Executive Summary

For

Expansion of Ferro Alloy Plant by Installing 7.5 MVA of Submerged Arc Furnace and Manufacturing of Noble Ferro Alloys through Thermite Process with Sinter Plant

At

Plot No. B-17, B-17/1 and B-1/1, MIDC, Lohara, Yavatmal - 445 001

PROJECT PROPONENT

Balaji Electro Smelters Private Limited

Environmental Consultant

Pollution and Ecology Control Services

QCI-NABET Accredited EIA Consultant for Metallurgical Industries (Sector 8)

Accreditation no.: QCI/NABET/EIA/1720/RA0101

Extension Letter: QCI/NABET/ENV/ACO/22/2254 valid upto 14th May 2022

1.0 INTRODUCTION

BALAJI ELECTRO SMELTERS PRIVATE LIMITED is proposed to install 7.5 MVA Submerged Arc Furnace for manufacturing of 23,400 TPA High Carbon Ferro Manganese OR 16,000 TPA High Carbon Silico Manganese OR 7,500 TPA of High Carbon Ferro Silicon and Noble Ferro Alloys Medium/Low Carbon Ferro Manganese 3,250 TPA OR Ferro Titanium 600 TPA OR Ferro Vanadium 250 TPA OR Ferro Molybdenum 250 TPA OR Manganese Oxide 2,400 TPA through Thermite Process and setting up of Sintering Plant. The proposed project has been identified at Plot Nos. B-17, B-17/1 and B-1/1, MIDC, Yavatmal - 445 001, Maharashtra. The proposed project falls in Category "A"

Details of Project are given in following table.

Project Highlights

Name of the Company	**:**	BALAJI ELECTRO SMELTERS PRIVATE LIMITED
Plant Location	:	B-17, B-17/1-and B-1/1, MIDC, Yavatmal 445 001, Maharashtra.
Contact person	:	RaghunathKaparthi
Land Area	:	Total Land: 39960 Sq.m Existing Plant Area :10887.91 Sq m **Land required for Expansion**:29072.09 Sq.m
Coordinates	:	A. 20°23'9.56"N 78° 4'59.74"E B. 20°23'5.37"N 78° 4'57.60"E C. 20°23'7.95"N 78° 4'56.76"E D. 20°23'9.11"N 78° 4'57.44"E E. 20°23'9.57"N 78° 4'58.82E F. 20°23'9.49"N 78° 5'5.33"E G. 20°23'8.93"N 78° 5'5.33"E H. 20°23'8.40"N 78° 5'2.66"E I. 20°23'6.87"N 78° 5'2.71"E J. 20°23'7.50"N 78° 5'5.44"E K. 20°23'6.70"N 78° 5'5.50"E L. 20°23'4.01"N 78° 5'4.18"E M. 20°23'4.20"N 78° 5'3.65"E N. 20°23'3.75"N 78° 5'3.46"E O. 20°23'4.31"N 78° 5'1.71"E P. 20°23'1.54"N 78° 5'0.75"E

Production Capacity	:	High Carbon Ferro Manganese: 23,400 TPA OR High Carbon Silico Manganese: 16,000 TPA OR High Carbon Ferro Silicon : 7,500 TPA **Noble Ferro Alloys** Medium/Low Carbon Ferro Manganese : 3,250 TPA OR Ferro Titanium : 600TPA OR Ferro Vanadium : 250 TPA OR Ferro Molybdenum : 250 TPA OR Manganese Oxide : 2,400 TPA
Water Requirement & Source	:	100 KLD and Source: MIDC
Project Cost	**:**	Rs.10Cr. approx.

2.0 PROJECT LOCATION

MIDC allotted total 3.996 Ha land to company at B-17, B-17/1, B-18, and B-1/1, MIDC, Yavatmal – 445 001, Maharashtra. Out of this, company wish to expand the unit on 2.9072 Ha land. The Google map showing plant location is shown in **Figure 1.1**

Source: Google Earth

Google Image Showing Plant Location

SIZE OR MAGNITUDE OF OPERATION

The production details of the proposed project is given in Following Table

Production Details

Existing Production

Sr. no.	Product	Maximum Production (As per Consent to Operate)
Submerged Arc Furnace		
1.	Silico Manganese	510 TPM (6120 TPA)

Proposed Production

Sr. no.	Product	Maximum Production
7.5 MVA Submerged Arc Furnace		
1.	High Carbon Ferro Manganese OR	23,400 TPA
2.	High Carbon Silico Manganese OR	16,000 TPA
3	High Carbon Ferro Silicon	7,500 TPA
Thermite Process		
4	Noble Ferro Alloys Medium/Low Carbon Ferro Manganese OR	3,250 TPA
5	Ferro Titanium OR	600 TPA
6	Ferro Vanadium OR	250 TPA
7	Ferro Molybdenum OR	250 TPA
8	Manganese Oxide	2,400 TPA

Raw Materials Requirement

Raw material and fuel details along with mode of transport is given in the following **Table**

1) Ferro Alloy Production by SAF

5 Raw Material Requirement for Ferro Manganese

Sr. No.	Name of Raw Material	Requirement (TPA)	Source	MODE OF TRANSPORT
1	Manganese Ore	58500	Maharashtra, Madhya Pradesh, Gujarat, Orissa, Karnataka, Telangana, etc.& Imports	By Ship/Train/Truck
2	Pearl Coke/Coal/Charcoal	15210	Maharashtra, Karnataka, Telangana, Andhra Pradesh etc. and imports	By Ship/Train/Truck
3	Dolomite	702	Maharashtra	By Truck
4	Electrode Paste	410	Maharashtra, Orissa, West Bengal, Karnataka, Madhya Pradesh etc.	By Train/Truck
5	Iron Ore/Mill Scale	As per requirement	Maharashtra, Orissa, Karnataka	By Train/Truck
	Total	**74822**		

