Executive Summary

Of

Installation of 9,00,000 TPA Pellet Plant, Expansion of Sponge Iron Plant 72,000 TPA (2 x 100 TPD) to 1,87,500 TPA (by addition of 1 x 350 TPD), and Induction Furnace to manufacture 1,98,000 TPA M.S. Billets (4 x 15T), Rolling Mill to manufacture 1,94,000 TPA TMT Bars, 30 MW Power Plant (12 MW WHRB and 18 MW AFBC) and 2 x 6 MVA Submerged Arc Furnace to manufacture Ferro Alloys (39,204 TPA Ferro Manganese OR 18,669 TPA Silico Manganese OR 39,204 TPA Pig Iron OR 9801 TPA Ferro Silicon)

Proponent

M/s. Chaman Metallics Limited

A-26, MIDC, Survey No. 183 & 184, Tadali Chandrapur Maharashtra

By

Pollution & Ecology Control Services

NAGPUR

Nabet No. QCI/NABET/ENV/ACO/20/1530

Executive Summary

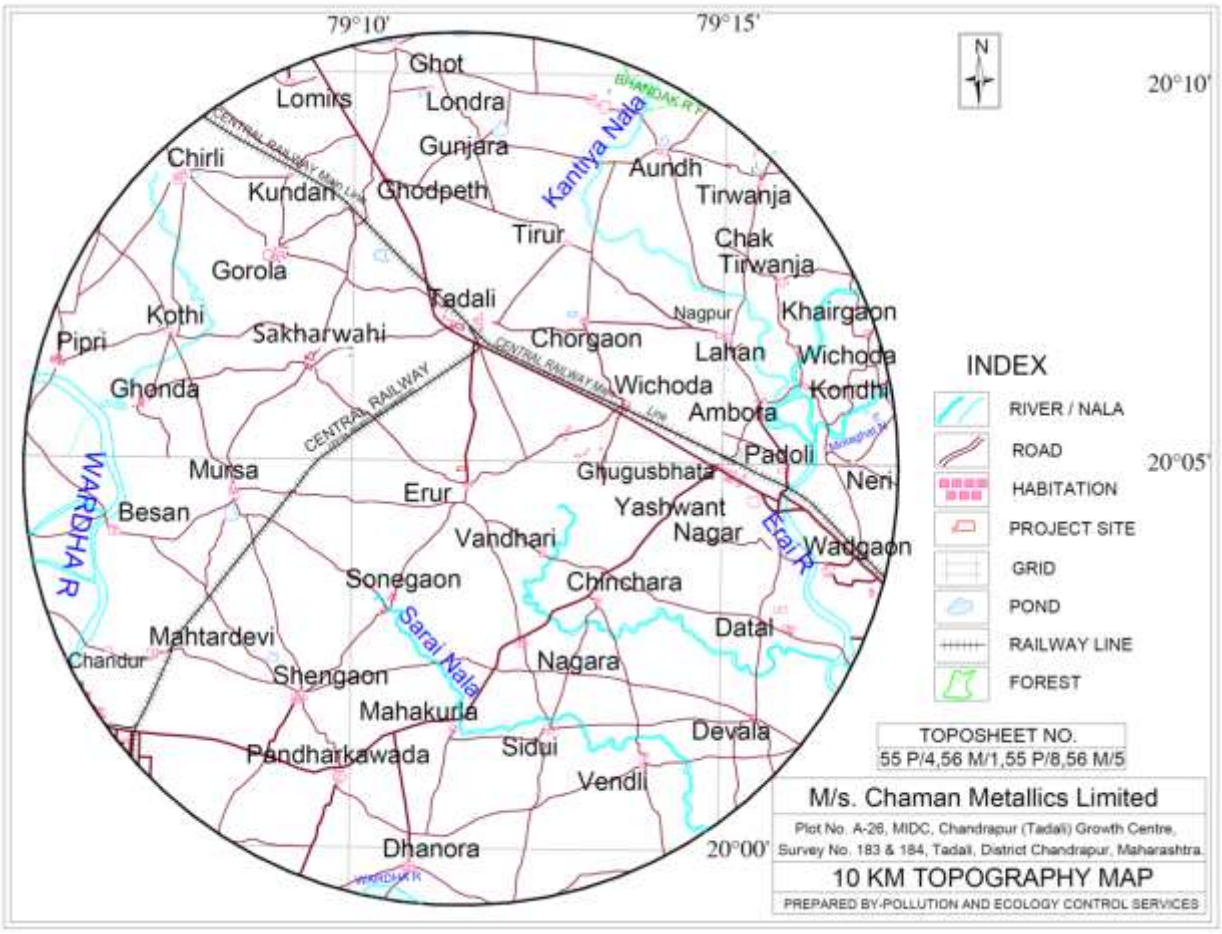
PREAMBLE

Environment Impact Assessment (EIA) is a process, used to identify the environmental, social and economic impacts of a project prior to decision-making. It is a decision making tool, which guides the decision makers in taking appropriate decisions for projects. It aims for predicting environmental impacts at an early stage of project planning and design, find ways and means to reduce adverse impacts, shape projects to suit the local environment and present the predictions and options to decision makers. By using EIA, both environmental and economic benefits can be achieved. EIA systematically examines both beneficial and adverse consequences of the project and ensures that these impacts are taken into account during the project design. By considering environmental effects and mitigation early in the project planning cycle, there are many benefits, such as protection of the environment, optimum utilization of resources and saving overall time and cost of the project. Properly conducted EIA also lessens conflicts by promoting community participation, informs decision-makers, and helps lay the base for environmentally sound projects. Pollution & Ecology Control Services (PECS), Nagpur presents this Environmental Impact Assessment Report on behalf of M/s. Chaman Metallics Limited for Installation of 9,00,000 TPA Pellet Plant, Expansion of Sponge Iron Plant 72,000 TPA (2 x 100 TPD) to 1,87,500 TPA (by addition of 1 x 350 TPD), Installation of Induction Furnace to manufacture 1,98,000 TPA M.S. Billets (4 x 15T), Rolling Mill to manufacture 