# EXECUTIVE SUMMARY

**FOR**

**ADDITION OF INDUCTION FURNACE IN EXISTING STEEL MANUFACTURING UNIT**

**IN THE EXISTING STEEL MANUFACTURING UNIT OF**

## M/S KASHMIR ISPAT

**SIDCO INDUSTRIAL COMPLEX, BARI BRAHMANA, SAMBA NORTH, JAMMU & KASHMIR**


**Prepared by**

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

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# EXECUTIVE SUMMARY

## 1.0 Project Name and location

The Proposed project namely **M/s Kashmir Ispat** is located at SIDCO Industrial complex, Bari Brahmana, Sambha North Jammu, Jammu & Kashmir.

## 2.0 Products and capacities

At present, the industry manufactures Flats, Steel Bar, Tor Steel, Steel Angle, Channels, Rounds, Wire rod, Square, Girders & TMT Bars with one rolling mill of 15 TPH. There is proposal to increase the capacity of structural steel to 1,13,050 TPA and steel ingots /billets @1,19,000 TPA by installing one Induction Furnace of capacity 25 TPH and one Continuous Casting Machine.

**After expansion the production details will be as under**

| **Product Name** | **Existing (TPA)** | **Proposed (TPA)** | **Total (TPA)** |
|---|---|---|---|
| Steel Ingots/Billets | Nil | 1,19,000 | 1,19,000 |
| Flats, Steel Bar, Tor Steel, Steel Angle, Channels, Rounds, Wire rod, Square, Girders & TMT Bars | 85,876 | 27,174 | 1,13,050 |

## 3.1 Land Area

The project has acquired land of 1.54 hectare (15400 Sqm.). Further, proposed expansion will be carried out in the 0.825 hectare or 8250 $m^2$ of land. Thus, total land will be 2.365 Hectare or 23650 $m^2$. Land breakup detail is given below:

| **Particulars** | **Existing** | **Addition** | **Total** |
|---|---|---|---|
| **i) Land** | 15400 sqm or<br>1.54 Hectare | 8250 $m^2$ or<br>0.825 Hectare | 23650 $m^2$ or<br>2.365 Hectare |

## 3.2 Raw Material Requirement

The principle raw materials such as Iron Scrap, Ferro Alloys and sponge Iron are indigenously and internationally available. The details of raw material requirement and their mode of transportation is given in the table below:

| Raw Material | Existing (TPA) | Proposed (TPA) | Total (TPA) |
|---|---|---|---|
| MS Scrap, Ferro-alloys Ingots/Billets (TPA) | 94,124 | 36,436 | 1,30,560 |
| **Source & Transport** | **Local & International Markets & transport through covered trucks.** | | |

### 3.3 Water Requirement

Water requirement for the unit which primarily will be makeup water for cooling and for domestic purpose will be met from the SIDCO supply. The detail of water requirement is given below: -

**For Summer Season**

| DESCRIPTION | EXISTING REQUIREMENT | PROPOSED REQUIREMENT | TOTAL REQUIREMENT |
|---|---|---|---|
| Domestic (KLD) | 4.0 | 6.0 | 10.0 |
| Cooling (makeup water) (KLD) | 16.0 | 40.0 | 56.0 |
| **Total (KLD)** | **20.0** | **46.0** | **66.0** |

**For Winter and Rainy Season**

| DESCRIPTION | EXISTING REQUIREMENT | PROPOSED REQUIREMENT | TOTAL REQUIREMENT |
|---|---|---|---|
| Domestic (KLD) | 4.0 | 6.0 | 10.0 |
| Cooling (makeup water) (KLD) | 16.0 | 20.0 | 36.0 |
| **Total (KLD)** | **20.0** | **26.0** | **46.0** |

**Source-** SIDCO water supply

### 3.4 Power Requirement

The Power Requirement will be met by sourcing the power from J&K State Power Corporation Limited as per the requirement given below:

