EXECUTIVE SUMMARY

FOR

IN THE EXISTING STEEL MANUFACTURING UNIT OF

M/S STEELTECH ALLOYS PRIVATE LIMITED

VILLAGE-ISMAILPUR, BHADLA ROAD, TEHSIL-KHANNA, DISTRICT-LUDHIANA, PUNJAB, PIN-141401

Prepared by

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1.0 Project Name and location

The proposed project i.e. **M/s Steeltech Alloys Private Limited**. is a secondary metallurgical process-based industry. The plant is located at Village-Ismailpur, Bhadla road, Tehsil-Khanna, District-Ludhiana, Punjab.

2.0 Products and capacities

The Existing capacity of Induction furnace is 28700TPA of Steel Ingots/Billets through 7TPH induction furnace. Now project proponent proposes to increase the capacity of Steel Ingots/Billets to 36750TPA by increasing no. of heats i.e. 15no. in first phase and in second phase production capacity will be 52500TPA by upgradation of existing Induction Furnace capacity to 10TPH and addition of CCM. Net capacity of the project after expansion will be 52500TPA of Steel Ingots/Billets

3.1 Land Area

The total plot area of the project is 3.25 acre or 13152.28sqm. Out of 3.25 acres, the industry has CLU of 2.42 acres land which is used for industrial purposes. The rest land area of 0.83 acre, having no CLU, will only be developed as green belt.

3.2 Raw Material Requirement

Raw Material	Existing (TPA)	Proposed (TPA)	Total (TPA)
MS Scrap (TPA)	30250	25250	55500
Ferro-alloys (TPA)	1250	1000	2250
Source & Transport	**Local & International Markets & transport through covered Trucks.**		

3.3 Water Requirement

Water consumption in the unit shall be for twin purpose namely domestic and make up water for cooling tower (CT). Water requirement will be met through existing tube well. The detail of water requirement and water balance is given below:-

Water Requirement for Summer

Water Supply Source	Existing Tube well		
Quantity of Water Required	**Existing**	**Proposed**	**Total**
Domestic	2.5 KLD	1.5 KLD	4.0 KLD
Cooling (makeup water)	8.0 KLD	35.0 KLD	43.0 KLD
Total (KLD)	**10.5 KLD**	**36.0 KLD**	**47.0 KLD**

Water Requirement for Winter & Rainy

Water Supply Source	Existing Tube well		
Quantity of Water Required	**Existing**	**Proposed**	**Total**
Domestic	2.5 KLD	1.0 KLD	4.0 KLD
Cooling (makeup water)	8.0 KLD	19.0 KLD	27.0 KLD
Total (KLD)	**10.5 KLD**	**20.0 KLD**	**31.0 KLD**

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:-

Power Requirement

Source of Electricity	Punjab State Power Corporation Limited (P.S.P.C.L.)		
Total Load (KW)	**Existing**	**Additional**	**Total**
	3,400	600	4,000

