

STEEL AUTHORITY OF INDIA LIMITED



Performance Highlights

H1 & Q2

FY 2018-19



PERFORMANCE HIGHLIGHTS : H1 FY2018-19



FINANCIAL PERFORMANCE

- ❖ Net Sales : Rs 32284 Crore
- ❖ EBITDA : Rs 5159 Crore
- ❖ PBT : Rs 1676 Crore
- ❖ PAT : Rs 1094 Crore

PRODUCTION & SALES PERFORMANCE

- ❖ Hot Metal Production : 8.241 MT
- ❖ Crude Steel Production : 7.647 MT
- ❖ Saleable Steel Production : 7.151 MT
- ❖ Semis component in production : 21 % of saleable steel
- ❖ Value Added Production : 3.070 MT
- ❖ Production through concast route : 6.515 MT
- ❖ Saleable Steel Sales : 6.746 MT

PERFORMANCE HIGHLIGHTS : Q2 FY2018-19



FINANCIAL PERFORMANCE

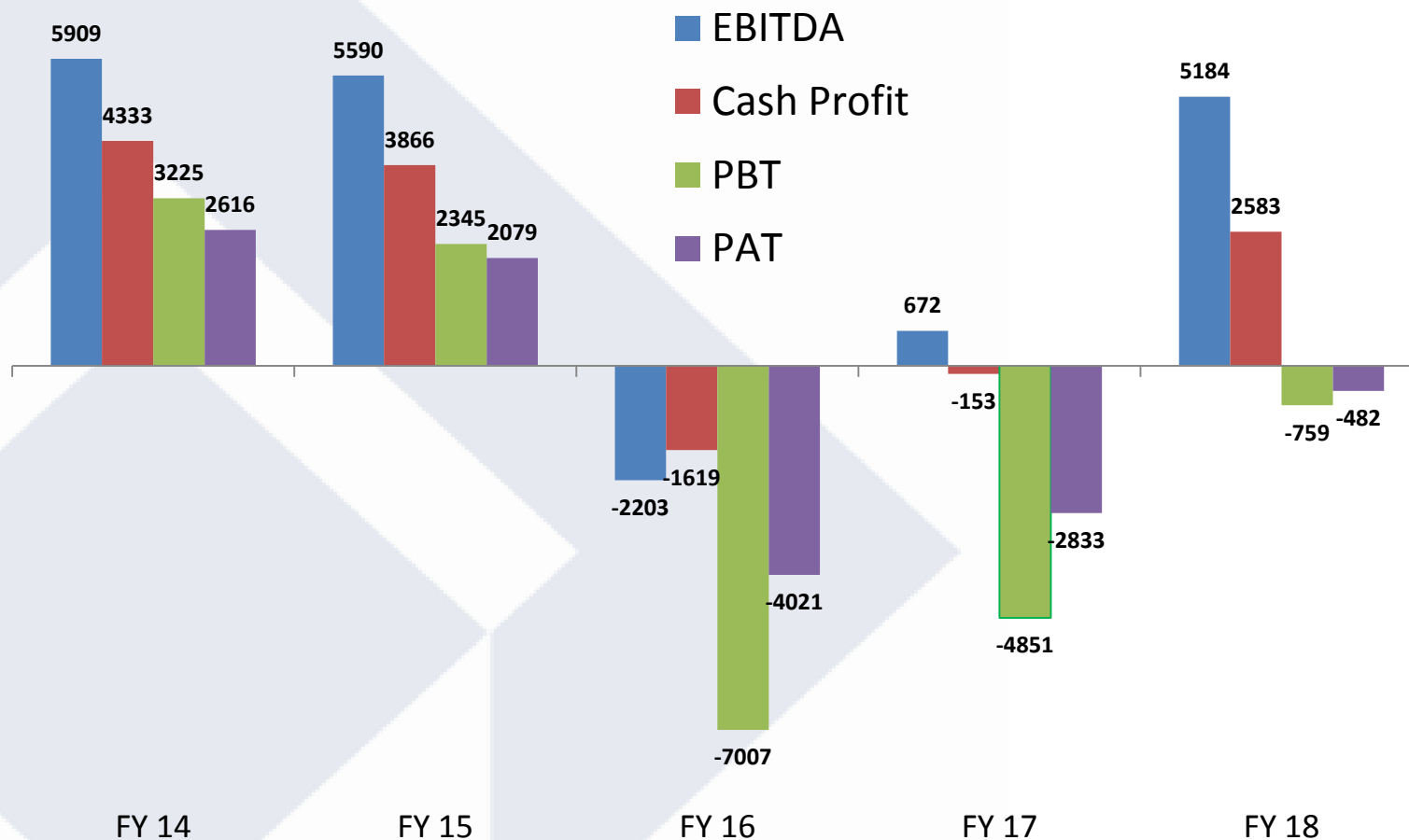
- ❖ Net Sales : Rs 16541 Crore
- ❖ EBITDA : Rs 2474 Crore
- ❖ PBT : Rs 848 Crore
- ❖ PAT : Rs 554 Crore

PRODUCTION & SALES PERFORMANCE

- ❖ Hot Metal Production : 3.975 MT
- ❖ Crude Steel Production : 3.702 MT
- ❖ Saleable Steel Production : 3.537 MT
- ❖ Semis component in production : 21.64% of saleable steel
- ❖ Value Added Production : 1.550 MT
- ❖ Production through concast route : 3.130 MT
- ❖ Saleable Steel Sales : 3.475 MT

