

EXECUTIVE SUMMARY

“Environmental Clearance for Expansion of Integrated Steel Plant with addition Steel Melting Shop with 3,72,352 TPA producing steel Rolled Product of 3,43,312 TPA along with Sponge Iron Plant of 2x 350 TPD and Captive Power plant 40 MW(AFBC-21, WHRB-19) to the Existing Facility with Sponge Iron Plant: 6x 100 TPD, Pellet Plant: 6,00,000 TPA, Captive Power Plant 15 MW (WHRB+AFBC) and Iron Ore Beneficiation Plant 6,00,000 TPA at Survey no 97, 225 etc. (KIADB: 219.11 Acres, NA Land: 116.37 Acres and KLA(u/s) 109: 49.68 Acres, (total 385.16 Acres), Sidiginamola village – 583 111, Bellary Taluka and District, Karnataka”



By

M/s. JANKI CORP LIMITED

Prepared By:

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EXECUTIVE SUMMARY

i. Project Name & Location

M/s. Janki Corp Limited (JCL) has its Integrated Steel plant located at Sy. No. 97,225 etc. (KIADB: 219.11acres, NA Land: 116.37acres and KLA (u/s) 109: 49.68acres(total area 385.16 Acre), Sidiginamola village, Bellary Taluk and District, Karnataka State.

ii. Product & Capacity If expansion proposal, then existing products with capacities and reference to earlier EC

Existing Facility	Proposed Additional Facility	Final Configuration
Sponge Iron Plant: 6× 100 TPD Pellet Plant: 6,00,000 TPA Iron Ore beneficiation Plant 6,00,000 TPA Captive Power Plant 15MW (WHRB)	Sponge Iron Plant of 2× 350 TPD, Steel Melting Shop-3,72,352 TPA producing Steel Rolled products of 3,43,312 TPA Captive Power plant 40 MW(AFBC-21, WHRB-19)	Iron Ore beneficiation Plant 6,00,000 TPA, Pellet Plant: 6,00,000 TPA, Sponge Iron Plant: 6× 100 TPD , 2× 350 TPD, Steel Melting Shop-3,72,352 TPA producing Steel Rolled products of 3,43,312 TPA Captive Power Plant 55 MW (AFBC-21, WHRB-34 MW)

iii (a) Requirement of Land

Total land envisaged for the entire project will be 385.16 acres. All the land is owned by Janki Corp Limited for Industrial set up as well as Green belt development. Adequate land has been earmarked to set up the proposed plant in JCL's existing complex.

(b) Raw Materials

Sl. No.	Raw Materials	Existing Quantity (TPA)	Proposed Quantity (TPA)	Source	Mode of Transportation
1	Iron Ore Fines	10,20,000	7,50,000	Local Market	Road
2	Lime stone	26,400	20,000	Local Market	Road

3	Bentonite	7,500	Nil	Local Market	Road
4	Coke Fines	12,000	Nil	Local Market	Road
5	Imported Coal	2,75,000	2,33,000	South Africa	Rail
6	Dolomite	4,500	10,000	Local Market	Road
7	Pig Iron	Nil	46,400	Local Market	Road

(c) Water

Total fresh water requirement for Integrated Steel Plant is 6859 KLD. This water is procured from the treated local Municipality waste water source, for which the company has a long term agreement to utilize the treated City STP water for its industrial purposes. By utilizing the treated sewage water, this particular industry is unique in its operation.

(d) Power Supply

With generation and transmission loss from the total capacity of 55 MW actual generations is 46.50 MW, which will cater to total power need of the Plant Emergency power supply to the essential loads of the proposed plant units for safe shutdown in case of failure of main power supplies will be made available from local 2 DG sets of 500 KVA& 3 DG sets of 600 KVA.

(d) Fuel

Sl. No.	Item Description	Unit	Quantity Per Annum	Storage
1	HSD	KL	742.963	Stored in Barrel in a designated Closed Room
2	FO	KL	852.995	Stored in Barrel in a designated closed cool place
3	Sodium Hypochlorite	KG	27,832	Stored inside closed room in a cool place.
4	Bleaching Powder	KG	1,150	Stored inside closed room in a cool place.

iv (a) Process Description

M/s Janki Corp Limited is for expansion of Integrated Steel Plant with addition of Steel Melting Shop-3,72,352 TPA producing Steel Rolled Product of 3,43,312 TPA, Sponge Iron Plant of 2× 350 TPD , Captive Power plant 40 MW(AFBC-21, WHRB-19) to the Existing Facility: Sponge Iron Plant: 6× 100 TPD , Pellet Plant:6,00,000 TPA, Captive Power Plant 254 MW (WHRB) and Iron Ore Beneficiation Plant 6,00,000 TPA within same premise.

