

Executive Summary for Installation of Ferro-Alloys unit to manufacture 66,000 TPA (FeMn/ SiMn) by Installing 2x18 MVA SAF; and Installation of Steel plant to manufacture 2000 TPD Billets by Installing 2x60 MT Induction Furnace, 1500 TPD Rolling Mill of TMT Bars/Round Bars/Wire Rods and 500 TPD Strip Rolling Mill of MS Sheets/MS Pipes/MS Flats/MS Angles/MS Square Bars/MS Channels/MS Beams/MS Plates for M/s. Paavan Steel-Tech Pvt. Ltd, located at Plot No D-57 (Phase I, MIDC Jalna) & Gut No 66 (Village: Daregaon Jalna) Taluka & District JALNA.

EXECUTIVE SUMMARY

INTRODUCTION

M/s. Paavan Steel-tech Private Limited is a Private incorporated on 31 August 2020. It is classified as Non-govt Company and is registered at Registrar of Companies, Mumbai. It is involved in Manufacture of other fabricated metal products; metal working service activities. Paavan Steel-Tech Private Limited has directors - Manoj Jaibhagwan Jindal and Ram Hiralal Agrawal

The proposed activities attract the provisions of EIA Notification, 2006 and falling under Category A of Schedule, 3 (a) Metallurgical Industries (Ferrous and Non-ferrous). Thus, proposed project requires prior Environmental Clearance from MoEF&CC as per the procedure laid down in the Notification. Online application was submitted on 17.03.2023 along with Form-1, copy of pre-feasibility report and other documents for proposing Terms of Reference (TORs) for undertaking detailed EIA study. The project is categorized as Category-A as per the notification. The Expert Appraisal Committee was granted TOR vide letter no. IA-J-1101/39/2021-IA (IND1) on 23th March 2023.

The project is to set-up of 2000 TPD Billet and 1500 TPD TMT Bar/Round Bars/Wire Rods, 500 TPD MS - Pipes/Sheets/Angels/Square Bars/Channels/Flats/Sheets/plates & Beams production & 66,000 TPA of Ferro alloy (Ferro manganese/Silico Manganese) by installing 2X18 MVA Submerged Arc Furnace along with Reheating Furnace.

HISTORY OF THE PROJECT

M/s Dhanlaxmi TMT Bars Pvt. Ltd. has previously acquired Plot No. D-57. The company was awarded license to produce 5000MT/M M.S. re-rolled round bars, flat bars, and channels through April 30, 2022, according to letter No. MPCB-17/MPCB/ROA/JLN/E-25/98/R/C-1707001076, dated July 25, 2017. Due to a financial difficulty in 2019, Dhanlaxmi TMT Bars is unable to operate the facility and has therefore begun selling its equipment. When M/s Paavan Steel -Tech Pvt Ltd purchased the D-57 property on 19.11.2020 and adjacent land Gut No. 66 on 25.09.2022 for the project's development, the remaining little patch of infrastructure of M/s

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Dhanlaxmi TMT Bars was still in place. However, the prior shade and some equipment are already in the plant premises.

IDENTIFICATION OF THE PROJECT

M/s Paavan Steel-Tech Pvt. Ltd. is venturing into installation of 66,000 TPA of Ferro alloy (Ferro manganese/Silico Manganese) by installing 2X18 MVA Submerged Arc Furnace and 2000 TPD of Billet and 1500 TPD TMT Bar/Round Bars/Wire Rods, 500 TPD MS - Pipes/Sheets/Angles/Square Bars/Channels/Flats/Sheets/plates & Beams production of at Plot No. D-57, Gut No.66, Daregaon, Jalna, Maharashtra, over an area of 3.3578 Ha., as a Greenfield project.

The project area is bounded by Coordinates of Latitude & Longitude 19°50' 49.09" N & 75° 50' 55.84" E respectively and is part of SOI Toposheet No. E43D13. The nearest railway station is Jalna Railway station, which is at a distance of 4.6 Km. The Road connectivity is through NH-753 A & SH-30 located at distance of 1.5 Km (N) & 3.0 (E) from the plant. All amenities and facilities are available at Jalna such as Hospitals and Dispensaries, District Headquarters, Police Station, Schools, Colleges and Technical Institutes.

The major raw materials are Manganese ore, Iron ore lumps, Quartzite, Dolomite, Lam coke, Carbon electrode, Procured Scrap and Sponge iron etc. All the materials are sourced from Jalna, Odisha, Rajasthan, Bilwara, and Karnataka states, Australia etc.