FINANCIAL PERFORMANCE

Annual Profit Trend



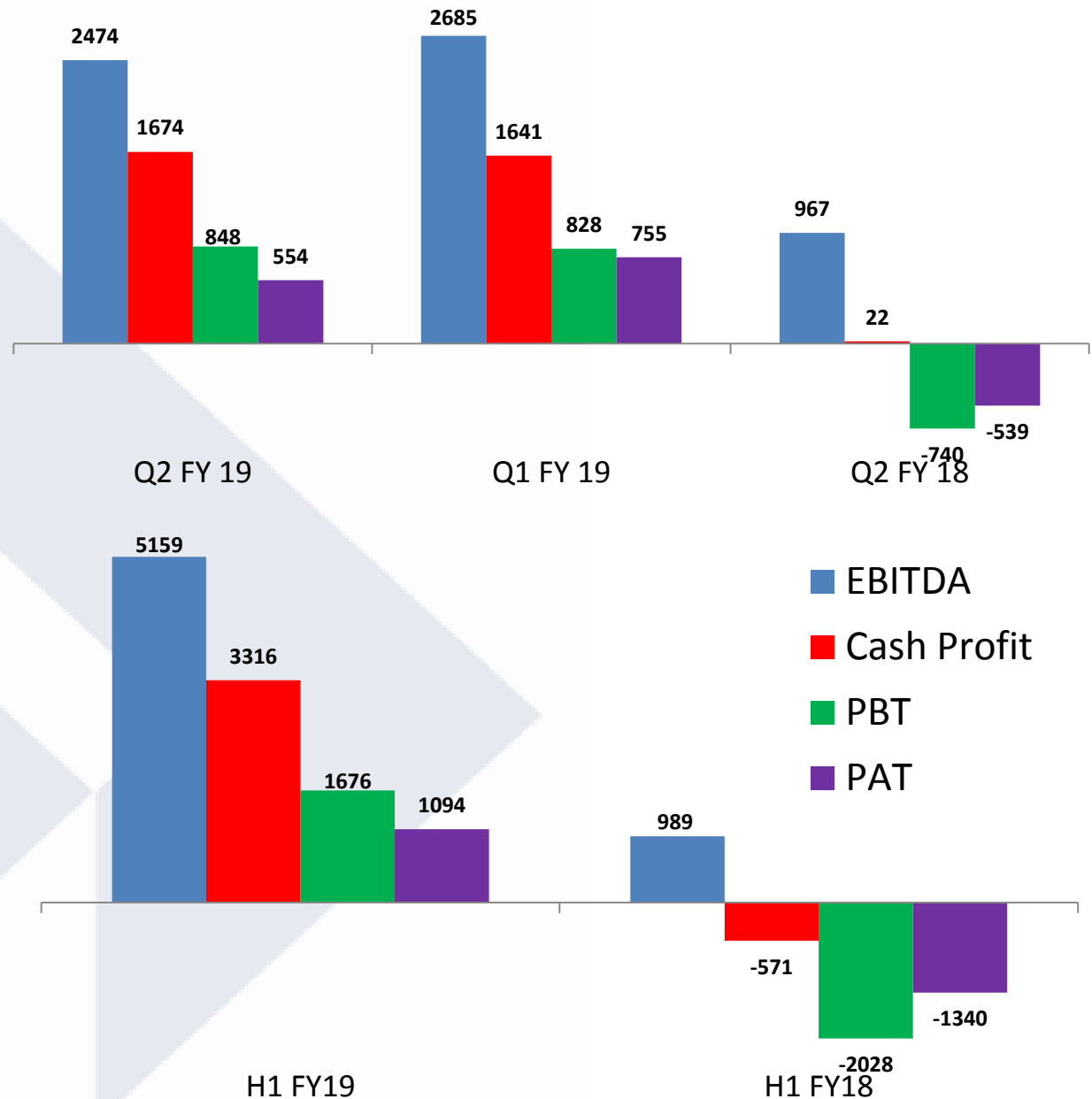
All figures in Rs crore

FINANCIAL PERFORMANCE

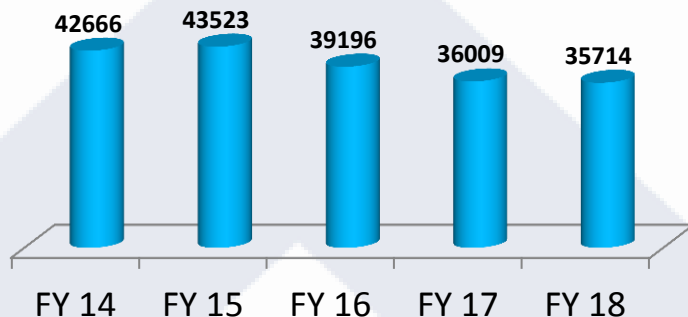
Quarterly Performance Q2 FY 19 vs Q1 FY 19 vs Q2 FY 18

All figures in Rs crore

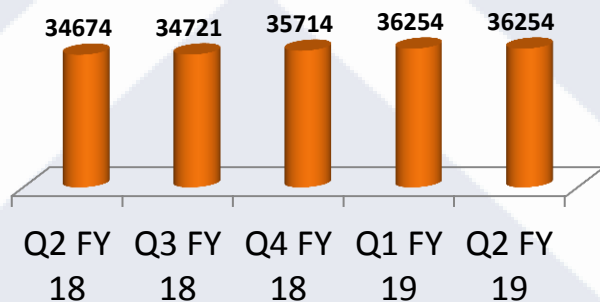
Half Yearly Performance H1 FY 19 vs H1 FY 18



Annual Net Worth

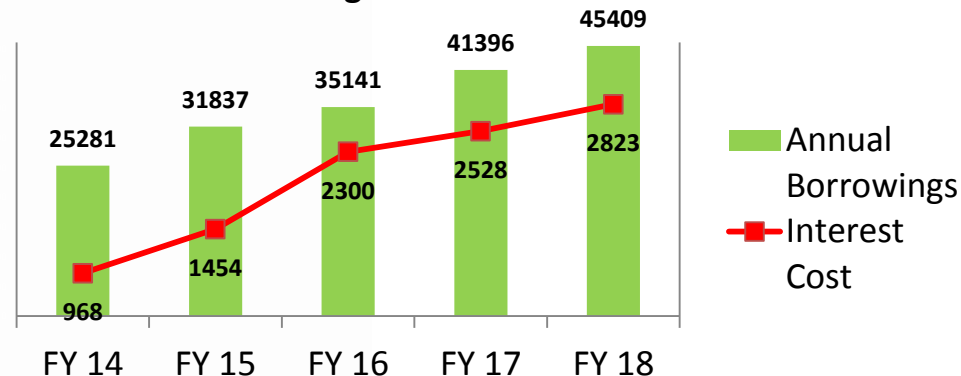


Quarterly Net Worth

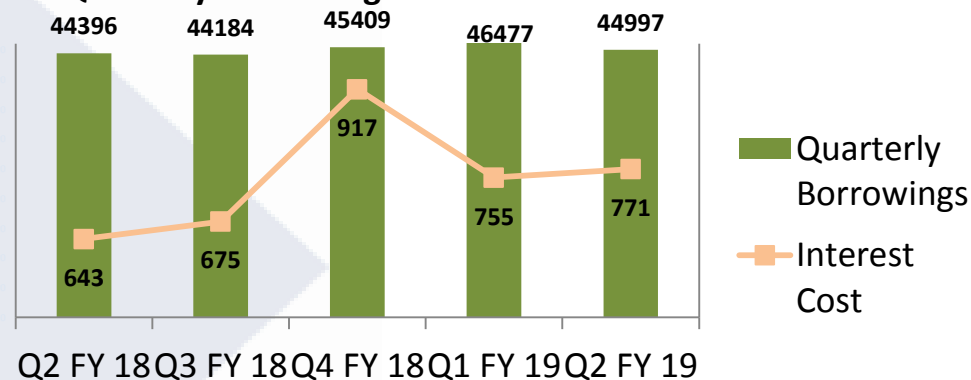


All figures in Rs. crore

Annual Borrowings & Interest cost



Quarterly Borrowings & Interest cost



Debt Equity Ratio

31/03/16	31/03/17	30/09/2017	31/03/18	30/06/2018	30/09/2018
0.90	1.15	1.28	1.27	1.28	1.22

