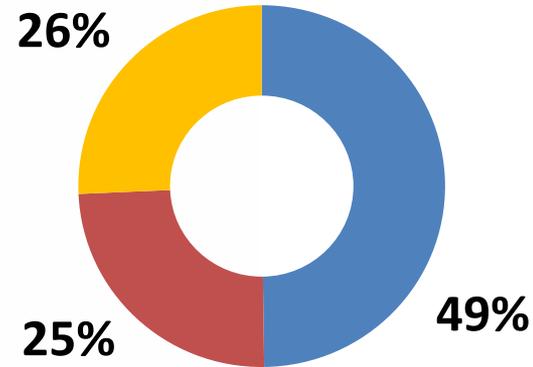
SALEABLE STEEL PRODUCTION BY PROCESS (5 ISPs)



PRODUCTION PERFORMANCE : H1 FY17



PRODUCT MIX : 5 ISPs

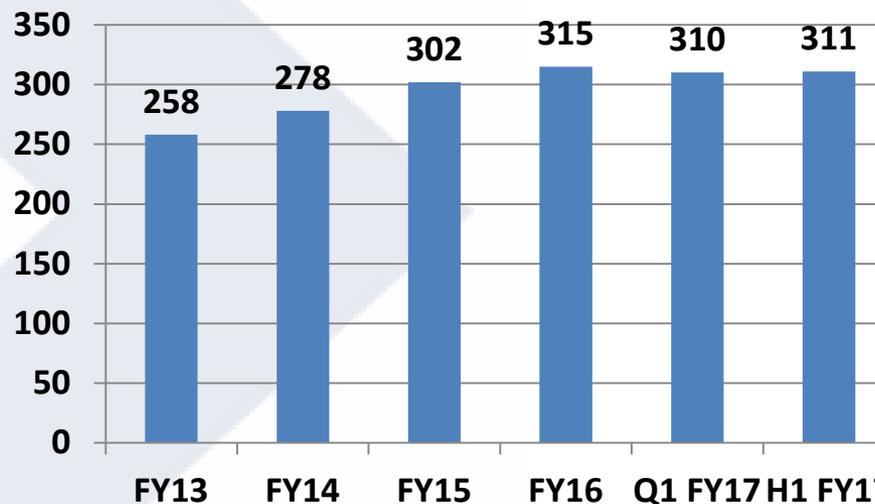


PRODUCTION PERFORMANCE

MAJOR TECHNO-ECONOMIC PARAMETERS H1 FY17

Coke Rate	479 kg/THM
Fuel Rate	558 kg/TCS
Sp. Energy Consumption	6.62 GCal/TCS
BF Productivity	1.65 T/m ³ /day

LABOUR PRODUCTIVITY



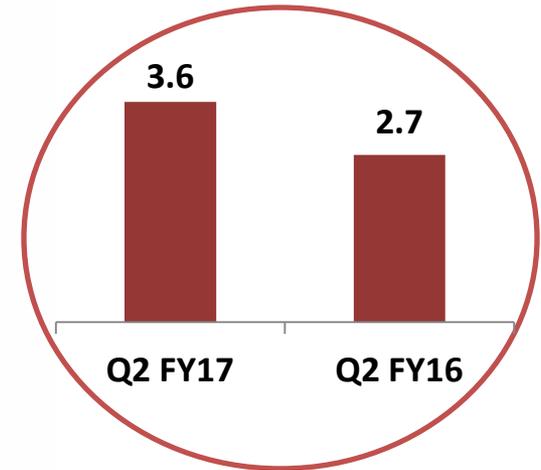
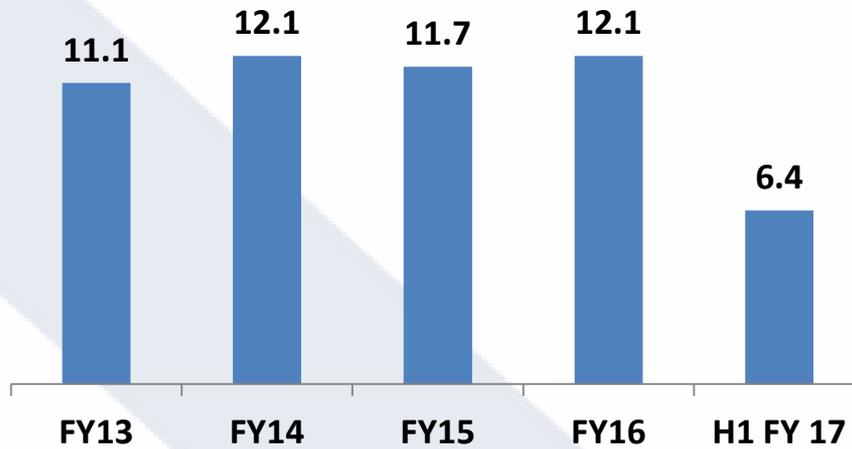
Total manpower as on 01.10.2016: **85,145**

