

PRE-FEASIBILITY REPORT

FOR

THE PROPOSED

**EXPANSION OF EXISTING INTEGRATED SPONGE IRON PLANT, STEEL
MELTING SHOP (INDUCTION FURNACE) WITH CAPTIVE POWER PLANT**

CAPACITY:

STEEL BILLETS FROM 216000 MTPA TO 330000 MTPA

SPONGE IRON FROM 198000 MTPA TO 297000 MTPA

CAPTIVE POWER FROM 24.0 MW TO 53.0 MW

AT

PLOT NO. AL – 5, SECTOR NO. 23, GIDA INDUSTRIAL ESTATE,

VILL- SAHBAJGANJ & DOMHARMAPHITEHSIL – SAHAJANWA

DISTRICT- GORAKHPUR (U.P)

PIN - 273209

BY

GALLANTT ISPAT LIMITED

Ministry of Environment and Forests
Pre-Feasibility Report as per Ministry of Environment and Forests

Contents	Details
1. Executive Summary	<p>M/s Gallantt Ispat Limited Plot No. AL – 5, Sector No. 23, GIDA Industrial estate, Vill- Sahbajganj & Domharmaphi Tehsil – Sahajanwa District- Gorakhpur (U.P) Pin - 273209</p> <p>Location Co-ordinates: Latitude : 26°45’33.64” N Longitude: 83°12’02.50” E Elevation : 254 ft</p> <p>Total project cost :- Rs 201.93 Crores</p>
2. Introduction of the project Background information	<p>Steel is a basic commodity for all industrial activities. Quantum of its consumption is considered as an index of industrial prosperity. Since independence, there has been substantial growth. From 1.5 Mt in 1950-51, India’s steelmaking capacity has increased to about 43 Million Tons/year at present. In spite of such a growth, the per capita steel consumption in India continues to remain at a low level of around 20 Kg only, as compared to 110 kg as compared to global average. India’s economy is also posed for sharp upturn. This is expected to lead, to a substantial improvement in the per capita consumption of steel. Further, while India is endowed with rich deposits of raw materials and its labour rate continues to be cheap on international basis, its contribution with 20% of world population is only of the order of 2.6% of world steel production. Therefore, under the current liberalized economy, private entrepreneurs can avail of the favourable situation for investment in the steel industry of the country.</p> <p>The Company has selected modified IF route for steel making. This route of steel making has the benefits of lower per ton investment, appropriate for small steel plant, lower power consumption and environment friendly process in comparison</p>

Contents	Details
	<p>to other processes of steel making.</p> <p>During 2008-09, it is estimated that 1074 units with a capacity of 22.18 million tonne were in operation. The total production of induction furnace units registered a growth of 6.62% during 2008-09, producing 18.05 million tonne against a production of 16.93 million tonne in 2007-08.</p> <p>India was the fifth largest producer of crude steel in the world in 2009, based on rankings released by World Steel Association. Domestic crude steel production grew at a compounded annual growth rate of 8.6 per cent during 2004-05 to 2008-09. This growth was driven by both capacity expansion (from 47.99 million tonne in 2004-05 to 66.343 million tonne in 2008-09) and improved capacity utilisation. India, the world's largest producer of direct reduced iron (DRI) or sponge iron, is also expected to maintain its lead in the near future. Sponge iron production grew at a CAGR of 11 per cent to reach a level of 21.09 million tonne in 2008-09 compared to 12.54 million tonne in 2004-05. India is expected to become the second largest producer of steel in the world by 2018-19, provided all requirements for fresh capacity creation are met.</p> <p>Indian steel industry has just come out of the slowdown that affected its performance during 2008-09. Domestically, 2009 ended on a relatively better and encouraging note, with CSO reporting an overall improvement of economic situation through its GDP data, which showed a robust 7.9 per cent growth during July-September 2009-10. IIP too had registered a strong 7.6 per cent growth during April-November 2009-10, further bolstering the idea that the demand side is back on stable footing. For steel, this is of key importance and the growth rates registered for leading end-use segments like manufacturing, consumer durables, construction, the stable growth of the service sector and agriculture sector spell good news. April-December 2009 provisional data released by JPC indicates a 7.8 per cent rise in consumption of total finished steel. Globally also there are signs of improvement in economic conditions and firming up of demand and prices.</p>

Contents	Details
<p>i. Identification of project and project proponent. In case of mining project, a copy of mining lease/letter of intent should be given.</p>	<p>Gallantt Ispat Limited (GIL) is a well established public limited company, listed on both the premier stock exchanges of India viz. Bombay Stock Exchange Limited and National Stock Exchange of India Limited. GIL is one of the companies of “Gallantt Group” which was incorporated in 2005 at Kolkata, with an object to carry on the business of manufacturers, producers etc. in all kinds of iron and steel products such as sponge iron, pig iron, bars, billets, Captive power plant etc. However with passing of time, promoters of the Company started exploring new areas of operation and exploring new areas of operation and have entered into Real Estate business.</p> <p>Gallantt Ispat Limited is one of the fast and aggressively growing organizations, which has captured a substantial market of Sponge Iron, M.S., Billets, TMT Bars and wheat flour products in the state of Uttar Pradesh within a short span of time. The group has about three decades of experience in steel and food processing industries and is well known by its brand name “Gallantt” which is ISO 9001:2008 & ISI certified. We are currently catering to various reputed clients such as Shalimar Corp Ltd., Viraj Construction Pvt. Ltd., Parasnath Developers, Omega Developers & Builders, BBD University, Uttar Pradesh Rajkiya Nirman Nigam and other State Government Departments.</p> <p>Company sells substantial part of its production in U.P. acknowledging the region’s enormous potential for steel consumption, we have planned to expand the present installed capacity. Such a step would require a huge investment within a short span of two years, for which Company is well equipped with. At Gallantt Ispat, we have evolved an agile business model, which can respond to the rapidly evolving market realities with speed and has helped us to consistently achieve volume guidance over the years. During past few years, despite sluggish demand, our model of marketing achieved higher sales target.</p>
<p>ii. Brief description of nature of the project.</p>	<p>In view of the tremendous market potential of Iron & steel and wheat products promoters have decided to expand the capacity of the existing Integrated Steel Plant and Power Plant for increase in production of Sponge Iron (DRI), Steel Billets with Captive Power Plant. Expansion in the existing plant would</p>

