

Executive Summary

For

Proposed Expansion by Installation of 4.0 MTPA Pellet Plant, 0.84 MTPA Blast Furnace, 0.4 MTPA Coke Oven, 670 TPD Oxygen Plant, EAF based Steel Melting Shop (1.05 MTPA) & Rolling Mill (1.2 MTPA) for production of Wire Rod & TMT along with 90 MW Power Plant

**[In addition to Existing 0.684 MTPA Sponge Iron Plant (0.324 MTPA in operation & 0.360 MTPA under construction), 0.216 MTPA OR 150 TPH Coal Washery & 85 MW Power Plant (25 MW in operation & 60 MW under construction)]
(*Brown Field Project*)**

At

At Plot A-1 and A-2, MIDC Area, Ghugus and Khasra no. 17, 30 & others at village Usgaon, Khasra no. 205, 206 & others at village Ghugus, Tahsil & District Chandrapur, Maharashtra.

Project Proponent

M/s Lloyds Metals and Energy Limited

Environmental Consultant

Pollution and Ecology Control Services

Near Dhantoli Police Station, Dhantoli, Nagpur

Accreditation no.: NABET/EIA/2225/RA 0291 valid till 16th October 2025

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EXECUTIVE SUMMARY

INTRODUCTION

M/s Lloyds Metals & Energy Limited proposes to expand project by the Installation of 4.0 MTPA Pellet Plant, 0.84 MTPA Blast Furnace, 0.4 MTPA Coke Oven, 670 TPD Oxygen Plant, EAF based Steel Melting Shop (1.05 MTPA) & Rolling Mill (1.2 MTPA) for production of Wire Rod & TMT along with 90 MW Power Plant (In addition to Existing 0.684 MTPA Sponge Iron Plant (0.324 MTPA in operation & 0.360 MTPA under construction), 0.216 MTPA OR 150 TPH Coal Washery & 85 MW Power Plant (25 MW in operation and 60 MW under construction) at Plot A-1 and A-2, MIDC Area, Ghugus and Khasra no. 17, 30 & others at village Usgaon, Khasra no. 205, 206 & others at village Ghugus, Tahsil & District Chandrapur, Maharashtra.

The proposed project falls under category 'A' (SI. No. 3(a) of Schedule : "Primary and Secondary Metallurgical Industries", 1(d): "Thermal Power Plants", 4(b): "Coke Oven Plants", and as per MOEFF&CC Notification dated 7th June 2024; item Pellet Plant will come under 2(c).

IMPLEMENTATION OF THE PROJECT

M/s. Lloyds groups started with the modest beginning with fabrication unit in the year 1974 and thereafter expanded rapidly. M/s Lloyds Metals & Energy Limited (LMEL) a prestigious sponge iron manufacturer in Vidarbha region possesses an impressive footprint and rich experience in manufacturing, mining and technology in the arena of metal industries. Presently, LMEL at Ghugus is operating 3,24,000 TPA Sponge Iron plant, 0.216 MTPA coal washery & 25 MW power plant at Plot No. A-1 and A-2, MIDC area, Ghugus, Chandrapur, Maharashtra with valid Consent to Operate after getting Environmental Clearance by Government of Maharashtra and Ministry of Environment and Forest, New Delhi.

Additionally 3,60,000 TPA sponge iron plant and 60 MW power generation plant are currently under construction with valid Consent to establish and Environmental Clearance by Ministry of Environment and Forest, New Delhi.

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Now, the company has proposed an expansion project by the Installation of 4.0 MTPA Pellet Plant, 0.84 MTPA Blast Furnace, 0.4 MTPA Coke Oven, 670 TPD Oxygen Plant, EAF based Steel Melting Shop (1.05 MTPA) & Rolling Mill (1.2 MTPA) for production of Wire Rod & TMT along with 90 MW Power Plant (In addition to Existing 0.684 MTPA Sponge Iron Plant (operational + under construction), 0.216 MTPA OR 150 TPH Coal Washery & 85 MW Power Plant (operational + under construction); which attracts the provisions of EIA Notification, 2006 and its various amendments. The proposed project is falling under Category “A” of Schedule 3 (a) Metallurgical Industries (Ferrous and Non-ferrous), Schedule 1(d) Thermal Power Plant and Schedule 4(b) Coke Oven and as per MoEF&CC Notification dated 7th June 2024; item Pellet Plant will come under 2(c). LMEL made an online application on 07.03.2024 along with Form-1, Pre-feasibility Report and other relevant documents for obtaining Terms of Reference (ToR) from concerned Regulatory Authority for undertaking detailed EIA Study. The proposal was considered by the Committee in the 61st Meeting of EAC (Industry - I) held on 19th June 2024 and prescribed the ToR vide letter No. J-11011/243/2019-IA-II (IND-I); Dated 18th July 2024

Out of the total land Plot no. 89 which is around 1.4 ha is a Government land and will be leased to the company and alternative land will be provided by the LMEL to the Government in some other location. In addition to this the Plot no. 72 & 78 which are within plant boundary (not included in the land procured for the project) are private land and owned by Gupta Energy Private Limited. LMEL is committed to provide approach road to plot no. 72 & 78 of Gupta Energy Private Limited.

