EXECUTIVE SUMMARY

FOR

EXPANSION OF STEEL MANUFACTURING UNIT

M/S KJ INTERNATIONAL

VILLAGE- KHINGRAN CHOE. TEHSIL-BHOGPUR, DISTRICT-JALANDHAR, PUNJAB

Prepared by

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1.0 Project Name and location

The Proposed Project i.e. M/s KJ International is a Secondary Metallurgical Process based industry. The plant is located at Village- Khingra Choe, Tehsil- Bhogpur, District- Jalandhar, Punjab.

2.0 Products and capacities

It is proposed to replace the existing 4 TPH Induction Furnace with 7 TPH Induction Furnace and to install additional 2 no. Induction Furnaces of capacities 15 TPH each, Ladle Refining Furnace (LRF) of 20TPH capacity, Vacuum Degassing (VD), Concast and a Rolling Mill of capacity 20TPH. The total capacity after expansion is provided below in given table-

After expansion the production details will be as under:

Product Name	Existing (TPA)	Proposed (TPA)	Total (TPA)
Steel Billets/ Ingots	14,000	1,67,300	1,81,300
Rolled/Flats Products	24,500	1,43,500	1,68,000

3.1 Land Area

The industry is already having 33120 m^2 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

The raw materials and finished goods will be transported through trucks. There is well developed road structure on, Jalandhar as well as within premises also. No additional road infrastructure will be required for transportation. The raw material details are given as under:

RAW MATERIAL (TPA)			
Capacity	**Existing**	**Additional**	**Total**
MS Scrap, CI, Sponge iron, Ferro Alloys	15,400	1,81,800	1,97,200
Source & Transportation	Local & international markets and 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

DESCRIPTION	EXISTING (KLD)	ADDITIONAL (KLD)	TOTAL (KLD)
Domestic	6.5	4.5	11 .0
Cooling (makeup water)	20 .0	40.0	60.0
Total	**26.5**	**44.5**	**71 .0**

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

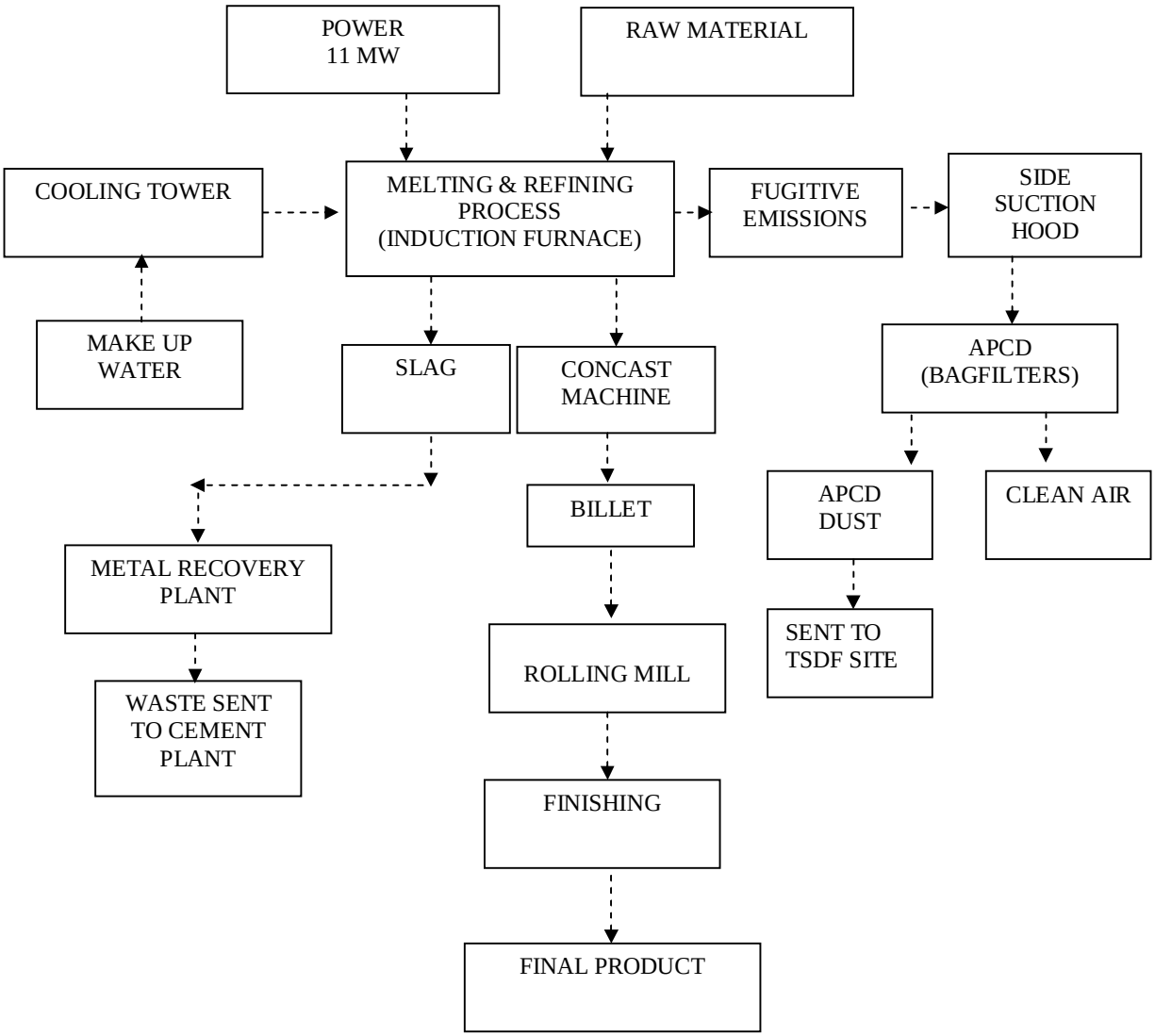
DESCRIPTION	EXISTING (MW)	PROPOSED (MW)	TOTAL (MW)
Power	4.0	7.0	11.0
Source	Punjab State Power Corporation Limited, Punjab		