Contents	Details									
	<p>improve the overall profitability of the project making it financially more viable.</p> <p>The in-house consumption of entire sponge iron for manufacturing of billets and captive power plant utilizing the waste heat rejects from the sponge iron would improve the overall profitability of the project.</p> <p>The modules of the projects and their relative advantages are as follows:</p> <table border="1" data-bbox="566 688 1536 1852"> <thead> <tr> <th data-bbox="566 688 654 772">S. No</th> <th data-bbox="654 688 865 772">Division</th> <th data-bbox="865 688 1536 772">Rational</th> </tr> </thead> <tbody> <tr> <td data-bbox="566 772 654 1409">1.</td> <td data-bbox="654 772 865 1409">Sponge Iron</td> <td data-bbox="865 772 1536 1409"> <p>To produce 297000 MT of sponge iron (Modifying the existing capacity of one Kiln of 300 MT/Day to 450 MT/Day and addition of one more Kiln with capacity of 450 MT/Day will be installed in place of 300 MT/Day Sanctioned) to be utilized in Steel Melt Shop (Induction Furnace with Continuous Casting) to produce Steel Billets. Further, the waste heat of sponge iron kilns shall be utilised by the captive power plant for power generation.</p> <p>Total Number of Working Days will be 330 Days.</p> </td> </tr> <tr> <td data-bbox="566 1409 654 1852">2.</td> <td data-bbox="654 1409 865 1852">Steel Melting Shop</td> <td data-bbox="865 1409 1536 1852"> <p>To produce Steel Billets (By replacing existing 4 Induction Furnaces of 15 MT/Heat to 2 Induction Furnaces of 30 MT/Heat & 02 of 20 MT/Heat along with 01 Nos induction furnace of 15 MT as standby on 330 working days & 10 Heats) to meet the requirements of Rolling Mill. It will consume Sponge Iron produced in the existing DRI division at expanded capacity.</p> </td> </tr> </tbody> </table>	S. No	Division	Rational	1.	Sponge Iron	<p>To produce 297000 MT of sponge iron (Modifying the existing capacity of one Kiln of 300 MT/Day to 450 MT/Day and addition of one more Kiln with capacity of 450 MT/Day will be installed in place of 300 MT/Day Sanctioned) to be utilized in Steel Melt Shop (Induction Furnace with Continuous Casting) to produce Steel Billets. Further, the waste heat of sponge iron kilns shall be utilised by the captive power plant for power generation.</p> <p>Total Number of Working Days will be 330 Days.</p>	2.	Steel Melting Shop	<p>To produce Steel Billets (By replacing existing 4 Induction Furnaces of 15 MT/Heat to 2 Induction Furnaces of 30 MT/Heat & 02 of 20 MT/Heat along with 01 Nos induction furnace of 15 MT as standby on 330 working days & 10 Heats) to meet the requirements of Rolling Mill. It will consume Sponge Iron produced in the existing DRI division at expanded capacity.</p>
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	<p>3. Captive Power Plant</p>	<p>For co-generation of power and utilization of waste heat coming out from DRI kilns and solid waste (Char) coming out from DRI Kilns. This will reduce the overall cost of power significantly. Entire power shall be consumed by the unit itself.</p> <p>Existing total Power generation from AFBC and WHRB is 24 MW. After expansion it will be 53.0 MW. Electricity generated will be utilised for in house purpose and surplus electricity will be sold to state power corporation.</p>
<p>iii. Need for the project and its importance to the country and or region.</p>	<p>The Indian economy is rapidly growing and is emerging as the second largest developing economy of the world, which has a great impact on domestic consumption of steel as well as export potential to other countries. As a result of this, the demand for iron & steel remains extremely good, this would continue for next 10 years if not less, since the per capita consumption of steel in India is still very low compared to other developed countries. For rapid development of economy and infrastructure of the country it is necessary to increase the production of steel within the country.</p> <p>The steel industry in India is rapidly expanding. It is forecast that steel production will raise from 38 million tones in 2005 to 68 million tones in 2015. Extensive capacity increases are planned for this same period. Despite the stellar increase in production, India's share of global crude steel output is forecast to rise to just under 4% in the next ten years. The Indian steel ministry plans to raise the export share from 15% at present to 24% in the next 15 years.</p>	
<p>iv. Demand-Supply Gap.</p>	<p>Supply - Demand Scenario</p> <p>With the rapid development of Infrastructure and manufacturing sector, the Iron and steel industry is poised for an accelerated growth. Steel demand in the country is increasing at an average rate of 10% and is likely to remain in</p>	

Contents	Details
	10-12% range at least for the next decade. In order to meet the steadily growing steel demand in the country, domestic steel producing capacity is required to be higher than 110 MTPA within next three years and, 150 MTPA by the year 2018-19. Indian economy is growing at more than 10% rate, steel demand and supply will grow in the same way. As good quality iron ore deposits are depleting fast beneficiation technologies will have to be adopted to meet iron ore demand. Therefore good yield of beneficiation process generally around 70 % will make this technology economically viable.
v. Imports vs. Indigenous production.	Only indigenous production.
vi. Export Possibility.	No
vii. Domestic/export Markets.	Domestic Only
viii. Employment Generation (Direct and Indirect) due to the project.	Direct employment :- for expansion additional 140 Persons will be required. Total Number of manpower after expansion will be 396 No.s. Indirect employment :- approx 500 persons
3. Project Description	
i. Type of project including interlinked and interdependent projects, if any.	Category 'A' schedule in 3(a), Expansion of existing Sponge iron plant (DRI), Steel Melting shop (Induction furnace) with Captive power plant.
ii. Location (map showing general location, specific location, and project boundary & project site layout) with coordinates.	Location map Enclosed (Google EARTH MAP),
iii. Details of alternate sites considered and the basis of selecting the proposed site,	Expansion will be done within existing premises.

Contents	Details																												
<p>particularly the environmental considerations gone into should be highlighted.</p>																													
<p>iv. Size or magnitude of operation.</p>	<p>Expansion of Sponge iron plant (DRI with pelletization), Steel Melting shop (Induction furnace) with Captive power plant. Proposed expansion of plant is given below :</p> <table border="1" data-bbox="586 638 1528 1113"> <thead> <tr> <th>Unit</th> <th>Existing Capacity</th> <th>Proposed Capacity</th> <th>Total Capacity after Expansion</th> </tr> </thead> <tbody> <tr> <td>SMS</td> <td>216000 MTPA</td> <td>114000 MTPA</td> <td>330000 MTPA</td> </tr> <tr> <td>DRI</td> <td>198000 MTPA</td> <td>99000 MTPA</td> <td>297000 MTPA</td> </tr> <tr> <td colspan="4" style="text-align: center;">CAPTIVE POWER PLANT</td> </tr> <tr> <td>AFBC</td> <td>16 MW</td> <td>19 MW</td> <td>35 MW</td> </tr> <tr> <td>WHRB</td> <td>8 MW</td> <td>10 MW</td> <td>18 MW</td> </tr> <tr> <td>TOTAL</td> <td>24 MW</td> <td>29 MW</td> <td>53 MW</td> </tr> </tbody> </table>	Unit	Existing Capacity	Proposed Capacity	Total Capacity after Expansion	SMS	216000 MTPA	114000 MTPA	330000 MTPA	DRI	198000 MTPA	99000 MTPA	297000 MTPA	CAPTIVE POWER PLANT				AFBC	16 MW	19 MW	35 MW	WHRB	8 MW	10 MW	18 MW	TOTAL	24 MW	29 MW	53 MW
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<p>v. Project description with process details (a schematic diagram flow chart showing the project layout, components of the project etc. should be given)</p>	<p>Process enclosed with detailed project report.</p>																												

Contents	Details				
vi. Raw material required along with estimated quantity, likely source, marketing area of final products, Mode of transport of raw Material and Finished Product.	Sr. No.	Material	Existing Consumption	Total Consumption after expansion	Source
	Sponge Iron Plant				
	1	Iron Ore	198000 MTPA	237600 MTPA	Open Market
	2	Pellets	158400 MTPA	237600 MTPA	Self / From Manufacturer
	3	Coal	198000 MTPA	267300 MTPA	Import/ auction
	4	Dolomite	9900 MTPA	14850 MTPA	Open Market
	Steel Melt Shop Division (Induction Furnace with Continues Caster)				
	1	Sponge Iron	198000 MTPA	297000 MTPA	Self
	2	MS Scraps	72845 MTPA	109267 MTPA	Open market
	3	Ferro Alloy	3240	4950	Open Market
	Captive power Plant (AFBC)				
	1	Coal	38016 MTPA	124740 MTPA	Auction
	2	Rice Husk	12672 MTPA	83160 MTPA	Open Market
	3	Dolochar	26038 MTPA	41580 MTPA	Self
	vii. Resource optimization/recycling and reuse envisaged in the project, if any, should be briefly outlined.	<p>Water : As this project is based on Zero Discharge, 100 % recycling of water will be done in the process.</p> <p>Solid waste:</p> <ul style="list-style-type: none"> • Dolochar (126 TPD) will be reused as raw material within the plant for power generation through AFBC boiler. • Slag (108 TPD) will be used in filling of Low lying area and 			

Contents	Details
	<p>in Road Making.</p> <ul style="list-style-type: none"> Total ash (226.0 TPD) from the Boiler and APCS Will be sold to brick manufacturing unit or used as binding material for land filling.
viii. Availability of water its source, Energy/power requirement and source should be given.	<p>Existing Industry is present in Non Notified “Safe” Zone as per CGWA. Water requirement met through existing tube well.</p> <p>Existing water requirement-</p> <ul style="list-style-type: none"> Industrial use: 1680 M3/Day Domestic Use: 20M3/Day <p>Expansion Water requirement</p> <ul style="list-style-type: none"> Industrial use: 1540 M3/Day <p>Total Water Requirement after expansion -</p> <ul style="list-style-type: none"> Industrial use: 3220 M3/Day Domestic Use: 20 M3/Day <p>Total Water requirement after expansion : 3240 M3/Day</p>
ix. Quantity of wastes to be generated (liquid and solid) and scheme for their Management/ disposal.	<p>Liquid effluents- Proposed project is based on ZERO discharge. Waste water generated from the process will be treated in neutrilisation pit and After treatment 100 % recycling will be done.</p> <p>Solid Waste (after expansion)-</p> <ul style="list-style-type: none"> Dolochar (126 TPD) Will be reused as raw material within the plant for power generation through AFBC boiler. Slag (108TPD) will be used in filling of Low lying area and in Road Making. Total ash (226 TPD) from the Boiler and APCS Will be sold to brick manufacturing unit or used as binding material for land filling.
x. Schematic representations of the feasibility drawing which give information of EIA purpose.	It will be enclosed in DPR/EIA report.