Raw Material Requirement for Silico Manganese

Sr. No.	Name of Raw Material	Requirement (TPA)	Source	MODE OF TRANSPORT
1	Manganese Ore and Ferro Manganese/High Mn content of Silico Manganese slag	45000	Maharashtra, Madhya Pradesh, Gujarat, Orissa, Karnataka, Telangana, etc.& Imports	By Ship/Train/ Tarpaulin covered Truck
2	Pearl Coke/Coal	11600	Maharashtra, Karnataka, Telangana, Andhra Pradesh etc. and imports	By Ship/Train/ Tarpaulin covered Truck
3	Dolomite/Limestone	480	Maharashtra	By Tarpaulin covered Truck
4	Electrode Paste	410	Maharashtra, Orissa, West Bengal, Karnataka, Madhya Pradesh etc.	By Train/ Tarpaulin covered Truck
5	Ferro Slag	11200	Captive / Maharashtra, Madhya Pradesh, Andhra Pradesh etc.	By Tarpaulin covered Truck
6	Iron Ore/Mill Scale	As per requirement	Maharashtra, Orissa, Karnataka	By Train/ Tarpaulin covered Truck
	Total	**68690**		

Raw Material Requirement for Ferro Silicon

Sr. No.	Name of Raw Material	Requirement (TPA)	Source	MODE OF TRANSPORT
1	High Grade Quartz	18750	Maharashtra, Madhya Pradesh, Gujarat, Karnataka, Telangana, etc.& Imports	By Ship/Train/ Tarpaulin covered Truck
2	Pearl Coke/Coal/Charcoal	11250	Maharashtra, Karnataka, Telangana, Andhra Pradesh etc. and imports	By Ship/Train/ Tarpaulin covered Truck
2	Mill Scale	3000	Maharashtra	By Tarpaulin covered Truck
3	Electrode Paste	410	Maharashtra, Orissa, West Bengal, Karnataka, Madhya Pradesh etc.	By Train/ Tarpaulin covered Truck
	Total	**33410**		

II) Ferro Alloy Production by Thermite Process

Raw Material Required For Ferro Alloys Production (By Thermite Process)

Raw Material Required ForLow/Med. Carbon Fe.Mn.

Product Name	**Raw Material**	**Quantity required (TPA)**	**Source**	Mode of transport
Low/Med. Carbon Fe.Mn.	Manganese Ore	5000	Local Procurement / Imported	By Ship/Train/Truck
	Aluminum Scrap/Telics	1000	Local Procurement / Imported	By Ship/Train/Truck
	Lime Powder/ Flourspar	800	Local Procurement	By Truck
	Silico Manganese	3250	Local Procurement	By Train/Truck

Raw Material Required ForFerro Titanium

Product Name	**Raw Material**	**Quantity required (TPA)**	**Source**	**Mode of transport**
Ferro Titanium	Ilmenite	850	Local Procurement / Imported	By Ship/Train/Truck
	Rutile/Zirconium	300	Local Procurement / Imported	By Ship/Train/Truck
	Aluminum Powder	500	Local Procurement Imported	By Truck
	Lime Powder	120	Local Procurement / Imported	By Truck
	Iron Ore	120	Local Procurement	By Truck

Raw Material Required For Ferro Vanadium

Product Name	**Raw Material**	**Quantity required (TPA)**	**Source**	**Mode of transport**
Ferro Vanadium	Vanadium Pentoxide (flakes)	300	Imported	By Ship/Train/Truck
	Aluminum Shots/Powder/ Telics	125	Local Procurement / Imported	By Ship/Train/Truck
	Flourspar/Lime Powder	50	Local Procurement	By Truck
	Iron Scrap	50	Local Procurement	By Truck

Raw Material Required For Ferro Molybdenum.

Product Name	Raw Material	Quantity required (TPA)	Source	Mode of transport
Ferro Molybdenum.	Molybdenum Concentrate	250	Imported	By Ship/Train/Truck
	Aluminum Powder / Telics	50	Local Procurement / Imported	By Ship/Train/Truck
	Lime Powder	50	Local Procurement	By Truck
	Mill Scale	125	Local Procurement	By Truck
	Ferro Silicon	100	Local Procurement / Imported	By Ship/Train/Truck

Raw Material Required For Manganese Oxide

Product Name	Raw Material	Quantity required (TPA)	Source	Mode of transport
Manganese Oxide	Manganese Ore	3200	Local Procurement / Imported	By Ship/Train/Truck
	Coal	720	Local Procurement / Imported	By Ship/Train/Truck

Water Requirement

The total water requirement will be 100 KLD will be met from MIDC, Yavatmal

Water Requirement and Wastewater Generation (Including Both Process)

INPUT	m^3/day	OUTPUT	m3/day
For Cooling	75	Cooling Tower Evaporation losses	75
Dust Suppression	05	Evaporation losses	05
Greenbelt	10	Gardening Losses	10
Domestic & Misc. applications	10	Sanitary Effluent	06
		Domestic Losses and Other misc. losses	04
Total	**100**	**Total**	**100**