Total Power required for proposed project is 85MW. Electric power will be supplied from MSEDL. Total water Requirement for the proposed project is 889 KLD which will be sourced from MIDC. The proposed project will create direct and indirect employment to 240 people.

The project cost was Rs. 570 Crore. The company has allocated a budget of Rs 12.5 Crores to be spent for environment management plan with recurring cost of Rs. 5 Crores/annum and will ensure the company remains environmentally complaint at all times.

The project will be implemented after 335 days after obtaining all permissions.

PROJECT DESCRIPTION



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The project is to set-up of 2000 TPD Billet and 1500 TPD TMT Bar/Round Bars/Wire Rods, 500 TPD MS - Pipes/Sheets/Angels/Square Bars/Channels/Flats/Sheets/plates & Beams production & 66,000 TPA of Ferro alloy (Ferro manganese/Silico Manganese) by installing 2X18 MVA Submerged Arc Furnace along with Reheating Furnace. As discussed in above segment, the proposed activity of M/s. Paavan Steel-tech Private Limited is green field project (New project); which falls under schedule 3(a) [Metallurgical industries (ferrous & nonferrous)], Category 'A' of Environmental Impact Assessment Notification vide no: S.O. 1533, published on 14th September 2006.

Table 1: Production Details with Configuration

S.N.	Facilities	Configuration	Product	Production Capacity (TPA)
1.	SAF	2x18 MVA	Ferro Alloys (FeMn/SiMn)	66,000
2.	Induction Furnace	2 x 60 Ton	Hot Metal	6,33,600
3.	Rolling Mill with CCM	2 Strand 50 TPH Mills	TMT Bars/Round Bars/Wire Rods	4,49,600
			MS - Pipes/Sheets/Angels/Square Bars/Channels/Flats/Sheets/plates & Beams	1,65,000

Sources: Project Proponent

DESCRIPTION OF THE ENVIRONMENT

The environmental study majorly constitutes air (both meteorological study and air quality assessment), water, noise, soil quality assessment, land use, description of ecology, socio-economic studies, hydro-geological studies and traffic study.

The district has a sub-Tropical climate, in which the bulk of rainfall is received from the southwest monsoon, between June to September. The average annual rainfall of the district ranges between 650 to 750 mm. The district often experiences drought with rainfall recording as low as 400 to 450 mm.

The rainy season is followed by Winter, which last up to February, during which the minimum temperature ranges between 90C to 100C and maximum temperature ranges between 30 0C &

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310C. The winter is followed by hot summer, which continues up to June. The maximum day temperature ranges between 42 0C & 43 0C's during summer.

The district has dry and tropical climate with very hot summer and mild winter with humid SW monsoon season of moderate rainfall. The climate can be divided into three main seasons viz; a) Hot to warm humid monsoon season from June to September. b) Cool dry winter season from October to February and c) Hot dry summer season from March to June.

Temperature during rainy season ranges from 21 to 300 C. In winter season temperature fall appreciably and range from 10 to 250C. In nights temperature range is 20 to 250C with privilege of cool breeze. The rainfall record shows that the district has two regions on the rainfall pattern. The first comprises Bhokardan, Jafrabad and Jalna talukas with rainfall of about 700 mm favorable for Khariff cropping. The second region comprises Ambad and Partur talukas with rainfall of about 800 mm, more favorable for rabi cropping. Rainfall is not uniform in all parts of the district as 9 assured rainfall areas are Jalna and Ambad talukas and the area of moderate rainfall of 625 to 700 mm is Bhokardan and Jafrabad talukas. The average annual rainfall in the area is 725.80mm. About 83% of the rainfall occurs during June to September and July is the rainiest month. The air is generally high over the district except during the southwest monsoon when the relative humidity is high. The summer months are the driest when the relative humidity is generally between 20 and 25 percent in the afternoon Winds are generally light to moderate with increase in speed during the later half of the hot season and in monsoon season. The winds blow predominantly from directions between west and north during the hot season. They are mostly from directions between southwest and northwest during the southwest monsoon season.

Various Environmental factors as existing in the study area which are liable to be affected by the activities have been assessed both quantitatively and qualitatively. Baseline environmental data generation of study area was carried out during the Post Monsoon period October, 2022 to December, 2022.