3.5 Manpower Requirement

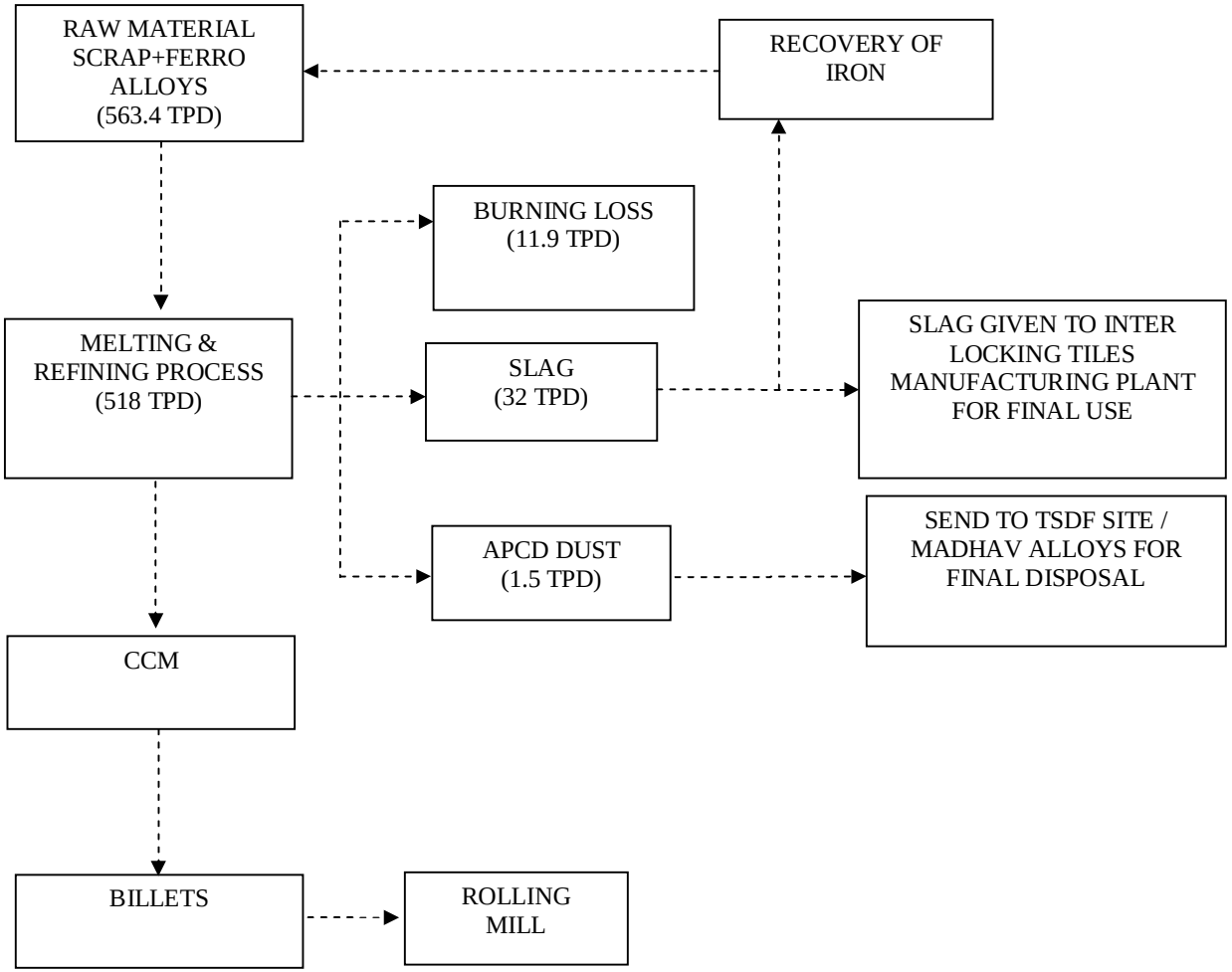
For expansion, total 100 persons will be required. Total manpower after expansion will be 250.

