EXECUTIVE SUMMARY ENGLISH

for

Expansion of existing Steel Manufacturing Unit for increasing the production capacity to 180 TPD

located at
Village Kumbh, Amloh Road, Mandi Gobindgarh, Distt. Fatehgarh Sahib, Punjab.

by

"M/s Hind Alloys"

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

Category: B1

Production Capacity: Existing: Steel Ingots/Billets @ 84 TPD
or Flats @ 84 TPD
After Expansion: Steel Ingots/Billets @ 180 TPD
or Flats @ 170 TPD

(TOR Letter No. – SEIAA/2018/1484 dated 3rd December, 2018)
(Baseline Monitoring Period – 15th November to 15th December, 2021 and October to December, 2021)

Submitted by

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(QCI NABET Accreditation No. - **QCI/NABET/EIA/2023/RA 0211** dated **10.09.2021**)

(In-house Lab., NABL Accreditation No. – **TC-7477** dated **01.06.2021)**

March, 2022

EXECUTIVE SUMMARY

1.0 PROJECT DESCRIPTION

M/s Hind Alloys is an existing Steel Manufacturing Unit located at Village Kumbh, Amloh Road, Mandi Gobindgarh, Distt. Fatehgarh Sahib, Punjab. The existing industrial unit is involving in the production of Steel Ingots/Billets @ 84 TPD with one Induction Furnace of capacity 7 TPH or 84 TPD of Flats with Rolling Mill. Consent to Establish has been obtained from PPCB for manufacturing of Flats @ 84 TPD. The industrial unit is located in the Industrial Zone as per the Master Plan of Mandi Gobindgarh, 2010-2031.

Now, the project proponent wants to increase their production capacity by replacing the existing Induction Furnace of capacity 7 TPH with new Induction Furnace of capacity 15 TPH.

Thus, after expansion, the total production capacity of the industrial unit will be 180 TPD of Steel Ingots/Billets with one Induction Furnace of capacity 15 TPH or 170 TPD of Flats with 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 which requires Environmental Clearance.

The salient features of the project will be as under:

- **Existing production capacity:** 84 TPD of Steel Ingots/Billets by one Induction Furnace of capacity 7 TPH or 84 TPD of Flats with Rolling Mill.
- **Total after expansion production capacity:** 180 TPD of Steel Ingots/Billets with one Induction Furnace of capacity 15 TPH or 170 TPD of Flats with Rolling Mill.
- **Total Area after expansion:** 12,881.04 sq.m. (3.18 acres).
- **Project cost after expansion:** Existing cost of the project is 10.02 crores. Proposed cost of expansion is estimated to be 3.5 crores and total cost of the project after expansion is estimated to be 13.57 crores.
- **Interlinked projects:** None.

2.0 LOCATION & CONNECTIVITY

The project is located at Village Kumbh, Amloh Road, Mandi Gobindgarh, Distt. Fatehgarh Sahib, Punjab. The industrial unit is connected to Kumbh-Amloh Road located at a distance of approx. 200 m which in turn connected to Amloh Road at a distance of approx. 0.7 km. National Highway (NH-1) is located at a distance of approx. 3 km in 'NE' direction. The

nearest Railway station is Mandi Gobindgarh Railway Station located at a distance of approx. 3.5 km in 'NE' direction. Ludhiana Airport, Sahnewal is located at a distance of approx. 40 km in 'NW' direction. The nearest bus stand is Mandi Gobindgarh Bus Stand at a distance of about 3 km in 'NE' direction. The industrial unit is located in the Industrial zone as per the master plan of Mandi Gobindgarh, 2010-2031.