**Power Requirement**

| Description | Existing Requirement | Additional Requirement | After Expansion |
|---|---|---|---|
| Power Requirement | 2997 KW | 12948 KW | 15945 KW |
| Source- J&K State Power Corporation Limited | | | |

**DG Set –**The industry has one DG set of capacity 125 KVA and propose one more DG set having capacity 325 KVA. The DG set will only be used as power backup. To control the emissions from DG sets, canopy of adequate height has been provided. The details of DG Sets are as follow: -

| Description | Existing Requirement | Additional | After Expansion |
|---|---|---|---|
| DG Sets | 125 KVA | 325 KVA | 125 & 325 KVA |
| APCD | Canopy of adequate height has already been provided | | |

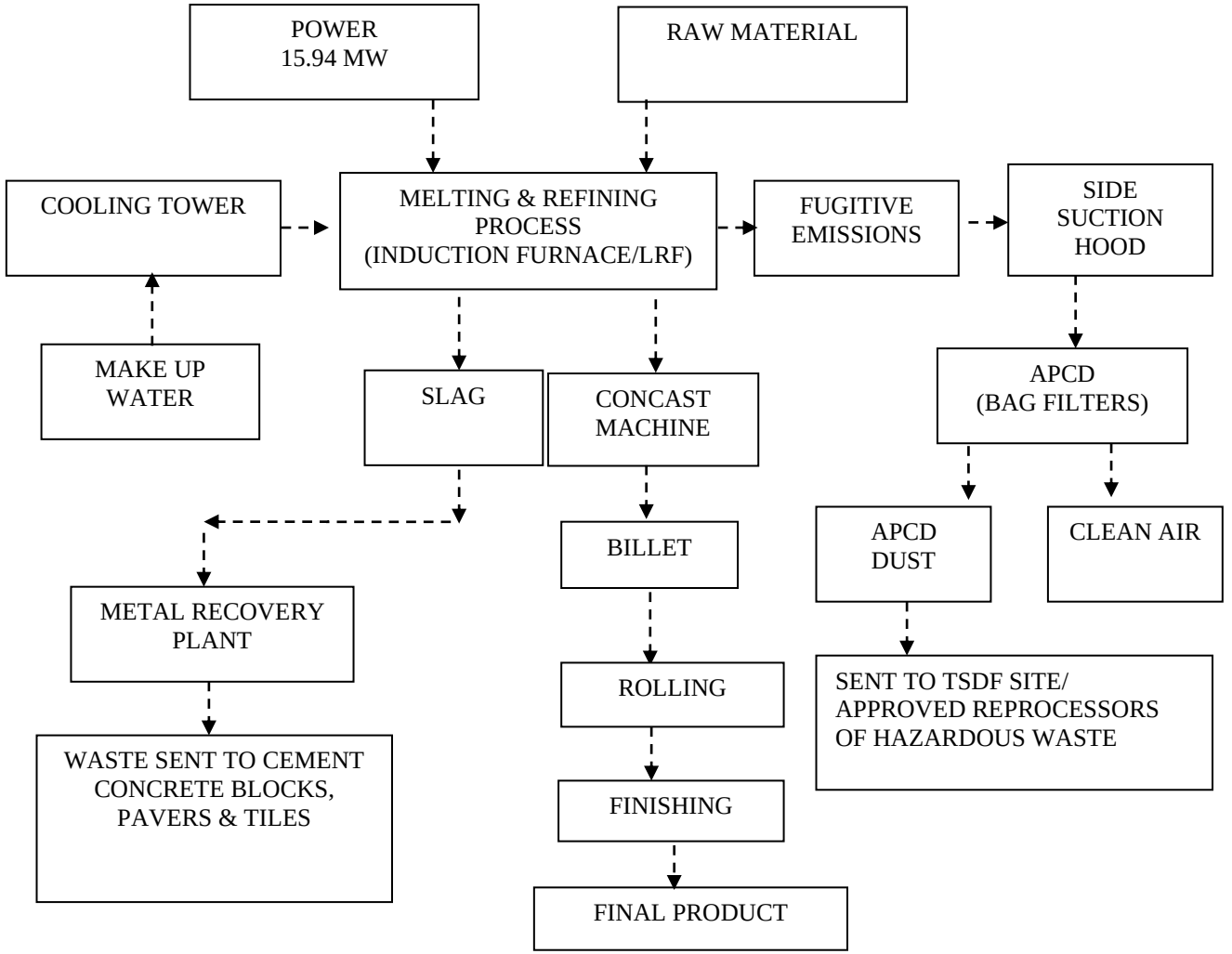
**3.5 Manpower Requirement**

The proposed project shall generate direct employment for additional 24 persons and the total men power after expansion will be 90 as per the details below:

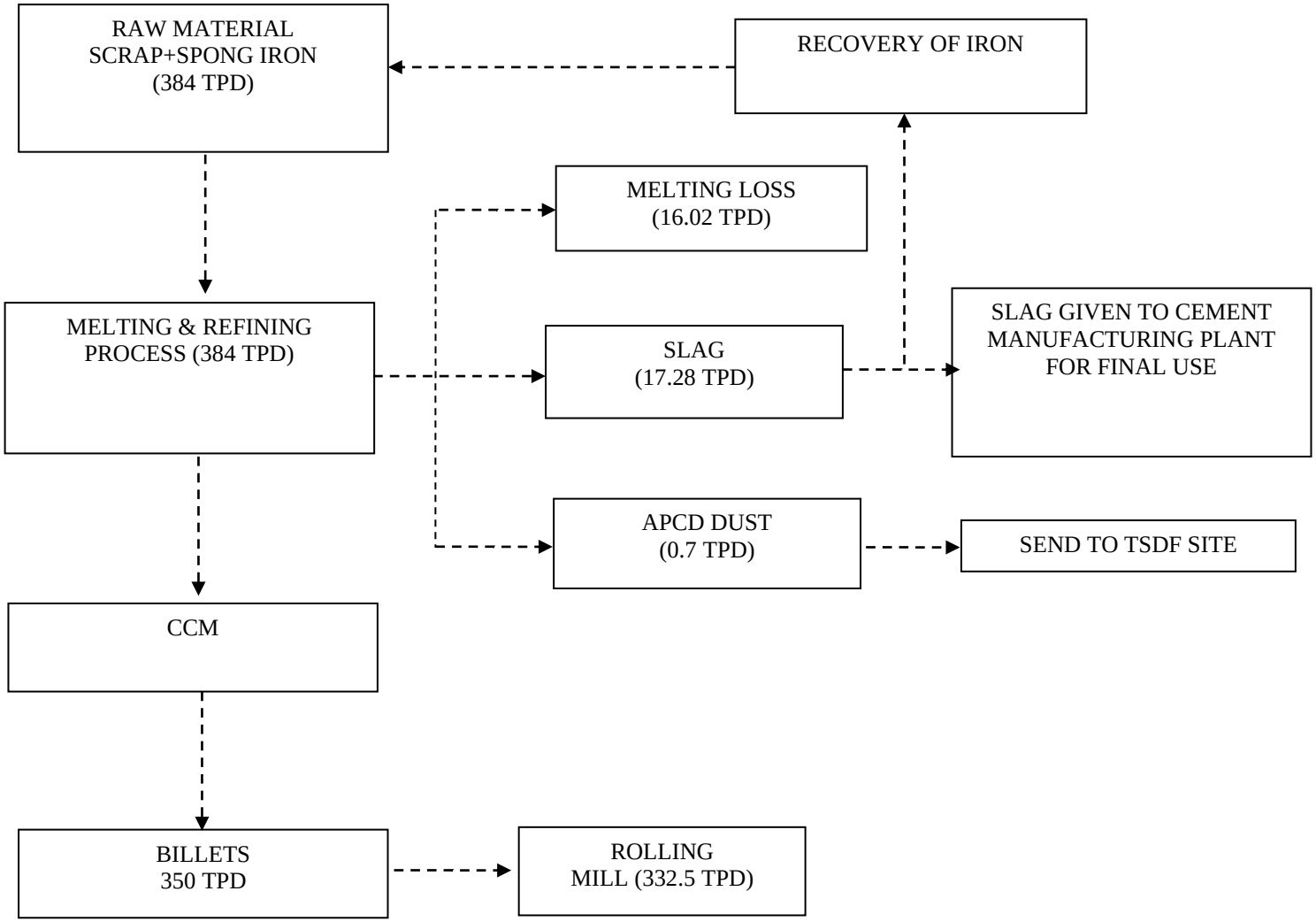
| S.No. | Description | Nos |
|---|---|---|
| 1. | Rolling Mill In Charge | 1 |
| 2. | Quality In Charge | 2 |
| 3. | Marketing In Charge | 2 |
| 4. | Shift Engineers | 3 |
| 5. | Supervisors | 4 |
| 6. | Foreman | 4 |
| 7. | Workers | 66 |
| 8. | Clerks | 6 |
| 9. | Accountants | 2 |
| **Total** | | **90** |