SALES PERFORMANCE



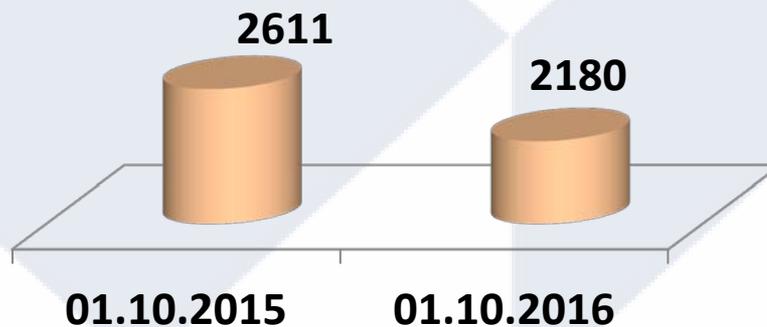
SALEABLE STEEL SALES

(Million Tonne)



Quarterly

No. of Dealers



SALES THROUGH DEALER'S NETWORK

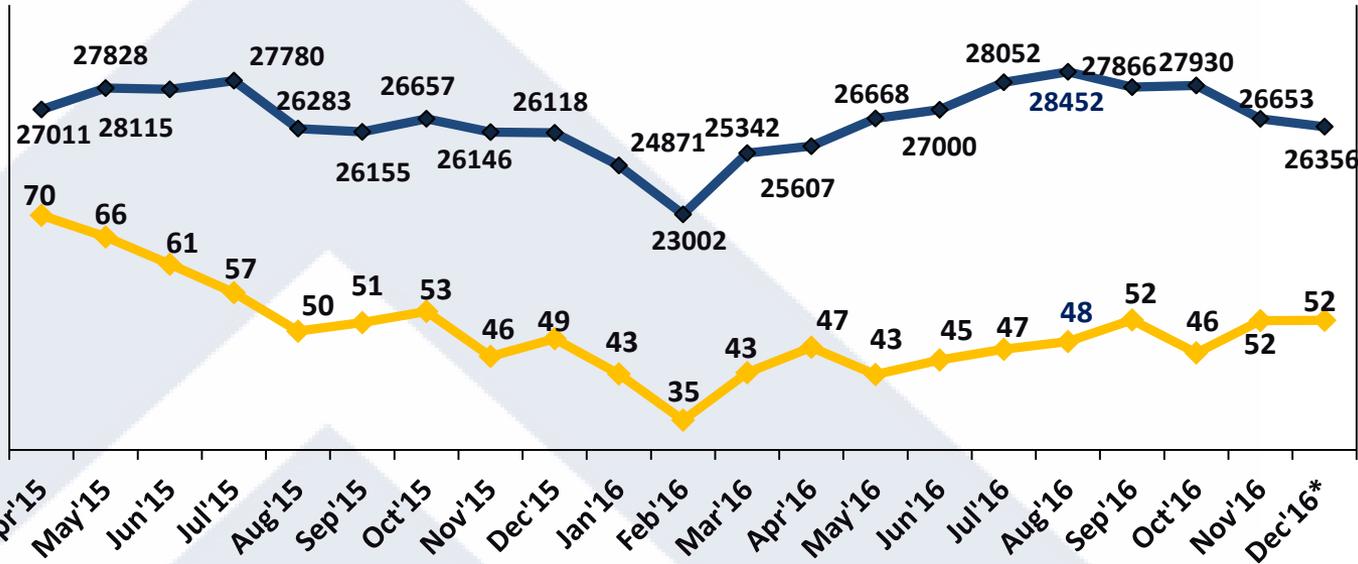
Sales through dealers during H1 FY17
0.324 MT