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Ambient Air Quality:

For selection of Air quality Monitoring station following factor were considered viz. sources and emissions, health status, demography, population growth, land use pattern, epidemiological studies. Primarily as the IMD based on annual wind rose diagram indicates the resultant wind blowing from NNW to ESE direction, therefore three locations were chosen in the lee ward side of the project location and eight locations were chosen in 120⁰ angle distribution and cross wind within 5-8 km radius distance from the project boundary. Further as because the immediate 1km radius is an industrial complex of Steel & Allied Manufacturing units, the windward locations distributed in 120⁰ angle to the resultant wind direction is expected to carry the total pollution load from the industrial complex.

The due consideration during the selection of sampling locations was given to the likely affected zones during construction and operation of the plant. The location of human habitation and other sensitive areas within the study area were also considered in selection of ambient air quality monitoring locations. Nine (9) numbers of monitoring stations were set up to assess the present air quality of the study area. One station was located inside the proposed project site (core zone) and the eight others, outside (buffer zone) the proposed project site. The locations of the monitoring stations were based on the frequent wind directions in order to site the stations as close as feasible to the anticipated maximum pollutant deposition areas, moreover, duly considering human habitation and proximity to sensitive zones within the study area. Logistic considerations as ready accessibility, security, availability of reliable power supply etc. were examined while finalizing the monitoring locations.

Table 2: Air Quality Sampling Locations

S.N.	Location Code	Location Description	Direction w.r.t the Project Site	Distance from the Project Site in Km	Latitude	Longitude
1	AAQ1	Project site			19°50'55.21"N	75°50'54.94"E
2	AAQ2	Chandanzira Police Station Premises Chandanzira	N	1.35	19°51'26.28"N	75°51'26.02"E

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3	AAQ3	Rooftop of Kotak Mahindra Bank ATM (Jalna Township)	SE	3.59	19°50'4.88"N	75°52'53.81"E
4	AAQ4	Karande Brick Suppliers premises in Dawalwadi Village	NW	4.75	19°52'5.23"N	75°48'29.12"E
5	AAQ5	Rooftop in a house Road Side in Tandulwadi Vilage	N	5.01	19°53'16.47"N	75°52'18.75"E
6	AAQ6	Rooftop of in a house Jawasgaon Village	W	5.08	19°50'38.09"N	75°47'57.92"E
7	AAQ7	Rooftop in Durva Clotha Center Old Jalna	SE	4.16	19°49'1.42"N	75°52'26.68"E
8	AAQ8	Roof top Ac Service jalna Shop National Nagar	E	2.4	19°51'4.60"N	75°52'20.26"E
9	AAQ9	Khadgaon	NW	6.31	19°53'36.65"N	75°48'41.95"E

Source: Toposheet No. E43D13 & Google Image for the area with Site reconnaissance

Ambient Air Quality Monitoring reveals that the concentrations of PM₁₀ and PM_{2.5} for all the 9 AAQM stations were found between 43.2 to 64.4 µg/m³ and 16.6 to 25.8 µg/m³ respectively. The concentrations of SO₂, NO_x & CO were found to be in range of 10.2 to 18.3 µg/m³ and 10.8 to 19.6 µg/m³ and 0.1 to 0.5 mg/m³ respectively. Highest concentration of PM₁₀ & PM_{2.5} is found in Location 3 (Rooftop of Kotak Mahindra Bank ATM (Jalna Township)), which is 3.59 km away from plant site due to commercial and domestic activities of the area. Also, this location to has collectively impact of the traffic and its adjacent railway line in D/W direction. The concentrations of SO₂ and NO_x were comparatively high at Location 3 due operational activities of existing plants. The plant will result in increase in ambient concentration due to increase in fugitive emissions during construction phase and it will be confined within plant boundaries. During operation phase, the movement of men, material and plant operations will result in increase of fugitive emissions and vehicular emissions and in turn increase in PM, SO₂ and NO_x concentrations. The baseline air quality level is within the National Ambient Air Quality Standards prescribed for industrial, residential, rural & other area and also satisfies the

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air quality index (AQI) w.r.t. health bracket for all the monitoring (Standards are 60, 100, 80 and 80µg/m³ for PM_{2.5}, PM₁₀, SO₂ and NO_x respectively).

Noise Environment:

The noise quality was monitored at seven (7) locations in the study area during the study period.

