

# STEEL AUTHORITY OF INDIA LIMITED



## RESULTS

## PRESENTATION

## FOR

## 9M & Q3 FY 2020-21



# STEEL AUTHORITY OF INDIA LIMITED

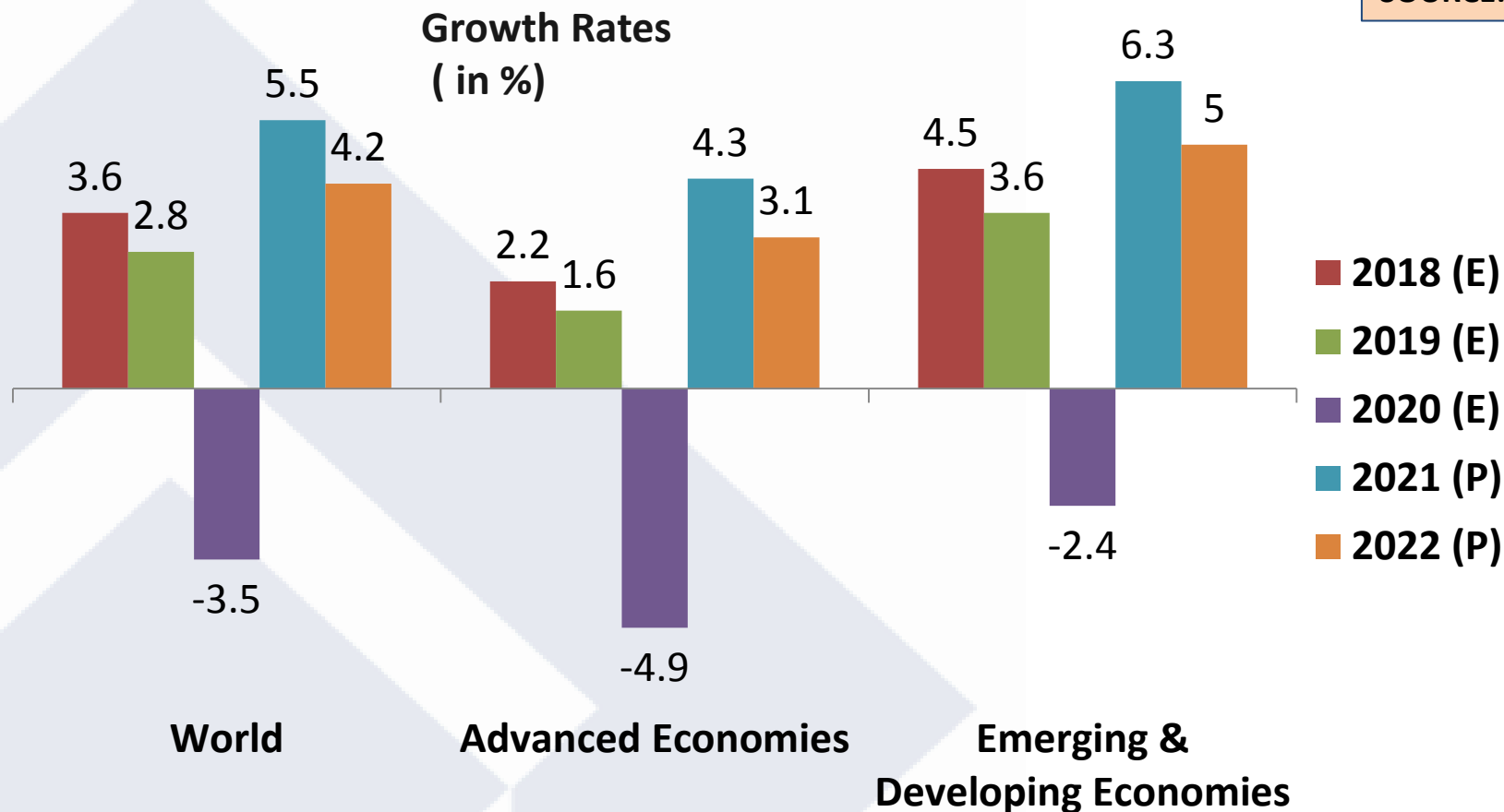


## Economic & Steel Scenarios



# WORLD ECONOMIC SCENARIO

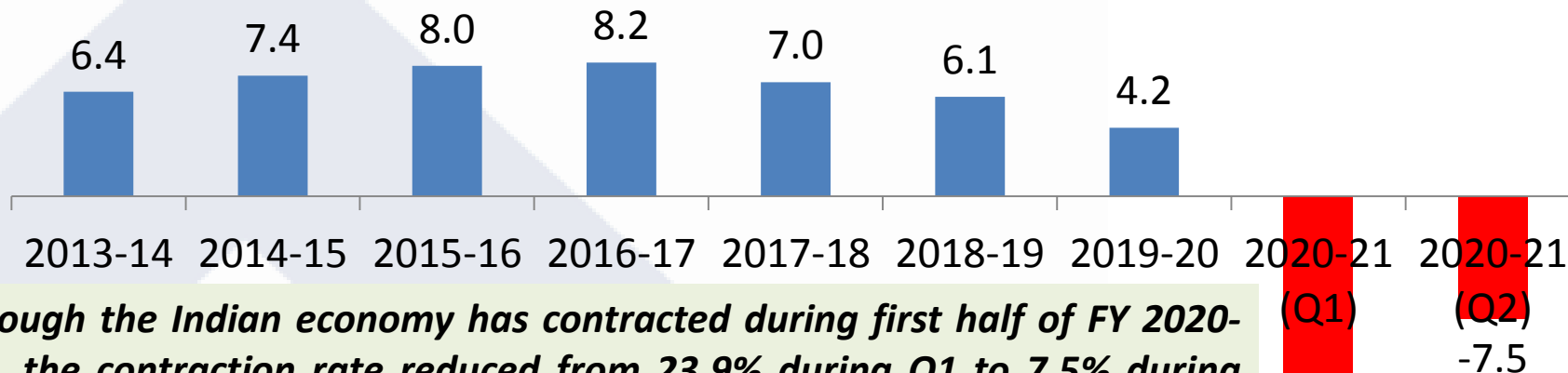
SOURCE: IMF



**IMF projected the growth for 2020 at 2.9% in its Jan 20 World Economic Outlook (WEO). With the lockdown emanating from COVID19 Pandemic, the projections became negative to almost 4.9%. Though the negative status still remains, the figure has since been revised to more lower 3.5% on the back of better GDP data from economies around the world during H2 2020. The growth projection for 2021 have also been increased to 5.5% which is expected to moderate to 4.2% during 2022.**

SOURCE: CSO, GoI & Economic Survey

## GDP Growth % at Constant Prices (2011-12 Prices)

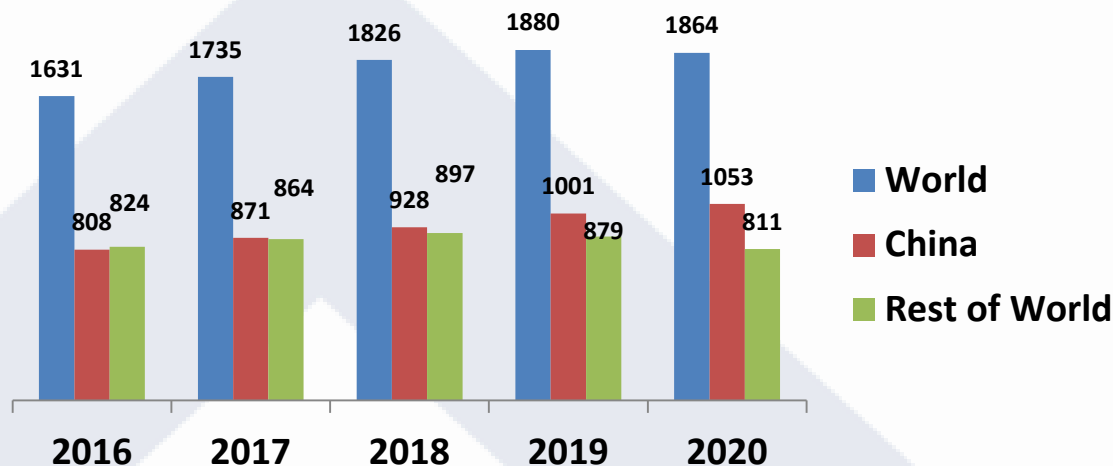


*Though the Indian economy has contracted during first half of FY 2020-21, the contraction rate reduced from 23.9% during Q1 to 7.5% during Q2. This has led to revision in the projections for the entire year. RBI is predicting a positive growth rate during the second half. The Government is predicting de-growth of 7.7% in GDP for FY'21 while RBI is maintaining a figure of -7.5%. The Rating Agencies like Fitch and S&P have revised their figures to -9.4% and -7.7% from -10.5% and -9.0% respectively.*

*Last available projections from major financial agencies are as follows:*

Source	Growth Projection
WORLD BANK	-9.6% (FY21) and 5.4% (FY21)
IMF	-8% (CY20) and 11.5% (CY21) & 6.8% (CY22)
RBI	-7.5% (FY21)

## Crude Steel Production (mtpa)



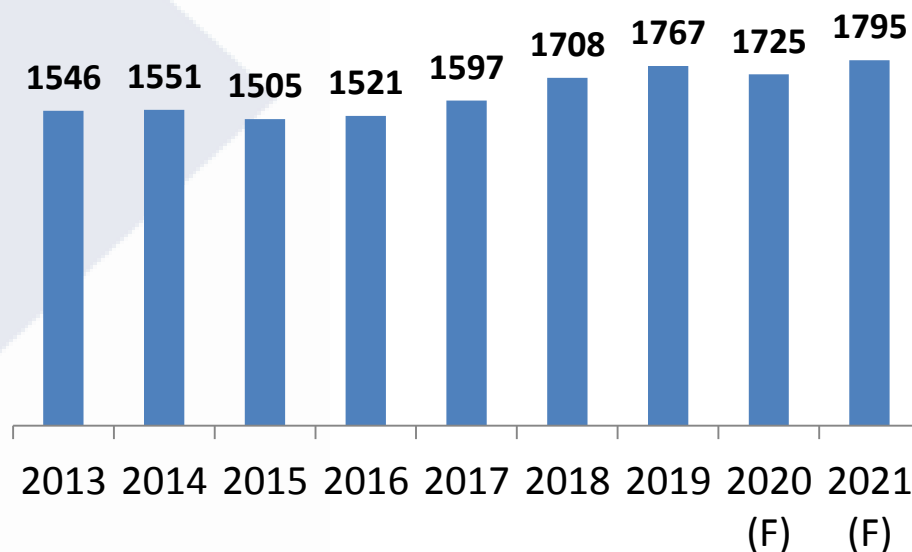
### (Crude Steel Production)

- In line with projections, Global Production during 2020 declined and stood at 1864 mt vis-à-vis 1880 mt during CPLY.
- China however increased its production by 5.2% during this period clocking 1053 mt as against 1001 mt during CPLY.

### **World Steel Association (WSA) Short Range Outlook (SRO) :**

- Global steel demand will decrease by 2.4% in 2020 and increase by 4.1% in 2021.
- China's growth is set to go down to 8% in 2020 and constant in 2021.
- In the Emerging and Developing Economies excluding China, steel demand is forecast to fall by 12.3% in 2020 and rise by 10.6% in 2021.
- Demand in India expected to fall by -20.2% in 2020 and rise by 22.7% in 2021.

