

EXECUTIVE SUMMARY

FOR

**PROPOSED EXPANSION OF STEEL MANUFACTURING UNIT
BY REPLACING EXISTING INDUCTION FURNACE**

IN THE EXISTING STEEL MANUFACTURING UNIT OF

M/S BEHARI LAL ISPAT (P) LTD.
VILLAGE-SALAN, AMLOH ROAD, MANDI GOBINDGARH
DISTRICT- FATEHGARH SAHIB, PUNJAB.
PIN-147301

Prepared by
Chandigarh Pollution Testing Laboratory- EIA Division

(QCI/ NABET Certificate No: NABET/EIA/1619/SA 057)

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1.0 Project Name and location

The Proposed Project i.e. M/s Behari Lal Ispat Pvt. Ltd. is a Secondary Metallurgical Process based industry. The plant is located at Village- Salani, Amlah Road, Mandi Gobindgarh, Fatehgarh Sahib, Punjab.

2.0 Products and capacities

The project proponent proposed to enhance the capacity of product i.e. 29,520TPA by replacing existing induction furnace of 7TPH capacity with two numbers of induction furnaces having capacity 15TPH each and VD, LRF, Concast & two numbers of Heat Treatment Furnaces. The capacity of the Steel Ingots/Billets, Steel Casting & Steel Roll in the unit after expansion will be 1, 29,600 TPA.

The unit falls in Category B-1 as per EIA notification, 2006 and its environmental clearance is to be accorded by SEIAA, MoEF & CC, Punjab. TOR was issued vide reference number SEIAA/2018/380 on dated 21/03/2018 for the preparation of EIA report. As public consultation is to be conducted for the proposed project; this draft EIA-EMP has been prepared.

Product Name	Existing (TPA)	Additional (TPA)	Total (TPA)
Steel Ingots/ Billets, Steel Castings, Steel Roll (TPA)	(-)29,520	(+)1,29,600	1,29,600

3.1 Land Area

The projects have already 8.0 acres land. No additional land will be required for expansion.

3.2 Raw Material Requirement

RAW MATERIAL	EXISTING	PROPOSED	TOTAL
MS Scrap (TPA)	(-) 32,150	(+) 1,40,824	1,40,824
Ferro Alloys (TPA)	(-) 610	3000	3000
Source & Transport	Local & international markets and transport through		

	covered Trucks.
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3.3 Water Requirement

Water consumption for the unit will be for makeup water for cooling and for domestic purpose. Water requirement will be met through existing tube well. The detail of water requirement is given below:-

Water Supply Source	Existing Tube well		
	Domestic	Cooling	Total
Quantity of Water Required			
Existing (KLD)	5.0	2.0	7.0
Proposed (KLD)	8.5	40.0	48.5
Total (KLD)	13.5	42.0	55.5

3.4 Power Requirement

The Power Requirement will be met by sourcing the power from Punjab State Power Corporation limited from nearby Sub-station. The detail of power requirement existing & after expansion is given below:-

