

EXECUTIVE SUMMARY

For

Expansion and Modification of an existing plant facilities (62,700 TPA DRI to 92,400 TPA DRI, 4MW WHRB to 5 MW WHRB), 2X4.5 MTPA Iron Ore Grinding Unit, 10.0 MTPA Thickening & Filtration Unit and 2X4.0 MTPA Iron Ore Pellet Plant by setting an additional Integrated Steel Plant (ISP) of 4.5 MTPA Capacity with 483 MW (488MW total) Captive Power Plant and 5.0 MTPA Filtration Unit (Brown Field Project)

Category “A” of Schedule 3 (a) Metallurgical Industries (Ferrous and Non-ferrous), Schedule 1(d) Thermal Power Plant and Schedule 4(b) Coke Oven of the Schedule of the EIA Notification, 2006

Location: Plot No. A-1, MIDC Konsari, Survey No. 174, 198, 214, 217-229, 231-351, 354-402, 404-433, 435, 438-467, 469-471, 474-494, 511-512, 516-517, 551-552, 559-561, 564-610, 612-617, 623, 635-638, 641-657, 664-703, 708-718 at Village Konsari; Tahsil- Chamorshi, District Gadchiroli, Maharashtra

Details of TOR	File No. IA-J-11011/465/2022-IA-II(IND-I) dated 05.10.2024	
Environmental Monitoring laboratory engaged:	NILAWAR LABORATORIES (A UNIT OF MNEC CONSULTANTS PVT. LTD.)	
	NABL Certificate Number & Validity	TC-9782 22/08/2025
Baseline study period	Summer Season (March 2024 to June 2024)	
Project cost	Rs.24,620 Crores	

Project Proponent



***M/s Lloyds Metals and Energy Limited
P. No. A-1, MIDC Konsari, Taluka
Chamorshi, Dist. Gadchiroli, Maharashtra.***

Environmental Consultant:



***Pollution and Ecology Control Services
Near Dhantoli Police Station, Dhantoli, Nagpur
Email: pecsnagpur@gmail.com
Accreditation no.: NABET/EIA/2225/RA 0291
valid till 16th October 2025***

December 2024

EXECUTIVE SUMMARY

1. INTRODUCTION

The present report is a Draft EIA/EMP report for the Expansion and Modification of an existing plant facilities (62,700 TPA DRI to 92,400 TPA DRI, 4MW WHRB to 5 MW WHRB), 2x4.5 MTPA Iron Ore Grinding Unit, 10.0 MTPA Thickening & Filtration Unit and 2x4.0 MTPA Iron Ore Pellet Plant by setting an additional Integrated Steel Plant (ISP) of 4.5 MTPA Capacity with 483 MW (488 MW total) Captive Power Plant and 5.0 MTPA Filtration Unit. The report was prepared in accordance with the procedure outlined in the Notification of the Ministry of Environment, Forest & Climate Change (MoEF&CC), Government of India on 14th September 2006 and amendments thereto.

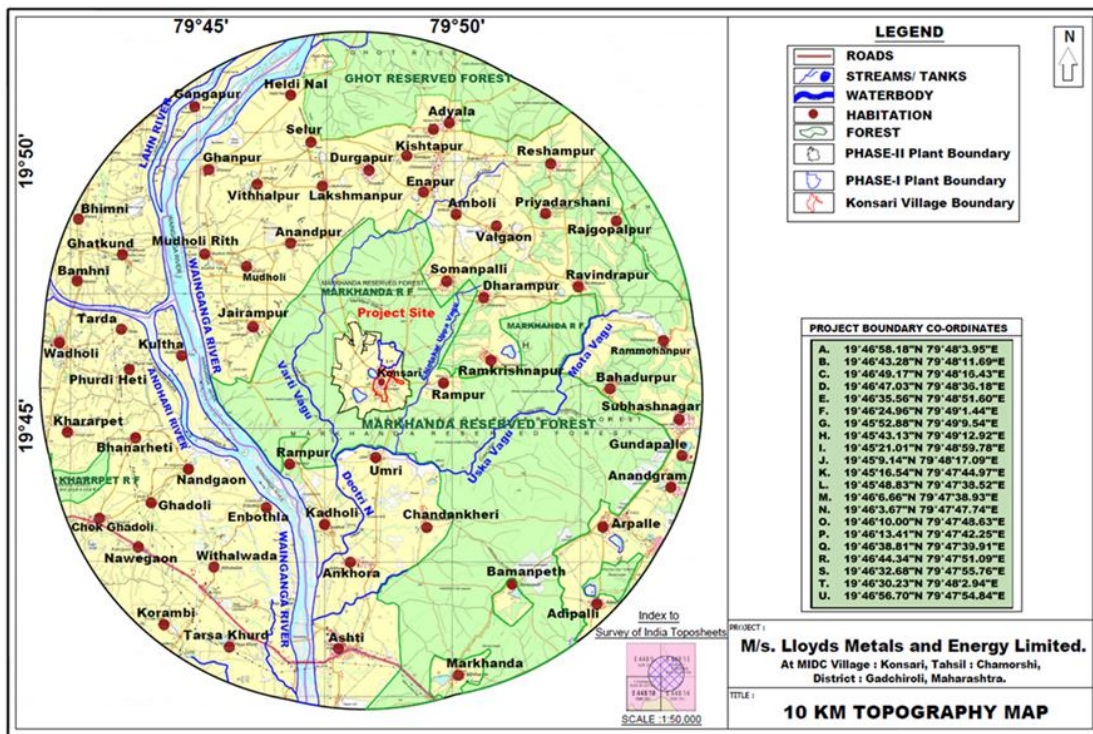
M/s Lloyds Metals & Energy Limited (LMEL) was granted an Environmental Clearance from MoEF&CC, New Delhi File No. J-11011/465/2022-IA-II(IND-I) EC Identification No. EC23A1006MH5717615N dated 03.11.2023 for Expansion of Project by Installation of 2 x 4.5 MTPA Iron Ore Grinding Unit, 10 MTPA Thickening & Filtration Unit and 2 x 4 MTPA Iron ore Pellet Plant at Plot A-1, Chamorshi (Konsari) Industrial Area, Village Konsari, Taluka Chamorshi, District Gadchiroli, Maharashtra.

2. IMPLEMENTATION OF THE PROJECT

M/s Lloyds Metals and Energy Limited (LMEL) has proposed an Expansion and Modification of an existing plant facilities (62,700 TPA DRI to 92,400 TPA DRI, 4MW WHRB to 5 MW WHRB) in operation, 2x4.5 MTPA Iron Ore Grinding Unit, 10.0 MTPA Thickening & Filtration Unit and 2x4.0 MTPA Iron Ore Pellet Plant (under construction) by setting an additional Integrated Steel Plant (ISP) of 4.5 MTPA Capacity with 483 MW (488 MW total) Captive Power Plant and 5.0 MTPA Filtration Unit on 477.6622 ha of land area on Survey nos. 174, 198, 214, 217-229, 231-351, 354-402, 404-433, 435, 438-467, 469-471, 474-494, 511-512, 516-517, 551-552, 559-561, 564-610, 612-617, 623, 635-638, 641-657, 664-703, 708-718 at Village Konsari adjacent to Plot No. A1 MIDC Konsari Chamorshi Industrial area, Taluka Chamorshi, District Gadchiroli (where both operational and under construction projects exist).

The total land area for the project after modification and expansion will be 527.9522 ha. (Existing 50.29 ha + Proposed 477.6622 ha).

Plot no. A-1 with 50.29 ha of land area in MIDC Konsari (Chamorshi Industrial area), village – Konsari, Tehsil Chamorshi is leased by MIDC to Lloyds Metals & Energy Limited; whereas the land proposed for 4.5 MTPA ISP project at Konsari is notified as Industrial land by Industries, Energy, Labour and Mining Department vide No. IDC 2023/(C.R.931)/Ind-14 dated 23rd November 2023, further notified dated 11.10.2024. Industries, Energy, Labour & Mining Department, Govt. of Maharashtra has notified **477.6622 ha** Non-Forest Land in Konsari for LMEL for industrial use vide Notification dated **23.11.2023**. DCF, Alapalli Forest Division has given NOC dated **03.02.2023** for non involvement of forest land in LMEL land in Konsari village for **473.74 ha**. Balance **3.92 ha** land is also non forest land.