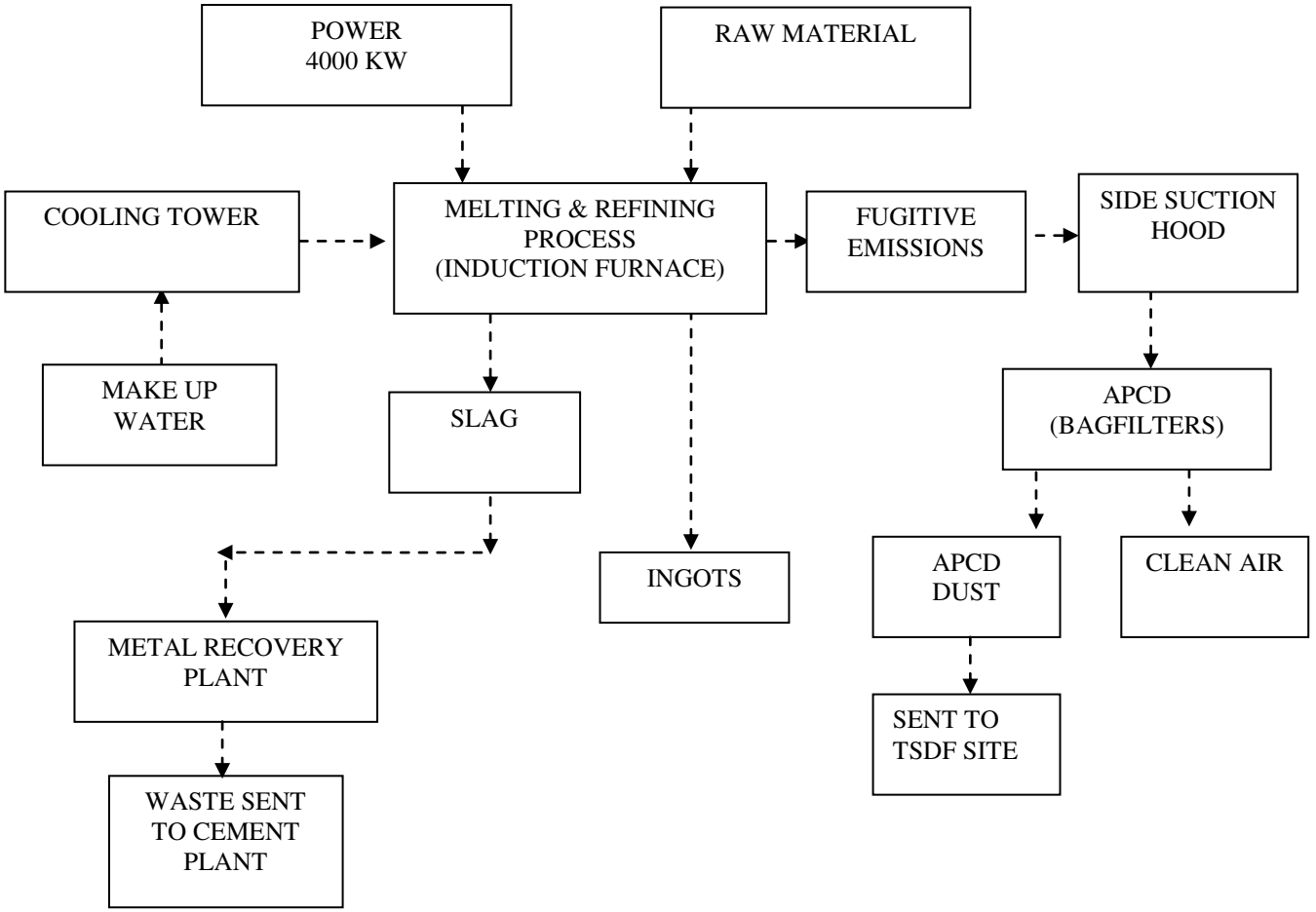
3.5 Manpower Requirement

For expansion, total 10 persons will be required. Total manpower after expansion will be 65.

