Project Summary

PROJECT SUMMARY

1.1 INTRODUCTION

Amar Pratap Steel (P) Ltd.is an existing unit which is situated at Plot No. A-161, RIICO Industrial Area, Bagru Ext-II, Jaipur (Rajasthan) which involves production of MS Ingots to the tune of 50 MTD/15,000 TPA. Since 2010, production of TMT Bars has been started to the tune of 96.70 MTD/29,000 TPA within the same premises. Now unit undergoes expansion of MS Ingots/Billets from 15,000 TPA to 45,000 TPA and TMT Bars from 29,000 TPA to 1,95,000 TPA. The total cost of the project after expansion will be Rs. 30.0 Crores (Existing – 19.66 crore, Proposed-10.34 Crore).

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.

Table 1.1 Details of Environmental Setting

S. No.	Particulars	Details
1	**Location**	
A	Plot No.	Plot No. A-161, RIICO Industrial Area, Bagru Ext-II,
B	Tehsil	Bagru
C	District	Jaipur
D	State	Rajasthan
E	Latitude	26°48'23.07"N
F	Longitude	75°34'6.03"E
H	Total Plant Area	13,125 sq.m; proposed expansion is coming up within the same premises.
2.	Nearest Habituation	Bagru:2.4 km, W
3.	Nearest Major Town	Jaipur: 25.0 km, ENE
4.	Nearest Highway	**Particulars** / **Distance** / **Direction** NH-48 / 2.5 / NW MDR 81 / 3.7 / WSW NH11C / 3.5 / W
5.	Nearest Railway Station from Project site	**Particulars** / **Distance** / **Direction** Sheo Singh Pura Railway Station / 12.0 / N Jaipur Junction / 25.2 / ENE

6.	Airport	Jaipur International Airport ~23.8 km in E direction.
7.	Defence installations	None within study area
8.	Archaeological important	None within study area
9.	Ecological sensitive zones	None within study area
10.	Reserved/Protected forest/National Parks/Wildlife Sanctuary (from Project Site)	List of RF/PF/Wildlife Sanctuary, National Park, Elephant Corridor, Tiger Reserve are as under:
11.	Nearest streams / Rivers / water bodies (from Project Site)	
12.	Seismic zone	The site is located in the Seismic Zone II, as per the seismic zoning map of India given in BIS code IS: 1893 (Part1)-2002, which is Low Damage Risk Zone.

S. No.	Particulars	Distance (Km) (From Project Boundary)	Direction
RF			
1.	Muhana R.F.	13.3	ESE

S. No.	Particulars	Distance (Km) & Direction (From Project Boundary)
Water Bodies		
1.	Sadriya Nadi	0.25, S
2.	Nevata Talav	10.9, E
3.	Bandi River	12.0, WSW
4.	Hingoniya Sagar	10.5, WSW

Source: - All Distances are taken with respect to Toposheet.

1.2 DESCRIPTION OF THE PROJECT

The salient features of the proposed plant are given below:

Table 1.2 SALIENT FEATURES OF PROJECT

S. No.	Particulars	Details				
1.	Project Name	Expansion of MS Ingots/Billets from 15,000 TPA to 45,000 TPA and TMT Bars from 29,000 TPA to 1,95,000 TPA				
2.	Location	Plot No. A-161, RIICO Industrial Area, Bagru Ext-II, Jaipur (Rajasthan)				
3.	Production & its Capacity	S. No.	Name of Products	Production Capacity (TPA)		
				Existing	Proposed	Total
		1	**M.S. Ingots/Billets**	15,000	30,000	45,000
			Induction Furnace (Capacity and Numbers)	6 TPH x 1	Replace existing (6 TPH) induction furnace - 15 TPH	15 TPH x 1
		2	**TMT Bar**	29,000	1,66,000	1,95,000
			Reheating Furnace (Capacity and Numbers)	9 TPH x 1	Upgrade existing (9 TPH) Reheating furnace – 30 TPH	30 TPH x 1

4.	Land requirement	13,125 sq.m; proposed expansion is coming up within the same premises.
5.	Source of power	JVVNL

6. Water Requirement

S. No.	Water Consumption	Existing (KLD)	Total After Expansion (KLD)
1.	Domestic purposes	1.5	7
2.	Gardening	1.0	5.0 – recycled water from STP
3.	Industrial Process (Cooling and quenching purposes)	200.0	650.0
Total		**202.5**	**657**
Fresh Water demand		**5.0**	**27**
Recycled water		**197.5**	**630.0**

7. Source of Water: Ground water supply

8. Manpower

Particulars	Existing	Proposed	Total
During Construction Phase	--	30	30
During Operation Phase	120	30	150

9. Wastewater generation

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 6.0 KLD waste water will be generated. Which will be treated into Automatic Control Airlift Crossflow MBR technology 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.