Table 3: Noise Monitoring Locations

S.N	Location Code	Location Description	Direction w.r.t the Project Site	Distance from the Project Site in Km	Latitude	Longitude
1	N1	Project site	-	-	19°50'55.17"N	75°50'54.37"E
2	N2	Chandanzira chawok	NE	1	19°51'16.48"N	75°51'21.24"E
3	N3	Nidhona Village	N	4.11	19°53'6.43"N	75°50'55.14"E
4	N4	Jalna Town ship area	SE	3.5	19°50'24.24"N	75°52'57.53"E
5	N5	Dawalwadi Village	NW	4.75	19°52'3.35"N	75°48'26.60"E
6	N6	Indewadi Town ship area	SE	4.28	19°48'41.47"N	75°52'13.11"E
7	N7	Aurangabad Jalna Toll Booth	N	1.15	19°51'32.15"N	75°50'48.46"E

Source: Toposheet No. E43D13 & Google Image for the area with Site reconnaissance

Ambient noise levels were measured at 7 locations within the 10 km radius area from the plant site. Noise levels vary from 45.3 to 58.6 Leq dB (A) during day time and 35.2 to 42.2 Leq dB(A) during night time. Maximum noise level is seen at near Chandanjira Chowk (Location 2) unlike other area there is minimal noise including activities. During day & night time, the values are not much varying and some level of noise is always found due to human and vehicular activities. From the above study, it can be concluded that the resultant noise levels in the study area are within the limits as prescribed by the noise pollution (regulation and control) rules, 2000 for both industrial & residential area. All required measures will be adopted to minimize the noise level at the plant site.

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Water Environment:

Five surface water samples and Six Ground water sample were collected from the study area for physical, chemical and bacteriological analysis.

Table 4: Detail Locations of Surface Water monitoring stations

S.N.	Location Code	Location Description	Direction w.r.t the Project Site	Distance from the Project Site in Km	Latitude	Longitude
1	SW1	Kundalika nadi(DS)	N	5.5	19°53'38.49"N	75°51'12.01"E
2	SW2	Kundalika nadi(US)	E	3.39	19°51'51.56"N	75°52'37.42"E
3	SW3	Ghanewadi Water Reservoir	N	6.46	19°54'25.60"N	75°50'47.14"E
4	SW4	Moti Talab water reservoir	SE	1.4	19°50'34.36"N	75°51'45.66"E
5	SW5	Daregaon Water Reservoir	SW	3.3	19°49'27.74"N	75°49'37.86"E

Source: Toposheet No. E43D13 & Google Image for the area with Site reconnaissance

The pH of water sample was 7.4 to 7.9 showing fair neutrality of surface water. The Dissolved Oxygen was 5.2 to 7.3 mg/l which is above oligotrophic water, favorable for aquatic organisms for survival. This showed that the physical quality of water sample was good. The values of BOD ranged from 2 to 3.2 mg/l; COD was 10 to 15 mg/l showing indicating no pollution level of surface water samples. The total hardness values were 136 to 254 mg/l which indicate hard water with low to moderate concentration of dissolved minerals. The alkalinity was 105 to 135 mg/l showing medium buffering capacity, and rich in mineral nutrients. The Fluoride concentration ranged from 0.2 to 0.6 mg/l. The value of conductivity was 450 to 510 μ s/cm which is medium to high due to the presence of ions and minerals in the water bodies.

Table 5: Detail Locations of Ground Water Monitoring Stations

S.N.	Location Code	Location Description	Direction w.r.t the Project Site	Distance from the Project Site in Km	Latitude	Longitude
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1	GW1	Tubell in MSS's Polytechnic College Nagewadi ,Jalna	SW	4.23	19°52'6.51"N	75°48'49.98"E
2	GW2	Open Well in Chandan Zira village	N	1.33	19°51'24.66"N	75°51'26.72"E
3	GW3	Tubell in Saraf nagar	SE	3.52	19°50'20.32"N	75°52'56.79"E
4	GW4	Borewell inGopi Krishna nagar	E	5.33	19°51'14.54"N	75°54'2.56"E
5	GW5	Open Well Khadgaon	N	6.58	19°53'44.11"N	75°48'40.49"E
6	GW6	Tubell Dawalwadi	W	6.31	19°52'14.18"N	75°47'34.49"E

Source: Toposheet No. E43D13 & Google Image for the area with Site reconnaissance

The physico-chemical analysis of groundwater samples was compared with Drinking Water Standard (IS: 10500-2012) as the groundwater is expected to be good and is utilized for domestic purpose and for irrigation purpose. The pH of the groundwater samples ranged from 7.2 to 7.8 which is within the permissible limit. The total dissolved solids ranged from 330 to 395 mg/l indicating medium mineral nutrients. This observation is supported by moderate values of total hardness (105 to 156 mg/l) and total alkalinity (105 to 132 mg/l). The groundwater samples were less polluted as indicated by the medium values of chlorides (105.3 mg/l to 186 mg/l). The Fluoride concentration (0.26 to 0.8 mg/l) was optimum for all villages. Based on the conductivity values, the groundwater samples are good for irrigation purpose. The sodium (30.8 to 46 mg/l) and potassium (7.6 to 12 mg/l) concentration are low indicating absence of pollution of groundwater samples. The groundwater samples from the plant site and from study area are of good quality, not polluted and good for irrigation or for domestic use.