Source: Survey of India (SOI) Toposheet

Topographical map (10Km radius)

PROJECT DETAILS

Project at a Glance

Sr. No.	Description	Details																																												
1.	Nature of the project	Expansion and Modification of an existing plant facilities (62,700 TPA DRI to 92,400 TPA DRI, 4MW WHRB to 5 MW WHRB), 2X4.5 MTPA Iron Ore Grinding Unit, 10.0 MTPA Thickening & Filtration Unit and 2X4.0 MTPA Iron Ore Pellet Plant by setting an additional Integrated Steel Plant (ISP) of 4.5 MTPA Capacity with 483 MW (488MW total) Captive Power Plant and 5.0 MTPA Filtration Unit																																												
2.	Production Capacity	<table border="1"> <thead> <tr> <th>Sr No</th> <th>Proposed Plants/Units</th> <th>Capacity/ Configuration</th> </tr> </thead> <tbody> <tr> <td>A.</td> <td>Coke oven plant</td> <td>2.0 MTPA (2.04 MTPA)</td> </tr> <tr> <td>B.</td> <td>Sinter Plant</td> <td>1 x 624 m² (5.12 MTPA)</td> </tr> <tr> <td>C.</td> <td>Blast Furnace</td> <td>1 x 5600 Cu.m. (4.63 MTPA GHM)</td> </tr> <tr> <td>D.</td> <td>Lime Plant</td> <td>2 x 500 TPD</td> </tr> <tr> <td>E.</td> <td>Dolomite Plant</td> <td>1 x 425 TPD</td> </tr> <tr> <td>F.</td> <td>Oxygen Plant (VPSA and Cryogenic Plant)</td> <td>2 x 1400 TPD</td> </tr> <tr> <td>G</td> <td>Basic Oxygen Furnaces (BOF)</td> <td>3 x 180 T</td> </tr> <tr> <td rowspan="2">H.</td> <td>Ladle Refining Furnaces (LRFs)</td> <td>3 x 180 T</td> </tr> <tr> <td>RH Degasser</td> <td>2 x 180 T</td> </tr> <tr> <td></td> <td>Endless Strip Plant & Rolling Mill (ESP)</td> <td>31,67,612 TPA</td> </tr> <tr> <td></td> <td>Endless Strip Plant (ESP) & Rolling mill HR Sheets & Coils</td> <td>22,67,612 TPA</td> </tr> <tr> <td></td> <td>CRM Complex will produce 9,00,000 TPA Galvalume coils, Colour coated coils, HR Galvalume, Cut to length coil, Slitting line coil, Pickled-annealed & oil skin pass in coil and similar sections.</td> <td>9,00,000 TPA</td> </tr> <tr> <td></td> <td>Beam Blank Caster & Section mill Parallel Flange Beams, Columns, Channels, Angles, Flat BTM Rail and similar sections.</td> <td>12,17,141 TPA</td> </tr> <tr> <td>I.</td> <td>Captive power generation (Total) <ul style="list-style-type: none"> • SP-WHRB • CDQ-WHRB • mixed gas (Surplus gas) • TRT blast furnace </td> <td> 483 MW 12 MW 15 MW 36 MW 20 MW 400 MW </td> </tr> </tbody> </table>	Sr No	Proposed Plants/Units	Capacity/ Configuration	A.	Coke oven plant	2.0 MTPA (2.04 MTPA)	B.	Sinter Plant	1 x 624 m ² (5.12 MTPA)	C.	Blast Furnace	1 x 5600 Cu.m. (4.63 MTPA GHM)	D.	Lime Plant	2 x 500 TPD	E.	Dolomite Plant	1 x 425 TPD	F.	Oxygen Plant (VPSA and Cryogenic Plant)	2 x 1400 TPD	G	Basic Oxygen Furnaces (BOF)	3 x 180 T	H.	Ladle Refining Furnaces (LRFs)	3 x 180 T	RH Degasser	2 x 180 T		Endless Strip Plant & Rolling Mill (ESP)	31,67,612 TPA		Endless Strip Plant (ESP) & Rolling mill HR Sheets & Coils	22,67,612 TPA		CRM Complex will produce 9,00,000 TPA Galvalume coils, Colour coated coils, HR Galvalume, Cut to length coil, Slitting line coil, Pickled-annealed & oil skin pass in coil and similar sections.	9,00,000 TPA		Beam Blank Caster & Section mill Parallel Flange Beams, Columns, Channels, Angles, Flat BTM Rail and similar sections.	12,17,141 TPA	I.	Captive power generation (Total) <ul style="list-style-type: none"> • SP-WHRB • CDQ-WHRB • mixed gas (Surplus gas) • TRT blast furnace 	483 MW 12 MW 15 MW 36 MW 20 MW 400 MW
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		<ul style="list-style-type: none"> Thermal coal-based boilers (FBC) 	
		J. Filtration Unit	5.0 MTPA
		K. Gran/Iron shots (For the period when Hot metal is surplus (hot metal production higher than BOF consumption))	3,92,931 TPA
		L. Railway Siding	22 MTPA
		<p><i>The raw material i.e. pellets required for the proposed Blast furnace is around 36,00,000 TPA to 37,00,000 TPA. The 2x4.0 MTPA pellet facility at Konsari, which is currently under construction, will supply these pellets. The remaining pellets will be offered for sale to the open market. Also, with proposed 5.0 MTPA Filtration Unit the recovered iron ore concentrate will be used in the proposed Sinter plant (5.1 MTPA) at Konsari ISP.</i></p>	
3.	Plant Location	<p>Existing - Plot A-1, MIDC Konsari (Chamorshi Industrial area), Village: Konsari, Tahsil: Chamorshi, District- Gadchiroli, Maharashtra.</p> <p>Proposed - Survey Nos. 174, 198, 214, 217-229, 231-351, 354-402, 404-433, 435, 438-467, 469-471, 474-494, 511-512, 516-517, 551-552, 559-561, 564-610, 612-617, 623, 635-638, 641-657, 664-703, 708-718 at Village Konsari Tahsil- Chamorshi, Dist. Gadchiroli, Maharashtra</p>	
4.	Water requirement for the proposed project	<p>94,031 KLD</p> <p><i>Out of 94,031KLD water requirement for 4.5 MTPA ISP 11,487 KLD will be sourced from excess water recovered from slurry (3912 KLD from existing under construction 10 MTPA Thickening & Filtration Unit & 7575 KLD from proposed 5.0 MTPA Filtration unit plant). Balance 82,544 KLD i.e. 30.13 MCM per annum will be sourced from the Wainganga River.</i></p>	
5.	Power requirement & Source	<p>572 MW</p> <p>Source: Captive Power Plant and MSEDCL</p>	
6.	Land	<p>Existing land - Plot no. A-1 with 50.29 ha of land area in MIDC Konsari (Chamorshi Industrial area), village – Konsari, Tehsil Chamorshi is leased by MIDC to Lloyds Metals & Energy Limited;</p> <p>Proposed land - 477.6622 ha of land area Notified as Industrial land by Industries, Energy, Labour and Mining Department vide No. IDC 2023/(C.R.931)/Ind-14 dated 23rd November 2023, further notified dated 11.10.2024.</p>	

7.	Manpower	Existing Employment: 2900 Nos. Proposed Employment: 5730 Nos. Total Employment: 8630 Nos.
8.	Total Cost of the project	Existing Project Cost - Rs. 2,050 Cr. Proposed Project Cost - Rs. 24,620 Cr. Total Project Cost – Rs 26,670 Cr.

3. PROCESS DESCRIPTION

Lloyds Metals & Energy Limited has Proposed to set up a 4.5 MTPA Integrated Steel Plant in and around the existing premises of LMEL at Konsari. Existing plant is at Plot A-1, Chamorshi (Konsari) Industrial Area, Village Konsari, Taluka Chamorshi, District Gadchiroli, Maharashtra.

Sr. No.	Plants /Facilities	Existing	Proposed Modification/ Expansion	Total after Expansion as per Project under consideration	Present Status
1.	Sponge Iron Plant	62,700 TPA	29,700 TPA (By Process Modification)	92,400 TPA	62,700 TPA in Operation
2.	Captive Power Plant	4MW (WHRB)	1 MW (By Process Modification)	5 MW (WHRB)	4 MW in Operation
3.	Iron Ore Grinding Unit	2 x 4.5 MTPA	-	2 x 4.5 MTPA	Under Construction
4.	Thickening and Filtration Unit	10.0 MTPA	-	10.0 MTPA	
5.	Iron Ore Pellet Plant	2 x 4.0 MTPA	-	2 x 4.0 MTPA	
6.	Coke Oven Plant (By Product Recovery Type) with gas Cleaning & CDQ	-	1 x 2.0 MTPA	20,40,165 TPA	TOR received dated 05.10.2024
7.	Sinter Plant (1 x 624 m ²)	-	51,19,995 TPA	51,19,995 TPA	