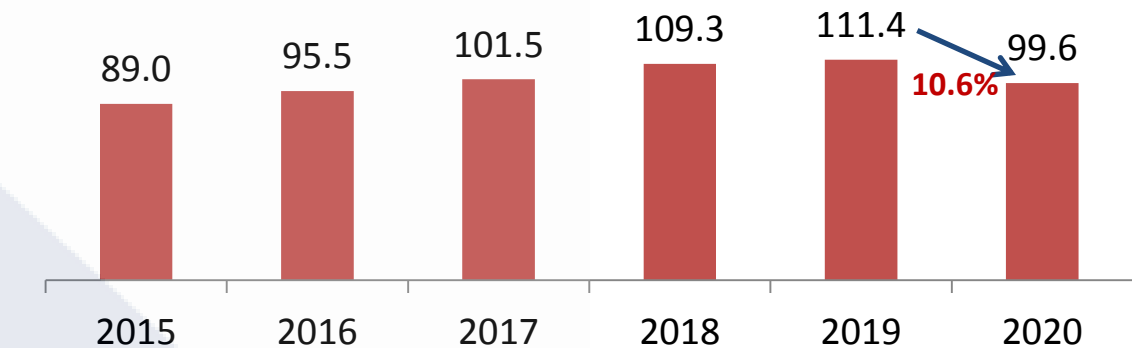
## Finished Steel Consumption (mtpa)



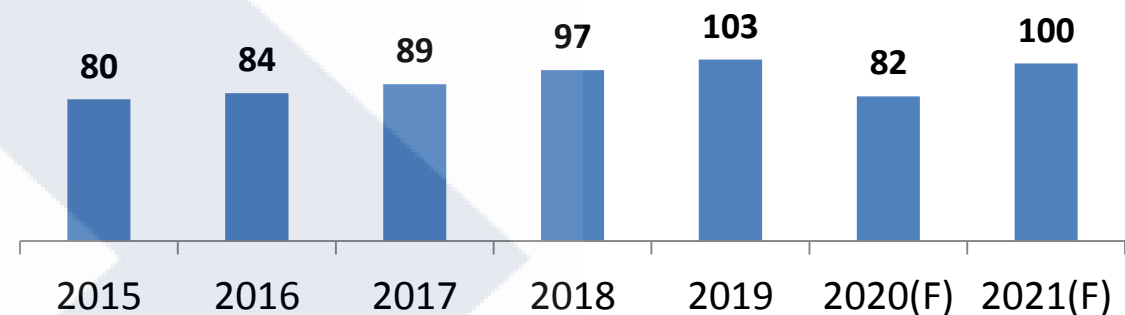
- **India's Crude steel production (2020):**  
**99.57mtpa** (de-growth of **10.6 %** over 2019)
- As per WSA Short Range Outlook, demand in India is set to fall by 20.2% in 2020 and grow by 22.7% in 2021.

Source: WSA

**Crude Steel Production (mtpa)**



**Finished Steel Consumption (mtpa)**



## **Performance FY 2020-21:**

- Due to the impact of COVID-19 Pandemic and consequent lockdown, consumption was severely impacted being almost negligible during April 20. Thereafter, with easing of lockdown, demand has been improving exponentially. The cumulative consumption during April-December 20 fell to 64.608 MT as against 76.241 MT during CPLY, decline of 15.3%.
- As the producers adjusted their production in line with the demand, the production declined by 14.4% and stood at 66.555 MT as against 77.742 MT during CPLY.

Source: JPC

# INDIAN STEEL PERFORMANCE

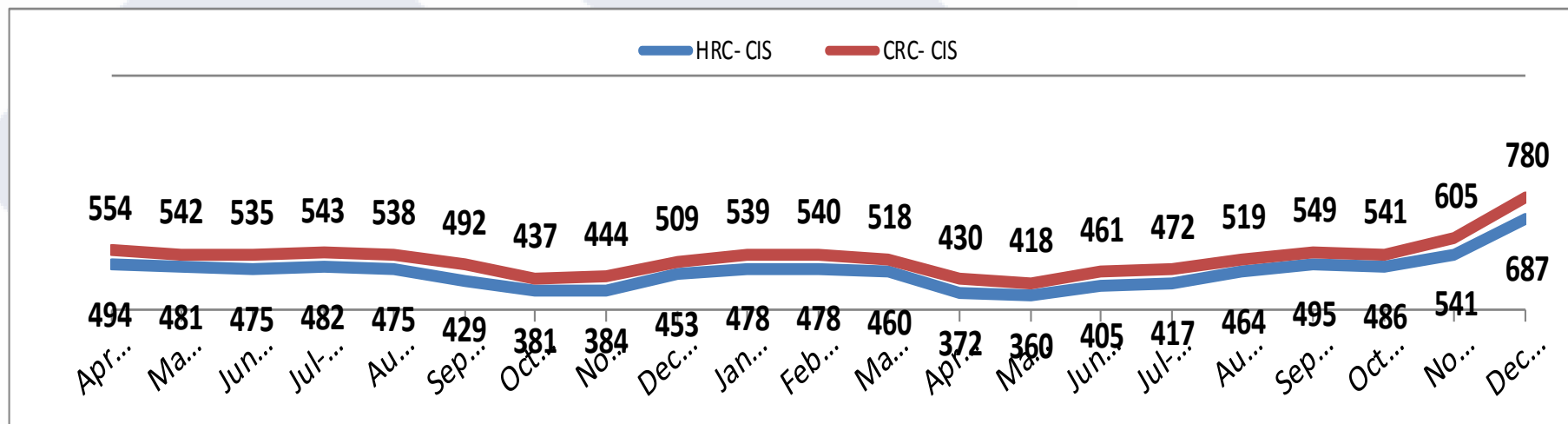
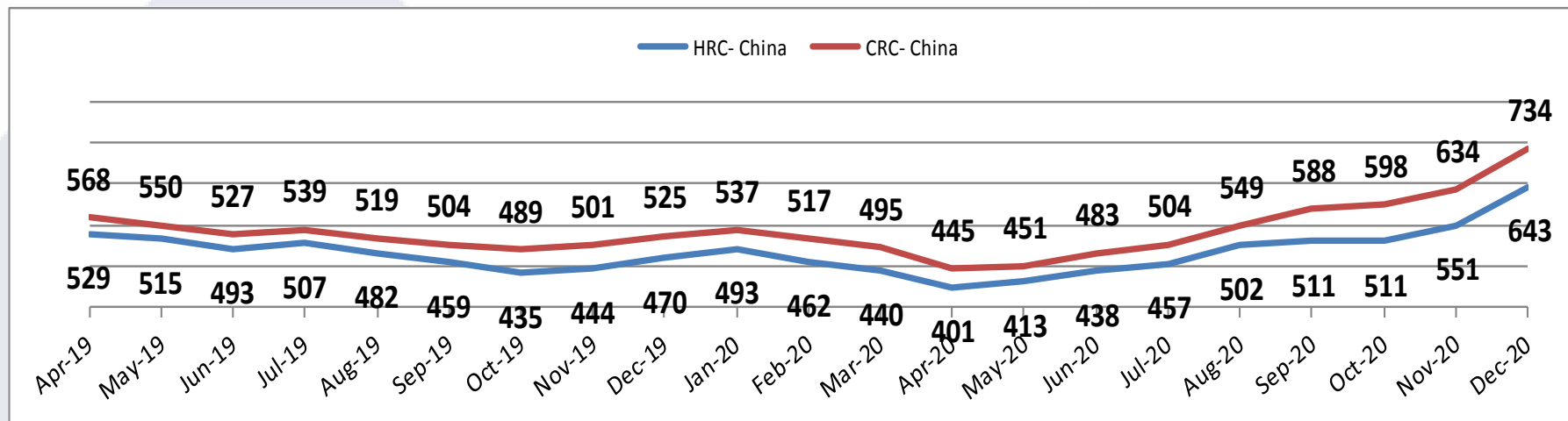
INDICATORS	UNIT	9M 20-21	9M 19-20	% +/- Over CPLY
Growth in Index of Industrial Production ^	%	-15.5	0.3	-15.80
Production - Finished Steel *	MT	66.56	77.74	-14.4
Imports - Finished Steel *	MT	3.21	5.51	-41.8
Exports - Finished Steel *	MT	8.31	6.52	27.5
Consumption - Finished Steel *	MT	61.45	76.74	-19.9
Real Consumption of Finished Steel *	MT	64.61	76.24	-15.3

^ As per CSO data 9M data is for Apr.-Nov'20-21

\*Source JPC Report

# INTERNATIONAL PRICE (FOB) TREND

USD/Tonne





# STEEL AUTHORITY OF INDIA LIMITED



## Performance Highlights



# PERFORMANCE HIGHLIGHTS : 9M FY'21

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## **FINANCIAL PERFORMANCE**

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- ❖ Net Sales : Rs. 45286 Crore
- ❖ EBITDA : Rs. 7267 Crore
- ❖ PBT : Rs. 2271 Crore
- ❖ PAT : Rs. 406 Crore

## **PRODUCTION & SALES PERFORMANCE**

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- ❖ Hot Metal Production : 11.604 MT
- ❖ Crude Steel Production : 10.659 MT
- ❖ Saleable Steel Production : 10.183 MT
- ❖ Semis component in production : 26.84% of saleable steel
- ❖ Value Added Production : 4.804 MT
- ❖ Production through concast route : 10.360 MT
- ❖ Saleable Steel Sales : 10.592 MT

# PERFORMANCE HIGHLIGHTS : Q3 FY'21

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## **FINANCIAL PERFORMANCE**

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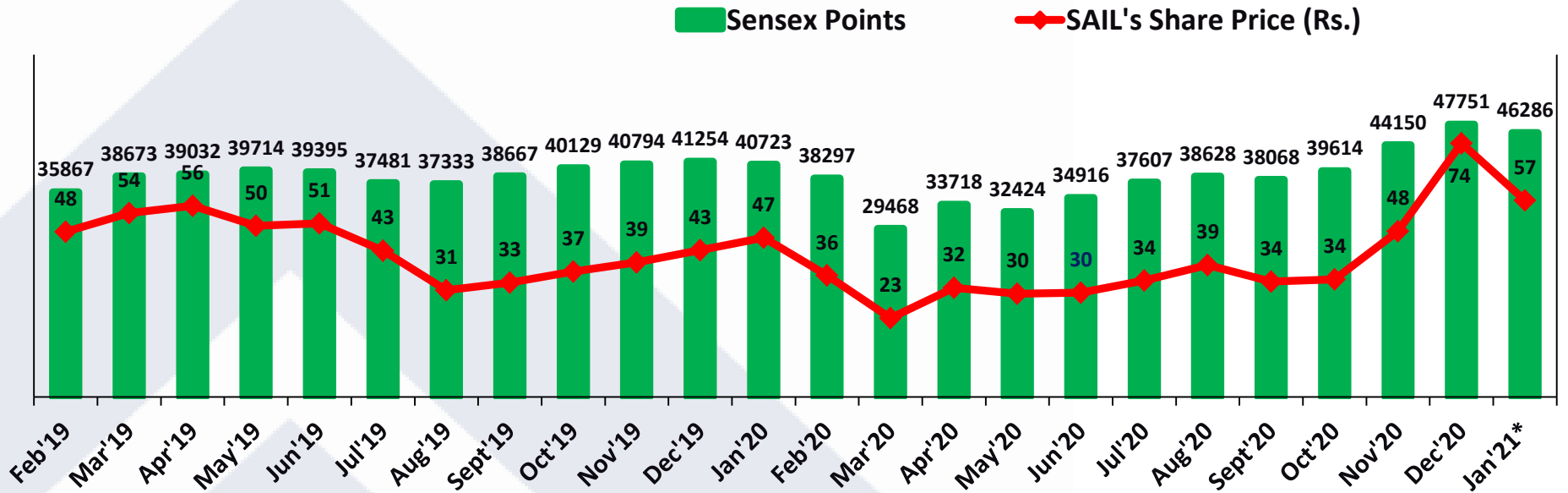
- ❖ Net Sales : Rs. 19614 Crore
- ❖ EBITDA : Rs. 5294 Crore
- ❖ PBT : Rs. 3645 Crore
- ❖ PAT : Rs. 1283 Crore

## **PRODUCTION & SALES PERFORMANCE**

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- ❖ Hot Metal Production : 4.794 MT
- ❖ Crude Steel Production : 4.369 MT
- ❖ Saleable Steel Production : 4.152 MT
- ❖ Semis component in production : 22.47% of saleable steel
- ❖ Value Added Production : 1.834 MT
- ❖ Production through concast route : 4.192 MT
- ❖ Saleable Steel Sales : 4.148 MT

# SAIL STOCK PRICE MOVEMENT



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

\* As on Jan 29, 2020

## DIVIDEND PAYOUT

	Interim (%)	Final (%)	Total (%)	Dividend (Rs. crore)	Dividend Tax (Rs. crore)
FY 21	10	-	10	413	-
FY 20	-	-	-	-	-
FY 19	-	5	5	206	-
FY 18	-	-	-	-	-
FY 17	-	-	-	-	-
FY16	-	-	-	-	-
FY15	17.5	2.5	20	826	165
FY14	20.2	-	20.2	834	142

