

EXECUTIVE SUMMARY

FOR

PROPOSED EXPANSION OF STEEL MANUFACTURING UNIT BY
REPLACING EXISTING INDUCTION FURNACE

IN THE EXISTING STEEL MANUFACTURING UNIT OF

M/S SAECO STRIPS PVT. LTD.
VILLAGE-DORAHA, RAMPUR ROAD, TEHSIL-PAYAL,
DISTRICT- LUDHIANA, PUNJAB

Prepared by

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(QCI/ NABET Certificate No: NABET/EIA/2225/RA 0250)

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1.0 Project Name and location

The proposed project i.e. **M/s Saeco Strips Pvt. Ltd.** is a Secondary Metallurgical Process based industry. The plant is located at Village- Doraha, Rampur Road, Tehsil-Payal, District-Ludhiana, Punjab.

2.0 Products and capacities

It proposes to install one new Induction Furnace (I.F) of 15 TPH capacity and a Concast. The capacity of unit after expansion will be 92,400 TPA of Steel Billets/Ingots and 73,100 TPA of Structural Steel (Round, Coils, Flats, Wire rod, TMT bars).

After expansion the production details will be as under

PRODUCTS			
Product Name	Existing (TPA)	Additional (TPA)	Total (TPA)
Steel Ingots/ Billets	29,400	63,000	92,400
Structural steel (Round, Coil, Flats, wire rod, TMT bars)	23,100	50,000	73,100

3.1 Land Area

The industry is already having 27968.22 m² of land. The land is enough to carry out the expansion. Thus, the proposed expansion will be carried out in the existing land.

3.2 Raw Material Requirement

RAW MATERIAL (TPA)			
Capacity	Existing	Additional	Total
Iron Steel Scrap	31,500	67,272	98,772
Steel Ingots/Billets	29,500	63,000	92,500

Source & Transportation	Local & international markets and transport through covered trucks
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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		
	Existing	Proposed	Total
Quantity of Water Required			
Domestic	4.5	3.0	7.5
Cooling (makeup water)	8.0	46.0	54.0
Total (KLD)	12.5	49.0	61.5

Water Requirement for Winter & Rainy

Water Supply Source	Existing Tube well		
	Existing	Proposed	Total
Quantity of Water Required			
Domestic	4.5	3.0	7.5
Cooling (makeup water)	8.0	15.0	23.0
Total (KLD)	12.5	18.0	30.5