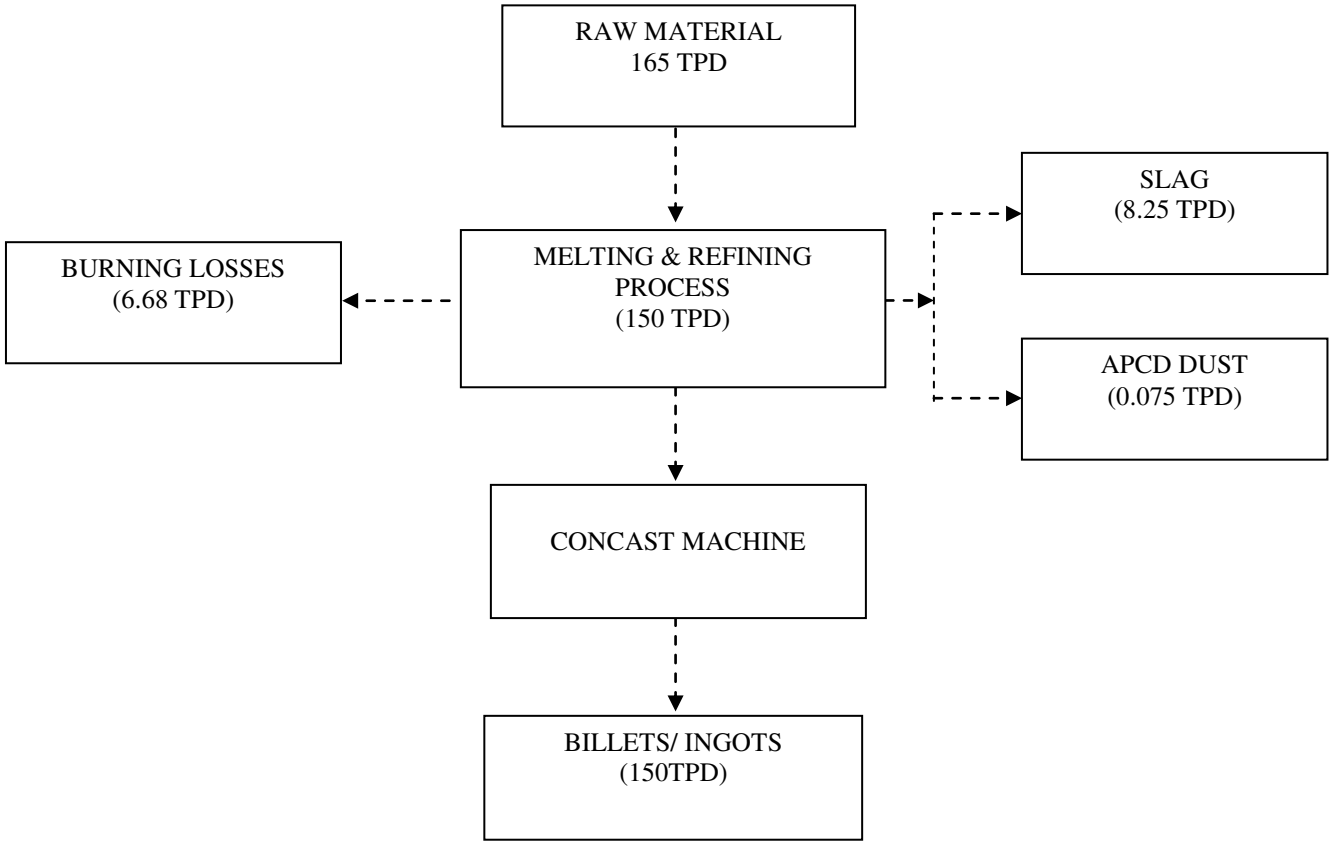
S.No.	PARTICULARS	EXISTING	PROPOSED	TOTAL
1.	Manpower (Nos.)	55	10	65

4.0 Process Description

PROCESS FLOW CHART



Material Balance



5.0 Description of Mitigation Measures

The purpose of mitigation measures is to avoid, reduce or minimize unwanted impacts on the environment and to maximize beneficial impacts. To minimize & control the emission from I.F, the exhaust after suction through side suction hood is passed through spark arrestor, air cooling and finally bag filters before its discharge to atmosphere. DG set is fitted with a canopy and adequate stack to take care of noise and particulate & gaseous emission. About 8.25 TPD of slag which is not a H.W will be generated and the same after recovering of iron will be supplied to M/s A.S. Industries under proper agreement. Treated waste water from STP will be used for plantation within the industrial premises. About 0.075 TPD APCD dust which is covered under hazardous waste will be sent to TSDF site/Jogindra Casting (P) Ltd. for final disposal.