# STEEL AUTHORITY OF INDIA LIMITED



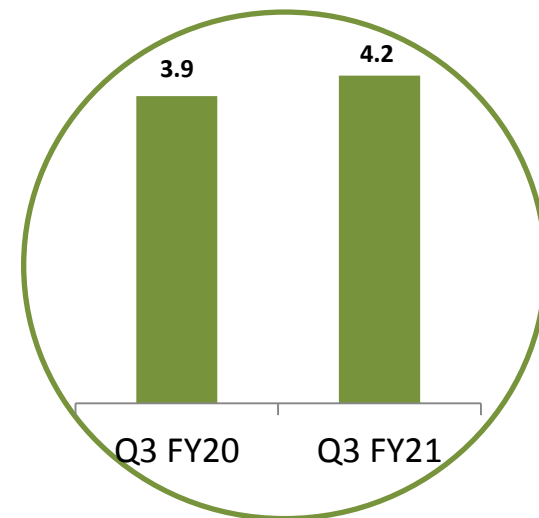
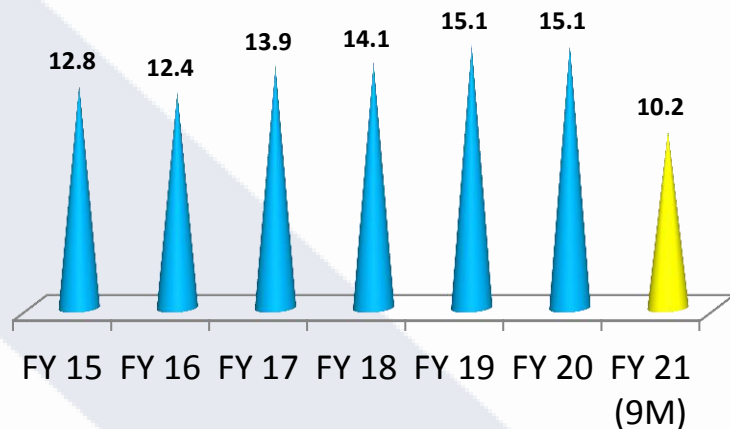
## Operational Performance



# PRODUCTION PERFORMANCE

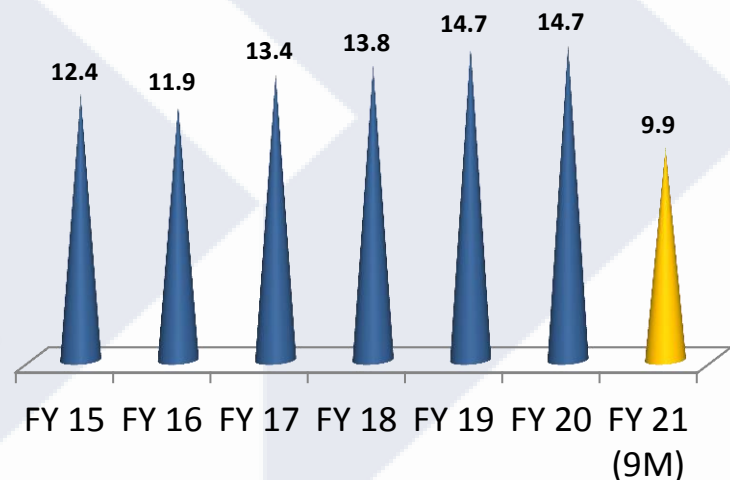
All figures In Million Tonne

## SALEABLE STEEL PRODUCTION (incl. SSPs)

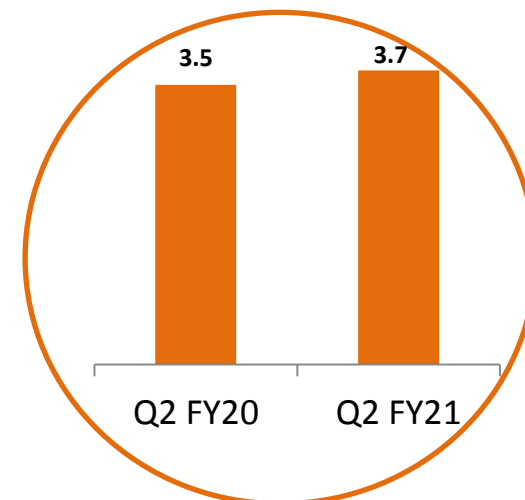


### Annual

## SALEABLE STEEL PRODUCTION (5 ISPs)



### Quarterly

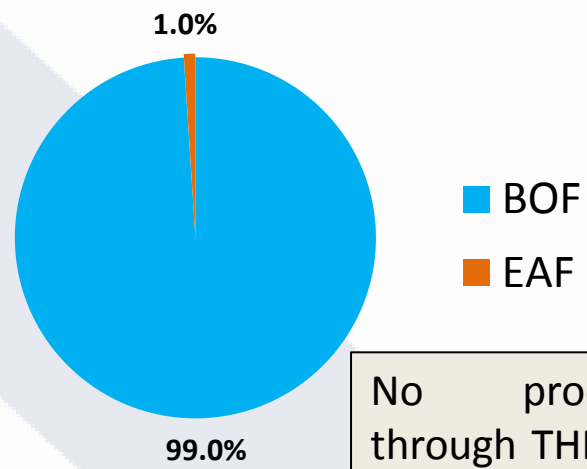


Production had been severely affected on account of COVID-19 impact during Q1 FY21

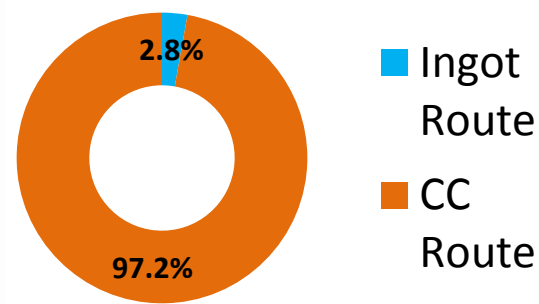
# PRODUCTION PERFORMANCE : 9M FY 21



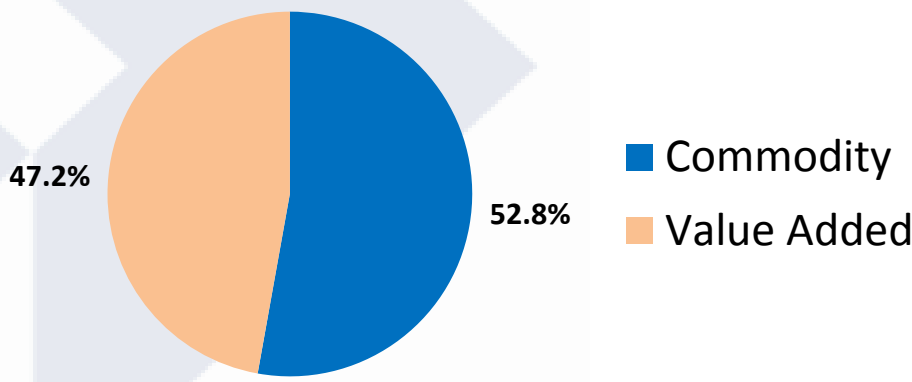
## CRUDE STEEL PRODUCTION BY PROCESS



No production through THF Route this financial year



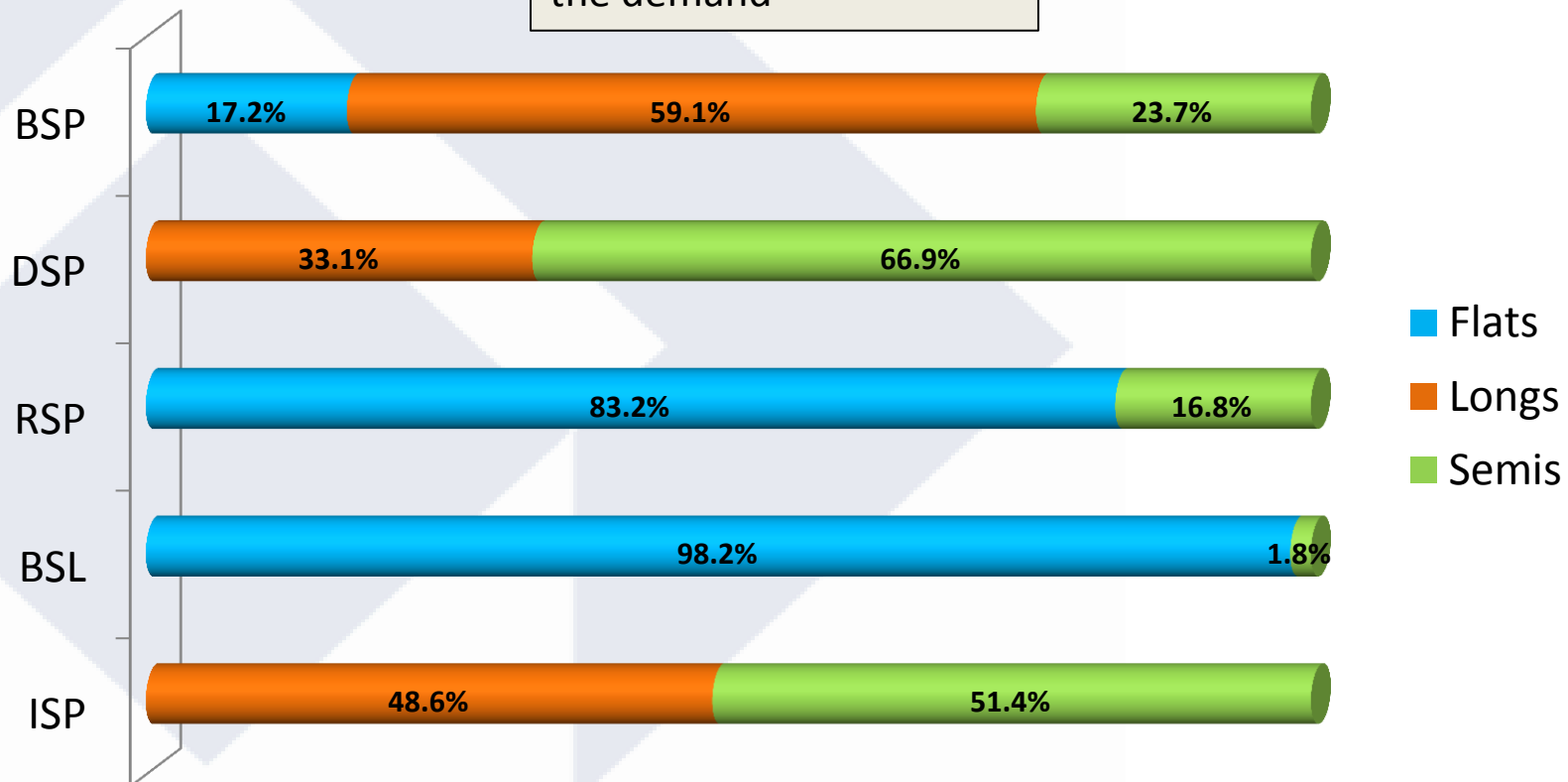
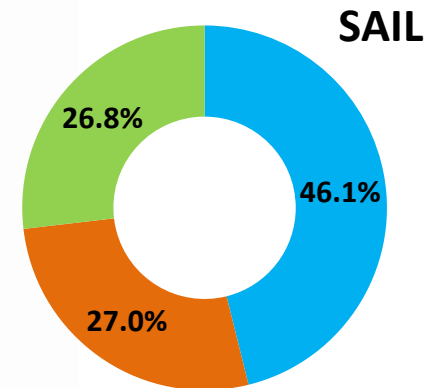
## SALEABLE STEEL PRODUCTION BY PROCESS



# PRODUCTION PERFORMANCE : 9M FY 21

## PRODUCT MIX : 5 ISPs

The percentage of semis has increased while both flat and long finished products saw a decline in share as the production was regulated in line with the demand

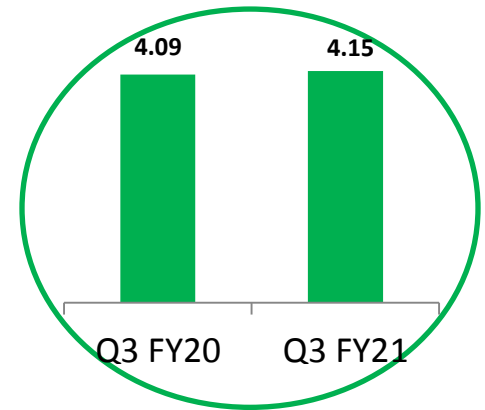
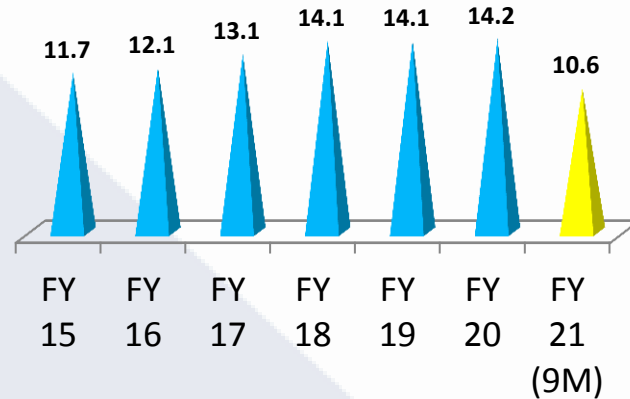




