PROPOSAL FOR OBTAINING

TERMS OF REFERENCE

FOR

"EXPANSION OF MS INGOTS/ BILLETS AND MS BAR ANGLE & SECTION"

{Category A (Due to presence of Nahargarh Wildlife Sanctuary at a distance of 3.30 Km and Eco Sensitive zone at a distance of 2.0 Km towards) under Item '3(a)'-Metallurgical industries (Ferrous &Non-Ferrous) of Schedule of EIA Notification, 2006 and its subsequent amendments}

Location:-Plot No. 16, 36-C, 37, 39-A, 39-B, 41-B Jhotwara Industrial Area Jaipur, Rajasthan

Area: -33,139.51Sq. m.

Project Capacity

S. No.	Product	Existing	Proposed	Total
1	**M.S. Ingots/ Billets**	29,700 TPA	30,300 TPA	60,000 TPA
	Induction Furnace (Capacity and Numbers)	9 TPH x 1	15 TPH x 1	24 TPH (9 TPH and 15 TPH x 2)
2	**M.S Bar Angle & Section**	90,000 TPA	70,000 TPA	1,60,000 TPA
	Reheating Furnace (Capacity and Numbers)	20 TPH x 1 13 TPH x 1	Upgrade existing (20 TPH) Reheating furnace - 25 TPH Upgrade existing (13 TPH) Reheating furnace - 20 TPH	45 TPH (25 TPH and 20 TPH x 2)

Baseline Data Generation : March'2021 to May'2021(Pre-Monsoon)

Project Cost : Rs. 29.7 Crores (Existing –24.7 Crores, Proposed-5 Crore)

PROMOTER

Shree Krishna Rolling Mills(Jaipur) Limited

37, Industrial Area, Jhotwara, Jaipur (Rajasthan)

Project In-charge:- Mr. Shri Niwas Gupta

(Director)

E-mail:-info@skrml.com

ENVIRONMENTAL CONSULTANT

Gaurang Environmental Solutions Pvt. Ltd.

#102, SNG Shree Ratna Apartment, Peetal Factory,

Jhotwara Road, Bani Park, Jaipur-302016

E-mail: gaurangenviro@gmail.com

NABET Accreditation: NABET/EIA/2023/RA 0192 dated 01.02.2021 valid up to 19.01.2023.

August'2021

INDEMNIFICATION

Utmost care has been taken in preparation of this Report vis a vis proposed Expansion of MS Ingots/Billets from 29,700 TPA to 60,000 TPA and MS Bar Angle & Section from 90,000 TPA to 1,60,000 TPA at Jhotwara Industrial Area Jaipur, Rajasthan promoted by : Shree Krishna Rolling Mills (Jaipur) Limited. The data incorporated in the report is generated through information received from clients in form of their project report received through e-mail, secondary information, besides stakeholder's interaction and inputs. Due care has been taken to represent facts and figures and sources acknowledged. The purpose of this document is to facilitate environmental appraisal of the proposal and as such the exercise has been scientifically carried out. The Consultant stand indemnified against any consequences arising out of any inadvertent omissions.

REVISION HISTORY

Report No.	**GESPL_366/2021 /ToR/81**
Type of report	Terms of Reference
Revision No.	01
Issue to	Shree Krishna Rolling Mills (Jaipur) Limited
Issue Date	05.08.2021

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DETAILS OF STUDIES CONDUCTED FOR THE PROJECT

DETAILS OF STUDIES CONDUCTED FOR THE PROJECT

Name of the Project:- Expansion of MS Ingots/ Billets from 29,700 TPA to 60,000 TPA and MS Bar Angle & Section from 90,000 TPA to 1,60,000 TPA situated at Jaipur, Rajasthan

Location:-Plot No. 16, 36-C, 37, 39-A, 39-B, 41-B Jhotwara Industrial Area Jaipur, Rajasthan

Nature of consultancy	Name and address of the Consultant/ Expert	Approvals, if any from (NABL/ DGMS/ IBM/ NRBPT/ MOEF/ CPCB/ Others etc)*, give reference
EIA/ EMP Organization	Gaurang Environmental Solutions Pvt. Ltd. #102 SNG Shri Ratna Apartment, Peetal Factory, Jhotwara Road, Jaipur-302016 E-mail:- gaurangenviro@gmail.com	NABET/ EIA/ 2023/ RA 0192 dated 01.02.2021 valid up to 19.01.2023.
EIA Coordinator	Sanagapati C. Babu	
FAE-LU	Vinod Kumar Verma	
FAE-AP	Sanjay Palnitkar Nidhi Bhardwaj	
FAE-AQ	Mallikarjuna Guttula Neha Bhargava	
FAE-WP	Sanjay Palnitkar PoojaYadav	
FAE-SC	Ratnakumar V Mudliar	
FAE-EB	Dr. YatiKachhawa Ginni Barotia	
FAE-NV	Sanagapati C. Babu Mallikarjuna Guttula	
FAE-SE	Gajendra Singh Rathore	
FAE-HG	Mukesh Suroliya Vidya Bhushan Trivedi	
FAE-GEO	Mukesh Suroliya Vidya Bhushan Trivedi	

	FAE-RH	Sanjay Palnitkar Ginni Barotia	
	FAE-SHW	Sanjay Palnitkar Nidhi Bhardwaj (BMW & HW)	
Environmental Monitoring & analysis		Nakshatra Enviro Services Plot No-46, Solitaire Industrial Park, Bagru (Ext.) Dahmi Kalan, Bagru, Jaipur, Rajasthan , India	TC-7334 valid up to 08.12.2021
Hydro geological study		Vidya Bhushan Trivedi Gaurang Environmental Solutions Pvt. Ltd. #102 SNG Shri Ratna Apartment, Peetal Factory, Jhotwara Road, Jaipur-302016 E-mail:- gaurangenviro@gmail.com	
Soil Investigation		--	
Mining Plan		Not Applicable	
Rainwater Harvesting		Vidya Bhushan Trivedi Gaurang Environmental Solutions Pvt. Ltd. #102 SNG Shri Ratna Apartment, Peetal Factory, Jhotwara Road, Jaipur-302016 E-mail:- gaurangenviro@gmail.com	
Risk Assessment		Sanjay Palnitkar Ginni Barotia Gaurang Environmental Solutions Pvt. Ltd. #102 SNG Shri Ratna Apartment, Peetal Factory, Jhotwara Road, Jaipur-302016 E-mail:- gaurangenviro@gmail.com	
Architectural Plan		Not Applicable	
Ground Vibration Study		Not Applicable	
Subsidence Study		Not Applicable	
Services (STP/ETP		Not Applicable	

design) etc.		
Others, such as project consultants etc.	Not Applicable	

* Only Govt. /Statutory Approvals to be mentioned. Put NA where not applicable.

** Team Member

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SECTION-I

SECTION-I

EXECUTIVE SUMMARY

1.1 EXECUTIVE SUMMARY

Shree Krishna Rolling Mills (Jaipur) Limited is in operational since 1966 and situated at Plot No. 16, 36-C, 37, 39-A, 39-B, 41-B Jhotwara Industrial Area, Jaipur, Rajasthan, which involves production of MS Ingots/Billets to the tune of 29,700 TPA and MS Bar Angle & Section to the tune of 90,000 TPA. The production capacity of MS Ingots/Billets manufacturing in existing unit was less than 30,000 TPA. Therefore, No prior Environmental Clearance was required for existing unit. Now company enhances the production of MS Ingots/Billets and MS Bar Angle & Section. The details of production are as under:-

Table 1.1: Details of Production

S. No.	Name of Products	Production Capacity(TPA)		
		Existing	**Proposed**	**Total**
1	**M.S. Ingots/Billets**	29,700	30,300	60,000
	Induction Furnace (Capacity and Numbers)	9 TPH x 1	15 TPH x 1	24 TPH (9 TPH and 15 TPH x 2)
	Number of Hour, Number of working days	Three Shift (20-22 Hour)		
2	**M.S Bar Angle & Section**	90,000	70,000	1,60,000
	Reheating Furnace (Capacity and Numbers)	20 TPH x 1 13 TPH x 1	Upgrade existing (20 TPH) Reheating furnace - 25 TPH Upgrade existing (13 TPH) Reheating furnace - 20 TPH	45 TPH (25 TPH and 20 TPH x 2)
	Number of Hour, Number of working days	Two Shift (14-15 Hour)		
	No of working Days Per Year	331 days		

The total plot area of existing unit is 33,139.51Sq.m. Proposed expansion is coming up within the same premises. Hence, no additional land is required for the proposed expansion. The total cost of the project after expansion will be Rs. 29.7Crores (Existing – 24.7 Crores, Proposed-5 Crore).

Table 1.2: Chronology of Consent to Establish and Consent to Operate

S. No.	Particular	Production Capacity	Letter No And Date	Validity
Consent To Establish-MS Ingots/Billets				
1.	Consent to Establish under Water Act for M.S Ingots/Billets for 60-70 MT/day has been applied on dated 27.01.2005.			
2.	MS Ingots/Billets	9,000 TPA	F(CPM)/JAIPUR(Jaipur(VKIA))/32(1) /2018-2019/2764-2766 dated 27.07.2018	08/12/2017 to 30/11/2022
3.	MS Ingots/Billets	2,700 TPA	F(HDF)/JAIPUR(Jaipur)/4(1)/2020-2021/594-596 dated 22/05/2020	30/10/2018 to 30/09/2023
Consent To Operate-MS Ingots/Billets				
1.	MS Ingots	18,000.00 MT PER YEAR	RPCB/ROJPR(S)/JHO/135/335 dated 30.04.2005	23.04.2005 to 22.04.2009
2.	MS Ingots	18,000.00 MT PER YEAR	RPCB/ROJPR(S)/JHO/135/1832 dated 28.08.2009	22.07.2009 to 30.04.2011
3.	MS Ingots	18,000.00 MT PER ANNUM	F(CPM)/Jaipur(Jaipur)/5(1)/2012-2013/5023-5025 dated 17.09.2012	01/05/2012 to 30/04/2015
4.	MS Ingots	18,000.00 MT PER ANNUM	F(CPM)/Jaipur(Jaipur)/5(1)/2012-2013/3777-3780 dated 26.11.2015	01/05/2015 to 30/04/2018
5.	M.S. INGOTS/BILLETS	27,000.00 TPA	F(CPM)/JAIPUR(Jaipur(VKIA))/32(1) /2018-2019/2767-2769 dated 27.07.2018	01/05/2018 to 30/04/2023
Consent To Establish - TMT Bars (MS Bar Angle and Section)				
Consent to Establish under Air and Water for Expansion of M.S Bar Angle & Section for 73,200.00 MT PER YEAR has been applied on dated 30.08.2018.				

Consent To Operate - TMT Bars (MS Bar Angle and Section)				
1.	M.S. Bars, Angles, Section etc	16,800.00 MT PER YEAR	RPCB/ROJPR/S/JHO/40/2803 dated 24.01.2006	01/01/2006 to 31/12/2010
2.	M.S BAR ANGLE & SECTION	16,800.00 MT PER YEAR	F(Tech)/Jaipur(Jaipur)/369(1)/2010-2011/1998-1999/1137 dated 16.12.2010	01/01/2011 to 31/12/2013
3.	M.S BAR ANGLE & SECTION	16,800.00 MT PER YEAR	F(Tech)/Jaipur(Jaipur)/369(1)/2010-2011/2033-2034/2630 dated 03.01.2014	01/01/2014 to 31/12/2018
Consent to Establish- DG sets (63 kVA-2 nos)				
1.	DG sets	63 kVA-2 nos	F(Tech)/Jaipur(Jaipur)/369(1)/2010-2011/1109-1110 dated 18.07.2018	21/07/2017 to 30/06/2022 or date of Commencement of production / commissioning of the project or activities
The Chronology of Consent to Establish and Consent to Operate are enclosed as **Annexure-I.**				

As per NGT order of I.A. No. 04/2020 in O.A. No. 55/2019(WZ) dated 16/01/2020 on the regulation of project requires environment clearance. Copy of NGT Order is enclosed as **Annexure-II.**

The project activity is listed at category-'B' under item 3(a)-Metallurgical industries (ferrous& non-ferrous)in column 5 point (ii) In case of secondary metallurgical processing industrial units, those projects involving operation of furnaces only such as induction and electrical arc furnace, submerged arc furnace, and cupola with capacity more than 30,000 tonnes per annum (TPA) would require environmental clearance as per the EIA Notification dated 14th September' 2006 and its subsequent amendments. Due to presence of Nahargarh Wildlife Sanctuary at a distance of 3.30 km towards NE and Eco Sensitive zone (Nahargarh Wildlife sanctuary) at a distance of 2.0 km towards ESE the project will be categorized as A and considered at MoEF&CC, New Delhi. The same has been Authenticated from the Office of Deputy Conservator of Forest (Wildlife), Chidiyaghar, Jaipur vide letter no क्रमांकएफ () सर्वे/ज़ू/2020-21/3118 dated 06.05.2021. Enclosed as **Annexure-III.**

NBWL application is not applicable as unit is 1 km away from the boundary of Eco sensitivity Zone of Wild Life Sanctuary as per Gazette Notification No. REGD. NO. D. L.-33004/99 dated 8/03/2019. Copy of Notification is enclosed as **Annexure-IV**.

The project details are summarized as under:-

Table 1.3:-Project Details

<table>
<tr><th>S. No.</th><th>Description</th><th>Details</th></tr>
<tr><td>1</td><td>Name of the Project</td><td>Shree Krishna Rolling Mills (Jaipur)Limited.</td></tr>
<tr><td>2</td><td>Address/ Location/ land details (Khasra no.)</td><td>Plot No. 16, 36-C, 37, 39-A, 39-B, 41-B Jhotwara Industrial Area Jaipur, Rajasthan</td></tr>
<tr><td>3</td><td>Total Plot area</td><td><table><tr><th colspan="3">Area (Sq. m)</th></tr><tr><th>Existing</th><th>Proposed</th><th>Total</th></tr><tr><td>33,139.51</td><td>--</td><td>33,139.51</td></tr></table></td></tr>
<tr><td>4</td><td>Production Capacity</td><td><table><tr><th rowspan="2">Name of Products</th><th colspan="3">Production Capacity(TPA)</th></tr><tr><th>Existing</th><th>Proposed</th><th>Total</th></tr><tr><td>M.S. Ingots/Billets</td><td>29,700</td><td>30,300</td><td>60,000</td></tr><tr><td>MS Bar Angle and Section</td><td>90,000</td><td>70,000</td><td>1,60,000</td></tr></table></td></tr>
<tr><td>5</td><td>Water Requirement and Source</td><td><table><tr><th>S. No.</th><th>Water Cosnumption</th><th>Existing (KLD)</th><th>Proposed (KLD)</th><th>Total (KLD)</th></tr><tr><td>1.</td><td>Domestic</td><td>3.0</td><td>6.0</td><td>9.0</td></tr><tr><td>2.</td><td>Gardening</td><td>2.0</td><td>4.0 - recycled water from STP</td><td>6.0 – recycled water from STP</td></tr><tr><td>3.</td><td>Industrial Process (Cooling and quenching purposes)</td><td>300.0</td><td>350.0</td><td>650.0</td></tr><tr><td colspan="2">Total</td><td>305.0</td><td>356.0</td><td>659</td></tr><tr><td colspan="2">Fresh Water demand</td><td>9.0</td><td>22.0</td><td>29.0</td></tr><tr><td colspan="5">*In existing unit 2 KLD fresh water demand is required for Gardneing purposes. After expansion STP tretaed water will be used for gardening purposes.</td></tr><tr><td colspan="2">Recycled water</td><td>296.0</td><td>334.0</td><td>630.0</td></tr><tr><td colspan="5">Source: Ground water supply (Borewell –4 no.-Existing)</td></tr></table></td></tr>
<tr><td>6</td><td>Power Requirement and Source</td><td><table><tr><td>Power demand -</td><td>Existing
4900 kVA</td><td>Proposed
900 kVA</td><td>Total
5,800 kVA</td></tr><tr><td>Source</td><td colspan="3">Jaipur Vidyut Vitran Nigam Limited (JVVNL)</td></tr></table></td></tr>
<tr><td>7</td><td>Back Up Source and</td><td><table><tr><td>Back Up</td><td>Existing
Number –</td><td>Proposed
--</td><td>Total
Number – 4</td></tr></table></td></tr>
</table>

	Fuel	**Source**	4 nos. with cumulative capacity 450 kVA 125 kVA – 1 no 62.5 kVA – 2 nos. 200 kVA- 1 no		nos. with cumulative capacity 450 kVA 125 kVA – 1 no 62.5 kVA – 2 nos. 200 kVA- 1 no
		Fuel and Consumption	HSD – 150 Litre/hr	--	HSD – 150 Litre/hr
8	Induction Furnace	**Existing**	**Proposed**	**Total**	
		9 TPH x 1	15 TPH x 1	24 TPH (9 TPH and 15 TPH x 2)	
		Existing - 2 Nos (20 TPH and 13 TPH) Proposed –up gradation of existing Re-heating furnace from 20 TPH to 25 TPH and 13 TPH to 20 TPH Total after expansion - 45 TPH (25 & 20 TPH)			
	Re-Heating Furnace	**Existing**	**Proposed**	**Total**	
		20 TPH x 1 13 TPH x 1	Upgrade existing (20 TPH) Reheating furnace - 25 TPH Upgrade existing (13 TPH) Reheating furnace - 20 TPH	45 TPH (25 TPH and 20 TPH x 2)	
	Fuel Requirement (Coal Consumption for Re-	**Fuel – Coal (MT/day)**	**Existing**	**Proposed**	**Total**
			35	20	55
		Source	Domestic Market		

	Heating Furnace)	**Storage for 7 days**	245	140	385	
9	Employment Generation	**Existing (Nos.)**	**Proposed (Nos.)**	**Total (Nos.)**		
		Construction phase- NA Operation Phase- 70 nos.	Construction phase- 50 nos. Operation Phase- 130 nos.	Construction phase- 50 nos. Operation Phase-200 nos.		