Project boundary coordinates of all corners are as follows:

A: 30°38'22.71"N & 76°16'32.21"E

B: 30°38'20.74"N & 76°16'29.45"E

C: 30°38'24.12"N & 76°16'26.06"E

D: 30°38'25.79"N & 76°16'28.54"E

E: 30°38'25.19"N & 76°16'29.31"E

F: 30°38'25.33"N & 76°16'29.64"E

The project location and its study area of 10 km falls in the Survey of India, Toposheet No. **H43K6 & H43K2.**

3.0 BRIEF FEATURES OF PROJECT

Table 1: Size/magnitude of operation of project

S. No.	Parameters	Description
1.	**Identification of the project**	Expansion of existing steel manufacturing unit namely **"Hind Alloys"** for increasing production capacity to 180 TPD of Steel Ingots/Billets or 170 TPD of Flats, which falls under Schedule 3(a) as per EIA Notification dated 14th September, 2006 and its subsequent amendments.
2.	**Project Proponent**	**Mr. Ramal Kumar** (Partner) M/s Hind Alloys E-mail: hindalloys@gmail.com
3.	**Brief description of nature of the project**	Existing capacity of steel manufacturing unit is Steel Ingots/Billets @ 84 TPD with one Induction Furnace of capacity 7 TPH or 84 TPD of Flats with Rolling Mill. Expansion of the unit will be done by replacing the existing Induction Furnace of capacity 7 TPH with new IF of capacity 15 TPH. Thus, after expansion, the total production capacity of the industrial unit will be

<table>
<tr><td></td><td></td><td>180 TPD of Steel Ingots/Billets with one Induction Furnace of capacity 15 TPH or 170 TPD of Flats with Rolling Mill.</td></tr>
<tr><td>4.</td><td colspan="2">Salient Features of the Project Proposed</td></tr>
<tr><td>4.1</td><td>Overall plant capacity</td><td>180 TPD of Steel Ingots/Billets or 170 TPD of Flats.</td></tr>
<tr><td>4.2</td><td>Area Details</td><td>Project area is 12,881.04 sq.m. (3.18 acres).</td></tr>
<tr><td>4.3</td><td>Location</td><td>Project boundary coordinates of all corners are as follows:
A: 30°38'22.71"N & 76°16'32.21"E
B: 30°38'20.74"N & 76°16'29.45"E
C: 30°38'24.12"N & 76°16'26.06"E
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Google Earth Image showing project location & its surroundings within 500 m are attached along as Drawing 3.
Project and its study area falls in the Survey of India, Toposheet No. H43K2 & H43K6. Toposheet marked project location & its 10 km study area is enclosed as Drawing 2.</td></tr>
<tr><td>4.4</td><td>Water requirement</td><td>Source: Ground Water
The total water requirement of the project will be 53 KLD. However, fresh water req. is estimated to be 50.5 KLD.
The break-up of the water requirement is given below:
<table>
<tr><th>Details</th><th>Existing Water Demand (KLD)</th><th>Proposed Water Demand (KLD)</th><th>Total Water Demand After Expansion (KLD)</th></tr>
<tr><td>Makeup water demand for cooling purpose</td><td>20</td><td>6</td><td>26</td></tr>
<tr><td>Domestic water demand</td><td>1.5</td><td>2.5</td><td>4</td></tr>
</table></td></tr>
</table>

		Green area water demand • Summer • Winter • Monsoon	 • 5 • 1.5 • 0.5	 • 18 • 6 • 1.5	 • 23 • 7.5 • 2
		Total	**26.5**	**26.5**	**53**
		Application will be submitted to PWRDA for seeking permission regarding abstraction of ground water.			
4.5	**Wastewater**	Approx. 1 KLD of domestic wastewater is being generated from existing unit, which is being treated in the Septic tank provided within project premises. After expansion, 3 KLD of domestic wastewater will be generated, which will be treated in proposed STP of capacity 5 KLD. No industrial effluent is being generated from the existing unit and even after expansion, no industrial effluent will be generated.			
4.6	**Man Power**	Existing manpower are 25 workers including both technical & non-technical. Out of which, 5 are residing within the project premises. For proposed expansion, additional 35 workers will be hired. Thus, after expansion, total 60 workers will be employed including both technical and non-technical. Out of which, 10 workers will be residing within the project premises.			
4.7	**Power requirement**	Existing Power load of the project is 3,100 KVA. 1 DG set of capacity 125 KVA has been provided for power backup. For proposed expansion, additional power load of 900 KVA will be required. Thus, after expansion, total power requirement will be 4,000 KVA. After expansion, 1 DG set of capacity 320 KVA has been proposed by replacing the existing DG set. Demand notice for additional power load has been issued from PSPCL; copy of the same is enclosed as **Annexure 6.**			
4.8	**Alternative site**	Since, the project is an expansion of the existing unit. Thus, no alternative site is being considered.			
4.9	**Land form, Land use and**	The total area of the project is 12,881.04 sq.m. (3.18 acres). Land documents are enclosed as **Annexure 1(a)** & **1(b).**			