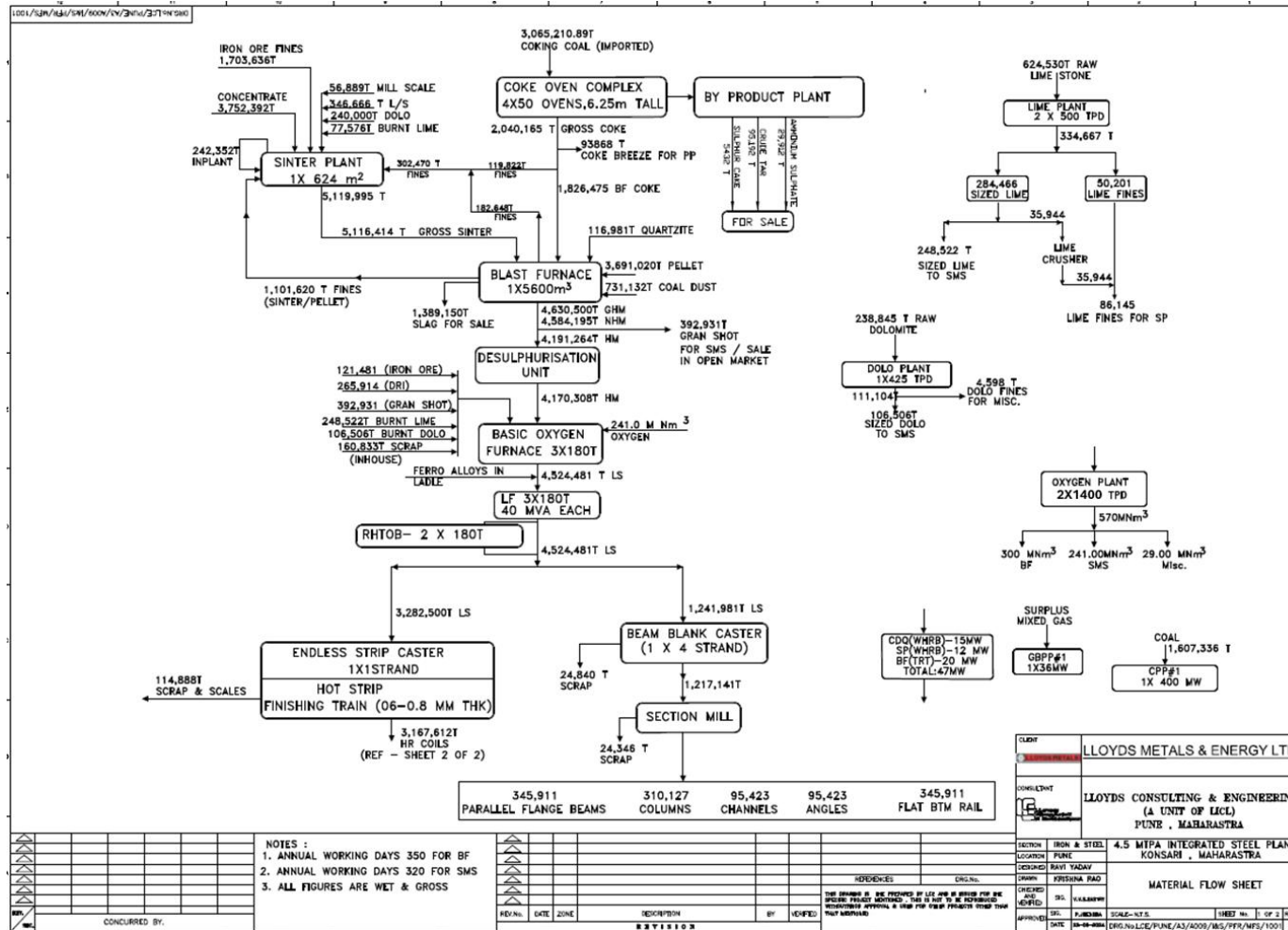
8.	Lime and Dolo Plant	-	2 x 500 TPD 1 x 425 TPD	2 x 500 TPD 1 x 425 TPD
9.	Blast Furnace (1x5600 m ³)	-	4.63 MTPA	4.63 MTPA
10.	Oxygen Plant – 2 x 1400 TPD (VPSA and Cryogenic Oxygen Plant)	-	1 x 1400 TPD Cryogenic and 1 x 1400 TPD VPSA Oxygen Plant	1 x 1400 TPD Cryogenic and 1 x 1400 TPD VPSA Oxygen Plant
11.	Steel Melting Shop (4.5 MTPA)	-	3 x 180T Basic Oxygen Furnace (BOF)	3 x 180T Basic Oxygen Furnace (BOF)
			3 x 180T Ladle Refining Furnace (LRF)	3 x 180T Ladle Refining Furnace (LRF)
			2x180 T RH Degasser	2x180 T RH Degasser
12.	Endless Strip Plant (ESP) [1 x 3.28 MTPA Thin Slab Casting & Rolling Mill]	-	1.273 MTPA HR Sheets	1.273 MTPA HR Sheets
			0.969 MTPA HR Coils	0.969 MTPA HR Coils
13.	Acid less Pickling (2 x 0.45 MTPA); Cold Rolling Mill (CRM) Complex [1 x 0.3 MTPA]; Continuous Galvanizing Line (1 x 0.45 MTPA); Colour Coating (0.25 MTPA)	-	0.9 MTPA - Galvalume coils, Colour Coated coil, HR Galvalume, Cut to Length sheets, Slitting Line Coil, Pickled & Oiled Skin Pass in Coil, Cold Rolled Closed Annealed and similar processed cold	0.9 MTPA- Galvalume coils, Colour Coated coil, HR Galvalume, Cut to Length sheets, Slitting Line Coil, Pickled & Oiled Skin Pass in Coil, Cold Rolled Closed Annealed and similar processed cold rolled, colour coated, sheets and coils

			rolled, colour coated, sheets and coils	
14.	Beam Blank Caster (1.242 MTPA)	-	1.217 MTPA Section Mill	1.217 MTPA Section Mill
15.	Section Mill [1.217 1.193MTPA]		1.193 MTPA - Parallel Flange Beams, Columns, Channels, Angles, Flat BTM rail, other sections	1.193 MTPA - Parallel Flange Beams, Columns, Channels, Angles, Flat BTM rail, other sections
	Scrap & Wastages (Edge trimming) from Cold Rolling Complex		0.026 MTPA	0.026 MTPA
	Scrap (end cut) from Structural Mill		0.049 MTPA	0.049 MTPA
16.	Gran/Iron Shots		0.392 MTPA (For the period when Hot metal is surplus (hot metal production higher than BOF consumption) Liquid Hot metal will be converted in Granshot and will be sold in the market as Iron product, a replacement of Pig Iron.)	0.392 MTPA (For the period when Hot metal is surplus (hot metal production higher than BOF consumption) Liquid Hot metal will be converted in Granshot and will be sold in the market as Iron product, a replacement of Pig Iron.)
17.	Filtration Unit (Iron Ore slurry)		5.0 MTPA	5.0 MTPA
18.	Captive Power Plant (483 MW)	-	12 MW from SP - WHRB	12 MW

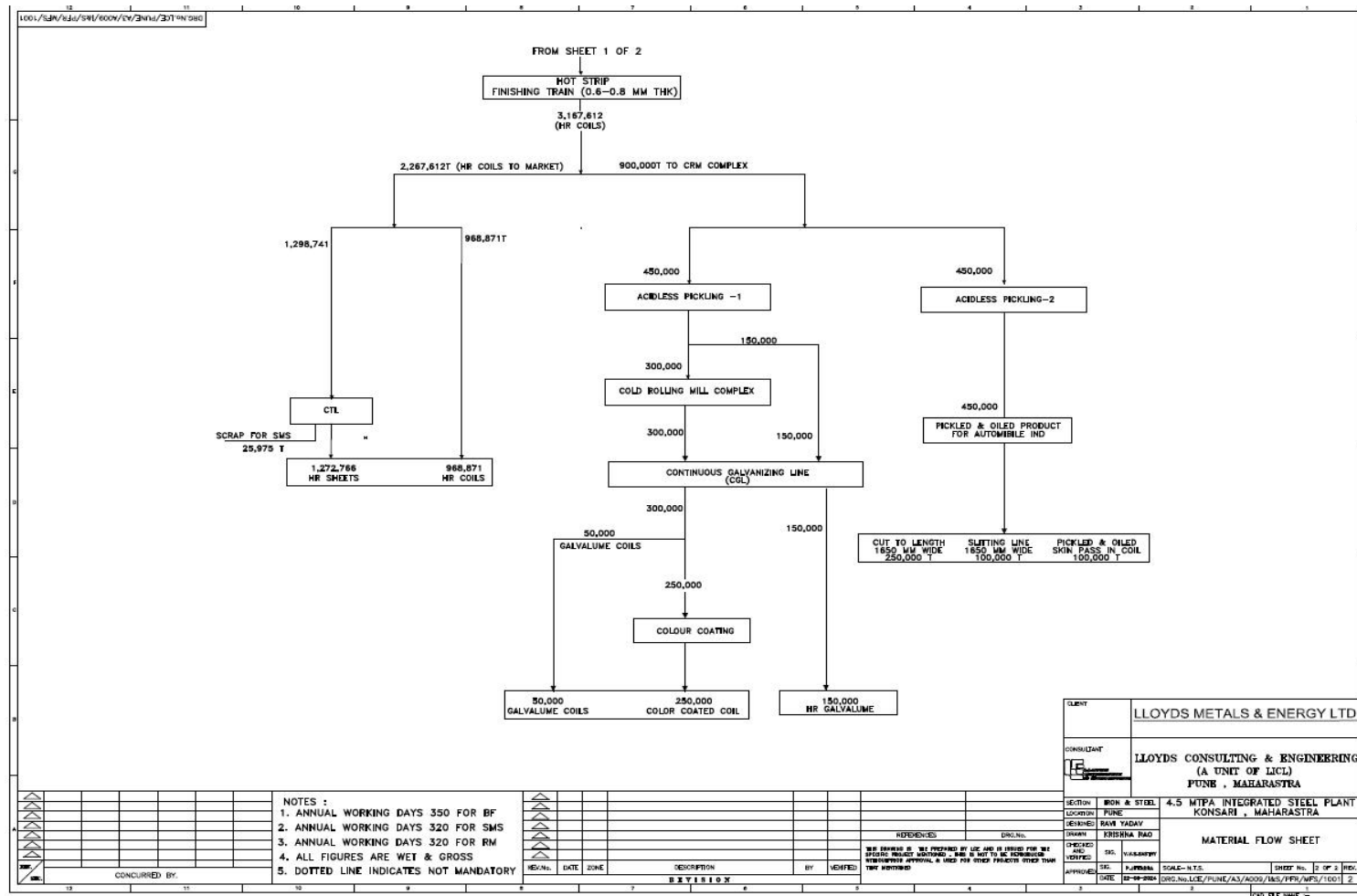
			15 MW from CDQ WHRB	15 MW	
			36 MW from mixed gas (Surplus gas)	36 MW	
			20 MW from TRT blast furnace	20 MW	
			2 x200 MW from thermal coal based boilers (FBC)	400 MW	
19.	Railway siding		22 MTPA	22 MTPA	