Company will be committed to ZERO Discharge of waste water. During plant operation no waste water will be generated from Plant. Cooling water completely recycled in a closed loop. The entire treated waste water will be recycled and reused. The domestic wastewater generated will be treated in Packaged Type STP

Power Requirement

The major input in the proposed alloys manufacturing process is the electricity. The electricity is drawn from the grid at 33 KV voltages to the switching station in the in-house substation wherein required HT switchgears, Air Circuit Breaker, CTs, PTs, Capacitor Banks, MCCs and other equipments are installed as per the rules and requirement of Maharashtra State Electricity Distribution Company Limited (MSEDCL) Electrical Inspectorate of Maharashtra. This electricity is then transferred to the furnace transformer, which are basically 7.5 MVA three phase transformers where it is further stepped down from 33 KV to the operating voltage of about 60 -150 volts. In order to improve the reactive power and reduce the losses suitable Capacitor Banks will be installed. The electricity from the furnace transformers at a voltage of 60 -150 volts and very high current of about 17,000 – 30,000 amps transferred to the reaction zone through copper bus tubes - copper clamps - self-baking soderberg carbon electrodes. All electrical equipment would be provided with earth connection as per Indian Electricity rules. All buildings would be provided with necessary lightning protection arrangements. I strips/ flats and GI electrodes will be used for earthening and lightning protection.

Employment Generation (Direct and Indirect) due to Project

The proposed project will requires the manpower for production and administration purposes and will be recruited locally without any difficulty. The expected total manpower is about 125-150 including contract labourers and excluding indirect employment.

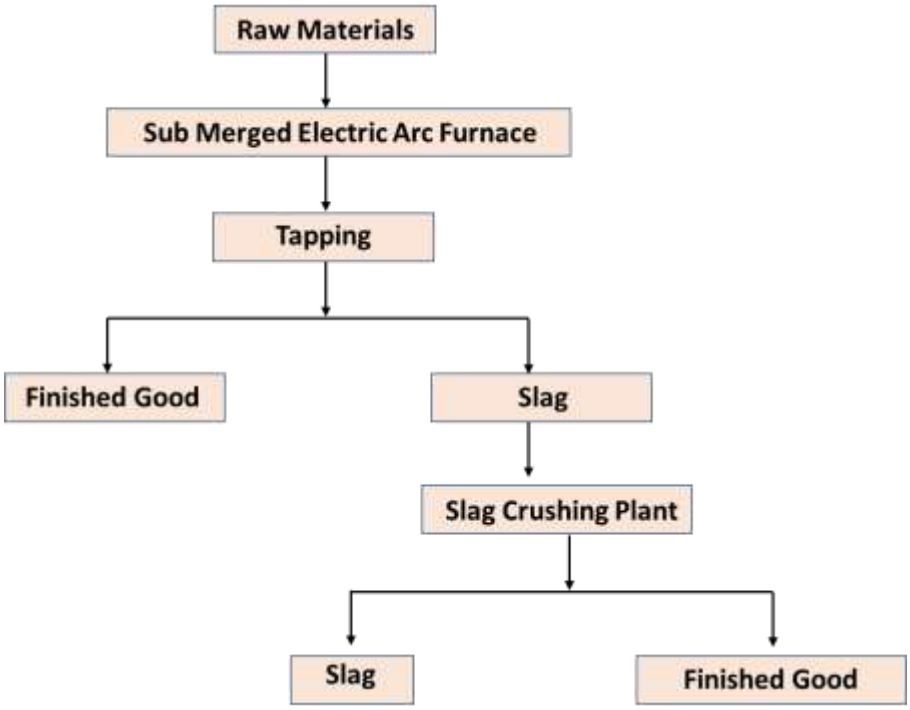
MANUFACTURING PROCESS

I) Manufacturing Process of Ferro Alloys by SAF

Most of the alloys e.g., Ferro Manganese, Silico Manganese, and Ferro Silicon are produced by smelting process. Smelting of the charge materials are carried out in Sub Electric Arc Furnace equipped with Transformer of proper ratings.

Manganese Ores received from different mines in India and imports are first graded in terms of Manganese, Ferrous, Silica, Alumina and Phosphorous contents. Different ores are blended to achieve desired specifications of finished product as per the requirement of the Buyer. Pearl Coke, Coal, Leco, Pet coke, etc. are used as reducing agent. Dolomite/Lime Stone is used as Flux. Quartz, Iron Ore/Mill Scale are used as additives. If raw material mix has sufficient properties of Dolomite, there is no need to use Dolomite/Lime Stone. Ferro Manganese slag is used for production of Silico Manganese. High MnO slag produced in the manufacturing of Silico Manganese also reused for manufacturing of Silico Manganese. All these required inputs are mixed and delivered into the Submerged Electric Arc Furnace. Three soderburg electrodes which are made from CRCA sheet filled with carbon paste are used in the process and these will get consumed in the process and are therefore replenished as per requirement. Three Electrodes which produce arc are submerged in the raw material charge. Since three Electrodes are submerged in the raw material Charge, this is called Sub Merged Electric Arc Furnace. A very strong current between 17000 to 30,000 amperes at 60 to 150 volts is passed through these three Soderburg Electrodes to produce arc. Between 1400^0C - 1600^0C temperature the reaction will be completed and Manganese based Ferro Alloys, Ferro Manganese/Silico Manganese are produced in molten state, which settles at the bottom of the furnace because it is heavier. The slag floats on finished product. Then there will be semi fluid and solid raw materials on the upper portion of the Furnace. These are tapped in intervals are collected into different sand beds for finished goods and slag. About 800 Kg. to 1,200 Kg. slag comes out for producing 1T finished product. On cooling, solid Cakes are produced and are broken in different small sizes as per the requirement of the Buyer and packed in double gunny bags of 50 kg each for dispatch. For exports and some Buyers in the domestic market places order for finished goods filled in 1T Jumbo Bag