1,94,000 TPA TMT Bars, 30 MW Power Plant (12 MW WHRB and 18 MW AFBC) and 2 x 6 MVA Submerged Arc Furnace to manufacture Ferro Alloys (39,204 TPA Ferro Manganese OR 18,669 TPA Silico Manganese OR 39,204 TPA Pig Iron OR 9801 TPA Ferro Silicon) and Fly Ash Brick Plant at A-26, MIDC, Chandrapur (Tadali) Growth Centre, Survey No. 183 & 184, Tadali, District Chandrapur, Maharashtra.

Existing and Proposed production capacity of the plant is as below:-

S.N.	**Activities**	**Existing Capacity (In TPA) Operational**	**Proposed Capacity**
1.	Pellet Plant	-	9,00,000 TPA
2.	Sponge Iron Plant	72,000 TPA (2 x 100 TPD)	1,15,500 TPA (1 x 350 TPD)
3.	Steel Melting Shop	-	1,98,000 TPA (4 x 15T)
4.	Rolling Mill	-	1,94,000 TPA
5.	Power Plant	-	30 MW (12 MW WHRB and 18 MW AFBC)
6.	Ferro Alloys Unit	-	39,204 TPA Ferro Manganese OR 18,669 TPA Silico Manganese OR 39,204 TPA Pig Iron OR 9801 TPA Ferro Silicon (2 x 6 MVA)
7.	Fly Ash Brick Plant	-	1,00,000 Nos.

The Topographical map of 10 km radius is given in the figure below



Power Requirement: The electricity load of 30 MW will be procured power will be from own captive power plant and MSEDCL.

Raw Material Requirement: Existing and Proposed raw material requirement for the project is as below:-

Proposed Raw Material Balance of Pellet (9,00,000 TPA)

INPUT			**OUTPUT**		
Item	**Quantity (Kg/ton)**	**Quantity (TPA)**	**Item**	**Quantity (Kg/ton)**	**Quantity (TPA)**
Iron Ore Fines DRY including Return Fines	3120	9,36,000	Pellet production	3000	9,00,000

Bentonite / Binder	30	9000	Process Loss	3	900
Lime Stone / Dolomite	48	14,400	LOI	60	20,700
			Return Fines	126	37,800
Green Ball Moisture (11%)	330	99,000	Steam	330	99,000
TOTAL	**3528**	**10,58,400**		**3528**	**10,58,400**

Fuel for Gasification System

S.N.	**Fuel**	**Quantity (TPA)**
1.	Coal	1,28,865

Proposed Raw Material Balance of Sponge Iron Plant

(1, 87,500TPA)

Input Raw Material	**Quantity (Kg/ton)**	**Quantity (TPA)**	**Output from Kiln**	**Quantity (Kg/ton)**	**Quantity (TPA)**
Pellet	1.45	2,71,875	Sponge Iron	1.00	1,87,500
Coal	1.00	1,87,500	Char & Dolachar	0.20	37,500
Dolomite	0.03	5625	Dust from Settling Chamber	0.07	13,125
			ESP Dust	0.07	13,125
			Carbon & Oxide Losses to Atmosphere	1.14	2,13,750
TOTAL	**2.48**	**4,65,000**		**2.48**	**4,65,000**

Proposed Raw Material Balance of SMS

(1, 98,000TPA)

