Executive Summary

1.0 Project Description

M/s Jaideep Metallics & Alloys Pvt. Ltd. is registered company under the company Acts having their registered office at 108 Neha Industrial Estate, 1st Floor, Behind CCI Ltd. Off. Dattapada Road, Borivali (East), Mumbai – 400066. The Company is engaged in production and trading of MS steel products. The firm is controlled by its Board of Directors.

The project is having Consents Under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974 & Under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 from the Maharashtra Pollution Control Board (MPCB) for the production capacity of 28500 metric ton per annum (MT/A) vide their letter No. BO/JD(APC)/EIA No. .KN-17/R/CC-0069 dated 02/04/2018. In view of the market demand and availability of raw material and infrastructure Company is proposed to enhance its production capacity upto 130000 MT/A

1.1 Project Location

The Project is located at Gut No.-78 (P) & Gut No.-79 Village – Lakhmapur, Bhiwandi-Wada Road, Taluka - Wada, District – Palghar. The plot area of project is 6000 sqm.

Details of Environmental Setting

S. No.	Particulars	Details
1	Location	Gut No.-78 (P)& Gut No.-79 Village Lakhmapur, Taluka Wada , District – Palghar
2	Latitude	19°34'55.44"N - 19°34'58.24"N
3	Longitude	73^{0} 06’41.17” N- 73° 6'36.53"E
4	Nearest Highway	Bhiwandi – Wada Highway
5	Nearest Railway Line/Station	Thansit Railway station 28.0 km
4	Nearest River	River Vaitarana – 7.0 km & Tanasa – 12 km.
5	Nearest Village / Township	Lakhmapur Village -1.0 km

6	Nearest Airport	Chhatrapati Shivaji International Airport– 62.0 km
7	Nearest Major Town	Wada- 8.0 km
10	Ecologically Sensitive Zones (National parks, Wildlife Sanctuaries)	Non within 10 km radius

1.2 Project Requirement

S. No.	Particulars	Details
1.	Existing Capacity	28500 MT/A
2.	Proposed Capacity	130000 MT/A
3	Raw Material	MS Scrap – 150000 MT/A source – indigenous/imported
4.	Fuel	Electricity – 14000 KVA Source – MSEDCL
5.	Source of Emission	Induction Furnace – 2 Nos.
6.	Air Pollution Control equipments	Fume Extraction system and Bagfilter
7.	Stack Details	Number – 2 Nos. Height – 35m and 10m Dia- 1000mm
8.	Water Requirement	Industrial for cooling – 90 m^3/day Domestic – 10 m^3/day
9.	DG set	1 No- 500 KVA
10.	Project Cost	Rs. 30.0 Crores
11.	Environmental Management Cost.	Rs. 6.0 Crores

2.0 Description of Environment

2.1 Present Environmental Status

S. No.	Parameter	Location	Sources
1.	Meteorology	1 Location	Primary & Secondary
2	Air Quality	8 Location	Primary
3	Water	5 location	Primary
4	Soil	3 Location	Primary & Secondary
5	Noise Level	8 location	Primary
6	Ecology	Study area	Primary & Secondary
7	Land use	Study area	Primary & Secondary
8	Socio economic	Study area	Secondary

2.2 Meteorological

Wind speed / direction

Predominating wind direction was observed towards East during study period.

Relative Humidity / Temperature

Months	Temperature		Relative Humidity	
	Max.	Min.	Max.	Min.
February	34^{o}C	23^{0}C	78%	25%
March	39^{o}C	26^{0}C	79 %	29 %
April	35^{o}C	26^{0}C	95 %	38 %

2.3 Ambient Air Quality Status

Eight ambient air quality stations were established and the monitoring was carried out from February 2018 to April 2018. The summary of pollutants concentrations are given as below:

Location	Parameter	Min	Max	98 Percentile	Avg.
	PM_{10}	32.2	65.5	63.8	49.7
	$PM_{2.5}$	14.6	28.5	26.7	20.6
	NOx	10.4	18.7	17.6	13.6
	SO_2	10.2	15.3	13.8	11.6
	PM_{10}	45.2	78.2	75.3	61.4
	$PM_{2.5}$	18.2	36.5	35.3	22.5
	NOx	10.6	17.5	16.8	14.2
	SO_2	9.2	18.3	16.9	12.1
	PM_{10}	36.9	69.3	68.2	48.8
	$PM_{2.5}$	12.2	28.3	25.9	17.3
	NOx	10.2	18.7	16.9	14.2
	SO_2	8.3	19.4	17.6	11.7
	PM_{10}	24.3	56.8	55.3	38.3
	$PM_{2.5}$	21.3	33.4	32.9	26.8
	NOx	11.3	18.3	17.8	13.6
	SO_2	10.6	19.5	18.7	13.1
	PM_{10}	41.3	67.2	65.8	56.0
	$PM_{2.5}$	15.6	33.6	31.8	24.7
	NOx	10.2	18.7	16.4	14.1
	SO_2	9.5	14.7	12.9	11.3
	PM_{10}	40.0	57.3	55.4	47.7
	$PM_{2.5}$	21.5	33.9	32.8	26.7
	NOx	6.6	9.8	8.3	7.4
	SO_2	8.3	10.6	9.5	8.7
	PM_{10}	42.3	62.7	60.8	50.5
	$PM_{2.5}$	28.6	36.4	34.6	30.9
	NOx	7.9	11.2	10.4	8.9
	SO_2	7.7	12.9	11.7	9.5
	PM_{10}	41.3	67.2	65.9	56.0
	$PM_{2.5}$	15.4	33.6	31.5	24.7
	NOx	10.2	18.6	16.7	14.1
	SO_2	9.8	14.7	13.8	11.3

2.4 Water Quality

Three ground water samples and two surface water samples are analysed for physico-chemical parameters and all parameters were found within the limits.

2.5 Noise Level

Noise levels are taken at the eight sampling location and noise levels are found well within the limits.

2.6 Flora and fauna

Primary data has been collected on the biological environment of the area and refered with the secondary data for listing.

2.7 Demography and socio – economic Profile

The Project is located in Lakhamapur Village, Lakhamapur is a medium size village located in Vada Taluka of Palghar district, Maharashtra with total 124 families residing. The Lakhamapur village has population of 569 of which 311 are males while 258 are females as per Population Census 2011.

Demography Details of some villages near the project

S.No.	Village Name	Distance (in km)	Direction	Population	Literacy
1.	Lakhmapur Village	1.5	NW	570	65.98 %
2.	Jamghar Village	4.3	NW	1136	66.25 %
3.	Nehroli Village	2.5	NE	2490	78.25 %
4.	Chikhale Village	2.8	NE	1038	81.30 %
5.	Vijaypur Village	5.2	NE	1012	76.79 %
6.	Wada Town	8.0	NE	16750	87.03

3.0 Anticipated Environmental Impacts & Mitigation Measures

Prediction of impact has been carried out through computer added modeling for the emission generation from the Induction furnace and found that the maximum GLC for the particulate matter is 6.6 $\mu g/m^3$ at 1km distance.

The industry will not generate any trade effluent, hence no impact is envisaged on ground water or surface water. Only sewage generated from the domestic use which is approx. 8.0 m^3/day, Which will be treated in sewage treatment plant and the treated water will be used for plantation purpose in factory premises.

3.1 Air Pollution & Control Measures

The induction furnace will be provided with Fume extraction system followed by bag – filter and 35m high chimney. The DG set will also equipped with acoustic enclosures.

3.2 Solid Waste Generation & Mitigation Measures

The solid waste generation from the proposed Project is given bellow**:**

Source Generation	**Type of Waste**	**Quantity**	**Management**
Process	plant dust, Mill scale , papers	5.0 TPA	Segregation at source using dust beans and collection at “value yard” selling to local vendor
Process	iron Slag	18000 TPA	A unit of iron recovery from slag has been installed and the recovered iron shall be used with scrap to charge in induction furnace. The remaining part shall be used for civil work & bricks manufacturing.
DG Set / Machineries	Spent oil	15 kl / yr.	Shall be given to authorized recyclers.
WTP/CT	Resin	3-5 kl/yr	Shall be given to authorized recyclers.

