EXECUTIVE SUMMARY

FOR

Expansion of Steel Manufacturing Plant to Increase the Capacity by Addition of Induction Furnace, LRF & Concast

M/s KUBER CONCAST

VILLAGE- KUMBRA, NEAR TRUCK STAND, MANDI GOBINDGARH, TEHSIL-AMLOH, DISTRICT- FATEHGARH SAHIB, PUNJAB.

Prepared by

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1.0 Project Name and location

The proposed project of **M/s Kuber Concast** running since 2007 is located at Village- Kumbra, near truck stand, Mandi Gobindgarh, Tehsil- Amloh, Distt. Fatehgarh Sahib, Punjab.

2.0 Products and capacities

M/S Kuber Concast has an existing capacity of Rolling Mill 25 Ton/hr. Now there is proposal to install new Induction Furnace of capacity 25 TPH, Laddle Refining Furnace (LRF) of capacity 25 TPH, and a Concast. Total capacity of the project after expansion will be 131250 TPA of Steel Ingots/billets & MS Rounds, Square, TMT Bars, Flats, Patra, Angle, Channel of 2,10,000 TPA.

After expansion the production details will be as under:

PARTICULARS	EXISTING (TPA)	PROPOSED (TPA)	AFTER EXPANSION (TPA)
Steel Ingots/billets	NIL	1,31,250	1,31,250
Angle, Channel, TMT Bars	--	1,40,000	1,40,000

3.1 Land Area

The total land area of the unit is 5.014 acres or 20075.2 sqm. The green belt requirement is 6624.9 sqm i.e. 33% of total area.

3.2 Raw Material Requirement

The raw materials and finished goods will be transported through trucks. There is well developed road structure on, Mandi Gobindgarh 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	Existing (TPA)	Proposed (TPA)	Total (TPA)
MS Scrap, CI, Sponge Iron, Ferro Alloys	NIL	1,37,900	1,37,900
MS Ingots, Billets	2,20,500	Nil	2,20,500
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 Balance for Summer Season

DESCRIPTION	EXISTING REQUIREMENT	PROPOSED REQUIREMENT	TOTAL REQUIREMENT
Domestic	3.0 KLD	4.0 KLD	7.0 KLD
Cooling (makeup water)	10 KLD	220 KLD	230 KLD
Total	**13.0 KLD**	**224 KLD**	**237 KLD**

Water Balance for Winter and Rainy Season

DESCRIPTION	EXISTING REQUIREMENT	PROPOSED REQUIREMENT	TOTAL REQUIREMENT
Domestic	3.0 KLD	4.0 KLD	7.0 KLD
Cooling (makeup water)	10 KLD	178 KLD	188 KLD
Total	**13.0 KLD**	**182 KLD**	**195 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