INPUT				**OUTPUT**		
Material	**Quantity (Kg/ton)**	**Quantity (TPA)**		**Material**	**Quantity (Kg/ton)**	**Quantity (TPA)**
Sponge Iron	0.8	1,58,400		Steel Billets	1.00	1,98,000
Scrap	0.2	39,600		Slag	0.04	7920
Flux	0.02	3960		LOI	0.01	1980
Silico Manganese (Ferro)	0.03	5940				
TOTAL	**1.05**	**2,07,900**			**1.05**	**2,07,900**

Proposed Raw Material Balance for Rolling Mill

(1, 94,000TPA)

Unit	**Raw Material (Billet)**	**Finished Material**	**Mill Scale**
Rolling Mill capacity of 1,94,000 TPA (Direct hot charging route)	1,98,000	1,94,000	4000

Proposed Raw Material Balance for Power Plant

Raw Material/Fuel	**Average Consumption (TPA)**
Coal	**1,53,000**
Char	**37,500**

Proposed Raw Material Balance for Ferro Manganese

S.N.	**Name of Raw Material**	**Quantity/Ton of FeMn**	**Requirement (TPA)**
1.	Manganese Ore	2.4 Tons	94089
2.	Coke	0.8 Tons	31363
3.	Dolomite	0.25 Tons	9801
4.	Carbon Paste	0.03 Tons	1176
5.	Quartz	0.1 Ton	3920
	Total		**140349**

Proposed Raw Material Balance for Silico Manganese

S.N.	Name of Raw Material	Quantity/Ton of SiMn	Requirement (TPA)
1.	Manganese Ore	1.6 Tons	29,870
2.	Coke	0.8 Tons	14,935
3.	Dolomite	0.25 Tons	4667
4.	Carbon Paste	0.03 Tons	560
5.	Ferro Slag	0.7 Ton	13,068
	Total		**63,100**

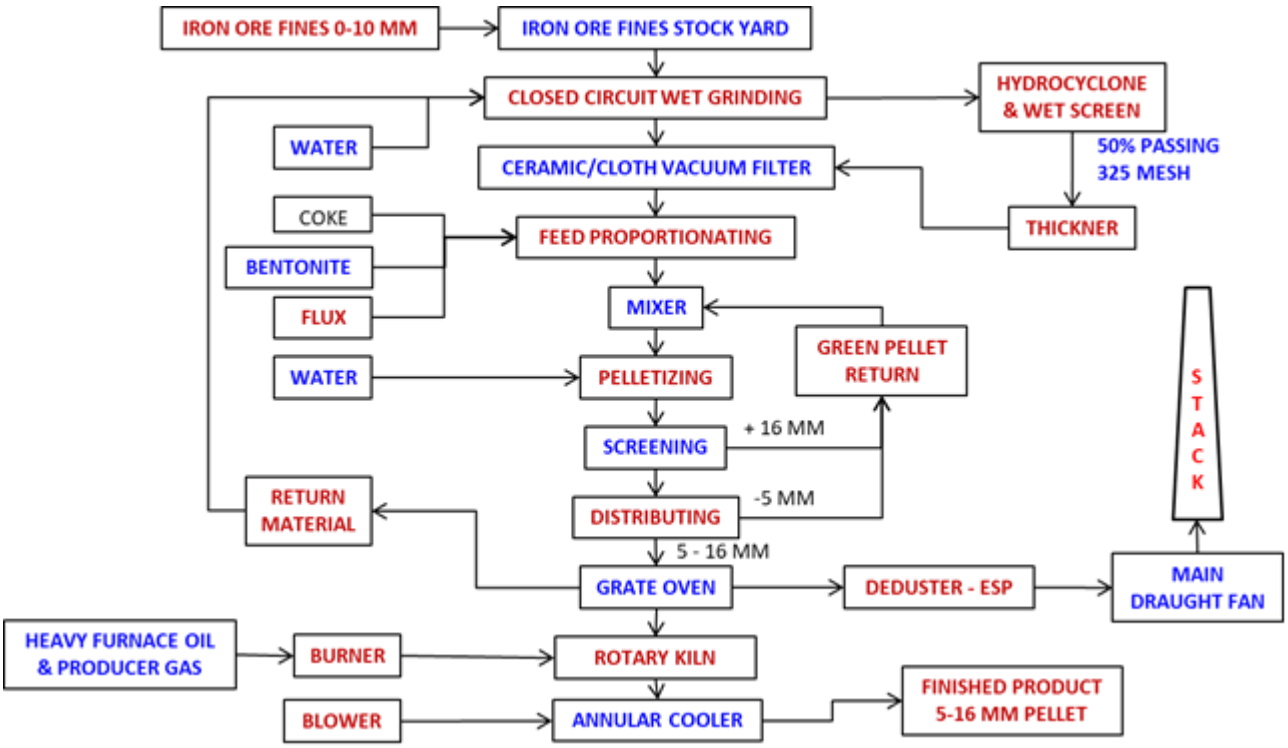
Proposed Raw Material Balance for Ferro Silicon