3.3 Noise Pollution & Control Measures

The effect of the proposed plant on the noise quality of the surrounding area will be very negligible. A 33% area has been kept for green belt development and boundary walls trapped the noise. Also regular maintenance of equipments will, reduce the noise pollution.

4.0 ENVIRONMENTAL MONITORING PROGRAMME

4.1 Environmental Monitoring

The Post Project Monitoring to be carried out at the project is mentioned below with budget:

Item	Frequency	No. of Locations	Charges (Rs.)	Cost per Annum (Rs.)
Air	Quarterly	3	11000/-	1,32,000/-
\emission Monitoring	Quarterly	1	6000/-	24,000/-
Noise	Quarterly	2	1200/-	9600/-
Soil	Annual	2	5,000/-	10,000/-
Ground water	Half yearly	2	8000/-	32,000/-
STP	Monthly	2 (inlet and outlet of STP)	5000/-	1,20,000/-
Occupational health and safety	Half yearly			50,000/-
			Total	3,77,600/-

4.2 BUDGET FOR ENVIRONMENTAL PROTECTION MEASURES

Sr. No.	Particular	Total Cost (Rs. In Lakhs)
1	Air Pollution Control	600.00
2.	Rain water harvesting	3.5
3.	Green belt development	2.5
4.	Establishment of environmental management cell and environmental monitoring	2.0
	Total capital expenditure	**608.0**
5.	Recurring expenditure on environmental management cell and on pollution control system	20.0

5. ADDITIONAL STUDIES

5.1 Risk Assessment & Management

Risk Assessment

Risk Assessment study covers the following:

- Hazard Identification '
- Hazard Unit Identification
- Causes of Risks/Hazards
- Recommendations on the minimization of the worst accident possibilities

Risk Management

This accident scenario has considerable damage potential. In such scenario the following steps should be taken:

- Determine the extent of damage; and
- Undertake all the emergency actions i. e. evacuate the area in vicinity, take all necessary

actions to avoid escalation of the accident

- Detect the source of leakage/Fire Accident Involving Fuel
- If possible, try to collect the leaking oil in a suitable container
- Use fire extinguishers to diminish the fire
- In case of fire, ensure suffocation and toxicity due to flame does not take place
- Call fire brigade & police for assistance

5.2 Occupational Health Management

Following measures will be undertaken in the installation for occupational safety and health of workers.

- Inspection and maintenance of pollution control systems will be undertaken only after checking that the equipment has been properly shut down or with permission of authorized officer.
- Immediate removal of waste accumulated in working areas.
- Insulation of hot surfaces
- All safety measures will be strictly implemented. Fire fighting equipment will be tested regularly to ensure their full serviceability. Contingency plans drawn up to deal with accidents will be rehearsed by all personnel.
- Training of employees for use of safety appliances and first aid
- Regular medical check up of personnel will be carried out.

The periodicity of occupational health check up will be followed as per the following schedule:

S. No.	Age Limit (years)	Frequency of check up
1	Below 30	once in five years
2	30 to 40	once in four years
3	41 to 50	once in two years
4	above 50	once in a year.

In the health check schedule includes Chest X-rays, Audiometry, Spirometry, Vision Testing, ECG, Blood and Urine test etc.

Safety of Personnel

All workmen employed in work zones will be provided with adequate personal safety equipments like Safety Shoes, Industrial Helmets, Hand gloves, Ear Muffs, Welder's screen, Gas masks, Respirators, Safety Belts, Goggles etc..

6.0 PROJECT BENEFITS

6.1 Improvement in the Physical Infrastructure

- To create an environment that could support the culture of good standards;
- To emphasise the policy of plantation and rainwater harvesting to create a better micro climate in the area;
- The development of land for any purpose creates both an immediate demand for services and a How of revenues to the community and Govt, from a variety of sources, for example transportation, property tax, licenses and permits fee etc.