Industrial Waste Water

There is being/will be no industrial effluent generation, as the water from cooling is being/will be recycled. Hence, there will be no any discharge of wastewater outside the company premises; Thus, the unit is being/will be achieving ZLD.

10. Solid waste generation

Solid Waste Generation

Particulars	Unit	Existing	Proposed	Total	Mode of Disposal
Domestic solid waste	Kg/day	18	5	23	disposed off solid waste dump sites
Slag	T/day	3	6	9	Used for road filling
Coal ash	Kg/day	3	11	14	Used for road filling

Hazardous Waste

Hazardous Waste			
Particulars	Category	Quantity	Management

		Used/ Spent oil	5.1	Existing 0.01 KL/ year	Proposed -	Total 0.01 KL/year	Authorized Recyclers
11	Project Cost	Rs. 30.0 Crores (Existing – 19.66 crore, Proposed-10.34 Crore)					
12	EMP costs	Capital cost: Rs 121.74 lac Recurring cost: Rs. 18.65 lac					

1.3 ENVIRONMENTAL MONITORING

For monitoring of the environmental parameters like meteorology, air, water, soil and noise quality, the monitoring stations have been established at different locations in and around the project area. The base line data has been collected in the pre-monsoon season from March, April and May'2022.

Ambient Air Quality

Ambient air quality monitoring has been carried out with a frequency of two days per week at eight locations. The summary of these results for all the locations is presented below. These are compared with the standards prescribed by Central Pollution Control Board (CPCB) for rural and residential zone.

Table No.1.3 Summary of Ambient Air Quality for all the locations

S. No.	Sampling Location		Parameters				
			PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)	CO (µg/m³)
1.	Project Site	Min	71.21	40.26	8.5	16.5	0.38
		Max	95.41	48.44	13.1	25.9	1.38
		Avg.	89.04	43.74	11.18	20.87	0.83
		98th% ile	95.27	48.06	13.01	25.39	1.37
2.	Dehmi Khurd	Min	65.04	35.67	4.31	9.18	0.45
		Max	89.12	57.45	9.76	17.68	0.59
		Avg.	73.96	45.56	7.82	14.56	0.52
		98th% ile	87.69	57.36	9.75	17.42	0.59
3.	Palri	Min	64.58	38.32	4.82	9.23	0.47
		Max	90.58	58.13	9.81	18.15	0.61
		Avg.	74.98	47.39	7.70	14.64	0.53
		98th% ile	89.92	57.93	9.78	18.13	0.60
4.	Chirota	Min	66.58	36.98	6.35	14.69	0.48
		Max	80.56	44.56	12.06	20.28	0.95
		Avg.	72.40	39.27	8.51	17.59	0.76
		98th% ile	79.32	43.32	11.70	20.22	0.94

5.	Lokhanda	Min	57.52	36.72	4.51	9.15	0.45
		Max	86.41	52.95	9.81	17.03	0.61
		Avg.	74.76	46.81	6.86	13.18	0.53
		98th% ile	86.39	52.66	9.77	16.83	0.60
6.	Bagru	Min	54.59	36.15	6.15	15.48	0.49
		Max	73.41	44.15	11.82	20.04	0.76
		Avg.	66.55	40.05	8.12	17.56	0.64
		98th% ile	72.32	43.84	11.56	19.76	0.76
7.	Bari Ka Khera	Min	75.48	45.38	9.25	13.63	0.51
		Max	92.82	52.05	13.6	18.67	1.16
		Avg.	83.40	47.73	11.65	16.61	0.77
		98th% ile	92.34	51.35	13.49	18.67	1.14
8.	Within Industrial area	Min	80.41	45.38	10.52	17.16	0.65
		Max	98.08	55.12	16.05	23.21	0.88
		Avg.	88.57	48.42	13.54	20.02	0.75
		98th% ile	97.92	54.97	16.04	23.12	0.83
NAAQ STANDARDS NAAQS, For 24 hourly monitoring (except CO for Eight hour)			**100**	**60**	**80**	**80**	**02**

Note: **All values are represented in µg/m^3**

All values were found to be well within the latest national standards.