S.N.	Name of Raw Material	Quantity/Ton of FeSi	Requirement (TPA)
1.	Quartzite	1.8	17,642
2.	Mill Scale	0.3	2940
3.	Coal	0.9	8820
4.	Coke Breeze	0.5	4900
5.	Scrap	0.1	980
	Total		**35,282**

Proposed Raw Material Balance for Pig Iron

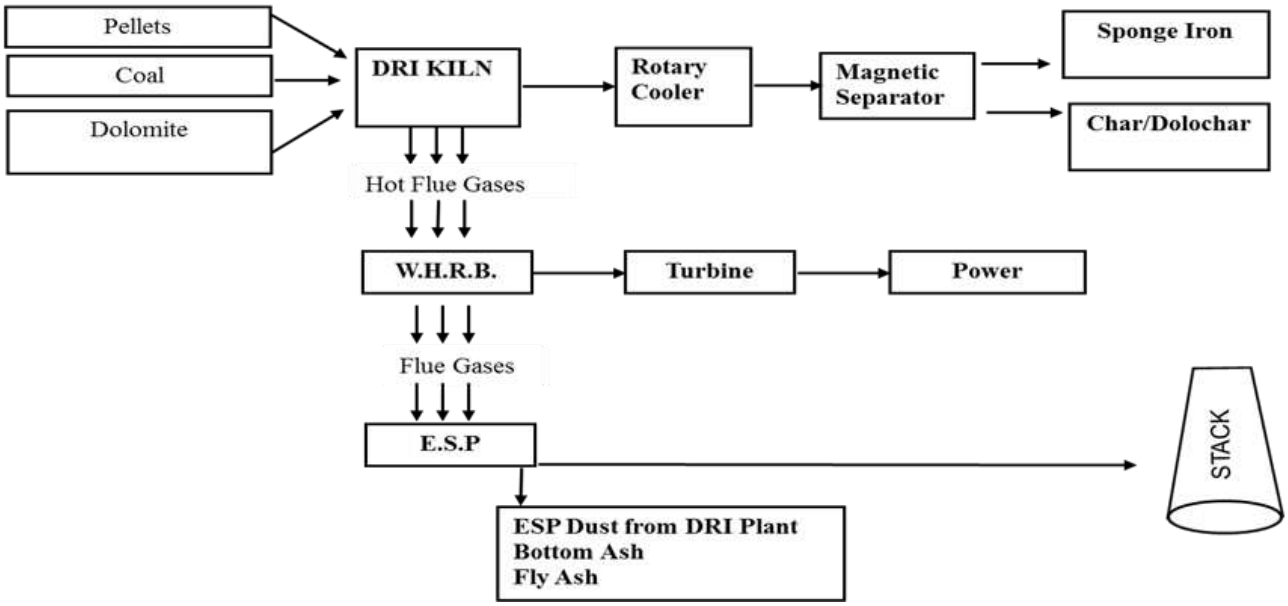
S.N.	Raw Material	Specific Consumption T/T	Quantity
1.	Mill Scale	0.1	3920
2.	Iron Ore Sinter	1.0	39,204
3.	Quartz	0.03	1176
4.	Dolomite/Limestone	0.35	13,721
5.	Pearl Coke	0.23	9017
6.	Steam Coal	0.52	20,386
7.	Flur Spar	0.04	1568
8.	Electrode Paste	0.015	588
	Total		**89,580**