Flow Chart of the Process



Breaking into sizes after weighment packed for dispatch

II) Manufacturing Process of Noble Ferro Alloys (Thermite Process)

Principal of Thermite Process:

Thermite Process aims at the production of Ferro Alloys from the oxides of elements by reduction with Aluminium powder using exothermic heat of the reaction for smelting purpose. The highly exothermic reaction raises the temperature of the reaction to above 2000 °c or even more.

$$\text{Metal Oxide} + \text{Al} \longrightarrow \text{Metal} + Al_2O_3$$

On ignition of the reaction mixture consisting of the oxide ore whose metal is to be obtained with aluminium powder/telic, aluminium readily reacts with the oxygen of the metal oxide liberating heat, which raises the temperature of the reacting substance and reacts thereby yielding the Ferro Alloys Slag.

Following activities are carried on:

a) Powdering of different Alloys / Minerals.
b) Mixing in blender in the required proposition

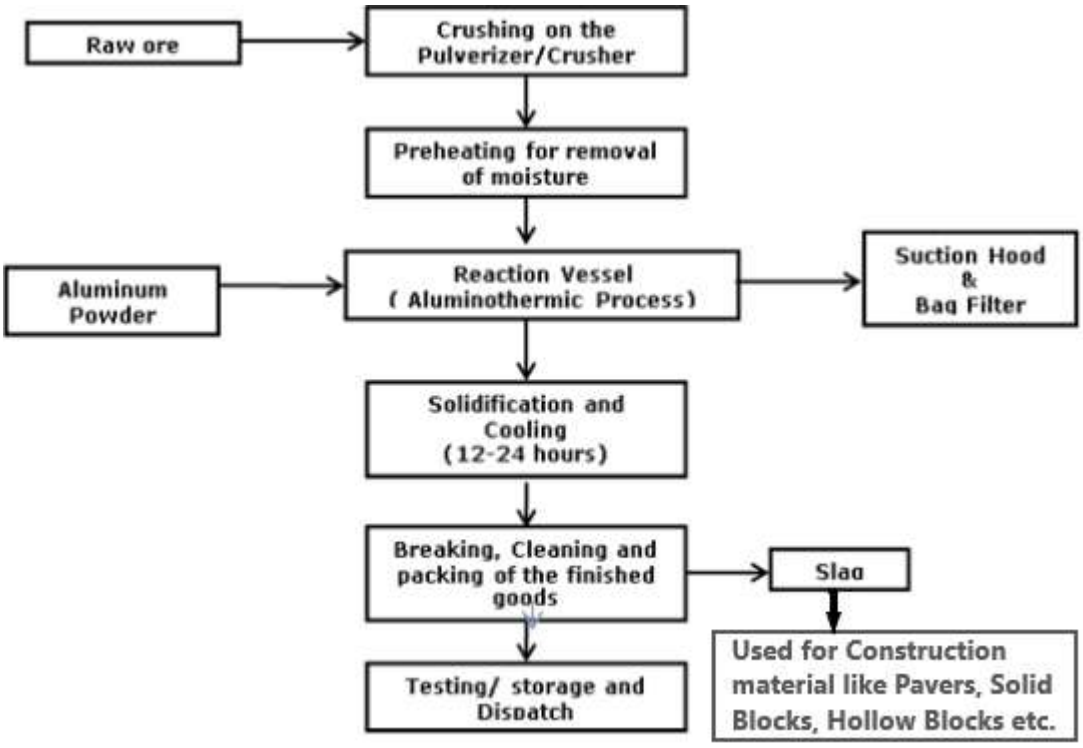
c) Then a small fire is created (By aluminium powder) in the reaction vessel, where this blended material is added slowly. The powder starts melting inside the vessel and the Metallic contents are automatically separated which settles down and the sludge floats.

d) Metal and Sludge are separated by manual processes.

e) Metal is crushed and for some customer it is powdered in Pulverizer.