Soil Environment:

Six soil samples were collected from the study area and analyzed.

Table 6: Location of the Soil Monitoring Station

S.N.	Location Code	Location Description	Direction w.r.t the Project Site	Distance from the Project Site in Km	Latitude	Longitude
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1	S-1	Project site	---	--	19°50'55.21"N	75°50'54.94"E
2	S-2	Nagewadi Village	E	3.34	19°52'23.34"N	75°49'46.89"E
3	S-3	Chandan Zira village	N	1.33	19°51'24.66"N	75°51'26.72"E
4	S-4	Dawalwadi Village	S	3.71	19°51'35.81"N	75°48'54.99"E
5	S-5	Nidhona Village	NE	4.38	19°53'17.34"N	75°50'45.82"E
6	S-6	Old Jalna (Wardha Road)	W	2.7	19°49'28.02"N	75°52'3.42"E

Source: Toposheet No. E43D13 & Google Image for the area with Site reconnaissance

By observing the soil, it can be found that the pH of the soil sample was observed in the range 7.6 - 8.4. Bulk density and moisture content was observed in the range of 1.26-1.72 g/cc & 4.8 – 6.3%. The inorganic elements like nitrogen, potassium, phosphorous, calcium, magnesium, chloride content is found to be varied between 68-85 kg/ha, 148-185 kg/ha, 3.8-8.6 kg/ha, 3.8-6.2 kg/ha, 2.9-6.0 mg/kg, 26.8-34.5 mg/kg, and 26.5-56 mg/kg, respectively. These values lay between the permissible values and the texture of the soil at all the locations is found to be silty clay loam types, which is a soil mixture that constitutes more clay than other types of rock or minerals.

Ecological Environment:

Biological data has been collected through secondary sources and by site visits. The tree species Neem, Babul, Ber, Gulmohar, Lime, Jamun, Peepal and Mango etc are the dominant plant species of the study area. Mongoose, Rat, Chameleon, Stripped Squirrel, Frog, cat, cobra, krait, snakes, hare, Buffalo, Fox, Dog & pigeon and variety of birds are the common animals of the study area. No endangered species of plants and animals are found in the study area, so no impact on ecological environment. No ecologically sensitive area like biosphere reserve, tiger reserve, and migratory corridors of wild elephant, wetland, national park and wildlife sanctuary are present in the study area.

Traffic Scenario

Traffic survey was conducted at Five major intersections within the study area for assessing the traffic density. The traffic movement was monitored once in both directions at the aforesaid

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locations continuously for 24 hours. The monitored vehicles were categorized into two wheelers, three wheelers, cars, heavy vehicles, etc. The volume of vehicles moving through the roads of the project site were estimated as PCUs and compared with the level of service based on IRC guidelines. The average traffic volume was 144 PCU/Day at TD1, 7800 PCU/Day at TD2, 5280 PCU/Day at TD3, 782 PCU/day at TD4 and 6156 PCU/Day at TD5 respectively.

Socioeconomic Condition:

SIA project area covers villages like Daregoan, Khadagoan, Dawalwadi, Kharpudi and Jawasgaon. As per the census 2011 the total households are 1903 with the total population of 9925 from which male population is 5524 and female population is 4401. In Daregoan highest numbers of households are 712 and highest numbers of peoples are 3349 and in Jawasgaon lowest number HHs are 179 and lowest number populations are 825. The female population dominates male population.

ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental impacts have been anticipated using three steps of impact assessment such as (1) Identification of interactions between activities and environmental receptors, (2) Identification of potentially significant environmental impacts, and (3) Evaluation of all significant environmental impacts. After apprehending the impacts on the environment, various mitigation measures are also been presented under this study.

Construction Phase

The construction phase of the proposed project will be of short duration for about 10-12 months. The potential impacts will be localized, limited and temporary. Fugitive dust, noise due machine operation, surface water runoff, etc are expected during this phase. Water spray will be done to control fugitive dust. Excavation will be limited during day time by properly serviced machines.

Operation Phase

Air Environment

The air pollution caused by steel industry is mainly from dust and fumes during charging (of scrap) and tapping of the furnace. Additionally, there will be emissions from vehicular traffic and from DG Sets as and when operated.