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3.	Plant Location	Plot A-1 and A-2, MIDC Area, Ghugus and Khasra no. 17, 30 & others at village Usgaon, Khasra no. 205, 206 & others at village Ghugus, Tahsil & District Chandrapur, Maharashtra.
4.	Water requirement for the proposed project	Existing: 7797 KLD Proposed: 27467 KLD Total: 35264 KLD
5.	Power requirement & Source	Total Power required for the project will be 162.65 MW. Power requirement for the proposed project will be 146 MW, supplied from own Plant and if required from MSEDL
6.	Land	Total existing land leased by MIDC to Lloyds Metals & Energy Limited (LMEL) is 93.52 ha in which plot no. A-1 is 4.00 ha & A-2 is 89.52 ha. The existing plant is in operation since 1995. Additional land procured is 120.422 ha. Total land in possession will be 213.942 ha.
7.	Manpower	Existing : 1003 and Proposed: 2150 Total : 3153
8.	Total Cost of the project	Existing Cost: Rs. 1001 Crores Proposed cost for the Project under Consideration: Rs 5852 Crores. Total Project Cost : Rs 6853 Crores.

PROCESS DESCRIPTION

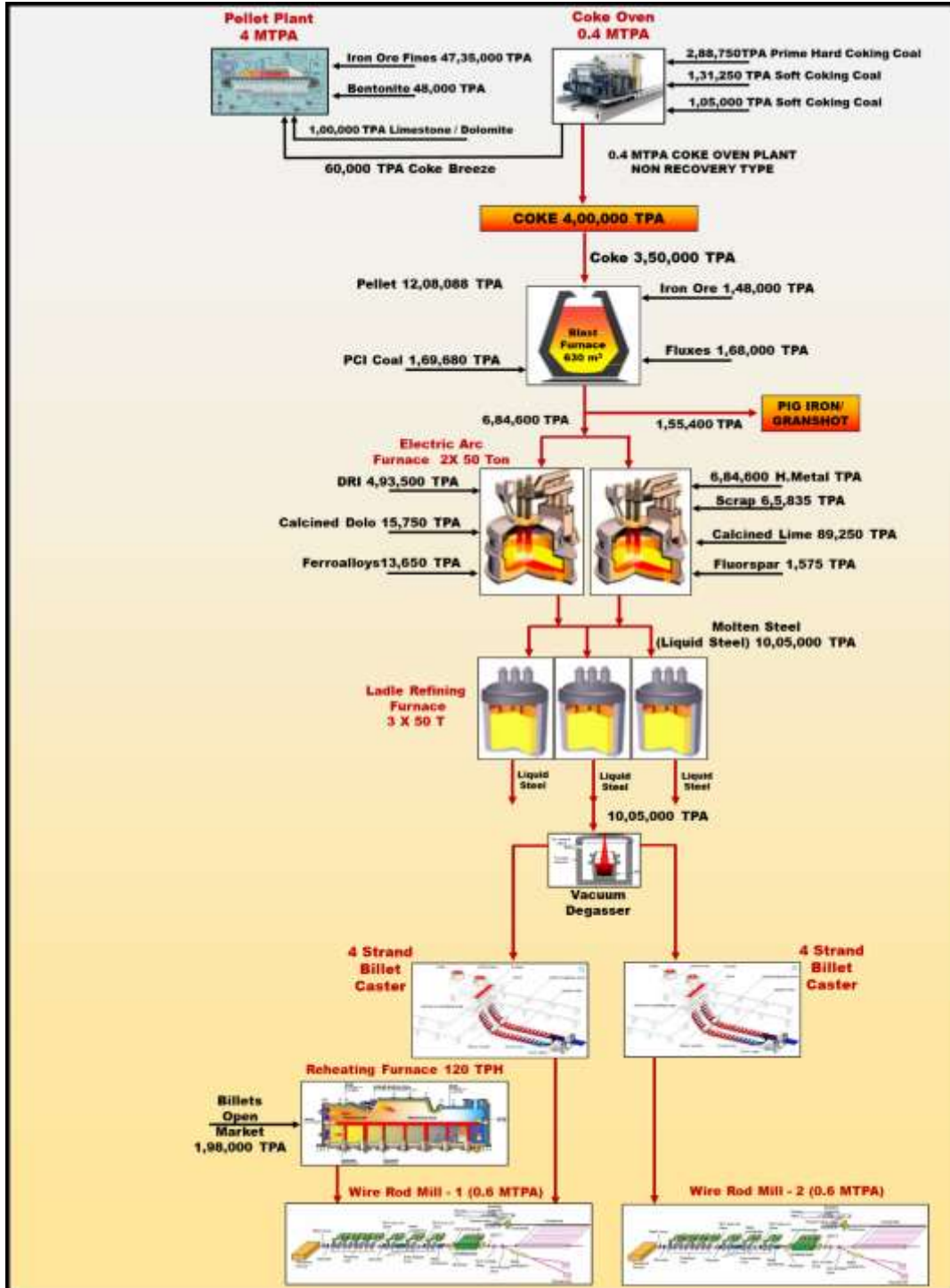
Lloyds Metals & Energy Limited has Proposed to set up an Integrated Steel Plant at village Ghugus and Usgaon for the following products:

Sl. No.	Description	Proposed Production Capacity
1.	Pellet Plant	4.0 MTPA
2.	Blast Furnace	0.84 MTPA Hot metal
3.	Coke Oven Plant	0.4 MTPA Coke
4.	Oxygen Plant	300 TPD ASU & 2 x 185 TPD VPSA
5.	SMS	1.05 MTPA Billets
6.	Rolling Mill	1.2 MTPA (Wire Rod and TMT)
7.	Power Plant	90 MW

State-of-the-art steelmaking facilities have been considered for the proposed integrated steel plant. LMEL will follow the EAF-LF route. They have planned to utilise natural resources very well to reduce their production cost. Through EAF-LF route, they will be producing 10,50,000 TPA liquid steel.

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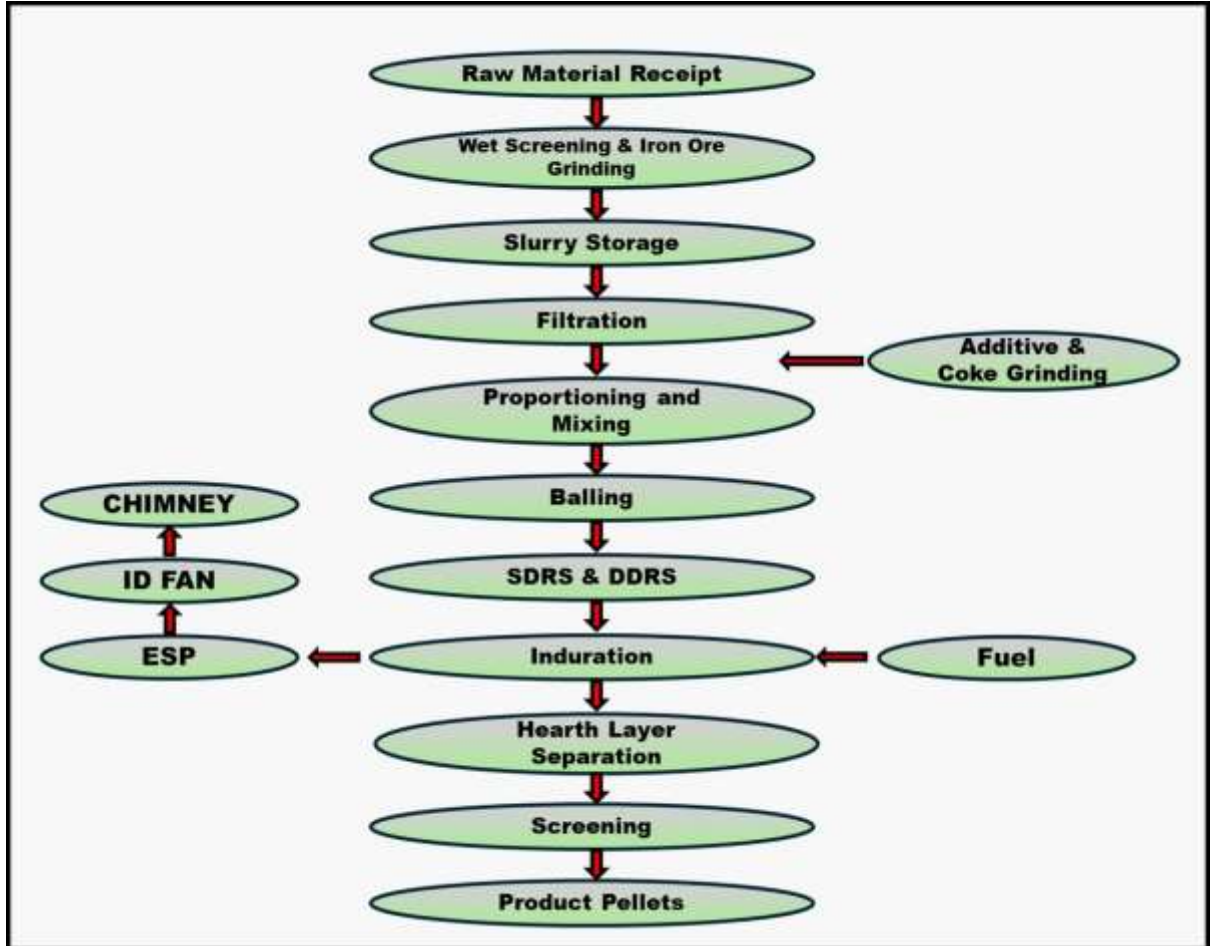
The process flowchart of Proposed and Existing Plant is given in **Figure below:-**