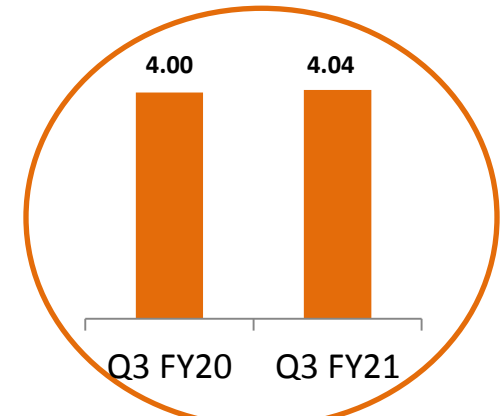
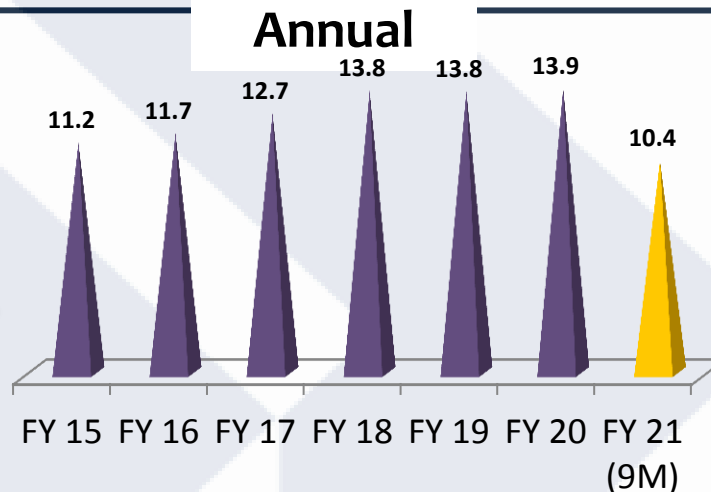
# SALES PERFORMANCE

All figures In Million Tonne

## TOTAL SALES (incl. SSPs)



## SALES OF 5 ISPs



Domestic demand had been impacted on account of COVID-19 during the initial months of the Financial Year. However, SAIL seized the opportunity available in the international market by exporting about 15.17 lakh tonnes during the period as against 8.44 lakh tonnes during CPLY, a growth of about 80%. Further, with domestic markets also looking up positively since, SAIL has again led the market by notching up its best ever performance.

# STEEL AUTHORITY OF INDIA LIMITED



**Efficiency &  
Sustenance  
Performance**

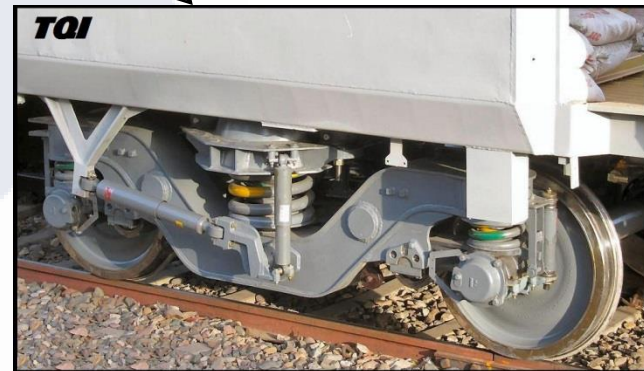


# RECENTLY DEVELOPED PRODUCTS

NARROW PARALLEL  
FLANGE BEAM 750:  
USAGE IN  
CONSTRUCTION  
INDUSTRY



LINKE HOFMANN  
BUSCH (LHB) WHEELS:  
USAGE FOR RAILWAYS



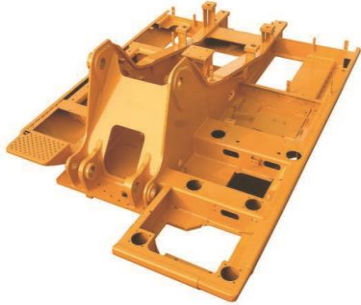
# PRODUCT CUSTOMISATION FOR END USERS

## HYVA TIPLERS



HSMP AND PMP  
GRADE: IS  
2062E450, E600

Main Frame



Track Frame



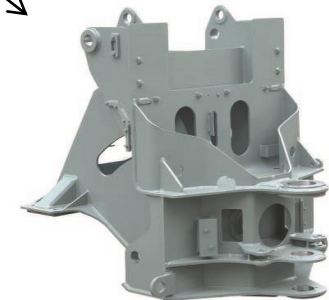
Boom



Arm



Front Frame





# PRODUCT CUSTOMISATION FOR END USERS

## ASHOK LEYLAND

**U TRUCK  
U 2518T**



HRC PMP  
GRADE: IS5986,  
ISH500,  
LAHFQ450

**CAPTAIN 2518**



Rear Axle Beam developed using HRC SAILFORMING 410 / 450 grades

Live Axle Beam

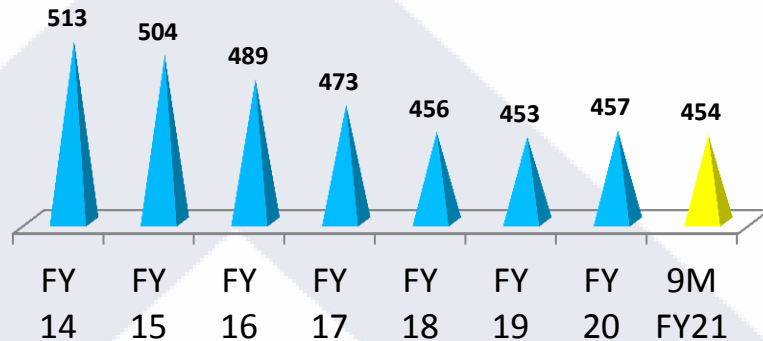


Dummy Axle Beam



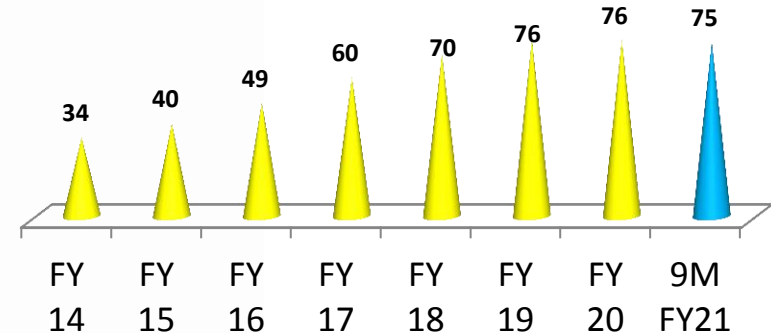
# TECHNO-ECONOMIC PARAMETERS

Coke Rate: kg/thm



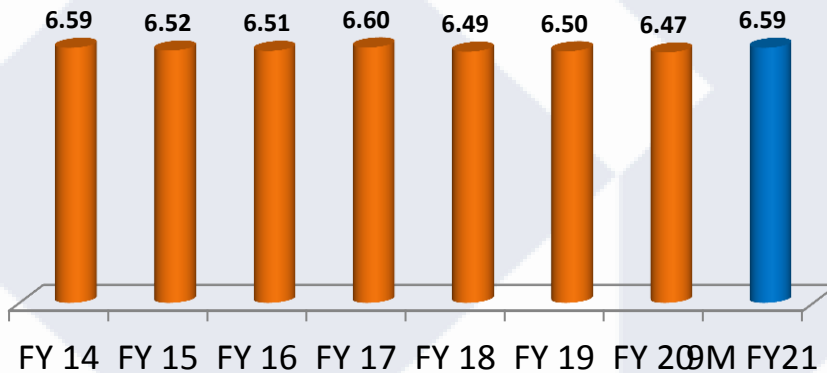
Reduction of 11% over FY14

CDI Rate: kg/thm



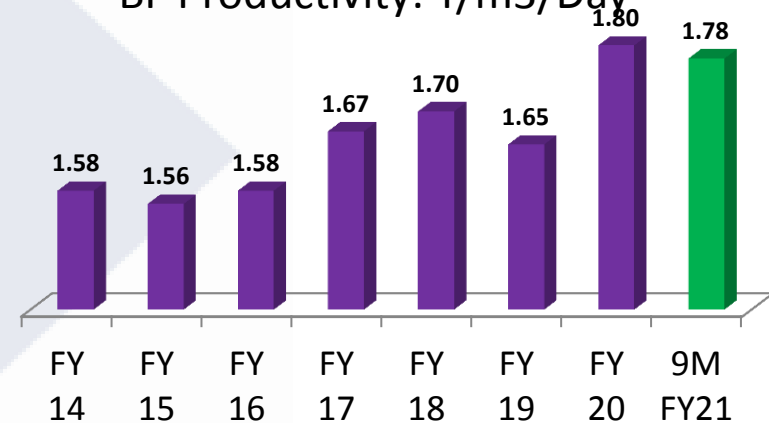
Increase of 124% over FY14

Specific Energy Consumption: GCal/tcs



Reduction of 2% over FY14

BF Productivity: T/m3/Day



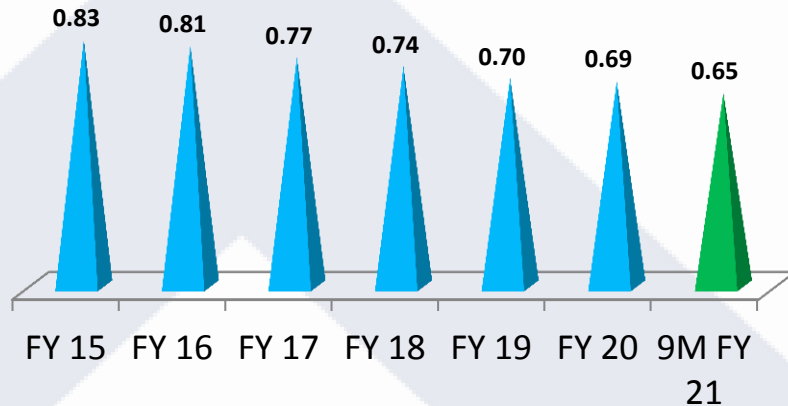
Improvement of 14% over FY14

Calculation done on considering performance during FY20.

Performance during current FY especially Q1 severely impacted on account of lower volumes.

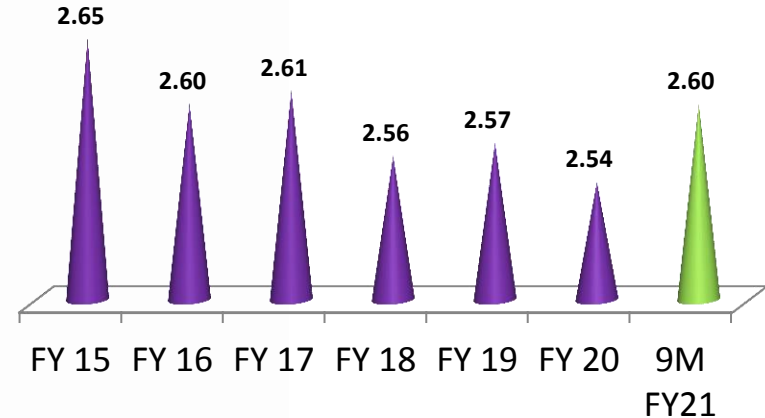
# SUSTAINANCE PARAMETERS

PM Emission Load: kg/tcs



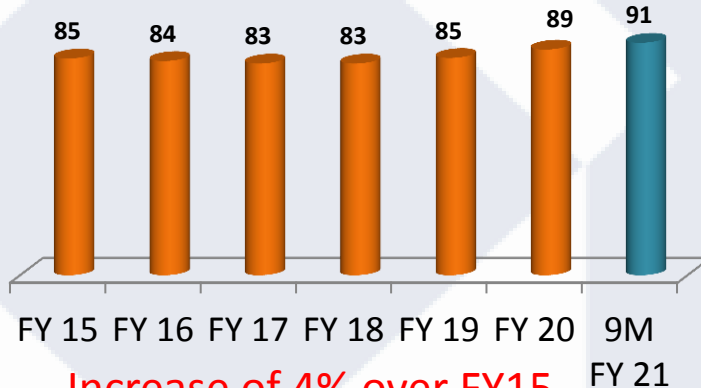
Reduction of 17% over FY15

Specific CO2 Emission: m3/tcs



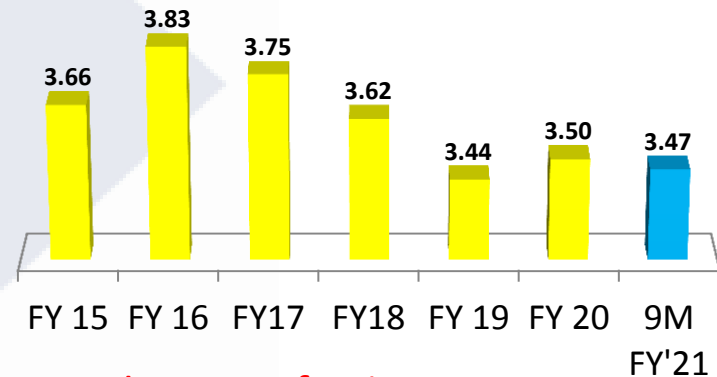
Reduction of 4% over FY15

Solid Waste Utilisation (%)