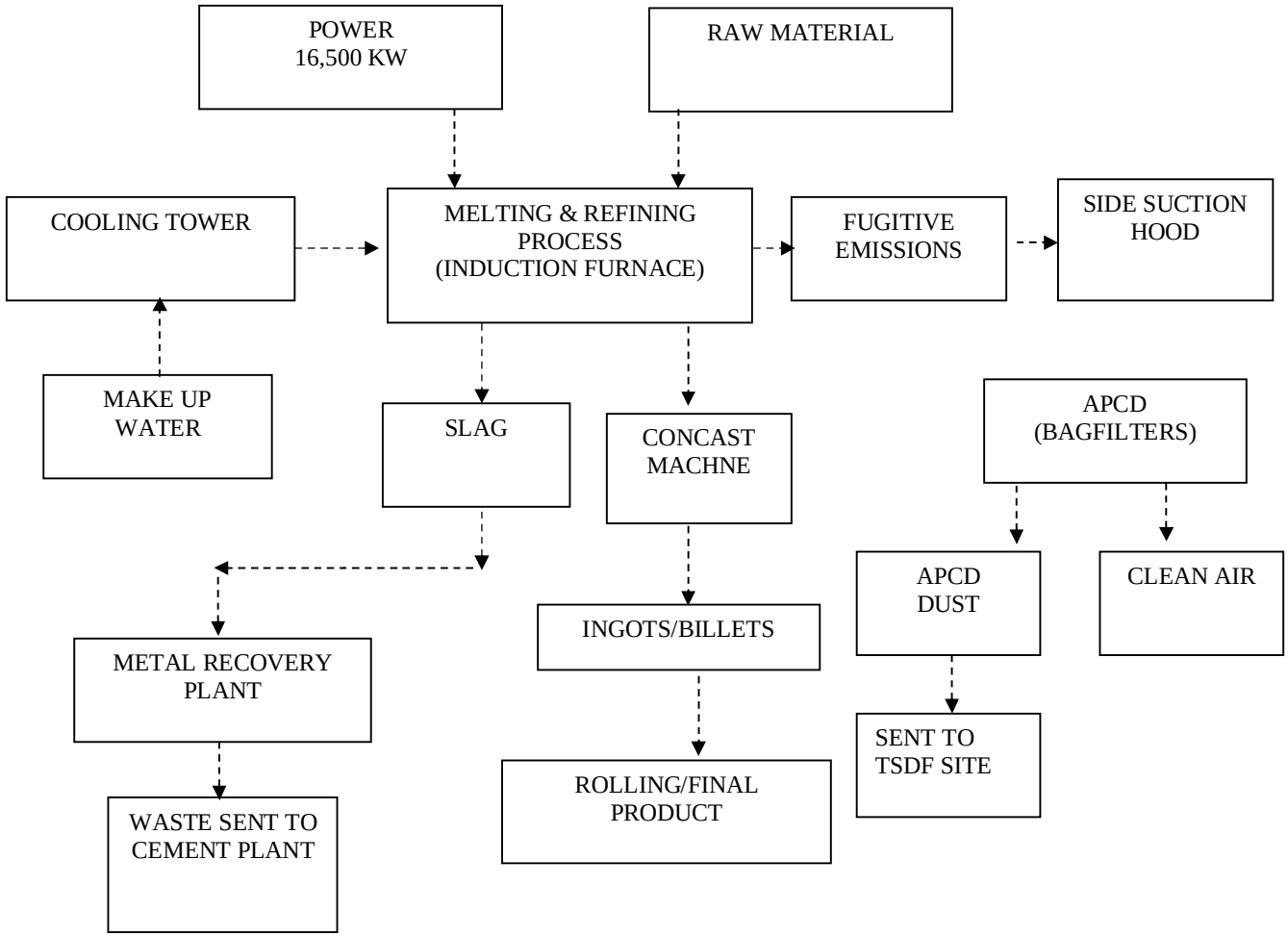
DESCRIPTION	EXISTING (KW)	PROPOSED (KW)	TOTAL (KW)
Power	1500	15,000	16,500
Source	Punjab State Power Corporation Limited, Punjab		