Ground water quality

Eight groundwater samples were collected as grab samples and were analyzed for various parameters. The result indicates that the ground water quality values are below the permissible limits and is suitable for drinking purpose. However, the same shall be suitably pre-treated before Drinking. As per IS 10500.

Noise Quality

The noise monitoring has been conducted for determination of noise levels at eight locations covering 10 km study area. The noise levels at each location were recorded for 24-hrs. The results obtained were compared with the national standards and were found to be within limits

Ecology

The project site is already surrounded by the industrial environment and does not hold

any critical habitat/ecosystem as well as any threatened floral or faunal species. So project site will not have any adverse impact on the environment.

1.4 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The summary of anticipated adverse environmental impacts due to the proposed expansion project and mitigation measures are given below.

1.4.1 Air Environment

PUC certified vehicles is being/will be used. To minimize & control the emission from induction furnace exhaust gases after suction hood will be passed through spark arrester along with bag house before its discharge to atmosphere through stack (30 m). From Re-Heating Furnace, gases passed through gravity chamber, multi cyclone and bag house before its discharge to atmosphere through stack (30 m). The flue gas outlet will be designed to maintain the PM emission level below 30 mg/Nm^3. DG sets will be fitted with adequate stack (10 m from ground level) to take care of particulate & gaseous emission. All roads shall be paved on which movement of raw materials or products will take place. Coal will be stored in covered designated storage area.

1.4.2 Water Environment

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 6.0 KLD waste water will be generated. Which will be treated into Automatic Control Airlift Crossflow MBR technology 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.

Industrial Waste Water

There is being/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 is being/will be achieving ZLD.

1.4.3 Noise Environment

33% of total project area is being/will be under green cover. Earmuffs/earplugs are being/will be provided to all the workers deployed at high noise generating sources. Acoustically insulated cubicles will be provided to operators working near high noise generation sources. Effective preventive maintenance and vibration measurement of all rotating equipments will be done which will help in improvising the plant life and reduce the noise.

1.4.4 Socio-Economic Environment

The requirement of unskilled manpower will be met from nearby villages during construction and operational phase through training and development. The project will also help in generation of the indirect employment apart from direct employment. This will be a positive socio-economic development for the region. There will be a general upliftment of standard of living in the region.

1.4.5 Solid Waste Generation & Disposal

Solid Waste Generation

S. No.	Particulars	Unit	Existing	Proposed	Total	Mode of Disposal
1.	Domestic solid waste	Kg/day	18	5	23	disposed off solid waste dump sites
2	Slag	T/day	3	6	9	Used for road filling
3	Coal ash	Kg/day	3	11	14	Used for road filling

Hazardous Waste					
Particulars	Category	Quantity			Management
		Existing	Proposed	Total	
Used/ Spent oil	5.1	0.01 KL/ year	-	0.01 KL/year	Authorized Recyclers

1.5 ENVIRONMENTAL MONITORING PROGRAMME

Environmental Monitoring Cell

A centralized environmental monitoring cell will be established for monitoring of important and crucial environmental parameters which are of immense importance to assess the status of environment during MS ingots/Billets and rolling mill operation. The following routine monitoring programme as detailed in as under shall be implemented at site. Besides to this monitoring, the compliances to all environmental clearance conditions and regular permits from RSPCB/MoEF shall be monitored and reported periodically.

