EXECUTIVE SUMMARY

For

Expansion of Steel Manufacturing Unit

Located at

Village Tooran, Tehsil Amloh, MandiGobindgarh, Distt. Fatehgarh Sahib, Punjab

By

"M/s Shree Ganesh Alloys"

Project schedule 3(a): Metallurgical Industries (ferrous & nonferrous)

Category: B

Production Capacity

Existing Production capacity: Ingots @ 84 TPD

After expansion: Billets/Ingots or Rolled Products (TMT Bars /Flats/Patra/Angles/Structure/Channels etc.) @380 TPD (1,33,000 TPA)

(TOR Letter No. – SEIAA/MS/2022/326 dated 28th July, 2022)

(Baseline Monitoring Period: October to December, 2021 and 1-month additional monitoring at project location from 15th May to 15th June, 2022)

Submitted by

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(QCI NABET Accreditation No. -**NABET/EIA/2223/SA 0183** dated **09.01.2023**)

(In-house Lab., NABL Accreditation No. –**TC-7477**dated**28.04.2022)**

UID No. EL/2021/07/03/D/Rev. 01 **October, 2023**

EXECUTIVE SUMMARY

1.0 PROJECT DESCRIPTION

M/s Shree Ganesh Alloys is existing steel Manufacturing Unit located at Village Tooran, Tehsil Amloh, MandiGobindgarh, Distt. Fatehgarh Sahib, Punjab.

The existing industrial unit deals with the manufacturing of Ingots @ 84 TPD (29,400 TPA) with one Induction Furnace of capacity 6 TPH. The project falls in industrial zone as per the Master Plan of Mandi Gobindgarh, Punjab.

Now, the industry wants to increase their production capacity by replacing the existing Induction Furnace of capacity 6 TPH with new Induction Furnace of capacity 10 TPH. Further, there will be addition of one more Induction Furnace of capacity 15 TPH along with Rolling Mill.

Thus, after expansion, the total production capacity of the unit will be 380 TPD (1,33,000 TPA) of Billets/Ingots or Rolled Products (TMT Bars /Flats/Patra/Angles/Structure/Channels etc.) with two Induction Furnaces (1 IF×10 TPH and 1 IF×15 TPH) and Rolling Mill.

As per EIA Notification, 2006 and its amendments, it is a Secondary Metallurgical processing industry falling under Schedule 3(a); Category B project.

The salient features of the project will be as under:

- **Exiting production capacity:** Ingots@ 84 TPD with Induction Furnace of overall capacity 6 TPH
- **After Expansion production capacity:** 380 TPD (1,33,000 TPA) of Billets/Ingots or Rolled Products (TMT Bars/Flats/Patra/Angles/Structure/Channels etc.) with two Induction Furnaces (1 IF×10 TPH and 1 IF×15 TPH) and Rolling Mill.
- **Total Area:** 13,410.08 sq.m.
- **Overall Project cost:** Existing Cost of the project is Rs. 8.3665 Crores and for expansion, proposed cost will be Rs. 22 Crores. Therefore, overall cost of the project after expansion will be Rs. 30.3665 Crores.
- **Interlinked projects:** None.

Envisaged changes due to expansion: Replacement of existing IF with one IF. Further, there will be addition of one more Induction Furnace of capacity 15 TPH along with Rolling Mill.

2.0 LOCATION & CONNECTIVITY

The industrial unit lies on Village Road which in turn connected to State highway 12A at a distance of approx. 0.3 km in 'N' direction, which further connects to NH-44 (NH-1) at a distance of 3.5 km in the "NE" direction. Project boundary coordinates are given below:

A: 30°38'21.72"N & 76°16'5.40"E

B: 30°38'19.56"N & 76°16'5.36"E

C: 30°38'17.36"N & 76°16'1.33"E

D: 30°38'17.38"N & 76°16'0.62"E

E: 30°38'21.79"N & 76°16'0.71"E

F: 30°38'21.72"N & 76°16'3.17"E

G: 30°38'21.82"N & 76°16'3.16"E

Project and its study area falls in the Survey of India, Toposheet No. **H43K1, H43K2, H43K5 & H43K6**.