Increase of 4% over FY15

Specific Water Consumption: m3/tcs



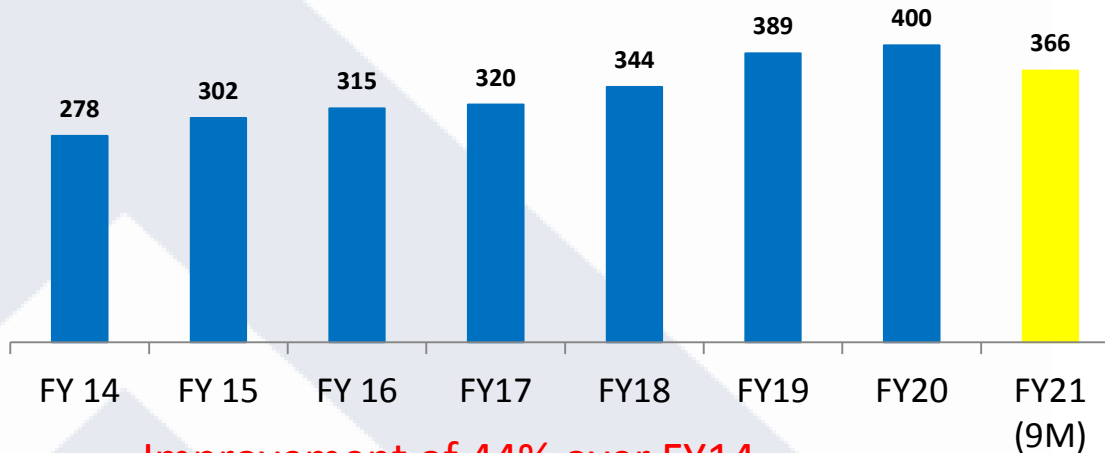
Reduction of 4% over FY15

Calculation done on considering performance during FY20.  
Performance during current FY especially Q1 severely impacted on account of lower volumes.



# MANPOWER PERFORMANCE

## LABOUR PRODUCTIVITY TREND (tcs/man/year)



Improvement of 44% over FY14

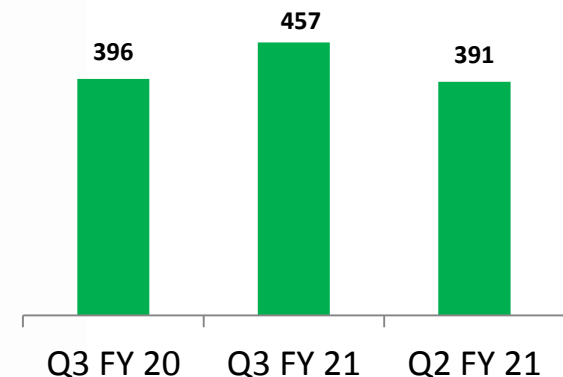
Calculation done on considering performance during FY20. Performance during current FY especially Q1 severely impacted on account of lower volumes.

## MANPOWER

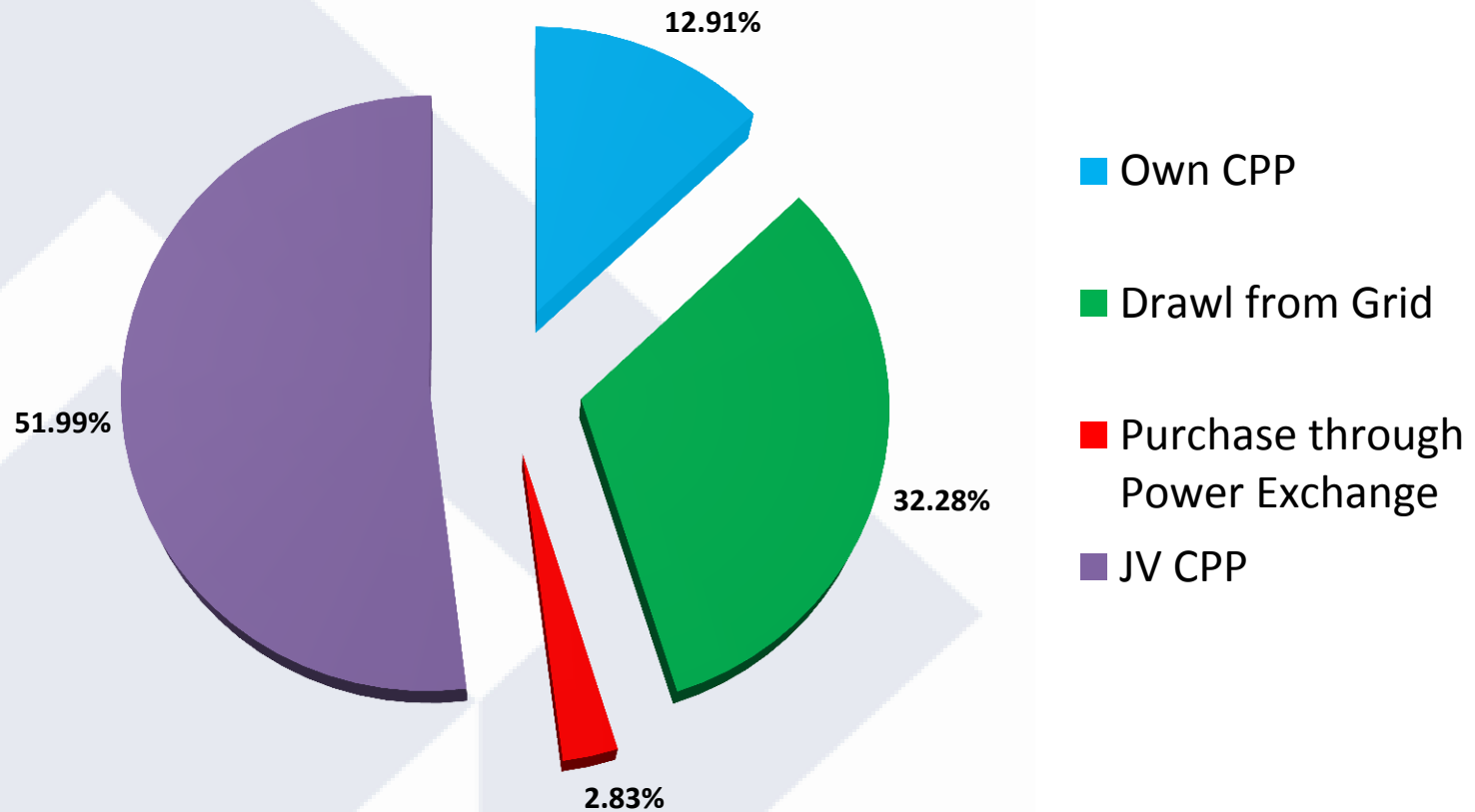
Total manpower as on 01.01.2021: **66396**

Reduction in 9M FY 21: **2983**

## LABOUR PRODUCTIVITY Q3 FY'21 VIS-À-VIS CPLY AND PREVIOUS QUARTER (tcs/man/year)



# POWER CONSUMPTION – 9M FY 21



# STEEL AUTHORITY OF INDIA LIMITED



## Financial Performance



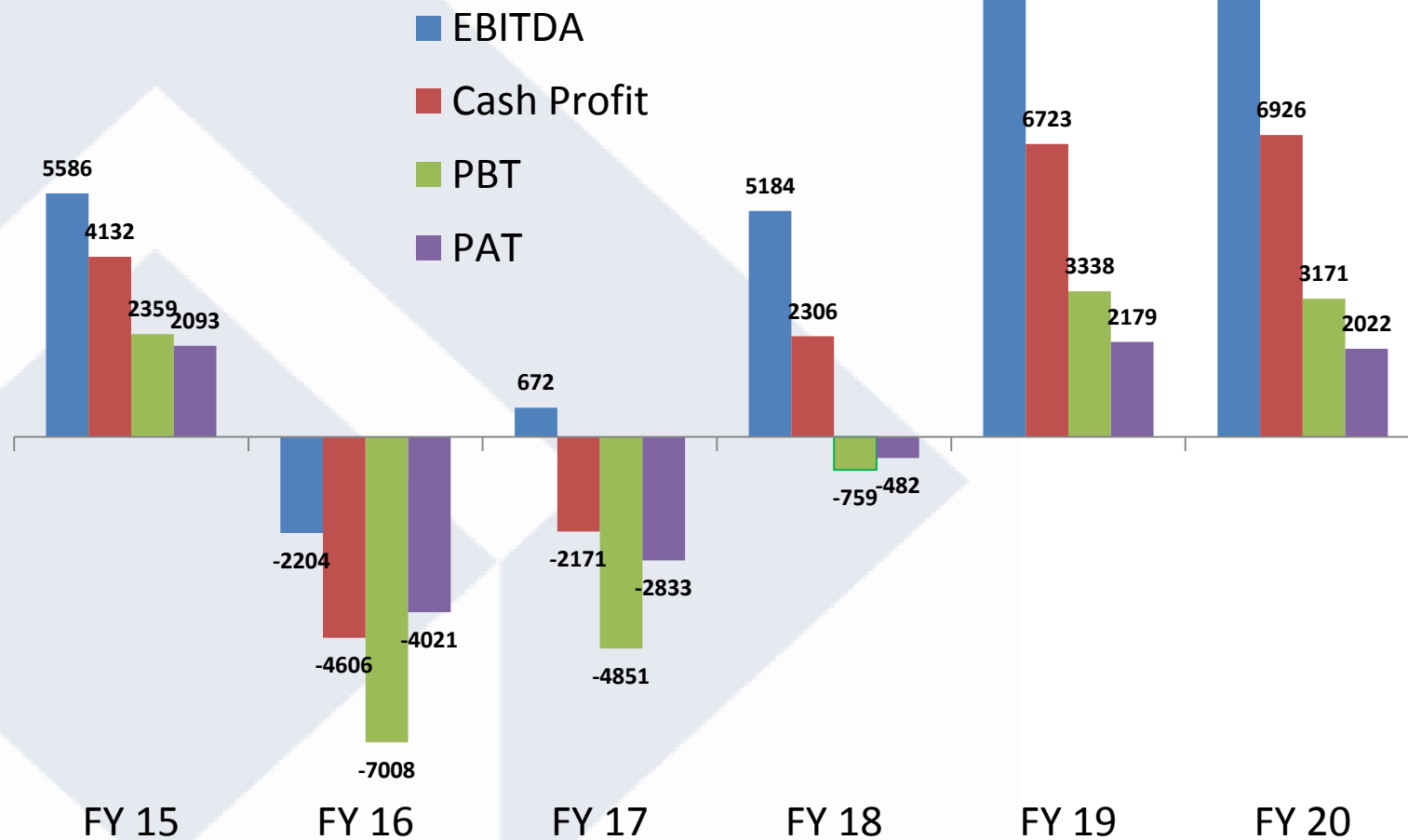
# FINANCIAL PERFORMANCE

<b>Rs. Crore (INDAS Compliant figures)</b>	<b>9M FY 21</b>	<b>9M FY 20</b>	<b>Q2 FY 21</b>	<b>Q3 FY 21</b>	<b>Q3 FY 20</b>
<b>Sales</b>	45286	45001	16834	19614	16405
<b>EBITDA</b>	7267	4275	2098	5294	1186
<b>Depreciation</b>	2944	2700	990	981	926
<b>Finance Cost</b>	2277	2578	720	670	849
<b>PBT Before Exceptional Items</b>	2045	-1003	388	3642	-590
<b>Exceptional/Abnormal Items (VRS/Suspended Operations)</b>	-225	7	-222	-2	2
<b>PBT After Exceptional Items</b>	2271	-1011	610	3645	-591
<b>Tax</b>	1864	-307	217	2361	-162
<b>Profit After Tax</b>	406	-704	393	1283	-430