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Air quality modelling was conducted to know the incremental values of gaseous pollutants using AERMOD Cloud software. The max Incremental Values (IV) obtained for PM10, PM2.5, SO₂, NO_x and CO are 0.03 µg/m³, 0.05µg/m³, 0.01µg/m³, 0.03µg/m³and 0.0001mg/m³ respectively.

Mitigation Measures:

- Stack emission level will be kept within permissible limit by installation of bag filters and online stack emission monitoring will be done.
- Furnace and DG set stacks with adequate height to ensure dispersion of pollutants.
- Ambient air quality and stack emission would be regularly monitored and effective control exercised, so as to keep limits on stack emission loads would be met honestly at all the time.
- In order to avoid fugitive emissions from different sources, water will be sprayed. Also, the roads within the premises will be concreted to prevent dust emission.
- Green belt around the periphery and within premises will be developed which will help in attenuating the pollutants emitted by the plant.

Water Environment

The total water requirement will be 889 KLD, which will be sourced from reservoir water. The Domestic water consumption is 39 KLD and the sewage generated is 35 KLD, after the consumptive usage and losses are approximately 10 %. However, there would be an effluent treatment plant with adequate capacity to take care of the shop floor washings contaminated with suspended solids and oil and grease. The treated effluent will be recycled or reused for miscellaneous non production use. The plant would be designed on the concept of 'zero discharge' of plant effluent.

Mitigation Measures:

- No waste water will be discharged outside the premises and 100% recycling /utilization of treated water is being proposed.

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- Effluents will be generated from DM Plant will be properly neutralized in neutralization pit before recycling back for dust suppression, slag quenching and GCP after mixing with other stream of waste water.
- Run-off water from the raw materials will be routed through garland drain to catch pits to settle out suspended solids. The clear water will be discharged to natural drains.
- To check the quality of treated waste water will be regularly monitored.
- Recharging sump within the factory premises is proposed to develop is connected to the storm water collection system to recharge the ground water.
- Due to proper EMP and long distance of surface water source, no impact will be imposed to the surface water.

Noise Environment

Noise will generate due to operation of induction furnace, SAF, Rolling Mill, vehicular movement, DG sets (in case of power failure) and blowers used in plants etc.

Mitigation Measures:

Various components of industrial operations will cause some amount of noise, which will be controlled by proper maintenance and compact technology.

- Time to time oiling and servicing of machineries will be done.
- Employees shall be provided with personal protective equipment's such as ear plugs or ear muffs.
- Regular maintenance of equipment, pumps shall be undertaken.
- Plantation around the plant boundary will create a noise barrier for attenuating noise level.

Solid & Hazardous Waste Management

The potential impacts envisaged due to the operation of the proposed project are due to spillages/leakages from operation and waste disposal. Details of Solid waste and hazardous waste are as presented in below tables.

Table 7: Solid Waste & Hazardous Waste Generation & Disposal Inventory

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Solid Waste generation	Quantity (TPA)	Method of Disposal
Induction Furnace		
IF Slag	87,466	Slag Crusher unit will be installed. After crushing slag is used for Hardening of working area, village internal roads.
Tail Cuttings	19,000	Will be reused in Induction Furnace
Ferro Manganese		
Ferro Slag	89,410	Ferro Manganese slag will be used in manufacturing of Silico Manganese as raw material.
Silico Manganese		
Silico Slag	76,137	Silico manganese slag will be used /sold for road making, hardening of working area etc.

Only used machine and transformer oil shall generate during maintenance and overhauling and shall be sold to registered oil vendors only.

Mitigation Measures

Used oil to be sold to registered recyclers/re-processors approved by (registered with) MoEF&CC having valid consents of MPCB.

Ecological Environment:

The predicted pollution load after the proposed project will be within the stipulated standards and therefore there will be minimum or no disturbance to surrounding habitat.

Mitigation Measures:

- Strengthening of existing greenbelt.
- Causality replacement and gap plantation to be taken up.
- Developing avenue plantation.

Traffic Scenario



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During the proposed project an addition of proposed volume due to projects is 499 PCU/day envisaged. The impact on the existing access roads due to this addition trips were carried out by accessing the level of service. The modified level of service will continue to be reasonably free flow as per the IRC guidelines. Traffic will continue to run smoothly without congestion and no widening of road is required.