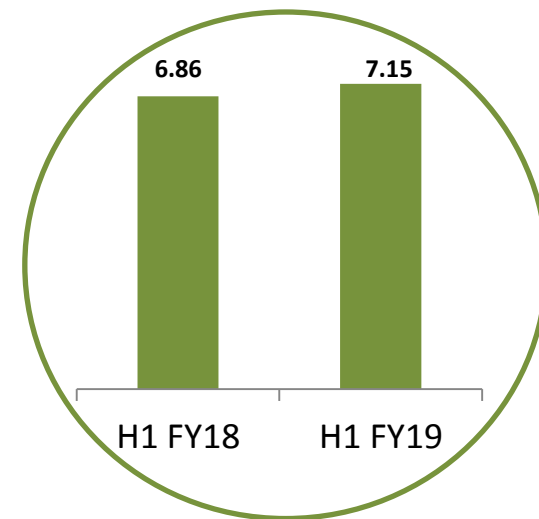
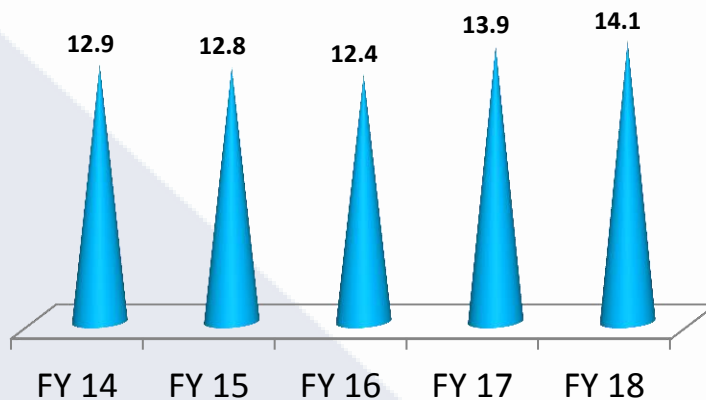
FINANCIAL PERFORMANCE

Rs. Crore (INDAS Compliant figures)	H1FY19	H1FY18	Q2 FY 19	Q1 FY 19	Q2 FY 18
Net Sales	32284	26297	16541	15743	13437
EBITDA	5159	989	2474	2685	967
Depreciation	1640	1457	826	814	762
Finance Cost	1526	1231	771	755	643
PBT Before Exceptional Items	1993	-1699	876	1116	-439
Exceptional/Abnormal Items (VRS/Suspended Operations)	317	329	28	288	301
PBT After Exceptional Items	1676	-2028	848	828	-740
Tax	582	-687	294	287	-201
Profit After Tax	1094	-1344	554	540	-539

PRODUCTION PERFORMANCE

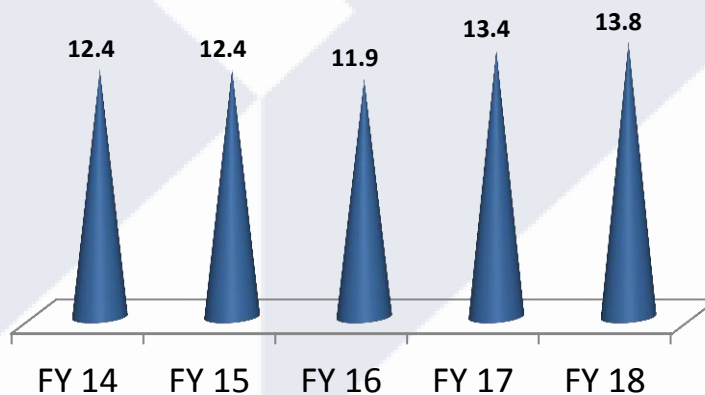
All figures In Million Tonne

SALEABLE STEEL PRODUCTION (incl. SSPs)

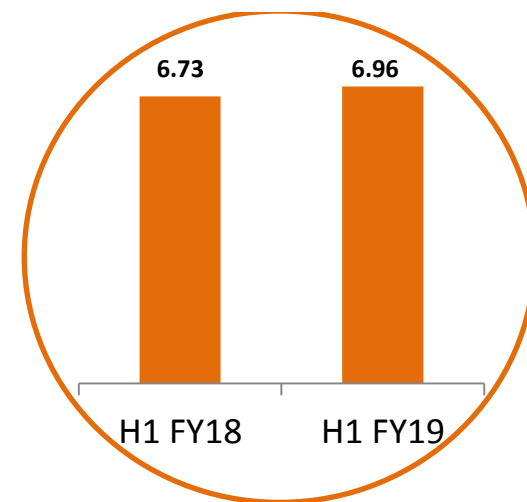


Annual

SALEABLE STEEL PRODUCTION (5 ISPs)



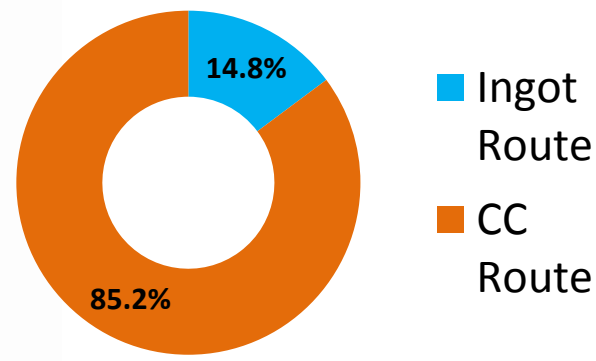
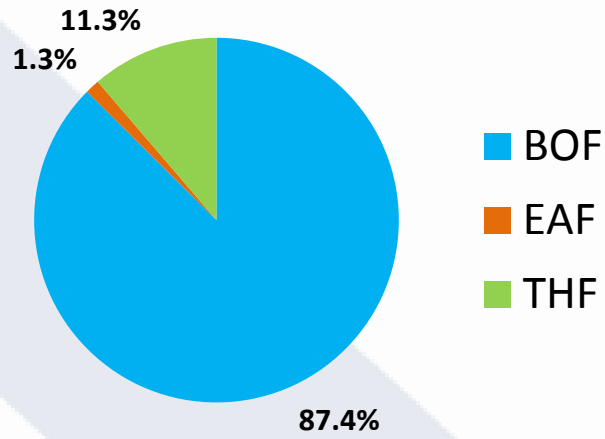
Half-Year



