

**December 2019**

## **EXECUTIVE SUMMARY**

**OF**

**EXPANSION OF EXISTING PRODUCTION**

**From**

**1000 TPD SPONGE IRON, 1000 TPD BILLETS WITH  
50 MW CAPTIVE POWER PLANT**

**To**

**3000 TPD SPONGE IRON, 3000 TPD TMT RODS WITH  
50 MW CAPTIVE POWER PLANT**

**At**

**PLOT No. F-1,2,3,8,9,10, ADD. MIDC PHASE – II, AND  
ADGACEENT GUT NOs. 46 & 63, D53/1, D52/6 & D52/7,  
VILLAGE DAREGAON, TEHSIL: JALNA,  
DIST: JALNA, MAHARASHTRA**

**Project**

**Proponent:**

**M/s. Om Sairam Steels & Alloys**

**Prepared**

**By**

**Pollution & Ecology Control Services, Dhantoli, Nagpur.**

**NABET No. : QCI/NABET/EIA/1720/RA010**

## EXECUTIVE SUMMARY

### i. Project Name & Location

The existing and proposed project is located at Plot no. F-1,2,3, 8, 9 & 10 of MIDC Phase II and adjacent Gut No. 46 & 63, D53/1, D52/6, D52/7 under village Daregaon, Taluka Jalna, District, Jalna of Maharashtra over an area of 6.86 Ha. is been allocated for the project as well as development of integrated greenbelt of the Industrial Area by MIDC. The whole land is in possession of the industry.

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

EC Details	Induction Furnace	Sponge iron	CPP	Rolling Mills (TMT Bars)
J-11011/883/2007 dt. 30.10.2008	1 x25T, 1x 30 T	2 x500TPD	-	1000 TPD
SEAC-2009/CR-200/TC-2; dt. 29.12.2010	Additional 2 x 30 T IF along with existing 1 x 25 T & 1 x 30T Furnaces	No Change	-	1000 TPD
J11011/57/2015-IA-II(I) dt.22.01.2018	Additional 1 x30 T	No Change	50 MW (24 MW FBC + 26 MW WHRB)	1000 TPD
EC Amendment dt. 17.09.2019 Vide proposal No.IA/MH/IND/62864/2015 dt.09.10.2018	Configuration change from 1 x 25T + 4 x 30T to 1 x 40T & 3 x 30T furnace capacity	No Change	No Change	1000 TPD
Implementation as on Date	1 x 25 T, 1 x40 T & 1 x 30T	No Change	No Change	1000 TPD
Proposed Capacity	2 x 40 T & 3 x 60 T by modification of existing 1 x 25 T furnace to 40 T furnaces & all 30 T furnace to 60 T furnace	No Change	No Change	2000TPD
<b>Final Configuration after modification &amp; up gradation</b>	<b>2 x 40 T &amp; 3 x 60 T</b>	<b>2 x 500 TPD</b>	<b>50 MW</b>	<b>3000 TPD</b>

**iii(a) Requirement of Land**

The total project area is 5.1522 Ha along with two extra land (1.7078 Ha) allocated by MIDC for integrated Greenbelt Development of the Industrial Area. The distribution of which is given in a table below. So, total area is 6.86 Ha.

Out of 6.86 Ha of land 2.74 Ha of land is dedicated for greenbelt development, which shall be retained as is even after the proposed expansion program, as because the proposed expansion uses the same unit footprint of the existing plant to do the necessary changes.

**(b) Raw Materials**

<b>Raw Materials (TPD)</b>	<b>Total Raw Material in present EC Conditions in TPA</b>	<b>Mode of Transportation</b>	<b>Source</b>
Iron Ore Pellets	495000	Road	Local market
Indian Coal	153300	Road	Chandrapur
DRI Grade Coal (B Gr)	396000	Road	Raigarh
Iron Scrap	665000	Road	Mumbai and Local Sources
Pig Iron	105000	Road	Raipur, Bellari
Silico Manganese	10000	Road	Local Purchase
Dolomite	16500	Road	Bhilwara
<b>Total Quantity By Road</b>	<b>1,840,800</b>		

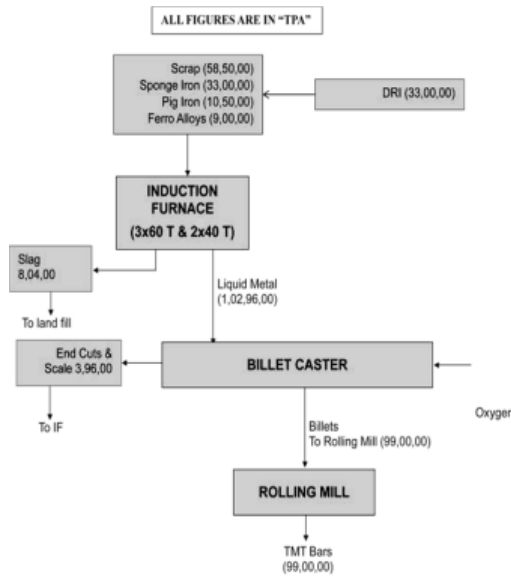
**(c) Water**

The total water requirement is 832 m<sup>3</sup>/day and will be met by MIDC.