4.0 Process Description

FLOW DIAGRAM OF PROCESS



Material Balance



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 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 32 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 cement concrete blocks, pavers & tiles under proper agreement. Treated waste water from STP will be used for plantation within the industrial premises. About 1.5 TPD APCD dust will be also covered under hazardous waste and sent to M/S Madhav Alloys (P) Limited or TSDF site Nimbuan Dera Bassi for final disposal.

6.0 Cost Details

The total cost of the project after expansion will be Rs 2859.25 Lacs including cost of expansion. The proposed expansion will be done within one year after granting of Environment Clearance

M/s K.J. International is situated at Village Village-Khingran Choe, Tehsil-Bhogpur, District -Jalandhar, Punjab. having its global coordinates as Latitude 31°30'34.20"N;31°30'31.47"N,31°30'25.65"N;31°30'26.07"N& Longitude 75°38’48.96"E; 75°38’54.87"E , 75°38’54.78"E; 75°38’54.75"E. Jalandhar is the nearest city (about 20 Km, South-West) and Bhogpur is nearest railway station (about 5.5 Km, North direction). Nearest airport is Amritsar (about 82 km, North-West) and Adampur (13km, South-East). 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 16 March, 2021- 15 June, 2021.

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 four months (16 March to). The P98 levels of criteria pollutants are as follows: $PM_{2.5}$ is 47.2µg/m^3, PM_{10} is 87.6µg/m^3, SO_2 is 12.7µg/m3, NO_2 is 26.3 µg/m^3 and CO is 0.50mg/ 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, NO_x and CO respectively).** Due to better pollution abatement facilities, proposed expansion will have insignificant impact on existing air quality.

8.2 Water Quality:

Eight groundwater samples and one surface water sample were collected from the study area for physical, chemical and bacteriological analysis. The groundwater quality of the study is satisfactory. No physical or bacterial contamination was found in the water quality. 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 58.2 db during day time and 44.2db during night time. 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 as no waste will be discharged on land.

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.

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. 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/ 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 will be done for worst-case scenario.

11.0 CER Activities (Corporate Environmental Responsibility)

The company has earmarked Rs 40.0 lakhs towards the Corporate Environmental Responsibility for undertaking the environmental activities as defined in CER circular issued by MoEF & CC and the public hearing issues which will be detailed in final EIA report.

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 $PM_{2.5}$, 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.