## 4.0 Process Description

### PROCESS FLOW CHART



## MATERIAL BALANCE



**5.0 Measures on Mitigating the Impact on The Environment**

The purpose of mitigation measures is to avoid, reduce or minimize adverse 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 system and finally through bag filters before its discharge to atmosphere. DG set is fitted with a canopy and adequate stack to take care of noise, particulate and gaseous emission.

- About 17.28 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 under proper agreement. Treated waste water from septic tank will be used for plantation within the industrial premises.
- About 0.7 ton/day APCD dust which is also covered under hazardous waste will be sent to TSDF site for final disposal.

**6.0 Cost Details**

The total cost of the project after expansion is estimated as Rs 3196.39 Lacs including Rs 2831.78 Lacs as cost of expansion.

The proposed expansion will be done within one year after grant of Environment Clearance.

**7.0 Site Details**

The proposed project is located at SIDCO industrial complex, Bari Brahmana, Samba, Jammu. It is having its global coordinates as Latitude 32°38'42.58"N, 32°38'43.17"N, 32°38'40.40"N, 32°38'35.82"N, 32°38'38.17"N & Longitude 74°56'21.40"E, 74°56'25.29"E, 74°56'26.25"E, 74°56'20.90"E, 74°56'17.98"E. Jammu is the nearest city (about 12 Km) approx. and Bari Brahmana is the nearest village (about 3.0 km, N). Nearest airport is Jammu which is at 12km. There is one reserved forest found in the study area along with their respective distance and direction from the project site i.e., Raika Forest RF – 9.0 km in North direction. Nearest water body is Balolle Nala which is 0.5 km north.

**8.0 Description of The Environment**

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 study was carried out during the period October, 2023 to December, 2023.

### 8.1 Baseline Environmental Data, impacts and mitigation measures

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 for the period October, 2023 to December, 2023.

### 8.2 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. The P98 levels of criteria pollutants are as follows: $PM_{2.5}$ is 40.2 $\mu g/m^3$, $PM_{10}$ is 82.2 $\mu g/m^3$, $SO_2$ is 8.5 $\mu g/m^3$, $NO_2$ is 23.2 $\mu g/m^3$ and CO is 0.73 mg/ $m^3$. The baseline air quality level is within the National Ambient Air Quality Standards prescribed for industrial, residential, rural & other area. **(Standards are 60, 100, 80, 80$\mu g/m^3$ and 4.0$mg/m^3$ for $PM_{2.5}$, $PM_{10}$, $SO_2$, $NO_x$ and CO respectively).** Due to better pollution abatement facilities in the proposed expansion, there will rather be improvement in the existing air.