# FINANCIAL PERFORMANCE

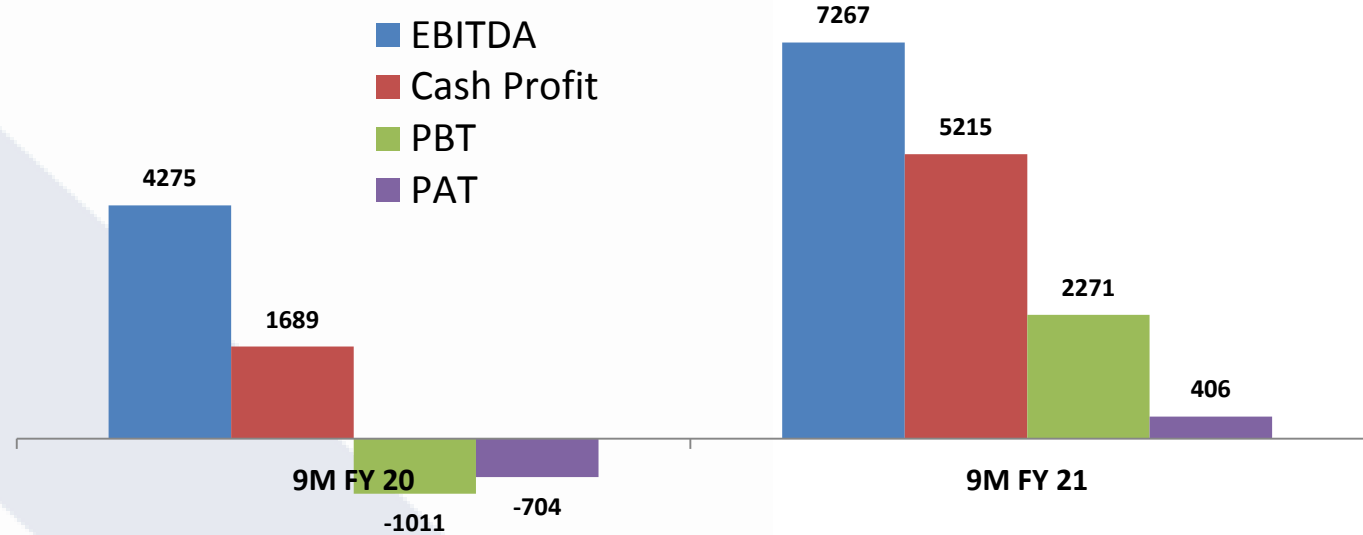
## Annual Profit Trend

*All figures in Rs crore*

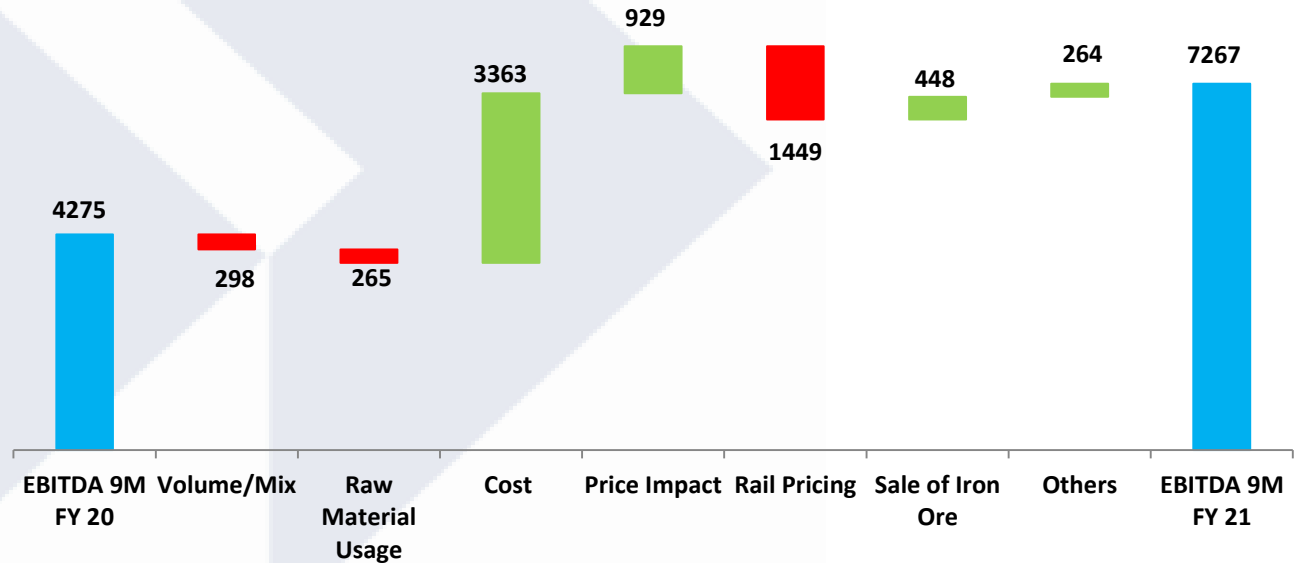


# FINANCIAL PERFORMANCE

## Nine Monthly Performance



## EBITDA Movement 9M FY 21 vs 9M FY 20



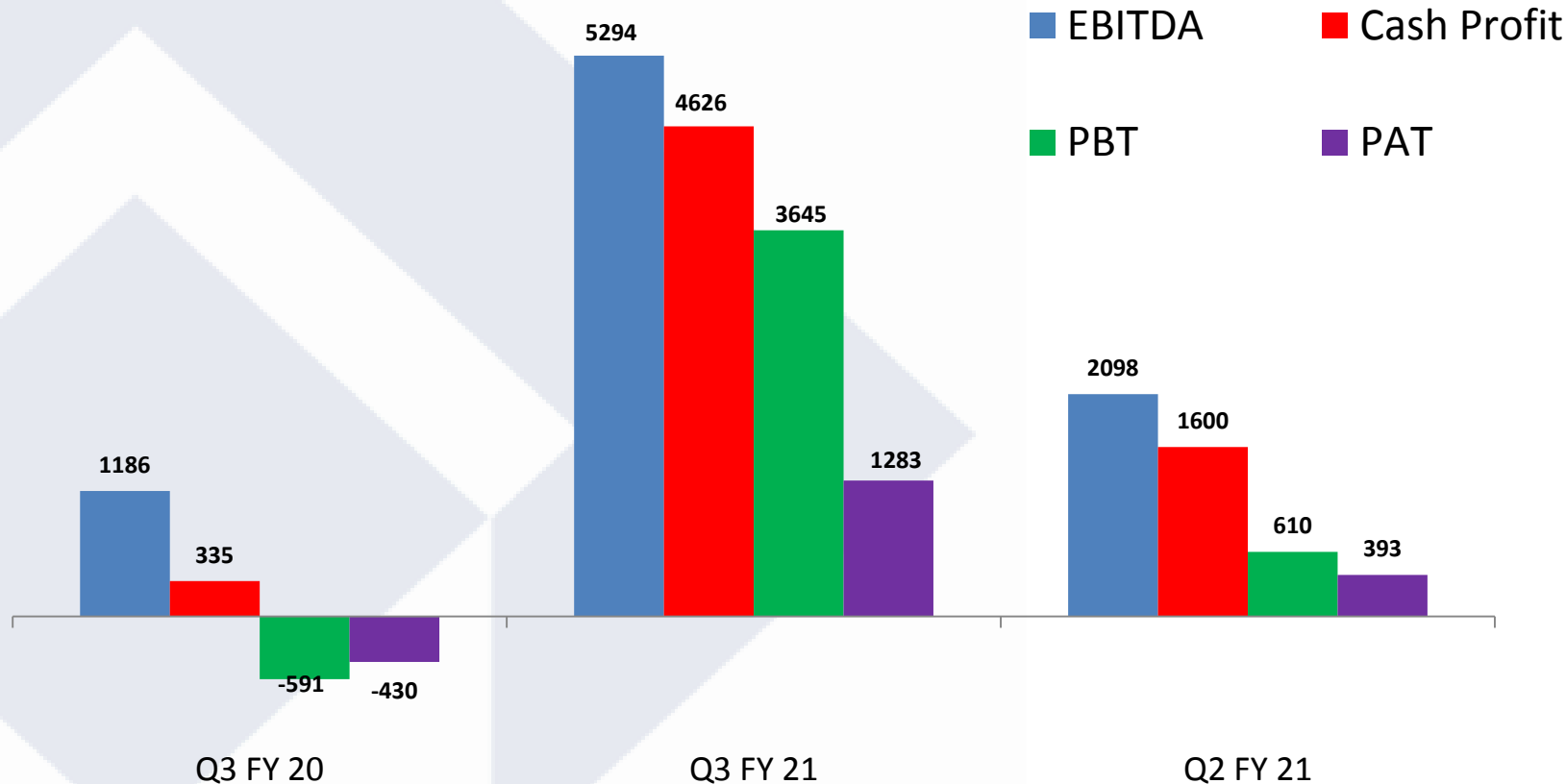
All figures in Rs crore

# FINANCIAL PERFORMANCE

## Quarterly Performance

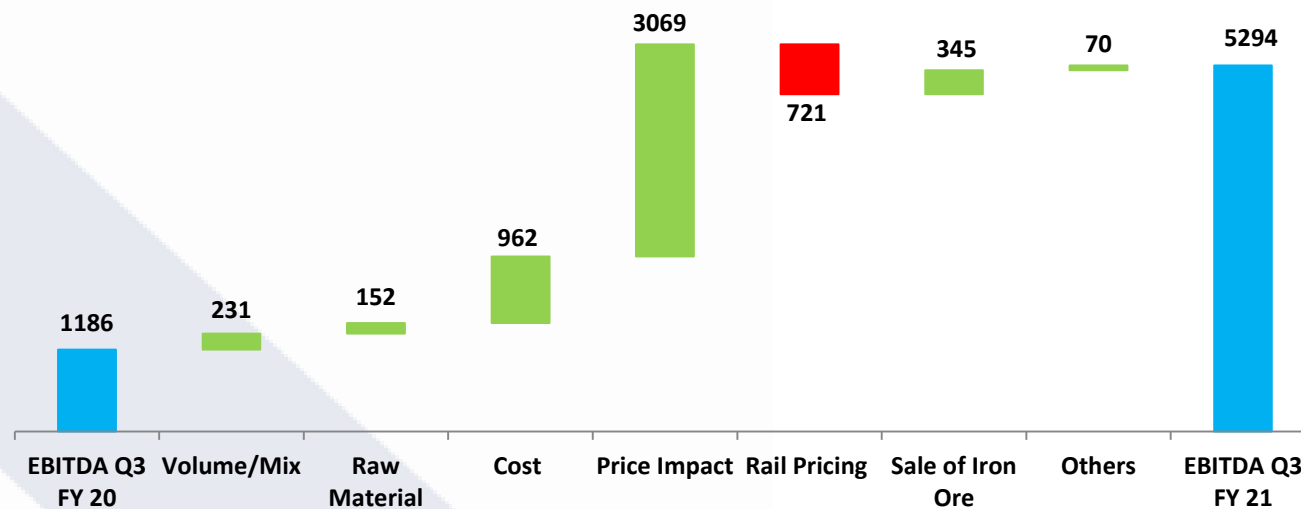
Q2 FY 20 vs Q2 FY 21 vs Q1 FY 21

*All figures in Rs crore*



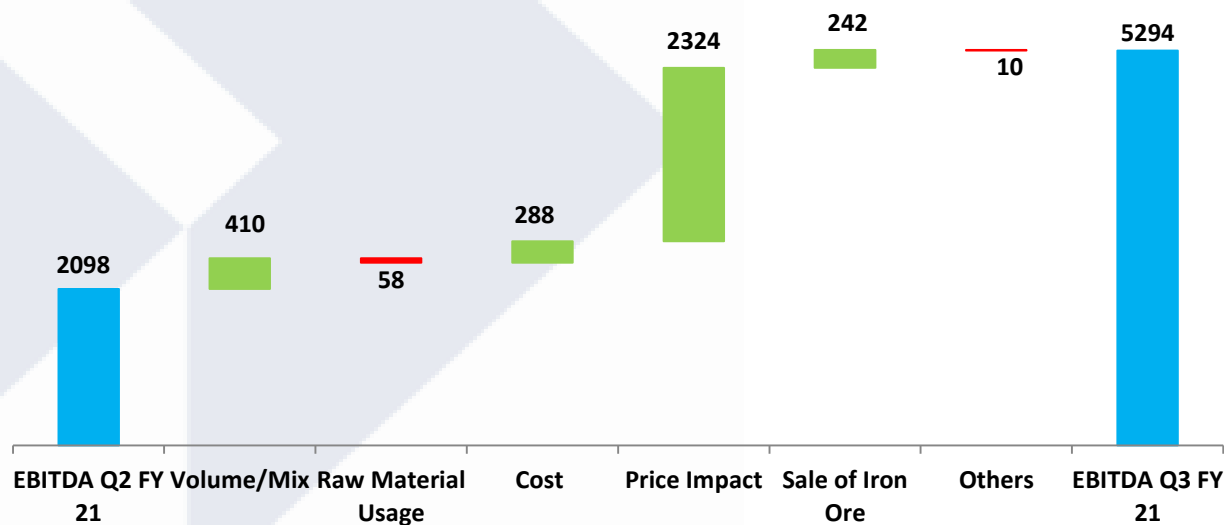
# FINANCIAL PERFORMANCE

## EBITDA Movement Q3 FY 21 vs Q3 FY 20



*All figures in Rs crore*

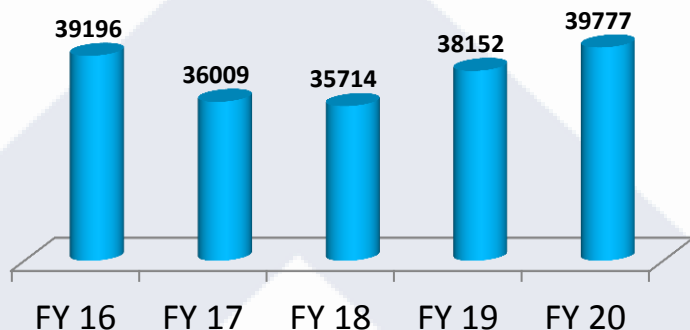
## EBITDA Movement Q3 FY 21 vs Q2 FY 21



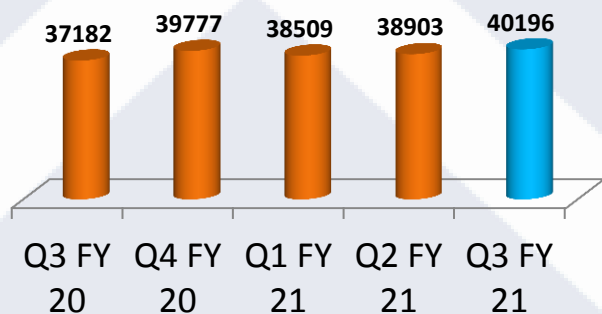


# FINANCIAL PERFORMANCE

## Annual Net Worth

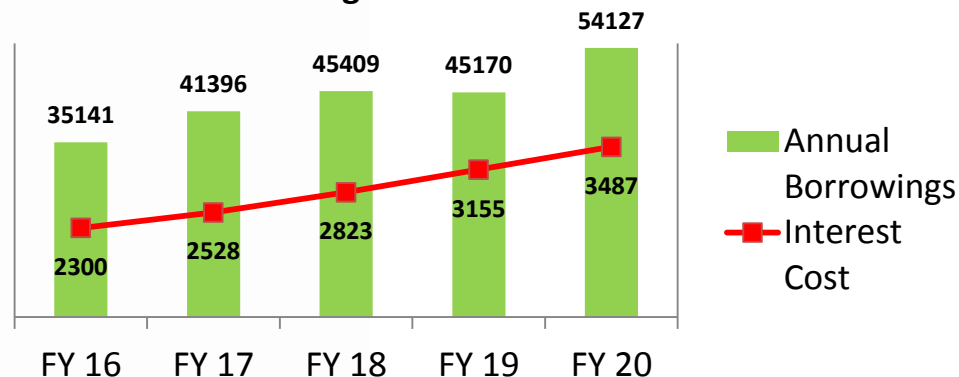


## Quarterly Net Worth

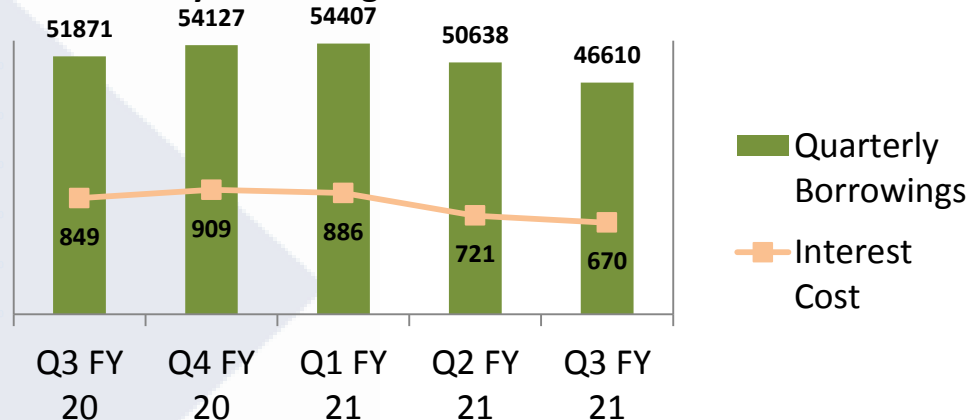


All figures in Rs. crore

## Annual Borrowings & Interest cost



## Quarterly Borrowings & Interest cost



## Debt Equity Ratio

31/3/15	31/3/16	31/3/17	31/3/18	31/3/19	31/3/20	30/6/20	30/9/20	30/12/20
0.69	0.90	1.15	1.27	1.18	1.36	1.41	1.30	0.71

# STEEL AUTHORITY OF INDIA LIMITED



## Capacity Building



# SAIL's MODERNISATION & EXPANSION PLAN

Million Tonne	Actual Production 2019-20	Capacity After On-going Expansion
