

Environmental Impact Assessment

Executive Summary

Proposed

3 X 9 MVA Submerged Arc Furnace

Padma Iron Products Private Limited

Project Site

Mouza & Village : Mahespur
P.S. : Salanpur
District : Burdwan
West Bengal

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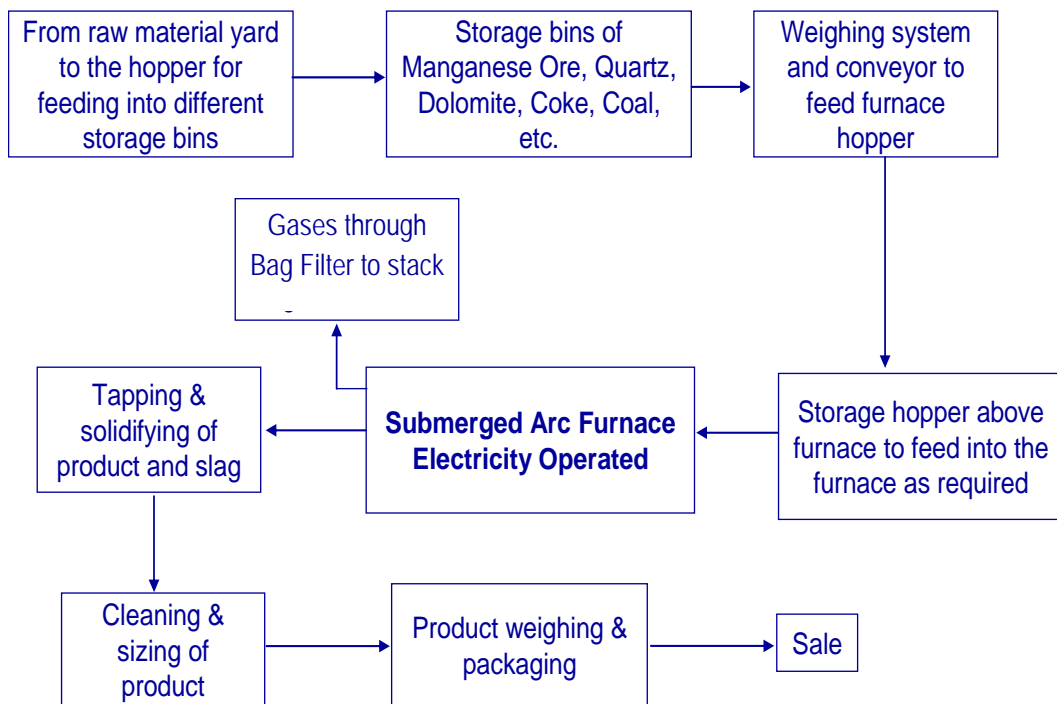
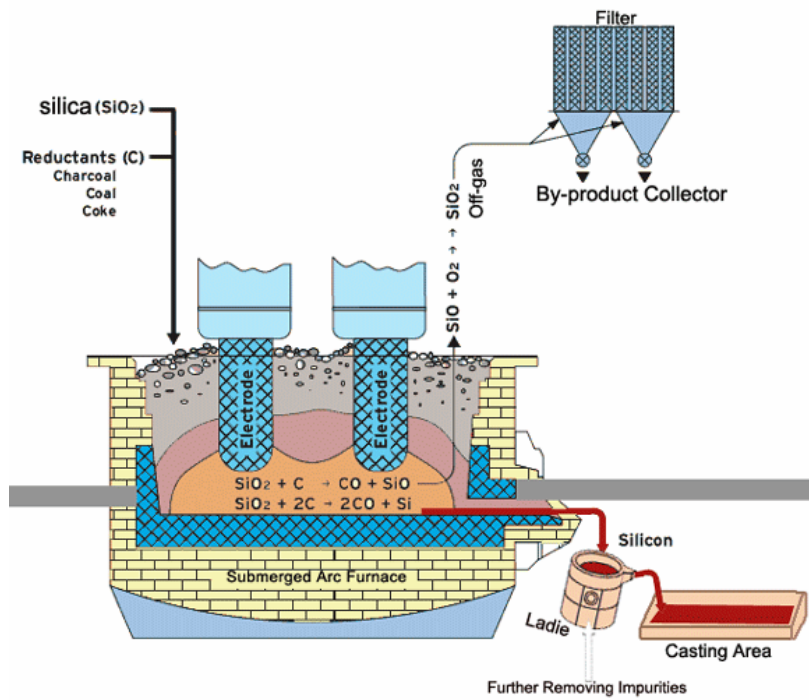


