



**INTRODUCTION  
TO  
BMM ISPAT LIMITED**



**1.BENEFICIATION OF IRON ORE**

**2.PELLETIZATION**

**3.SPONGE IRON (DRI PLANT)**

**4. CAPTIVE POWER PLANT**

**5.SMS (ELECTRIC ARC FURNACE)**

**6. TMT (BAR MILL)**

# **SPONGE IRON DIVISION**



# **ADVANCED TECHNOLOGIES INSTALLED IN BMMIL SPONGE IRON PLANTS**

- **PRE HEATING TECHNOLOGY:  
SAVES FUEL**
  
- **BAGFILTER DUST INJECTION SYSTEM INTO ABC:  
UTILISES WASTE DUST FOR STEAM GENERATION**

# PRE HEATER KILN

**Length 30 M**

**Dia 2.6M**

**Pre heating of pellets will increase the reducibility , so that we can go for higher feed rate . Pre heater is connected before the Main kiln. In the main kiln chemistry is same as conventional kiln. What ever the gasses generated passes through the Pre heater kiln and the heat energy is utilized for pre heat the pellet. Pellet feeding takes through feed tube to Pre heater kiln at room temperature and the retention time is around 45 min to 60 min with 900 °C .Pellet passes through the transfer chute to Main kiln.**

# CONVEYING OF BAG FILTERS DUST TO ABC

We have implemented the conveying system to carry the dry dust through pipe line from bag filters to silo with compressed air. And silo is connected with RAV and Blower with drive control to convey the dust to ABC.

PID provision given to feed the dust in the control way so, the RAV rpm to be adjusted according to WHRB inlet temperature.

## Quality of Dust :

GCV	4000
Fe(T) %	5.61
V.M	0.24
Ash	59.76
F.C	40.00







# BUDGET AND PAY BACK DAYS DETAILS

Materials and fabricating charge	Money in Rupees
Cost of steel	6,50,000/
Fabrication charges	2,50,000/-
Rotary Air lock vanes	30,000/-
Roots blower	60000/-
Compressor	7,00,000/-
Total	16,90,000/-

# PAY BACK DETAILS

PARAMETERS	
Coal input	15 TPH
GCV	5500
Total Energy in waste gas	$15 * 5500 = 82500000 * 20\%$
Steam generation to be	21 TPH
Present generation	32 TPH
Excess generation	11 TPH
Excess power	$11 / 4.1 = 2.7 \text{ MWH}$
Profit	$2700 * 5 * 24 * 30 = 97,20,000/-$

# **COST SAVING THROUGH ID FAN**

**If We are running two ID Fans**

**Each 40Kw and each volume 2,30,000m<sup>3</sup>/Hour with 990 RPM as per design maximum.**

**If we using both ID Fan, RPM goes up to 750 and load will take up to 200 KWH.**

**If we going for both ID Fan RPM will go up to 500/each and both will take load up to 70KWH**

**So we can save up to 60 KWH if we using both ID Fans**

**So we can save up to  $(60*24*30*5) = 2,16,000$  Rupees per month**

# **SAVINGS THROUGH STOPPING HOT WELL PUMPS**

**Two hot well pumps for diverting water to cold well tank,**

**One pump is 47 KWH and another one is 59 KWH**

**Both are consuming 106 KWH**

**and 2544 units/Day\*30 days consuming entire month**

**So totally 76320 units are consuming per month**

**and 5 Rupees charging/Unit, Through that 3,81,600 Rupees  
consuming per month to divert water to cold well by using hot  
well pump.**

**Gravity line arranged for diverting water**

**By the way can save Rs 3,81,600/- per month.**



Thank you