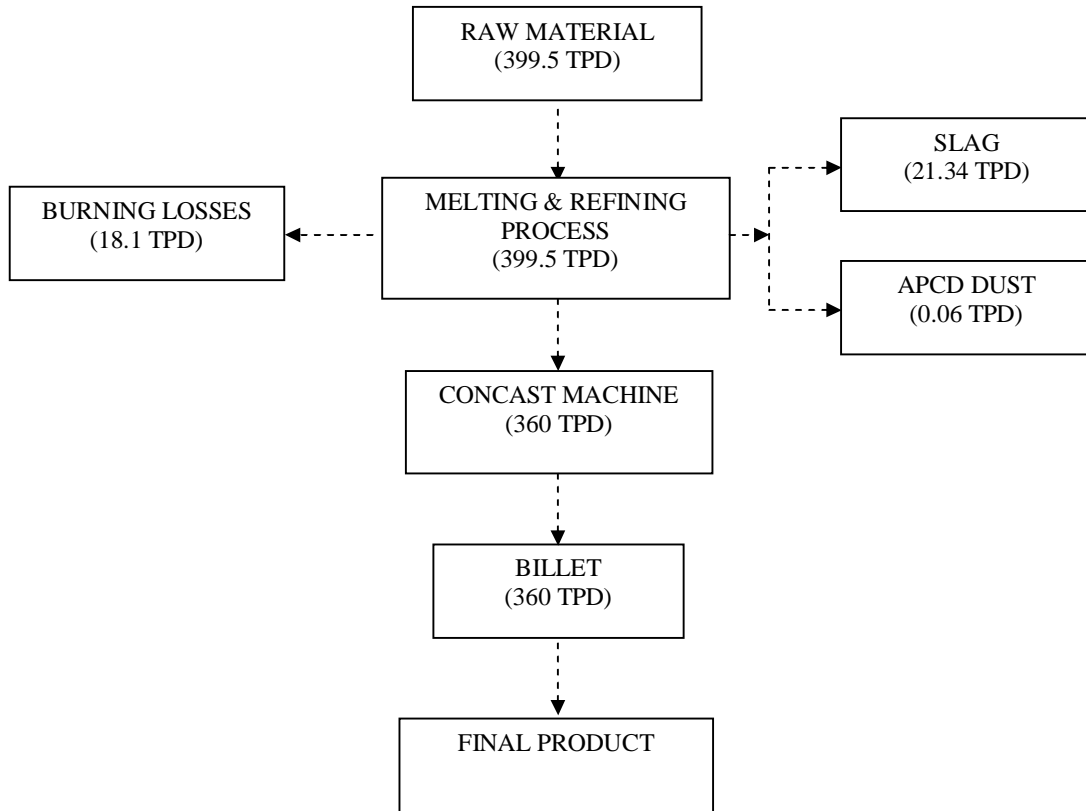
DESCRIPTION	EXISTING	PROPOSED	TOTAL
Power Requirement	4000 KW	15000 KW	19000 KW
Source	Punjab State Power Corporation Limited, Punjab		

3.5 Manpower Requirement

There are about 100 persons working in the unit. After expansion about 200 persons will be working in the unit.

4.0 Process Description

PROCESS FLOW CHART



5.0 Description of Mitigation Measures

The purpose of mitigation measures is to avoid, reduce or minimize unwanted impacts on the environment. To minimize & control the Flue Gas emission from the stack attached to furnace & DG Set, M/s Behari Lal Ispat Pvt. Ltd. has already installed separate bag filters with I.F & canopy with DG set. The quantity of slag after expansion will be 21.34 TPD which will be used to fill low lying area. Solids from APCD are disposed off at designated TSDF site. Used Oil from DG set is being sold to the authorized Recyclers. STP is provided for treatment of domestic effluent. Treated effluent is used for plantation in the premises. The industry is regularly operating and maintaining its APCD and ensuring that the emissions are adequately collected and concentration of air pollutants in its emissions conforms to the emission standards laid down by the board.

6.0 Cost Details

Existing cost of the project is Rs. 9.75 Cr and total cost for the expansion has been estimated Rs. 10.0 Cr. The total cost of the project has been estimated as Rs. 19.75 Cr.

7.0 Site Details

M/s Behari Lal Ispat Pvt. Ltd. is situated Village Salani, Amloh Road, Mandi Gobindgarh, Fatehgarh Sahib, Punjab having its global coordinates as Latitude 30°38'03.74"N & Longitude 76°15'25.85"E. Mandi Gobindgarh is the nearest city and the nearest railway station. Nearest airport is Ludhiana which is at 50 km from site. No National Parks/ Wildlife Sanctuaries/ Biosphere Reserves/ Reserved Forests exist within 5 km radius of project site. There are no water bodies near project site.

8.0 Baseline Environmental Data and their impacts

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 period February, March & April 2018.

8.1 Ambient Air Quality

The PM_{2.5}, PM₁₀, SO₂, NO₂, CO levels were monitored at eight locations in the study area for three months (Feb-April, 2018). The P98 levels of criteria pollutants are as follows: PM_{2.5} is 46.8µg/m³, PM₁₀ is 96.8µg/m³, SO₂ is 16.9µg/m³, NO₂ is 45.8µg/m³ and CO is 0.66mg/ m³. The baseline air quality level is within the National Ambient Air Quality Standards prescribed for

industrial, residential, rural & other area and also satisfies the air quality index (AQI) w.r.t. health bracket for all the monitoring. Standards are 60, 100, 80 and $80\mu\text{g}/\text{m}^3$ for $\text{PM}_{2.5}$, PM_{10} , SO_2 and NO_2 respectively. Proposed expansion will have less impact than existing one.