Contents	Details
4. Site Analysis	
i. Connectivity.	Railway Station: Sahjanwa –2 km Airport: Gorakhpur-25 km
ii. Land Form, Land use and Land ownership.	Plain land, Industrial Land is registered under Gallantt Ispat Limited.
iii. Topography (along with map).	Location Map (Google Earth map) enclosed
iv. Existing land use pattern (agriculture, non-agriculture, forest, water bodies (including area under CRZ)), shortest distances from the periphery of the project to periphery of sanctuary, eco from the HFL industrial area, be given.	Land use pattern will be Study and Enclosed in EIA Study report. No any sanctuary, eco-sensitive zone is present within 5 KM of the project site.
v. Existing Infrastructure.	Existing industrial plant.
vi. Soil classification	Silty/Clay/Sand
vii. Climatic data from secondary sources.	Max. Temp:43 Degree C Mini. Temp: 3.7 Degree C Ave Temp: 27 Degree C Relative Humidity: 65 – 85 %
viii. Social Infrastructure available.	Road, School & electricity.
5.Planning Brief	
i. Planning Concept (type of industries, transportation etc) Town and Planning/ Development authority	Transportation by Road and Railways.

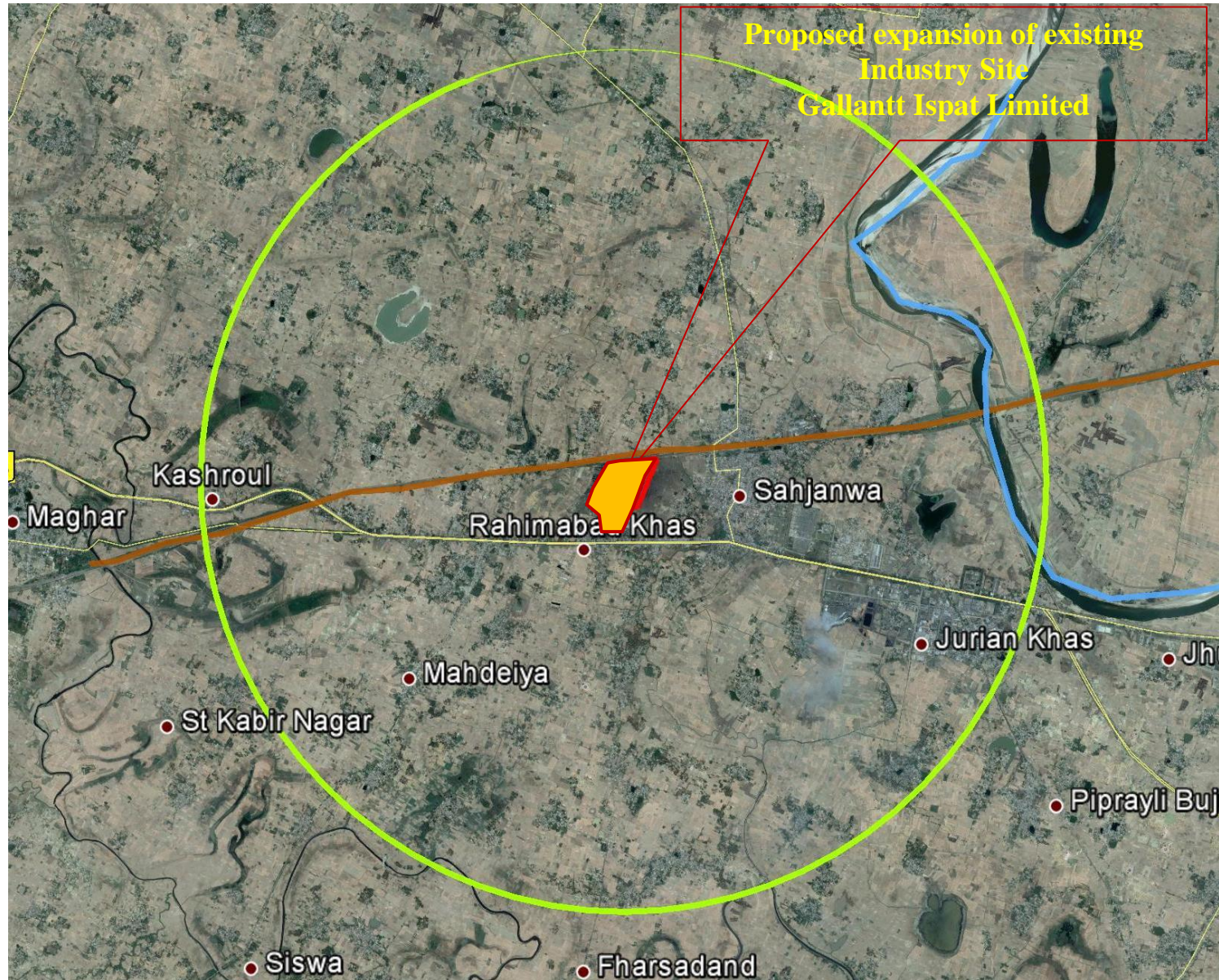
Contents	Details
Classification	
ii. Population Projection	For expansion additional 140 Persons will be required. Total Number of manpower after expansion will be 396 No.s. Indirect employment :- approx 500 persons.
iii. Land use planning (breakup along with green belt etc).	65% of area is used for plant machinery, Storage of raw Material, infrastructure and storage final products. 35% of total project land is already developed as green belt.
iv. Assessment of Infrastructure Demand (Physical & Social).	Local labours & construction material.
v. Amenities/Facilities.	Company's employees and consumer shall be provided.
6. Proposed Infrastructure	
i. Industrial Area (Processing Area).	Industrial land
ii. Residential Area (Non Processing Area).	Available with existing Plant / near by village
iii. Green Belt.	Green belt development: 35 % (13.99 ha.) of total area (40.50 ha.) of existing land.
iv. Social Infrastructure.	Proposed expansion will lead to the development of certain local ancillary facilities and consequent employment opportunities. Further the proposed expansion will also lead to the development of market, trade centres, banking activities etc.
v. Connectivity (Traffic and Rail/Metro/Water ways etc)	Railway Station: Sahjanwa –2 km Airport: Gorakhpur-25 km National Highway : 28 - 0.2km
vi. Drinking Water Management (Source water)	Ground water from existing tube well,
vii. Sewerage System.	Septic tank / Sock pit available for domestic effluent treatment.
viii. Industrial Waste	Solid Waste :

Contents	Details
Management.	<ul style="list-style-type: none"> • Dolochar (126 TPD) Will be reused as raw material within the plant for power generation through AFBC boiler. • Slag (108 TPD) will be used in filling of Low lying area and in Road Making. • Total ash (226 TPD) from the Boiler and APCS will be sold to brick manufacturing unit or used as binding material for land filling. <p>Hazardous Waste Spent oil, Used oil and oily waste shall be provided to authorized recyclers/ reprocessors.</p>
ix. Solid Waste Management.	<ul style="list-style-type: none"> • Dolochar will be reused as raw material within the plant for power generation through AFBC boiler. • Slag will be used in filling of Low lying area and in Road Making. • Total ash from the Boiler and APCS Will be sold to brick manufacturing unit or used as binding material for land filling.
x. Power Requirement & Supply / source.	<p>Power requirement 45 – 48 MW after Expansion. The above demand will be met from own Captive power plant. DG Set for power backup of auxiliary load. DG sets Details :</p> <p>(1 No) 1250 KVA (Existing) (1 No) 1000 KVA (Existing) (1 No) 630 KVA (Existing) (1 No) 380 KVA (Existing) (02Nos) 1250 KVA (Proposed)</p>
7. Rehabilitation and Resettlement (R&R) Plan	
i. 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	No R & R