Process flowchart of Integrated Steel Plant

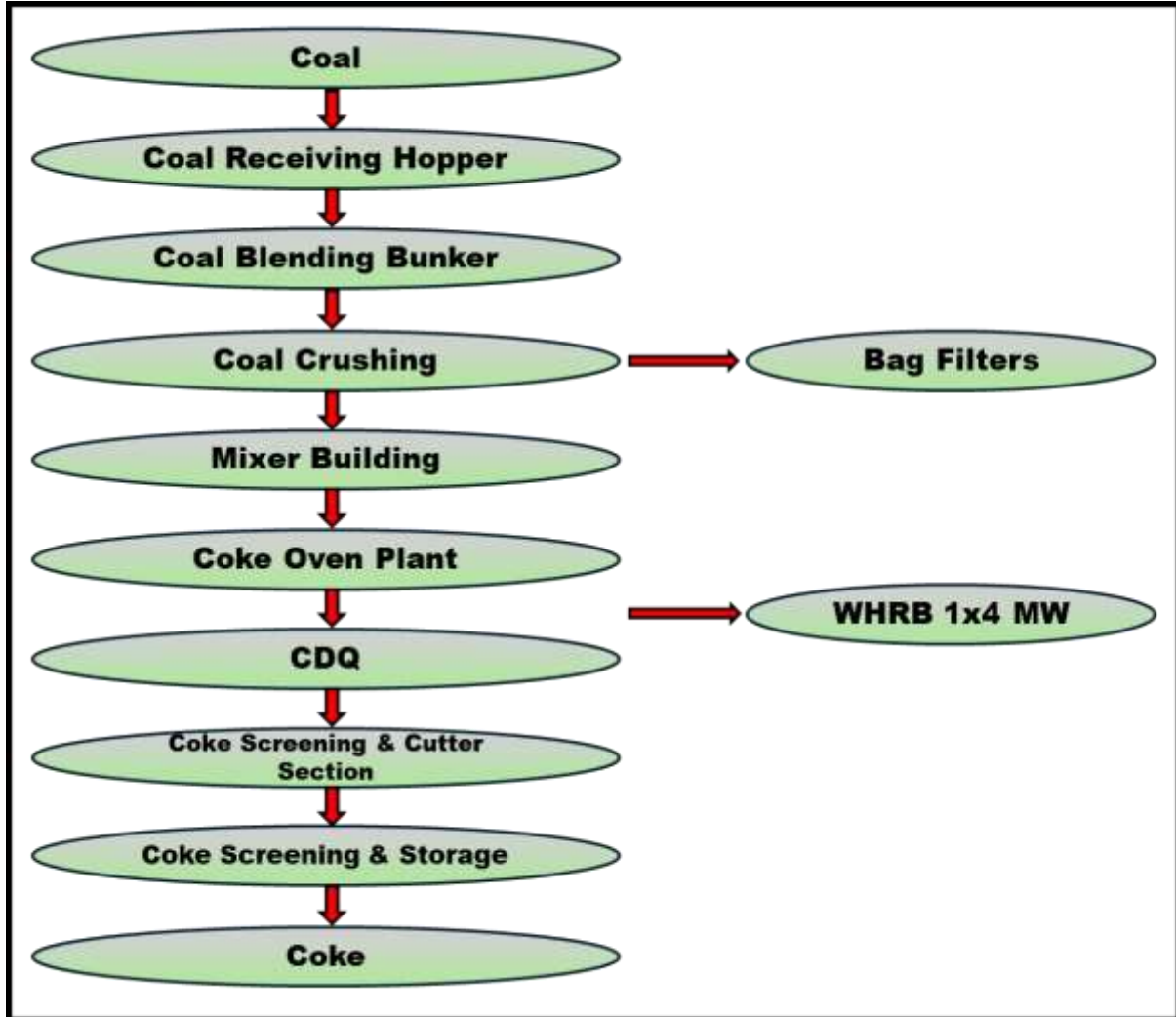
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Process Description of Pellet Plant