DESCRIPTION OF PROCESS



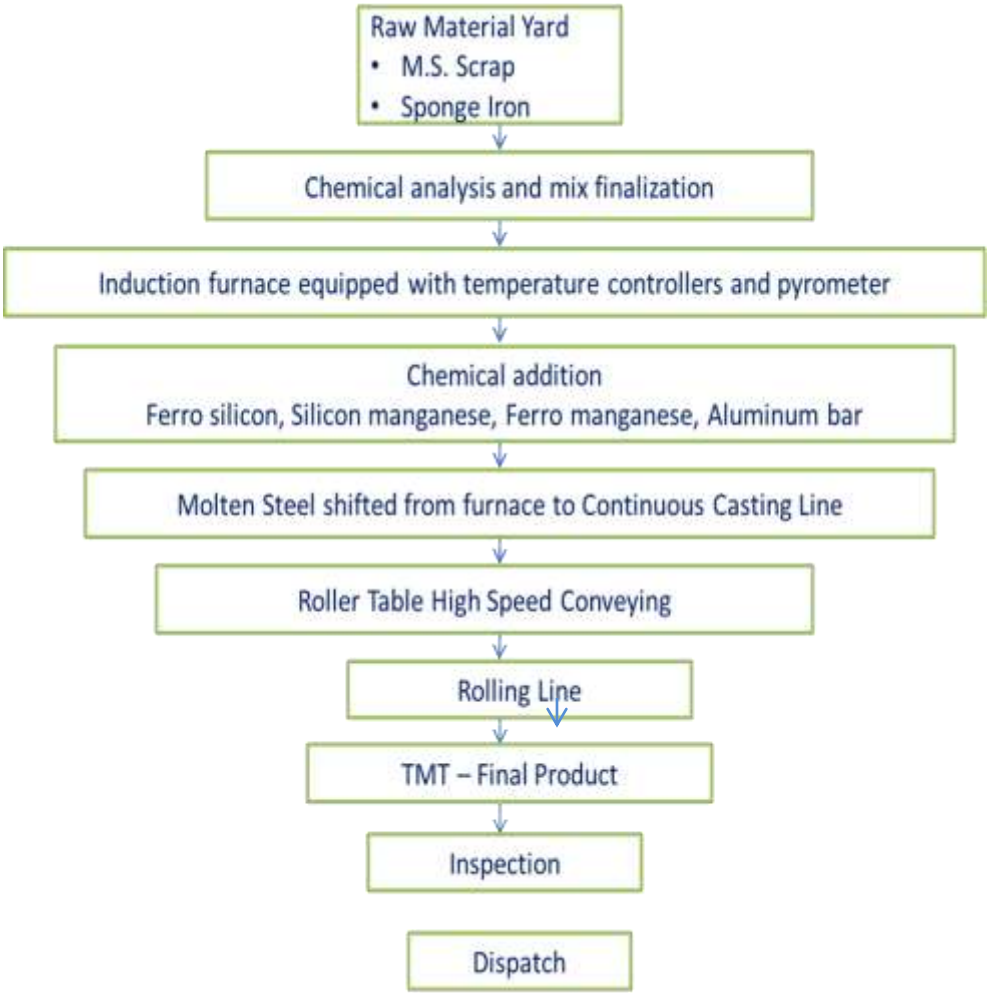
Flow Sheet of Pellet Plant

Sponge Iron Plant



Process Flow Diagram of DRI Kiln

Induction Furnace



Process Flow Chart for Induction Furnace & Rolling Mill

Advantages of Hot Billet Rolling Process

- No need of Re-heating the Billets
- Billets in molten condition will be directly fed to Hot Billet Rolling machine thus saving of fuel & electricity.
- No need of storing coal required in Gasifier for conventional rolling mill
- No space will be required for storage of Billets and fly ash.
- Easy handling of Process.
- No additional SPM emission as coal will not be used.
- No generation of Fly Ash.
- Less man power required.

12 MW WHRB based power generation

- The high temperature hot gases from the Kiln pass into the boiler through the inlet duct. The flue gases will be taken to kiln exhaust to the inlet of Waste heat recovery boiler where the heat of waste gases will be absorbed by the water and steam will be generated. The flue gases will be emitted from chimney through ESP. The ash collected in the hoppers will be stored in silos and transported to the ash disposal site and will be sold to brick manufacturing plant
- The waste gases have to be subjected to a waste gas treatment for conditioning with regard to its temperature, dust content, combustion constituents and contaminates before it can be used in settling chamber which reduces the waste gas velocity and removes the dust particles.
- The combustion in burning chamber takes place in a controlled temperature range between 950 to 1000 ^{0}C. It is ensured that the gas leaving the chamber has no traces of carbon monoxide or tar components.

18 MW AFBC Power Generation

Coal from the coal handling plant will be transported to the boiler bunkers through conveyors belts. There on, the coal of size <6 mm will be fed to the boiler furnace with the help of heated air driven by primary air (PA) fans. Forced draught (FD) fans will provide additional controllable air to assist desirable combustion. The heat released by the burning coal is absorbed by the demineralized boiler feed water passing through the boiler wall tubing to produce high-pressure steam. The steam will then be discharged onto the turbine blades which will make the turbine to rotate. The generators coupled to the turbines will also rotate and produce electricity. The electricity will pass to the transformer which will increase the voltage to the desired level of the transmission grid system.

This combustion will produce ash, out of which the bottom ash will fall to the bottom of the boiler. The f1y ash carried in the flue gases will travel through the electrostatic precipitators (ESP) where it will be precipitated on the high voltage electrodes. The relatively clear flue gas will pass through the stacks with the help of induced draught (lD) fans. Bottom ash will be collected in dry form and disposed in ash disposal area.