**(d) Power Supply**

The total Power requirement will be 58 MW out of which 50 MW will be self-generated and 8 MW will be obtained from MSEDCL. Two DG sets as standby of 750 KVA.

**iv.(a) Process Description**



**(b) Gaseous Emission**

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

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

**(c) Liquid Effluent**

- Total liquid sewage generation will be approx.25 m3/day.
- Domestic sewage will be treated in Extended Aeration System STP of capacity 25 m3/d which includes tertiary treatment i.e., multi grade filter and charcoal filter.
- The treated wastewater shall be used for gardening resulting to achieve zero discharge, except in monsoon.
- In monsoon STP Overflow will be discharged in MIDC sewer line.

**(d) Solid & Hazardous Waste**

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S. No.	Waste	Qty	Treatment	Disposal	Remark
1	STP Sludge	1 Kg/day	Treated	Own	Own garden
2	Office	50 Kg/day	--	Sales	Dry waste mainly paper
3	Packing	50 Kg/day	--	Sale	Sale, Recycle
4	Process	12 TPM	Refractory	Sales	Inert
		748 TPD	Dolochar	Reuse	Will be used in FBC
		118 TPD	Ash	Sale	Will be sent to brick manufacturer
5	Slag	236 TPD	Segregation	Sale	Sale, Can be used as alternative building material after due leachate test.

Sl.No	Hazardous Waste	Quantity	Utilization
1	Spent/ Used Oil	1.2KL/annum	Stored separately and incinerated in Kiln
2	Used Cotton	12Kg /annum	Stored separately and incinerated in furnace

(e) Material Balance

DRI [330 days]			
INPUT IN TPA		OUTPUT IN TPA	
PELLETE	478500	DRI	330000
DOLOMITE	16500	CHAR	247000
LOCAL COAL	396000	GASEOUS	347300
AIR	52500	DRI DUST	19200
	<b>943500</b>		<b>943500</b>

SMS (TPA)			
INPUT		OUTPUT	
DRI	330000	HOT METAL	1029600
PIG IRON	105000	SLAG	80400
SCRAP	665000		
Silico Mn	10000		
	<b>1110000</b>		<b>1110000</b>

ROLLING MILL (TPA)	
INPUT	OUTPUT

## Executive Summary

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HOT METAL	1029600	TMT	990000
		Scrap	39600
	<b>1029600</b>		<b>1029600</b>

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

M/s Om Sairam Steels & Alloys Pvt. Ltd. follows 3R's of water conservation i.e. Recirculation, Reclamation, and Reuse of water M/s Om Sairam Steels & Alloys Pvt. Ltd. have a motto of "ZERO WATER IS CHARGE" i.e. Elimination of discharge of waste water (treated or untreated) into the external environment.

**Vi Capital Cost of the Project & Estimated time of Completion**

The proposed expansion project has an estimated project cost of Rs. 103.85 Cr.

Sl. No.	Activities	Duration
1	<b>Engineering</b>	
	Concept Design	15 days
	Basic Engineering	30 days
	Detailed Engineering	60days
2	<b>Civil Work</b>	
	Finalization of layout	90 days
	Setup of plant & auxiliary machineries	120 days
3	<b>Statutory Clearance for establishment</b>	
	State clearance for establishment	30 days
	State EC Clearance	90 days
4	<b>Procurement</b>	
	Place orders for long lead Equipments	90 days
	Place orders for commodity items	30 days

vii. M/s Om Sairam Steels & Alloys Pvt. Ltd. comes under Industrial Estate area so following information as per Tor Executive Summary Point no vii not required.

**Viii Baseline Environmental Data**

**(a) AAQ**

The baseline air quality data was interpreted along with secondary data of Jalna, Maharashtra as available in website (<https://airpollutionapi.com/aqi/india/maharashtra/jalna>). As per the secondary data the average PM<sub>10</sub> is 69.52 µg/m<sup>3</sup> and as per primary data, the average PM<sub>10</sub> ranges from 42.4 µg/m<sup>3</sup>to 62.2 µg/m<sup>3</sup>.The secondary data is collected from traffic junction areas for which the values are higher. However the buffer area of Jalna Industrial Estate has rural environmental condition for which the values are as low as 42.4 µg/m<sup>3</sup>. The Bhilpuri Kh.