The process flowchart of Proposed and Existing Plant is given **in Figure below:-**

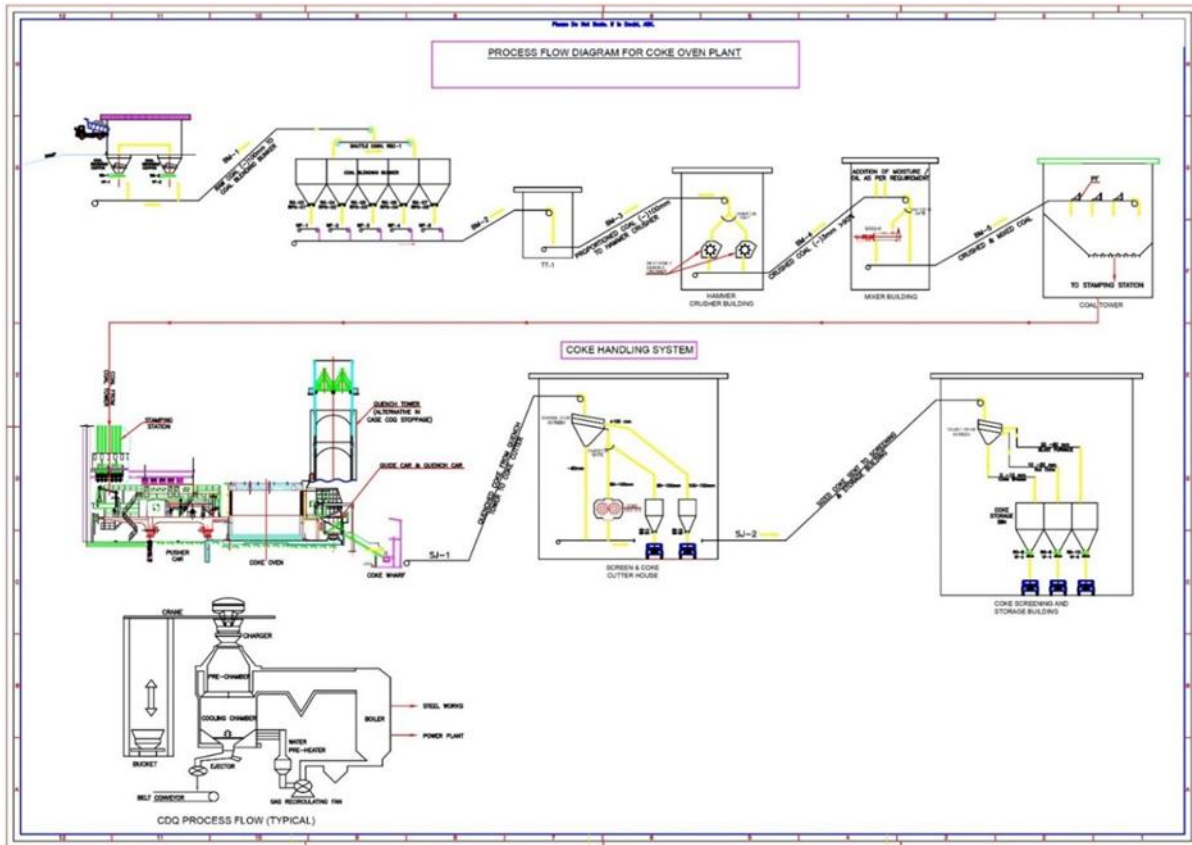
Blast furnaces to produce hot metal → De-sulphurization of hot metal → Basic Oxygen Furnace for steel making with 82% hot metal & 18% scrap & DRI → Ladle Refining Furnace for secondary refining → RH Degasser for removal of hydrogen from steel → Endless Casting & Rolling of slabs into Hot rolled coils (HRC).



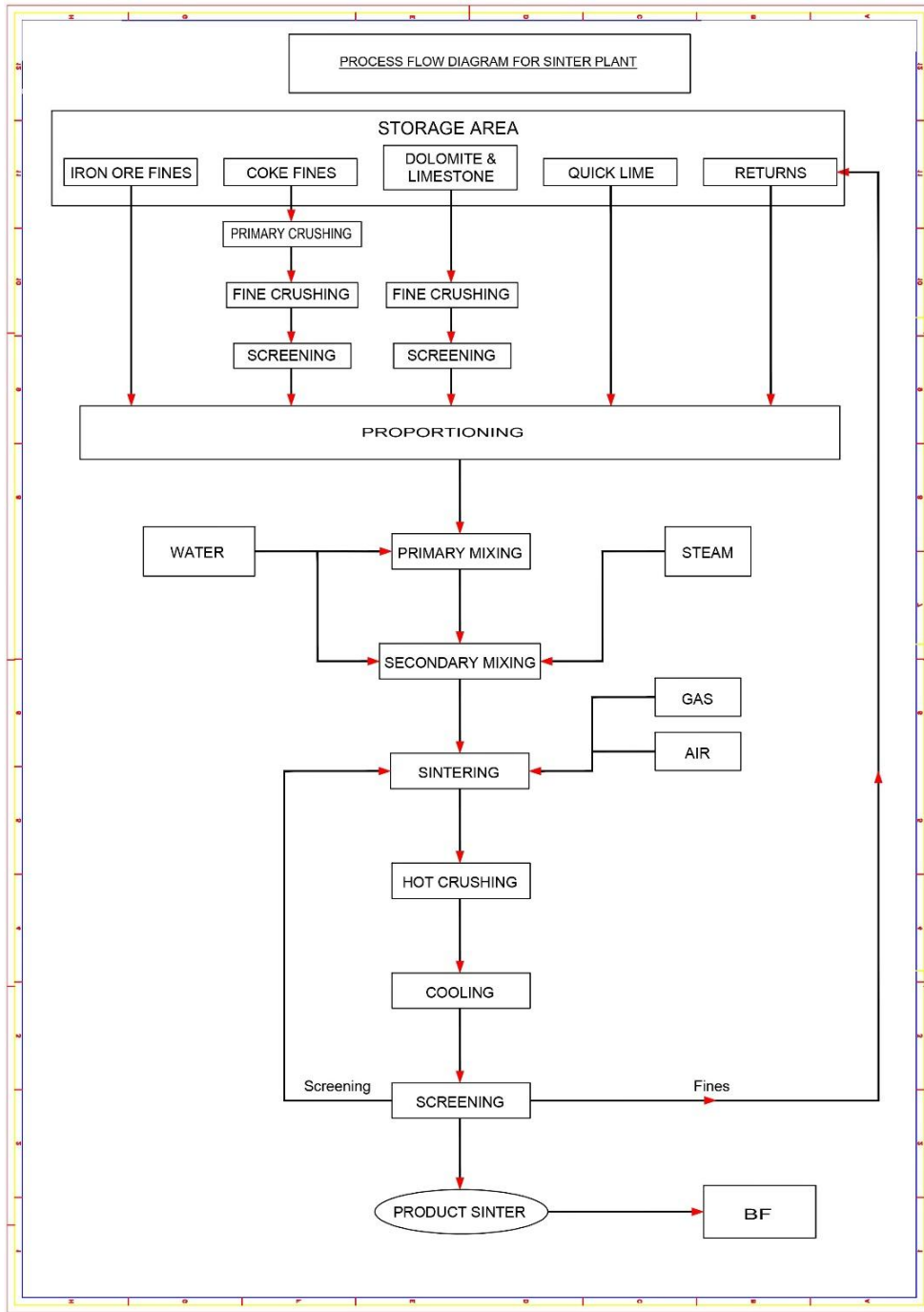
Process flowchart of Integrated Steel Plant (1/2)