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SECTION-II

SECTION-II

INTRODUCTION TO THE PROJECT/BACKGROUND INFORMATION

2.1 IDENTIFICATION OF PROJECT AND PROJECT PROPONENT

2.1.1 IDENTIFICATION OF PROJECT

Shree Krishna Rolling Mills (Jaipur) Limited is situated at Plot No. 16, 36-C, 37, 39-A, 39-B, 41-B Jhotwara Industrial Area, Jaipur, Rajasthan involves production of MS Ingots/Billets to the tune of 29,700 TPA and MS Bar Angle & Section to the tune of 90,000 TPA. Now unit undergoes expansion of MS Ingots/Billets from 29,700 TPA to 60,000 TPA and MS Bar Angle & Section from 90,000 TPA to 1,60,000 TPA.

2.1.2 PROJECT PROPONENT

Shree Krishna Rolling Mills (Jaipur) Limited (SKRM) is one of the leading Rolling Mill's in Rajasthan situated in western part of India. Established in the year 1966 as a partnership concern SKRM, today, is a Corporate Body i.e. A Limited Company engaged in the same business activity but, now in a far different manner. SKRM specialize in manufacture of Hot Rolled Special Profiles, TMT Bars, Angles, Flats and Rounds. SKRM caters to light and heavy engineering industries in automobiles, fabrication, construction, and etc.

SKRM is not the leader but we are working towards technological development through dedicated, determined and dynamic team of people to meet the most stringent requirements of customers and become leaders of tomorrow. As a result we have been providing the highest-quality steel products to some of the world's most recognized manufacturers. We make highly engineered steel products to save our customers time and money. SKRM are committed to take an active role towards society by providing clean safe and reliable products.

Name of the Promoter	Shree Krishna Rolling Mills(Jaipur) Limited
Name and Address of the Applicant	Mr. Shri Niwas Gupta (Director) 37, Industrial Area, Jhotwara, Jaipur (Rajasthan)
CIN No.	U27105RJ1996PLC011828

Status of Project	Brownfield Project (Freshly applied for Environmental Clearance)
E-mail Id	info@skrml.com
Contact Number	+91-8114413240

2.2 BRIEF DESCRIPTION OF NATURE OF THE PROJECT

It is an expansion of MS Ingots/Billets from 29,700 TPA to 60,000 TPA and MS Bar Angle & Section from 90,000 TPA to 1,60,000 TPA.

2.3 NEED FOR THE PROJECT AND ITS IMPORTANCE TO THE COUNTRY AND OR REGION

India is the world's third-largest producer of crude steel (up from eighth in 2003) and is expected to become the second-largest producer by 2016. The growth in the Indian steel sector has been driven by domestic availability of raw materials such as iron ore and cost-effective labor. Consequently, the steel sector has been a major contributor to India's manufacturing output.

The Indian steel industry is very modern with state-of-the-art steel mills. It has always strived for continuous modernization and up-gradation of older plants and higher energy efficiency levels. While plant closures and privatization are rare in India, the private sector is considered to be the engine of growth in the steel industry and technological changes and modernization are taking place in both the public and the private sector integrated steel plants in India.

The proposed expansion project will provide a potential & required growth opportunity for the company. We have identified the demand for the proposed products of "Metallurgical industries (Ferrous & non-ferrous)" and it can be developed in-house and produce commercially for domestic market as well as for International market. Its export and also increase the foreign revenue. India being a developing country having huge scope for being a lead exporter of Mild Steel & alloy Steel products, to the global market. The products are well established and acceptable in the international markets. Hence the proposed project will significantly help the country's economic by supplying the products against the very high demand replacing supply from imported materials. In addition to this, company has a plan for secure business by developing a business circle and the circle industries require significant quantity of these products. Hence, the company will

have highly feasible & viable operation & business potential. The industrial sector in the past few years has seen a drastic boom and also the keeping in mind the globalization trend. Keeping in view on all above points, company have determined market potential for the selected products & their demand and with valuable R&D efforts by fully integrated and testing laboratory with advanced instruments. Company is confident that it can develop the product in very economical route of production and supply at very competitive price and will help the buyer company. Company has also noticed that the products will be able to replace the demand of the imported & costly products which in turn will provide a growth potential opportunity to the company & buyers. Besides, there will be very good opportunity of employment generation directly and indirectly due to proposed expansion project. The demand of such products is tremendous in our country and there is a huge gap in the demand supply.

2.4 DEMAND AND SUPPLY GAP

Steel production of India accounted for 14.33 million tons in 1990-91, which gradually increased to 36.12 million tons in 2003-04. Rapid rise in production has resulted in India becoming the 3 rd largest producer of crude steel in 2015 and the country continues to be the largest producer of sponge iron or DRI in the world. As per the report of the Working Group on Steel for the 12th Five Year Plan, there exist many factors which carry the potential of raising the per capita steel consumption in the country. These include among others, an estimated infrastructure investment of nearly a trillion dollars, a projected growth of manufacturing from current 8% to 11-12%, increase in urban population to 600 million by 2030 from the current level of 400 million, emergence of the rural market for steel currently consuming around 10 kg per annum. At the time of its release, the National Steel Policy 2005 had envisaged steel production to reach 110 million tonnes (mt) by 2019-20.

2.5 IMPORTS VERSUS INDIGENOUS PRODUCTION

Based on the assessment of the current ongoing projects, both in Greenfield and brownfield, the Working Group on Steel for the 12th Five Year Plan has projected that domestic crude steel capacity in the county is likely to be 140 MT by 2016-17 and has the potential to reach 149 MT if all requirements are adequately met. The National Steel

Policy 2005 is currently being reviewed keeping in mind the rapid developments in the domestic steel industry (both on the supply and demand sides) as well as the stable growth of the Indian economy since the release of the Policy in 2005.India is expected to become the world's second largest producer of crude steel in the next 10 years, moving up from the third position, as its capacity is projected to increase to about 300 MT by 2025. Huge scope for growth is offered by India's comparatively low per capita steel consumption and the expected rise in consumption due to increased infrastructure construction and the thriving automobile and railways sectors.`

2.6 EXPORT POSSIBILITY

Product will be supplied in domestic market. Also, export is envisaged as per market demand.

2.7 DOMESTIC/EXPORT MARKET

The finished goods will be sold in domestic market and would be largely exported to the Regulated International Market as per demand all over the world.

2.8 EMPLOYMENT GENERATION (DIRECT AND INDIRECT) DUE TO THE PROJECT

The proposed expansion project will provide direct employment during construction & operational phase. Local workers will be hired from the nearby villages based on the requirement and its fulfillment criteria. The details are given below:-

Table 2.1: Employment Details

S. No.	Particulars	Existing	Proposed	Total
1	During Construction Phase	NA	50	50
2	During Operation Phase	70	130	200
Total		**70**	**180**	**250**

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SECTION-III

SECTION-III

PROJECT DESCRIPTION

3.1 TYPE OF PROJECT INCLUDING INTERLINKED AND INTERDEPENDENT PROJECTS, IF ANY

The proposed expansion project is MS Ingots/Billets and Rolling Mill Unit enhance the production capacity of MS Ingots/Billets from 29,700 TPA to 60,000 TPA and MS Bar Angle & Section from 90,000 TPA to 1,60,000 TPA situated at Plot No. 16, 36-C, 37, 39-A, 39-B, 41-B Jhotwara Industrial Area Jaipur, Rajasthan.

There is no interlinked project. The proposed expansion project is an individual project.

3.2 LOCATION (MAP SHOWING GENERAL LOCATION, SPECIFIC LOCATION AND PROJECT BOUNDARY & PROJECT SITE LAYOUT) WITH COORDINATES

The existing unit is situated at Plot No. 37,36-C,39-A,39-B, 41-B,16 Jhotwara Industrial Area,Jaipur, Rajasthan. The project site falls on Geological Survey of India Toposheet No. 45N/13. The latitude and longitude of the project site are given below:-

Table 3.1 : Geographical Coordinates of the Project Site

1.Point 1 Latitude : 26°57'22.07"N Longitude : 75°45'33.65"E	**2.Point 2** Latitude : 26°57'19.30"N Longitude : 75°45'34.84"E
3.Point 3 Latitude : 26°57'18.04"N Longitude : 75°45'31.36"E	**4.Point 4** Latitude : 26°57'14.91"N Longitude : 75°45'32.86"E
5.Point 5 Latitude : 26°57'13.87"N Longitude : 75°45'30.26"E	**6.Point 6** Latitude : 26°57'16.15"N Longitude : 75°45'29.20"E
7.Point 7 Latitude **:** 26°57'15.41"N Longitude : 75°45'27.13"E	**8.Point 8** Latitude : 26°57'14.60"N Longitude : 75°45'27.44"E
9.Point 9 Latitude **:** 26°57'13.59"N Longitude : 75°45'24.83"E	**10.Point 10** Latitude **:** 26°57'15.41"N Longitude : 75°45'23.86"E
11.Point 11 Latitude **:** 26°57'16.61"N Longitude : 75°45'27.79"E	**12.Point 12** Latitude **:** 26°57'19.27"N Longitude : 75°45'26.46"E