Area is in farther west of the project site as well as the industrial area and the wind direction is from west to east in study period for which the PM<sub>10</sub> values are lowest and can be considered as background value for the area. In similar context the Pm<sub>2.5</sub> values are more over consistent across the study area with a minimum of 18.9 µg/m<sup>3</sup> & maximum of 27.9 µg/m<sup>3</sup> therefore it may be infrared that the respirable particulate concentration is unanimously same across the regional profile. The concentration of the SO<sub>x</sub> is higher on the windward side of Chandanzira, Jalna and Dawalwadi villages whereas is minimum leeward side of Bhilpuri Kh & Gundelwadi. The local and daily variation of NO<sub>x</sub> is due to mostly traffic volume in the areas of sampling and period of sampling. In an overall sense the AAQ are well within the NAAQS standard for the area.

**(b) Surface & Ground Water Quality**

For Baseline study of surface water, resources are selected from different nearby Talab & River within 10km radius from the project site to know the surface water quality. Considering the immediate vicinity and 3km radius distance from the project boundary there is no perennial stream of water body other than unevenly distributed ponds and open harvesting structure are utilised for local watershed management. Considering as zero discharge for the project, any surface water impacts is quiet impossible other than any probable seepage and percolation to nearby static water bodies of ponds and tanks therefore for surface water sample mostly ponds and water tanks are considered within 6 to 7 km radius and two location from Kundalika River were choosen for upstream & downstream conditions considering the flow of water.

For Baseline study of ground water, resources are selected from different nearby open well and bore well within 10km radius from the project site to know the ground water quality. The groundwater resource of the area is very valuable for local livelihood as this is a aried to semi aried climatic zone with meagare rainfall of 450 to 530mm per year. The locations of the borewells were choosen from as near as 2 Km to as far as 7 km from the project site. Due to either dried up well or non functional well conditions only 5 identifiable operating public borewells were choosen for the sampling.

**(c) Soil**

Type of Soil	Lithic Ustorthents	Vertic Haplusteps
Appearance	Sandy Clay Silt	Clay Sand Silt



<b>Chemical Properties</b>	Acidic Soil	Slightly Acidic to alkaline
<b>Bulk Density</b>	1.45 mg/m <sup>3</sup>	1.39mg/m <sup>3</sup>

The pH of soil samples is Normal to Saline which is from 7-7.7. Soil texture is Silty Clay Loam. The level of nitrogen in most of the soil samples is very high. Organic Carbon is very high. Water Holding capacity is ranges from 16-24.6 in eight location.

**(d) Flora & Fauna**

Different flora & fauna are collected during the baseline period from Dec-2018- Feb 2019.

**(e) Socio Economic**

SIA project area covers villages like Daregoan, Khadagoan, Dawalwadi, Kharpudi and Jawasgaon. As per the census 2011 the total households are 1903 with the total population of 9925 from which male population is 5524 and female population is 4401. In Daregoan highest numbers of households are 712 and highest numbers of peoples are 3349 and in Jawasgaon lowest number HHs are 179 and lowest number populations are 825. The female population dominates male population.

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

The impacts during the project operation on the ambient air quality of the study area are classified based on discharge to atmosphere, from stationary and mobile sources. Air emissions from the existing TMT bar manufacturing facility, are particulates, carbon monoxide, sulfur dioxide, nitrogen oxides, and small quantities of chlorides and fluorides. There are negligible amounts of toxic metals such as nickel, hexavalent chromium, lead, cadmium.

Untreated waste water will contaminate surrounding soil and water environment. Waste water generated from the plant is classified into two streams:

- Industrial process water and
- Domestic sewage water.

There is no unmanaged generation of solid and liquid waste from the plant which impacts land environment. Thus, no impact on land is envisaged due to the proposed operations of TMT bars steel plant.

As there are all type of community people living in the nearby area of the project location for maintaining their day to day life requirement they are depend upon the project for job and business.

**xi Emergency Preparedness Plan**

The Risk management measures for the proposed project activities require adoption of best safety practice at the respective construction zones within the Works boundary. In addition, the design and engineering of the proposed facilities would take into consideration of the proposed protection measures for air and water environment.

In a DRI plant like this one, it is imperative that accidents occurring due to unforeseen acts and events will not affect the surrounding areas. Therefore an onsite emergency plan for prevention and mitigations of accidents will be enough to cater for unforeseen acts and events that may occur.