SAIL STOCK PRICE MOVEMENT



सेल SAIL

◆ SAIL's Share Price (Rs.) ◆ Sensex Points



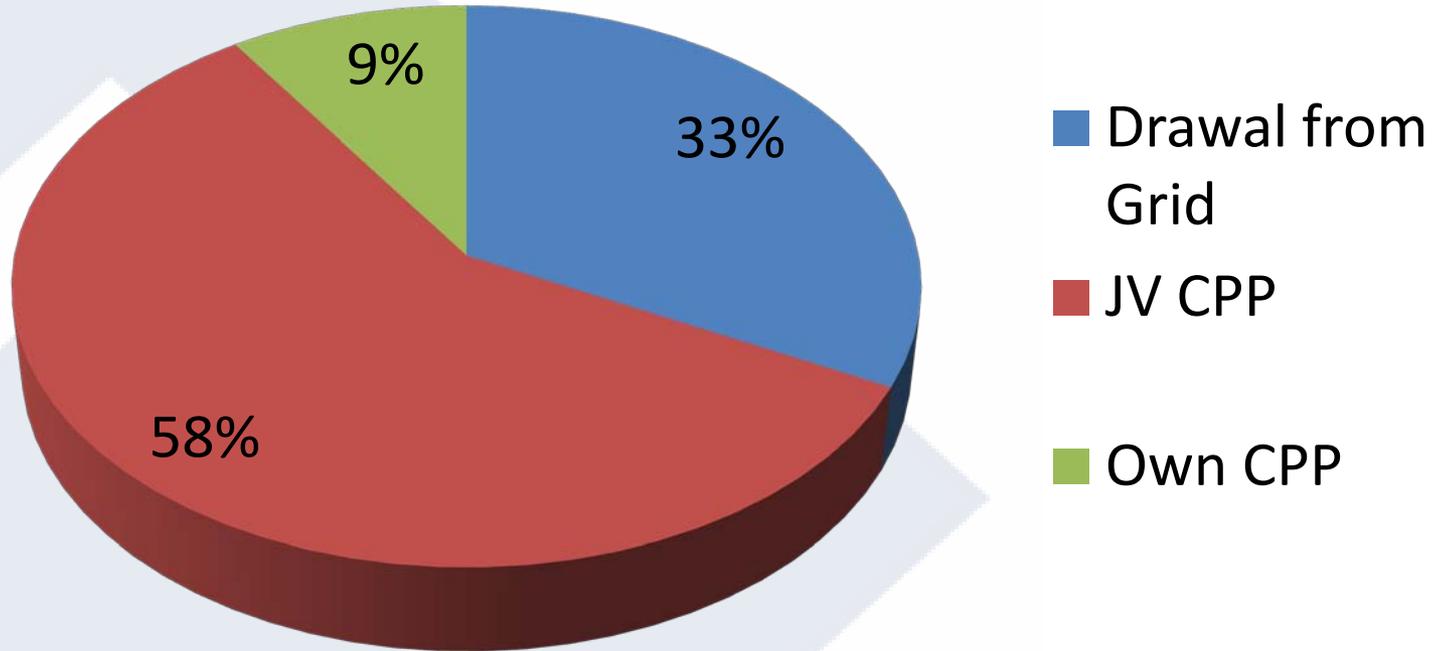
Closing Share Price and Sensex as on the last day of the month