3.0 BRIEF FEATURES OF PROJECT

Table 1: Size/magnitude of the project

S. No.	Parameters	Description
1.	**Identification of the project**	Expansion of steel manufacturing unit namely "**Shree Ganesh Alloys"** falls under Schedule 3(a) as per EIA Notification dated 14th September, 2006 and its subsequent amendments.
2.	**Project Proponent**	**Mr. Sanjeev Gupta** (Partner) Shree Ganesh Alloys E-mail: ganesh.alloys@gmail.com
3.	**Brief description of nature of the project**	Existing capacity of steel manufacturing unit is Ingots @ 84 TPD with one Induction Furnace of capacity 6 TPH. Expansion of the steel manufacturing unit will be done by replacing the existing Induction Furnace of capacity 6 TPH with new Induction Furnace of capacity 10 TPH. Further, there will be addition of one more Induction Furnace of capacity 15 TPH along with Rolling Mill. Thus, after expansion, the total production capacity of the unit will be 380 TPD (1,33,000 TPA) of Billets/Ingots or Rolled Products (TMT Bars/

		Flats/Patra/Angles/Structure/Channels etc.) with two Induction Furnaces (1 IF×10 TPH and 1 IF×15 TPH) & Rolling Mill.
4.	**Salient Features of the Project Proposed**	
4.1	**Overall plant capacity**	After expansion, 380 TPD (1,33,000 TPA) of Billets/Ingots or Rolled Products (TMT Bars/Flats/Patra/Angles/Structure/Channels etc.) with two Induction Furnaces (1 IF×10 TPH and 1 IF×15 TPH) & Rolling Mill.
4.2	**Area Details**	Project area is 13,410.08 sq.m. Expansion of project has been proposed within the existing land only.
4.3	**Location**	Project boundary coordinates of all corners are as follows: **A**: 30°38'21.72"N & 76°16'5.40"E **B**: 30°38'19.56"N & 76°16'5.36"E **C**: 30°38'17.36"N & 76°16'1.33"E **D**: 30°38'17.38"N & 76°16'0.62"E **E**: 30°38'21.79"N & 76°16'0.71"E **F**: 30°38'21.72"N & 76°16'3.17"E **G**: 30°38'21.82"N & 76°16'3.16"E Google Earth Image showing project location & its surroundings within 500 m has been submitted. Project and its study area falls in the Survey of India, Toposheet No. **H43K1, H43K2, H43K5 & H43K6.**
4.4	**Water requirement**	**Source:** Borewell Total water requirement for the project is estimated to be 50.5 KLD; out of this, 31 KLD will be makeup water demand for cooling purpose, 6.5 KLD will be domestic water demand and 13 KLD will be green area water demand @ 2,416.35 sq.m which will be meet through borewells and treated water.
4.5	**Wastewater**	5.2 KLD of domestic wastewater will be generated after expansion which will be treated in proposed STP of capacity 10 KLD to be installed within the project premises. No industrial effluent will be generated.
4.6	**Man Power**	In the existing unit, 40 workers including both technical & non-

		technical are working. Residing facility to 15 workers has been provided within project premises. For proposed expansion, additional 40 workers will be required. Thus, after expansion, total 80 workers will be working; out of which 30 workers will be residing within project premises.
4.7	**Power requirement**	Existing Power load: 3,300 KVA 1 DG set of 125 KVA capacity is installed in existing unit for power backup. After expansion, approx. 16,000 KVA will be required and 1 additional DG set of 320 KVA capacities has been proposed**.** **Source:** Punjab State Power Corporation Limited (PSPCL).
4.8	**Alternative site**	No alternative site is being considered as the expansion is proposed within the existing industrial unit only.
4.9	**Land form, Land use and Land ownership**	The project falls within Industrial Zone as per Master Plan of Mandi Gobindgarh.

4.0 METEOROLOGY

Meteorological data was obtained for the summer season monitoring period October to December, 2021. The predominant winds are mainly flowing from North-West.

5.0 AIR QUALITY

Baseline data of Devbhoomi Castings Pvt. Ltd. has been considered from period October to December, 2021 has been considered for the project. Further, one-month additional monitoring at project location from 15th May to 15th June, 2022. Baseline studies have been conducted at project location from NABL and MoEF&CC approved laboratory.

Thus, $PM_{2.5}$, PM_{10}, SO_2 and NO_2 levels (Criteria Pollutants) as well as NH_3 and O_3 were monitored at nine locations (including project site) in the 10 km study area. Sites of the monitoring stations were keeping in view of the dominant wind direction On an average, the observed levels at project area are as follows: PM_{10} from 72 µg/m^3 to 152 µg/m^3, $PM_{2.5}$ from 37 µg/m^3 to 81 µg/m^3, SO_2 from 10 µg/m^3 to 18 µg/m^3 and NO_2 from 20 µg/m^3 to 32 µg/m^3. The results when compared with National Ambient Air Quality Standards (NAAQS) of Central

Pollution Control Board (CPCB) for "Industrial/ Residential/ Rural and Other Areas", it was observed that all the values of PM_{10} & $PM_{2.5}$, SO_2, NO_2, CO and PAH were within prescribed limits. This indicates air quality deterioration in study area due to presence of industries in areas of Mandi Gobindgarh and Khanna industrial hubs, heavy traffic movement on road network (national highways, state highways and connecting roads) and other agro and domestic activities in the region.