	Land ownership	The project falls within Industrial Zone as per Master Plan of Mandi Gobindgarh, 2010-2031.

4.0 METEOROLOGY

Meteorological data has been taken of the monitoring period of 10 km study area. The predominant winds are mainly flowing from North-West.

5.0 AIR QUALITY

$PM_{2.5}$, PM_{10}, SO_2 and NO_2 levels (Criteria Pollutants) as well as NH_3 and O_3 were monitored at eight locations in the 10 km study area and at project location. Monitoring stations were keeping in view of the dominant wind direction. The observed levels are as follows: PM_{10} ranges from 72 µg/m^3 to 152 µg/m^3 with average value found at project location is 114 µg/m^3, $PM_{2.5}$ ranges between 37 µg/m^3 to 81 µg/m^3 with average value found at project location is 67.25 µg/m^3, SO_2 ranges between 10 to 18 µg/m^3 with average value found at project location is 15.12 µg/m^3 and NO_2 ranges between 20 to 30 µg/m^3 with average value found at project location is 31 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 except PM_{10} & $PM_{2.5}$ all the values of SO_2, NO_2, CO and PAH were within prescribed limits. Mass levels of particulate dust as PM_{10} & $PM_{2.5}$ were quite higher than 24 hours average NAAQ standards of 100 µg/m^3 and 60 µg/m^3 respectively. This indicates air quality deterioration in study area due to presence of industries in areas of Mandi Gobindgarh and Khanna and other agro and biomass burning activities as predominant in the region.

6.0 NOISE QUALITY

Ambient noise levels were measured at 5 locations within the project premises. Noise levels varied from 65.8 dB(A) and 67.3 dB(A) during the day time and were 56.1 dB(A) and 57.6 dB(A) during night time at the project location. 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 and heavy traffic movement on road network (connecting roads) and domestic activities in the region.

7.0 WATER QUALITY

The ground water test results indicate that water is good in quality and safe for drinking purpose and fit for cooling water requirement. In the study area, 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. However, the levels of the various components are within acceptable/ permissible norms for drinking water.

As no effluent is being generated from the industry and even after expansion, no industrial effluent will be generated from the unit. Hence, surface water quality will not be affected due to the expansion of the industry.

8.0 SOIL QUALITY

The observations show that in the study area soil are generally basic to alkaline in nature and sandy clay texture at the project site whereas sandy loam texture 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 location. 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. However, Bir-Amloh protected forest located at a distance of about 5.5 km from 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 will be controlled using Side Suction Hood, Pulse Jet Bag Filter 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 raw material handling yard, Induction Furnaces etc. are the major sources of noise during operation phase. All the workers engaged at and around high noise generating sources are being provided with ear protection devices like ear mufflers/plugs. Similarly, after expansion

also, PPE kit will be provided to workers. They will be regularly subjected to medical check-up for detecting any adverse impact on the ears. The green belt will also help to prevent noise generated within the plant from spreading beyond the plant boundary. Workplace ambient level is not expected to be beyond 75 dB(A) during day time and 71 dB(A) during night time which is much below the limit specified for 8 hours of exposure.