Submerged Arc Furnace

Most of the Ferro-alloys e.g. Ferro-silicon, Ferro-manganese, Silico-manganese are produced by smelting process. Smelting of the charged materials is carried out in submerged electric furnaces equipped with transformer of proper ratings.

The process developed in India during the decade of 90 is based on basic process parameters as offered by ELKEM, Norway, in past. Various Indian furnace manufacturers successfully developed furnace design upto 12.5MVA electrical ratings for manufacture of different grades of ferro-alloys based on ELKEM Technology.

The process for the manufacture of Ferro Alloys viz. Silico Manganese, Ferro manganese and Ferro-Silicon by submersible Arc furnace technology is well established in India. All the companies manufacturing Ferro Alloys are using the above technology.

The submerged arc process is a reduction smelting operation. The reactants consist of metallic ores (ferrous oxides, silicon oxides and manganese oxides) and a carbon-source reducing agent, usually in the form of coke, charcoal, high and low-volatility coal. Dolomite may also be added as a flux material. Raw materials are crushed, sized, and, in some cases, dried, and then conveyed to a mix house for weighing and blending. Conveyors, buckets, skip hoists, or cars transport the processed material to hoppers above the furnace. The mix is then gravity-fed through a feed chute either continuously or intermittently, as needed. At high temperatures in the reaction zone, the carbon source reacts with metal oxides to form carbon monoxide and to reduce the ores to base metal.

Smelting in an electric arc furnace is accomplished by conversion of electrical energy to heat. An alternating current applied to the electrodes causes current to flow through the charge between the electrode tips. This provides a reaction zone at temperatures up to 2000°C. The tip of each electrode changes polarity continuously as the alternating current flows between the tips.

The lower part of the submerged electric arc furnace is composed of a cylindrical steel shell with a flat bottom or hearth. The interior of the shell is lined with 2 or more layers of

carbon blocks. The furnace shell may be water-cooled to protect it from the heat of the process. A water-cooled cover and fume collection hood are mounted over the furnace shell. Normally, 3 carbon electrodes arranged in a triangular formation extend through the cover and into the furnace shell opening. Prebaked or self baking (Soderberg) electrodes ranging from 76 to over 100 cm (30 to over 40 inches) in diameter are typically used. Raw materials are sometimes charged to the furnace through feed chutes from above the furnace. The surface of the furnace charge, which contains both molten material and unconverted charge during operation, is typically maintained near the top of the furnace shell. The lower ends of the electrodes are maintained at about 0.9 to 1.5 meters (3 to 5 feet) below the charge surface. Three phase electric current arcs from electrode to electrode, passing through the charge material. The charge material melts and reacts to form the desired product as the electric energy is converted into heat. The carbonaceous material in the furnace charge reacts with oxygen in the metal oxides of the charge and reduces them to base metals. The reactions produce large quantities of carbon monoxide (CO) that passes upward through the furnace charge. The molten metal and slag are removed (tapped) through 1 or more tap holes extending through the furnace shell at the hearth level. Feed materials may be charged continuously or intermittently. Power is applied continuously. Tapping can be intermittent or continuous based on production rate of the furnace.

DESCRIPTION OF ENVIRONMENT

The baseline environmental quality for the period of 15th September 2020 to 15th December 2020 was assessed in an area of 10 km radius around the proposed project site.

Air Environment

The ambient air quality monitored at 8 locations selected based on predominant wind direction, indicated the following ranges;

PM_{10} : 37.7 to 82.2 µg/m^3

$PM_{2.5}$: 22.2 to 38.1 µg/m^3

SO_2 : 9.7 to 35.6 µg/m^3

NO_x : 13.4 to 49.9 µg/m^3

Industrial Area Residential, Rural Area (CPCB Norms)	PM_{10}	$PM_{2.5}$	SO_2	NOx
	100 μg/m^3	60 μg/m^3	80 μg/m^3	80 μg/m^3

The concentrations of PM_{10}, $PM_{2.5}$, SO_2 and NO_x were found within the National Ambient Air Quality Standards (NAAQ).

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.

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).

Noise Environment

Noise levels measured at 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.

Area Code	**Category of Area**	**Limits in dB(A) Leq**	
		Day time	**Night time**
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone**	50	40

**** Silence zone is defined as area up to 100 meters around premises of hospitals, educational institutions and courts. Use of vehicle horns, loud speakers and bursting of crackers are banned in these zones

Land Environment

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.