6.0 NOISE QUALITY

Ambient noise levels were measured at 5 locations within the project location. Noise levels varied from 66.3dB (A) and 73.4 dB (A) during the day time and were 55.1 dB (A) and 61.2 dB (A) during night time in the study area. The obtained noise levels are well within prescribed limits for industrial area whereas marginally higher to prescribed limits for residential areas indicating annoying environment for population and sensitive receptors. Noisy environmental conditions are mainly associated to industrial activities in Mandi Gobindgarh and Khanna industrial hubs, heavy traffic movement on road network (national highways, state highways and connecting roads) and other agro and domestic activities in the region.

7.0 WATER QUALITY

The ground water samples have been collected from different sites at isolated places, the level of concentration and different elements vary quite considerably which may be due to small aquifers.

Analysis results of ground water reveal the following:

- pH value ranges from 7.20-7.39 at all locations.
- Total dissolved solids (TDS) ranges from 497 to 769 mg/l against the BIS standard as acceptable limit 500 mg/l and permissible limit in absence of alternate source 2000 mg/l.
- Total alkalinity ranges from 254 mg/l to 390 mg/l against the BIS standard as acceptable limit 200 mg/l and permissible limit in absence of alternate source 600 mg/l.
- Total hardness ranges from 220 mg/l to 255 mg/l against the BIS standard as acceptable limit 200 mg/l and permissible limit in absence of alternate source 600 mg/l.
- Rest of other chemical parameters tested are well within prescribed limit of BIS.

As no effluent will be generated from the industry after the commissioning of the industry. Hence, surface water quality will not be affected due to the industry.

8.0 SOIL QUALITY

The observations show that in the study area soil are generally alkaline in nature and Sandy clay texture at the project site whereas sandy loam with medium class of fertility.

9.0 ECOLOGY

No plant or animal species were found as per the endangered list within 10 km radius of the project site. No ecologically sensitive area like biosphere reserve, tiger reserve, elephant reserve, migratory corridors of wild elephant, wetland, national park and wildlife sanctuary are present within 10 km distance of the project location.

10.0 ANTICIPATED ENVIRONMENTAL IMPACTS & MITIGATION MEASURES

10.1 AIR QUALITY

The major pollutants from the project will be particulate matter (PM) emissions and controlled using Side Suction Hood, Compartmentalized Pulse Jet Bag Filter with duct & ID fan will be restricted within 150 mg/Nm^3. The efficient Air Pollution Control Devices will enhance environment cleanness. Therefore, impact on the surrounding environment will be minimal.

10.2 NOISE QUALITY

The noise levels near the sources such as raw material handling yard, Induction Furnace etc. will be higher during the operation phase. The noise levels at source like Induction Furnace are anticipated to go upto 85 dB(A). However, the noise levels will attenuate to the background values beyond the plant boundary and the levels are not expected to rise beyond 55 dB(A) in the study area. The damage risk criteria as enforced by OSHA and CPCB to reduce hearing loss, stipulates the noise levels up to 85 dB(A) as acceptable limits for 8 hour working shift per day. In case of the operation of heavy machinery/ cranes for scrap handling and storage, noise levels may exceed the prescribed limits in certain work places like scrap yard, material loading/unloading and feeding to furnace.

10.3 WATER QUALITY

Domestic wastewater will be treated in the proposed STP of 10 KLD capacity to be installed within the project premises. No wastewater will be discharged outside the plant premises (under normal operating conditions). The storm water drain will be kept separate from wastewater drains. As no Industrial effluent is generated from the project hence the quality of the surface water will not be affected.

10.4 SOLID WASTE

10.4.1 DOMESTIC WASTE

Approx. 11 kg/day of domestic solid waste is being generated from the existing unit. After expansion, 22 kg/day of domestic solid waste will be generated which will be managed as per SWM Rules, 2016 & its amendments.