8.2 Water Quality:

Eight groundwater samples and one surface water sample were collected from the study area for chemical and biological analysis. The groundwater quality of the study is satisfactory. No metallic or bacterial contamination was found in the water quality. But bacterial contamination is found in surface water.

8.3 Noise Environment

Ambient noise levels were monitored at 8 locations in the study area. Noise levels in the study vary from 47.5 dB (A) to 71.5 dB (A) in day time and 37.3 dB (A) to 61.4 dB (A) at night. The highest levels were observed at Project Site. The baseline noise levels are well within the National Standards. Proposed expansion will have less impact than existing one due to better pollution control facility.

8.4 Soil Quality

Eight soil samples were collected from the study area and analyzed. The texture of soil is sandy loam. The organic matter, nitrogen, potassium and phosphorus content of the soil are moderate. The pH of all the soil samples is within the acceptable range. No impact on soil will be there for proposed plant.

8.5 Ecological environment

Ecological data has been collected through secondary sources and by site visits. The tree species kikar, Jamun, Peepal and Mango etc are the dominant plant species of the study area. Mongoose, porcupine, jungle cat, cobra, krait, snakes, hare, 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.

8.6 Sensitive Ecosystem:

Within 10 km distance of the project site, no plant or animal species were found to be on the endangered list. No ecologically sensitive area like biosphere reserve, tiger reserve, and elephant reserve, migratory corridors of wild elephant, wetland, national park and wildlife sanctuary are present within 10 km distance of the project site. There is no Reserve and Protected Forests present around the project site of 10 km. Agriculture and industrial workers

dominate the occupation structure of the study area. Several induction furnaces, rolling mills, ferroalloy plants, brick kilns, and other small units are present in the study area.

8.7 Socioeconomic Condition:

Socioeconomic status has been studied through secondary sources and by site visits. The social requirements identified such as Drinking water requirement, Promotion of Educational institutions and Medical facilities to the villagers (especially Senior Citizens and infants or pregnant ladies). Community centers, recreation facilities etc will also be developed as part of social responsibility.

9.0 Possible Hazards & Risks from Secondary Metallurgical Industries

The various process operations, which are having potentially high risk to human exposure and which have high levels of attention area identified in **Table**.

Table: Possible Risk

S.No.	Plant Area	Possible Deviation from normal operation	Likely Causes	Consequences
1	Furnace	Re-circulating and cooling water coming in contact with the molten iron or slag.	Leakage of water from the walls Spurting of metal/	Explosion under extreme cases.
		Presence of Oil & Grease and other Impurities in raw	Fire	Sudden catches fire & flames
2	High Power Transformer	Oil temperature being very high.	Varying room Temperatur	Sudden flashing of fire or
3	High Tension Electrical	Heavy sparking at the pot heads and the joints.	Loose joints, cable cut, burning of fuses, short circuits	Sparks in the beginning, devastating fire if

10.0 Emergency Plan

Emergency planning is primary for the protection of plant personnel and people in nearby areas and the environment that could be affected by unplanned hazardous events. Furnaces are associated with fire and electrical hazard due to sudden generation of pressure or

temperature that leads to damage, injury and death. Temperature and pressure are closely related, and when flammable or combustible mixture is present in process equipment that leads to worst consequences. Thus, an engineering evaluation will be done for worst-case scenario.

11.0 CER Activities (Corporate Environmental Responsibility)

Proposed project will result in growth of the surrounding areas by increased direct and indirect employment opportunities in the region including ancillary development and supporting infrastructure. Special emphasis on Financial and Social benefits will be given to the local people. Development of social amenities will be in the form of medical facilities, education to underprivileged and creation of self help groups.

The company has earmarked Rs. 10.0 lakhs towards the Corporate Environment Responsibility for undertaking the environmental activities..

12.0 Environment Monitoring Plan

Regular monitoring of all significant environmental parameters is essential to check the compliance status vis-à-vis the environmental laws and regulation. The frequency of the monitoring will be as follows:

- The ambient Air quality shall be monitored at project site and two upward and downstream locations once every quarter for PM_{2.5}, PM₁₀, NO_x & SO₂, and CO levels during the Construction Phase and Operational Phase.
- The Ambient Noise Levels, Water Quality, Effluent etc. shall also be monitored once every six months or as per EC conditions.