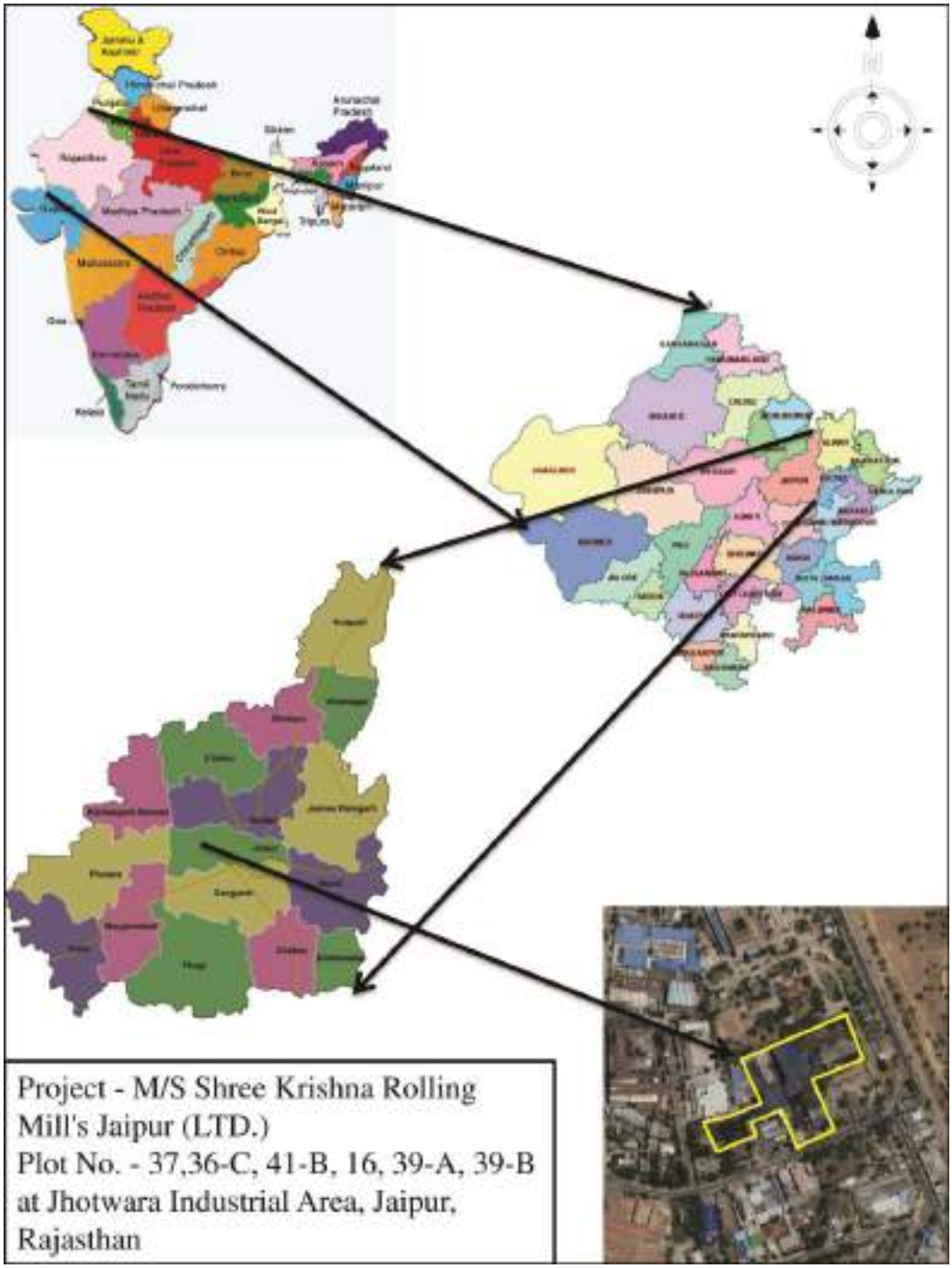


Figure-3.1: Location Map

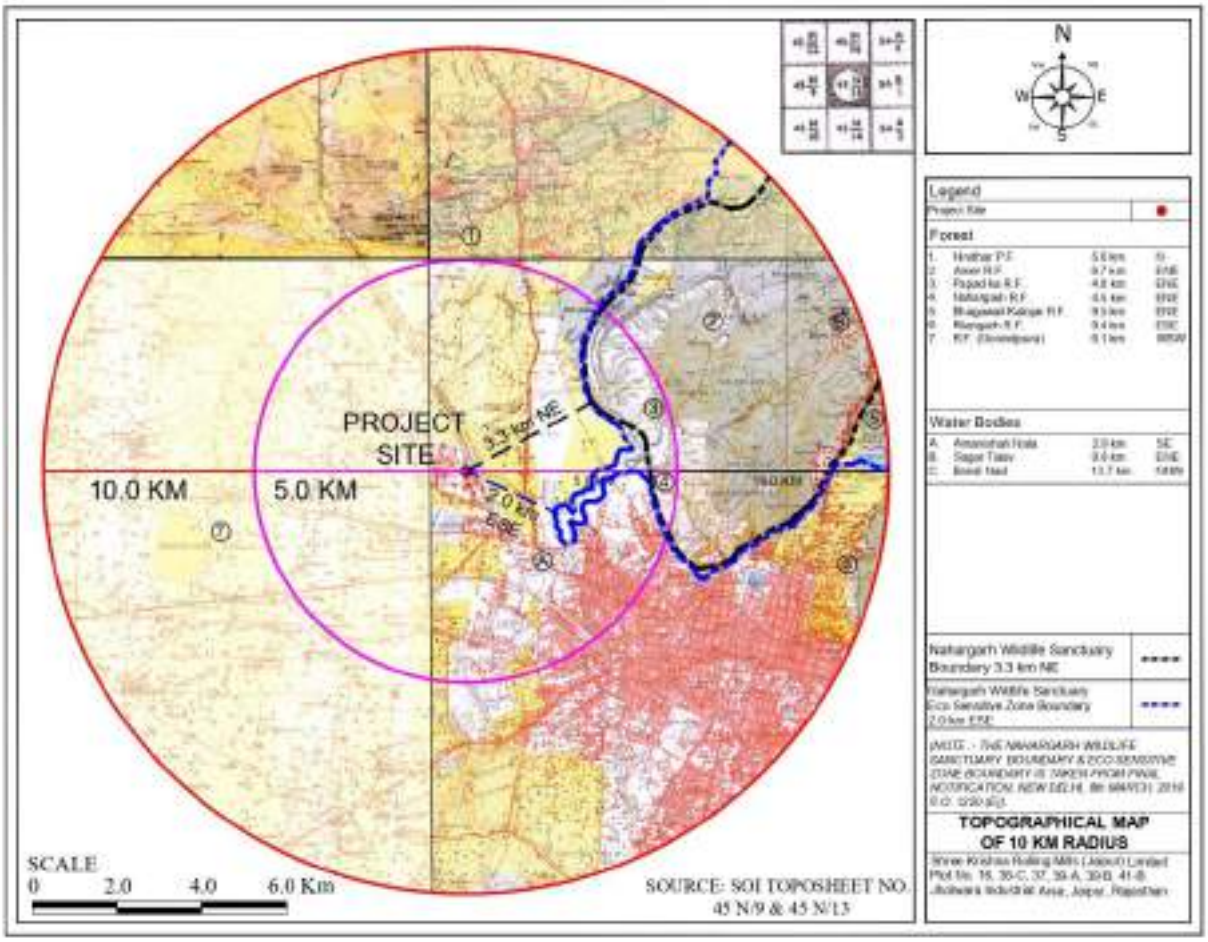


Figure 3.2: Topographical Map

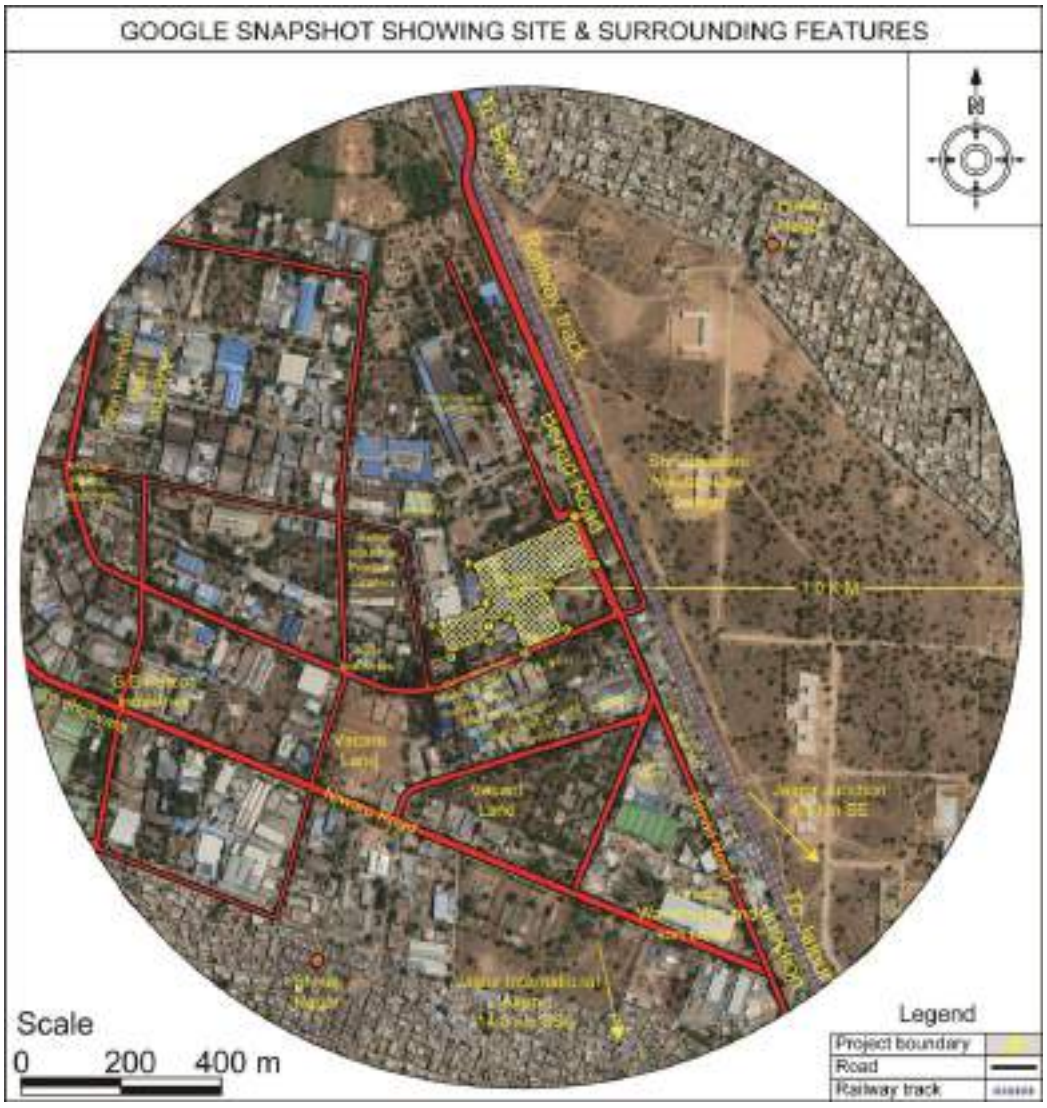


Figure3.3: Specific Location Map showing Plant boundary and Project Site Layout of 1.0 km Radius

Figure3.4: Photographs Showing Existing Plant

3.3 DETAILS OF ALTERNATE SITES CONSIDERED AND THE BASIS OF SELECTING THE PROPOSED SITE, PARTICULARLY THE ENVIRONMENTAL CONSIDERATIONS GONE INTO SHOULD BE HIGHLIGHTED

No alternative site has been examined, as the proposed expansion is coming up within the same premises.

The site is having required infrastructure facilities in form of water, electricity and Road available for the expansion activities. Land Chronology is as under:-

Table 3.2 : Chronology of Land Ownership

Plot Number	Name of the project	Area Sq.m	Date
Plot No. 37	Shree Krishna Steel Rolling Mill	4613.46	19.11.1988
Plot No 36 C	Shree Krishna Steel Rolling Corporation	1173.66	19.11.1988
Additional land	Shree Krishna Steel Rolling Corporation	1951.95	19.11.1988

Additional land	Shree Krishna Steel Rolling Corporation	1566.76	19.11.1988
Plot No. 41-B(A)	Shree Krishna Steel Rolling Corporation	3136	17.12.1990
Plot No. 39-A	Shree Krishna Rolling Mills (Jaipur) Ltd.	1130.0	29.12.1998
Plot No.16	Shree Krishna Rolling Mills (Jaipur) Ltd.	16,183.68	15.05.2004
Plot No. 39-B	Shree Krishna Rolling Mills (Jaipur) Ltd.	3384.0	02.08.2011
Total Area		**33,139.51**	

The chronology of the land documents is enclosed as **Annexure – V.**

Amalgamation letter has been submitted to Sr. Regional Manager, RIICO, VKi Area, Jaipur on dated 09.04.2021. Copy of the same is enclosed with land documents.

3.4 SIZE / MAGNITUDE OF OPERATION

The size and magnitude is as given below:-

Table 3.3: Size/Magnitude of Operation

S. No.	Name of Products	Production Capacity(TPA)		
		Existing	**Proposed**	**Total**
1	**M.S. Ingots/Billets**	29,700	30,300	60,000
	Induction Furnace (Capacity and Numbers)	9 TPH x 1	15 TPH x 1	24 TPH (9 TPH and 15 TPH x 2)
	Number of Hour, Number of working days	Three Shift (20-22 Hour)		
2	**M.S Bar Angle & Section**	90,000	70,000	1,60,000
	Reheating Furnace (Capacity and Numbers)	20 TPH x 1 13 TPH x 1	Upgrade existing (20 TPH) Reheating furnace - 25 TPH Upgrade existing (13 TPH) Reheating furnace - 20 TPH	45 TPH (25 TPH and 20 TPH x 2)
	Number of Hour, Number of working days	Two Shift (14-15 Hour)		
	No of working Days Per Year	331 days		

3.5 PROJECT DESCRIPTION WITH PROCESS DETAILS (A SCHEMATIC DIAGRAM/FLOW CHART SHOWING THE PROJECT LAYOUT, COMPONENTS OF THE PROJECT ETC SHOULD BE GIVEN)

The existing plant is involved in manufacturing of MS ingots/Billets by using induction furnace (9 TPH-1no.) and MS Bar Angle & Section from Re-heating furnace (20 TPH and 13 TPH-2 nos.).Now unit is undergoes expansionfrom 29,700 TPA to 60,000TPA for Ms billets and ingots and from 90,000TPA to 1,60,000TPA for MS Bar Angle & Section. Additional one induction furnace (15 TPH) and upgrade the existing Reheating furnace from 20 TPH to 25 TPH and 13 TPH to 20 TPH will be done after proposed expansion.

1. PRODUCT:MILD STEEL INGOTS/BILLETS MANUFACTURING PROCESS

INDUCTION FURNACE

The heart of the **coreless induction furnace** is the coil, which consists of a hollow section of heavy duty, high conductivity copper tubing which is wound into a helical coil. Coil shape is contained within a steel shell and magnetic shielding is used to prevent heating of the supporting shell. To protect it from overheating, the coil is water-cooled, the water bing recirculated and cooled in a cooling tower. The shell is supported on trunnions on which the furnace tils to facilitate pouring.The crucible is formed by ramming a granular refractory between the coil and a hollow internal former which is melted away with the first heat leaving a sintered lining.The power cubmicle converts the voltage and frequency of main supply, ot that required for electrical melting. Frequencies used in induction melting vary from 50 cycles per second (mains frequency) to 10,000 cycles per second (high frequency). The higher the operating frequency, the greater the maximum amount of power that can be applied to a furnace of given capacity and the lower the amount of turbulence induced.When the charge material is molten, the interaction of the magnetic field and the electrical currents flowing in the induction coil produce a stirring action within the molten metal. This stirring action forces the molten metal to rise upwards in the centre causing the characteristic meniscus on the surface of the metal. The degree of stirring action is influenced by the power and frequency applied as well as the size and shape of the coil and the density and viscosity of the molten metal.

The stirring action within the bath is important as it helps with mixing of alloys and melting of turnings as well as homogenising of temerature throughout the furnace. Excessive stirring can increase gas pick up, lining wear and oxidation of alloys.The coreless induction furnace has largely replaced the crucible furnace, especially for melting of high melting point alloys. The coreless induction furnace is commonly used to melt all grades of steels and irons as well as many non-ferrous alloys. The furnace is ideal for remelting and alloying because of the high degree of control over temperature and chemistry while the induction current provides good circulation of the melt.

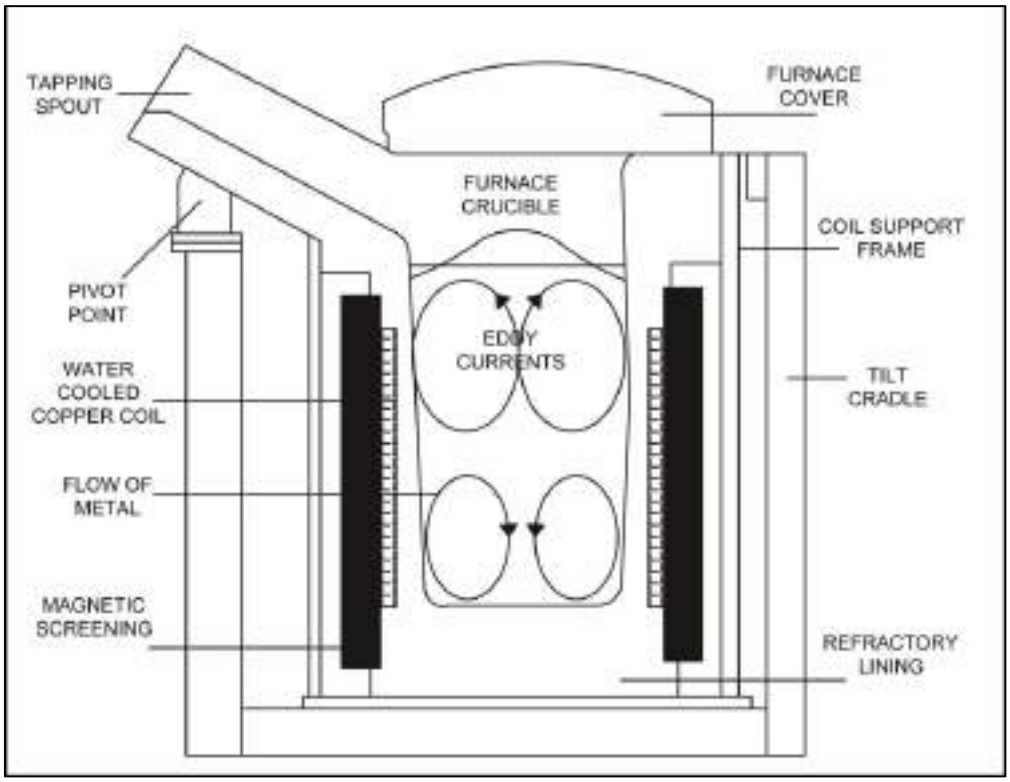


Figure 3.5: Coreless Induction Furnace

Mild Steel Ingots/Billets Manufacturing process

- Steel scrap and sponge iron is received by Trucks in charging bay. Scrap and sponge iron is stored as per grades. Sample is drawn from each lot which is analyzed in chemical lab for carbon, manganese, sulphur, phosphorus, silicon and other required elements.
- The scrap mix is prepared as per requirement and charged in to the Induction Furnaceby buckets and magnet. Manual charging is also done. In the Induction Furnace scrap is melted and continuous charging is done until the full capacity of

the furnace is reached, slag off is done and sample is taken to check the chemical analysis.

- On the basis of analysis further refining and additions of ferromanganese and ferrosilicon is done to achieve the required chemical composition after meeting and achieving required temperature the molten metal is tapped into ladle, which is preheated.
- This liquid metal in the ladle is then kept on the Continuous Casting Machine. The liquid metal is poured from the ladle to the Tundish through slide gate mechanism in the ladle.
- The Tundish regulates the flow of the metal to the copper mould tubes which is water cooled. This Billet which leaves the mould with a well formed shell is cooled by spraying water. The Billet reaches the withdrawal – cum – straightening unit through spray apron.
- The Billet is then cut to desired length by gas cutting and a slice of this billet is cut for chemical analysis. This is final analysis of the finish product. The Billet of this heat is marked as heat no. All the billets are stacked heat wise. Billets are loaded in the trucks by E.O.T Cranes and dispatched to rolling mill. These Billets are raw materials for rolling mills (The billet is also cut through automatic shear machine and transferred to rolling mill directly for hot rolling).

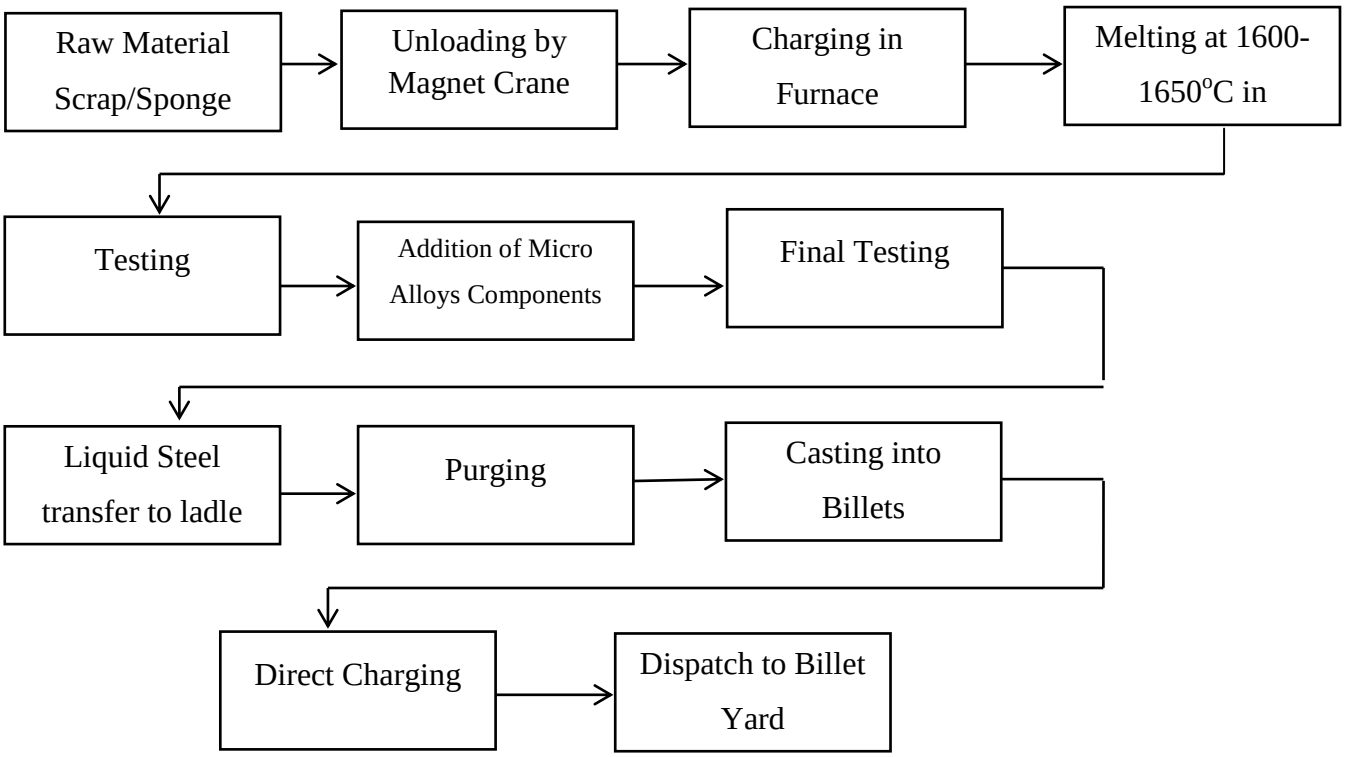


Figure 3.6: Prosess Flow Chart (Melting Shop)

PRODUCTION PROCESS OF STRUCTURAL SECTION:

RE HEATING FURNACE

Reheating furnaces are used in hot rolling mills to heat the steel stock (Billets, blooms or slabs) to the rolling temperatures of around 1200 deg C which is suitable for plastic deformation of steel and hence for rolling in the mill. The heating process in a reheating furnace is a continuous process where the steel stock is charged at the furnace entrance, heated in the furnace, and discharged at the furnace exit. Heat is transferred to the steel stock (figure 3.7) during its traverse through the furnace mainly by means of convection and radiation from the burner gases and the furnace walls.