6.0 Cost Details

The total cost of the project after expansion will be Rs 9.78 Cr including Rs 1.55 Cr as cost of expansion.

Particulars	Existing	Proposed	Total
Project Cost (Cr)	Rs 8.23	Rs 1.55	Rs 9.78

7.0 Site Details

M/S Steeltech Alloys (P) Limited is situated at Village-Ismailpur, Bhadla road, Tehsil-Khanna, District-Ludhiana, Punjab. having its global coordinates as Latitude 30°42'2.53"N, 30°42'2.52"N, 30°41'59.94"N, 30°41'57.46"N, 30°41'58.54"N & Longitude 76°17'47.06"E, 76°17'51.27"E, 76°17'51.29"E, 76°17'47.92"E, 76°17'47.04"E. Mandigobindgarh is the nearest city and also the nearest railway station (about 4.0 km). Nearest Airport are Ludhiana (37km), NW Side and Chandigarh which is at 47 km, E Side. Bir Bhadson Wild Life Sanctuary is about 19.5KM towards South side.

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 March-May, 2023.

8.1 Ambient Air Quality

The $PM_{2.5}$, PM_{10}, SO_2, NO_2, CO levels were monitored at eight locations in the study area for three months (March-May, 2023). The P98 levels of criteria pollutants are as follows: $PM_{2.5}$ is 40.4µg/m^3, PM_{10} is 89.8µg/m^3, SO_2 is 7.0µg/m^3, NO_2 is 15.0µg/m^3 and CO is 0.76mg/ m^3. 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, 80µg/m^3 and 4.0mg/m^3 for $PM_{2.5}$, PM_{10}, SO_2, NOx and CO respectively**). 51-100 as satisfactory AQI.

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. Since, no waste water will be discharged on land; water quality is not likely to be impacted.

8.3 Noise Environment

Ambient noise levels were monitored at 8 locations in the study area. Noise levels in the study were found to be 72.2 dB during day time and 66.9 dB during night time. The baseline noise levels are well within the CPCB standards for noise.

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.

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, 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 as listed in the respective schedule-I of Wild Life Act 1972.

8.6 Sensitive Ecosystem

Within the study area, no plant or animal species were found to be on the endangered list. 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. Agriculture and industrial workers dominate the occupational structure of 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/ slag.	Explosion under extreme cases.
		Presence of Oil & Grease and other Impurities in raw materials.	Fire	Sudden catches fire & flames
2	High Power Transformer	Oil temperature being very high.	Varying room Temperatures.	Sudden flashing of fire or bursting.

3	High Tension Electrical Installation	Heavy sparking at the pot heads and the joints.	Loose joints, cable cut, burning of fuses, short circuits etc.	Sparks in the beginning, devastating fire if neglected.

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 for worst-case scenario has been done under the Factory Act.

11.0 EMP Budget

S. No	Title	Capital Cost Rs. Lakh	Recurring Cost Rs. Lakh/Cost annum
1.	Pollution Control during construction stage	5.0	2.0
2.	Air Pollution Control (Installation of APCD)	120.0	10.0
3.	Water pollution Control (installation of Septic tank)	10.0	2.0
4.	Green Belt development	6.80	6.80
5.	Noise Pollution Control	3.0	0.50
6.	Solid/ Hazardous Waste Management	3.0	0.25

7.	Occupational Health, Safety and Risk Management	5.0	1.0
8.	Energy Conservation	3.0	1.0
9.	RWH	10.0	2.0
	TOTAL	**165.8 Lakh**	**25.55 Lakhs**

12.0 CER Activities (Corporate Environmental Responsibility)

In lieu of Corporate Environmental Responsibility, the OM dated 30th Sept., 2020 issued by MOEF&CC superseding OM dated 1st May, 2018 shall be followed and commitments made by project proponent to address the concerns raised during public hearing will be part of EMP.

13.0 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 $PM_{2.5}$, PM_{10}, NO_x & SO_2, 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.