6.2 Improvement in the Social Infrastructure

- This project will increase the economic activities around the area, creating avenues for direct/ indirect employment in the post project period. There would be a wider economic impact in terms of generating opportunities for other business like workshops, marketing, repair and maintenance tasks etc.
- The continuous inflow of people will require local transport systems like autos, taxis etc which would help their business;

6.3 Employment Potential

- During construction phase, the project will provide temporary employment to many unskilled and semi-skilled laborers in nearby villages. The project will also help in generation of indirect employment to those people who render their services for the personnel directly working in the project; and
- It is proposed that local people of the nearby villages specially tribals will be given priority during proposed expansion. Local people will be engaged to various posts under various cedars viz. Technical, Administrative and Skilled & Semi-skilled staff for the proposed project. During the operation phase of the industry @130000 MT/A approx.

200 Nos of workers / staff are required. After getting employment in this project, a certain mass of population will be benefited financially.

7. ENVIRONMENTAL MANAGEMENT PLAN

7.1 Air Environment

- Monitor the aconsented parameters for ambient air, regularly.
- Monitor the stacks.
- Monitor the work zone to satisfy the requirements for health and environment.
- Covered storage for raw materials, wherever necessary
- Water sprinklers
- Trucks Covered & Smooth Roads.
- Green Belt development

7.2 Water Environment

- Keep record of input water every day for quantity and periodically of quality,
- Water conservation shall be accorded highest priority in every section of the activity.
- Keep record of water returned back to cooling and to gardening, both the quantity and quality details.

7.3 Solid Waste

- Monitor solid waste zones environment.
- Non hazardous material
- Biodegradable waste composted at the site

7.4 Aesthetic (Noise & Odour) Environment'

The Project will generate noise from various locations like -

- Rotary equipments like fans, blowers and compressors
- Combustion Chamber

The Project shall have the following facilities, which will help reduce the overall impact of noise pollution -

- Enforce to use of acoustic enclosure systems to minimize noise generated by the

equipments.

- Regular maintenance of equipments to minimize noise pollution.
- Monitor the ambient noise level and work zone noise level to conform the stipulated norms.
- Creation of awareness for noise attenuation and mitigation program.

7.5 Biological Environment

- Special attention is planned to maintain green belt in and around the premises.
- Adequate provisions are made to facilitate daily watering of all plants and lawns. Ensure the availability of water for green belt.
- Development & maintenance of green belt to be considered as a priority issue.
- Wastewater collection, treatment and reuse under watch.

7.6 Work-zone Comfort Environment

- Monitor the work zone temperature levels.
- Monitor the work zone humidity.
- Examine the health of staff workers and keep record.

7.7 Socio- Economic Environment

- Training program for workers in various aspects of ESH (Environment, Safety and Health).
- Workshop and up gradation of information on various environmental issues for managers and officers involved in Environment Management Cell.
- The industrial management staff shall help in promoting the activities related to environmental awareness in nearby villages and visitors.
- Health Statistics will be assembled, compiled and displayed.
- Environmental status will be displayed.

8.0 CSR Activity

The Company will also contribute 2.5% of the project cost over a period of 10 years towards Enterprise Social Commitment (ESC). M/s Jaideep Matallics & Alloys Pvt. Ltd. fully understands and acknowledges that better education and health care facilities, road infrastructure and drinking water facilities are basic social amenities for better living standard of any human being. The above activities shall be initiated either by providing or by improving the facilities in the area, which will help in uplifting the living standards of local communities.

9.0 CONCLUSIONS

It can be seen from the study that air emission due to proposed capacity expansion project will less than 50 mg/nm^3. Adequate stack height and control measures will be provided for proposed furnace. Zero effluent discharge treatment system is proposed for the unit. Ground water table will is not expected to be disturbed as no ground water withdrawal is proposed moreover water harvesting system shall be provided which will increase the water table of the area. There will not be significant impacts of the unit on other environmental aspects such as meteorology, topography and geology, mineral resources, archaeology, cultural, religious and land use. On the contrary may be positive impacts through contribution to improvement in socio economic environment.

Other component of environment such as soil, flora, fauna etc would also not experience significant adverse impact as unit is already located in the designated industrial area. The conclusion emerging out of the EIA study suggests that the proposed expansion shall adequately taken care the control measures and high standard of mitigation efforts shall be followed. It is therefore requested that necessary environmental clearance may be considered for the project of M/s Jaideep Metallics & Alloys Pvt. Ltd with appropriate stipulations.