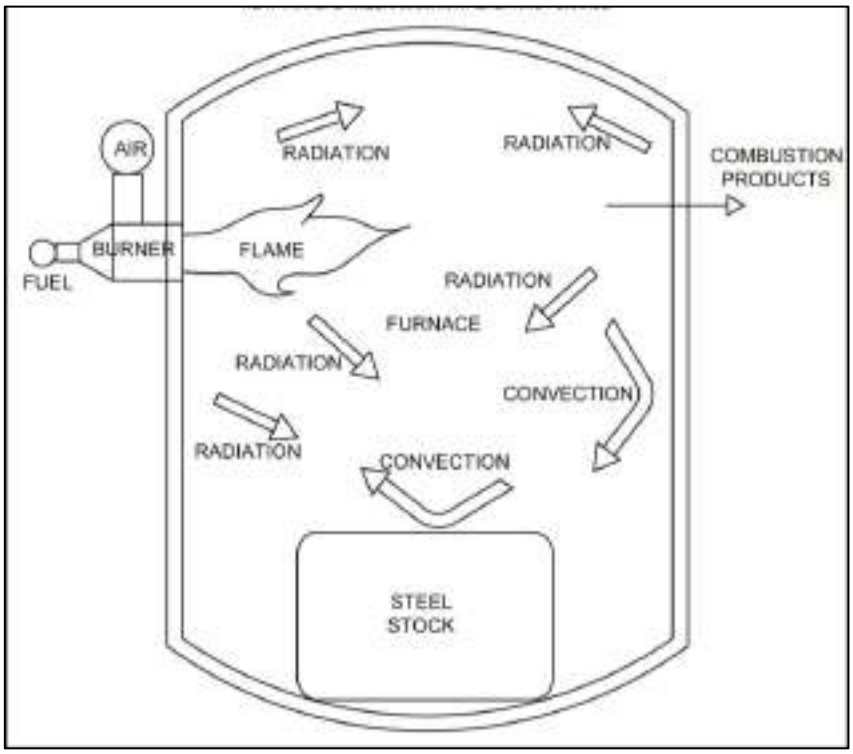


Figure 3.7: Heat Transfer Mechanism in Reheating Furnace

The charging temperature of the steel stock can range from ambient temperature to 800 deg C. The target exit temperature of the steel stock is governed by the requirement of the process of rolling which is dependent on the rolling speed, stock dimension and steel composition. Steel quality aspects put constraints on temperature gradient and surface temperature. Fuel used in these furnaces can be solid, liquid, or gaseous fuel. The schematic diagram of a pusher type reheating furnace is shown at Figure 3.8.

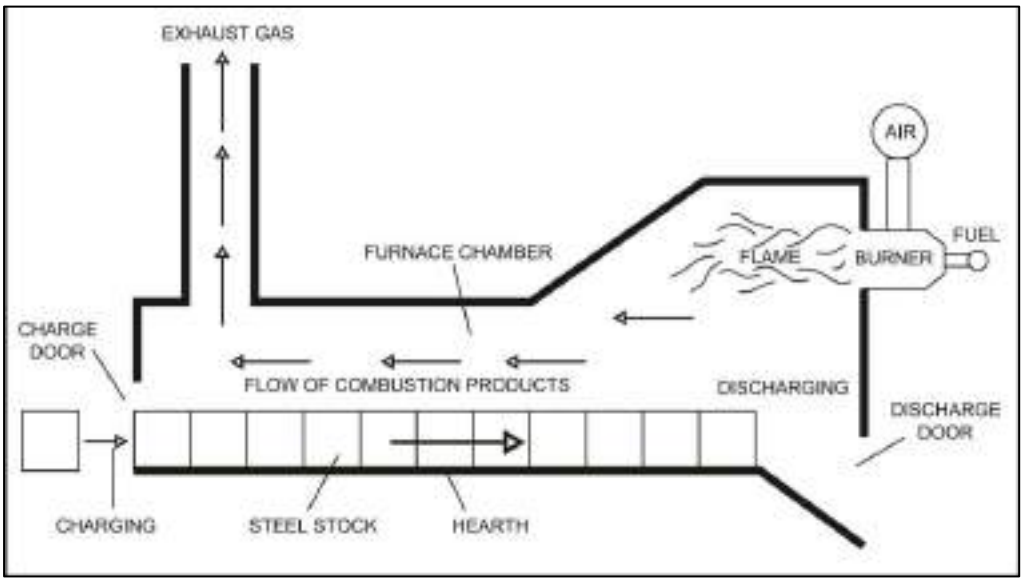


Figure 3.8: Schematic Diagram of Pusher Type Reheating Furnace

The size of reheating furnace is usually expressed as the capacity to supply hot steel stock to the rolling mill from the cold stock and is expressed in tons per hour. The energy efficiency of reheating furnace is usually defined as increase of steel stock heat content when heated from 10 deg C to 1200 deg C divided by the fuel energy (latent heat plus sensible heat) used for it. Typical longitudinal section of a reheating furnace is shown in Figure 3.9.

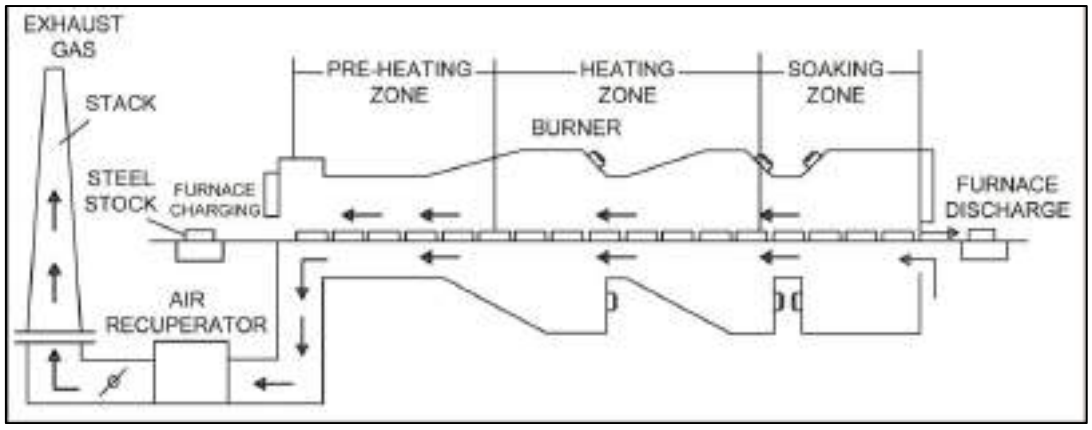


Figure 3.9: Typical Longitudinal Section of a Reheating Furnace

Many design features of the furnace affects the energy efficiency. These include:-

(i) Type of burners

(ii) Furnace dimensions

(iii) Number of furnace zones

(iv) Type of wall and roof insulation

(v) Skid design and

(vi) Preheating of fuel and combustion air in recuperators by the hot flue gases coming out from the furnace exit.

An efficient furnace is designed in such a way so that in a given time the steel stock as per furnace capacity is heated to a uniform temperature with the least possible fuel and man-hours. The parameters important for furnace design include:-

(i) The quantity of heat to be imparted to the charge

(ii) Generation of sufficient heat which is is available within the furnace to heat the steel stock as well as to overcome all steel losses

(iii) Transfer of generated heat to the surface of the steel stock to be heated

(iv) Equalization of temperature within the steel stock, and

(v) Loss of heat from the furnace to the minimum.

In the pusher type of furnace, cold steel stock is pushed forward with the help of pushers at the charging side. Earlier, these furnaces were designed for heating billets or smaller sections of blooms. The hearth of earlier furnaces was short in length and sloped downward longitudinally towards the discharge end in order to permit easy passage of steel stock through the furnace. Presently pusher furnaces are longer with hearths of around 25 m to 30 m in length. These furnaces are equipped with either top firing or top and bottom firing. These furnaces normally have three zones namely

(i) Preheating zone

(ii) Heating zone, and

(iii) Soaking zone. Multiple zone furnaces such as five zone slab reheating furnace have also been designed and operated.

Cold steel stock can be charged in such furnace either from the end or through a side door. In either case, the steel stock is moved forward by pushing the last piece charged with a pusher at the charging end. With each pushing of the cold steel stock against the continuous line of material, a heated piece is discharged at the discharge end either by gravity through an end door upon a roller table feeding the rolling mill, or pushed through a side door to the mill roller table by suitable manual or mechanical means, or withdrawn through the end door by a mechanical extractor.

Re heating furnace process includes unloading and shifting of thebillets/ingots for the inspections. After inspection cutting and charging to the reheating furnace is done. In the furnace billets/ingots are heated to1200°C. Molten material is discharged to the six stands cross country type rolling mill of 325mm size for Angle, Shape, and section an dimensionalinspection than cooling below 100°C is done. Stacksare made for cooling. After cooling the cutting to the desired length by shearing machine is done. After cutting sections are shifted to straightening machine for straightening. After the test and inspection sections are ready to dispatch.

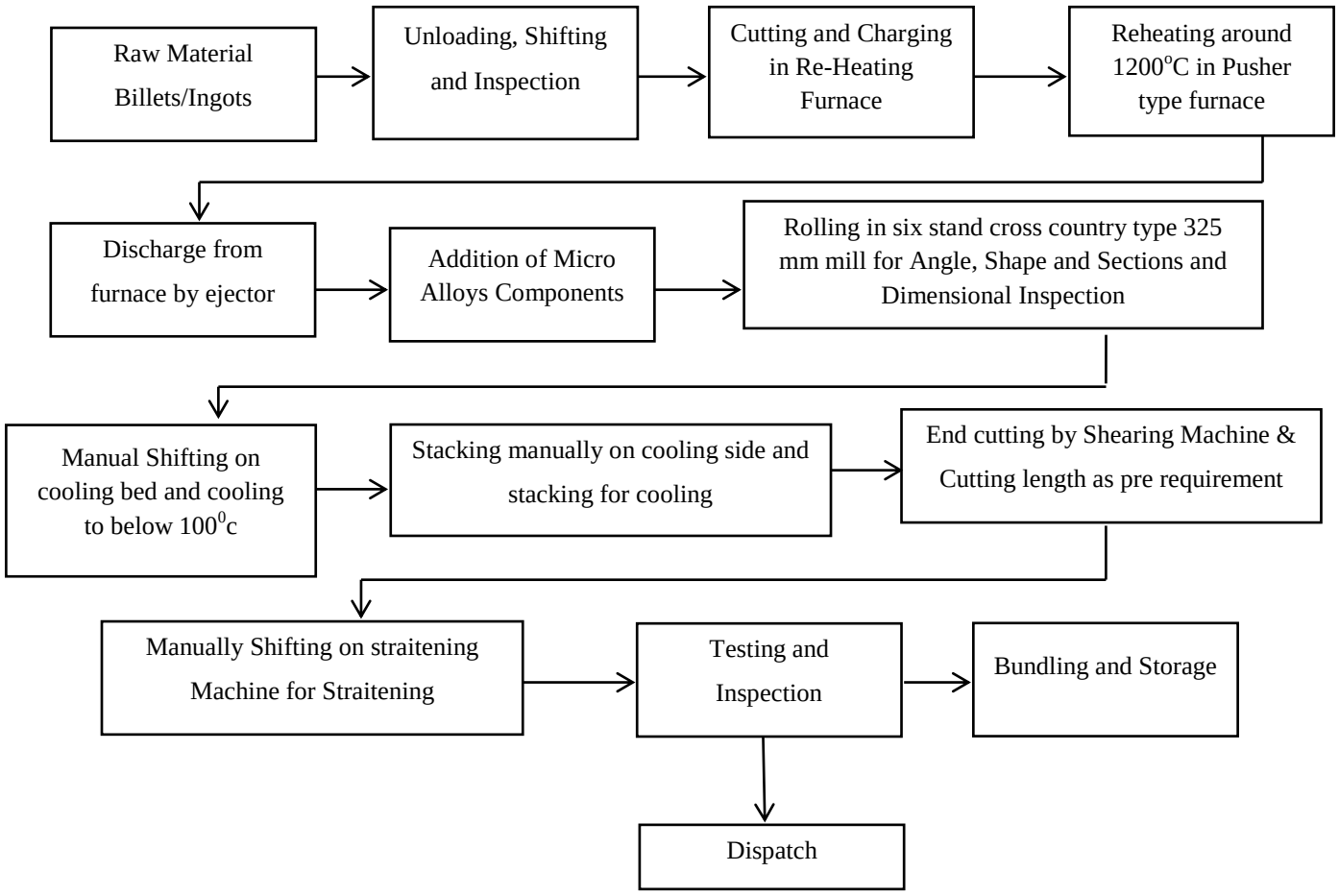


Figure 3.10: Prosess Flow Chart (Structural Section)

2. PRODUCT: TMT Bars, Round & Square Bars Manufacturing process:

1. Heating of Billets/Ingots into Billets/Ingots Heating Chamber at the 1100^{0}C to 1200 ^{0}C temperature.

2. The heated billets / ingots are ejected cut of the heating chamber in to a roll table by

the side of the heating chamber one by one and are pushed on to the main roller table by a turning device.

3. In case of hot charging, hot billet produced is directly transferred through conveyer to rolling mill.

4. The discharged heated billets will be fed in to the first stand of roughing mills. The number of passes are given depend on the section to be produced. After this the rolled bar is fed in to successive stands to repeaters situated in lines.

5. The front end of the rolled bar is then cut to facilitate entry in to intermediate stand.

6. The rolling will be done in a continuous mill.

7. Snap shears are used between each group of stands for taking samples to control the mill looping and final section rolled.

8. The hot rolled bar (called the ribbed bar) is automatically cut into length of upto required length by shearing machine and transferred to a cooling bed.

9. After cooling of the ribbed bar, it is again cut by a separate shearing machine in to marketable lengths of generally 12 meter.

10. Finally the TMT Steel is bundled and dispatch.

11. For making TMT the hot rod is passed through a tube where water is counter flowing under very high pressure. From cooling platform the TMT bars are taken to shearing machine and cut individually to the required length and bundled for dispatch.

12. During the manufacturing or products, there is no any metal surface treatment which can generate polluted waste water and there is no any process gas emission during the manufacturing of products.

13. Water will be used for cooling purpose only and water requirement is only to compensate the evaporation loss in the cooling system.

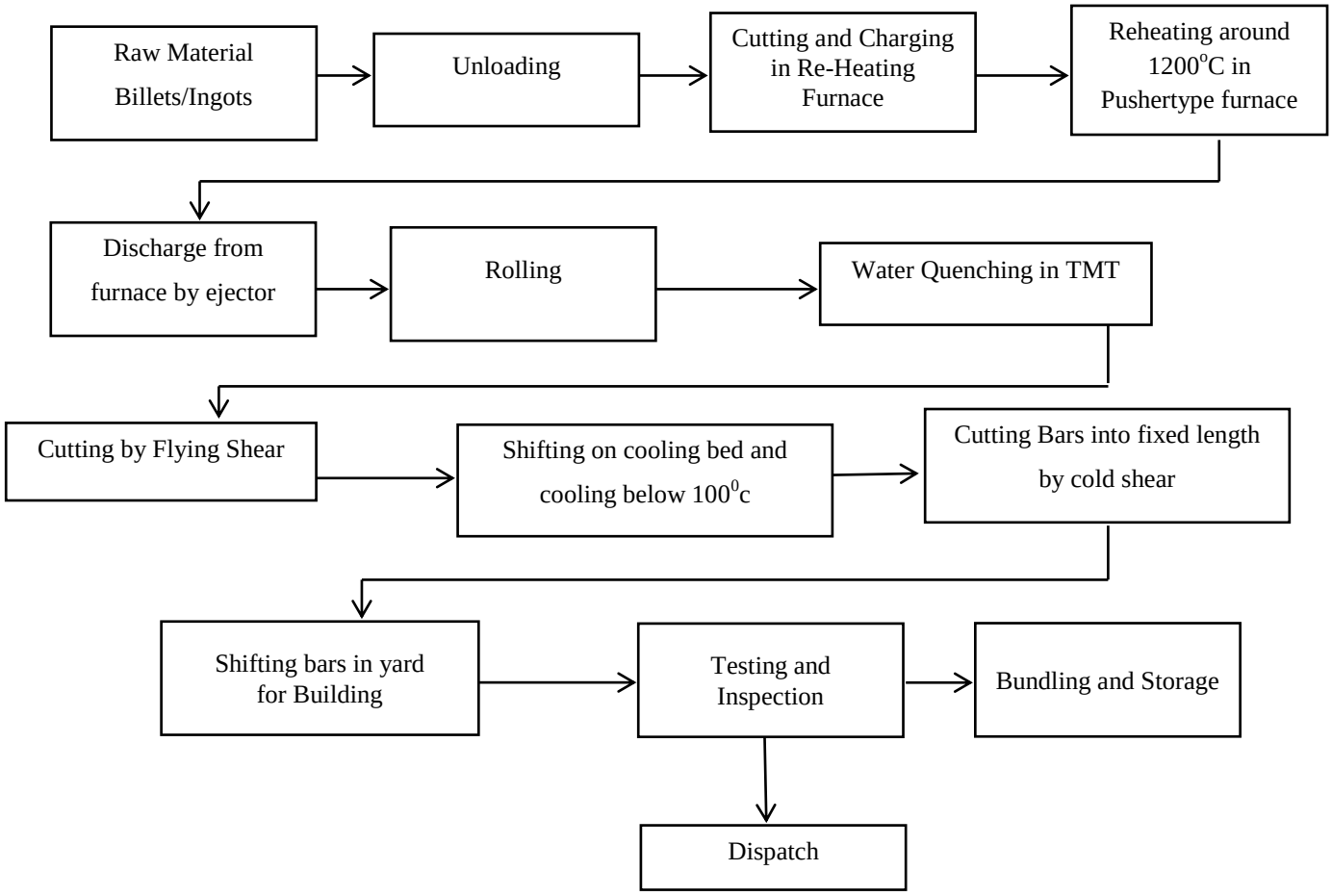


Figure3.11: Prosess Flow Chart (Bar Mill)

PLANT & MACHINERY

The Company will install additional one induction furnace (15 TPH) and Upgrade existing (20 TPH) Reheating furnace from 20 TPH to 25 TPH and 13 TPH to 20 TPH after proposed expansion. The details of existing and proposed machineries & equipment are presented below:-

Existing Machineries & Equipment (Casting)

One 9 TPH induction furnace and Two Re-heating furnace of capacity 20 TPH and 13 TPH has been installed.