10.3 WATER QUALITY

Domestic wastewater will be treated in the proposed STP of capacity 5 KLD to be installed within project premises. No wastewater will be discharged outside the plant premises (under normal operating conditions).

Storm water drains are kept separate from wastewater drains. No Industrial effluent is being generated from the industrial unit. Similarly, after expansion, no industrial effluent will be generated. Hence, surface water quality will not be affected due to proposed expansion.

10.4 SOLID WASTE

10.4.1 DOMESTIC WASTE

Approximately, 6 kg/day of domestic solid waste is being generated from the existing project & after expansion, approx. 14 kg/day of domestic waste will be generated, which will be properly collected and segregated into biodegradable and non-biodegradable waste. Solid waste is being disposed off as per Solid Waste Management Rules, 2016.

10.4.2 INDUSTRIAL WASTE

2.8 TPD of slag is being generated from existing industrial unit which is disposed of in low lying area. After expansion, the quantity of slag is estimated to be 6 TPD, out of which 20% will be reused for metal recovery within the project premises & remaining 80% will be sold to Tiles/Block manufacturing unit for co-processing.

10.4.3 HAZARDOUS WASTE

Hazardous waste generated from the existing industrial unit is 0.05 KL/annum of used oil under Category 5.1 and 0.25 TPD (90 TPA) of APCD dust under Category 35.1 of Schedule I. Authorization of hazardous waste has been obtained from PPCB; copy of the same is enclosed as **Annexure 3(a).** Agreement has been done with M/s Madhav KRG Ltd. (formerly known as Madhav Alloys Pvt. Ltd.) for disposal of APCD dust; copy of the same is enclosed as **Annexure 3(b)**. Used oil is being given to authorized vendor.

After expansion, hazardous waste produced from the industrial unit is estimated to be 0.25 KL/annum of used oil under Category 5.1 and 0.5 TPD of APCD dust under Category 35.1 of Schedule I.

11.0 GREENERY DEVELOPMENT

Existing green area within the project premises is 882.89 sq.m. and 3,373.60 sq.m. of green area has been proposed within the project. Thus, after expansion total green area within project premises will be 4,256.50 sq.m. which comes out to be 33.04%. Locally available type 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 environmental impacts likely to occur due to operation of expansion of the project. The main scope of monitoring program is to track, timely and regularly 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/ PPCB. Separate records for water, wastewater, air & stack emission will be maintained regularly. Along with other budgets, budget for environmental management will be prepared and revised regularly as per requirement.

13.0 RISK MITIGATION MEASURES

Even with all precautions, disasters may take place. Although, safety measures have been adopted in the existing unit. But, proper 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 the proposed expansion of the unit will be conducted by PPCB after submission of draft EIA report. Proceedings of the public hearing will be submitted with final EIA report after incorporating the public hearing action plan.

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 expansion of the project will create additional direct/indirect employment for people. Local people will be preferred for employment during operation stage.

16.0 CORPORATE ENVIRONMENT RESPONSIBILITY (CER)

Mr. Ramal Kumar (Partner) will be responsible for implementation of CER activities. Since, proposed cost of expansion is estimated to be Rs. 3.5 Crores. Therefore, 1% of the additional cost (approx. Rs. 3.5 lakhs) will be spend on CER activity to be undertaken as given below:

Activities	Annual Expenditure (in lakhs)	Timeline	Total Expenditure (in lakhs)
Education Maintenance of School building and provision of water cooler in Government Elementary School, Village Kumbh.	Rs. 3.5 lakhs	1 year	Rs. 3.5 lakhs

Further, the issues raised during public hearing will be taken as CER activities.

17.0 ENVIRONMENTAL MANAGEMENT PLAN

Environment Management Cell will implement the EMP of the project. All recommendations given in the draft 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. 107 lakhs and recurring cost per year will be Rs. 17.5 lakhs per annum. 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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