* As on December 7

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 – H1 FY 17



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



MODERNISATION & EXPANSION PLAN

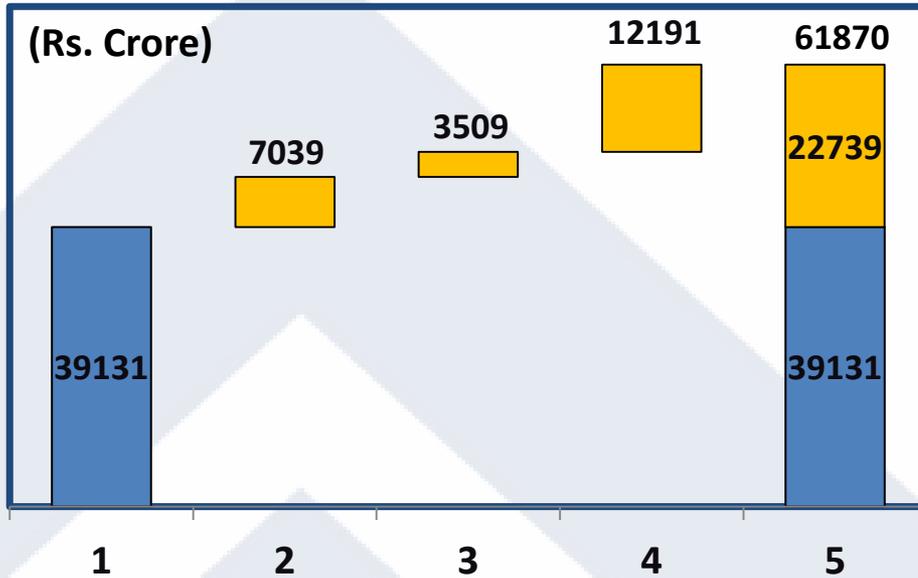
EXPECTED OUTCOME

- 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)

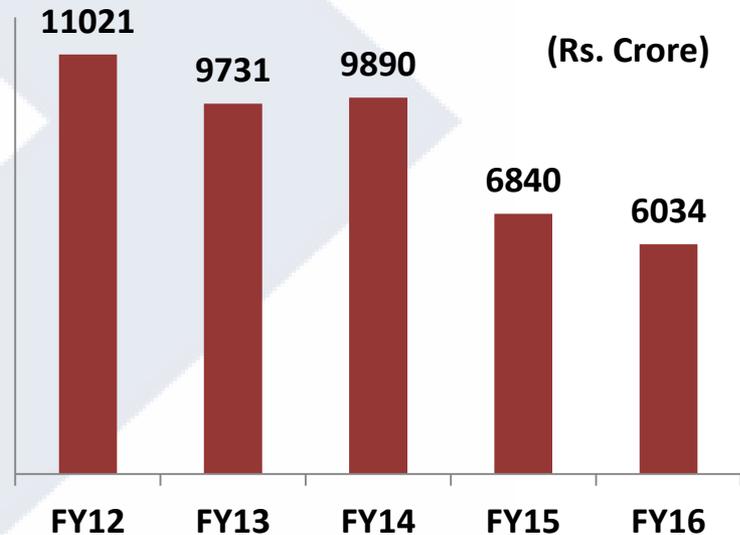


- 1 Expansion of existing capacity
- 2 Value-addition / Product-mix improvement
- 3 Technological up gradation / Modernization
- 4 Sustenance including de-bottlenecking, AMR & Environment
- 5 Total Estimated Cost