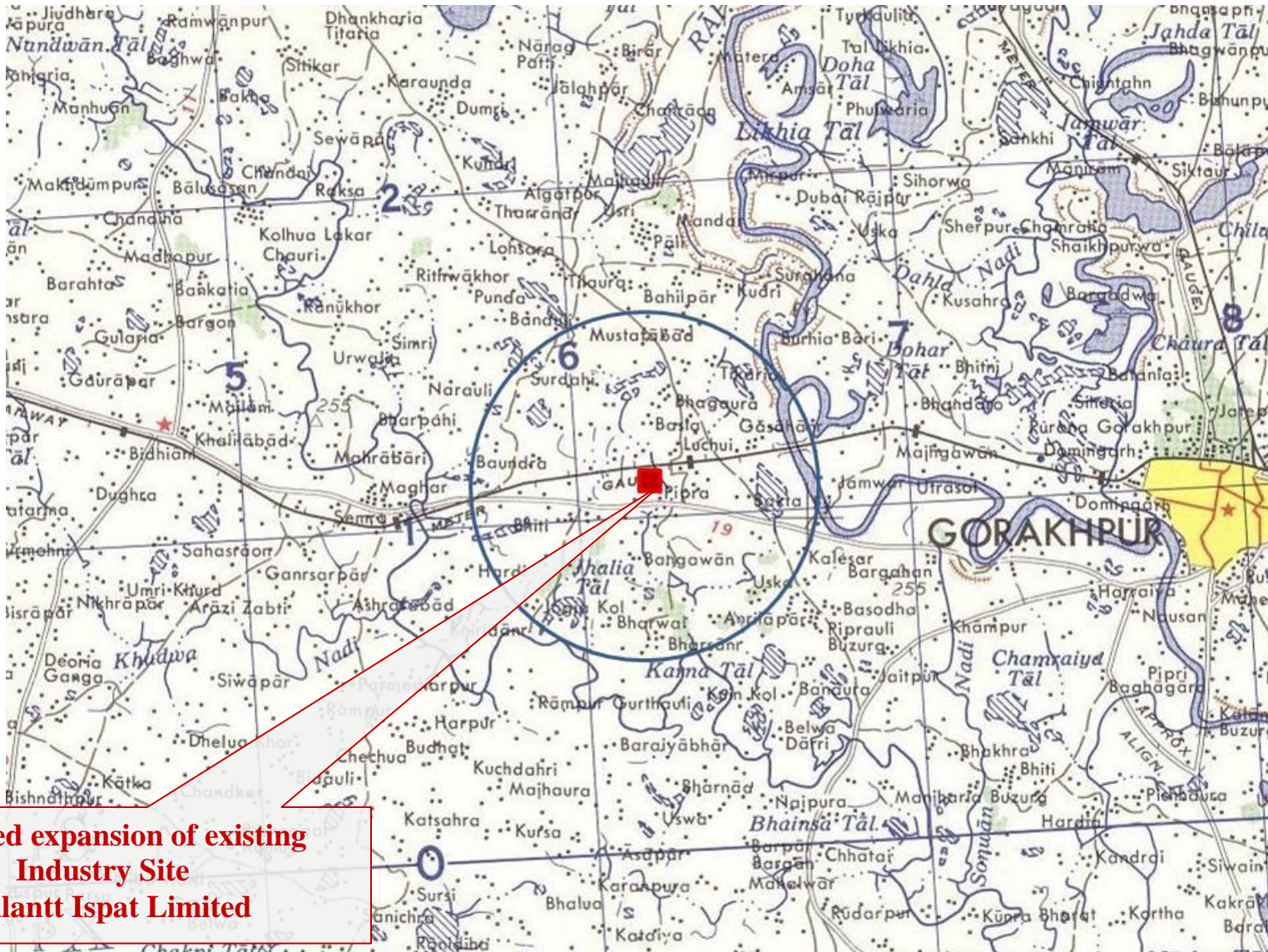
Contents	Details
given).	
8. Project Schedule & Cost Estimates	
ii. Likely date of start of construction and likely date of completion (Time schedule for the project to be given).	After receipt of NOC & Environmental Clearance.
iii. Estimated project cost along with analysis in terms of economic viability of the project.	Rs 201.93 Crores
iv. Cost toward Environment Protection	Rs 400.00 Lakh
9. Analysis of proposal (Final Recommendations)	
i. Financial and social benefits with special emphasis on the benefit to the local people including tribal population, if any, in the area.	<p>Financial Benefits: Benefits and advantages of expansion of existing plant: a) It will full fill the Demand Supply Gap. b) It is help in increment of Life style of Local People By providing Jobs.</p> <p>Social Benefits: Greater employment for local populations</p> <p>Environmental benefits: a) Low emission of air pollutant (ESP installed) . b) It is a Brown field project. c) No waste water will be generated and 100 % recycling will be done.</p> <p>Other Benefits: Revenues to the State and Central ex-chequers.</p>

Contents	Details
	Over all development of District- Gorakhpur in particular and Uttar Pradesh State in general.

EXISTING INDUSTRY SITE WITHIN 5 KM RADIUS (Satellite Image)



EXISTING INDUSTRY SITE WITHIN 5 KM RADIUS (Topo Map)



**Proposed expansion of existing
Industry Site
Gallantt Ispat Limited**

GALLANTT



PROJECT REPORT

GALLANTT ISPAT LIMITED

Sector 23, GIDA Industrial Area, Sahjanwa
District: Gorakhpur, Uttar Pradesh.

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1.0 PROJECT AT A GLANCE

- 1.01 NAME OF THE COMPANY : **M/S. GALLANTT ISPAT LIMITED,**
- 1.02 ADDRESS OF THE COMPANY : **HEAD OFFICE**
8th Floor, Gallantt Landmark
Bank Road, Gorakhpur - 273 001
- REGISTERED OFFICE**
1, Crooked Lane, Room No. 222 & 223
2nd Floor, Kolkata – 700069.
- FACTORY & OFFICE**
AL-5 Sector 23
GIDA Industrial Area, Sahjanwa,
District - Gorakhpur
Uttar Pradesh - 273209
- 1.03 CONSTITUTION : Public Limited Company
- 1.04 DATE OF INCORPORATION : 11/02/2005
- 1.05 PROMOTERS AND DIRECTORS : Mr. Chandra Prakash Agrawal
Mr. Santosh Kumar Agrawal
Mr. Prem Prakash Agarwal
Mr. Nitin Kandoi
- 1.06 PRODUCTS : i) M.S. Billets (Induction Furnace)
ii) Sponge Iron
iii) Captive Power Plant
- 1.07 CAPACITY

CAPACITY IN MTPA

UNITS	EXISTING SANCTIONED CAPACITY	PRAPOSED CAPACITY	TOTAL CAPACITY MT/MW
1. SMS (Induction Furnace)	216000	114000	330000
3. SPONGE IRON PLANT	198000	99000	297000
4. CAPTIVE POWER PLANT	24 MW	29 MW	53 MW

PROJECT COST :**(Rs. In Cr)**

SL.NO.	PARTICULARS	SMS	DRI	CPP	MFA	Total
1)	LAND AND SITE DEVELOPMENT	0.00	0.00	0.00		0.00
2)	CIVIL WORK & BUILDING	10.00	14.00	14.00	6.00	52.00
3)	PLANT AND MACHINERY	29.40	28.23	88.50	11.80	157.93
4)	MISCELLANEOUS FIXED ASSETS	0.00	0.00	0.00		0.00
6)	CONTINGENCIES	0.00	0.00	0.00		0.00
	TOTAL FIXED COST	39.40	42.23	107.50		201.93
7)	MARGIN MONEY					0.00
	TOTAL	39.40	42.23	102.50	17.80	201.93