September 2011

Project Summary

Proposed Project	3 X 9 MVA Submerged Arc Furnace			
Project Proponent	Padma Iron Products Private Limited			
Project Location	Mouza & Village : Mahespur, P.O. & P.S. : Salanpur District : Burdwan, West Bengal.			
Product	Items		Quantity (TPA)	
	Ferro Manganese		55,440	
	Silico Manganese		39,600	
	Ferro Silicon		19,800	
Raw Materials	Raw Materials Requirement	Ferro Manganese (55,440 TPA)	Silico Manganese (39,600 TPA)	Ferro Silicon (19,800 TPA)
	Manganese Ore	102,010	15,682	-
	Fe Mn Slag	-	54,252	-
	Coke Breeze	22,176	14,256	-
	Quartz	-	16,276	20,592
	Dolomite	17,464	3,960	-
	Iron Scrap	-	-	11,405
	Pet Coke	-	-	10,573
Make-up Water	Quantity : 30 KLD ; Source : Borewell / Rainwater Harvesting			
Land	Total Land Area : 9.86 acres ; Greenbelt : 3.25 acres			
Air Pollution Control Measures	Submerged Arc Furnace (Bag Filter) & Raw Material Handling Section (Dry Fogging System)			
Solid Waste	Fines collected at Bag Filter from Submerged Arc Furnace (1,500 TPA) will be recycled in the respective process. Fe-Mn Slag (48,000 TPA) will be utilized in Si-Mn production. Si-Mn Slag (43,500 TPA) will be utilized in road / area / land development.			
Power Requirement & Source	Consumption : 27.75 MVA ; Source : Damodar Valley Corporation (DVC) D.G. Set : 2 X 125 KVA & 1 X 250 kVA			
Total Project Cost	₹ 60.00 Crores			
Pollution Control Measures Cost	Capital Cost : ₹ 4.5 Crore; Recurring Cost : ₹ 45 Lakhs			
Applicability of EIA Notification 2006	Category A [3(a) : Metallurgical Industry (Ferrous & Non Ferrous)]			

Process Flow Diagram of Submerged Arc Furnace



Baseline Environmental Study (10 km radius March – May 2011)

Air : The ambient air quality at 8 locations has been monitored. The average concentration of PM₁₀, PM_{2.5}, SO₂ & NO₂ ranged between 36-72 µg/m³, 22-40 µg/m³, 6-12 µg/m³ & 17-35 µg/m³ respectively.

Noise : Ambient noise level have been recorded in the 10 km radius of the project site.

Water : Surface & Ground water samples have been collected and the results obtained.

Ecology : A baseline survey was carried out to appraise the terrestrial flora and fauna.

Socio-economy : The total population of the Salanpur Block is 156,320. Sex ratio is 968 female per 1000 male. Population density of the study area is 1,157 people per sq. km. The overall literacy rate is about 78.2 %. The working population comprise about 48,081. The principal language is Bengali. The principal staple food is rice. The primary sources of drinking water are dug wells & tube wells. In some villages & urban area, supply water is also available. All the above mentioned data is as per Census 2001.

Environmental Impacts & Management Plan

Air Pollution Control Measures : To control source emissions from the Submerged Arc Furnace & Sinter Plant, Bag Filter will be installed. The emissions would be released through stack of adequate height above ground level for proper dispersion. The average incremental concentration of PM₁₀ will reach a level of 2.6 µg / m³ while that of PM_{2.5} will reach a level of 2.2 µg / m³. Dry fogging system will be installed & commissioned to reduce fugitive emission in the raw materials handling area, transfer points & work zone area.

Wastewater Treatment : The plant has been designed for maximum recycling including dust suppression & green belt development after proper treatment.

Solid Waste Management : The slag (48,000 TPA) generated due to the production of Ferro Manganese will be used in the production of Silico Manganese. The slag (43,500 TPA) generated due to the production of Silico Manganese will be used as boulders in land / area / road development. Besides, the fines collected at Bag Filter (1,500 TPA) will be recycled in the process.

Green Belt Development : Out of 9.86 acres of total available land, a total greenbelt area of 3.25 acres has been considered.

Rainwater Harvesting : Rainwater Harvesting Pond will be developed to reduce consumption of fresh water in the proposed project.

Conclusion

In view of the proposed mitigation measures considered for the proposed 3 X 9 MVA Submerged Arc Furnace the environmental impacts due to this project on the existing environment has been considered. The environmental management plan will be implemented effectively to comply with statutory limits. Overall, the project proposal is justified taking into account the potential economic & social development including environmental impacts.