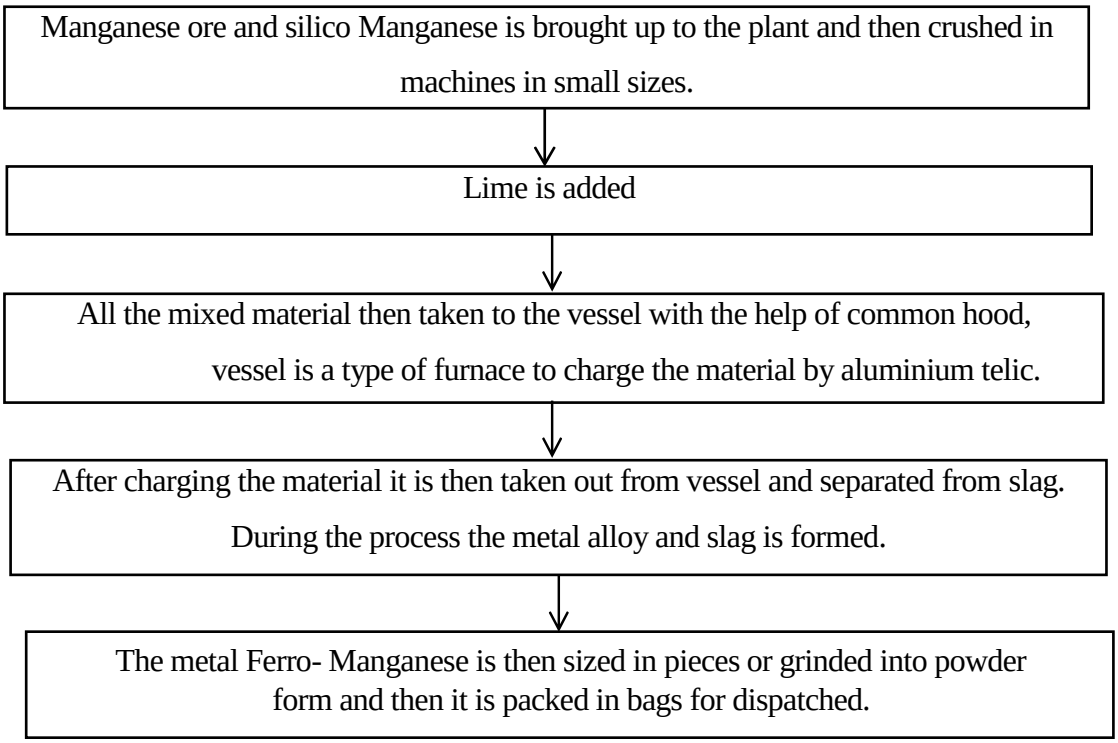
f) The Metal is crushed and packed in bags and kept ready for dispatches.

Given below is the flow chart for the manufacturing of Ferro Alloys such as Low, Medium Carbon Ferro Manganese, Ferro Titanium, Molybdenum, and Vanadium.