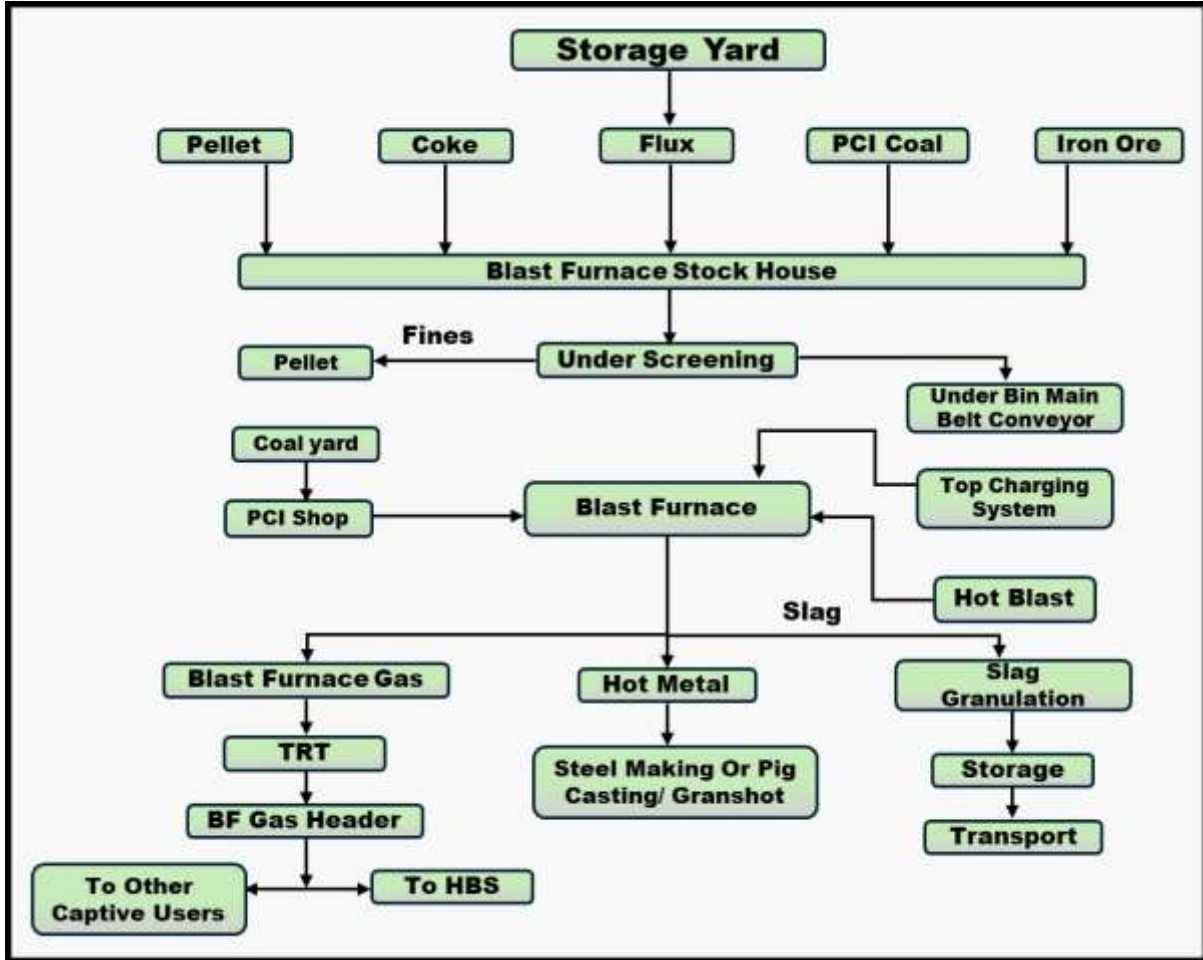
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Process Description of Coke Oven



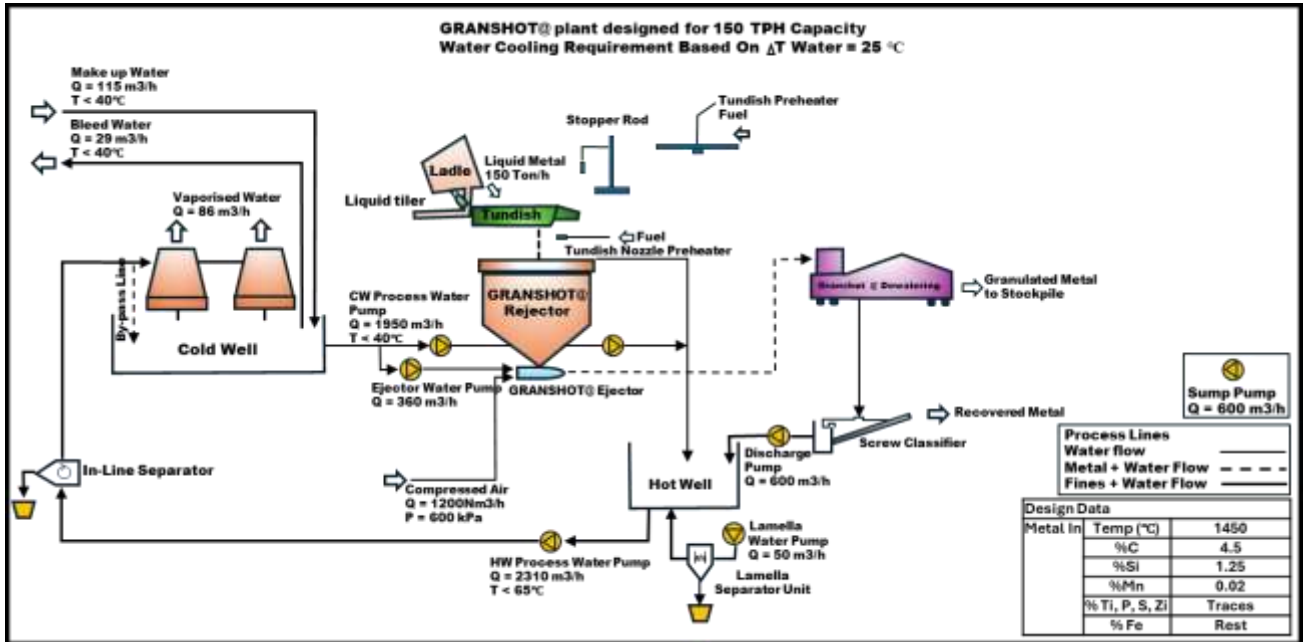
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Process Description of Blast Furnace