Crude Steel	16.155	21.4
Saleable Steel	15.083	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

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## EXPECTED OUTCOME

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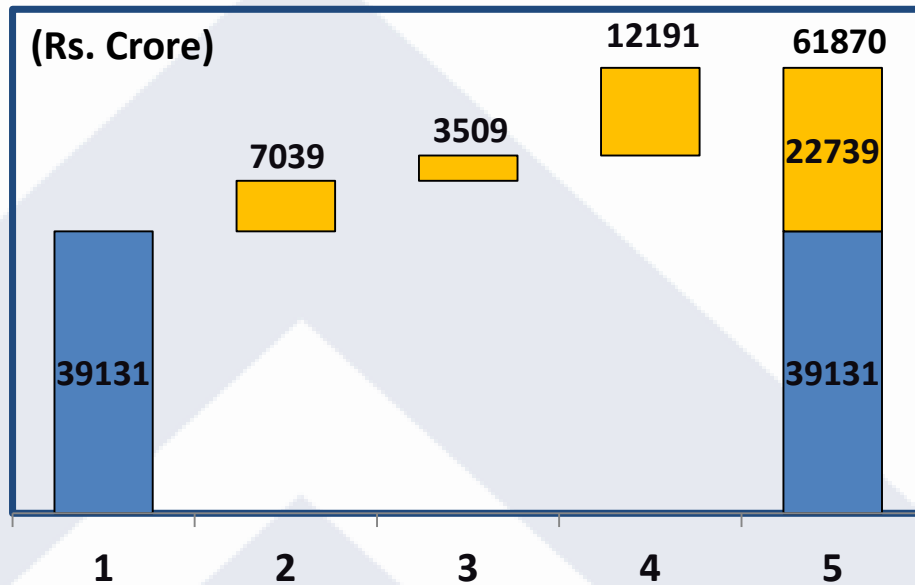
- Production through twin-hearth furnace (THF) route to be replaced by BOF-LD converter route.
- Production through Ingot – teeming route to be replaced with continuous cast production route.
- Enhancement of Production volume by addition of 2 new 4060 m<sup>3</sup> Blast Furnaces and one Blast Furnace of 4160 m<sup>3</sup>.
- 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:

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- 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)

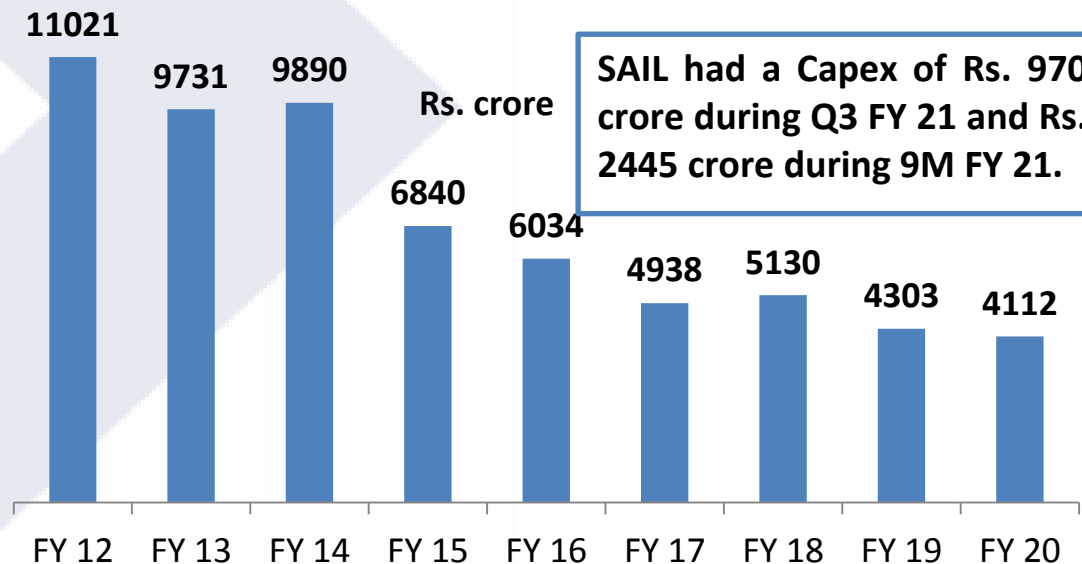


- 1 Expansion of existing capacity
- 2 Value-addition / Product-mix improvement
- 3 Technological up gradation / Modernization
- 4 Sustenance including de-bottlenecking, AMR & Environment
- 5 Total Estimated Cost

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 FY20 was Rs.4000 Crore (including expenditure towards Capital Repairs and Spares needed to be capitalised under Ind AS).

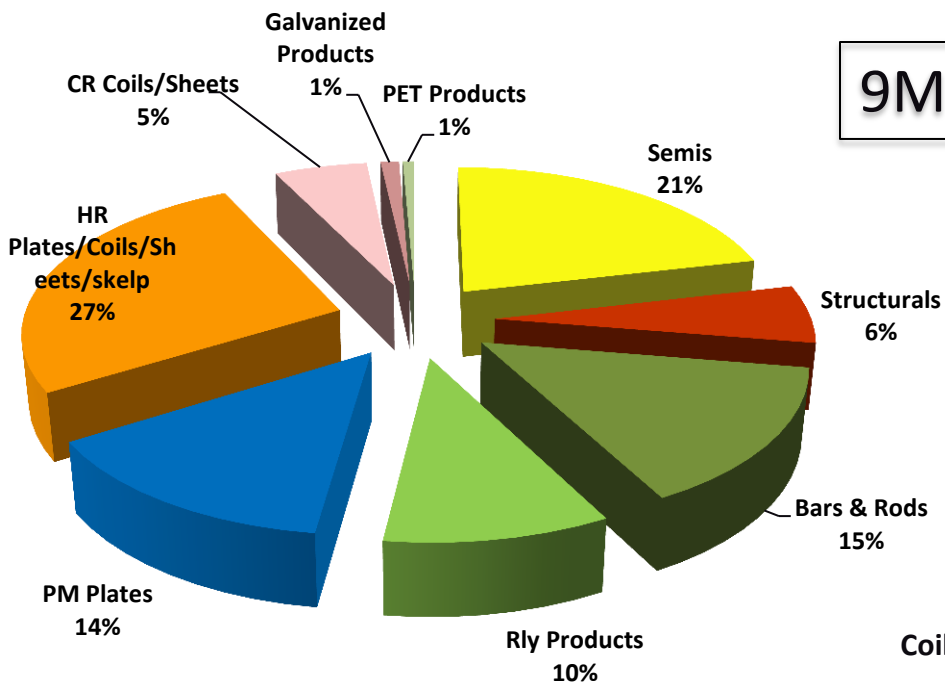


SAIL had a Capex of Rs. 970 crore during Q3 FY 21 and Rs. 2445 crore during 9M FY 21.