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 is
Rs.4000 Crore



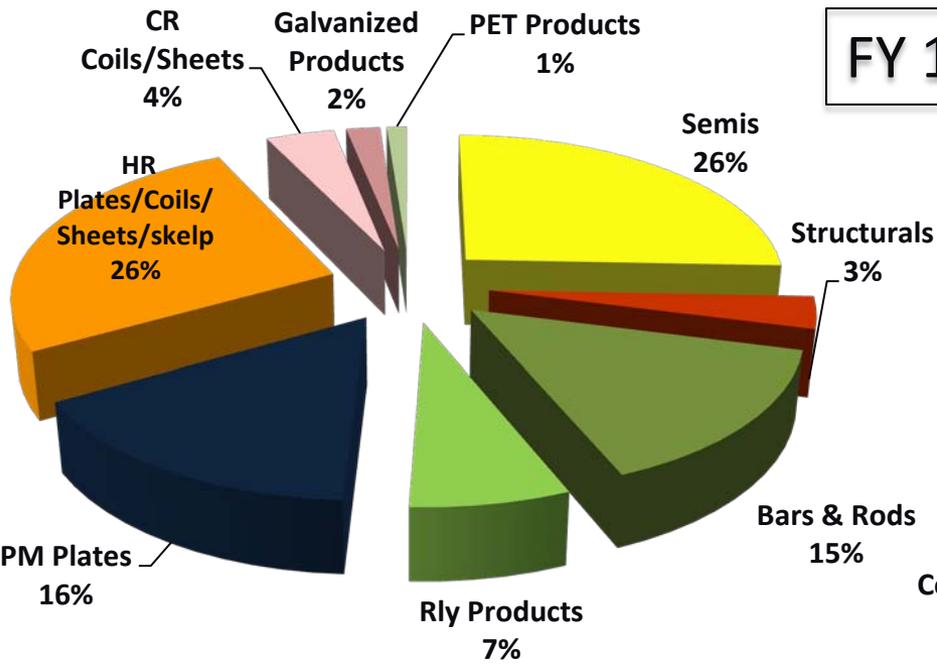
Capex during Q2 FY17 was Rs.1,232 crore, H1 was Rs 2374 crore.

CAPACITY AFTER EXPANSION

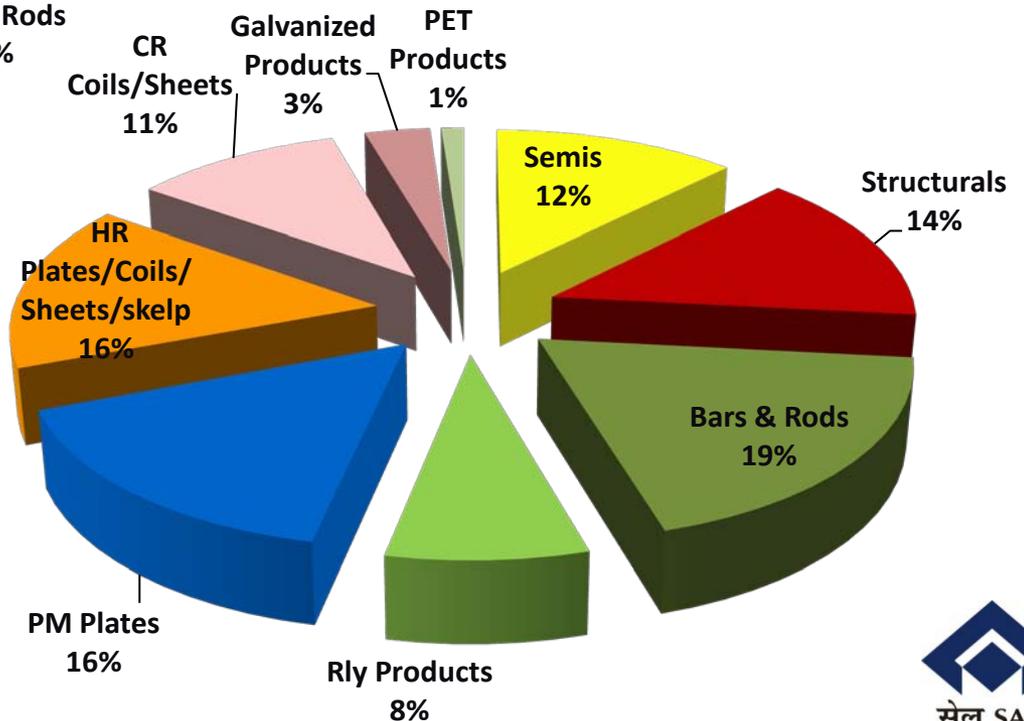
Plant	Hot Metal (MTPA)		Crude Steel (MTPA)		Saleable Steel (MTPA)	
	2015-16	After Expansion	2015-16	After Expansion	2015-16	After Expansion
BSP	5.3	7.5	5.1	7.0	4.2	6.6
DSP	2.2	2.5	2.0	2.2	1.9	2.1
RSP	3.0	4.5	2.7	4.2	2.4	4.0
BSL	3.7	5.8	3.4	4.6	2.6	4.2
ISP	1.4	2.9	0.9	2.5	0.9	2.4
VISL	0.1	0.3	0.0	0.2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