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:-

Power Requirement

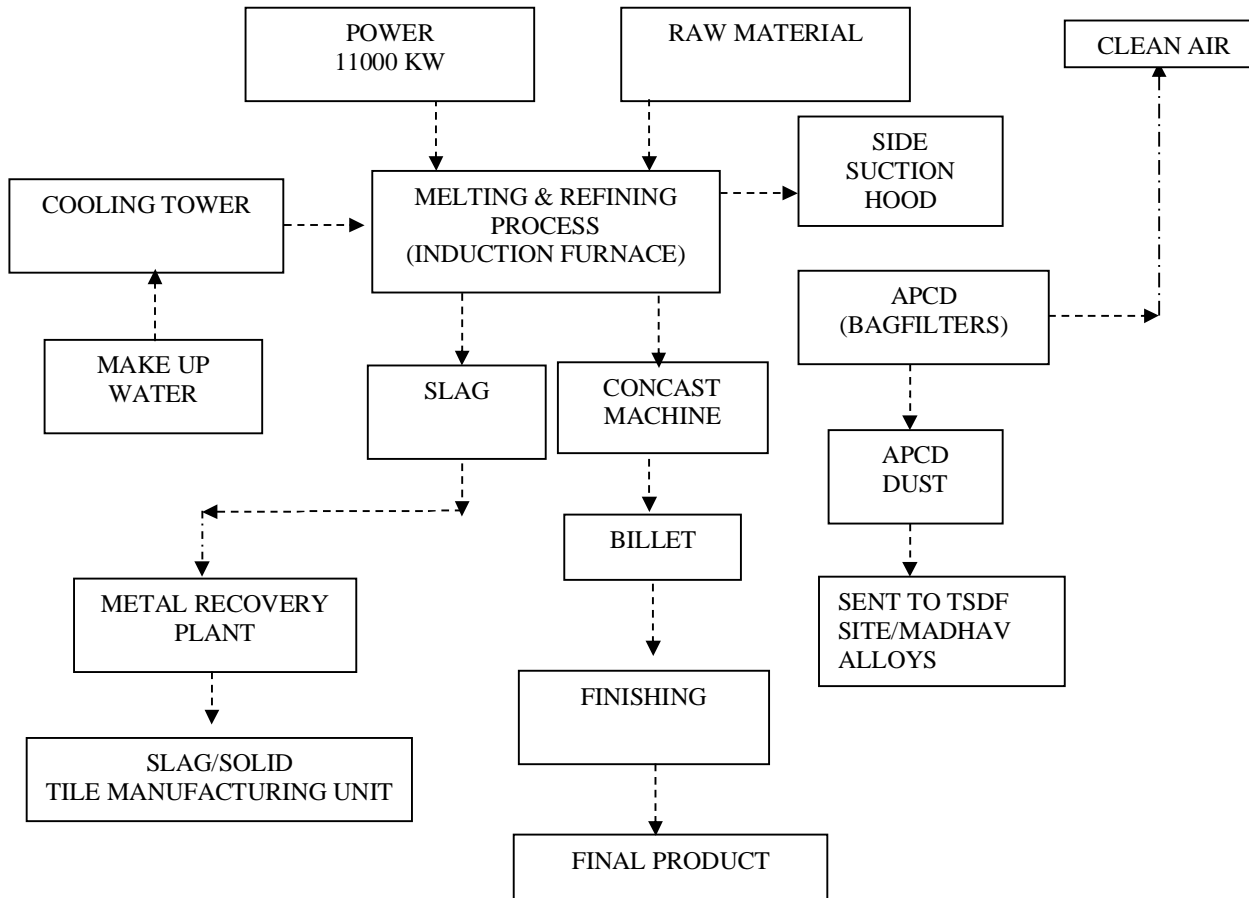
Source of Electricity	Punjab State Power Corporation Limited (P.S.P.C.L.)		
	Existing	Additional	Total
Total Load (kVA)	3,999	7,001	11,000