MEANS OF FINANCE :

1)	PROMOTER'S CONTRIBUTION -					Total
	Share Holder's Fund / Internal accruals etc					101.93
	Term Loan					100.00
	Interest Free Loan against VAT					0.00
	Capital Subsidy					0.00
	Transport Subsidy					0.00
	Advances					0.00
	TOTAL					201.93

2.0 INTRODUCTION / BUSINESS OVERVIEW

Gallantt Ispat Limited (GIL) is a well established public limited company, listed on both the premier stock exchanges of India viz. Bombay Stock Exchange Limited and National Stock Exchange of India Limited. GIL is one of the companies of "Gallantt Group" which was incorporated in 2005 at Kolkata, with an object to carry on the business of manufacturers, producers etc. in all kinds of iron and steel products such as sponge iron, pig iron, cast iron, bars, rods, billets, Captive power plant etc. However with passing of time, promoters of the Company started exploring new areas of operation and exploring new areas of operation and have entered into Real Estate business.

Gallantt Ispat Limited is one of the fast and aggressively growing organization, which has captured a substantial market of Sponge Iron, M.S., Billets, TMT Bars and wheat flour products in the state of Uttar Pradesh within a short span of time. The group has about three decades of experience in steel and food processing industries and is well known by its brand name "Gallantt" which is ISO 9001:2008 & ISI certified. We are currently catering to various reputed clients such as Shalimar Corp Ltd., Viraj Construction Pvt. Ltd., Parasnath Developers, Omega Developers & Builders, BBD University, Uttar Pradesh Rajkiya Nirman Nigam and other State Government Departments.

The group has come a long way since 1984, when it made a simple and humble beginning by setting up a small industrial venture, to presently running an integrated steel Plant with Captive Power Plant and Flour Mill in the state of Uttar Pradesh. The Steel Unit and Flour Mill Unit along with own railway siding in Gorakhpur with an investment of Rs.350 Crore, is the only one of its kind in the State of U.P., Bihar, Uttaranchal, Haryana and Delhi. The in house consumption of entire Sponge Iron to manufacture billets which is further rolled into TMT bars along with installation of captive power plant to utilize the waste heat improves profitability of the company thereby making it economically more viable. This growth has been achieved by a maintained strategy of continual investment in our manufacturing facilities and technology. As a testimony to this "Gallantt" has become one of the major secondary steel producers in India.

Installation of private railway siding for easy movement of raw material and finished goods has incurred lower logistics costs and proved enormous advantages to the Company and kept other similar business houses in the region very far and out of competition.

Company sells substantial part of its production in U.P. acknowledging the region's enormous potential for steel consumption, we have planned to expand the present installed capacity in a phased manner. Such a step would require a huge investment within a short span of two years, for which Company is well equipped with. At Gallantt Ispat, we have evolved an agile business model, which can respond to the rapidly evolving market realities with speed and has helped us to consistently achieve volume guidance over the years. During past few years, despite sluggish demand, our model of marketing achieved higher sales target.

AWARDS

As a result of the extraordinary and enviably outstanding performance of the group within a short span of time, Uttar Pradesh "Udyami Samman – 2011" has been awarded by Zee Media House which was presented by Shri Shri Prakash Jaiswal, then Hon'ble Coal Minister, Government of

India and again awarded for "Best Performing Company -2013 in Uttar Pradesh" by Sahara Samay Media House presented by Shri Akhilesh Yadav, Hon'ble Chief Minister of U.P. Gallant Group has been listed on India's Super Rich List at 188th position in 2014 by the Business World Magazine.

EXPERTISE OF MANAGEMENT

Executive Directors and Senior Management Personnel responsible for strategic planning are competent and expert enough to take real time decision. They have vast knowledge about the Sales and Marketing, Productions, Finance Management. Management of the Company has been owning and running steel and agro units for decades and are aware of business nuisance. Rapid growth in turnover, profitability and timely repayment of loan are results of superb control of the management personnel of the Company and these are indicators of the ability of the management in forecasting and decision making. Under the able and noble guidance of Mr. C.P.Agrawal, Mr.S.K.Agrawal, Mr.P.P.Agrawal and Mr. Nitin M. Kandoi the Company has achieved several milestones and marching ahead on the road to progress exploring new horizons.

3.0 THE MANAGEMENT

Chandra Prakash Agrawal, Chairman & Managing Director

Aged about 59 years, C.P. Agrawal is possessing multifunctional experience of more than thirty years. He is very well versed in all aspects of marketing, finance, costing, technical matters and administration. In his term of office spanning nine years, he has contributed extensively towards the growth of the Company and has been actively responsible for the installation implementation and functioning of units of the project of the Company and attainment of the highest standards of quality. By focusing on key areas such as Finance, ERP implementation, Value Engineering, Process Documentation, Environment Health and Safety measures, he has significantly strengthened the foundation of the Company. The turnover of the Company has increased manifold under his guidance. Being the 'Key Person' and 'a man of action', he is heading the General Administration and Finance of the Group. The modest beginning under his able guidance has made the group emerge as one of the fastest growing.

Santosh Kumar Agrawal, Director – Sales

Santosh Kumar Agarwal has more than 35 years of experience in the Steel and Agro Industries. He was closely associated with Gallantt Udyog Limited as Managing Director and during his tenure of service, Company achieved a high level of turnover and growth. He is looking after the sales and day to day management of the flour mill division of the company. His vast experience will be of enormous help for the company's smooth running.

Prem Prakash Agrawal, Whole-time Director

Having an aggregate experience of more than twenty five years in the manufacturing of Wheat Flour Products and more than a decade in the steel industry, Prem Prakash Agrawal manages the functioning of various departments in the organization such as Sales & Marketing, Financial Matters, Customer Relationship Management, Estimation and day to day administration. His valuable contributions towards the growth of the Company is commendable as he has been actively involved in all the activities of the company shoulder to shoulder with other officers for

the installation, Implementation and functioning of units of the project of the Company to attain the best quality. The Company has streamlined the process and achieved great administration and discipline within the organization under his guidance.

Nitin M Kandoi, Director - Operations

Nitin Kandoi has been actively involved and immersed in the operations of the steel manufacturing facility of Gallantt Udyog Limited since 1995. His active involvement in setting up of the operations of our Company has been instrumental in the implementation of technological advances made in the manufacturing processes. Under his Directorship, the company has accomplished and achieved various targets and plans. Company also achieved higher levels of growth.

His expertise in the steel and power businesses has been instrumental in contributing to the growth of the Company. Mr. Kandoi manages the operation and functioning of steel and power plants, besides Purchase and procurement departments of the Company.

4.0 DETAILS OF THE PROJECT

The Indian economy is rapidly growing and is emerging as the second largest developing economy of the world, which has a great impact on domestic consumption of steel as well as export potential to other countries. As a result of this, the demand for iron & steel remains extremely good, which would continue for next 10 years if not less, since the per capita consumption of steel in India is still very low compared to other developed countries. For rapid development of economy and infrastructure of the country it is necessary to increase the production of steel within the country.

In view of the tremendous market potential of iron & steel and wheat products promoters have decided to expand the capacity of the existing Integrated Steel Plant and Power Plant for increase in production of Sponge Iron (DRI), Steel Billets, Re-rolled products (TMT Bars & Structural) with Captive Power Plant. Expansion in the existing plant would improve the overall profitability of the project making it financially more viable.

The in-house consumption of entire sponge iron for manufacturing of billets, which would further be rolled into TMT bars and captive power plant utilizing the waste heat rejects from the sponge iron would improve the overall profitability of the project.