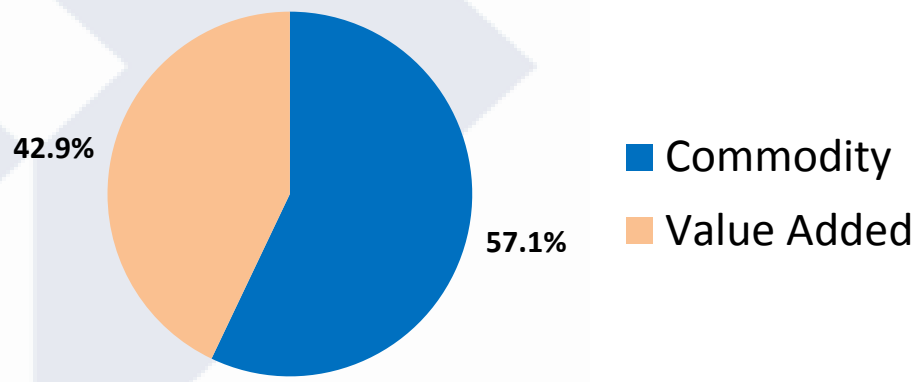
PRODUCTION PERFORMANCE : H1 FY19



CRUDE STEEL PRODUCTION BY PROCESS

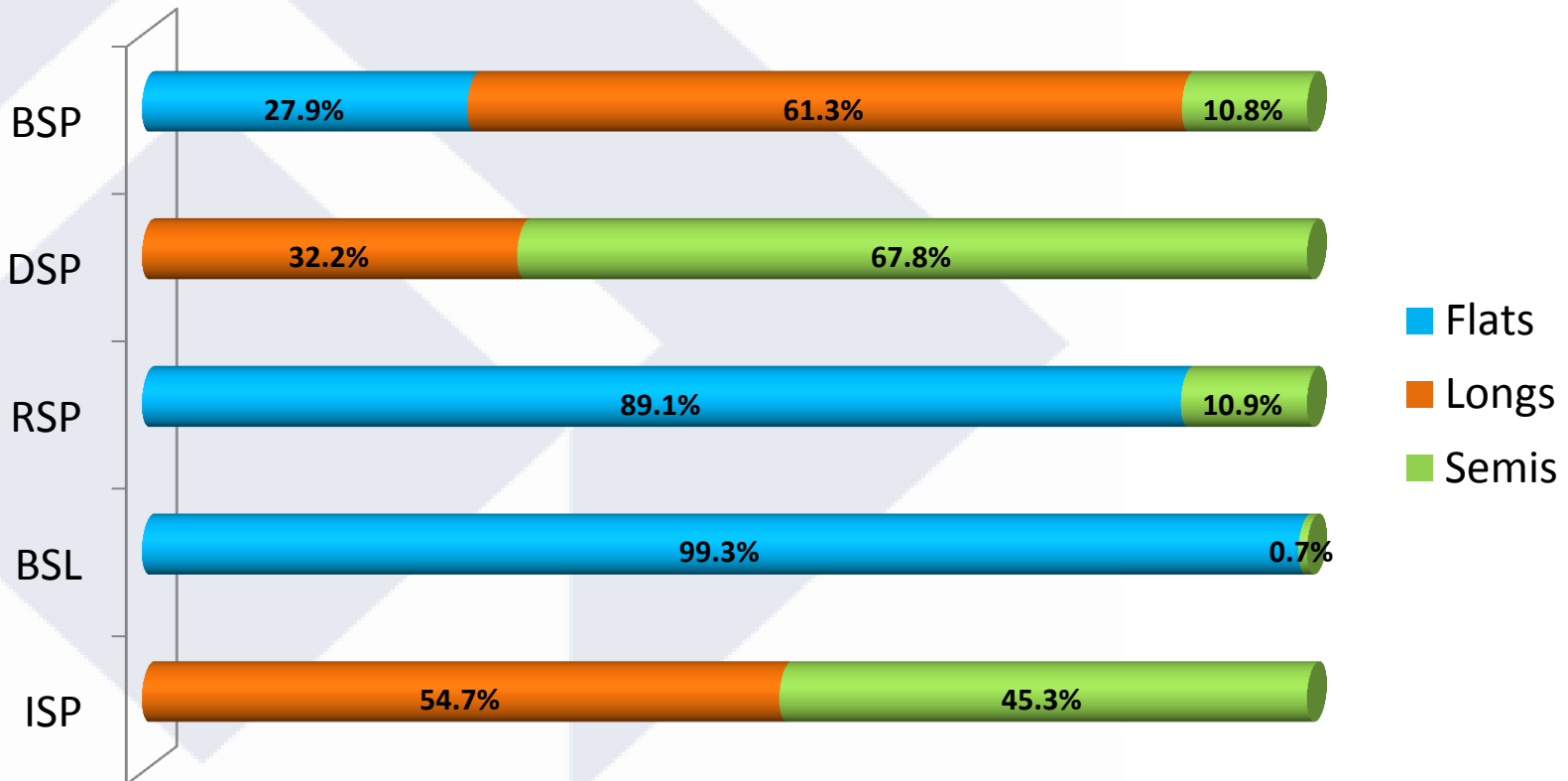
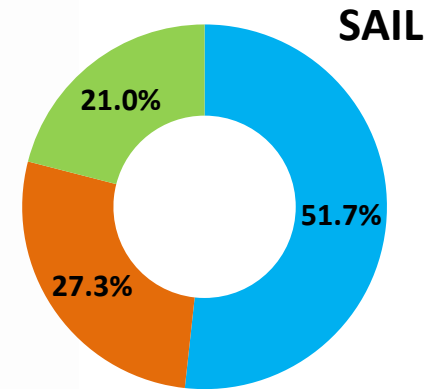


SALEABLE STEEL PRODUCTION BY PROCESS



PRODUCTION PERFORMANCE : H1 FY 19

PRODUCT MIX : 5 ISPs



PRODUCTION PERFORMANCE

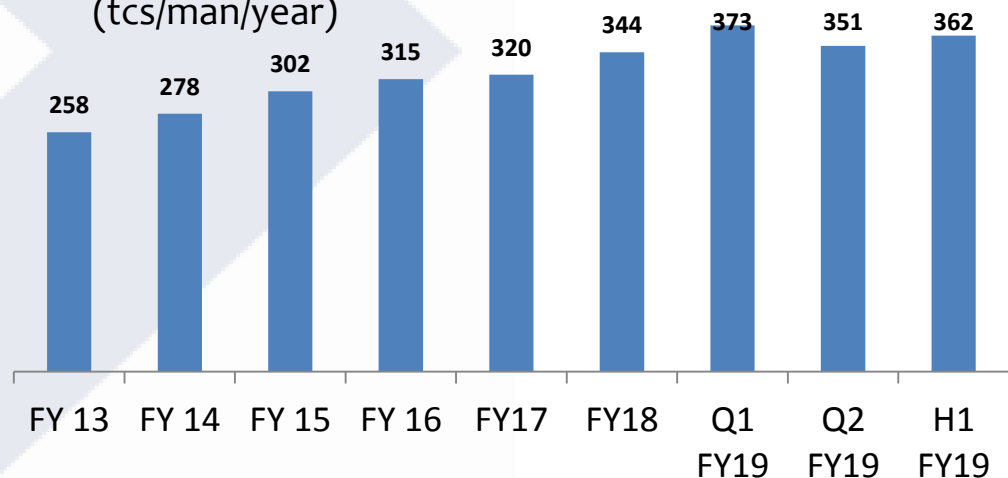
MAJOR TECHNO-ECONOMIC PARAMETERS

Parameter	H1 FY 18-19	H1 FY 17-18
Coke Rate (kg/thm)	460	464
Fuel Rate (kg/thm)	564	561
Specific Energy Consumption (GCal/TCS)	6.58	6.57
BF Productivity (T/m ³ /day)	1.55	1.66

