PROCESS FLOW DIAGRAM FOR BLAST FURNACE
Process Flow Diagram for Power Plant

Annexure - 4.9
ANNEXURE-4.10

PROCESS FLOW DIAGRAM FOR LIME KILN
Endless Casting Rolling Process Flow Chart

Billet Caster

130 mm² Endless Hot Billet from Caster

Induction Heater (Future Provision)

Snap Shear

2-Hi Roughing Mill Stand #1 to #6

Crop-cum-Cobble Shear #1

2-Hi Intermediate Mill Stand #7 to #12

Crop-cum-Cobble Shear #2

2-Hi Finishing Mill Stand #13 to #18

Water Quenching Line

Crop Shear with Pinch Roll

Dividing Shear with Pinch Roll

Tail braking Pinch rolls

Cooling bed 16 m long

Tying area

Bar Transfer System

Bundle Collecting System

Finished TMT Bars

Dispatch

130mm sq billet directly fed to continuous mill from caster which has following advantages:
1. Reheating furnace is not required which eliminates the emission of CO₂ - the green house gas
2. Energy saving
3. There is no scale loss resulting in higher yield %.

With Endless Rolling concept head & tail cuts are negligible which improves the yield

With special design feature of dividing shear the finished bars after water quenching line are cut to saleable length of 12 m through dividing shear which further reduces the requirement of additional equipment and also improves the yield
WATER BALANCE DIAGRAM

RAW WATER RESERVOIR

WATER TREATMENT

COKE OVEN QUENCHING

SINTER PLANT

RMHS DUST SUPRESSION

BLOWDOWN

BOILER FEED

BLOWDOWN

REJECT WATER

BOILER FEED

REJECT & BLOWDOWN

BF, STOVES, ETC

PCM

SLAG GRANULATION

OXYGEN FURNACE

OPEN MACHINE COOLING

CCM - MOULD

ASPI & CENTRAL UTILITIES

TMT REBAR MILL

ALLOY BAR MILL

TANK

TANK

BLOWDOWN

BLOW DOWN

SCALE PIT

FILTRATION

DM WATER PLANT

SOFT WATER PLANT

FILTERED WATER

812

2800

5928

2448

360

1500

360

BF GAF BOILER 12 MW POWER

WHRS POWER 15 MW POWER

SEWAGE TREATMENT PLANT (STP)

GARDENING

ROAD SPRAY

GAR DENING

HORTICULTURE

SERVICE WATER & SYSTEM LOSS

ALL FIGURES IN M³/DAY
Jai Raj Ispat Limited
Location Map for 0.5 MTPA Integrated Steel Plant

Annexure-9.1

[Map showing location of Orvakal Mega Industrial Hub]
# JAI RAJ ISPAT LIMITED

## PRE FEASIBILITY REPORT FOR

0.5 MILLION TONNE INTEGRATED STEEL PLANT

## PROJECT IMPLEMENTATION SCHEDULE FIRST PHASE UNITS

<table>
<thead>
<tr>
<th>Activity S. No.</th>
<th>Activity Description</th>
<th>Starting from 1st day of month</th>
<th>Completion Period (Months)</th>
<th>Number of Months Elapsed since Completion of Preliminary Activities</th>
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<tbody>
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<td>1.</td>
<td>Completion of Preliminary Activities</td>
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<td>2.</td>
<td>Equipment Procurement for Major Production Units</td>
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<td>Release of Purchase Orders for Major Production Units &amp; Payment of Advance Money</td>
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<td>Release of Work Order on Selected Parties</td>
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<td>Issue of Execution Drawings for Plant Boundary, Roads, Storm Water Drains &amp; Construction of the same</td>
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<td>4.4</td>
<td>Issue of Drawings for fabrication of steel structural work for buildings &amp; completion of fabrication &amp; erection work</td>
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<td>4.5</td>
<td>Issue of Execution Drawings for equipment foundation &amp; completion of their construction</td>
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*Annexure - 12.1
Sheet 1 of 2*
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**COLOUR CODE**
- RED: Customer
- BLUE: Consultant
- ORANGE: Contractor (Erection/General)
- PINK: Contractor (Testing, Cold & Hot trials)
- GREEN: Equipment supplier
- BLACK: Contractor (Commercial production)