Mitigation Measures:

- Plant to operate an automated scheduling system which aims to eliminating waiting times and improving efficiency of trucks accessing the plant.
- Provision of adequate truck parking facility.
- Vehicle carrying raw materials will be covered with tarpaulin sheets to prevent dust emission during transportation.
- As per motor vehicles act vehicles used in transportation will comply the norms.
- Repairing and maintenance of vehicles will be taken care.
- Greenbelt shall be provided around the plant area.
- Water sprinkling facilities shall be enhanced in raw material handling area, finished product handling area and also in haulage road.
- The end products are transported through road in truck covered with tarpaulin.

Socio – Economic Environment

The proposed project is planned within the MIDC Industrial area. So no R&R is involved. This proposed project will generate local direct & indirect employment in terms of contracts, truck transport related activities etc. Therefore, impact on employment generation aspect is seen as positive.

Occupational Health and Safety

The major hazard is mainly with working within proper tools, poor illumination, poor ventilation, ladle movement, working without safety equipment, PPEs. Violation of safety protocols and shut down procedures etc. are also cause of hazards. There will be impact on person engaged for plant operations due to pollutants like, Noise, air emission, effluent from process etc. Following measure shall be taken for mitigation of same.

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Mitigation Measures:

- In accordance to factory and electrical inspectorate layout of equipments/ machinery shall be done.
- All shield guards shall be provided at all belts, pulleys, gears and other moving parts.
- Employees will be provided helmets, safety boots, fire resistant gloves, ear plugs, spectacles etc.
- Mask and dust proof will be provided to workers in the area with high dust levels.
- Investigating of all type of big or small accidents and implementing corrective measures.
- Regular review safety meeting shall be held with department head, where investigations of various incidents are also to be discussed.
- Use of Personal Protective Equipment's will be encouraged among employees. Proper training program shall conduct on use of PPEs.
- Mock drill will be arranged for the workers to test the effectiveness of the training program from time to time and the way to react in case of emergency.
- Fire safety measures will be taken within the factory premises. All the fire extinguishing media such as water, dry chemicals, CO₂, sand, dolomite, foam etc will be kept in vital location.
- Safety precaution will be displayed around the premises on the board etc.

ENVIRONMENTAL MONITORING PROGRAMME

Environmental monitoring program is a vital process of any management plan. This helps in providing an early warning of any undesirable changes or trends in the natural environment that could be associated with industrial and allied activities and will allow for early implementation of effective corrective measures. In order to monitor the environmental managements an exclusive environmental cell will be actively operated.

- As per the NAAQs Standard and CPCB guidelines monitoring Air, Water, Noise, Soil environmental parameter a plan is being defined in tabular form below and the locations of monitoring stations shall be decided based on local PCB officials and shall be intimated to all respective Statutory authorities.

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- Periodic maintenances of pollution equipment's and WTP/ETP/STP shall be carried out with maintenance of monitoring logbook by EHS Department.
- On a yearly basis water and energy audit shall be carried out to understand the usage and justified optimization as a conservative measure.
- Annual environmental audit and hazardous audit before the end of the financial year & shall be reported along with the annual environment status report.
- Proper Coordination between Operation, maintenance and EHS Department shall be done and overseen by the management in order to identify in errors, errors or any statutory violations to be reported for immediate action.
- All departmental heads shall be responsible for Housekeeping of their respective area of operations and report to the higher hierarchy for any fallouts or deviations.
- Online Monitoring Systems shall be implemented of all stacks and two permanent ambient air, quality stations shall be fixed within premises. One is inward & other is windward direction based on annual wind rose diagrams.
- EHS Department will initiate, guide, implement and monitor the green belt development program on a monthly basis.
- Production department shall keep daily record of waste generation along with product and the waste shall be dealt as per the proposed environment management plan.
- EHS Department shall be responsible for timely compliances all statutory for timely compliances all statutory conditions and report the status on a quarterly basis to the management along with PCB/MOEFCC RO/dept. of Environmental & Forest govt. of Maharashtra /Regional Officers PCB/Local Industry Development.
- Flow meter shall be installed at all usage points or nodes for measuring the water usage, effluent generation, treatment and optimization water usage.
- There will be at least two monitoring wells for Ground water monitoring within 1 k.m. radius along the ground water flow directions to capture any contamination what so ever from the operations.

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- Regular Safety training and evolving guidelines shall be carried out in monthly basis for all workers including contractual labours as well as Departmental Heads.
- All internal roads will either be concretized/ tar folded with shrub planted on either side followed by 2 layers of tall trees all along the plant area.
- Any complete or Grievances from any layers of hierarchy shall be held by its sphere and subsequently in upper hierarchy until the resolution is implemented. Based on such compliance it necessary respective SOP and all corporate policies may be revised as a when required.
- Last but not the list the Public Hearing commitments and commitments through corporate environmental responsibilities shall be implemented in consumption with the management, HR Dept., Environment EHS Department, Local Administration along with people's representatives from the nearby areas.