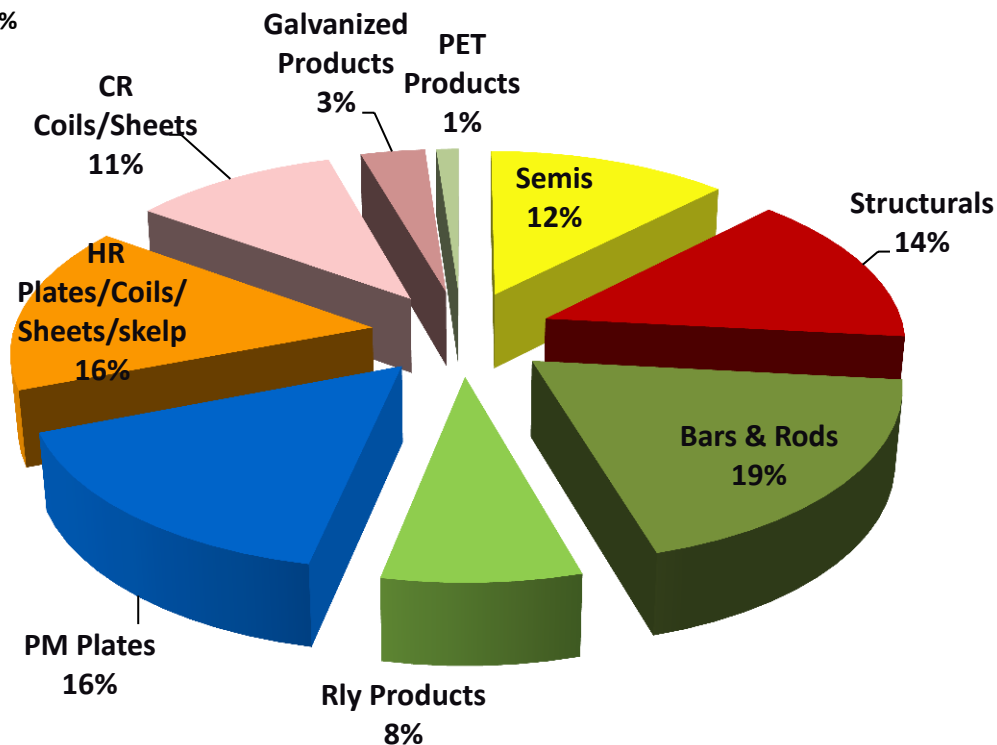
# CAPACITY AFTER EXPANSION

Plant	Hot Metal (MTPA)		Crude Steel (MTPA)		Saleable Steel (MTPA)	
	2019-20	After Expansion	2019-20	After Expansion	2019-20	After Expansion
<b>BSP</b>	4.82	7.5	4.50	7.0	3.98	6.6
<b>DSP</b>	2.40	2.5	2.19	2.2	2.08	2.1
<b>RSP</b>	3.63	4.5	3.51	4.2	3.21	4.0
<b>BSL</b>	4.09	5.8	3.67	4.6	3.39	4.2
<b>ISP</b>	2.51	2.9	2.08	2.5	2.09	2.4
<b>VISL</b>	0.00	0.3	0.00	0.2	0.01	0.2
<b>ASP</b>	-	-	0.10	0.5	0.10	0.4
<b>SSP</b>	-	-	0.11	0.2	0.23	0.3
<b>TOTAL</b>	<b>17.44</b>	<b>23.5</b>	<b>16.16</b>	<b>21.4</b>	<b>15.08</b>	<b>20.2</b>

9M FY 2020-21



Post  
Ongoing Expansion



## 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	2019-20 (Actual)	After Expansion
Crude Steel	0.11	0.18
Saleable Steel	0.23	0.34



## 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 m<sup>2</sup>)
- Blast Furnace 4160 m<sup>3</sup> 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)

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

## Production (MTPA) :

Item	2019-20 (Actual)	After Expansion
Crude Steel	2.08	2.50
Saleable Steel	2.09	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





## 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).

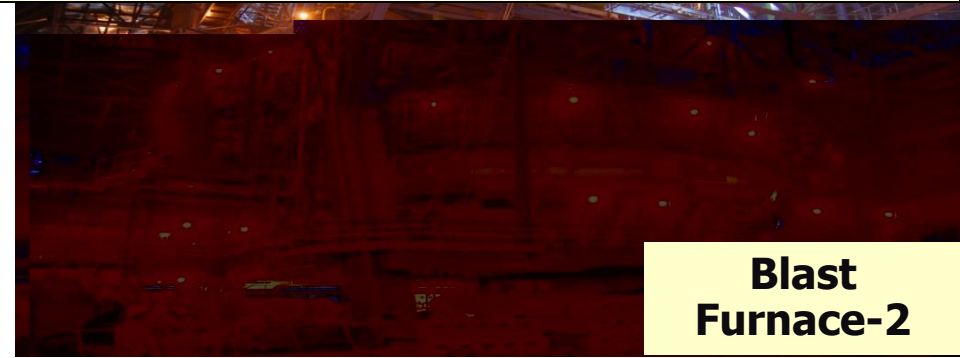
## Production (MTPA) :

Item	2019-20 (Actual)	After Expansion
Crude Steel	3.67	4.61
Saleable Steel	3.39	4.18

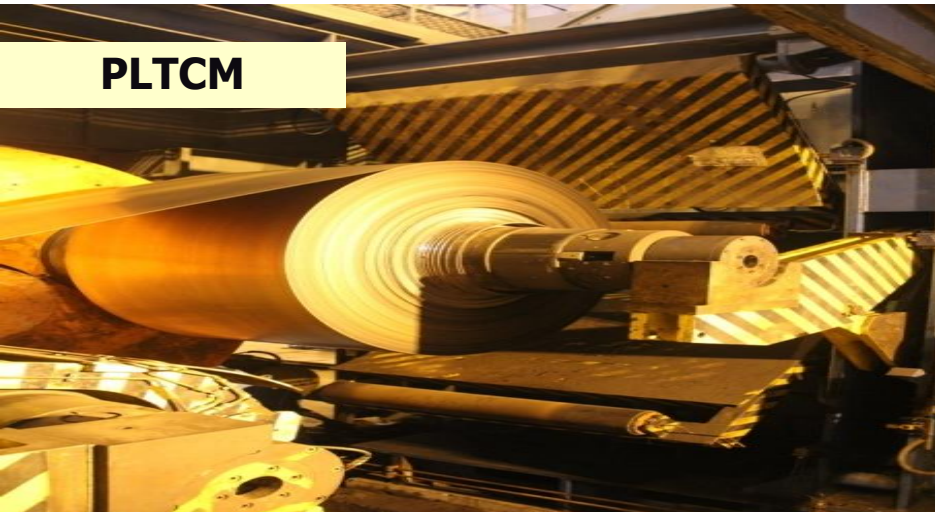
# Current Progress of Expansion at Bokaro Steel Plant



**Coke Oven  
battery-2**



**Blast  
Furnace-2**



**PLTCM**



**Coil Packaging Line**



**Skin Pass  
Mill**



**Bell Annealing Furnace**

## 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 and Rod Mill (0.9 MTPA)
- Blast Furnace 4060 m<sup>3</sup> (2.8 Mtpa)
- New Steel Melting Shop (SMS-3) with Converter-1 & 2 and New Billet Casters (2x6) and New Billet-cum-Bloom Caster (1X6).
- Convertor - 3, LF -3, Argon Rinsing Station-3 in SMS -3.

## Production (MTPA) :

Item	2019-20 (Actual)	After Expansion
Crude Steel	4.50	7.0
Saleable Steel	3.98	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**

## Facilities Completed:

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

## Production (MTPA) :

Item	2019-20 (Actual)	After Expansion
Crude Steel	3.51	4.20
Saleable Steel	3.21	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



3<sup>rd</sup> BOF Converter



3<sup>rd</sup> Slab Caster

## 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	2019-20 (Actual)	After Expansion
Crude Steel	2.19	2.20
Saleable Steel	2.07	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
2019-20	17.438	28.88	Existing Mines
Post Expansion	23.46	39	<p>The capacity of existing mines at Kiriburu, Meghahatuburu, Bolani &amp; 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 &amp; 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"> <li>Expansion at Kiriburu has already been completed whereas Meghathaburu is being ramped up to meet the requirement of the ongoing expansion plan.</li> <li>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 only Durgaiburu Lease.</li> </ul>
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	<p>**Depleted resources and quality constraints</p> <ul style="list-style-type: none"> <li>New Pellet Plants shall use the existing reserve of fines incl. dumps &amp; slimes at captive mines.</li> </ul>
Barsua, Kalta, Taldih	6.00	6.50	<ul style="list-style-type: none"> <li>Environment clearance obtained &amp; FC obtained on 23<sup>rd</sup> Oct. 2017 for ML-162 lease.</li> <li>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.</li> </ul>
Rowghat	New	12.00	All statutory clearances have been received. MDO has been engaged and LOA issued to MDO on 1 <sup>st</sup> 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
2019-20	17.438	15.193	<ul style="list-style-type: none"> <li>• Import Component – 90.5%</li> <li>• Over 70% of imported coal is sourced from Australia.</li> <li>• Indigenous: 9.5%</li> <li>• Domestic coal is largely sourced from Coal India Ltd.</li> <li>• SAIL has existing captive clean coking coal production of nearly 0.7 mtpa, During 2018-19, production was 0.27 mt.</li> </ul>
Post Expansion	23.46	19.5	<ul style="list-style-type: none"> <li>• Long term / Quarterly contracts cover 95% of Import requirements</li> <li>• Tasra captive coal mine being developed to produce 4 mtpa of ROM (1.8 mtpa washed coal)</li> <li>• New linkages / acquisitions are being explored.</li> <li>• Request has been made to Ministry of Coal for allocation of new potential coking coal blocks in line with recommendations of NITI Aayog.</li> </ul>








# STEEL AUTHORITY OF INDIA LIMITED



## Strategic Partnerships








# MAJOR JOINT VENTURES



FOCUS AREA	ALLIANCE PARTNER	REMARKS
STEEL	 	<ul style="list-style-type: none"> <li>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.</li> </ul>
DOWNSTREAM STEEL PROCESSING UNITS	  	<ul style="list-style-type: none"> <li>SAIL Bansal Service Center Limited – A JV with Bansal Metal Works Ltd. for a Flat Product service centre at Bokaro.</li> <li>SAIL SCL Kerala Limited – A JV with Govt. of Kerala for producing TMT Bars at Kozhikode.</li> <li>Prime Gold – SAIL JVC Limited – A JV with M/s Prime Gold for producing TMT Bars at Gwalior.</li> <li>VSL SAIL JVC Limited – A JV with M/s Velagapudi Steel Ltd. for producing TMT Bars at Ujjain.</li> </ul>
ENERGY	 	<ul style="list-style-type: none"> <li>JV with NTPC for operating and managing CPPs of Bhilai, Durgapur and Rourkela.</li> <li>JV with DVC for operating &amp; managing CPP of Bokaro.</li> </ul>



# MAJOR JOINT VENTURES

FOCUS AREA	ALLIANCE PARTNER	REMARKS
TECHNOLOGY		<ul style="list-style-type: none"> <li>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.</li> </ul>
RAW MATERIALS	     	<ul style="list-style-type: none"> <li>International Coal Ventures Pvt. Ltd., a SPV of 5 leading PSUs incorporated (SAIL, RINL, CIL, NTPC &amp; NMDC) for acquisition / operation of coal assets in overseas territories.</li> <li>M/s S&amp;T Mining Company Pvt. Ltd. formed with Tata Steel for developing coking coal mines in India.</li> <li>M/s SAIL &amp; MOIL Ferro Alloys (Pvt.) Ltd. formed with MOIL for production of Ferro-alloys at Bhilai.</li> </ul>
CEMENT		<ul style="list-style-type: none"> <li>Bhilai Jaypee Cement Ltd. -Slag based cement plant of 2.2 million tonne per annum capacity with grinding unit at Bhilai &amp; clinkering unit at Satna.</li> </ul>

# MAJOR JOINT VENTURES

FOCUS AREA	ALLIANCE PARTNER	OBJECTIVE
<b>WAGON MANUFACTURE</b>	 THE INFRASTRUCTURE PEOPLE	<ul style="list-style-type: none"><li>▪ 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.</li></ul>
<b>E-PORTAL</b>		<ul style="list-style-type: none"><li>▪ JV with Tata Steel to promote e-commerce activities in steel and related areas</li></ul>

# 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

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