(b) Gaseous Emission

The major sources of air pollution in the plant are fugitive emission from material handling & transfer points and gases like Carbon Dioxide, Sulphur Dioxide, and Nitrogen Oxides etc.

The installed system as well as proposed system for air pollution control provides acceptable environment conditions in the working areas and abates air pollution in the surrounding areas of the site. The technological equipment and processes have been selected with the above objective. Depending upon the quality of emissions from different sources, suitable air pollution control systems are provided.

(c) Liquid Effluent

Sl.No.	Source	Quantity(in KLD)	Management
1	Beneficiation Plant	910	The effluent from each source is channelized to the ETP comprising of Primary Clarifier, Secondary Clarifier with Tube Settler, Neutralization Tank and Sand Filter beds and is recycled in the system with proportionate distribution to the respective entities as makeup water.
2	Pellet Plant	122	
3	DRI Plant	135	
4	CPP	2692	
5	IF & LFR	175	
6	AOD & CCM	60	
7	Domestic	165	

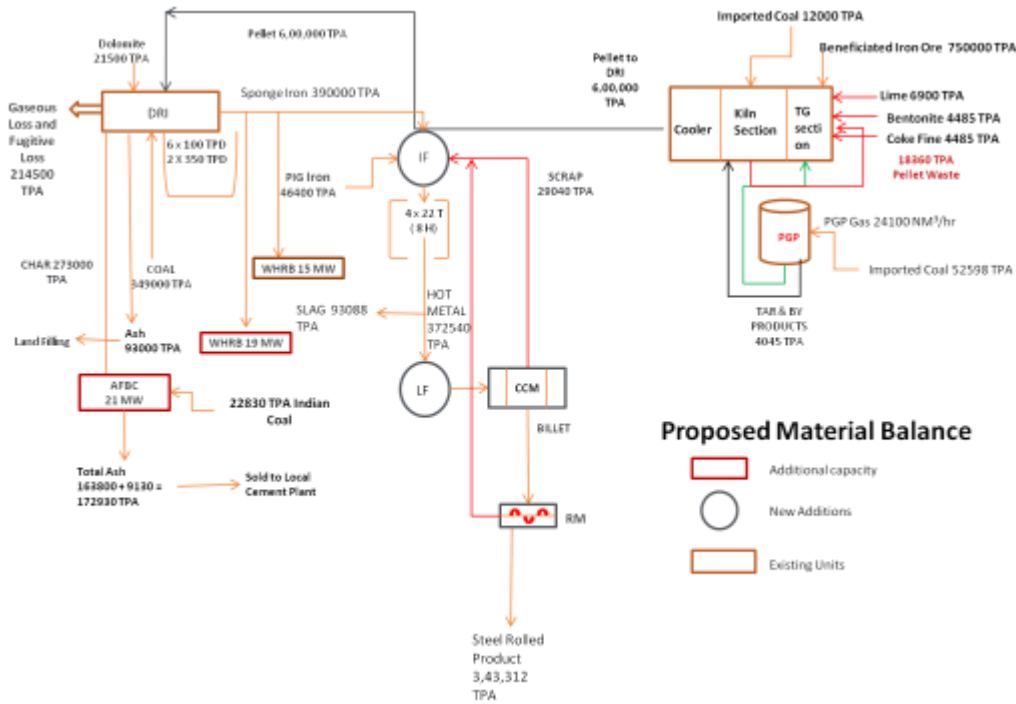
(d) Solid & Hazardous Waste

Sl. No.	Type of Waste	Source	Quantity(TP A)	Management
1	Tailing	Beneficiation Plant	1,50,000	Stored at earmarked area in cake form and sold to the Cement Plants
2	MS Scrap	SMS	29,040	Recycled in IF
3	Ash	DRI	93,000	Land fill

4	Dolochar	DRI	2,63,000	AFBC Boiler
5	Slag	IF	93,088	Used for construction and road making
6	Tar and Various Bi-product from PGP	PGP	4,045	Recycled in Klin
7	Pellet Waste	Pellet Plant	18,360	Recycle in TG section of Pellet Plant
8	Fly Ash and Bottom Ash	AFBC Boiler	1,72,930	Sold to local Cement Plant
9	Clarifier Sludge	From Common ETP	54,750	From Sludge Bed to Bio Manure to be utilized for Greenbelt Development

Sl. No.	Hazardous Waste	Quantity (ton/annum)	Mode of Disposal
1.	Waste residue containing Oil	20,000 MT	Collected in the leak proof containers and disposed to KPSCB authorized Re-processor/Incinerator
2.	Used/Spent Oil & Used grease	2,500 MT	Collected in the leak proof containers and disposed to KPSCB authorized Re-processor/Incinerator

