

Project: Expansion of TMT Bars, Jaipur

Promoter: Kamal Sponge Steel and Power Limited

Project Summary

PROJECT SUMMARY



Gaurang Environmental Solutions Pvt. Ltd.

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PROJECT SUMMARY

1.1 INTRODUCTION

Kamal Sponge Steel and Power Limited is in operational since February' 2006 and situated at Plot No. A-160, RIICO Industrial Area, Bagru Extension-II, Bagru District, Jaipur, Rajasthan, which involves production of MS Ingots to the tune of 30,000 TPA and CTD Bar Steel, to the tune of 29,400 TPA. The unit has dismantled induction furnace and there is/will be no production of MS ingots. Now the company enhance the production of only TMT Bars from 29,400 TPA to 99,000 TPA. Total project cost after expansion will be Rs. 23.4 Crores. (Existing-Rs. 6.49 Crore, Proposed- Rs. 16.91 Crore).

The project activity is listed at category-'B' under item 3(a)-Metallurgical industries (Ferrous & Non-Ferrous) 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	Plot No. A-160, RIICO Industrial Area, Bagru Extension-II,		
A	Plot No.	Bagru		
B	Tehsil	Jaipur		
C	District	Rajasthan		
D	State	26°48'23.11"N		
E	Latitude	75°34'3.25"E		
F	Longitude	22,750 sq.m; proposed expansion is coming up within the same		
H	Total Plant Area	premises.		
2.	Nearest Habitation	Bagru:2.3 km, W		
3.	Nearest Major Town	Jaipur: 25.0 km, ENE		
4.	Nearest Highway	Particulars	Distance	Direction
		NH-48	2.5	N
		NH11C	2.6	W
5.	Nearest Railway Station from Project site	Particulars	Distance	Direction
		Sheo Singh Pura Railway Station	12.0	N
		Jaipur Junction	25.3	ENE
6.	Airport	Jaipur International Airport ~23.3 km in ENE 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:		
		S. No.	Particulars	Distance (Km) (From Project Boundary)
		RF		
		1.	Muhana R.F.	13.3 ESE
11.	Nearest streams / Rivers / water bodies (from Project Site)	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
		<i>*Source: - All Distances are taken with respect to Toposheet.</i>		
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.		

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 TMT Bars from 29,400 TPA to 99,000 TPA				
2.	Location	Plot No. A-160, RIICO Industrial Area, Bagru Extension-II, Bagru District, Jaipur, Rajasthan				
3.	Production & its Capacity	S. No.	Name of Products	Production Capacity (TPA)		
				Existing	Proposed	Total
		1	TMT Bars	29,400	69,600	99,000
			Reheating Furnace (Capacity, Number)	15 TPH x 1 No	No Change in Reheating furnace capacity	15 TPH x 1 No.
4.	Land requirement	22,750 sq.m; proposed expansion is coming up within the same premises.				

5. Source of power JVVNL

S. No.	Water Consumption	Existing (KLD)	Total After Expansion (KLD)
		3.0	9.0
1.	Domestic	3.0	9.0
2.	Gardening	2.0	4.5 – recycled water from STP
3.	Industrial Process (Cooling and quenching purposes)	150.0	600
	Total	155.0	609
	Fresh Water demand	9.0	29.0
	Recycled water	146.0	580.0

7. Source of Water Ground water supply

Particulars	Existing (Nos.)	Proposed (Nos.)	Total (Nos.)
	Manpower	Construction Phase-NA Operation Phase- 70	Construction Phase - NA Operation Phase-130

9. Wastewater generation

Domestic Waste water
Approximately 2.0 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 7.0 KLD 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.

S. No.	Particulars	Quantity			Mode of Disposal
		Existing	Proposed	Total	
		1.	Domestic waste (Kg/day)	10	
2.	Coal ash (T/day)	1.5	2.5	4	Sent to road filling

Hazardous Waste

Particulars	Category	Quantity	Management



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		Existing	Proposed	Total	
	Used/ Spent oil	5.1	-	0.01 KL/year	0.01 KL/year Authorized Recyclers
<i>The same does not require authorization under HoW Rules 2016 quantity anticipated is less than 5 KL/annum.</i>					
11	Project Cost	Rs. 23.4 Crores. (Existing-Rs. 6.49 Crore, Proposed- Rs. 16.91 Crore)			
12	EMP costs	Capital cost: Rs 132.44 lac Recurring cost: Rs. 22.45 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 winter season from December'2022 to February'2023.