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 under stabilisation

Production (MTPA) :

Item	2015-16 (Actual)	After Expansion
Crude Steel	0.12	0.18
Saleable Steel	0.34	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	2015 -16 (Actual)	After Expansion
Crude Steel	0.871	2.50
Saleable Steel	0.855	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	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



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

Facilities Likely to be Completed During FY 16-17:

- 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)
- Bar and Rod Mill (0.9 MTPA)

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



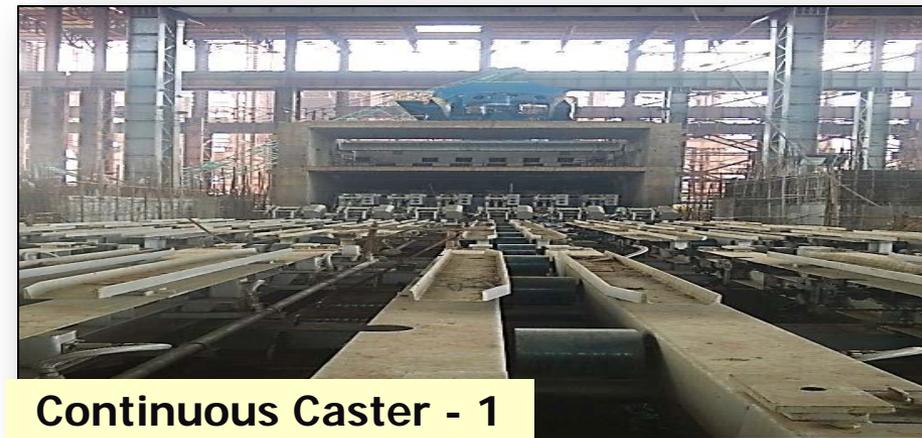
Sinter Machine



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	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