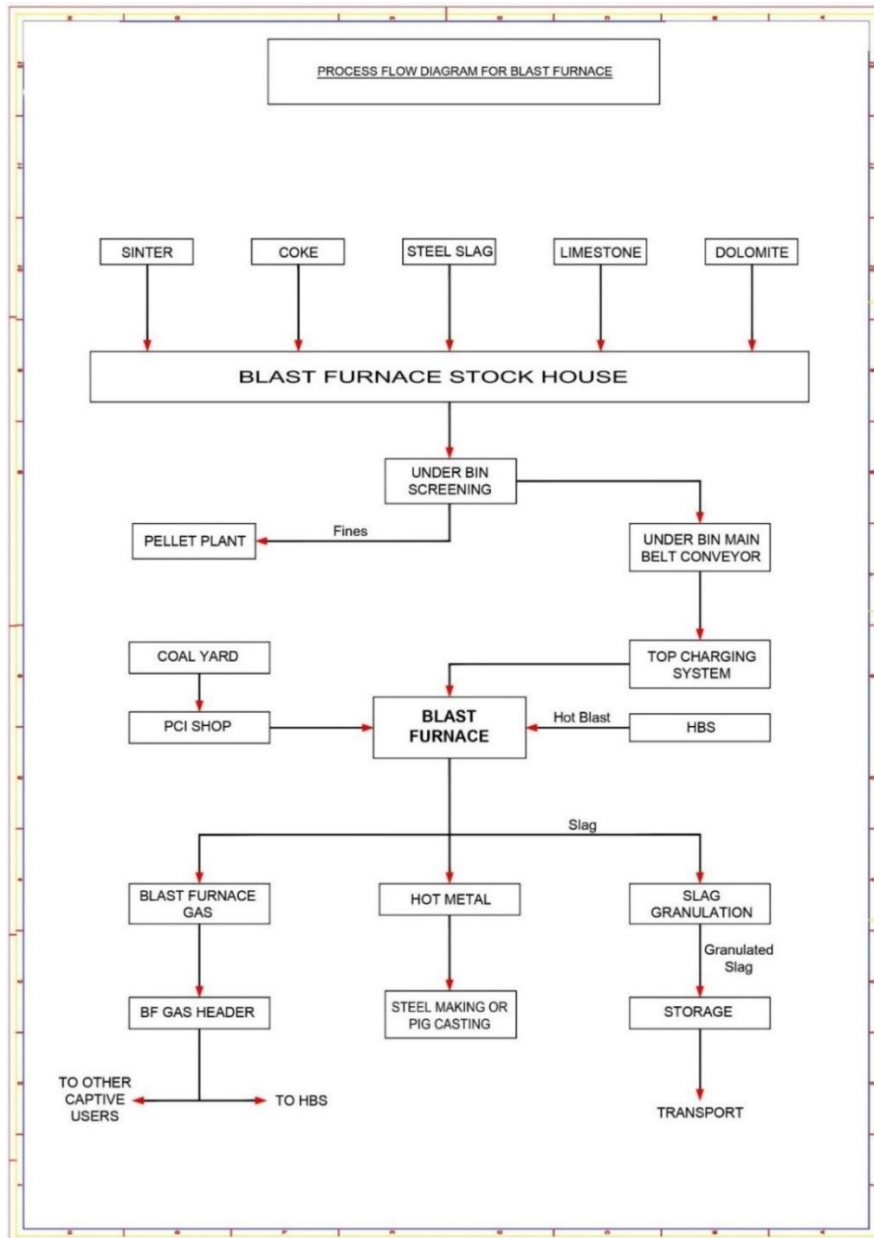
Process flowchart of Integrated Steel Plant (2/2)