Table 3.4: Existing Machineries & Equipment (Rolling Mill)

S. No.	Name of Machinery	Quantity
1.	Rolling Mill stand 3 Hi-type of 14" size centre Roll Fix type, fitted with fibre bearing	6
2.	Pinion Gear fitted with Roller Bearing 14" size with helical gears	1
3.	Reduction Gear Ratio 1 : 3.	1
4.	Fly wheel, fitted with shaft & bearings brackets etc. approx. weight 16MT	1
5.	Electric Motor 800H. P. Kirloskar make 720 R. P. M 1 (One)	1
6.	Power press 150 Ton capacity (Ratna Machine & Tools) Jaipur	1
A	**Furnace**	
7.	Re-Heating Furnace (20TPH and 13 TPH)	2
B	**Shearing Machines**	
8.	Cold shearing for end cutting fitted with motors	2
9.	Hot shearing or Rolling Mill fitted with motor as Snap shearing	4
C	**Workshop**	
10.	Lathe Machines 16' size	2
11.	Lathe Machines 14' size	2
12.	Lathe Machines 12' size	2
13.	Lathe Machines 10' size	2
14.	Lathe Machines 8' size	2
15.	Shape Machine 30' Strock	2
16.	Drill machine $1^{1/2"}$ capacity	2
17.	Welding Transformers	6
D	**Electricals**	
18.	Transformer 11000 to 440Volt capacity 1800 kVA	1
19.	Transformer 11000 to 440Volt capacity 1000 kVA	1

20.	Transformer 11000 to 440Volt capacity 800 kVA	1
21.	H. T. O. C. B. - 800 kVA	1
22.	L. T. O. C. B. - 1200 Amp	2
23.	Electric Motor 1000 H. P. Kirloskar make 720 R. P.M	1
24.	Electric Motor 1250 H. P. Kirloskar make	1
25.	Misc. Motors	55
E	**Equipment of Structural Line**	
26.	V- Belts - E- Section	16
27.	Pulley Set Suitable to transmit 1000 H. P. from motor to Mill	2
28.	Twisting Machine (capacity 8mm to 45mm)	7
29.	Overhead Movable Electric Hoist in Rolling Mill shed capacity 7.0 MT	1
30.	Billet shearing machine cutting capacity upto 160mm square	1
31.	Mono - Block Pump for water circulation in plant	6
32.	One shearing machine capacity upto 60mm square	1
33.	Cooling Bed : 150' x 22'	1
34.	Cooling Bed : 90' x 22' size 16Metre x 7 Meter	1
35.	Oxy-acetylene torch, suitable for cutting of heavy blooms, slabs etc.	4
36.	Weigh - bridge avery make 60.00 M. T. Capacity	1
37.	One over head portable crane in rolling mills shed. Capacity 10M. T. for Rolling Mill use	1
38.	Escort make two mobile crane capacity 5 M. T. each. for handling of raw material & finished products	2
39.	NIPPON make mobile crane capacity 10.0 MT	1
F	**Straightening Machine**	
40.	Suitable to straight upto 130 x 130mm angle	1
41.	Suitable to straight upto 1300 x 100mm angle	1

42.	Suitable to straight upto 65x 65mm angle	1
S. No.	**Name of Machinery (Bar Mill)**	**Quantity**
1.	Stands 16" size three - Hi – type	4
2.	Pinion Gear Box fitted with roller bearing 16" size with helical gear	1
3.	Reduction Gear ratio 1 :3	1
4.	Universal Flexible coupling	2
A	**Intermediate Mill**	
5.	Rolling Mill stand, two Hi - type of 10" Rolling Mill fitted with gearing	4
6.	Gear Box 10" centre fitted with roller bearings & helical gears.	1
7.	Fly wheel 3 M.T. weight fitted with shaft roller bearings & Brackets	1
8.	Rotary shearing, Flying shearing	3
9.	Repeaters	12
10.	Pusher Type Furnace (fitted with 6 burners) 1 (One) Size : 90' x 14' (Outer dimension) suitable to heat Up to 160mm square, fitted with pyrometer, heat recuperator etc.	1
11.	Cold shearing for end cutting fitted with motors	1
12.	Hot shearing or Rolling Mill fitted with motor 1 (One)	1
13.	Billet shearing machine capacity upt0 150mm	1
14.	Coal pulverizer size 32" with pipeline cyclone back filter	2
15.	Coal grinder	2
B	**Workshop**	
16.	Lathe Machines 16' size	1
17.	Lathe Machines 14' size	1
18.	Lathe Machines 12' size	2
19.	Lathe Machines 10' size	3
20.	Lathe Machines 8' size	2

21.	Shape Machine 30' Strock	2
22.	Drill machine $1^{1/2"}$ capacity	1
23.	Milling Machine	1
24.	Roll Branding Machine (Sparkonik make)	1
25.	CNC Rib cutting machine	1
C	**Electricals**	
26.	Power House 3300kVA fitted with VCB	6
27.	Transformer 33kV to 440Volt capacity 3000 kVA	1
28.	Misc. Motors	120
29.	Electric Motor 1250 HP Kirloskar make	1
30.	Electric Motor 800 HP Kirloskar make	1
D	**Equipment of TMT Line**	
31.	TMT cooling line	1
32.	Hot water pumps	3
33.	Cold water pumps	3
34.	D.C. Motor 187KW, Kirloskar Make, Frame KLDC - 280L, 220KW	2
35.	Digital Thyristar KEC Make, 187 KW, Common operator Control desk	4
36.	Gear Box Education gear box cum pinion stand 260mm CRS 2hi, 270 HP	3
37.	Lubrication System 150 LPM Duplex type oil circulation system with electrical control panel	4
38.	Air Compressor & Tank 50 HP, Air cooled, constant speed controlled, 2 stage mounted on frame, 80 CFM.	1

39.	Cooling Tower Model design SQ -7 – 3	3
40.	Cooling bed & Conveyors - 73 Mtr length	1
41.	Electrical Cable, Panels and miscellaneous electrical	1
Machinery (Steel Melting Shop)		
A	**Furnace**	
1.	Capacity of 9 MT, 2750 KW	1
B.	**Over head Crane**	
2.	20 MT Capacity	1
3.	15 MT Capacity	1
4.	10 MT Capacity	1
D	**Motors**	
5.	Main Hoist 56 HP	3
6.	Ogsalliry 22 HP	3
7.	L. T. Motor 11 HP	8
8.	C. T. Motor HP	4
9.	Hydraulic Motor 15 HP	2
10.	Pump Room Motors	1
11.	20 HP	2
12.	25 HP	2
13.	15HP	1
14.	3 HP	1
15.	Oil Compressor Motor	1
16.	15 HP	1
E	**Other Equipment**	

17.	D. M. Water Pump 10 HP	2
18.	D. G. Set – 4 nos (62.5 kVA- 2 nos., 125 kVA – 1 no, 200 kVA-1 no)	4
19.	Furnace Transformer 3500 KVA	1
20.	L. T. Transformer 1600 kVA	1
21.	L. T. Panel	1
22.	Furnace Panel	1
23.	CCM	1

Table 3.5: Proposed Machineries & Equipment

S. No.	Description	Qty.
A.	**Induction Melting Furnace (Model-Quick Melt-DTi) consisting of following:**	
1	**4000 KW/250-500 Hz, 12 plus, DiFOC, Medium Frequency Solid state power supply unit**	1 No.
2	**10000 Kg ET-Steel Frame Melting Furnace** complete with refractory top & bottom, copper coil, Lamination packets secured in a Frame Structure, hydraulic Cylinders and inlet and outlet Sub-Manifolds etc.	2 No.
3	**Capacitor Rack fitted with Capacitors** suitable for above power supply unit complete with connecting bus bars and capacitor switch	1 Set
4	**D.C. Choke** suitable for above solid state power supply unit	1 No.
5	**D.M. water circulation unit** complete with plate type heat exchanger, Non-Ferrous pump, Mix-bed resin, cartridge, DM water storage PVC tank with pressure gauge, valves and inter-connecting pipeline.	1 No.
6	**Hydraulic Power Pack** consisting of 3phase induction motor, Hydraulic pump, oil storage tank, pressure gauge, valves and inter-connecting pipeline	1 No.
7	**Operator Control Desk** with stand consisting of on/off push buttons, indicators and meters for ON/OFF and power control operations from furnace platform	1 No.

8	**Inter Connecting Materials** including: (a) Bus bars from power supply unit to capacitor rack with insulators (b) Outgoing bus bars from capacitor rack to melting furnace along with water cooled cables, cable guide (c) Pipelines with fittings such as bands, collars, stubends, tees for water connections between DM water circulation unit, capacitor rack and solid state power supply unit (d) Hydraulic pipeline with equal tees, equal bands along with Directional Control valves with stand (e) Main inlet & outlet water manifolds complete with valves, temperature sensors, temperature gauges, pressure gauge, carbon rubber hoses for making water connections	1 Lot
9	**Manually Operated Furnace change over switches** for immediate switchover of power from one melting furnace to another	1 Set
B	**4800 kVA, 33 KV/1140 V x 2 furnace Transformer ONAN Type**	1 No
C	**Power optimizer** comprising of: 1. Five nos. pneumatic capacitor cut off switch with pneumatic valve, cylinder, limit switch & other connecting materials 2. PLC panel with MMI touch screen display 3. FRL Unit, manifold and other connected cables and connecting materials as per requirements	1 Set

S. No.	Name of Machinery	Quantity
1.0	**INTERMEDIATE MILL AREA (330 MM MILL (11-12)**	
1.1	330 mm 2-HI Horizontal conventional, Mill Stand Close Top Suitable for Spherical Roller Bearing 24036 Roll Neck Diameter 180 mm, Without Rolls, Guides and Bearings	2 Nos.
1.2	Base Plate for Mill Stand	4 Nos.
1.3	Carden Shaft and Coupling Hub (1 set means one propeller shaft, one Roll End + one pinion end coupling hub)	4 sets
1.4	Reduction Gear Box cum 330 mm 2 Hi-pinion stand ratio (ration 5:5:1 &	2 nos.

	3:8:1) 250 kW 0-750-1500	
1.5	Base frame for Reduction Gear Box	2 nos.
1.6	Geared Couplings	2 nos.
1.7	Base Plate for Motor	8 nos.
	CROP AND COBBLE SHEAR	
1.8	Cantilever Type Pinch Roll before CCS-1	01 No
1.9	CROP AND COBBLE SHEAR 600 Crs. (with crop chute, without bin without DC Motors, Drives and Controls)	01 No
	300 MM MILL (C1, C2, C3 and C4)	
1.10	Reduction Gear Box cum 300 mm 2-Hi pinion stand(ration 3:6:1, 2:8:1, 1:95:1 and 1:5:1) 250 kW (0-750-1500)	4 nos
1.11	Gear Coupling	4 nos
1.12	Base Plate for Motor	16 nos.
	260 MM MILL(C5)	
1.13	Coupling Head Pinion End for Reduction Gear Box	2 nos
1.14	Reduction Gear Box cum 260 mm 2 Hi-Pinion stand (ratio 1:1) 250 kW 0-1000-1500	1 no
1.15	Base Frame for Reduction Gear Box	1 no
1.16	Geared Couplings	2 nos
2.0	**TMT Line Area**	
2.1	425 Crs Continuous Operating Shear	1 no
2.2	Cantilever type Pinch roll (Without DC Motors, Drives and Controls)	2 nos
3.0	**COOLING BED AREA**	
3.1	Speed/ Tail Break Pinch roll -2 nos (1 set) without Motor, Drives and Controls	1 set
3.2	High Speed Delivery System-Double Shaft Twin Channel, 72 m Hydrauliclay Operated	1 no

4.0	**MILL UTILITIES**	
4.1	Lubrication Unit	1 no
5.0	**SPARES**	
5.1	Spare chock for 24036 Brg. (1 no Chock + 1 no Split Ring + 2 no Bearing)	16 nos
5.2	Carden Shaft for Int Mill	1 no
5.3	Spare Coupling Head for Int Mill (08 Nos Roll End + 01 No Pinion End)	08 +1 nos

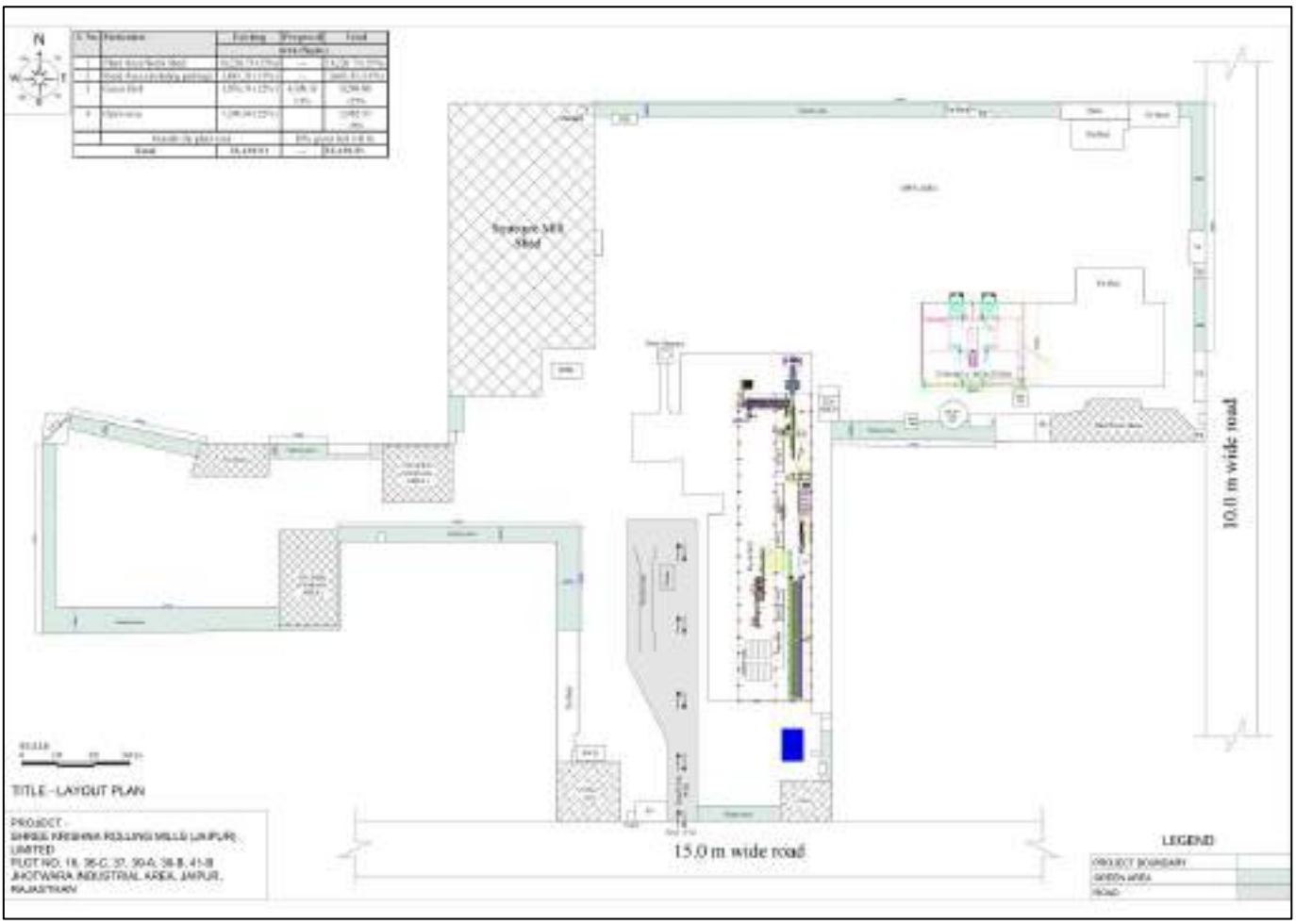


Figure 3.12: Plant Layout

3.6 RAW MATERIAL WITH REQUIRED QUANTITY, SOURCE, MARKETING AREA OF FINAL PRODUCTS, MODE OF TRANSPORT OF RAW MATERIAL AND FINISHED PRODUCT

3.6.1 RAW MATERIAL

All raw materials required for manufacturing of products are easily available indigenously in local market, which will be transported through road. In house manufactured MS ingots/billets is being/will be used. The details of the raw material requirement are presented below:-