MANPOWER & LABOUR PRODUCTIVITY

Total manpower as on
01.10.2018: **74,441**

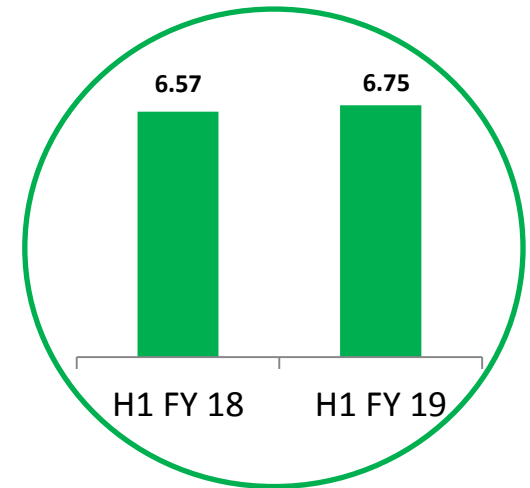
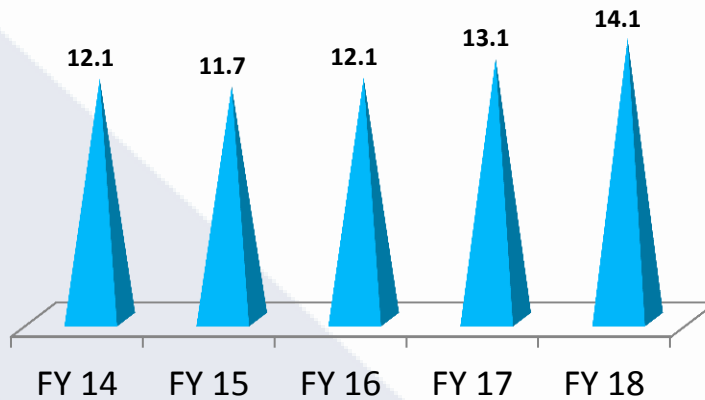
LABOUR PRODUCTIVITY (tcs/man/year)



SALES PERFORMANCE

All figures In Million Tonne

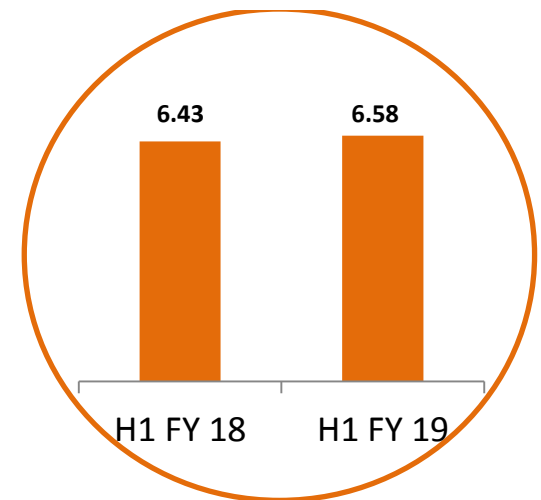
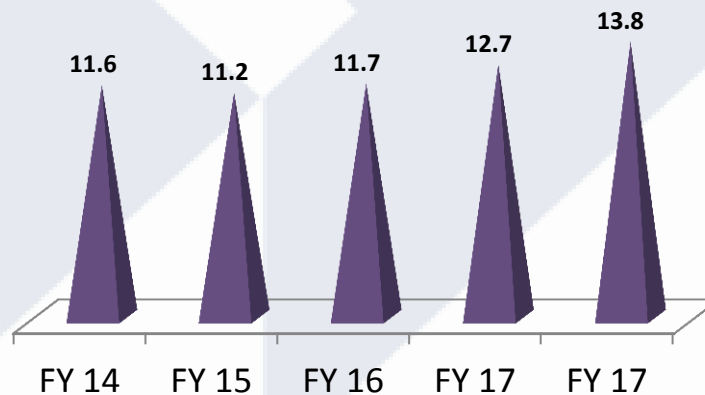
TOTAL SALES (incl. SSPs)