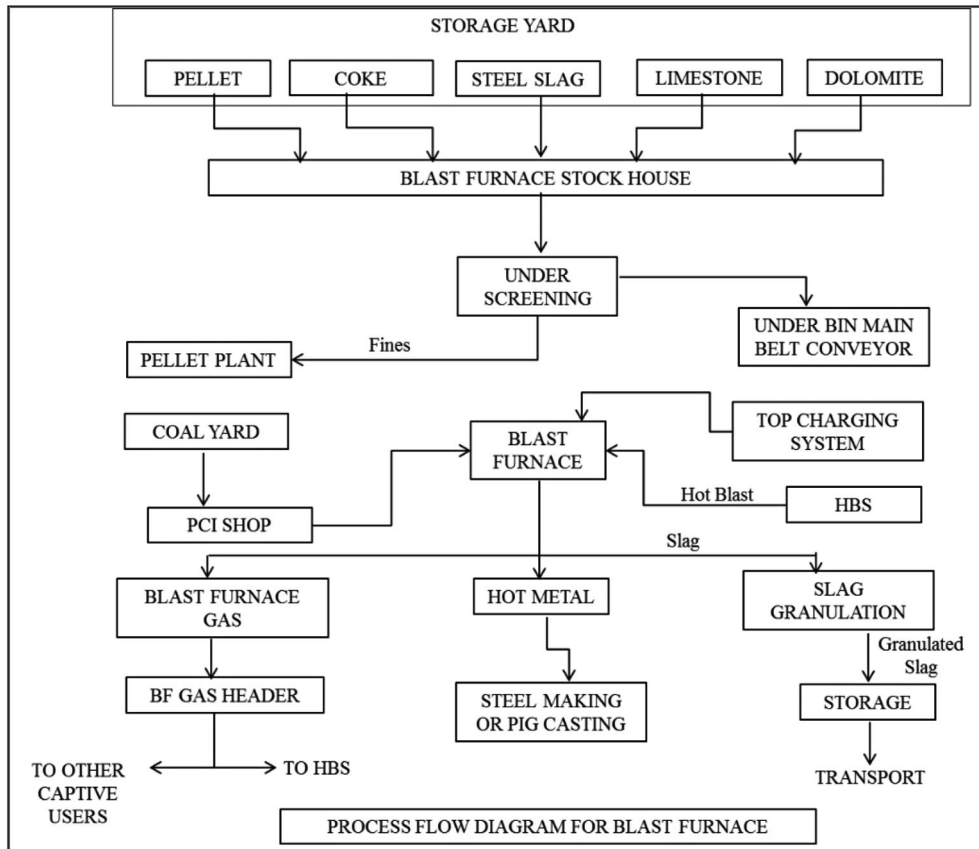
Process Flow Diagram of Coke Oven



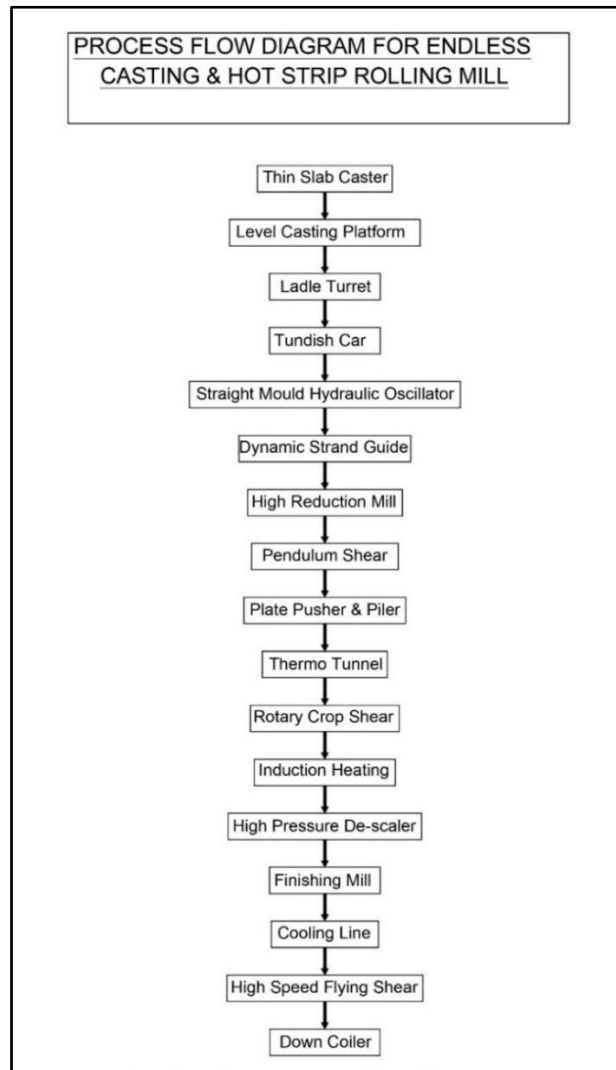
Process Flow diagram for Sinter Plant



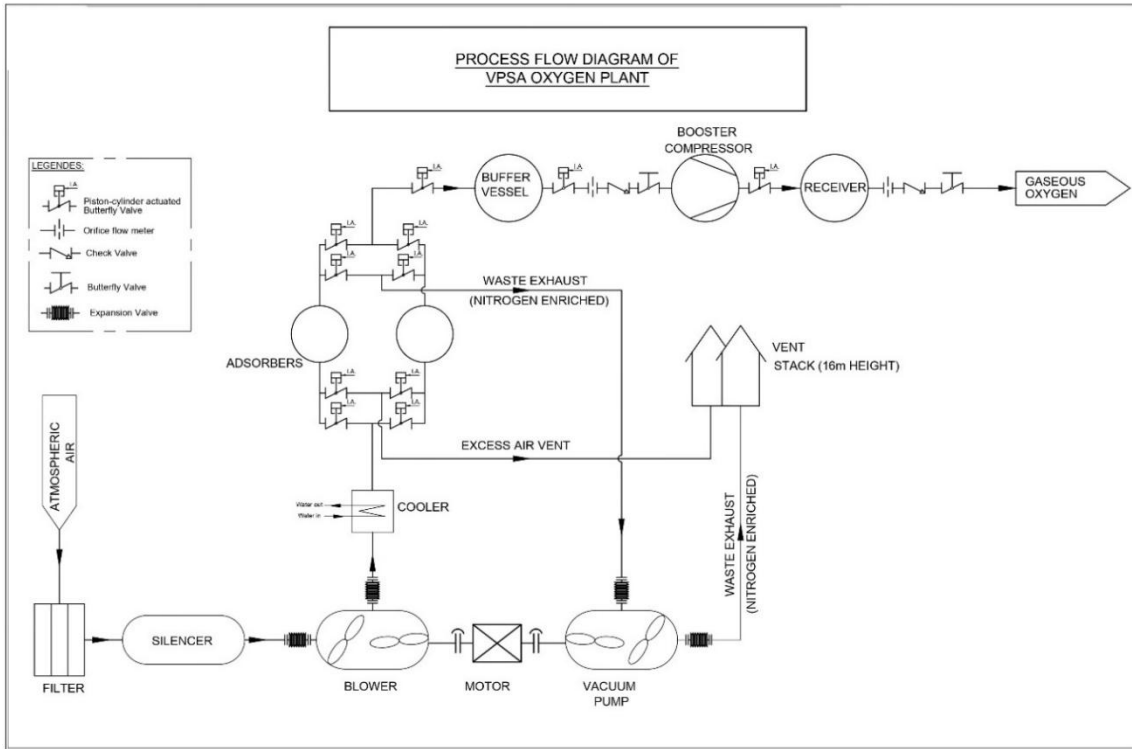
Process Flow diagram for Blast Furnace



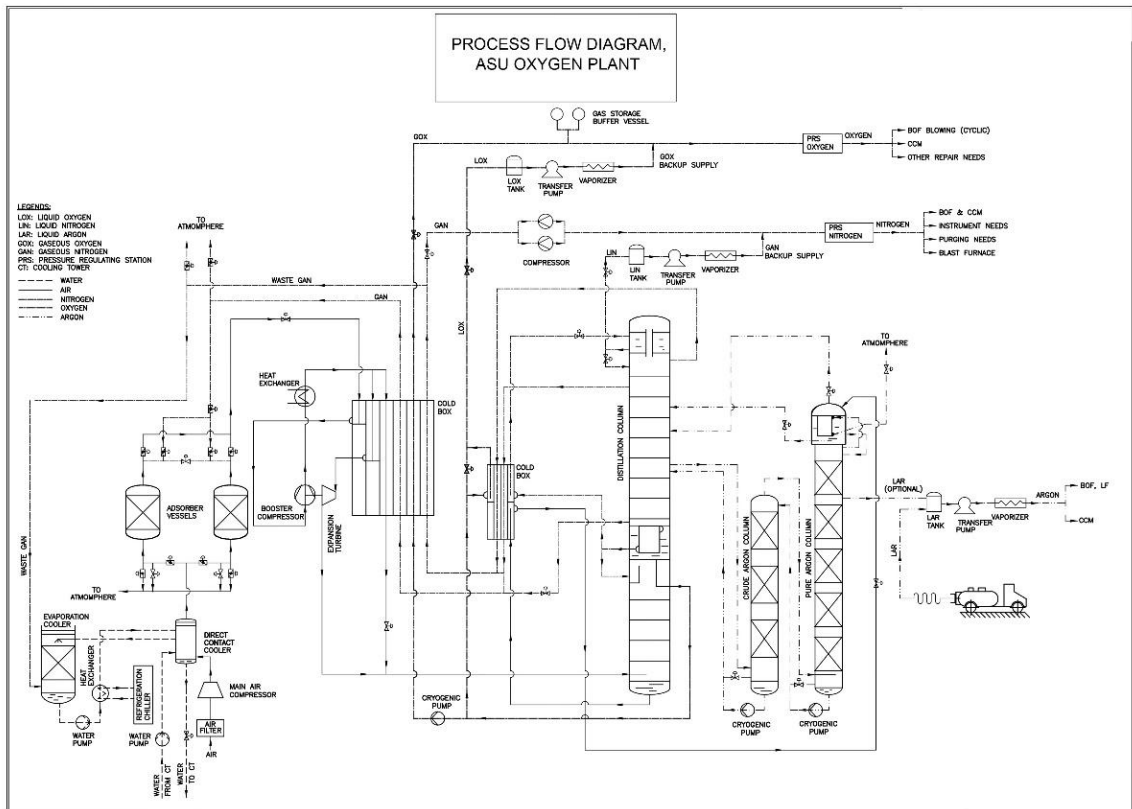
Hot Metal De-Sulphurisation, Steel Making and Continuous Casting Shop



Process Flow Diagram for Endless Casting & Hot Strip Rolling Mill



Process Flow Diagram of VPSA Oxygen Plant



The process flow of ASU Oxygen plant

4. DESCRIPTION OF ENVIRONMENT

Air Environment

The baseline environmental quality for the 15th March 2024 to 15th June 2024 was assessed in an area of 10 km radius around the proposed project site. The predominant wind direction is West North West. The ambient air quality monitored at 10 locations selected based on predominant wind direction, indicated the following ranges;

PM ₁₀	-	26.9 – 66.8 µg/m ³
PM _{2.5}	-	9.8 – 31.2 µg/m ³
SO ₂	-	5.2 – 19.2 µg/m ³
NO _x	-	10.5 – 30.5 µg/m ³
CO	-	0.10 – 0.98 mg/m ³

The concentrations of PM₁₀, PM_{2.5}, SO₂ and NO_x were found within the National Ambient Air Quality Standards (NAAQ).

Water Environment

A total 16 samples including eight surface & eight ground water samples were collected and analyzed. The water samples were analyzed as per Standard Methods for Analysis of Water and Wastewater, American Public Health Association (APHA) Publication.

The data indicates that the ground water as well as the surface water quality are below the stipulated standard for drinking water (IS 10500 – 2012).

Noise Environment

Noise levels measured eight stations are within limit of 55.0 dB (A) for Residential Area or 75.0 dB (A) for Industrial Area as given in MoEF Gazette notification for National Ambient Noise Level Standard.

Land Environment

The characteristics of the soil sample was analysed at eight stations. The soil analysis report indicates that the soil in the area are capable of supporting plant growth.

Biological Environment

There shall not be any loss or reduction of species and habitat due to the project site. Based on the above faunal diversity of the study area, its found that there are 14 Nos. of schedule I species (2 birds, 2 reptiles and 10 mammals).

Socio Economic Environment

The study area constitutes 37 inhabited villages.

The population is distributed among 9,566 households in the study area. The 37 inhabited villages have a population of 38,980 comprising of 19,875 males and 19,105 females.

The local economy will receive a positive impact and a boost due to employee spending capacity and services generated by the proposed project. The overall effect will help in improving the standard of living of the surrounding area viz. better education, improved health and sanitation facilities, etc. This is a major positive benefit, which will be responsible for the sustainable development of the surrounding area. Further, it would lead to overall socio-economic development of majority tribal and LWE affected Gadchiroli region.

5. ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES.