10.4.2 INDUSTRIAL WASTE

Approx. 2.5 TPD of slag is being generated from the existing unit which is disposed off at low lying areas. After expansion, approx. 12 TPD of slag will be generated which will be given to Concrete Blocks/ RCC tiles etc. manufacturing units for co-processing, after metal recovery.

10.4.3 HAZARDOUS WASTE

Hazardous waste generated from the existing unit is 0.05 TPD of exhaust air or gas cleaning residue (APCD dust) under category 35.1 of Schedule I and 0.02 KLA of used oil under Category 5.1 of Schedule I. Agreement has been done with M/s Madhav KRG Ltd. for disposal of APCD dust and used oil given to Authorized vendor.

After expansion, hazardous waste generated from the project is estimated to be 1 TPD of exhaust air or gas cleaning residue under category 35.1 of Schedule I and 0.4 KLA of used oil under Category 5.1 of Schedule I.

11.0 GREENERY DEVELOPMENT

The project is an existing industrial unit 2,416.35 sq.m (@ 18.01%) of green area has been proposed within project premises. In order to meet requirement of 33% green area, additional land has been acquired outside of project premises. Locally available types of trees which are resistant to pollutants will be planted. Tree plantation around the plant helps to arrest the effects of particulate matter and gaseous pollutants in the area besides playing a major role in environmental conservation efforts. The green belt would;

- Mitigate gaseous emissions
- Have sufficient capability to arrest accidental release
- Effective in wastewater reuse
- Maintain the ecological balance
- Control noise pollution to a considerable extent

- Prevent soil erosion
- Improve the Aesthetics

All the species suggested are pollution tolerant, besides having an aesthetic appeal.

12.0 ENVIRONMENTAL MONITORING PLAN

The environment monitoring plan enables environmental management system with early sign of need for additional action and modification of ongoing actions for environment management, improvement and conservation. The environmental monitoring points will be decided considering the environmental impacts likely to occur due to the operation of proposed expansion as the main scope of monitoring program is to track, timely and regularly, the change in environmental conditions and to take timely action for protection of environment Monitoring of environmental samples will be done as per the guidelines provided by MoEF&CC/CPCB. Separate records for water, wastewater, solid wastes, air emission, soil and manure/compost will be prepared and preserved regularly. Along with other budgets, Budget for environmental monitoring will be prepared and revised regularly as per requirement. The estimated yearly budget for Environmental Monitoring has been kept as Rs. 5 lakhs which include monitoring of efficiency of pollution control equipment, once in four months.

13.0 RISK MITIGATION MEASURES

Even with all precautions, disasters may take place. As such, an Emergency Plan will be formulated to take care of any disaster in the plant and surrounding areas. In order to prevent occurrence of any disaster, the plant will be provided with various safety and disaster control facilities. In addition to these, numerous material handling systems, heavy road transport, high-tension electric lines, overhead cranes and various other handling and transport systems always have chances of accidents.

14.0 PUBLIC CONSULATION

Public hearing for expansion of the unit will be conducted by Punjab Pollution Control Board (PPCB). The proceedings of the same will be incorporated in the final EIA report.

15.0 PROJECT BENEFITS

The project will overcome the demand and supply gap of steel product in the country. The expansion of the project will also generate additional revenue for the State Government. The steel availability will boost the infrastructure sector and overall economic scenario of the

country. The project will create additional direct/indirect employment for people. Local people will be preferred for employment.

16.0 CORPORATE ENVIRONMENT RESPONSIBILITY (ADDITIONAL ENVIRONMENT ACTIVITY)

Sanjeev Gupta (Partner) will be responsible for implementation of the Additional Environment Activities. Thus, under Additional Environment Activities, rejuvenation of pond or development of Nanak Bagichi in nearby village will be done. Further, issues raised during public hearing will be taken up.

17.0 ENVIRONMENTAL MANAGEMENT PLAN

Environment Management Department will implement the EMP of the project. All recommendations given in the EIA report including that of occupational health, risk mitigation and safety will be complied. Capital cost for the pollution control equipment for project is estimated to be Rs. 129 lakhs and recurring cost per year will be Rs. 20 lakhs. EMD will ensure that all air pollution control devices and water re-circulating systems function effectively. Schemes for resource conservation (raw materials, water etc.) and rainwater harvesting will be taken up by EMD. Greenbelt and greenery development inside and outside the plant premises will be intensified by the EMD. Guidelines issued by the Central Pollution Control Board (CPCB) on greenbelt development will be followed. Environmental awareness programs for the employees will be conducted. EMD will also ensure cleanliness inside the plant.

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