

PROJECT PROFILE ON BEE - METALLURGICAL COKE

Introduction

Metallurgical Cokes are hard coke used in blast furnace for producing pig iron and in cupolas for the production of grey iron castings. Integrated Steel Plants have their own Coke oven battery in the premises to produce better quality of Metallurgical coke. Cokes used in Cupola are of inferior quality in comparison to coke used in the blast furnace. Due to some inherent characteristics like hardness, porosity, and abrasive strength, (Metallurgical cokes are being used in these furnaces. Metallurgical coke is produced by Carbonisation (heating of pulverised coking coal in absence of air) of coking coal i.e. bituminous coal in coke oven battery. Due to shortage of cooking coal in our country, now a days coke is also being produced by blending of coking coal, Non-coking and some additives. **Process of**

Manufacture: i. Bituminous coal is pulverized by ball mill into fine powder. ii) Fine coal is heated in coke oven battery at 700-900 C in absence of air. This process is called Carbonisation. Soaking at this temperature for about 7-8 hrs., it is allowed to cool in the furnace. Due to coking property of bituminous coal powdered coal converts into lump size and becomes very hard and highly porous. iii) After cooling, the coke produced is crushed into desired size. Strength of the coke, fixed Carbon, sulphur content and ash content is determined in the testing laboratory for justifying the quality of the coke. iv) By-products like tar may also be collected during carbonisation process.

1 Name of the Product : METALLURGICAL COKE

2 Project Cost :

a Capital Expenditure

Land : Own

Workshed in sq.ft 300 Rs. 60,000.00

Equipment : Rs. 150,000.00

Coke oven battery to produce 800 kg Coke per batch-3, Coat crusher-2, Ball Mill (cap. 200kg)-3, Material handling equipment/tools etc.-L.S., Testing laboratory-L.S., Platform type weighing balance-1, Office equipment.

Total Capital Expenditure Rs. 210,000.00

b Working Capital Rs. 80,000.00

TOTAL PROJECT COST : Rs. 290,000.00

3 Estimated Annual Production Capacity:

(Rs. in Lakhs)

Sr.No.	Particulars	Capacity in Quintals	Rate	Total Value
1	Metallurgical coke			839.40
TOTAL		0.00	0.00	839.40

4 Raw Material : Rs. 232,000.00

5 Packing Material : Rs. 15,000.00

6 Wages (2- Skilled & 2- Unskilled) Rs. 288,000.00

7 Salaries Manager-1 Rs. 120,000.00

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8	Administrative Expenses	:	Rs.	75,000.00
9	Overheads	:	Rs.	60,000.00
10	Miscellaneous Expenses	:	Rs.	10,000.00
11	Depreciation	:	Rs.	18,000.00
12	Insurance	:	Rs.	2,100.00
13	Interest (As per the PLR)			
	a. C.E.Loan	:	Rs.	27,300.00
	b. W.C.Loan	:	Rs.	10,400.00
	Total Interest		Rs.	37,700.00
14	Working Capital Requirement	:		
	Fixed Cost		Rs.	234,400.00
	Variable Cost		Rs.	605,400.00
	Requirement of WC per Cycle		Rs.	139,967.00

15 Cost Analysis

Sr.No.	Particulars	Capacity Utilization(Rs in '000)			
		100%	60%	70%	80%
1	Fixed Cost	234.40	140.64	164.08	187.52
2	Variable Cost	605.00	363.00	423.50	484.00
3	Cost of Production	839.40	503.64	587.58	611.02
4	Projected Sales	900.00	540.00	630.00	720.00
5	Gross Surplus	60.60	36.36	42.42	48.48
6	Expected Net Surplus	43.00	18.00	24.00	30.00

- Note :
1. All figures mentioned above are only indicative.
 2. If the investment on Building is replaced by Rental then
 - a. Total Cost of Project will be reduced.
 - b. Profitability will be increased.
 - c. Interest on C.E.will be reduced.