### 8.3 Water Quality:

Eight groundwater samples and one surface water sample were collected from the study area for chemical and bacteriological analysis. The groundwater quality of the study is satisfactory. No physical or bacterial contamination was found in the water quality. But bacterial contamination is found in surface water. Since, no waste water will be discharged to the environment, water quality is not likely to be impacted.

### 8.4 Noise Environment

Ambient noise levels were monitored at 8 locations in the study area. Noise levels at the Project site was found to be 71.2 dB (A) during day time and 54.6 dB (A) at night. The baseline noise levels are borewell within the Noise Standards prescribed by the CPCB. Proposed expansion will not have insignificant impact as there will be no noise generating machinery and process. The DG set has been provided with canopy and workers are provided ear plug/muffs for protection against noise.

### 8.5 Soil Quality

Eight soil samples were collected from the study area and analyzed. The texture of soil is silt 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.

### 8.6 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. Since the expansion is proposed in the existing area there will be no impact on the existing ecological environment.

### 8.7 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. Several induction furnaces, rolling mills, ferroalloy plants, brick kilns, and other small units are present in the study area.

### 8.8 Socioeconomic Condition

Socioeconomic status has been studied through secondary sources and by site visits. The study was conducted in respect of social and economic requirements such as health, education, communication, drinking water, employment and infrastructure. The area is well developed in terms of communication and road infrastructure but lacking in adequate drinking water, education and medical facilities for which the proponent will contribute in terms of CSR/ECR activities. Since, most of the workforce will be heired from the surrounding areas there will no influx of people in the area thereby no impact on the existing social setup, rituals and customs.

## 9.0 Possible Hazards & Risks from Secondary Metallurgical Industries

The various process operations, which are having potentially high risk to human exposure and which require highest attention are tabulated below.

**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 | 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 development 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 which requires engineering evaluation 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 APCs) | 90.0 | 5.0 |
| 3 | Water Pollution Control/ STP (15 KLD) | 15 | 5.0 |
| 4 | Noise Pollution Control | 5.0 | 1.0 |

| | | | |
|---|---|---|---|
| 5 | Landscaping/ Green Belt Development | 20.0 | 20.0 (for Three years) |
| 6 | Solid Waste Management | 5.0 | 5.0 |
| 7 | Environment Monitoring and Management | 5.0 | 3.0 |
| 8 | Occupational Health, Safety and Risk Management | 10.0 | 2.0 |
| 10 | Miscellaneous | 5.0 | -- |
| | **TOTAL** | **160.0** | **43.0** |
| **ADDITIONAL MANAGEMENT ACTIVITIES** | | | |
| | **DESCRIPTION** | **Estimated Cost (in Rs. Lacs)** | **Time Line/Action Plan** |
| 1 | Plantation in community areas in consultation with concerned village panchayat. | Rs 15 Lacs | Starting after six months of grant of EC, plantation will be completed within three successive monsoon seasons |
| 2 | Water Recharge/Harvesting by deepening of existing ponds of three villages. | Rs 10.0Lacs | One each per year after grant of EC. |
| 3 | Distribution of biodegradable carry bags to surrounding population and employees to discourage the use of SUP. | Rs 7.0 Lacs | Twice a year |

## 12.0 CER Activities (Corporate Environmental Responsibility)

***In lieu of Corporate Environmental Responsibility, the project proponent will undertake the above activities for the amelioration of environment as per provisions of OM dated 25.02.2021 issued by MOEF&CC and the same will be executed as part of EMP.***

## 13.0 Environment Monitoring Plan

The monitoring of environmental parameters like air, water, noise, soil, and meteorological data and performance of pollution control facilities and safety measures in the unit are vital for environmental management of any industrial project. Therefore, the company shall create environmental monitoring facilities by the environmental and safety department to monitor air and water pollutants as per the guidelines. Moreover, air, noise, drinking water, and soil shall be monitored by outside agencies authorized by Pollution Control Board at regular intervals. This department shall also carry out periodical check of fire and safety equipment.