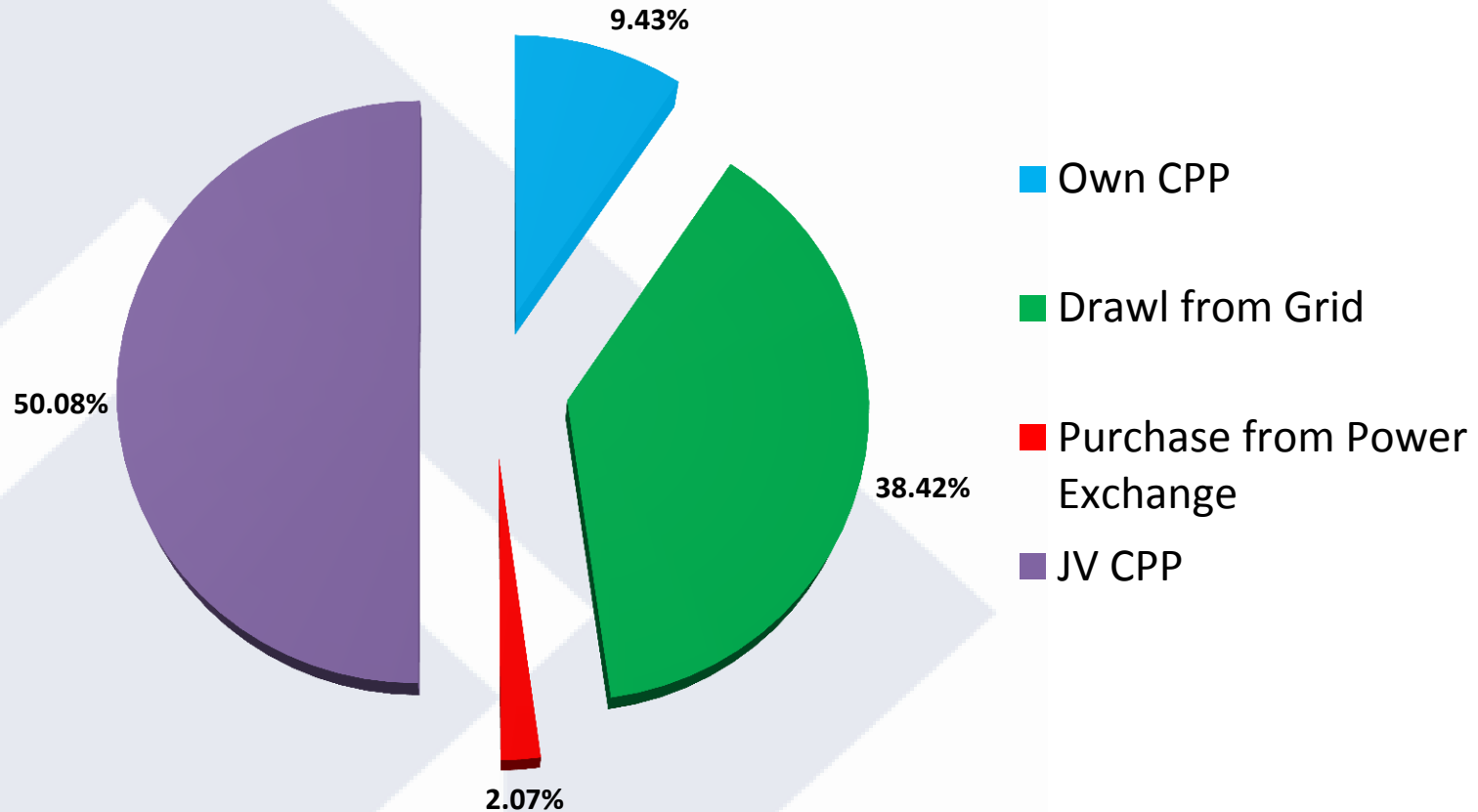
Annual

Half-Yearly

SALES OF 5 ISPs



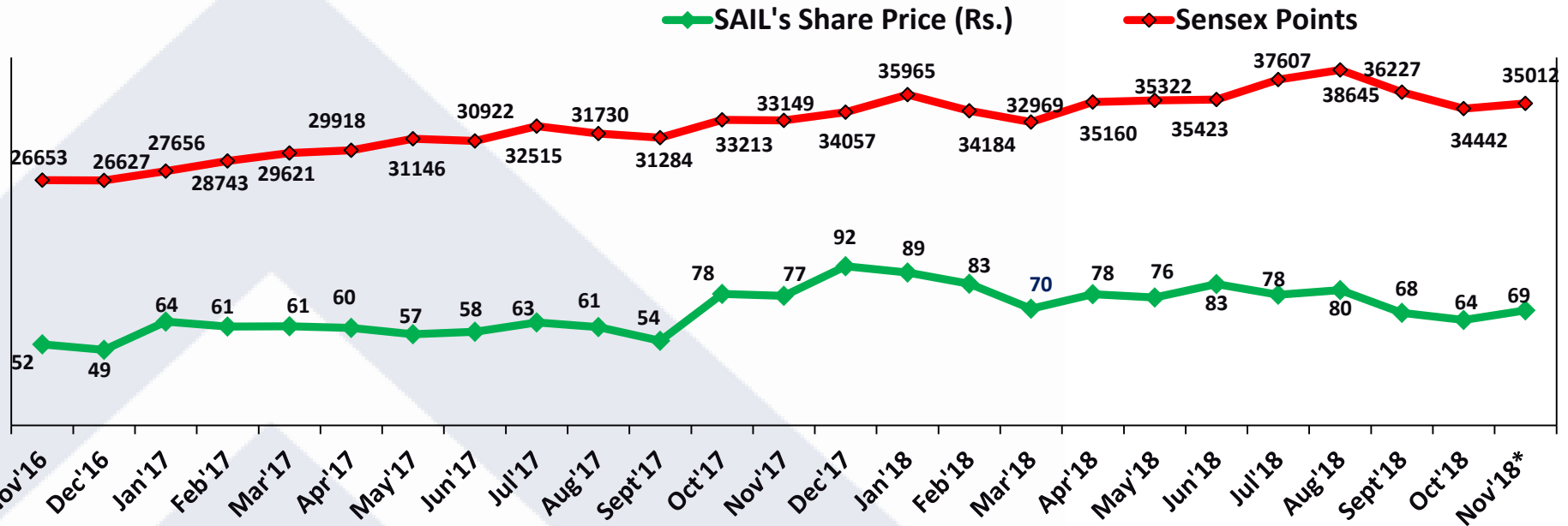
POWER CONSUMPTION – H1 FY 19



SAIL STOCK PRICE MOVEMENT



सेल SAIL



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

* As on Nov 2, 2018

DIVIDEND PAYOUT

	Interim (%)	Final (%)	Total (%)	Dividend (Rs. crore)	Dividend Tax (Rs. crore)
FY 18	-	-	-	-	-
FY 17	-	-	-	-	-
FY16	-	-	-	-	-
FY15	17.5	2.5	20	826	165
FY14	20.2	-	20.2	834	142
FY13	16	4	20	826	134

SAIL's MODERNISATION & EXPANSION PLAN

Million Tonne	Actual Production 2017-18	Capacity After On-going Expansion
Crude Steel	15.021	21.4
Saleable Steel	14.071	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

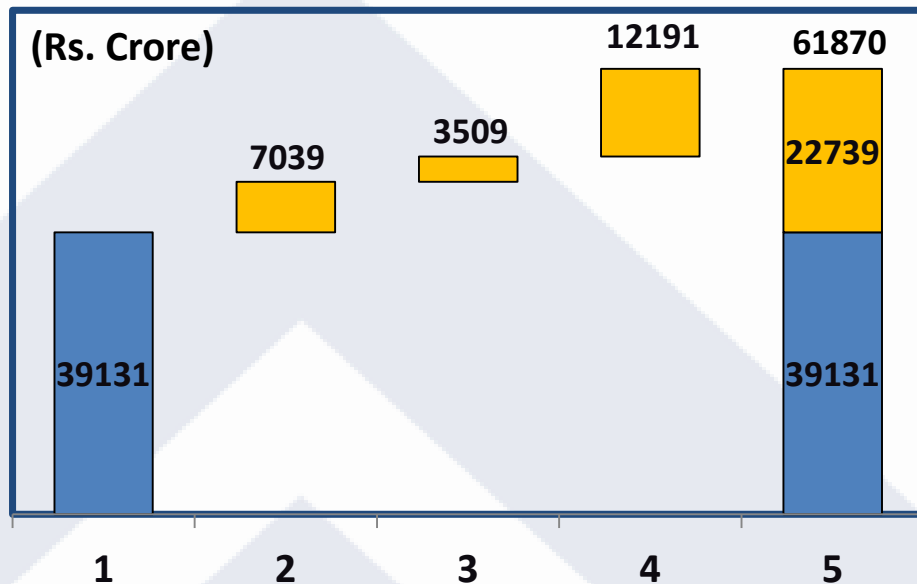
EXPECTED OUTCOME

- 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)