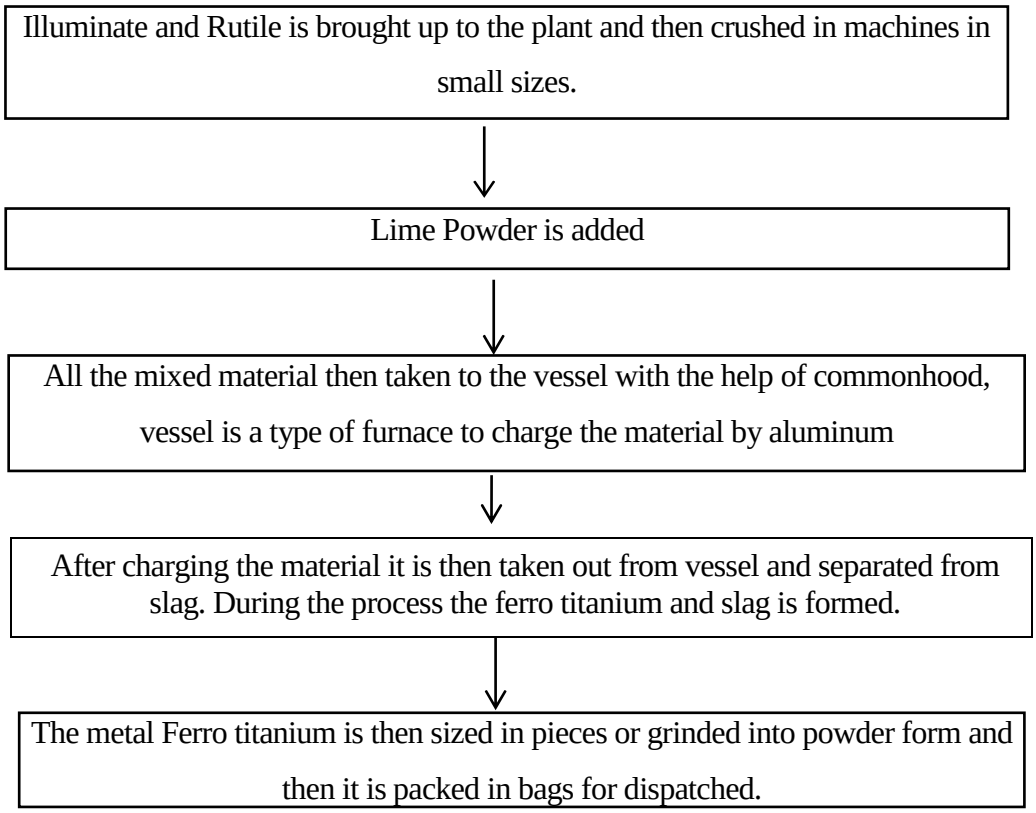


Process Flow Chart of the Project

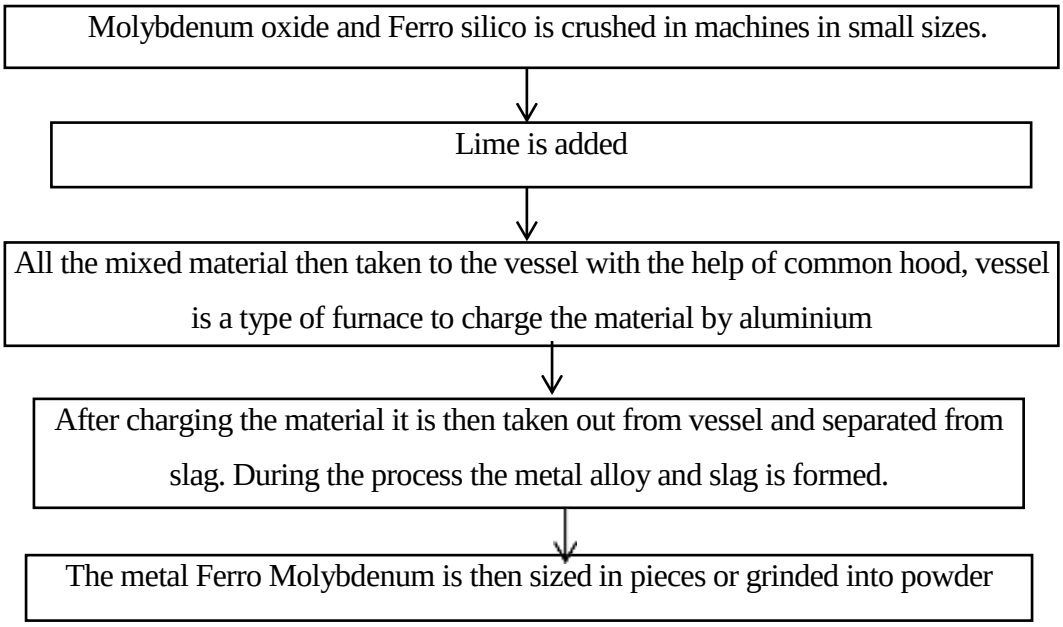
FLOW CHART FOR MEDIUM/LOW CARBON FERRO MANGANESE



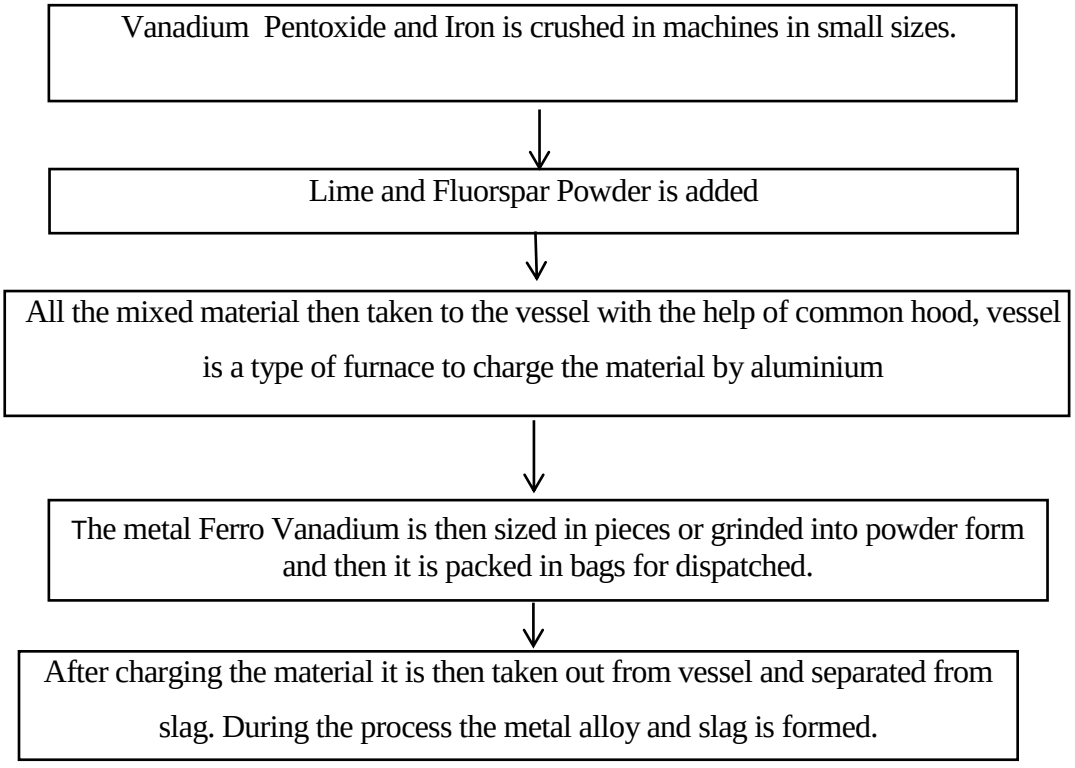
FLOW CHART FOR FERRO TITANIUM



FLOW CHART FOR FERRO MOLLYBDENUM



FLOW CHART FOR FERRO VANADIUM



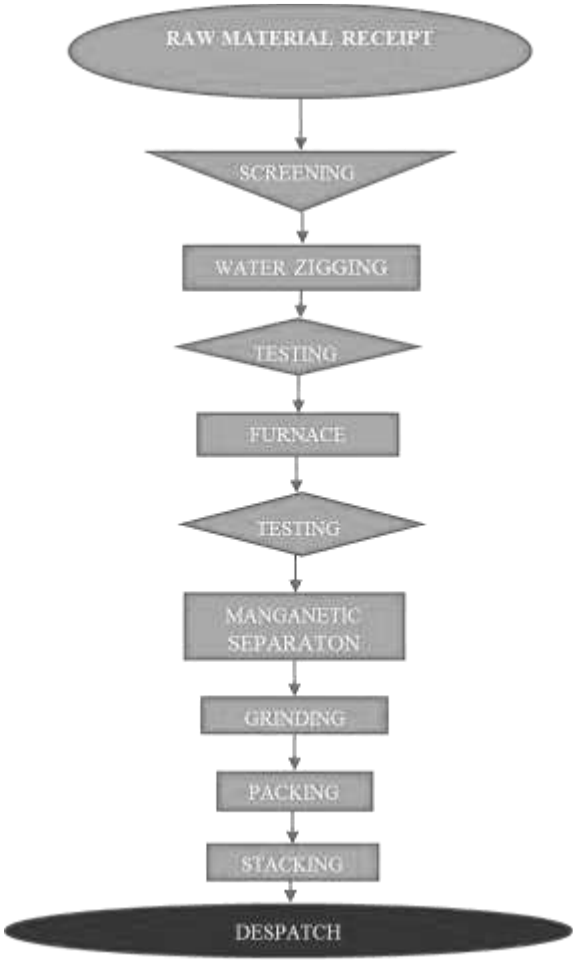
Manufacturing Process of Manganese Oxide

(A) After Raw Material receipt at the site it is tested for the contents of various elements and then the material is screened.