3.5 Manpower Requirement

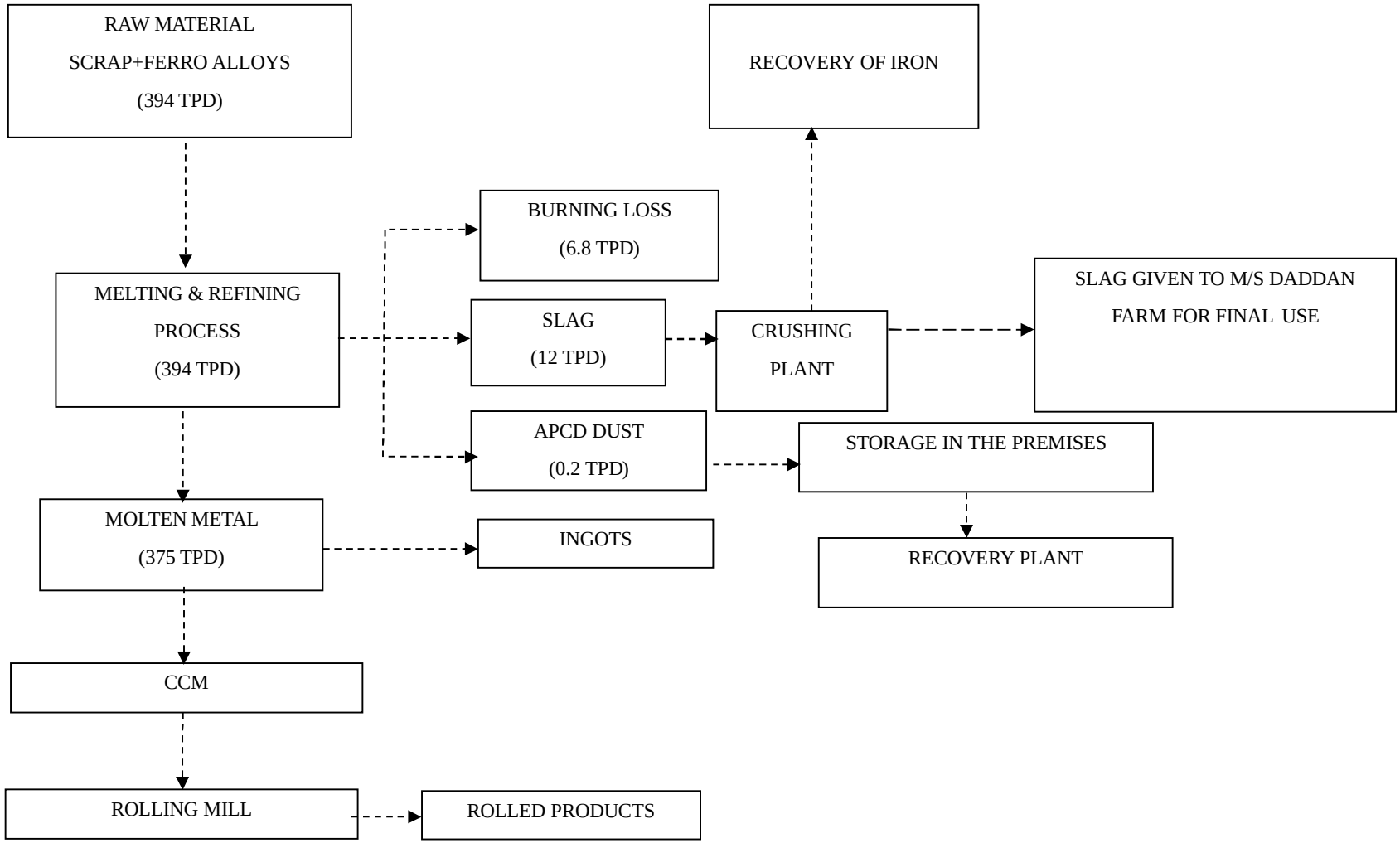
There are about 65 persons working in the unit. The proposed expansion will generate employment for 85 people more. Thus, after expansion about 150 persons will be working in the unit.

4.0 Process Description

Flow Chart of Manufacturing 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.

- Total quantity of slag generated after expansion will be 12 TPD which will be sent to M/s Daddan Farm under proper agreement for final disposal.
- APCD dust will be sent to M/s Jogindra Castings Pvt. Ltd. for recovery of Zn metal.
- Used oil from DG sets will be used as lubricant in the industry

6.0 Cost Details

- The total cost of the project after expansion will be ₹32.54 Crores including ₹25.0 Crores as cost of expansion.
- The proposed expansion will be done within one year after granting of Environment Clearance.

7.0 Site Details

The proposed project site is located at Village- Kumbra, near truck stand, Mandi Gobindgarh, Tehsil- Amloh, Distt-Fatehgarh Sahib, Punjab is having its global coordinates as Latitude 30°38'7.25"N, 30°38'9.61"N, 30°38'3.92"N, 30°38'1.99"N, 30°38'4.45"N and Longitude 76°18'17.80"E, 76°18'22.61"E, 76°18'26.33"E, 76°18'23.97"E, 76°18'17.80"E. Mandi Gobindgarh is the nearest city and also the nearest railway station (about 2.6 km). Nearest Airport is Chandigarh which is at 45 km from site. No National Parks/ Wild Life Sanctuaries/ Biosphere Reserves 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-March, 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 (January-March, 2023). The P98 levels of criteria pollutants are as follows: $PM_{2.5}$ is 40.6µg/m^3, PM_{10} is 73.4µg/m^3, SO_2 is 11.7µg/m^3, NO_2 is 14.8µg/m^3 and CO is 0.77 mg/ 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 at the Project site was found to be 70.1 dB (A) in day time and 56.4 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 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	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
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 EMP Budget

S.No	Title	Capital Cost Rs. Lakh	Recurring Cost Rs. Lakh
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/ STP upgradation	9.0	1.0
4.	Noise Pollution Control	3.0	0.50
5.	Greenbelt development with maintenance plan	10	10
6.	Occupational hazard and safety	5.0	1.0
7.	Environment Monitoring	--	0.50
8.	Solid Waste Management	3.0	0.25
9.	Energy Conservation	3.0	1.0
10.	RWH	10.0	2.0
	Total	**168.0**	**28.25**

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.

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.