(e) Material Balance



v Measures of Mitigating the impact on the environment and mode of discharge or disposal

SI No	Proposed Mitigation Measure	Purpose
1	Enhancement of ETP capacity(3000KLD)	For Treatment of waste water and reused in Industrial Purpose
2	Bag House, each with 30filters in series	To Control air Pollution Furnance
3	ESP	To Control air Pollution at CPP
4	Acoustic Enclosures	To Control Noise level
6	Dry Fog Systems	To Control Dust generation
7	Fixed Sprinklers	Dust suppression
8	Mobile Water Tanker 15 KL	Dust suppression

vi Capital Cost of the Project & Estimated time of Completion

The estimated Project Cost is Rs. 423.43 Cr, in which there is no Landcost as the project is proposed to be done on the same premises. The total EMP cost is estimated at 34.79 Cr Rs. Out of this about 26.85 Cr is already been implemented in the existing Plant. The rest will be implemented along with the project execution.

Sl. No.	Activities	Duration
1	ENGINEERING	
	Concept Design	15 days
	Basic Engineering	30 days
	Detailed Engineering	60days
2	CIVIL WORK	
	Finalization of layout	90 days
	Setup of plant & auxiliary machineries	120 days
3	STATUTORY CLEARANCE FOR ESTABLISHMENT	
	CFE from Karnataka Pollution Control Board	30 days
	EC Clearance	90 days
4	PROCUREMENT	
	Place orders for long lead Equipments	90 days
	Place orders for commodity items	30 days
	Receipt of equipment	90 days
	Installation of equipment & items	90 days
5	ERECTION & COMMISSION	

	Inspection before commissioning	15 days
	Commissioning & production trial run	90 days

vii Site selected for the project- Nature of land

M/s. Janki Corp Limited (JCL) has its Integrated Steel plant located at Sy. No. 97,225 etc. (KIADB: 219.11acres, NA Land: 116.37acres and KLA (u/s) 109: 49.68acres(total area 385.16 Acre), Sidiginamola village, Bellary Taluk and District, Karnataka State. The plant was successful in tripling the capacity of sponge iron production in just a few years. Not agriculture land, forest, eco sensitive zone, within 10 km distance only one industry is there.

viii Baseline Environmental Data**(a) AAQ**

For Ambient Air Quality total 8 location are taken from different direction leeward & wind ward and also two other direction to know the quality of air within 10 km radius of the project area.

(b) Surface & Ground Water Quality

Within 10 km radius there is two surface water location i.e. Moka Reservoir and Tungabhadra Canal water near Gollanaganahalli village chosen for surface water quality analysis whether any water quality variation is there or not due to project area however there is zero discharge. 8 locations were chosen for ground water quality analysis form nearby area within 10 km radius of the project. By analysis it concluded that water qualities are good as per standard.

(c) Soil

For soil quality analysis from 8 different location soil are taken to analysis. Soil quality is also good and can be used in irrigation process by adding some manure.

(d) Flora & Fauna

Different flora & fauna are collected during the baseline period from Dec-2019- Feb 2020.

(e) Socio Economic

M/s Janki Corp Limited SIA area covers five villages namely- Sidiginamola village, Gollanaganahalli village, Karekal village, Karekal Veerapura village & Meenahalli village. Considering the location of the plant and its surrounding environment, nearby villages were surveyed for their socio-economic status. Apparently, the villages are distantly speculated and having spreader households within the village boundary. Hence considering the maximum influence due to Industrial Pollution five villages within 2.5km-7 km radius spread over in four quadrants of the buffer zone is been considered for the assessment.

ix Identification of Hazard

Hazards were identified and evaluated for Risk potential, so that appropriate preventive measures can be developed for such probabilities.

(A)		(B)		(C)	
Likelihood of occurrence		Likelihood of detection		Severity of consequence	
Criteria	Rank	Criteria	Rank	Criteria	Rank
Very High	5	Very High	1	None	2
High	4	High	2	Minor	4
Moderate	3	Moderate	3	Low	6
Low	2	Low	4	Moderate	8
Very Low	1	Very Low	5	High	10

This risk potential is calculated as:

$$\text{RISK POTENTIAL (RP)} = (\text{A} + \text{B}) \times \text{C}$$

Based on the above stated criteria for assessing the risk, each probable event has been evaluated by addressing several questions on the probability of event occurrence in the view of the in-built design features detection response, operational practice and its likely consequence.

x. Impact on Air, water, land, flora & fauna nearby population

- The baseline monitoring data shows that the air quality is complying to CPCB standard, the proposed mitigation measure will keep the concentration of air pollutant below the Norm.
- There will be no impact on water body as it is far away from the project. As the project is not using ground water, there will be no impact on ground water level.