OBSERVATIONS

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 in Texture Classification.

b) Colour of soil samples from agriculture is black & samples from waste land is brown in color.

c) The bulk density of soil samples are in the range of 0.98 to1.87 gm/cc.

d) Soil samples have pH values in the range of 7.13 to 7.31. The pH values are indicating nature of soil samples as neutral.

e) Soil samples have conductivities between 0.050 to 0.151 mmhos/cm.

f) Soil samples have Organic Matter between 0.27 to 1.10 %. These values represent average fertility of soils.

g) Soil samples have concentration of Available Nitrogen values ranged between 188.2 to 445.8 kg/ha.

h) Soil sample have concentration of Available Phosphorous values ranged between 174.24 to 601.93 kg/ha.

i) Soil sample have concentration of Available Potassium values range between 17.20 to 41.26 kg/ha.

From the analysis results of the soil samples, it was observed that the soil was medium fertile and having average productivity. The soil in the study area needs additional fertilizers for improving the fertility status and increase in crop productivity. Overall the soil quality in the area was found medium fertile with moderate productivity.

ANTICIPATED ENVIRONMENTAL IMPACTS & MITIGATION MEASURES

Impact on Air Quality

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

Sources of Emissions

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. From the proposed activities the possible environmental impact on air quality has been envisaged due to the following sources.

In this case the source emission is envisaged from furnace.

Mitigation Measures

- The flue gases from the Travelling Grate Kiln will be treated in ESP &discharged through stack for effective dispersion of emissions into the atmosphere. The stack height is designed as per CPCB norms. The outlet Particulate emission is less than 30 mg/Nm^3 .
- Material transfer points are provided with Dust Extraction system and same practice will be continued further.
- Fugitive dust generated from Raw Material Handling, Bentonite Grinding, Lime and Coal Grinding and Bentonite Transfer points will be collected using suction ducts and clean in Bag Houses.
- Bag filter dust collected from the bentonite and lime stone systems and other systems will be returned to their respective storage bins. Dust collected from ESP's and Bag Filters is reused.
- The emissions from the Induction furnaces will be sucked through movable mechanical hoods fitted on top of furnace and will pass through a fume extraction system with bag filter and then cleaned air will be discharged into the atmosphere through stack of 30 m height for effective dispersion of emissions from Steel Melting Shop. The outlet dust emission in the exhaust gases will be less than 30 mg/Nm^3 .
- The plant will be further equipped with Natural Draft Exhaust Fans attached to shed for ventilation.

- Fugitive emission will be collected using suitable fume extraction system, connected to bag filter.
- Particulate Matter emission level less than 30 mg/Nm^3 have been proposed for the unit.
- Fourth hole extraction will be provided in the furnaces to control secondary emissions.

The gases generated from Sponge Iron project will be re-used to generate electricity. The fuel for AFBC power plant is Coal and Char/Dolochar. The following pollution control measures will be installed:

- At all the points, Dust Collectors/ dust suppression systems will be installed.
- Water sprinklers will be provided across the plant.
- The waste gases are fed in the Waste Heat Recovery Boiler wherein Electro Static Precipitator is installed and coal/Dolochar fired AFBC boiler will be installed with ESP.
- All the stacks will be equipped with continuous emission monitoring system along with remote calibration facility for gaseous parameters and connectivity with MPCB & CPCB server.

Noise Levels

During operation, the major noise generating sources are auto loading sections, blenders 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 85 dB (A). Noise levels generated in the project site will be confined within the proposed expansion project, the impact of noise levels on surrounding will be insignificant.

Mitigation Measures

The noise levels stipulated by Central Pollution Control Board at any point of time will not exceed the standards.

- By providing padding at various locations to avoid sharp noise due to vibration.
- 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 are designed properly
- Inlet and outlet mufflers are provided which are easy to design and construct.
- All rotating items are well lubricated and provided with enclosures as far as possible to reduce noise transmission.

- The insulation provided for prevention of loss of heat and personnel safety will also act as noise reducers.

Impact on Water

- Total water requirement for the proposed expansion project is 3658 m^3/day. The source of water is met through MIDC, Tadali water supply.
- 340 KLD Industrial waste water will be treated in ETP.
- 27 KLD of Domestic waste water will be taken to adequately designed STP. The treated water will be recycled for utilization in Green Belt Development.

Solid Waste Generation

The solid waste generation from the Sponge Iron process is Char & Dolochar (37,500 TPA) and dust from ESP(13,125 TPA). Char & Dolochar will be used in captive power plant (AFBC), Dust from ESP will be used in brick manufacturing units and land filling. Slag Generation from SMS will be 7920 TPA. Slag will be crushed in proposed slag crusher and magnetic part of slag will be sent to SMS for re-melting while granulated Non-Magnetic will be utilized for road base making. Slag (13,068 TPA) from Ferro Alloys unit will be used in manufacturing of Silico Manganese & used in Road making and will be sold to various Cement Plants. Ash (45,900 TPA) generated from Power Plant will be used in brick manufacturing unit. Tar (3600 TPA) from Pellet Plant will be Utilized in kilns of pellet plant.