Impact on Air Quality

The major pollutants of air in a proposed plant are the particulate matters from the various stacks and fugitive emissions due to material handling. SO₂ also add to the pollutant level due to Boiler. The company is presently taking all measures to effectively control the air emissions and periodic monitoring of the stack emissions & ambient air quality is being done to monitor the pollutant concentrations. Same will be continued after the proposed expansion. During operation phase, air emissions both gaseous and fugitive will be on account of process emissions from stacks of Sponge Iron Plant, captive power plant, Pellet Plant, Coke Oven Plant, Blast Furnace, Power Plant, SMS and Rolling mill as well as transportation of men and material. The impacts on air quality due to source of the air pollutant in the proposed facilities have been identified.

Mitigation Measures – Air Quality – Operation Phase

Activity	Anticipated Emissions from	Proposed Control/Mitigation Measures
Incoming Raw Material, storage, and Internal Handling at various sections	<ul style="list-style-type: none"> ➤ Spill materials ➤ Over loading ➤ Unloading and Feeding points ➤ Transfer and blending points ➤ Fugitive emissions from Stock Heaps and conveyors ➤ Crushing points ➤ Slag Handling points ➤ Internal transportation/ shifting 	<ul style="list-style-type: none"> ➤ Dust suppression sprinklers ➤ Dry Fog dust suppression system ➤ Dust extraction system for material transfer points ➤ Closed covered conveyors, and trucks ➤ Maintaining moisture levels ➤ Dust extraction system ➤ Green Belt ➤ Concrete Plat forms at Unloading points ➤ Scrappers/ skirt at Conveyors ➤ Bagged materials ➤ Bunker sealing / Gratings ➤ stackers and reclaimers with water sprinkling facility for coal ➤ Reduced heights of material discharge from conveyors etc. to reduce fugitive emissions. ➤ Periodic maintenance of equipment
Coke Oven Battery	<ul style="list-style-type: none"> ➤ Off gases from battery heating or from various dedusting facilities ➤ Diffuse emissions from transport and handling of coke, coal, coke 	<ul style="list-style-type: none"> ➤ Minimizing number of flanges and appendages ➤ Maintaining pipes and flanges visible for inspection as much as possible. ➤ Storage and transport of by products like tar, ammonium sulphate, sulfur without causing

	<p>pushing etc.</p> <ul style="list-style-type: none"> ➤ Spillages ➤ Transfer points ➤ Conveyors ➤ Fugitive emissions from leakages from vessels, oven doors, flanges or from byproducts area. 	<p>any soil pollution.</p> <ul style="list-style-type: none"> ➤ Dry fog dust suppression system ➤ Stock house dedusting ➤ Bag Filter ➤ Grating & Sealing ➤ Self-sealing door ➤ Extraction system ➤ Ventilation ➤ Vacuum cleaners ➤ Spilled coke collection system ➤ Covered System for dust recovery transportation ➤ Covered conveyors ➤ Coke dry quenching and waste heat recovery ➤ H₂S and NH₃ scrubber and removal systems ➤ Sulphur Recovery Unit ➤ Land based dust extraction system ➤ Periodic maintenance of equipment. ➤ Gas tight operation by using magnetic or double sealed pumps. ➤ Connecting byproducts storage tank outlets to coke oven gas collecting main. ➤ Reuse of Coke oven gas
<p>Blast Furnace Complex</p>	<ul style="list-style-type: none"> ➤ Emissions from burden preparation ➤ Charging and conveying ➤ Blast furnace gas at high pressure ➤ Hot stoves ➤ Gas handling ➤ Steam and dust from 	<ul style="list-style-type: none"> ➤ Bag Filter ➤ Cyclones ➤ BF Gas Cleaning Plant ➤ Covered conveyors ➤ Covered runners ➤ Covered stock house ➤ Dust Catchers /dedusting ➤ Reuse of BF gas as fuel

	<p>slag Granulation</p> <ul style="list-style-type: none"> ➤ Conveyor transportation ➤ Hot Metal Dump Pit ➤ Crushing unit 	
Steel Making and Continuous Shop	<ul style="list-style-type: none"> ➤ Emission from storage silos of Lime ➤ Fumes of Deslagging ➤ Basic Oxygen furnace, Ladle Furnace and Degassing ➤ Slag splashing ➤ Fumes ➤ Storage of Ferro alloys ➤ Slag Handling ➤ Billet /Slab casters 	<ul style="list-style-type: none"> ➤ Covered silos ➤ Ventilation and covered storages ➤ Dust extraction with stack ➤ Slag shields ➤ Fume extraction systems and cleaning of Gas systems ➤ Dust collection system ➤ Bag Filters
Oxygen Plant	<ul style="list-style-type: none"> ➤ Fumes 	<ul style="list-style-type: none"> ➤ Scrubber gas cleaning ➤ Ventilation system
<ul style="list-style-type: none"> • Captive Power Generation • Gas fired Boilers with steam turbine generator • Waste Heat Recovery Boiler with turbo Generator • DG sets 	<ul style="list-style-type: none"> ➤ Flue gas exhaust 	<ul style="list-style-type: none"> ➤ Low NOx Burner ➤ Ventilation system ➤ ESP

Internal and External transport of materials	<ul style="list-style-type: none"> ➤ Gaseous emissions 	<ul style="list-style-type: none"> ➤ PUC certification ➤ Avoidance of engine idling ➤ Designated parking locations
Wire Rod Mill	<ul style="list-style-type: none"> ➤ Greenhouse gases 	<ul style="list-style-type: none"> ➤ Energy conservation and recovery ➤ Control of air/fuel ratio to control burning ➤ Waste Heat recovery systems ➤ Oxygen enrichment or preheating blast air ➤ Automatic control of combustion parameters ➤ Reuse of fuel gases for combustion ➤ Optimize the material flow, thereby reducing energy requirement

Prediction of Air Quality

Impact on Air Quality

The impacts on air quality due to source of the air pollution in the proposed facilities have been identified.

Sources of Emissions

Emissions released from the stack during operation phase will get dispersed in the atmosphere and finally reach to the ground at a specified distance from the sources. The possible environmental impact on air quality has been envisaged due to process emissions i.e. emissions from stack and fugitive emissions due to transportation and raw material handling

Mitigation Measures

- 1 No. of ESP is installed in the existing plant to control emissions from sponge iron plant.
- The fumes from the proposed Pellet Plant will be extracted through the ESP followed by stack of 110 mt height.
- Cyclone Dust collector will be installed to capture dust and particulate matter.

- The Sinter plant shall adopt MEROS technology for improving the quality of dust emission in the exhaust gases. MEROS (Maximized Emission Reduction of Sintering) is an advanced air pollution control technology specifically designed for sinter plants in integrated steel production.
- Bag filter will be installed to capture dust and particulate matter.
- SMS will be set up with Suction Hood and Bag Filters of adequate capacity to capture fine particulate matter from flue gases.
- Flue gases generated in this plant will be cleaned by ESP and then vented off to the atmosphere through a stack of 200 m height for coal based Power Plant and 90m stack for gas based Power Plant.
- All Internal roads are/will be paved to prevent the fugitive dust emission due to vehicular movement.
- All transportation vehicles carry/ will carry a valid PUC (Pollution under Control) Certificate.
- Adequate greenbelt has already been developed in the existing plant area. Greenbelt acts as a surface for settling of dust particles and thus reduces the concentration of particulate matter in air. Green belt will be further strengthened in the additional land for proposed ISP.
- Water Sprinkling is being /will be done to reduce fugitive emission in the plant and maintain the ambient air quality within CPCB standards.

Impact on Noise Levels and Mitigation Measures

During operation, the major noise generating sources are crushing mill, auto loading section, electric motors etc. During operation the major noise generating sources are operation of scrap metal handling, ventilation fans, rolling mill, crushers, waste gas fans, cooling fans, motors, pumps, compressors, furnaces, turbines, boilers, DG sets, transfer by conveyors, dedusting equipment due to high evacuation rates, gas discharge blowers, blower plants, rotating equipment and transport of raw materials and products. The noise levels from these activities and equipment ranges from 60 – 110 dBA. These activities result in noise and vibration and an increase in ambient noise levels. The workers in the plant are prone to noise impacts of change in

behaviour due to noise, while those living outside have less chance of getting impacted.

Mitigation Measures

- Encasement of noise generating equipment where otherwise noise cannot be controlled
- Providing noise proof cabins to operators where remote control for operating noise generating equipment is feasible.
- In all the design/installation precautions are taken as specified by the manufacturers with respect to noise control will be strictly adhered to;
- High noise generating sources will be insulated adequately by providing suitable enclosures;
- Use of lagging with attenuation properties on plant components / installation of sound attenuation panels around the equipment
- Other than the regular maintenance of the various equipment, ear plugs/muffs are recommended for the personnel working close to the noise generating units;
- All the openings like covers, partitions will be designed properly
- Inlet and outlet mufflers will be provided which are easy to design and construct.
- All rotating items will be well lubricated and provided with enclosures as far as possible to reduce noise transmission. Extensive vibration monitoring system will be provided to check and reduce vibrations. Vibration isolators will be provided to reduce vibration and noise wherever possible.
- The insulation provided for prevention of loss of heat and personnel safety will also act as noise reducers.