Table 3.6: Product wise List of Raw Material and its Consumption

S. No.	Name of the Product	Raw materials	Quantity (MT/Annum)		
			Existing	Proposed	Total
1.	MS Ingots/Billets	Sponge Iron (78%)	25,483	25,974	51,457
		Steel Scrap (20%)	6,534	6,660	13,194
		Pig Iron (2%)	653	666	1,319
	Total		**32,670**	**33,300**	**65,970**
2.	MS Bar Angle & Section	M.S Ingots/Billets	17,304	1,47,496	1,64,800
		Coal for Reheating Furance	11,585	6,620	188,205

Table 3.7: Details of Source, Transportation & Storage Raw Materials

S. No.	Raw Material	Max. Storage Capacity in MT/month			Physical State	Modeof Transport	Storage	Type of Linkage
		Existing	Proposed	Total				
1.	Sponge Iron	1,925	1,950	3,875	Solid	Road	Designated scrap yard	Local market
2.	Steel Scrap	500	500	1000	Solid	Road	Designated scrap yard	Local market
3.	Pig Iron + Ferro Alloy	50	50	100	Solid	Road	Designated scrap yard	Local market
4.	MS Ingots/Billets	1300	11,150	12,450	Solid	Road	Designated Finished yard under shed	Inhouse production and local market
5.	Coal for Reheating Furance	875	500	1375	Solid	Road	Designated coal storage yard	Local market

1. Material balance for Billtes

Input	Ton/day	Output	Ton/day
Sponge iron (78%)	220	Billets	178 (81%)
Steel Scrap (20%)		Slag	13 (6%)
Pig Iron+ Ferro Alloy (2%)		Cutting	29 (13%)
Total	**220**	**Total**	**220**

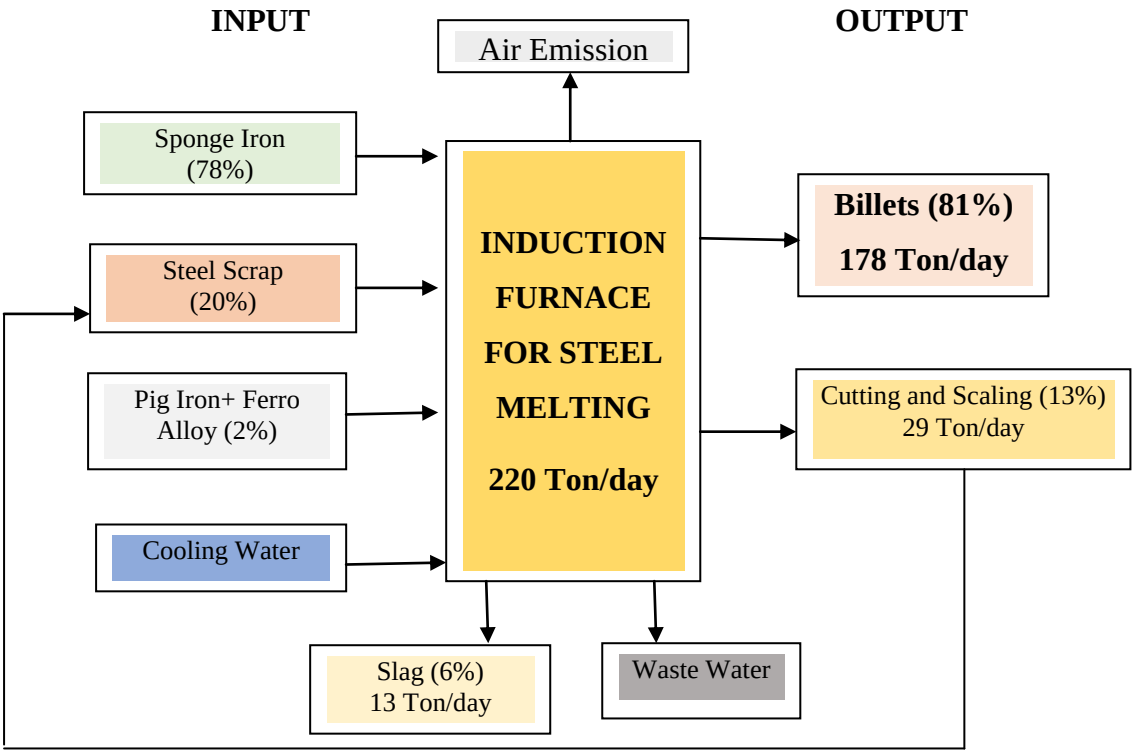


Figure:3.13 Material balance for MS Ingots/Billtes

2. Material balance for TMT bar and Sections (Rolling Mill)

S. No	Raw Material	Quantity (Tons)	Output	Quantity (Tons)
1.	MS Ingots/Billets	103	TMT	97
2.			Waste fines and gases	6
	Total	**103**	**Total**	**103**

3.6.2 PRODUCT

Table3.8: Details of Production

S. No.	Name of Products	Production Capacity(TPA)		
		Existing	Proposed	Total
1	M.S. Ingots/Billets	29,700	30,300	60,000
2	MS Bar Angle & Section	90,000	70,000	1,60,000

3.7 RESOURCE OPTIMIZATION /RECYCLING AND REUSE ENVISAGED IN THE PROJECT, IF ANY, SHOULD BE BRIEFLY OUTLINED

The water is mainly required for cooling purposes in Rolling Mill. The water will be used in closed cooling circuit where 100% water will be recycled. 100% of waste water is and will be recycled and Zero discharge condition will be maintained. Melting Scrap generated in the rolling mill will be used in own Induction Furnace as raw material thus practically there is no solid waste generation. The raw material used in the project is mainly MS Ingots/billets, which is a solid waste generated from most of the activities/operations come across in our day to day life. Thus, the proposed expansion project is reusing the waste iron scarps. By this way, the proposed project will conserve a significant quantity of iron ore and coal.

3.8 AVAILABILITY OF WATER ITS SOURCE, ENERGY/POWER REQUIREMENT AND SOURCE SHOULD BE GIVEN

3.8.1 WATER AVAILABILITY & ITS SOURCE

Total water demand for existing unit is 305 KLD. Out of which industrial purposes (cooling and quenching) 300 KLD water is being required. For domestic purposes 3.0 KLD and plantaion 2.0 KLD water is being required. Water demand is met from Ground water supply. NOC for Ground waer abstraction has been obtained vide NOC No. CGWA/NOC/IND/ORIG/2021/10577 dated 24.02.2021 and its valid upto 23.01.2023. Copy of NOC is enclosed as **Annexure-VI**.

After expansion total water demand will be 659 KLD, out of which 630 KLD will be recycled water and 29 KLD will be fresh water. The same will be met through Ground water supply.

CGWA Application for additional water demand (90 KLD) has been applied vide application no. 21-4/15514/RJ/IND/2021 dated 04.03.2021.Copy of application is enclosed as **Annexure-VII**. Water balance for existing, proposed and Total are shown as under:-

Table 3.9: Water Requirement

S. No.	Water Consumption	Existing (KLD)	Proposed (KLD)	Total (KLD)
1.	Domestic	3.0	6.0	9.0
2.	Gardening	2.0	4.0 - recycled water from STP	6.0 – recycled water from STP
3.	Industrial Process (Cooling and quenching purposes)	300.0	350.0	650.0
Total		**305.0**	**356.0**	**659**
Fresh Water demand		9.0	22.0	29.0
In existing unit 2 KLD fresh water demand is required for Gardneing purposes. After expansion STP tretaed water will be used for gardening purposes.				
Recycled water		296.0	334.0	630.0
Source: Ground water supply (Borewell –4 no.-Existing)				

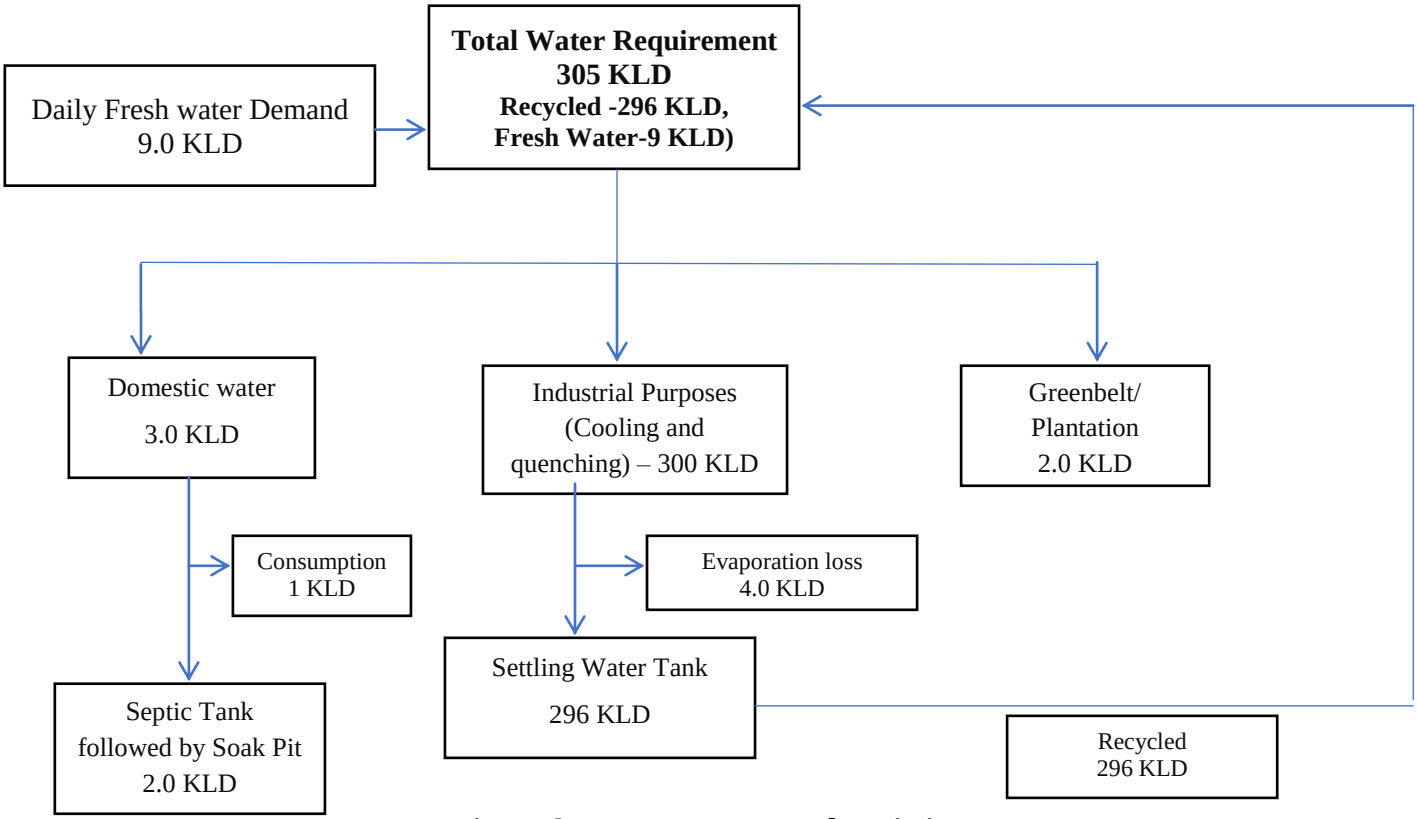


Figure 3.14: Water Demand- Existing

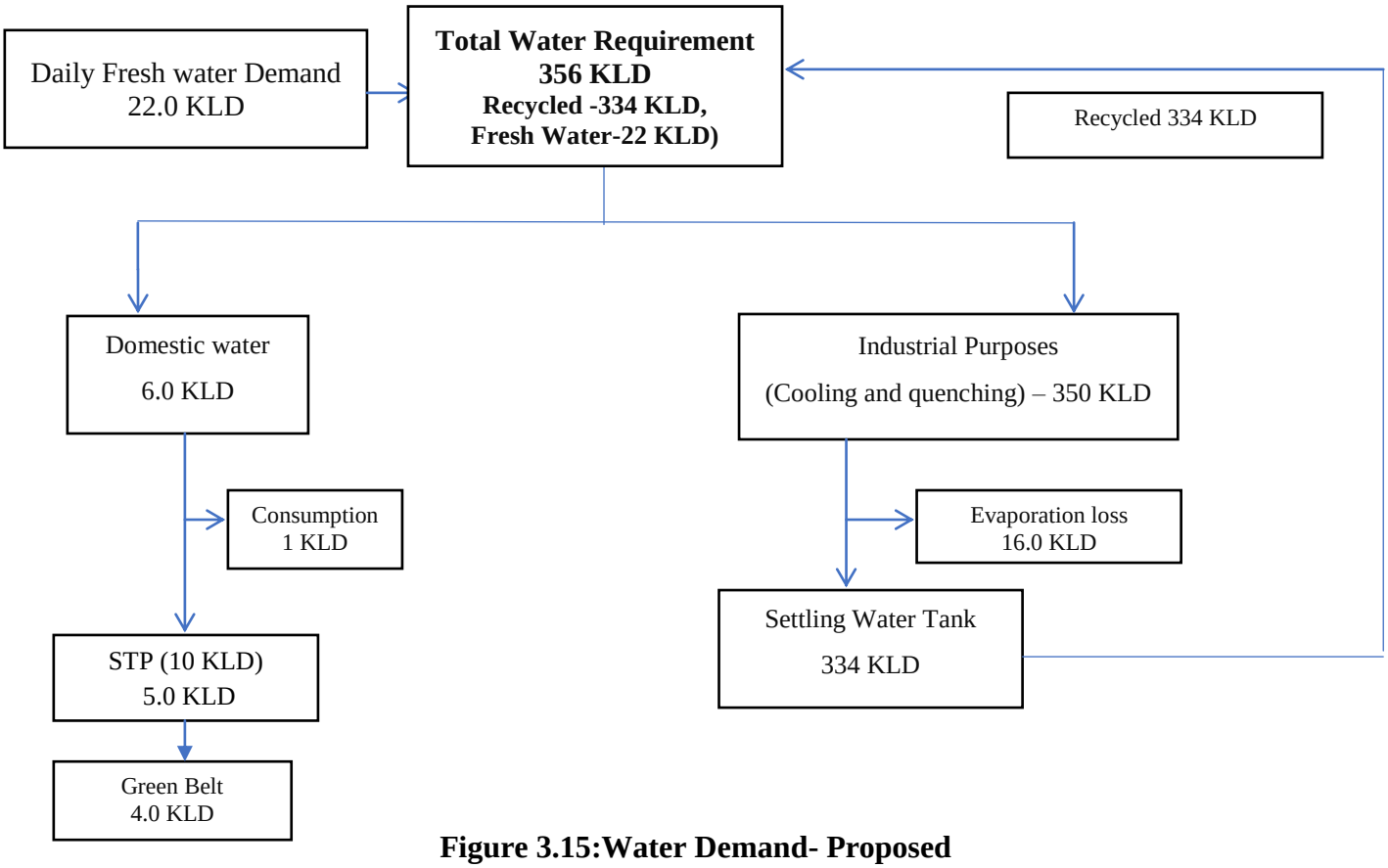


Figure 3.15:Water Demand- Proposed

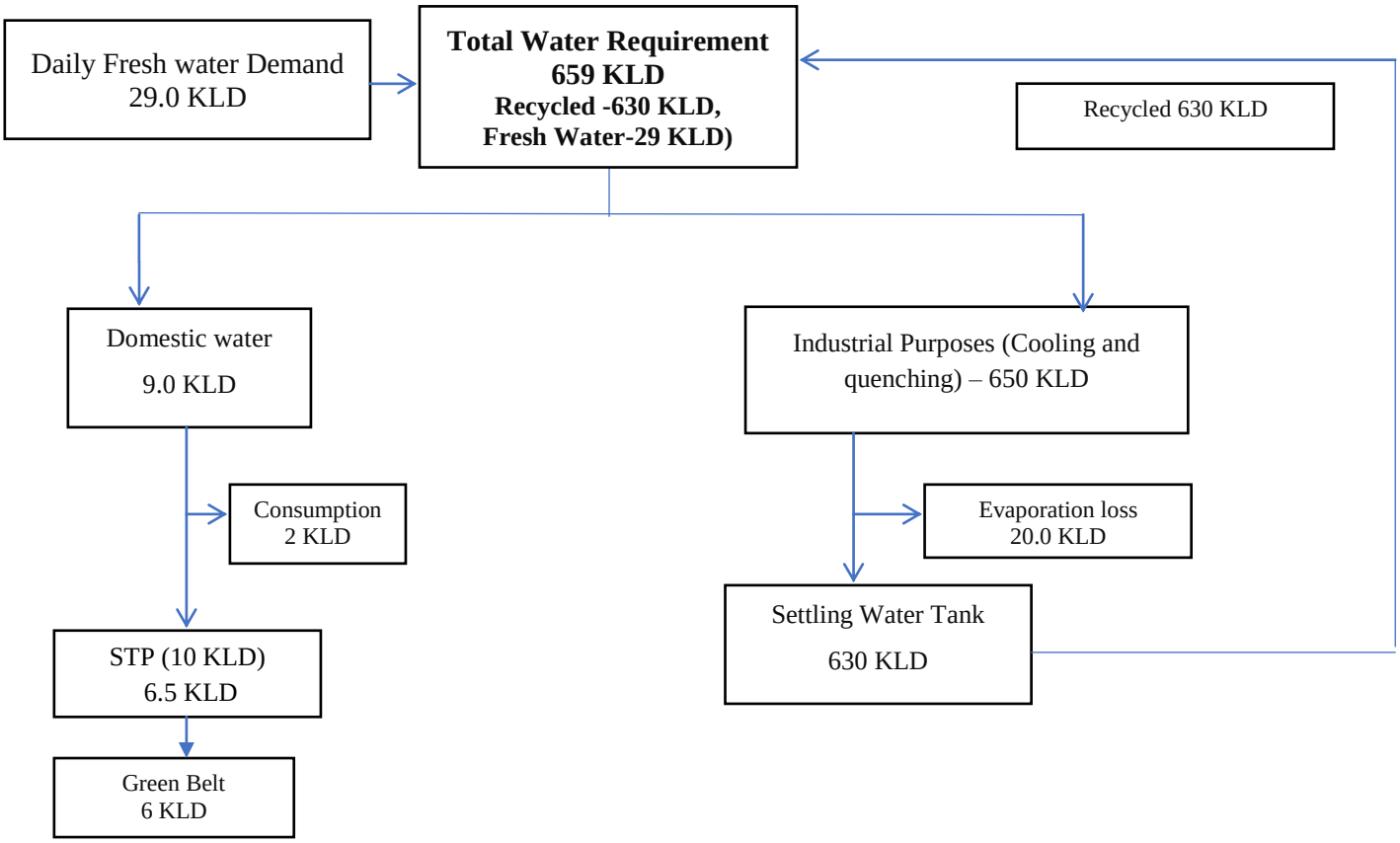


Figure 3.16:Water Demand- After Expansion

3.8.2 ENERGY / POWER REQUIREMENT& ITS SOURCE

S. No.	Particulars	Unit	Existing	Proposed	Total	Source
1	Power	kVA	4900	900	5800	JVVNL
2	DG Set (Number and capacity)	kVA	4 nos with cumulative capacity 450 kVA 125 kVA – 1 no 62.5 kVA each – 2 nos. 200 kVA- 1 no	--	4 nos with cumulative capacity 450 kVA 125 kVA – 1 no 62.5 kVA each – 2 nos. 200 kVA- 1 no	From manufacture
3	HSD (for DG Set)	l/hr	150	--	150	Local Traders
4	Coal (for Re-heating furnace)	MT/day	35	20	55	Domestic Market