The modules of the projects and their relative advantages are as follows:

S. No	Division	Rational
1.	Sponge Iron	To produce 330000 MT of sponge iron (Modifying the existing capacity of one Kiln of 300 MT/Day to 450 MT/Day and addition of one more Kiln with capacity of 450 MT/Day in lieu of the already sanctioned 300 MT/Day) to be utilized in Steel Melt Shop (Induction Furnace with Continuous Casting) to produce Steel Billets. Further, the waste heat of sponge iron kilns shall be utilised by the captive power plant for power generation.
2.	Steel Melting Shop	To produce Steel Billets (By replacing existing 4 Induction Furnaces of 15 MT/Heat to 5 Induction Furnaces of 20 MT/Heat on 330 working days) to meet the requirements of Rolling Mill. It will consume Sponge Iron produced in the proposed DRI division.
3.	Captive Power Plant	For co-generation of power and utilization of waste heat coming out from DRI kilns and solid waste coming out from DRI Kilns. This will reduce the overall cost of power significantly. Entire power shall be consumed by the unit itself.

4.1 ENVIRONMENT CLEARANCE

We have been issued Environmental Clearance No. J-11011/229/2008 IA II (I) dated 02.02.2009 as under:

S. No.	Unit	Facility	Sanctioned Capacity	Products to be manufactured	Installed Capacity
1	Sponge Iron Plant along with Pre-heating and On-line palletizing Plant with a capacity of 1,98,000 MTPA (2 X 300 TPD)	Sponge Iron Plant	198000 MTPA	Sponge Iron MTPA	99000 MTPA
		Iron Ore Pellet	99000 TPA	Iron Ore Pellet	Not Installed
2	M.S. Billets via induction Furnace & Caster Machine Route (4 x 15T)	Induction Furnace	2,16,000 MTPA	Steel Billets	216000 MTPA
3	Captive Power Plant	WHRB Boiler	8 MW	Power	18 MW
		FBC Boiler	16 MW		

Now we are proposing additional installation and modification of existing capacity as under:

S. No.	Proposed Unit	Sanctioned Capacity	Installed Capacity	Proposed Capacity	Total Manufacturing Capacity (Sanctioned+ Proposed)
1	Sponge Iron Plant with a capacity of 2,97,000 MTPA (2 X 450 TPDx330 days)	198000 MTPA	99000 MTPA	99000 MTPA	297000 MTPA
2	M. S. Billets via induction Furnace & Caster Machine Route (2x30MT & 2x20MT) (1x15MT as Stand By) x 10 Heatx330 Days)	216000 MTPA	216000 MTPA	114000 MTPA	330000 MTPA
3	Captive Power Plant				
	WHRB Boiler	8 MW	8 MW	10 MW	18 MW
	AFBC Boiler	16 MW	10 MW	19 MW	35 MW

5.0 PLANT CAPACITY & MANUFACTURING PROCESS

5.01 PLANT CAPACITY

Based on the existing demand of the products consumption pattern, the plant capacity has been worked out on 330 days, triple shift basis. There are many inter-related factors, which will affect the output of the plant.

Attainment of plant capacity depends on various activities. It needs co-ordination among different section and maximum capacity can be achieved after few years. Capacity Utilization also depends on power availability. Considering all the parameters, practical capacity utilization has been considered.

5.02. Steel Melt Shop (Induction Furnace)

Company proposes to change the Induction Furnace capacity from 15 MT/Heat x 4 to 30 MT x 2 & 20 MT x 2 capacity of new power savings technology making total manufacturing capacity of Steel Melt Shop unit to 3,33,000 MTPA having Induction Furnace route along with continuous casting machine. Company having sanctioned capacity of 4 Nos. of Induction Furnaces of 15 MT/Heat capacities vide Environmental Clearance No. J-11011/229/2008 IA II (I) dated 02.02.2009.

Selection of Equipment

A. Medium Frequency Induction Furnace:

Medium Frequency Induction Furnace Plant will have 4 Nos. Induction Furnaces and these will utilize:-

- | | | |
|---|---|----------|
| i) M. S. Scrap / C. I. Scrap / Pig Iron | - | 20.10% |
| ii) Continuous Feeding of DRI | - | 79.99% |
| iii) Melting and Tapping from Induction Furnace | - | 144 Min. |

The induction melting technology has brought a significant revolution where it has been proved that the steel produced out of sponge iron mixed with Cast Iron and M.S. Melting Scrap/Pig iron coupled with electric induction furnace, medium frequency, constant power track has become formidable process and can offer better economics at a relatively smaller scale operations.

The process involves the charge mix of Raw material mainly Sponge Iron, C. I. Scrap / M. S. Scrap, into molten bath with constant power track through Solid State generator converting A.C. Power into D.C. Power and again to convert the same into A.C. Power after changing the frequency of cycle in between 250 to 500 HZ through thyresters (an electronic device). This converted A.C. power with a frequency of 250 to 500 HZ is passed through capacitor Rack after achieving the de-sired voltage and the same is passed through copper Bus Bar into Molten bath having copper coil, cooled through water circulation, transparent the heat energy into molten bath at constant voltage to melt the Iron and Steel at a temperature of 1625°C.

The continuous effort made by technologists has led to the development of the process parameters by which considerable quantity of sponge iron are used in steel making. This has brought a new era in steel melting technology in the country where scrap scarcity can no more be a threat to the mini steel plants.

B. Continuous Casting Machine:

Liquid Metal from Induction Furnace is carried in a ladle over the Concast Machine. The liquid metal flows from the ladle through a slide gate system underneath it into water cooled copper mould tubes which solidifies the liquid metal into a square shaped mould which we call as M.S. Billets.

From the considered casting cycle time, the number of strands required to cast 100 mm sq. and 110 mm sq. billets is worked out to be two (2). Based on the above, 2 - strand billet casting machine suitable for casting up to 200 mm sq was selected. The caster is 6/11 meter radius machine with two strands with a provision to add one more strand in future.

5.03 DRI Plant: Sponge Iron

We have been sanctioned two nos. of DRI Kilns of 300 MT/Day capacities vide Environmental Clearance No. J-11011/229/2008 IA II (I) dated 02.02.2009 and have installed one Kiln of the said capacity. The Company proposes to replace existing sanction DRI Kiln of 300 MT/ Day to 450 MT/Day with second Klin of 450 MT/Day.

The process for the production of sponge iron consists of the reduction of iron ore / pellets with solid carbonaceous material (coal/coke/lignite) in a rotary kiln at high temperature, cooling to room temperature in the rotary cooler with indirect water cooling system, screening and magnetic separation of the product. Sponge iron being magnetic gets attracted and separated from the non-magnetic char.

In the process for the production of sponge iron, the raw materials (iron ore / pellets, feed coal and lime stone /dolomite) are fed to the rotary kiln through feed tube in a pre-determined ratio by electronic weighing equipment. Rotary kiln is generally of 4.2 meters in diameter and 76 Mts. Long and inclined a 2°. It is internally lined with refractory of 250 mm thick. It is rotated by an AC variable speed motor at a steeples variable speed ranging from 0.2 to 1.0 rpm. Due to inclination and rotary motion of the kiln the material moves from the feed end of the kiln to the discharge end in approximately 12 hrs. (Tendency time). The fine coal is blown counter currently from the discharge end of the kiln to maintain the required temperature and the carbon concentration in the bed. The kiln has seven shells air fans mounted on the top which blow air in the respective zones to maintain the required temperature profile. The material and the hot gasses move in the counter current direction and as a result Iron Ore / pellets gets pre-heated and gradually reduced by the time it reaches the discharge end.

The kiln is divided into two zones namely pre-heating zone and reduction zone. The pre-heating zone is normally 30% of the total length of the kiln and the rest is taken as the reduction zone. The material gets heated to the reduction temperature in the pre-heating zone up to 500°C, the iron ore / pellets, coal and limestone gets dried and all the moisture is vaporised. Thereafter, the material moves to reduction zone. In reduction zone, the iron ore/ pellet is deoxidized where the magnetite is reduced to metallic iron. Temperatures are maintained at around 1000 degrees C in this zone to enable the de-oxidization of the Iron ore/ Pellet.