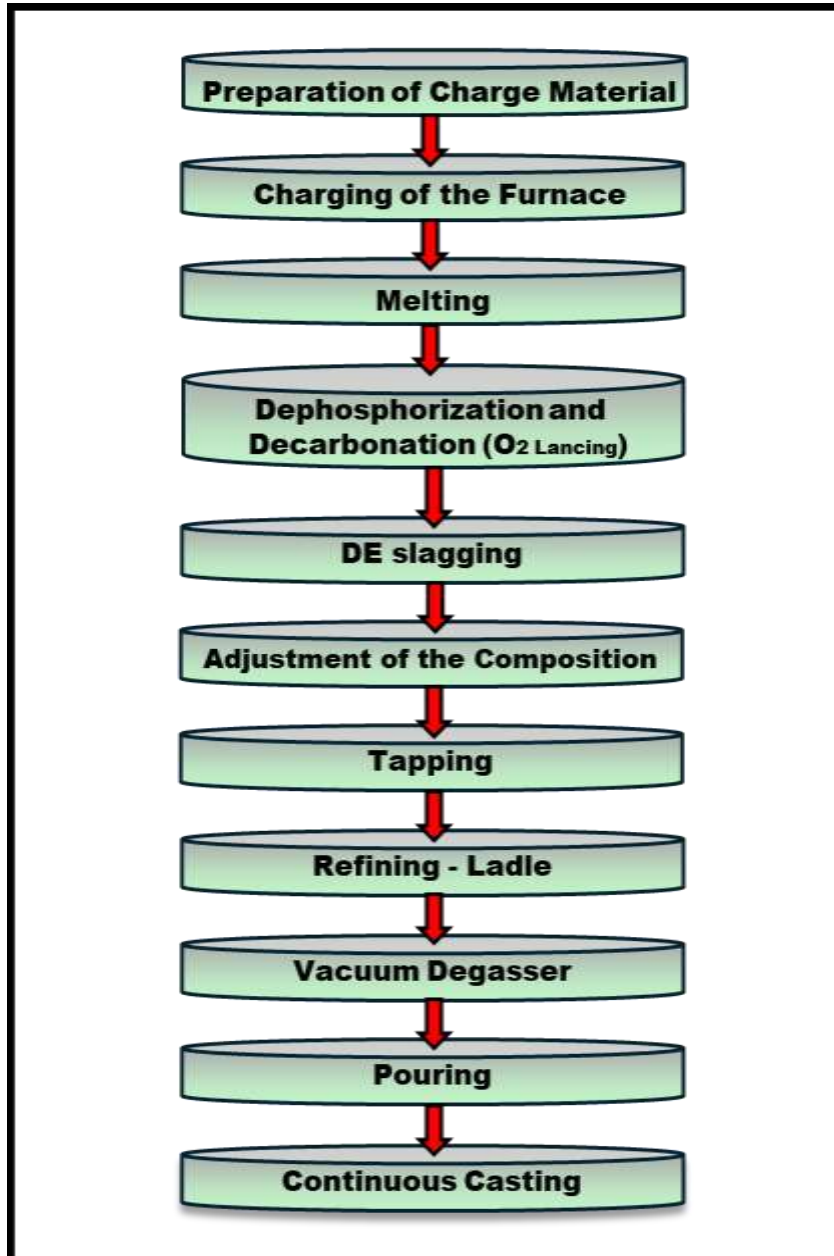
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Process Description of Hot Metal Granulation



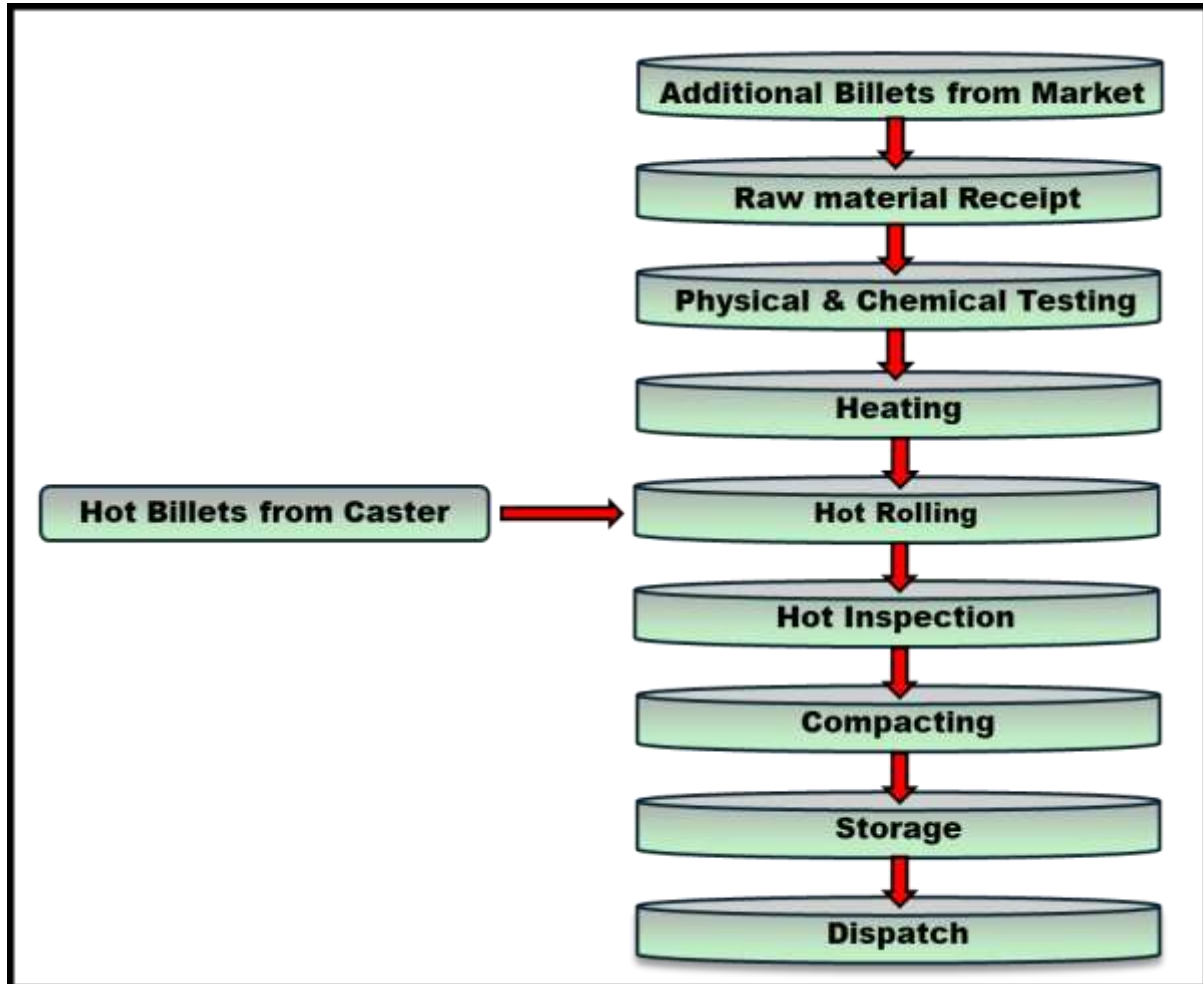
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Process Description of Steel melting Shop