3.5 Manpower Requirement

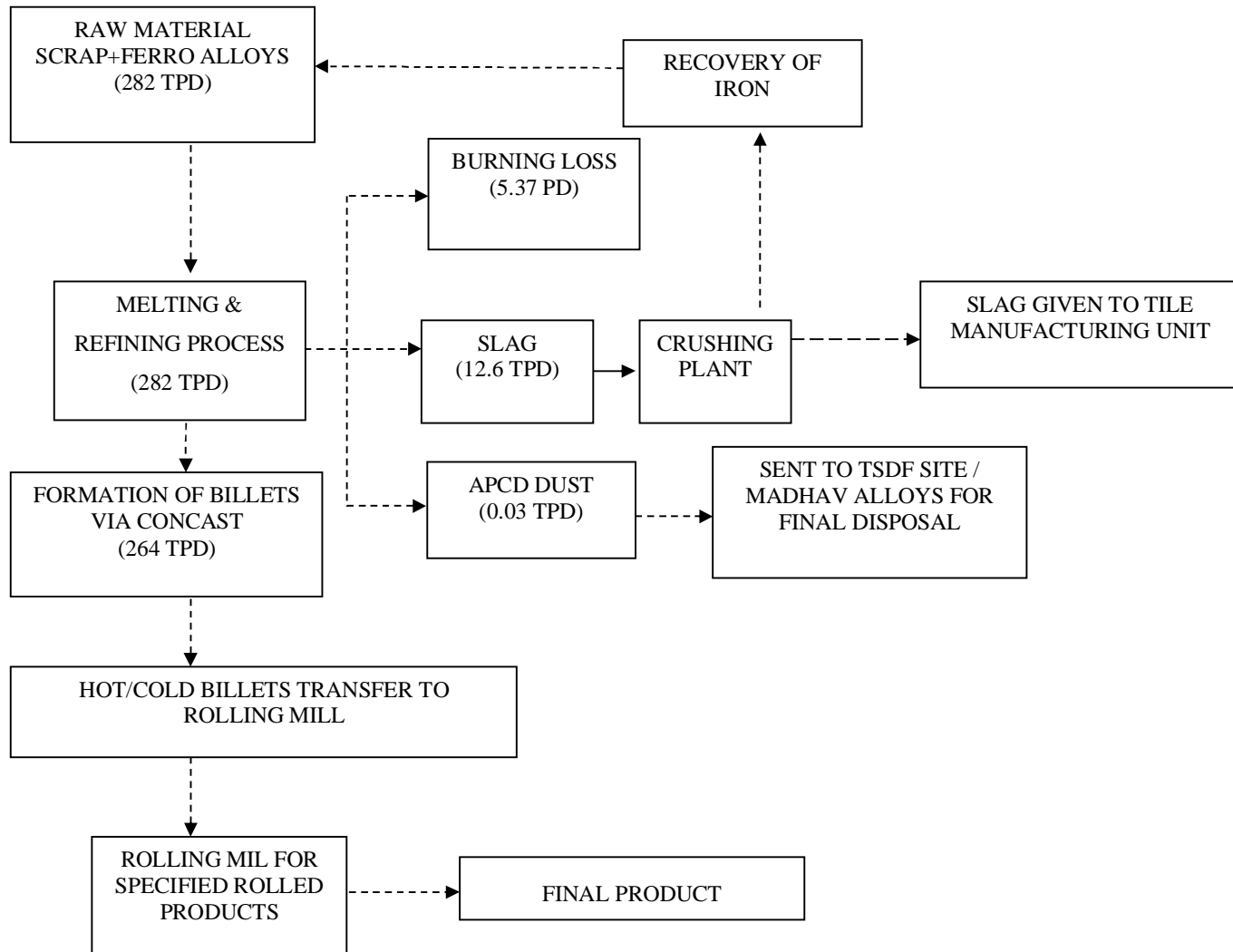
For expansion, total 60 persons will be required. Total manpower after expansion will be 150.

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 12.6 TPD of slag which is not a H.W will be generated and the same after recovering of iron will be supplied to manufacturers of Brick Klins under proper agreement. Treated waste water from STP will be used for plantation within the industrial premises. About 0.03 TPD APCD dust which is covered under hazardous waste will be sent to TSDF site/Madhav Alloys for final disposal.

6.0 Cost Details

The total cost of the project after expansion will be Rs 24.04 Cr including Rs 15.0 Cr as cost of expansion.

7.0 Site Details

M/s Saeco Strips Pvt. Ltd. is situated at Village- Doraha, Rampur Road, Tehsil-Payal, District-Ludhiana, Punjab. having its global coordinates as Latitude 30°48'42.71"N, 30°48'41.80"N, 30°48'36.43"N, 30°48'36.19"N, 30°48'40.40"N & Longitude 76°02'05.38"E, 76°02'11.67"E, 76°02'11.52"E, 76°02'08.84"E, 76°02'02.71"E. Ludhiana is the nearest city (about 18 Km, North-West) and Doraha is nearest railway station (about 1.2 Km, East). Nearest airport is Chandigarh (about 73 km, North-West). No National Parks/ Wildlife Sanctuaries/ Biosphere Reserves/ Reserved Forests exist within 10 km radius of 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 January to October-December, 2020.

8.1 Ambient Air Quality

The PM_{2.5}, PM₁₀, SO₂, NO₂, CO levels were monitored at eight locations in the study area for four months (October-December-2020). The P98 levels of criteria pollutants are as

follows: PM_{2.5} is 47.6µg/m³, PM₁₀ is 78.8µg/m³, SO₂ is 15.3µg/m³, NO₂ is 35.6µg/m³ and CO is 0.60mg/ 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, 80µg/m³ and 4.0mg/m³ for PM_{2.5}, PM₁₀, SO₂, NO_x 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 72.5 DB during day time and 66.7 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 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.