1. The emergency preparedness team will be constituted within the organization consisting of the senior officials from managerial level from the different department like production, Health and Safety, Environmental, Material Handling, Security to handle the emergency.
2. The team will meet once in three months to discuss the possible or probable causes / instance leading to any disaster that may occur in and around the plant premises.
3. The team will assess the required resources to deal with the situation that may be identified as above.
4. The team leader will lay down a detailed procedure or oral information to the each member to follow in case of any impending or possible or actual disaster.
5. The team will conduct mock drill once in six months to understand the practical problems that may arise while implementing the emergency preparedness
6. Action plan including the response time and take necessary steps to make the system effective.

7. The team will make the necessary recommendation /suggestions to the Management for identifying/monitoring /dealing with any possible or probable disaster.
8. The minutes of the meeting of the team shall be prepared including the probable cause of incident, response time and corrective & preventive actions required to be taken to avoid the reoccurrences of the same and kept as record.
9. The team may draw an action plan and modify the same from time to time.
10. The Emergency Preparedness Team will come into force in case of any disaster by establishing the control room at an appropriate place nearer to the affected area.
11. The team shall record the actual performance/procedure followed/short comings while dealing with any actual disaster, which will be discussed at various levels to strengthen the plan and approach.
12. The Plant Manager shall inspect all the places where disaster occurred, along with Emergency preparedness Team.
13. He shall ensure that all the affected places are safe to resume the normal works, and the give permission to start the plant operation.

**Xii Public Hearing**

It is a draft report.

**xiii. CSR Plan**

<b>Year Wise CSR Expenditure (Rs. In Lakhs) as on date</b>				
<b>SI No</b>	<b>Field</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19 (Proposed)</b>
1	Health	5.10	4.63	6.0
2	Education	1.00	10.52	11.0
3	Communication/ Road	6.00	0.00	0.00
4	Drinking Water	12.00	10.73	17.0
5	Culture Activities /Awareness Programme	2.50	5.21	3.0
6	Sports/Youth development	0.00	7.78	8.00
7	Afforestation	15.5	2.68	6.0

8	Rural Development /Infrastructure	3.40	20.05	10.0
<b>Total</b>		<b>45.50</b>	<b>61.6</b>	<b>61.0</b>

**xiv Occupational Health Measures**

Occupational health hazard in an integrated steel plants are of two types.

- a) Common to all shops including Raw material/Product handling  
b) Hazards specific to individual Major Shop
- a) **Common Health hazards** in an Integrated Steel Plant are due to dust in eye contact, skin contact, inhalation and ingestion.
- b) **Common safety hazards in an Integrated Steel Plant are** - Posture, Excess Load, Harmful Contact By Cranes : Defective Tackles, Slings, Excess Load, Wrong Signaling, Working Under Load, Unskilled Operator, Defects in Crane, Improper / Unauthorized Handling and most important is stress.

**xv Post Project Monitoring Plan**

Sl. No	Particulars Monitoring		Frequency	Method of Sampling	Parameter
<b>I</b>	<b>Air Pollution &amp; Meteorology</b>				
	<b>A</b>	<b>Stack Monitoring</b>			
	1	Stacks	Continuous	Online CEMS	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub>
	<b>B</b>	<b>Air Quality Monitoring</b>			
	1	Locations in and around the plant	Continuous	24 hr continuously	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub>
	2	Work zone monitoring	Twice in a month	High volume sampler	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub>
	<b>C</b>	<b>Fugitive Emissions</b>			
	1	Raw material handling, feed area, and other areas specified by SPCB	Twice in a month	8-hour basis with High Volume Sampler	PM <sub>10</sub> , PM <sub>2.5</sub>
<b>II</b>	<b>Water and Wastewater Quality</b>				
	<b>Water Quality</b>				
	1	Ground water	Once in a season	Grab	(Class C) and IS: 10500, 1986
	2	Surface water	Once in a season	Grab	Parameters specified in IS: 2296
<b>III</b>	<b>Ambient Noise Levels</b>				
	1	On the Plant Boundary at	Once in three	24 hr continuous	Noise levels in

		three locations	months for the various Units of the plants	with one hr interval	dB(A)
	2	Surrounding Area	Once in each season for ambient noise levels	24 hr continuous with one hr interval	Noise levels in dB(A)
<b>IV</b>	<b>Soil Quality</b>				
		In and around the plant Area	Once in Pre-Monsoon and Post Monsoon season	Grab	Physico-chemical parameters and heavy metals