Environmental Monitoring includes;

- Monitoring of installed PCEs and their efficiency.
- Creating an Environmental Cell to monitor the PCEs, Accidents, improvisation of process, Plantation Program, Incident recording, Statutory reporting collaboration with and Salutation provides.
- Periodic monitoring of environmental components in conjunction with PCB officials.
- Liaising with local bodies, Govt. Organisation, management for CSR implementation and monitoring.

ENVIRONMENTAL MANAGEMENT PLAN

Environment Management Plan describes the processes that an organization will follow to maximize its compliance and minimize harm to the Environment. A full-fledged environmental monitoring programme and Environmental Management Cell will be formed at M/s. Paavan Steel-Tech Pvt. Ltd. For efficient execution of environmental protection measures. It is unlikely that the entire monitoring programme shall be carried out effectively through a contract with an external agency on a part time basis. However, casual labourers etc. shall be employed for plantation, drain cleaning etc. as and when required.

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EMC shall be headed by a senior officer, designated as Manager, Pollution Control. In his day-to-day work he is/shall be assisted by Operational supervisors and assistants. He shall be directly Reporting to the Operation Director and the Management in the cases of Emergency or in any Statutory NCs.

Table 8: Cost of Environment Management Plan

S.N.	Description	Estimated Capital Cost, Rs. Lakhs	Recurring cost as per annum, Rs. Lakhs
1	Emission Control Engineering / Air Pollution Control System running	815.5	310
2	Water & Waste Water Management	35	19
3	Solid Waste Handling	19	7
4	Fugitive Dust Control Measures	70	34
5	Greening Belt Maintenance	5.5	3.3
6	Environmental Monitoring	70	28
7	Environmental Cell & PR	110	54.7
8	Others (Rain water harvesting, safety, security, etc.)	42	10
9	Safety & Occupational Health	53	25
10	Contingency	30	9
Total		1250	500

Note: EMP cost shall be revised after public hearing for incorporating the demand raise by the public

PROJECT BENEFITS

Different benefits like physical infrastructure, social infrastructure, employment generation, and livelihood generation have been discussed in the report. Under the Corporate Social Responsibilities, M/s Paavan Steel -Tech Pvt. Ltd. shall be devoted to social commitments and will continue to do the same as per the needs of nearby village people. For Corporate Social Responsibility, Various Programs/ Projects related to social & economic development of surrounded area has been planned, which are as follows, planned for providing water purifier for village people, conducting medical camps for Cataract operation, senior citizen check-up, deputing teacher for literacy development to Senior Citizens. Moreover, education, development

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of technologies, improvement of health care and improvement of quality of living will also taken care of.

- 500 or more families get direct or indirect employment.
- Various secondary and tertiary livelihood supports things shapes, services and goods transactions.
- Along with the economic development the social, health & educational awareness and developments shall enrich the value of life.
- Total living structured will be upgraded.
- With production of goods and materials, exchanger is benefited might to nation and hence attributes to GDP and national income.

Along with the environmental protection measures through direct and indirect employment around 500 families shall be benefited from the projects, which not only cater to the employability of the area but also add revenue to the exchequer towards National GDP. The production of steel shall marginally cater to the gap in existing internal steel demand of India. A balance between environment and productivity shall bring sustainable development of the area.

CONCLUSION

M/s Paavan Steel -Tech Pvt. Ltd. (PSTPL) is Steel Plant for Installation of Ferro-Alloys unit to manufacture 66,000 TPA (FeMn/ SiMn) Installing 2x18 MVA SAF; and Installation of Steel plant to manufacture 2000 TPD Billets by Installing 2x60 MT Induction Furnace, 1500 TPD Rolling Mill of TMT Bars/Round Bars/Wire Rods and 500 TPD Strip Rolling Mill of MS Sheets/MS Pipes/MS Flats/MS Angles/MS Square Bars/MS Channels/MS Beams/MS Plates in Plot No D-57 (Phase I, MIDC Jalna) & Gut No 66 (Village: Daregaon Jalna) Taluka & District Jalna. Company has committed to implement all the pollution control measures to protect the surrounding environment. The project can definitely improve the regional, state and national economy. The implementation of this project will definitely improve the physical and social infrastructure of the surrounding area.