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/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)	CO (µg/m ³)
1.	Project Site	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	16.60	0.76
		98 th % ile	92.34	51.35	13.49	18.67	1.14
2.	Dehmi Khurd	Min	63.24	28.99	7.36	11.79	0.82
		Max	77.15	37.13	9.82	14.62	1.97
		Avg.	70.28	32.52	8.21	13.07	0.99
		98 th % ile	76.37	36.76	9.43	14.58	1.13
3.	Palri	Min	63.43	28.15	6.46	10.80	0.27
		Max	75.09	36.60	8.20	14.22	0.51
		Avg.	69.33	31.85	7.35	12.30	0.40
		98 th % ile	74.66	36.11	8.16	14.19	0.51
4.	Chirota	Min	68.62	33.80	8.42	15.07	0.76
		Max	80.26	45.50	10.47	18.46	1.50
		Avg.	73.55	39.33	9.18	16.52	0.96
		98 th % ile	79.84	44.89	10.33	18.43	1.36
5.	Lokhanda	Min	60.98	24.61	5.77	10.69	0.50
		Max	75.02	37.58	7.13	14.15	1.03



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6.	Bagru	Avg.	63.93	31.11	6.65	12.36	0.70
		98 th % ile	74.49	37.06	7.10	14.11	0.98
		Min	64.44	28.10	7.20	12.00	0.24
		Max	76.66	36.30	8.38	14.29	0.46
		Avg.	69.92	32.83	8.04	12.99	0.36
7.	Bari Ka Khera	98 th % ile	76.17	36.23	8.38	14.22	0.46
		Min	65.04	35.67	8.19	9.18	0.45
		Max	89.12	57.45	12.72	17.68	0.59
		Avg.	73.96	45.55	10.22	14.56	0.52
8.	Within Industrial area	98 th % ile	87.69	57.36	12.53	17.42	0.59
		Min	78.63	39.93	11.99	20.83	0.47
		Max	95.12	55.93	21.01	29.81	1.82
		Avg.	88.01	47.80	16.15	24.93	0.91
NAAQ STANDARDS For 24 hourly monitoring (except CO for Eight hour)		98 th % ile	94.96	55.54	20.52	29.31	1.55
			100	60	80	80	02

Note: All values are represented in $\mu\text{g}/\text{m}^3$
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. 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/Nm³. DG set 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

Approximately 2.0 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 7.0 KLD 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

S. No.	Particulars	Solid Waste Generation			Mode of Disposal
		Existing	Proposed	Total	
1.	Domestic waste (Kg/day)	10	20	30	Will be disposed off solid waste dump sites
2.	Coal ash (T/day)	1.5	2.5	4	Sent to road filling

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 rolling mill operation. Monitoring and compliances to all environmental clearance conditions and regular permits from RSPCB/MoEF shall be monitored and reported periodically.

1.6 ENVIRONMENTAL ACTION PROGRAMME

Kamal Sponge Steel and Power Limited is quite conscious of its responsibility for maintaining clean and a healthy environment. The total capital cost towards EMP is Rs. 132.44 lac. and recurring cost will be Rs. 22.45 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	20.0	3.0	38.0	5.5
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	45.04	5.0	46.04	5.25
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)	--	--	23.4	--	23.4	--
Total		22.0	5.45	110.44	17.0	132.44	22.45

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 1.6 Environment Management Plan

Particulars	Mitigation Measures					
Air Environment	<ul style="list-style-type: none"> 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/Nm³. 					
Water Environment	<ul style="list-style-type: none"> Domestic Waste water will be treated in STP. Rain water harvesting structure will be installed in the unit. 					
Solid Waste	S. No.	Particulars	Quantity			Mode of Disposal
			Existing	Proposed	Total	
	1.	Domestic waste (Kg/day)	10	20	30	Will be disposed off solid waste dump sites
2.	Coal ash (T/day)	1.5	2.5	4	Sent to road filling	
Noise Pollution	<ul style="list-style-type: none"> 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

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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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