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Process Description of Rolling Mill



DESCRIPTION OF ENVIRONMENT

Air Environment

The ambient air quality monitored at 10 locations selected based on predominant wind direction, indicated the following ranges;

PM₁₀ : 42.6 to 66.1 µg/m³.

PM_{2.5} : 18.2 to 38.9 µg/m³

SO₂ : 10.1 to 25.3 µg/m³

NO_x : 16.6 to 31.6 µg/m³

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Industrial Area, Residential, Rural Area (CPCB Norms)	PM ₁₀	PM _{2.5}	SO ₂	NO _x
	100 µg/m ³	60 µg/m ³	80 µg/m ³	80 µg/m ³

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

Water Environment

A total of 17 samples including eight surface & nine 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 (BIS 10500 – 2012) except presence of coliform in surface water, which may be due to the human activities

Noise Environment

It has found that in the proposed expansion plant, noise levels are in the range of 36.6 to 55.7 dB (A) at all eight stations. Maximum levels of noise have recorded in day hours which are natural as our most of activities have done in day hours.

Noise levels measured at all eight stations are well within limit of either 65.0 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

Eight Soil samples were collected analyzed for physico-chemical characteristics at selected locations in the study area to assess the existing soil conditions around the proposed project site. The relevant parameters show the following characteristics.

The characteristics of the soil sample were compared with different depths for respective parameters.

The observations of soil characteristics are discussed parameter wise below;

- a) Texture of all soil samples are Silty clay and sandy in Texture Classification.
- b) Colour of soil samples from agriculture and waste land is light grey & reddish, dark brown & brown in color.

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- c) The bulk density of soil samples are in the range of 1.69 to 1.81 gm/cc.
- d) Soil samples have pH values in the range of 7.27 to 8.61. The pH values are indicating nature of soil samples as neutral.
- e) Soil samples have conductivities between 0.094 to 1.92 mmhos/cm.
- f) Soil samples have Organic Matter between 0.45 to 1.98 %. These values represent average fertility of soils.
- g) Soil samples have concentration of Available Nitrogen values ranged between 80.8 to 358 kg/ha.
- h) Soil sample have concentration of Available Phosphorous values ranged between 29.3 to 106 kg/ha.
- i) Soil sample have concentration of Available Potassium values range between 69.8 to 852 kg/ha.

ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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.

Raw Material Handling / Transport System

The possible pollutants are fugitive dust emissions from raw materials handling areas viz. loading / unloading, fuel storage area etc.

Mitigation Measures

- Installation of ESP for power plant and Pellet plant.

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- Installation of Bag filters for Blast Furnace, Coke Oven Plant and SMS.
- Dust suppression system will be provided in the form of water sprinklers.
- All discharge and feed points wherever the possibility of dust generation, is provided with dust suppression system.
- Regular monitoring of air pollution as per MPCB norms.

Noise Levels

During operation, the major noise generating sources are auto loading section, electric motors etc. These sources will be located far off from each other. Under any circumstances the noise level from each of these sources will not exceed 75 dB (A).

Noise levels generated in the project site will be confined to the noise generating plant units hence the impact of noise levels on surroundings will be insignificant.

Impact on Water

The project will implement zero liquid discharge. Hence there will not be any impact on water. No ground water will be abstracted.

Impact on Terrestrial ecology

There shall not be any loss or reduction of species and habitat due to the project site. Project site is located in existing plant premises No site clearance or vegetation will be removed.