Impact on Demography and Socio-Economics

The impacts of the proposed project, during its operation, on demography and socio-economic condition can be identified as follows.

- Negative impacts can be depletion of natural resources like water and land. The impact on the air quality will be marginal.
- Increase in employment opportunities and Reduction in migrants to outside for employment.
- During operation phase 1200-1500 technical and nontechnical people will be employed.

- Increase in consumer prices of indigenous produce and services, land prices, house rent rates and Labour prices.
- Improvement in socio-economic environment of the study area.
- Improvement in transport, communication, health and educational services.
- Increase in employment due to increased business, trade commerce and service sector.
- The overall impact on the socio economic environment will be beneficial.

The management of M/s. Chaman Metallica Limited has proposed to give preference to local people for recruitment in semi skilled and skilled category.

ENVIRONMENT MONITORING PROGRAMME

The environmental monitoring is important to assess performance of pollution control equipment installed in the proposed expansion project of M/s. Chaman Metallics Limited. The sampling and analysis of environmental attributes including monitoring locations will be as per the guidelines of the Central Pollution Control Board / State Pollution Control Board.

Environmental monitoring will be conducted on regular basis by M/s. Chaman Metallics Limited to assess the pollution level in the proposed expansion project as well as in the surrounding area. Therefore, regular monitoring program of the environmental parameters is essential to take into account the environmental pollutant of the study area.

The objective of monitoring is:

- To verify the result of the impact assessment study in particular with regards to new developments;
- To follow the trend of parameters which have been identified as pollutants;
- To check or assess the efficiency of the controlling measures;
- To ensure that new parameters, other than those identified in the impact assessment study, do not become critical due to the commissioning of proposed expansion facilities;

- To check assumptions made with regard to the development and to detect deviations in order to initiate necessary measures;
- To establish a database for future Impact Assessment Studies for new projects.

The attributes, which needs regular monitoring, are specified below:

- Air quality
- Water and wastewater quality;
- Noise levels;
- Soil quality;
- Ecological preservation and afforestation; and
- Socio Economic aspects and community development

ADDITIONAL STUDIES

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

ENVIRONMENT MANAGEMENT PLAN

Air Environment

The major pollutants of air in a proposed expansion plant are the particulate matters from the various stacks and fugitive emissions due to material handling. Stacks of adequate height along with bag filters for induction furnace and Submerged Arc Furnace, ESP for Sponge Iron Plant and Pellet plant is proposed for proper dispersion of flue gases. Plantation along the internal roads in the plant premises will be strengthen and all the internal roads will be concreted / asphalted to reduce the fugitive dust due to vehicular movement.

Adequate measures already adopted to arrest the emission of pollutants within the stipulated & statutory norms. All the stacks will be equipped with continuous emission monitoring system along with remote calibration facility for gaseous parameters and connectivity with MPCB server.

Noise Environment

Regular maintenance of the various equipment, ear plugs/muffs will be provided for the personnel working close to the noise generating units. Further all the openings like covers, partitions will be designed properly to abate noise pollution.

Water Environment

Total water requirement for the proposed expansion project is 3658 m^3/day. The source of water is met through MIDC, Tadali water supply. 340 KLD Industrial waste water will be treated in ETP. 27 KLD of Domestic waste water will be taken to adequately designed STP. The treated water will be recycled for utilization in Green Belt Development.

Management Plan of Solid waste

The solid waste generation from the Sponge Iron process is Char & Dolochar and dust from ESP. Char & Dolochar will be used in captive power plant (AFBC), Dust from ESP will be used in brick manufacturing units and land filling. Slag Generation from SMS will be 7920 TPA. Slag will be crushed in proposed slag crusher and magnetic-part of slag will be sent to SMS for re-melting while granulated Non-Magnetic will be utilized for road base making. Ash generated from Power Plant will be supplied to cement plants/ in house brick manufacturing units, road base making and reclamation of area.

Socio Economic Environment

M/s. Chaman Metallics Ltd. would aid in the overall social and economic development of the region. The plant will give employment to about direct employment to 1200-1500 people of local area. In order to mitigate the adverse impacts likely to arise in the proposed expansion 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.

Occupational Safety & Health Management

M/s. Chaman Metallics Ltd. will provide all necessary provisions under Factory Act. In addition a Safety committee will be formed and manned by equal participants from Management and Workers. All personal protect equipments like Safety shoes, helmet & uniform will be issued to each employee based on the nature of job involved.