3.9 QUANTITY OF WASTES TO BE GENERATED (LIQUID AND SOLID) AND SCHEME FOR THEIR MANAGEMENT / DISPOSAL

3.9.1 QUANTITY OF LIQUID WASTE TO BE GENERATED & ITS MANAGEMENT / DISPOSAL

3.9.1.1 Domestic Waste Water

Approximatly 1.0 KLD Domestic wastewater is being generated from the existing unit, which is disposed off into septic tank followed by soak pit. After expansion to the tune of 6.5 KLD will be generated. Which will be treated into STP (10 KLD). Treated water from STP will be reused in greenbelt/plantation purposes. Sludge will be generated and utilized as manure for greenbelt development/ plantation within the plant premises.

3.9.1.2 Industrial Waste Water

There will be no industrial effluent generation, as the water from cooling will be

recycled. Hence, there will be no any discharge of wastewater outside the company premises;thus the unit will achieving ZLD.

3.9.2 QUANTITY OF SOLID WASTE TO BE GENERATED & ITS MANAGEMENT / DISPOSAL

1. Solid Waste Generation

Table 3.10: Solid Waste Generation

S. No.	Particulars	Unit	Quantity			Mode of Disposal
			Existing	Proposed	Total	
1.	Domestic solid waste	Kg/day	35	65	100	Will be handled by Municipal Corporation, Jhotwara, Jaipur
2	Slag	T/day	5.4	5.5	10.9	Used for road making
3	Coal ash	Kg/day	3.5	2.0	5.5	Sold to brick manufactures

2. Hazardous Waste:

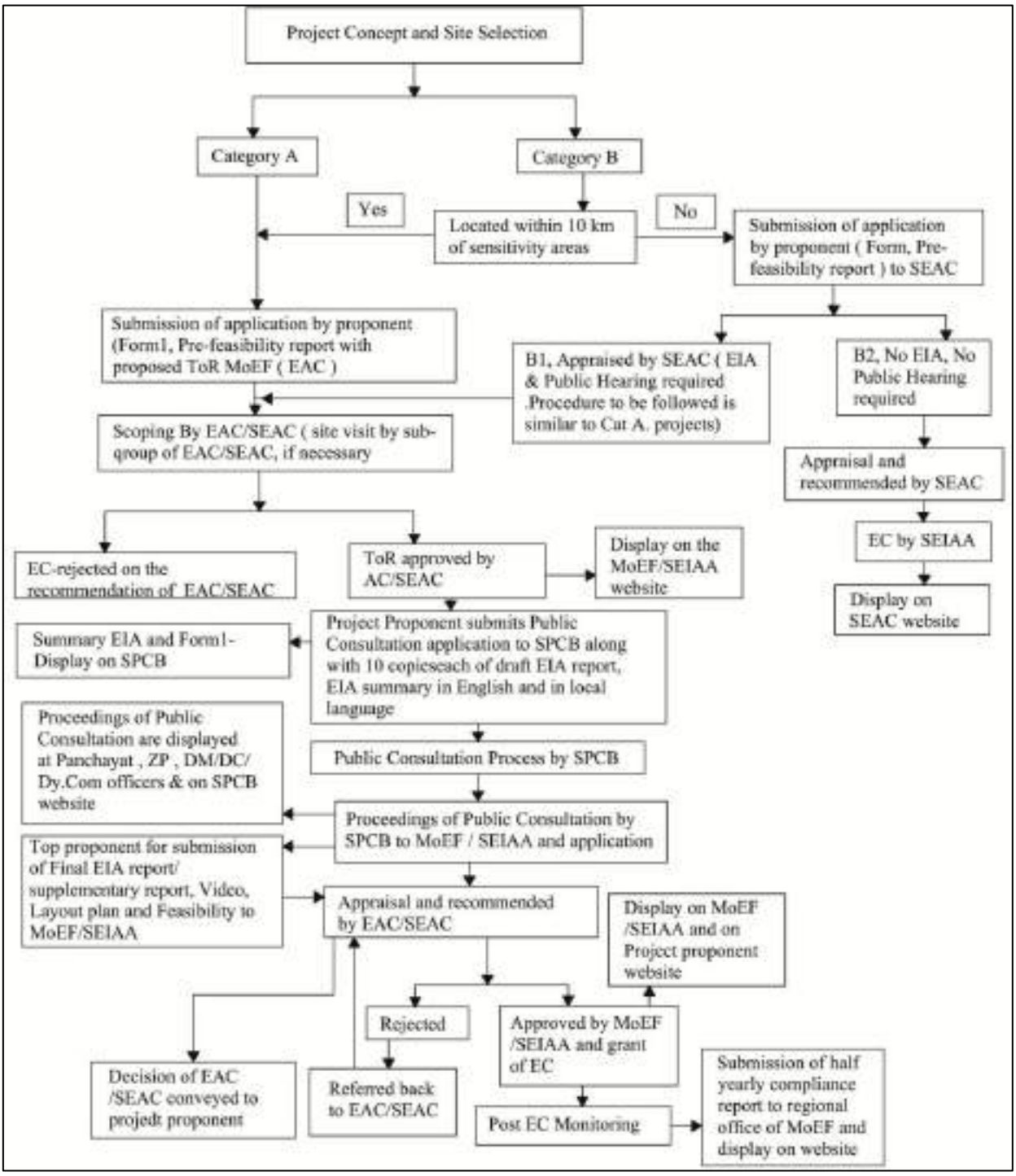
Table 3.11: Hazardous Waste Generation

Particulars	Category	Management
Used/Spent oil	5.1	will be sold to register users

3.10 SCHEMATIC REPRESENTATIONS OF THE FEASIBILITY DRAWING WHICH GIVE INFORMATION OFEIA PURPOSE

The project activity is listed at category-'B' under item 3(a)-Metallurgical industries (ferrous & non-ferrous) in column 5 point (ii) In case of secondary metallurgical processing industrial units, those projects involving operation of furnaces only such as induction and electrical arc furnace, submerged arc furnace, and cupola with capacity more than 30,000 tonnes per annum (TPA) would require environmental clearance as per the EIA Notification dated 14th September' 2006 and its subsequent amendments till date.

Due to presence of Nahargarh Sanctuary at a distance of 3.30 km towards NE and Eco Sensitive zone at a distance of 2.0 km towards ESE the project will be categorized as A and considered at MoEF&CC, New Delhi.


Project Concept and Site Selection
Category A
Category B
Yes
Located within 10 km of sensitivity areas
No
Submission of application by proponent (Form, Pre-feasibility report) to SEAC
Submission of application by proponent (Form1, Pre-feasibility report with proposed ToR MoEF (EAC)
B1, Appraised by SEAC (EIA & Public Hearing required .Procedure to be followed is similar to Cat A. projects)
B2, No EIA, No Public Hearing required
Scoping By EAC/SEAC (site visit by sub-group of EAC/SEAC, if necessary
Appraisal and recommended by SEAC
EC by SEIAA
Display on SEAC website
EC-rejected on the recommendation of EAC/SEAC
ToR approved by AC/SEAC
Display on the MoEF/SEIAA website
Summary EIA and Form1- Display on SPCB
Project Proponent submits Public Consultation application to SPCB along with 10 copieseach of draft EIA report, EIA summary in English and in local language
Proceedings of Public Consultation are displayed at Panchayat , ZP , DM/DC/ Dy.Com officers & on SPCB website
Public Consultation Process by SPCB
Proceedings of Public Consultation by SPCB to MoEF / SEIAA and application
Top proponent for submission of Final EIA report/ supplementary report, Video, Layout plan and Feasibility to MoEF/SEIAA
Appraisal and recommended by EAC/SEAC
Display on MoEF /SEIAA and on Project proponent website
Rejected
Approved by MoEF /SEIAA and grant of EC
Decision of EAC /SEAC conveyed to projedt proponent
Referred back to EAC/SEAC
Post EC Monitoring
Submission of half yearly compliance report to regional office of MoEF and display on website

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SECTION-IV

SECTION-IV

SITE ANALYSIS

4.1 CONNECTIVITY

The Shree Krishna Rolling Mills (Jaipur) Limited is a proposed expansion of MS Ingots/Billets and Rolling Mill Unit. The existing unit has all possible amenities that are feasible for industrial projects viability.

Table 4.1: Connectivity

S. No.	Name	Distance (Km)	Direction
		(From project site)	
Nearest Railway Station			
1	Jaipur Junction Dehar Ke Balaji	4.6 1.4	SE SE
Nearest Airport			
2	Jaipur Airport	15	SSE
Nearest Highway			
3	NH 8 SH 19 NH11 NH11c	1.90 6.2 12.40 11.20	NW N ESE ENE
Fire station			
4.	Bani Park Municipal Corporation Fire station	3.70	SSE

4.2 LAND FORM, LAND USE AND LAND OWNERSHIP:

Land Form: The existing unit is situated over an area of 33,139.51Sq.m, which is an industrial area (Jhotwara).

Land use: There has already one shad constructed where additional machineries will be installed after expansion. The land use breakup (internal) is summarized as under:-

Table 4.2: Land use Breakup

S. No.	Particulars	Existing	Proposed	Total
		Area (Sq.m.)		
1	Plant Area/Work Shed	18,226.73 (55%)	--	18,226.73 (55%)
2	Road Area (including parking)	3,645.35 (11%)	--	3,645.35 (11%)
3	Green Belt	3,976.74 (12%)	4,308.14 13%	8,284.88 (25%)
4	Open area	7,290.69 (22%)		2,982.55 (9%)
	Outside the plant area		10% green belt will be provided	
Total		**33,139.51**	**--**	**33,139.51**

Land Ownership: The details of land ownership is as given below:-

Table 4.3: Chronology of Land Ownership

Plot Number	Name of the project	Area Sq.m	Date
Plot No. 37	Shree Krishna Steel Rolling Mill	4613.46	19.11.1988
Plot No 36 C	Shree Krishna Steel Rolling Corporation	1173.66	19.11.1988
Additional land	Shree Krishna Steel Rolling Corporation	1951.95	19.11.1988
Additional land	Shree Krishna Steel Rolling Corporation	1566.76	19.11.1988
Plot No. 41-B(A)	Shree Krishna Steel Rolling Corporation	3136	17.12.1990
Plot No. 39-A	Shree Krishna Rolling Mills (Jaipur) Ltd.	1130.0	29.11.1998
Plot No.16	Shree Krishna Rolling Mills (Jaipur) Ltd.	16,183.68	15.05.2004
Plot No. 39-B	Shree Krishna Rolling Mills (Jaipur) Ltd.	3384.0	02.04.2011
Total Area		**33,139.51**	
The chronology of the land documents is as enclosed as **Annexure – V.** Amalgamation letter has been submitted to Sr. Regional Manager, RIICO, VKi Area, Jaipur on dated 09.04.2021. Copy of the same is enclosed with land documents.			

4.3 TOPOGRAPHY (ALONG WITH MAP)

The general slope of the Jaipur city and its surroundings is from north to south and then to south-east. Nearly all the ephemeral streams flow in this direction. Higher elevations in the north exist in the form of low, flat-topped hills of Nahargarh (587 meters). Jaigarh, Amber and Amargarh, which are deeply dissected and eroded. An isolated hillock called "Moti Dungari" upon which an old royal castle exists, is near the Rajasthan University. Further in the south, topographical levels of the plain areas varies between 280 meters along Bandi and Dhund rivers in the south to some 530 meters in the north east of Chomu near Samod hills. The overall trend is a decline of level from the areas bordering the hills in the north to plain in the south slopes of the plain areas are in general gentle.

4.4 EXISTING LAND USE PATTERN (AGRICULTURE, NONAGRICULTURE, FOREST, WATER BODIES (INCLUDING AREA UNDER CRZ)), SHORTEST DISTANCES FROM THE PERIPHERY OF THE PROJECT TO PERIPHERY OF THE FOREST, NATIONAL PARK, WILD LIFE SANCTUARY, ECO SENSITIVE AREA, WATER BODIES (DISTANCE FROM THE HFL OF THE RIVER), CRZ.

Existing Land use:-Land use pattern is given in Table 4.2.

The details of Forests, National Park, Wild Life Sanctuary, Eco Sensitive Area, Water Bodies within 15 km area are as mentioned below:-

S. No.	Particulars	Distance (Km)	Direction
		(From Project Boundary)	
P.F/RF			
1.	Nindhar P.F.	5.6	N
2.	Amer R.F.	6.7	ENE
3.	Papad ka R.F.	4.8	ENE
4.	Nhargarh R.F.	4.5	ENE
5.	Bhagawali kalojar R.F.	9.5	ENE

6.	Kilangrah R.F.	9.4	ESE
7.	R.F. (Govindpura)	6.1	WSW
7.	Ambagarh R.F.	10.7	ESE
9.	Daleri Ka Bir	13.4	ESE
10.	Jhalana bani R.F.	10.6	SE
11.	R.F.(Malviya Nagar)	10.7	SSE
Water Bodies			
1.	Amanishah Nala	2.9	SE
2.	Sagar Talav	9.8	ENE
3.	Bandi River	13.7	NNW
National Park			
1.	None within 10 km radius	--	--
Wildlife Sanctuary			
1.	Nahargarh Wildlife Sanctuary	3.30	NE
Eco Sensitive Area			
1.	Eco-Sensitive Boundary	2.0	ESE
Source:- All distance are taken with respect to Toposheet			

Conservation plan of Schedule species found within study area will be mentioned during preparation of Final EIA. The proposed expansion project is situated within notified industrial Area (Jhotwara, Jaipur).

4.5 Existing Infrastructure:

There is an existing unit, which is situated an industrial land. The proposed expansion is coming up within the same premises.The area is well connected by NH-8, which is 1.90 km towards NW from the site. SH-19, which is 6.2 km towards N from the site. The study area is having facilities for primary educational and health care, drinking water, post and telegraph offices, approach roads etc.

4.5.1 BASIC AMENITIES

The details of basic amenities like schools, hospitals and medical center located in 10.0 km of project site is given as under:-

Table No. 4.3: Basic Amenities

S. No.	Particulars	Distance (Km) & Direction (From Project Boundary)
Medical facility		
1.	Rajkiy Chikitsalay	1.1 km ENE
2.	Government Hospital	2.2 km NNE
3.	Government Hospital	3.0 km NNW
Schools		
4.	Govt. primary School	1.7 km W
5.	Government girls school	1.5 km SE
6.	Government Girls School	2.0km SW
Place of Worship		
7.	Shiv Temple	0.55 km SSW
8.	Karni Mata Temple	0.85 km NE
9.	Bharma Temple	2.5 km SE
Source: - All Distances are taken with respect to Toposheet.		

4.5.2 INDUSTRIES

There is an existing unit situated within notified industrial area, Jhotwara. The proposed expansion is coming up within the same premises. There are Alloy casting, Food processing, Batteries, Pharma, Dye, Asbestos, laminates, Plastic, Electroplating, Engineering services, fabrication (Iron and Steel), Re-rolling, Pesticides etc types of industries situated with well-developed infrastructure facilities within study area.