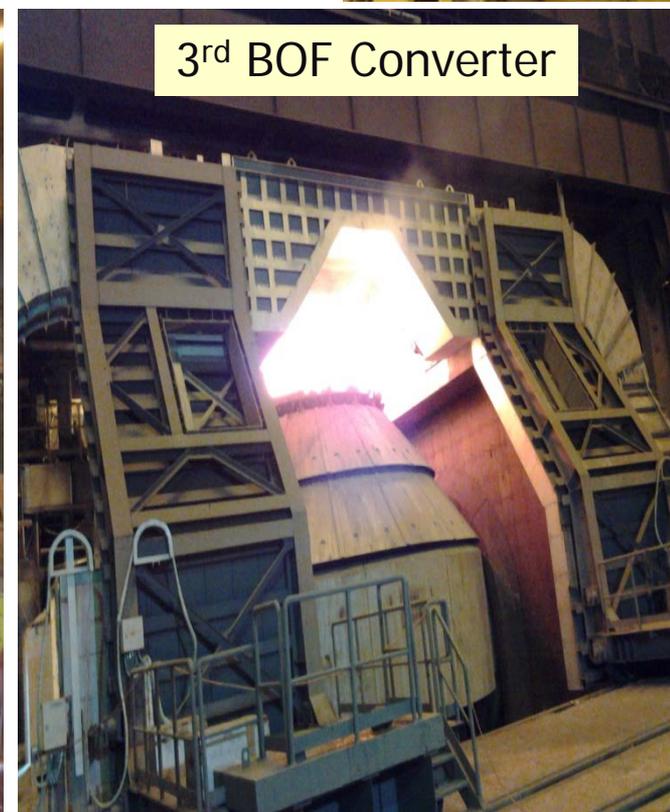
Coke Oven
Battery - 6



Sinter Plant - 3



Blast Furnace -
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	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 – 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 at Meghahatuburu is being ramped up to meet the requirement of the ongoing expansion plan.
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 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. Iron ore production to the tune of 1mtpa started at Taldih in Nov,2016.
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.

- 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

RAW MATERIALS – Coal

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 – 86% • Over 90% of imported coal is sourced from Australia. • Indigenous: 14% • 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 allocation letter issued in March 2016 • New linkages / acquisitions are being explored

MAJOR JOINT VENTURES

FOCUS AREA	ALLIANCE PARTNER	REMARKS
<p>STEEL</p>	  <p>एन एम डी सी N M D C</p>	<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
<p>DOWNSTREAM STEEL PROCESSING UNITS</p>	  <p>BMWIL BMW Industries Ltd</p> <p>PRIME GOLD PURE STEEL (TMT)</p>	<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
<p>ENERGY</p>	  <p>एन टी पी सी NTPC</p>	<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
<p>TECHNOLOGY</p>		<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.
<p>RAW MATERIALS</p>	  	<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.
<p>CEMENT</p>		<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>mjunction innovating for outcomes</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
• SMS	Steel Melting Shop
• BOF	Basic Oxygen Furnace
• THF	Twin Hearth Furnace
• EAF	Electric Arc Furnace
• BSP	Bhilai Steel Plant
• DSP	Durgapur Steel Plant
• RSP	Rourkela Steel Plant
• BSL	Bokaro Steel Limited
• SSP	Salem Steel Plant
• VISL	Visvesvaraya Iron & Steel Plant
• ASP	Alloy Steels Plant
• CPLY	Corresponding Period Last Year
• G.Cal/tcs	Giga Calories per tonne of Crude Steel
• ISP	Integrated Steel Plant
• HDGL	Hot Dip Galvanizing Line
• CR	Cold Rolled
• HR	Hot Rolled

• FOB	Freight On Board
• JPC	Joint Plant Committee
• Kg/thm	Kilo Gram Per Tonne of Hot Metal
• Tpd	Tonnes Per Day
• MT	Million Tonne
• Mtpa	Million Tonne Per Annum
• EBIDTA	Earnings Before Interest Depreciation ,Taxes & Ammortization.
• PAT	Profit After Tax
• PBT	Profit Before Tax
• RINL	Rashtriya Ispat Nigam Limited
• CS	Crude Steel
• CDI	Coal Dust Injection
• CC	Continuous Casting
• BOO	Build-Own-Operate
• GoI	Government of India
• MOEF	Ministry of Environment & Forests

Disclaimer



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Further, statement describing the Company's projections, estimates, expectations are "forward looking statements" within the meaning of applicable securities laws and regulations. Actual results may differ materially from those expressed depending on the circumstances / situations.

Major factors that could affect the Company's operations include, among others, economic conditions affecting demand / supply and prices in the domestic and global markets in which the Company operates, changes in Government regulations, tax laws and other statutes etc.