During the EB study 9 schedule I species fauna were found in the study area. Conservation Plan for the same is prepared and submitted to DFO Chandrapur.

There shall not be any impairment of ecological functions such as (i) disruption of food chains, (ii) decline in species population and or (iii) alterations in predator-prey relationships. Plant will be equipped with Air Pollution Control Device, No waste water will be release from production process, and green belt has been developed for noise pollution control and for maintaining balance in flora fauna habitat.

Solid Waste Management

Solid wastes / by products that will be generated from plant and their disposal method is given in following table:

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Solid Waste Quantity and Disposal for Existing and Under Construction plant

Solid Waste generation	Existing Quantity (TPA)	Under Construction plant Quantity (TPA)	Method of Disposal
Char	48000	53333	Reused in Power Plant and Sold to local entrepreneurs for making a coal briquettes.
Bottom Ash	9855	10950	Brick Manufacturing
Accretion	3650	4055	Low Land Filling and Brick Manufacturing.
Fly ash	39785	44205	Low Land Filling and Brick Manufacturing.
Dust from ESP	7300	8111	Brick Manufacturing

Solid Waste Generation and Management in Under Construction Power plant

Solid Waste	Quantity (TPA)	Utilization
Fly Ash	46,200	Land filling / levelling and will be supplied to brick manufacturing units/ cement plants

Solid Waste Generation and Management in Existing Coal Washery (No Change)

Solid Waste	Quantity	Mitigation Measures
Washery reject	91250 TPA	Sold to Third Party

Solid Waste Generation and Management in Proposed Expansion

Solid Waste	Quantity	Mitigation Measures
Ash	131733	Land filling / levelling and will be supplied to brick manufacturing units/ cement plants
Dust Removed from Primary dust catchers & BF gas cleaning	21000	Will be Sold to third party
BF Slag	336000	Will be sold to Cement Plant
EAF Slag	231000	Road Making, filling of back low lying area or will be sold in the market to reseller
Tailings and Mill Scale	37200	Reused in SMS

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Impact on Socio-Economic Environment

LMEL is providing employment to 1003 people. The proposed project shall create direct and indirect permanent employment. The proposed project shall create employment to 2150 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.

ENVIRONMENTAL MONITORING PROGRAMME

LMEL is carrying out the environmental Monitoring on regular basis in the existing plant and methodologies adopted for environmental monitoring are in accordance with the CPCB guidelines. The environmental monitoring locations are selected where environmental impacts are likely to occur due to the operation of existing and proposed project. The main scope of monitoring program is to check the environmental quality and to take necessary action to restore the environment quality in case of deviations. The monitoring reports will be submitted to all statutory agencies regularly.

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ADDITIONAL STUDIES

The additional studies as per the ToR issued by MoEF&CC are Risk Assessment, & Disaster Management Plan.

PROJECT BENEFITS

M/s. Lloyds Metals and Energy Limited is equally conscious for the all-round socio-economic development and is committed to raise the quality of life and social well-being of communities where it operates. Its CER initiatives will be prioritized on local needs, which focus on Health, Education and Environment Conservation. Rs. 2,37,34,015.38 have been spent towards various CSR activities in the last 7 years. The summary of CSR amount spend in last 7 years for various activities such as sports, education, medical facilities and water facilities.

CORPORATE ENVIRONMENT RESPONSIBILITY (CER)

Developmental activities should be based on community priority and with significant local contributions. Important areas identified by Social Impact Assessment and during Public hearings have been considered under CER activities. This approach will strengthen the groups, empower the members and local people will be benefited.

As per the previous EC dated 5.02.2024 vide letter No. IA-J-11011/243/2019-IAII(IND-I) (Public Hearing Requirement), the company has already started the work under CER committed during Public Hearing Rs. 739 Lacs.

PROPOSED CER

The total cost of activities / schemes planned as per the socio-economic survey conducted under baseline monitoring. Rs. 10 crores will be spent for development of nearby villages. This fund will be further strengthened after the conduction of Public Hearing.

ENVIRONMENTAL MANAGEMENT PLAN

The environmental management plan will be followed during construction and operation phases. The project allocated a budget of Rs.333 Crores for the

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implementation of capital works under EMP apart from the annual recurring budget that will be allocated annually for operation and maintenance of environmental infrastructure. An environment management cell is existing in the existing project, which will be further enhanced as per the requirements of the proposed expansion .

GREEN BELT DEVELOPMENT

Avenue plantation within the plant and green belt development is done.

Existing Green belt development is at 47.7 ha (51%) out of the total area of the project 93.52 ha. Proposed green belt will at 48.57 ha (40.33%) of total area of the proposed project i.e. 120.422 ha. Therefore, the Cumulative green belt development will be at 96.27 ha (45%) of 213.942 ha.

The plant has been in operation since 1994-95 and 2,34,650 nos. of trees are planted and 1,05,000 nos. survived till date. Further gap filling has been done. For gap filling around 15000 nos. of trees are planted. Total 1,20,000 no. of trees are well grown.

For proposed project 1,21,425 nos. of trees @ 2500 per ha will be planted from Monsoon 2024 and will be completed within one year.