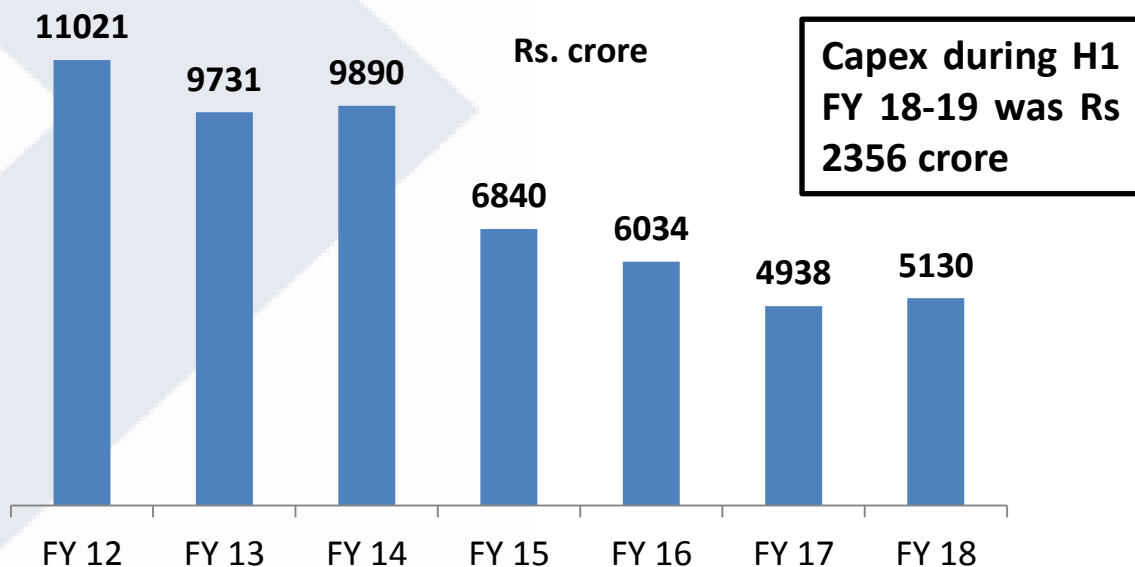


- 1 Expansion of existing capacity
- 2 Value-addition / Product-mix improvement
- 3 Technological up gradation / Modernization
- 4 Sustenance including de-bottlenecking, AMR & Environment
- 5 Total Estimated Cost

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 FY18 was Rs.4700 Crore (including expenditure towards Capital Repairs and Spares needed to be capitalised under Ind AS).
Capex Plan for FY19 is Rs.4000 Crore



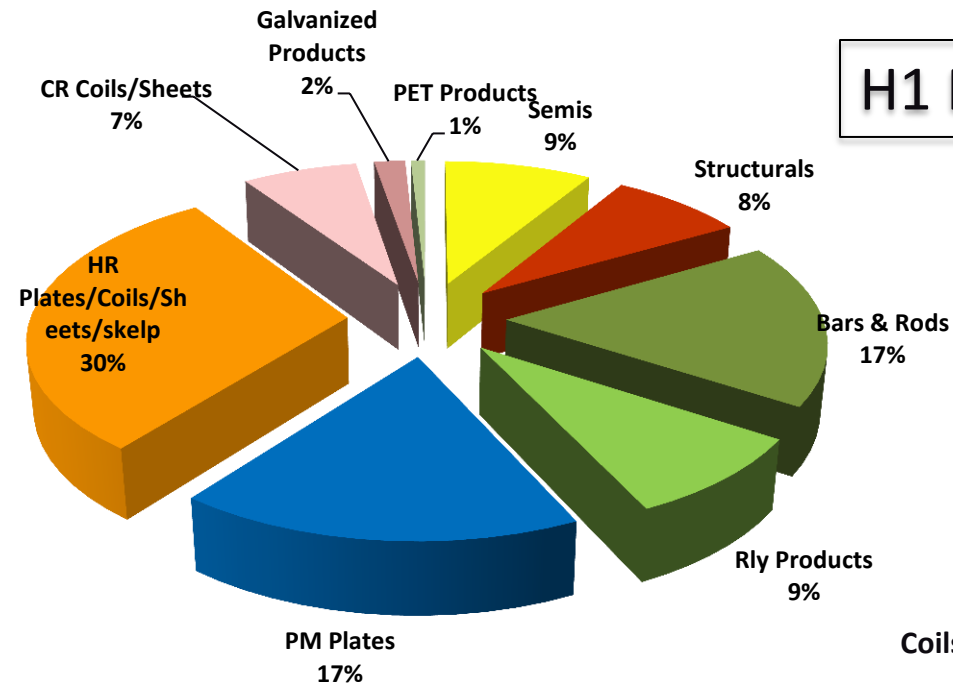
Capex during H1
FY 18-19 was Rs
2356 crore

CAPACITY AFTER EXPANSION

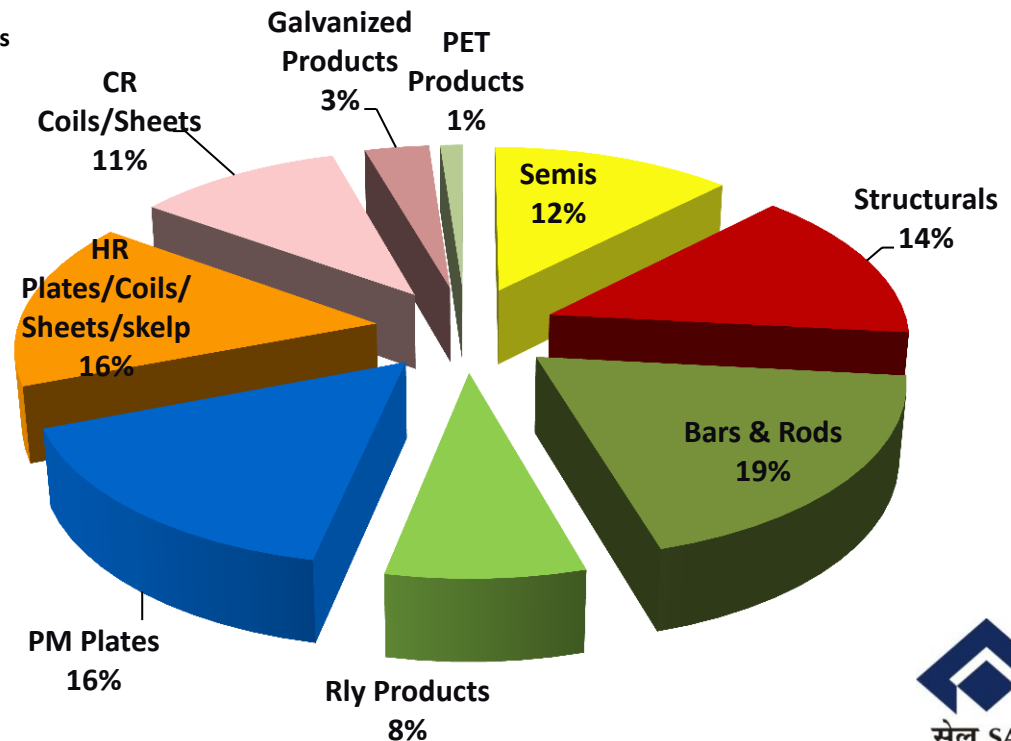
Plant	Hot Metal (MTPA)		Crude Steel (MTPA)		Saleable Steel (MTPA)	
	2017-18	After Expansion	2017-18	After Expansion	2017-18	After Expansion
BSP	4.28	7.5	4.07	7.0	3.69	6.6
DSP	2.28	2.5	2.04	2.2	1.95	2.1
RSP	3.32	4.5	3.22	4.2	2.94	4.0
BSL	4.05	5.8	3.69	4.6	3.50	4.2
ISP	2.06	2.9	1.80	2.5	1.69	2.4
VISL	0.00	0.3	0.00	0.2	0.01	0.2
ASP	-	-	0.10	0.5	0.09	0.4
SSP	-	-	0.10	0.2	0.20	0.3
TOTAL	15.98	23.5	15.02	21.4	14.07	20.2

PRODUCT MIX POST EXPANSION – SALEABLE STEEL

H1 FY 19



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

Production (MTPA) :

Item	2017-18 (Actual)	After Expansion
Crude Steel	0.10	0.18
Saleable Steel	0.20	0.34

MODERNISATION & EXPANSION PLAN - IISCO STEEL PLANT

Facilities Completed:

- Raw Material Handling System
- New Coke Oven Battery (0.88 Mtpa, 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 (0.55 Mtpa)
- Bar Mill (0.90 Mtpa)
- Universal Section Mill (0.85 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	2017 -18 (Actual)	After Expansion
Crude Steel	1.80	2.50
Saleable Steel	1.69	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



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)
- Up-gradation of HSM with augmentation of Roughing Facility (4.5 MTPA).