Coal contains sulphur in it. During the decomposition of the coal the sulphur is released in the form of Iron sulphide. The iron sulphide (FeS) has deleterious effect in the steel making and is to be removed. So limestone is used to prevent the sulphur pick up by the sponge iron. All the above reactions are possible only in the presence of CO. The generation of the CO is most important reaction, which is called the Boudard reaction. This reaction is highly endothermic which is also reversible. The conditions favourable for the forward reaction i.e. the generation of CO is:

- The higher temperature favours the production of CO.
- The concentration of the reactants has to high so that the forward reaction occurs.
- Low pressure favours the CO generation.

Oxygen required for the burning of these combustibles is supplied from the air tubes placed along the length of the kiln. By controlled combustion, the temperature in the various zones is maintained so that the reduction is proper and to sufficient degree.

The reduction of iron ore/pellet is topo-chemical i.e. the reduction proceeds from the surface to the core. The iron ore/pellet on partial reduction has all the different stages of the reduction.

The hot material after the reduction is complete is then transferred to the rotary cooler via the transfer chute. The rotary cooler is of 3.2 meters dia and 46 mtrs. long made up of Mild Steel shell. It is also inclined at 2° approximately and rotates at variable speed from 0.2- 1.2 rpm. It is driven by an AC variable speed motor. The water is sprayed on the top of the shell, which cools

the material inside the cooler indirectly. The heat from the material is extracted by the shell. In order to increase the surface area for the heat extraction fins are welded inside. Complete shell is covered by thin layer of water. The heat is transferred from the shell to the water by convection. By this the material gets cooled to 80°C and is discharged on the belt conveyor by the double pendulum valve. The double pendulum valve acts as the seal for the prevention of the atmospheric air into the kiln cooler system.

The total kiln cooler system is kept under positive pressure. This prevents the atmospheric air from getting into the system. The kiln has to be always operated on positive pressure, as any leakage into the system will cause the re-oxidation of the sponge iron there by causing the drop in the quality of the product.

The material after the discharge from the cooler is dropped on to the cooler discharge conveyor. A diversion chute is provided at the head end of this conveyor for diversion of the material in case of break down in the production separation. The material is then sent to the product separation system.

In product separation system consisting of double deck screen, the material is screened to 0-15 mm size fractions. The oversize i.e. +20 mm obtained is small quantity so it is taken on the floor or diverted to the sponge iron bin. The 0-3mm size fraction is called the fines are fed to a drum type magnetic separator where the magnetic sponge iron fines and the non-magnetic dolochar separated and fed to the respective bins through the chutes and conveyor. The coarser fraction is similarly separated by another magnetic separator and fed to respective bins. This magnetic fraction is called the sponge iron lumps and the non-magnetic as dolochar which is the unburned coal. This dolochar acts as a fuel for our captive power plant. As such, it is transferred to power plant through conveyors and is consumed along with coal in there boiler to generate power.

The gasses, which flow in the counter current direction of the material, go to the dust-settling chamber where the heavier particles settle down. These particles are continuously removed by the wet scrapper system. The gasses then pass to the after burner chamber where the residual carbon or CO is burned by the excess air available. The gasses are at high temperature and have lot of heat energy, which shall be utilized for the power generation through the waste heat recovery boiler. The hot gasses after the heat recovery boiler get cooled to below 200°C. The gases are then cleaned passing the gasses to ESP (Electrostatic precipitator). This clean gas at a temperature of below 90 degree centigrade is passed into the atmosphere through the chimney.

5.04 Captive Power Plant

Company has been sanctioned 16 MW AFBC and 8 MW WHRB vide Environmental Clearance No. J-11011/229/2008 IA II (I) dated 02.02.2009. Against this sanction, Company has installed 10 MW AFBC and 8 MW WHRB (18 MW), hence there is a balance sanctioned capacity of 6 MW of AFBC. We hereby propose to install additional capacity of 29 MW (19 MW CFBC and 10 MW WHRB) with the existing sanctioned thereby making the total 53 MW; (i.e. 18 MW Installed) + (6 MW AFBC balance of sanction) + proposed to install (10 MW WHRB & 19 MW CFBC).

Presently company has an AFBC of 40 TPH capacity which can generate 10 MW power using bio mass as fuel, besides a WHRB of 35 TPH capacity is also installed which generates 8 MW power using waste heat of DRI kiln as fuel thus unit have a total installed capacity of 18 MW. Company further proposes installation of 1 number 110 TPH CFBC boiler which generate 27 MW and 35

TPH WHRB Boiler which generate 8 MW making a total additional capacity of 35 MW. After this addition the total power generation capacity of the unit will be 53 MW.

The proposed CPP consist of two waste heat recovery boiler of 35 TPH steam generation capacity and one Fluidized Combustion Boiler (FBC) of 110 TPH besides existing AFBC of 40 TPH steam generation capacity. Company shall be installing turbine of one number of 25 MW and one number of 10 MW in addition to the existing turbine of 18 MW.

Company proposes to sale surplus power between 4 MW to 9 MW generated through bio-mass to UPPCL.

Waste Heat Recovery Boiler

The waste heat recovery boiler of both the Kilns will generate 70 TPH of steam with the outlet parameters of 110 Ksc(a) and 640 Deg. C., while taking in the feed water at 160° C from the de-aerator. The entire waste gas from the sponge iron kiln will be utilized in the waste heat boiler for the steam generation.

70 TPH of steam generated in the boiler is fed to the main steam line. About 0.25 TPH of steam is used for the ejector and turbine gland sealing after pressure and temperature reduction to 235 Deg.C. Around 0.096 TPH of feed water is used as spray. 68.36 TPH of steam is fed to the extraction cum condensing turbine. The uncontrolled extraction from the turbine at 6.5 Ksc (a) gives 6.26 TPH of steam approximately at a temperature of 231 Deg.C. This steam is used in the de-aerator, for heating up the feed water to temperature of 160 Deg.C.

Atmospheric Fluidised Bed Combustion Boiler

Fluidised bed combustion is a "Clean Technology for a better tomorrow" where technology and economy have been interwoven harmoniously in quest of a better environment. The environmentally friendly perspective of this technology is as follows:

- At the low combustion temperature of 850°C / 900°C, no Nitrogen Oxides result from the Nitrogen in the combustion air, with the end result of extremely low NOx emissions even with fuels rich in Nitrogen.
- Formation of SOX is essentially prevented by the addition of limestone. This is both mixed into the fuel and blown into the combustion chamber. Due to the favourable conditions in the fluidized bed, about 90% of the resulting Sulphur Oxides can be removed.
- Better Plant flexibility at partial loads of about 25% and quick load changes.
- Low Auxiliary Power consumption compared to other coal fired Boiler versions.

The Steam Generator would be semi-outdoor type, natural circulation, balanced draft, Single-drum, designed for firing different grades of coal. The Boiler is of bubbling fluidised bed type to handle even high ash coal.

Capacity of AFBC coupled with adjacent WHRB has been selected to ensure adequate margin

over the requirement of turbine at 100% MCR. AFBC would be designed to operate with "The HP heaters out of service" condition (resulting in lower feed water temperature at Economizer inlet) and deliver Steam to meet the Turbo-Generator requirement at 100% MCR. Economizer section of the Boiler would be non-Steaming type. Super heater sections would be convection type and designed so as to maintain rated Steam temperature of 540°C (± 5°C) at super heater outlet over the control range of 60% to 100%, MCR. Attenuator is provided at the outlet of convection super heater for temperature control at Steam Generator outlet. The Boiler furnace and flue gas passages would be designed for appropriate low velocities in order to minimize erosion.

Suitable balanced draft System would be provided for the Steam Generator with one forced draft and one induced draft fans. Each of these fans would be capable of meeting the air requirement at 100% Boiler MCR load. The forced draft fans would be radial type with inlet vane control for regulation of airflow. The induced draft fans would be radial type with multi louver damper control the regulation. The forced draft fans would control total air flow to Boiler and the induced draft fan would control furnace draft of the Boiler through automatic control loops. In addition to the FD fan, one primary air fan of 100% capacity shall be provided for transportation of fuel.

The Boiler would be top supported type and would be provided with all supporting Steel platforms, galleries and stairways for easy approach and Maintenance of the Unit. Adequate weather protection would be provided for instruments and operating personnel. Necessary insulation along with skin casing to limit outside surface temperature to the safe level would be provided.