1.6 ENVIRONMENTAL ACTION PROGRAMME

Amar Pratap Steel (P) Ltd. is quite conscious of its responsibility for maintaining clean and a healthy environment. The total capital cost towards EMP is Rs. 121.74 lac. and recurring cost will be Rs. 18.65 lac. The annual expenditure to be incurred on plantation, maintenance, monitoring and analysis of ambient air, effluent water and soil etc as shown in Table below:

Table 1.5: Annual Expenditure of Environmental Protection Measures

S. No.	Description of Item	COST OF EMP					
		Existing		Proposed		Total	
		Capital Cost	Recurring Cost	Capital Cost	Recurring Cost	Capital Cost	Recurring Cost
1	Air Pollution Control	18.0	2.5	32.0	2.2	50.0	4.7
2.	Water Environment (Existing: Septic tank followed by soak pit, proposed: Installation of Automatic Control Airlift Crossflow MBR STP)	0.5	0.2	7.0	2.0	7.5	2.2
3	Rain water Harvesting (1-Proposed)	--	--	5.0	1.0	5.0	1.0
4	Environmental Monitoring (Air, Water, Noise and Soil)	--	2.0	--	4.0	--	6.0
5	Green Belt	1.0	0.25	15.74	2.0	16.74	2.25
6	Occupational Health and Safety (PPE) (Training, Medical Checkup & Awareness programme)	2.5	0.5	10.0	2.0	12.5	2.5
7	Conservation plan-Schedule I species	--	--	30.0	--	30.0	--
Total		**22.0**	**5.45**	**99.74**	**13.2**	**121.74**	**18.65**

1.7 PROJECT BENEFITS

The PP proposes the following permanent structures within a 10.0 km periphery of the project. On the basis of the preliminary site visit, the proposed infrastructures are as follows:

- ✓ The proposed expansion project aims to provide health camps and access treatment programmes
- ✓ Facility for village schools including classroom/toilet construction, ceiling fans/coolers or books for school library.
- ✓ There will be social benefits from the proposed expansion project.

The underlying benefits through the proposed project are:

- ✓ The proposed expansion project will contribute to gains in national employment and in the gross domestic product.
- ✓ The organization will establish, implement & maintain Occupational health & safety objectives as per norms, at relevant functions & levels within the organization.

1.8 ENVIRONMENT MANAGEMENT PLAN DURING OPERATION PHASE

Table 1.6Environment Management Plan

<table>
<tr><th>Particulars</th><th>Mitigation Measures</th></tr>
<tr><td>Air Environment</td><td>• Storage of coal in covered area.
• PUC certified vehicles are being/will be used.
• The flue gas outlet will be designed to maintain the PM emission level below 30 mg/Nm^3.</td></tr>
<tr><td>Water Environment</td><td>• Domestic Waste water will be treated in STP.
• Rain water harvesting structure will be installed in the unit.</td></tr>
<tr><td>Solid Waste</td><td>Solid Waste Generation
<table>
<tr><th>S. No.</th><th>Particulars</th><th>Unit</th><th>Existing</th><th>Proposed</th><th>Total</th><th>Mode of Disposal</th></tr>
<tr><td>1.</td><td>Domestic solid waste</td><td>Kg/day</td><td>18</td><td>5</td><td>23</td><td>disposed off solid</td></tr>
</table></td></tr>
</table>

							waste dump sites
	2	Slag	T/day	3	6	9	Used for road filling
	3	Coal ash	Kg/day	3	11	14	Used for road filling

Hazardous Waste

Hazardous Waste					
Particulars	**Category**	**Quantity**			**Management**
		Existing	**Proposed**	**Total**	
Used/ Spent oil	5.1	0.01 KL/ year	-	0.01 KL/year	Authorized Recyclers

Noise Pollution	• 33% of total project area will be under green cover. • Acoustic dampeners and insulators will be provided in the foundation and interiors respectively. • Earmuffs/earplugs will be provided to all the workers deployed at high noise generating sources. Acoustically insulated cubicles will be provided to operators working near high noise generation sources. • Effective preventive maintenance and vibration measurement of all rotating equipment's will be done which will help in improvising the plant life and reduce the noise.

1.9 CONCLUSIONS

It is predicted that socio-economic impact due to this project will positively increase the employment opportunities for local inhabitants. There are no resettlement and rehabilitation issues involved in this project. The project infrastructures will be of use to people of the area. The contribution to the revenue of the State Govt. will be put in public welfare and augment growth. The entire project area is devoid of any endangered flora and fauna. Thus, proposed expansion project is not likely to affect the environment or adjacent ecosystem adversely.

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