Impact on Water and Mitigation Measures

LMEL has proposed to install 5.0 MTPA Filtration unit at Konsari. The proposed 5.0 MTPA iron ore concentrate will be utilized as one of the input raw materials in Sinter plants proposed at Konsari.

For carrying 5 MTPA iron ore slurry through pipeline, water requirement is 3 mm³/annum. After processing in filtration unit, 0.5 mm³/annum of water will be carried along with the product i.e with iron ore concentrate and remaining water

recovered will be 2.5 mm³/annum i.e. 7575 m³/day. This recovered water (7575 m³/day) will be utilized in the ISP Konsari after required treatment.

Therefore, total water recovered will be 11,487 m³/day. 3912 m³/day (i.e 163 m³/hr) from under construction 10 MTPA thickening & filtration unit & 7575 m³/day from proposed 5.0 MTPA filtration unit.

The total water requirement for the proposed expansion of LMEL ISP (4.5 MTPA) is 94,031 KLD. The sources of water are Wainganga River which is at a distance of 2.80 km from site and excess water recovered from slurry. So, the total amount of fresh water requirement will be (94,031 - 11,487 KLD) i.e. 82,544 KLD.

Effluent generated (318 m³/hr) from the proposed units of the plant will be treated in suitable treatment facilities and treated water (286 m³/hr) recycled back to the process to attain 'zero' discharge, facilitating adequate re-use of water in the respective recirculating systems, and economizing on the make-up water requirement. Sludge and salts generated in the ETP will be disposed at CHWTSDF (Common Hazardous Waste Treatment, Storage, and Disposal Facility).

LMEL is committed to ZERO Liquid Discharge.

Solid Waste Generation

Solid Waste Generation and Disposal

Sr No.	Item	Source	Qty Per Annum (Tonnes)	Pollution Control & Disposal
1	Coke Oven Plant (2.0 MTPA)			
1.1	Tar	By product plant	95,192	Sell to authorized vendor/user
1.2	Sulphate		5,432	
1.3	Ammonium Sulphate		29,912	
2	Blast Furnaces (1 x 5600 cum Blast Furnace)			
2.1	Granulated Slag @300kg/tonne	Slag Granulation Plant	13,89,150	98 % granulated and sold to Cement plants, 2% treated in dry pits and used for landfills, road construction.
2.2	Flue Dust	Gas Cleaning System of BF	1,15,763	To be used in Sinter Plant

3	Steel Melt Shop (4.5 MTPA)			
3.1	Slag	BOF	5,42,938	BOF slag is granulated, metallics will get recycled and remelted in steel making. This process will be followed at regular interval with short gap to take care of Sulphur and Phosphorus concentration in hot metal. Non-metallics is used in construction as Backfilling. Some portion is used in sintering process.
3.2	Ladle Furnace Slag		67912	
3.3	Sludge + Dust (@20kg/tls)		90,490	To be used in Sinter Plant
4.	Endless Casting and Rolling			
4.1	Mill Scale	Casting and Roling	46976	To be used in Sinter Plant
5.	Cold Rolling Complex			
5.1	Scrap	Beam Blank Caster & Section Mill	49,186	To be used in SMS
5.2	Oil-Water Emulsion Oil Content 1% with Scum & Iron Particles	Cold Roling Mills	120 KL	Disposed through Authorized Dealers as per non-hazardous Waste rules
5.3	Zinc Dross	Galvanizing Line	1.45 T	To be used in the market
6	Power Plant			
6.1	Fly Ash	Coal Based	8,23,200	Fly ash will be sold to Cement Plants and used for manufacturing fly ash bricks.
6.2	Bottom Ash	Coal Based	3,52,800	Bottom Ash shall be dumped in ash dump.
7	Misc. wastes & debris			
7.1	Refractory waste		50,000	Un-contaminated (80%) bricks will be sold (for construction) or crushed to be used as mortar. Balance would have to be discarded and dumped in landfills.

Impact on Socio-Economic Environment

LMEL is providing employment to 5430 people in proposed expansion. The proposed project shall create direct and indirect permanent employment. The proposed project shall create employment to 5730 people. The local persons have been given preference in employment as per the qualification and technical competencies. In order to mitigate the adverse impacts likely to arise in the proposed project activities and also to minimize the apprehensions to the local people, it is necessary to formulate an affective EMP for smooth initiation and functioning of the project. The suggestions are given below:

- ❖ Communication with the local people will be established regular basis by project authority to provide an opportunity for local youth.
- ❖ Project authorities will undertake regular environmental awareness program on environmental management
- ❖ Job opportunities are the most demanding factor, the local people as per their education will be employed.

For social welfare activities to be undertaken by the project authorities, collaboration should be sought with the local administration, gram panchayat, block development office etc. for better coordination

6. ENVIRONMENTAL MONITORING PROGRAMME

Lloyds Metals and Energy Limited is carrying out the Environmental Monitoring on regular basis. Environmental monitoring refers to systematic sampling of Air, Water, Soil, Biota in order to observe and study the environmental components. The methodologies adopted for environmental monitoring are in accordance with the CPCB guidelines. The purpose of post project environmental monitoring program is to evaluate the performance of mitigation measures implemented and to check how well the installed pollution control systems are working.

ADDITIONAL STUDIES

The present Draft EIA/EMP report is prepared for submission for public hearing. Minutes/proceedings of public hearing will be incorporated in the final EIA/EMP report after conduction of public hearing.

The CER Budget including commitments during recent Public Hearing dated 07-07-2023 is Rs 39,05,20,000 & Rs. 50,00,00,000 is budgeted for construction of Multispecialty Hospital in Konsari.

This existing CER as per EC dated 03.11.2024 Budget is Rs. 89,05,20,000

In addition to this being an expansion project four more villages Umri, Raipur, Ramkrishnapur, Dharmapur will be adopted by budget of approximately Rs. 12.00 Crores for project under consideration.

Final budget, activities will be elaborated after conduction Public Hearing in final EIA/EMP report.

Besides above referred various CER activities compensation will be given to land owners as per the provision and decision by Government of Maharashtra.

PROJECT BENEFITS

LMEL reaffirms its commitment towards a clean, sustainable and continually enhancing environmental performance as an integral part of its business philosophy and values.

Through CSR initiatives in the fields of education, health, infrastructure development, and community development LMEL has been working with their neighbouring areas to uplift society in terms of economic, social and environmental principles. The company is bound as per their CSR policy adopted since 16th March 2023 for the upliftment of social infrastructure in the surrounding area like:

- Clean drinking water
- Health care measures
- Educational benefits
- Promotion of culture
- Religious and sports activities

DRI plant is in operation in Konsari since last year. This gives inherent advantage of social infrastructure. In order to maximize the impact of growth in the villages surrounding the plant, the company will also be rigorously carrying out various development projects under the CSR program.

For the social development in the area, the company has planned various infrastructural development of the area. Time to time the proponent will also organize various camps and provide the facilities to nearby villages as per their requirements. As per the Office Memorandum No. 22-65/2017-IA.III dated 20th October 2020 based on the need of the local people, Local Gram Panchayat and District authorities, CER will be spent. So far, as per the commitment made in the Public Hearing (project that is under construction) the LMEL has already spent Rs.6,39,02,674/-out of Rs. 39,05,20,000/-. The details of amount spent under CER till October 2024 are as follows:

Particulars	Amount in Rs.
Health	18,62,320
Education and Training	4,65,92,273
Livelihood	79,13,321
Other Social Developmental Activity	75,34,760
Total	6,39,02,674/-

7. ENVIRONMENTAL MANAGEMENT PLAN

After commissioning of the proposed project, LMEL is going to follow all the measures as per EMP in the plant premises that will results in the further improvement in the environmental quality and all the parameters will be maintained within the prescribed limits.

Budget for Implementation of Environmental Management Plan

Sl. No.	Environmental Pollution Control Facility	Estimated Cost in Rs Crores	Recurring Cost/ Annum in Rs. Crores.
1	Pollution Control facilities (Air pollution control units, solid waste management, green belt development)	850	85
2	MEROS Technology for Sinter Plant	100	10
3	Zero Liquid Discharge Equipment	300	30
4	Noise Pollution Control	50	5
5	Effluent Treatment Plant	150	15
6	Rainwater Harvesting	150	15
7	Green Belt Development	16.16	1.64
8	Soil Moisture Conservation (SMC)	1.3	0.01
	TOTAL	1617.46	161.65

Conclusion

It is clear from the above discussion that the proposed project will not be likely to cause any significant impact on the surrounding area, as adequate mitigative measures will be adopted so that the all the parameters will be within the prescribed standards. The existing plant is operating as per EC and Consent conditions and all environment parameters are within prescribed norms. More than 33% Greenbelt development in and around the proposed project would also be taken up as an effective pollution control measure.