(B) The material is then heated in coal fired furnace. From where it is transferred for drying and magnetic separation.

(C) Then the material is dried and after Magnetic Separation it is feed to grinding Machine, where it is powdered in the required mesh size.

(D) After grinding it is semi automatically packed in 25 kg/50 kg/ or 100 kg HDPE Bags and kept ready for dispatch.



Sintering Plant: To achieve economic cost of production and depending upon the prices of ores, it is beneficial if Manganese Ore powder is Sintered and used in the raw material mix. Therefore this Plant is not used continuously. In Sintering process, Manganese Ore powder

bonded and granules of Manganese Ore produced.

Sintering Process: Manganese Ore Powder and Pearl coke/coal is mixed in the Steel Pans and heated by using blower. The particles generated are collected by using Suction Hood and Filter Bags. The collected particles reused in the process. These Filter Bags are also used for collecting particle in manufacturing of Noble Ferro Alloys through Alumino Thermo Process. Bonded sintered material is crushed by hammer and used in as raw material in the manufacturing process of bulk ferro alloys through Sub merged Electric Arc Furnace.

3.0 DESCRIPTION OF THE ENVIRONMENT

Baseline data has been collected during October to December 2021. The data was collected by NABL/MoEF&CC approved Laboratory. The schedule of environmental monitoring programme is presented in following **Table**

SCHEDULE OF ENVIRONMENTAL MONITORING PROGRAMME

Environmental Component	**Monitoring period**	**Number of sampling Stations**	**Parameters**
Micro -Meteorology	October to December 2021	01	Temperature, Relative Humidity, Rainfall, Wind Speed, Wind direction
Air Quality	October to December 2021	08	PM_{10} , $PM_{2.5}$, SO_2, NOx, CO
Water Quality	October 2021		Parameters as per IS-10500:2012 and IS-2490:1982
Noise Level	October 2021	08	L_d, L_n& L_{dn}
Soil Quality	October 2021	08	Physico & Chemical characteristics as per Indian Standards (IS 2720)

AIR ENVIRONMENT

The ambient air quality monitored at 8 locations selected based on predominant wind direction during october to Decemeber 2021. Based on the studies it was found that

PM_{10} concentration was ranges from 36.5 to 74.6 µg/m^3, $PM_{2.5}$ concentration was ranges from 20.1 to 43.5 µg/m^3, SO_2 concentration was ranges from 4.6 to 18.4 µg/m^3 and NOx concentration was ranges from 9.3 to 29.4 µg/m^3 All the observed values was found to be below the NAAQ standards for Industrial/ Residential/ Rural areas at all sampling stations as indicated in graphical figures given for $PM_{10,}$ $PM_{2.5}$, SO_2 and NOx

Water Environment

A total 14 samples including six 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.

It was observed that the characteristics of the surface and ground water samples were found to be within the permissible limits stipulated standard for drinking water (BIS 10500 – 2012) except the total coliforms in surface water samples which may be due to the human activities observed during sampling and requires disinfection before use for drinking purpose.

Noise Environment

Noise levels are in the range of in the range of 33.0 dB (A) to 51.4 dB (A) at all eight stations. Noise levels measured at all eight stations (N-1, N-2, N-3, N-4, N-5, N-6, N-7 and N-8) are low and well within limit of either 55.0 dB(A) for Residential Area or 75.0 dB(A) (Day time) for Industrial Area as given in MoEF&CC Gazette notification for National Ambient Noise Level Standard.

Land Environment

Total eight soil samples were collected for physico-chemical of soil. The fertility status of Soil Nitrogen Phosphorus and Potassium was found to be poor to moderate level which require supplementation depending on the agricultural products grown.

4.0 ANTICIPATED IMPACTS & MITIGATION MEASURES

The main sources of dust pollution is mainly due to operation of SAF and thermite process and emission due to truck movement.

S.N	Stack attached to	Pollution Control Equipment	Stack Height (m)	Maximum Particulate emission at the outlet of Stack
1	Submerged Electric Arc Furnace	4th Hole extraction & cleaning system ID Fan, Spark Arrestor and Bag filters	35m	50mg/Nm3
2	Thermite Process	Dust collector & Bag filter	18 m	50mg/Nm3

Submerged Electric Arc Furnace being electrically operated, no fuel will be used. Hence no major emissions are envisaged.

The Maximum Cumulative GLC for PM_{10} will be 0.93 µg/m^3 at 750 m in SW Direction. .The predicted ground level concentrations obtained when superimposed on the baseline concentrations will be within the prescribed NAAQ Standards. Pollutant concentration summaries from accidental release is presented in the section below and it was found that at that time of such type of release the maximum GLC will be 33.1 µg/$m^3$for the plot of 1 hr.

M/s. Balaji Electro Smelters Private Limited will provide all necessary pollution control equipment to meet the standards prescribed by MoEF, CPCB and MPCB.