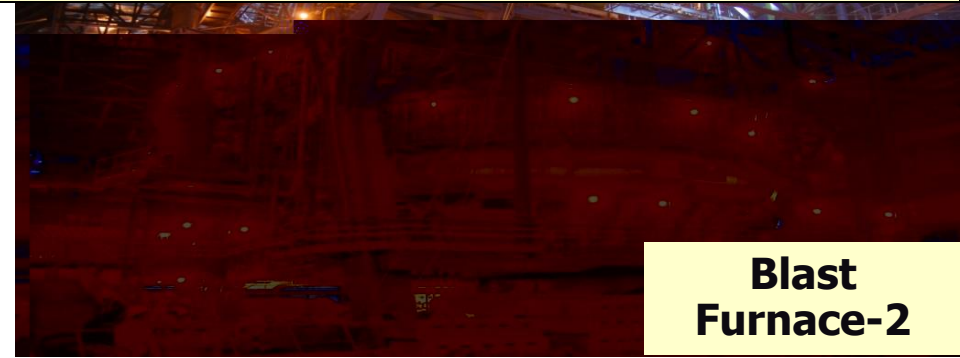
Production (MTPA) :

Item	2017-18 (Actual)	After Expansion
Crude Steel	3.69	4.61
Saleable Steel	3.50	4.18

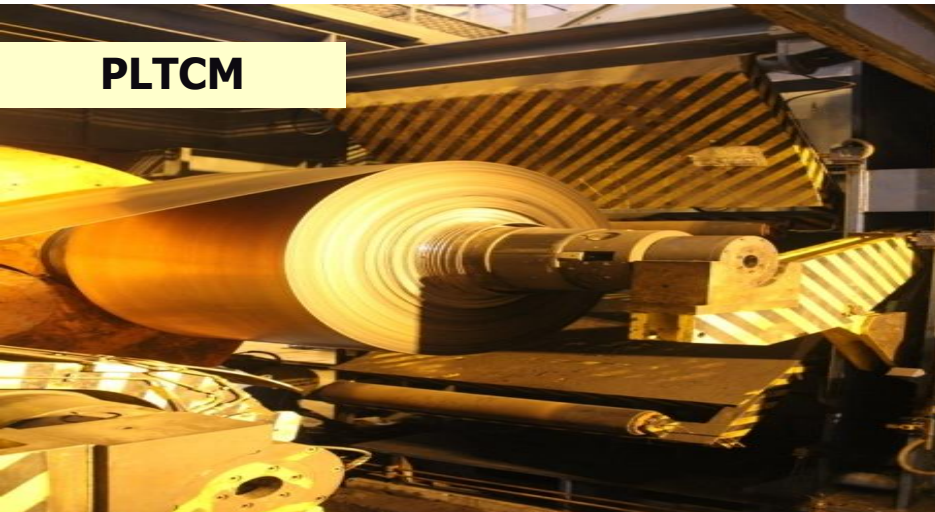
Current Progress of Expansion at Bokaro Steel Plant



**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) and Rail Welding Line
- Bar Line of Bar and Rod Mill (0.9 MTPA)
- Blast Furnace 4060 m3 (2.8 Mtpa)
- New Steel Melting Shop (SMS-3) with Converter-1 and New Billet Casters (2x6).

Facilities Likely to be Completed During FY 18-19:

- Converter - 2, LF -2 and New Billet-cum-Bloom Caster (1X6) in SMS -3.
- Wire Rod Line (Lateral Line) of Bar and Rod Mill

Production (MTPA) :

Item	2017 -18 (Actual)	After Expansion
Crude Steel	4.07	7.0
Saleable Steel	3.69	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, useful volume - 4060 m³
- 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	2017-18 (Actual)	After Expansion
Crude Steel	3.22	4.20
Saleable Steel	2.94	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	2017-18 (Actual)	After Expansion
Crude Steel	2.04	2.20
Saleable Steel	1.95	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
2017-18	15.983	25.87	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	<ul style="list-style-type: none"> Expansion at Kiriburu has already been completed whereas Meghathaburu is being ramped up to meet the requirement of the ongoing expansion plan. 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.
Meghathaburu	5.00	6.50	
Bolani	7.50	10.00	
Gua	4.00	10.00	
Rajhara, Dalli	8.70	7.00**	
New Pellet Plants	New	7.00	**Depleted resources and quality constraints <ul style="list-style-type: none"> New Pellet Plants shall use the existing reserve of fines incl. dumps & slimes at captive mines
Barsua, Kalta, Taldih	6.00	6.50	<ul style="list-style-type: none"> Environment clearance obtained & FC obtained on 23rd Oct. 2017 for ML-162 lease. Iron ore production to the tune of 1mtpa started at Taldih in Nov, 2016. Consequent to the order by the Hon'ble Supreme Court dated 11.05.2018 and grant of subsequent clearances by the Government of Odisha, production at Barsua mine resumed on 20.05.2018.
Rowghat	New	12.00	All statutory clearances have been received. MDO has been engaged and LOA issued to MDO on 1 st August 2017. MSA signed on 25.09.2017 for a period of 30 years.
Chiria	0.75	5.80	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
2017-18	15.983	15.392	<ul style="list-style-type: none"> • Import Component – 86% • Over 70% of imported coal is sourced from Australia. • Indigenous: 13% • Domestic coal is largely sourced from Coal India Ltd. • SAIL has existing captive clean coking coal production of nearly 0.7 mtpa, During 2017-18, production was 0.66 mt.
Post Expansion	23.46	19.5	<ul style="list-style-type: none"> • Long term / Quarterly contracts cover 95% of Import requirements • Tasra captive coal mine being developed to produce 4 mtpa of ROM (1.8 mtpa washed coal) • New linkages / acquisitions are being explored. • Request has been made to Ministry of Coal for allocation of new potential coking coal blocks in line with recommendations of NITI Aayog.



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
• 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
• CPL	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
• EBITDA	Earnings Before Interest, Taxes, Depreciation & Amortization.
• 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

Statements / Data which do not relate to SAIL and are used / made in this presentation are from sources which are considered reliable and Company cannot be held for its authenticity.

Further, statements 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.