- The proposed expansion shall be carried out within plant premise, so there will be no impact on land use of buffer zone.
- The flora and fauna will not be affected by the proposed expansion.

xi Emergency Preparedness Plan

- The emergency preparedness team will be constituted within the organization consisting of the senior officials from managerial level from the different department like production, Health and Safety, Environmental, Material Handling, Security to handle the emergency.
- The team will meet once in three months to discuss the possible or probable causes / instance leading to any disaster that may occur in and around the plant premises.
- The team will assess the required resources to deal with the situation that may be identified as above.
- The team leader will lay down a detailed procedure or oral information to the each member to follow in case of any impending or possible or actual disaster.
- The team will conduct mock drill once in six months to understand the practical problems that may arise while implementing the emergency preparedness
- Action plan including the response time and take necessary steps to make the system effective.
- The team will make the necessary recommendation /suggestions to the Management for identifying/monitoring /dealing with any possible or probable disaster.
- The minutes of the meeting of the team shall be prepared including the probable cause of incident, response time and corrective & preventive actions required to be taken to avoid the reoccurrences of the same and kept as record.
- The team may draw an action plan and modify the same from time to time.
- The Emergency Preparedness Team will come into force in case of any disaster by establishing the control room at an appropriate place nearer to the affected area.
- The team shall record the actual performance/procedure followed/short comings while dealing with any actual disaster, which will be discussed at various levels to strengthen the plan and approach.

- The Plant Manager shall inspect all the places where disaster occurred, along with Emergency preparedness Team.
- He shall ensure that all the affected places are safe to resume the normal works, and the give permission to start the plant operation.

xii Public Hearing

It is a draft report.

xiii. CSR Plan

The total budget for CSR upto 2019-20 FY is Rs 170 lacs.

xiv Occupational Health Measures

- Personnel working near the noise generating machines in different plant locations will be provided with ear muffs/ plugs.
- Training to personnel will be imparted to generate awareness about effects of noise and importance of using personal protective equipment (PPEs).
- In case a person inhales CO, he will be taken outside the work area i.e. in fresh air and kept calm. The employee shall taken to the hospital for treatment.
- Workers shall not exposed above the prescribed thresholds limit, if they are working shall have shift wise duty or break shall be given. They must wear all PPE's.
- Routinely auditory examination shall be carried out among the employee working in the high noise area.
- Workers exposed to mechanical accident-prone areas will be given PPE.
- Data sheet of hazardous chemical shall be displayed in the area where it has been kept.
- Fire hydrants will be located at all convenient and strategic points along the major plant lines. Fire extinguishing equipment will be sourced from approved local suppliers, sand buckets, water sprinklers and water hoses, checked for water availability on regular basis will be provided at all convenient points. Alaram which can detect fire, heat and smoke shall be installed.
- Trainings on health and safety will be given to the workers regularly.

xv Post Project Monitoring Plan

Sl. No	Particulars Monitoring		Frequency	Method of Sampling	Parameter
I	Air Pollution & Meteorology				
	A	Stack Monitoring			
1	Stacks		Continuous	Online CEMS	PM ₁₀ , PM _{2.5} , SO ₂ , NO _x
	B	Air Quality Monitoring			
1	Locations in and around the plant		Continuous	24 hr continuously	PM ₁₀ , PM _{2.5} , SO ₂ , NO _x
2	Work zone monitoring		Twice in a month	High volume sampler	PM ₁₀ , PM _{2.5} , SO ₂ , NO _x
	C	Fugitive Emissions			
1	Raw material handling, feed area, and other areas specified by SPCB		Twice in a month	8-hour basis with High Volume Sampler	PM ₁₀ , PM _{2.5}
II	Water and Wastewater Quality				
	Water Quality				
1	Ground water		Once in a season	Grab	(Class C) and IS: 10500, 1986
2	Surface water		Once in a season	Grab	Parameters specified in IS: 2296
III	Ambient Noise Levels				
1	On the Plant Boundary at three locations		Once in three months for the various Units of the plants	24 hr continuous with one hr interval	Noise levels in dB(A)
2	Surrounding Area		Once in each season for ambient noise levels	24 hr continuous with one hr interval	Noise levels in dB(A)
IV	Soil Quality				
		In and around the plant Area	Once in Pre-Monsoon and Post Monsoon season	Grab	Physico-chemical parameters and heavy metals



AN ISO 9001 COMPANY

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