4.6 Soil Classification (Jaipur District):

According to soil taxonomical classification, there are six categories of classification i.e. i. Order (the broadest category) ii. Suborder, iii. Great group, iv. Subgroup, v. Family and vi. Series (the most specific category). The soil of the Rajasthan state have been grouped under five orders, namely, Aridosols, Alfisols, Entisols, Inceptisols and Vertisols. Soils have further been subdivided at suborder and great group levels under these five orders. The

names of the soils orders occurring in the state and their subdivisions up to the great group level are given in table below.

Table 4.5: Classification of Soils found in Jaipur

S. No.	Order	Suborder	Great group	Occurrence
1.	Aridisols	Orthids	**a.** Camborthids	Parts of Jalore, Churu, Jodhpur, Pali, Barmer, Sikar and Jhunjhunu districts.
			b. Calciorthids	Parts of Jalore, Jodhpur, Pali, Barmer, Nagaur, Sikar, Churu, Sriganganagar and Jhunjhunu districts.
			c. Salorthids	Found scattered in Ghaggar floodplain in Sriganganagar; Near sambhar, Pachpadra, Deedwana lakes, little Rann of Kutch area in Jalore and in Barmer districts
			d. Paleorthids	Scattered and cover a small area in Jaisalmer, Barmer and Nagaur districts.
2.	Alfisols	Ustalfs	a. Haplustalfs	Eastern and south-eastern part of Rajasthan in Udaipur, Chittorgarh, Bhilwara, Ajmer and Jaipur districts.
3.	Entisols	Psamments	a. Torripsamments	Cover up to 80% of the area at many places in western Rajasthan. Also cover a part of Jaipur, Alwar and Ajmer districts.
			b. Quartzipsamments	Small part of Jaisalmer and barmer districts.
		Fluvents	c. Torrifluvents	Occur in Ghaggar floodplain area of Sriganganagar district.
			d. Ustifluvents	Occur on the north-eastern and eastern portion of Rajasthan covering parts of Alwar and almost whole of Bharatpur districts.
4.	Inceptisols	Ochrepts	a. Ustochrepts	Occur along the foothill slopes and cover extensive areas in Bhilwara, Udaipur, north-eastern Sawaimadhopur and in parts of Sirohi, Pali, Jaipur and Chittorgarh districts.

5.	Vertisols	Usterts	a. Chrom usterts	Parts of Bundi, Kota & Jhalawar districts in south-eastern part of Rajasthan and to a lesser extent in Chittorgarh, Dungarpur, Banswara & Bharatpur districts.
			b. Pellusterts	Cover a large are of Bundi, Kota, Jhalawar, Chittorgarh, Dungarpur, Banaswara and Bharatpur districts.

4.7 Climatic Data From Secondary Sources:

The Jaipur is located in the semi-Arid Zone of India. It has characterized by high temperature, low rainfall and mild winter. The mean temperature of Jaipur is 36^0C varying from 18^0C in winter (January) to 40^0C in summer (June). Thus the January and June are the coldest and hottest months.. The normal rainfall of Jaipur is 600 mm; nearly 90 percent of which takes place in the summer monsoon period i.e. from June to September, the rest comes from the winter cyclones.

4.8 Social Infrastructure Available:

The well-established social infrastructure like hospitals, temple, schools, roads, and others similar are available/ existing within 10 km radius which is tabulated in point no 4.5 of PFR.

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SECTION-V

SECTION-V
PLANNING BRIEF

5.1 PLANNING CONCEPT (TYPE OF INDUSTRIES, FACILITIES, TRANSPORTATION ETC) TOWN AND COUNTRY PLANNING/DEVELOPMENT AUTHORITY CLASSIFICATION

The existing unit is operational since 1966 manufacture MS Ingots/Billets to the tune of 29,700 TPA and MS Bar Angle & Section to the tune of 90,000 TPA situated at Plot No. 16, 36-C, 37, 39-A, 39-B, 41-B Jhotwara Industrial area Jaipur, Rajasthan. Now unit undergoes Expansion of MS Ingots/Billets from 29,700 TPA to 60,000 TPA and MS Bar Angle & Section from 90,000 TPA to 1,60,000 TPA.

All raw materials required for manufacturing of products are easily available indigenously in local market, which will be transported through road. In house manufactured MS ingots/billets is being/will be used.

Transportation of Raw Material and finished product will be done through road only as it is well-connected and in the centre of neighboring states. The land for the project is owned by Shree Krishna Rolling Mills (Jaipur) Limited.

5.2 POPULATION PROJECTION

Jaipur district consists 47.6 percent rural and 52.4 percent urban population whereas the State percent of rural and urban population is 75.1 and 24.9 respectively.

The sex ratio of Jaipur district (910) is significantly lower than the State sex ratio (928). The literacy rate in Jaipur district is 75.5% which is higher than the State Average (66.1%) and it ranks 2nd among the other districts of the state. Gender Gap of the literacy rate is 22.1% in the district. The Scheduled Caste and Scheduled Tribe population in Jaipur district is 15.1% and 8.0% respectively whereas the State of Scheduled Caste and Scheduled Tribe population is 17.8% and 13.5% respectively.

The economy of Jaipur district is mainly dependent on other workers (60.8%). Work participation rate (WPR) of Jaipur district has recorded 37.2% and gender gap in WPR is 25.7% points. The non workers comprise of 62.80% of the total population and female non working population of the total; female population is 76.25%. The proposed expansion

project will provide employment to 250 persons of whom 50 persons are for construction Phase and 200 persons for operation phase. It is likely that the population of the project area will not be significantly impact.

5.3 LAND USE PLANNING

Existing green belt has been done over an area of 3,976.74 sq.m (12%). Additional 4,308.14 sq.m (13%) of open area will be used for green belt development. Thus, the total land area in the green belt will be 8,284.88 sq.m (25%) after proposed expansion. 10% outside the plant area will also use as green belt development.

The main aim of the green belt development is to improve the ecosystem to a maximum possible extent by designing the green cover with the same native species. The year wise plantation programin five years is given below: -

Table 5.1: Green Belt Development Programme

S. No	Botanical Name	Common Name	Total
1	*Azadirachta indica*	Neem	80
2	*Cassia Fistual*	Amaltash	200
3	Polyalthia longifolia	Ashok	200
4	*Delonix regia*	Gulmohar	150
5	*Mangolia Champaca*	Champa	200
6	*Cassia Siamea*	Khasod	120
	Total		**950**

Table 5.2: Budget for Green Belt Development

Particulars	***1st Year***	***2nd Year***	***3rd Year***	***4th year***	***5th Year***	***Grand Total***
Core Zone: following plantation will be developed in the 25.00% (Existing- 12%. Proposed-13%) greenbelt area of the project site						
Saplings required for project site greenbelt/	*200*	200	200	200	150	*950*
Amount (@ INR. 200 per sapling)/	*40,000*	*40,000*	*40,000*	*40,000*	*30,000*	*1,90,000*
2. ***Buffer Zone: Every year 100 sapling will be planted upto 5 years with in LIZ area like, agriculture***						

hedges, various places of urban area (public places) and along road.						
Saplings required for project site greenbelt	*100*	*100*	*100*	*100*	*100*	*500 sapling*
Amount (@ INR. 200 per sapling)	*20,000*	*20,000*	*20,000*	*20,000*	*20,000*	*INR 1,00,000/-*
*All other costs like labor costs for plantation, soil filling dressing, irrigation etc. will also borne by client / proponent. * Buffer Zone*						

5.4 ASSESSMENT OF INFRASTRUCTURE DEMAND (PHYSICAL & SOCIAL)

On the basis of the preliminary site visit, the infrastructure demands in the villages are assessed on the basis of need and priority. The health infrastructure, drinking facilities are the primary requirements analyzed. The lack of modern and specialist facilities in hospitals needs improvement. The assessment will be identified in the socio-economic survey, after the grant of TOR and final assessment will be submitted in final presentation of EC.

5.5 AMENITIES / FACILITIES

In the preliminary site visit it was found that requiments of women upliftment and increase in working population. After ToR will be obtained during the detailed survey which will include consultations with the likley stakeholders. The required facilities will be updated. This is a tentative budget with facilities to be provided in Table 5.2 Amenties/ Facilities provided is briefly given.

Table 5.2: Amenties/ Facilities

S.No.	Activities	Capital Cost (Rs. In Lacs)	Recurring Cost (Rs. In Lacs)
1.	Education	2.50	0.50
2.	Training/ Camps etc	1.00	0.25
3.	Miscellaneous	0.50	0.25
Total		**4.00**	**1.00**

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SECTION-VI

SECTION-VI

PROPOSED INFRASTRUCTURE

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th></tr>
<tr><td>1.</td><td>Industrial Area</td><td>Total plot area of existing unit is 33,139.51 sq. m. The proposed expansion is coming up within the same premises. The existing sheds within the plant premises will be used for the proposed expansion of the project.</td></tr>
<tr><td>2.</td><td>Residential Area (Non Processing Area)</td><td>No residential area is proposed. Preference would be given to suitable local people for employment.</td></tr>
<tr><td>3.</td><td>Green Belt</td><td>
<table>
<tr><th>Existing</th><th>Proposed</th><th>Total</th></tr>
<tr><td>3,976.74 (12%)</td><td>4,308.14 (13%)</td><td>8,284.88 (25%)</td></tr>
<tr><td colspan="3">After Expansion outside the plant area (10%) green belt will be provided.</td></tr>
</table>
</td></tr>
<tr><td>4.</td><td>Social Infrastructure</td><td>Social infrastructure available within 10-15 km from project site.</td></tr>
<tr><td>5.</td><td>Connectivity</td><td>
<table>
<tr><th>S. No.</th><th>Highways</th><th>Distance (Km) & Direction (From Project Boundary)</th></tr>
<tr><td>1.</td><td>NH 8</td><td>1.90 Km towards NW</td></tr>
<tr><td>2.</td><td>SH 19</td><td>6.2 Km towards N</td></tr>
<tr><td>3.</td><td>NH11</td><td>12.40 Km towards ESE</td></tr>
<tr><td>4.</td><td>NH11c</td><td>11.2 Km towards ENE</td></tr>
<tr><td>5.</td><td>Sikar Road</td><td>1.3 Km towards E</td></tr>
<tr><td colspan="3">*Source: - All Distances are taken with respect to Toposheet.</td></tr>
</table>
</td></tr>
<tr><td>6.</td><td>Drinking Water Management</td><td>Adequate water facility is being/will be provided.
Source of water – CGWA Ground water supply
NOC for Ground water abstraction has been obtained vide NOC No. CGWA/NOC/IND/ORIG/2021/10577 dated 24.02.2021 and its valid up to 23.01.2023. Copy of NOC is enclosed as Annexure-VI.
CGWA Application for additional water demand (90 KLD) has been applied vide application no. 21-4/15514/RJ/IND/2021 dated 04.03.2021.Copy of application is enclosed as Annexure-VII.</td></tr>
<tr><td>7.</td><td>Sewerage System</td><td>Industrial waste water – No waste water is being/will be generated from industrial process. There is water required for cooling and quenching</td></tr>
</table>

<table>
<tr><td></td><td></td><td>process. Water from the cooling operation is left in the cooling tank. After cooling, the water will be re-used for the processes.
Domestic waste water - Approximately 1.0 KLD Domestic wastewater is being generated from the existing unit, which is disposed off into septic tank followed by soak pit. After expansion to the tune of 6.5 KLD will be generated. Which will be treated into STP (10 KLD). Treated water from STP will be reused in greenbelt/plantation purposes. Sludge will be generated and utilized as manure for greenbelt development/ plantation within the plant premises.</td></tr>
<tr><td>8.</td><td>Industrial Waste Management</td><td>
<table>
<tr><th>Particulars</th><th>Unit</th><th colspan="3">Quantity</th><th>Mode of Disposal</th></tr>
<tr><th></th><th></th><th>Existing</th><th>Proposed</th><th>Total</th><th></th></tr>
<tr><td>Domestic solid waste</td><td>Kg/day</td><td>35</td><td>65</td><td>100</td><td>Will be handled by Municipal Corporation, Jhotwara, Jaipur</td></tr>
<tr><td>Slag</td><td>T/day</td><td>5.4</td><td>5.5</td><td>10.9</td><td>Used for road making</td></tr>
<tr><td>Coal ash</td><td>Kg/day</td><td>3.5</td><td>2.0</td><td>5.5</td><td>Sold to brick manufactures</td></tr>
</table>
</td></tr>
<tr><td>9.</td><td>Solid Waste Management</td><td></td></tr>
<tr><td>10.</td><td>Power Requirement & Supply / Source</td><td>
<table>
<tr><th>Phase</th><th colspan="3">Demand</th><th>Expected Source</th></tr>
<tr><th></th><th>Existing</th><th>Proposed</th><th>Total</th><th></th></tr>
<tr><td>Operational Phase (kVA)</td><td>4900</td><td>900</td><td>5800</td><td>JVVNL</td></tr>
<tr><td>D. G. Set (kVA)</td><td>Number – 4 nos. with cumulative capacity 450 kVA
125 kVA – 1 no
62.5 kVA – 2 nos.
200 kVA- 1 no</td><td>--</td><td>Number – 4 nos. with cumulative capacity 450 kVA
125 kVA – 1 no
62.5 kVA – 2 nos.
200 kVA- 1 no</td><td>For power back up</td></tr>
<tr><td colspan="5">Fuel (For Machinery Operations, DG Set)</td></tr>
<tr><td>Fuel (HSD)</td><td>150 l/ hr</td><td>--</td><td>150 l/hr</td><td>Local Traders</td></tr>
<tr><td>Coal for Re-heating Furnace</td><td>35 MT/day</td><td>20 MT/day</td><td>55 MT/day</td><td>Domestic market</td></tr>
</table>
</td></tr>
</table>

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SECTION-VII

SECTION-VII

REHABILITATION AND RESETTLEMENT (R & R) PLAN

7.1 POLICY TO BE ADOPTED (CENTRAL/ STATE) IN RESPECT OF THE PROJECT AFFECTED PERSONS INCLUDING HOME OUSTEES, LAND OUSTEES AND LANDLESS LABORERS (A BRIEF OUTLINE TO BE GIVEN).

There is no habitation in the existing project land and is an industrial land. The expansion project is proposed to be expanded on the existing industry land premises. Thus, R & R policy is not applicable to this project. There shall not be displacement of any population in expansion project land. The expansion of project will slightly increase the commercial and economical status locally.

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SECTION-VIII

SECTION-VIII
PROJECT SCHEDULE & COST ESTIMATES

8.1 LIKELY DATE OF START OF CONSTRUCTION AND LIKELY DATE OF COMPLETION

Proposed expansion project shall be started within one year of getting Environment Clearance from MoEF&CC and consents from RSPCB, Jaipur.

Table 8.1: Expected Time Schedule for the Project

Activities	Completed activities	Months											
		1	2	3	4	5	6	7	8	9	10	11	12
Submission of Terms of Reference Application	Aug'2021												
Terms of Reference													
Baseline Study													
Preparation of Draft EIA/EMP report													
Submission of Draft EIA to SPCB, Raj. for Public Hearing													
Public Hearing													
Submission of Final EIA/ EMP report for EC													
Environmental Clearance													

8.2 PROJECT COST ESTIMATION

The total cost of the project after expansion will be Rs. 29.7 Crores. (Existing – 24.7 Crores., Proposed-5 crore).

Table 8.2: Expenditure Proposed for Environmental Protection Activities

S. No.	Description of Item	Existing (Rs. In Lacs)		Proposed (Rs. In Lacs)	
		Capital Cost	Recurring Cost	Capital Cost	Recurring Cost
1	Air Pollution Control Equipment	28.00	1.5	35.0	2.0
2.	Rain water Harvesting Structure	3.0	0.50	3.0	0.5
2	Water Pollution Control	0.50	--	15.0	0.5
3	Environmental Monitoring and Management	--	2.0	--	6.5
4	Green Belt Development	1.5	0.80	3.0	1.25
5	Occupational Health & Safety	2.5	0.50	3.50	0.50
Total		**35.5**	**53**	**59.5**	**11.25**

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SECTION-IX

SECTION-IX
ANALYSIS OF PROPOSAL

9.1 FINANCIAL AND SOCIAL BENEFITS WITH SPECIAL EMPHASIS ON THEBENEFIT TO THE LOCAL PEOPLE INCLUDING TRIBAL POPULATION, IFANY, IN THE AREA

There will be social benefits due to the proposed expansion project. Due to expansion project, it is expected that employment will increase for people who reside nearby project area. Approximately 250 persons will get employment directly after expansion (50 people during Construction phase and 200 people during Operation Phase). Ancillary units will also be benefitted in the project area. The local economy will be uplifted in the project area. Locals will get employment their expenditure and saving power will increase which will result in better living standards. Due to green belt development, aesthetic value of local environment will improve. Detailed Environmental management plan will be submitted during EIA stage.

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GAURANG ENVIRONMENTAL SOLUTIONS PVT.LTD.

SIMPLIFYING SUSTAINABILITY

Accredited EIA Consultant Organization by NABET, QCI, New Delhi at S. No. 108 in list of Accredited EIA Consultant Organizations (as on June'2021)

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