Steam Turbine Generators and Auxiliaries

STEAM TURBINE

The Steam Turbine will be of condensing type. The set will be complete with Condenser, Air Evacuation System, 2 x 100% Condensate Extraction Pumps, Generator Cooling, System, Gland Sealing with Gland Vent Condenser, Lube Oil System, LP & HP Re-generative Feed Heaters, etc.

EXCITATION SYSTEM

The Excitation System envisaged will be brush-less type. The Excitation System shall be capable of Supplying the Excitation Current of the Generator under all condition of Operation of Load, Voltage and Power. Rated current and Voltage of the Exciter shall be at least 120% of normal Excitation Current and at least 110% of no Load Excitation

Voltage with maximum of 140% ceiling. The Exciter response ratio shall be greater than 1.5. The Field Breaker and Field Suppression System will also be part of Exciter System. Automatic high speed Thyristorised, Auto Manual AVR capable of maintaining Steady State Terminal Voltage within ± 0.5% of the preset Value under all Operating Conditions and capable of smooth and continuous running over the Operating Range. The Generators shall be provided with Temperature Detector embedded at different location, i.e. Stampings, Stator Windings, etc.

6.0 RAW MATERIAL AVAILABILITY & SPECIFICATION

6.01 Steel Melt Shop Division (Induction Furnace with Continues Caster)

The raw materials are easily available and will be sourced as under:

1. Sponge iron will be procured from company's own sponge iron division.
2. M.S. Scraps and other variety of scraps will be procured from local suppliers.
3. The Ferro Alloys will be procured from manufacturers across India.

6.02 Sponge Iron Division

The major Raw Materials required for production of Sponge Iron by the rotary kiln process are: sized graded iron ore or pellets and Non-Coking coal. Dolomite, in small quantities which are easily available in the open market.

6.03 Captive power Plant

Out of the total sanctioned and proposed capacity of 53 MW, 18 MW shall be produced by waste heat of sponge iron division for which no fuel is required. For 35 MW Circulating Fluidized Combustion Boiler (CFBC) / Atmospheric Fluidised Bed Combustion (AFBC) Boiler, coal, rice husk and dolochar shall be used. Dolochar is the burnt coal generated during the sponge iron production as a bye product. It acts as a fuel for this boiler. Entire dolochar generated shall be consumed by power plant. Thus, very small quantity of coal and rice husk shall be required for the operations. The same shall be managed from open market.

7.0 LOCATION, UTILITIES AND SERVICES

LOCATION

The proposed unit to be established at same place at Plot No. AL-5, Sector-23 at GIDA, Sahjanwa, Gorakhpur (U.P.). The site has all the required all infrastructural facilities as under:

Connectivity:

The site is also well connected with all type of transportation.

National Highway	:	The site is located on NH 28.
Railway Station	:	The site is just one KM away from the Sahjanwa Railway Station.
Railway Siding	:	Unit is having its own private Railway Siding helps in transporting main raw material of the unit i.e. Iron Ore and Coal through Railway Racks.
Road Transport	:	Eastern U.P. has a vast population as such consumable materials are being received through Trucks in heavy quantity and in turn while going back these trucks are available for transportation of finished goods at a very competitive rates. Unit had never faced any kind of non availability of trucks for transporting finished goods.
Air Port	:	Gorakhpur Airport is 20 Kms away from the site

Thus, the location of the site will be advantageous to the company in transportation of Raw materials as well as the Finished Products.

Manpower

Various kinds of skilled and unskilled workers employed in the steel industry all over the country are majority from U.P. and Bihar. As such getting a chance to work in their own region would be a big attraction and therefore adequate manpower will be easily available.

Proximity to Market

Existing produced quantity of steel is easily sold in the local market of Eastern U.P. as there is enough requirements in the area in regard to the production capacity. Company is not able to

fulfill the local demand of the Eastern U.P. as such looking to the heavy demand, company has decided for the expansion of the capacity.

POWER

The total power requirement of the unit is proposed to be met mainly with own captive power plant, however 5% to 10% of the total requirement is proposed to be procure from Purvanchal Vidyut Vitran Nigam Limited and for this purpose unit already have a connected load of 10 MW. This load is released from the 132 KV GIDA substation and the power is almost available for all the time. Suitable DG Sets for auxiliary and emergency loads are already installed in the unit.

WATER

Company has permission to use 17,00,000 liter ground water per day, which is sufficient for the current operations and for future requirements, application under preparation and necessary permission to be obtained by the company. Plenty of ground water is available as the region of tarai (the low land area) as such there is no problem of the water, company already has suitable borings which are sufficient for the purposes.

ROAD AND DRAINAGE

The site is located on National Highway however internal roads and drainage has already been developed.

ENVIRONMENT CLEARANCES

Status of the environment clearances are as under:

Unit	Sanctioned capacity	Installed Capacity	Proposed Capacity	Total Capacity
SMS (Induction Furnace)	216000 MTPA	167400 MTPA	114000 MTPA	330000 MTPA
Sponge Iron	198000 MTPA	99000 MTPA	99000 MTPA	297000 MTPA
Captive Power Plant				
AFBC	16 MW	10 MW	19 MW	35 MW
WHRB	8 MW	8 MW	10 MW	18 MW
TOTAL	24 MW	18 MW	24 MW	53 MW
Pellet Plant	99000 MTPA	-	-	0 MTPA

Companies already have clearances for the part expansion proposed. Sanction for the remaining manufacturing facilities to be sanctioned.

8.0 PLANT ORGANISATION & MANPOWER REQUIREMENT

Efficient management of the unit requires judicious manpower planning, selection of Qualified and experienced personnel and appropriate organizational structure clearly defining the functions and responsibility of the managerial and supervisory staff.

The manpower requirement in accordance with the targeted production of plant operation has been estimated on the following consideration :-

- i) The estimated production and productivity level which is achievable in various sections of the plant with the proposed plant and machineries.
- ii) The total number of personnel required to perform various duties associated with the different processing steps leading to production of steel billets, Re-rolled Products, captive power plant and Wheat products .

A preliminary estimate of the manpower requirement for expansion are based on the present strength, allowing for leave, absenteeism, sickness and holidays for smooth and efficient operation of various sectors of proposed expansion of the plant. Further, the implementation of industrial laws and regulations and location factors of labour employment will also have to be considered. Division wise man power requirement are as under:-

S.No	Division	Existing	Addition	Total
01	Sponge Iron Division	65	40	105
02	SMS Division	71	40	111
04	Power Plant	50	30	80
05	Common	70	30	130
	Total	256	140	396

Besides above unit creates indirect job opportunities for thousands of people.

9.0 IMPLEMENTATION SCHEDULE

The installation of several production units along with utilities and services require co-operation for procurement of equipment, equipment foundations, award of all contracts and supervision of all construction jobs at plant site. The project implementation schedule has been drawn up to maintain a strict time schedule. The factors which are responsible for timely implementation of the project are :-

- i) Arrangement of proper finance for the project.
- ii) Finalization of layout of the proposed plant.
- iii) Design of utilities and services.
- iv) Placement of orders for plant and machinery.
- v) Arrangements for Govt. sanctions and supply of power.
- i) Recruitment of personnel.

Construction materials

It is envisaged that cement, reinforcing steel and structural steel materials, sheets will be procured by the company and issued to the contractors free of cost or at agreed recovery rates. For this, advance action has to be initiated by the company so that these materials are sufficiently stored in adequate quantity before commencement of the work at site. All other construction materials will be procured by the contractors.

Construction facilities

Construction facilities will mainly include providing infrastructural arrangement like water, power, road, drainage storages etc. Company proposes that entire construction shall be done by a competent civil contractor

The implementation schedule of the project are as under:

Activity	
Arrangement of Land	Existing
Civil Works	October-2016
Plant & Machinery	
-Ordering starting from	June-2016
-Delivery starting from	September-2017
Erection and Commissioning	December-2017
Arrangement of Power	Existing
Arrangement of Water	Existing
Commercial Production	January-2018