Impact on Noise Levels and Mitigation Measures

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 and Mitigation Measures

Water is mainly used for cooling of Furnace Transformer and Sub Merged Electric Arc Furnace Parts. For disposal of Sanitory Waste Water will be treated in packaged Type STP. Water is used for suppression of dust during unloading of raw materials and for watering Green Belt. Therefore there is no Water Pollution in our industry. "Zero Discharge" will be adopted.

Terrestrial Ecology

Biological Environment

There shall not be any loss or reduction of species and habitat due to the project site. During the EB study No Endemic, Rare, Endangered and Threatened (RET) species of flora and fauna were found in the study area.There is no National park, Wildlife sanctuary, Biosphere reserves and protected forest within 10 km of the plant area. No schedule- I species were recorded in the core and buffer zone of plant area during the biodiversity assessment. There may be an impact on the biological environment of the area due to operation of plant, if proper care will not be taken

Solid Waste Generation

Solid Waste Generation and Management in Submerged Arc Furnace from proposed plant is given in below table

Solid Waste generation	**Quantity (TPA)**	**Method of Disposal**
Slag from Ferro Manganese	9100	Ferro Manganese slag will be used in manufacturing of Silico Manganese
Slag from Silico manganese	9600	High MnO slag will be reused for manufacturing of Silico Manganese. Otherwise Low MnO Silico Manganese Slag is produced. This slag is used to produce Hollow and Solid Bricks which is an alternative to the conventional Red Soil Bricks. Therefore these are eco friendly and reduces soil degradation caused for producing Red Soil Bricks. The slag is also used for producing artificial Mortar /Washed Sand which again eco friendly. Other products produced from Slag are Pavers, Stair case steps, Road dividers, Manhole covers and Fencing Poles etc. Slag is also used for laying of Roads. The Slag is in Green Colour and it is used for decoration purposes in Water falls and construction of Walls in various places. The company is endeavouring to produce many eco friendly new products from slag.

Slag from Ferro Silicon	Nil	Production of Ferro Silicon is Slag less process.
Dust from Bag filters of SAF and during tapping	30	Reused in Furnace

Solid Waste Generation and Management for Ferro Alloy using Thermite process

Waste	Quantity	Mitigation Measures
Slag (Cumulative)	2700 TPA	Slag will be reused for lining & earth preparation of reaction vessels & will be sold to silicone Manufactures
Ash	880 TPA	Will be sold to brick manufacturers

Impact on Socio-Economic Environment Socio Economic Environment

Company will provide employment to 125-150 workers. The 80-90% of local people will be 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.

The overall impact on the socio economic environment will be significant

5.0 ENVIRONMENTAL MONITORING PROGRAMME

The baseline monitoring for Air, Water, Noise and soil including stack monitoring will be monitored through MoEFCC/NABL Accredited Laboratory as per statutory requirement and reports are being/will be submitted to MPCB regularly.

6.0 ADDITIONAL STUDIES

The additional studies was carried out as per the ToR issued by MoEF&CC are Risk Assessment, & Disaster Management Plan. This Draft report is being submitted for the Public hearing.

7.0 PROJECT BENEFITS

The proposed Project will result in improvement of infrastructure as well as upliftment of social structure will further strengthen the existing facilities. The people residing in the nearby areas will be benefited directly or indirectly as per their educational qualification. It will also help in development of infrastructure such as road transport, educational facilities, water supply and sanitation. After public hearing, based on the requirement CER Fund will be spent. As per the Office Memorandum No. 22-65/2017-IA.III dated 30th September 2020 based on the issued raised at the time of public hearing the CER will be detailed in the Final EIA Report.

8.0 ENVIRONMENTAL MANAGEMENT PLAN

Air pollution control measures:

Emissions released from the stack during operation phase will get dispersed in the atmosphere and finally reach the ground at a specified distance from the sources. In this case the source emission is envisaged from various sources, single stack of height 35 m will be provided in proposed Submerged Arc furnace and 18 m stack will be provide for thermite process for proper dispersion of gaseous pollutants in the proposed plant.

Action Plan for Control and Monitoring of Fugitive Emissions

- Regular water sprinkling will be done.
- All internal roads and raw material storage yards will be concreted.

- Regular monitoring of Ambient Air Quality& Stack will be carried out as per MPCB/CPCB norms

8.1 Greenbelt Development

The greenbelt shall be developed simultaneously with the plant construction. This will further mitigate the pollution impacts. Local DFO will be consulted in developing the green belt. Greenbelt will be developed in an area of 1.318 Ha in the plant premises. Greenbelt will be developed in an area of 1.318 Ha in the plant premises. Greenbelt will be developed as per CPCB guidelines. At present near about 824 trees are planted in the company. Local and native species will be planted with a density of 2500 trees per hectare in expansion phase

8.2 Rain Water Harvesting System

11 Nos. of RWH structures will be provided to harvest the rain water around the plant area and roof top. The collected rain water shall be utilized for plant uses to minimize the raw water requirement from the source. The surface water run-off from the main plant area would be led to a sump for settling and the over flow would be collected in the common water basin for further uses in the plant to optimize the raw water requirement of the plant.

9.0 CONCLUSION

It can be concluded that there would be negligible impact in the buffer zone due to the proposed Project. The project shall contribute to the socio-economic development, strengthening of infrastructural facilities like medical, educational etc. The plant shall be operated keeping "Sustainable Development" of the region in mind. Further, management is committed to contribute towards improving socio-economic status of the surrounding local community.