

Crockery (Bone China)

PRODUCT CODE	: 94326 and 94389
QUALITY AND STANDARDS	: As per Customers Specification
MONTH AND YEAR OF PREPARATION	: January, 2003
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INTRODUCTION

Mankind has a natural liking and inclination towards clay made utensils/crockery. Though a number of substitute items appeared in the market ultimately the clay crockery has sustained. The fancy items of bone china like tableware, crockery, decorative items, lamp shades etc. is finding a good domestic as well as export market.

MARKET POTENTIAL

The decorative items made of bone china are elegant for while there is a customer preference. The demand of bone china crockery and decorative item in urban areas is gradually increasing. There is a good scope of export to Gulf countries.

BASIS AND PRESUMPTIONS

The unit will run on single shift basis in 300 working days in a year. There will be a 8 hours shift in a day. Furnance will work on three shifts basis.

Full production capacity will be achieved in 3 years.

Wages are taken as per the minimum wages of the Government.

Rate of interest on borrowings-14%.

Life of plant and machinery-10 years.

Life of furnace-5 years.

Cost of plant and machinery as per latest quotations.

IMPLEMENTATION SCHEDULE

Sl. No.	Activity	Period (in months)
1.	Possession of land	2
2.	Construction of building	5
3.	Purchase of machinery	8
4.	Installation of machinery	12
5.	Trial production	14

TECHNICAL ASPECTS

Process of Manufacture

China clay powder, calcined quartz powder, potash felspar, bone ash and other raw materials are weighed proportionately and fed in to ball mill for fine grinding. This mixture is ground to 300 mesh and sieved after passing through magnetic separator. The slurry is placed in agitator. This slurry is again pumped in to filter press, cake received from filter press is mixed with water and electrolyte to make casting slip. Now desired items are cast in Plaster of Paris moulds. Articles are taken out from moulds and dried. These articles are finished. After finishing and drying articles are biscuit fired. Articles are glazed by dipping or spraying and again after drying these articles are gloss fired. At last ready articles are decorated by transfer papers, ceramic colour or gold. These decorated articles are fired at 650°C in electrical furnace. Thus ready articles are sorted and packed for despatch.

Quality Control and Standards

As per customer's specification.

Production Capacity (per annum)

Bone China Crockery and Art ware

Quantity : 130 MT
Value : Rs. 94, 50, 000

Motive Power

48 H. P.

Pollution Control

Bone China unit has to take no objection certificate from the State Pollution Control Board as per rule.

FINANCIAL ASPECTS

A. Fixed Capital

(i) Land and Building	(Rs.)
Land 2000 sq. mtr @ Rs. 550 sq. mtr.	11,00,000
Building	
Work shed 500 sq. mtr. @ Rs. 1,550 sq. mtr.	7,75,000
Office Store 100 sq. mtr. @ Rs. 1,550 sq. mtr.	1,55,000
Total	20,30,000

(ii) Machinery and Equipments

Particulars	Quantity (Nos.)	Value (Rs.)
Ball mill 5' x 5 1/2' with motor and other accessories	3	64,000
Ball mill 3' x 3' with 7 HP motor and other accessories	1	32,000
Blunger 10' with 5 HP motor	1	54,000
Agitator with 3 HP motor	1	26,500
Vibrating screen with magnetic separator	2	54,000
Filter press 44" dia, 30 plates	1	63,000
De-airing pug mills with 5 HP motor	1	64,000
Saggur press hand operated	1	17,000
Pot mills 2 HP motor	1	5,500
Shuttle kiln 6 Cubic meter	2	17,00,000
Muffle electric furnace	1	3,20,000
Installation, electrification expenditure	L.S.	2,40,000
Plaster of Paris moulds	L.S.	40,000

Particulars	Quantity (Nos.)	Value (Rs.)
Rack, panels etc.	L.S.	16,000
Testing equipments	L.S.	6,000
Office furniture	L.S.	40,000
Total		27,42,000

(iii) Pre-operative Expenses Rs. 22,000

Total Fixed Capital (Rs.)	
Land	11,00,000
Building	9,30,000
Plant and Machinery	27,42,000
Preliminary Expenses	22,000
Total	47,94,000

B. Working Capital (per month)

(i) Salary and Wages

Particulars	Nos.	Salary (Rs.)	Total (Rs.)
Manager	1	6,500	6,500
Production Manager	1	5,500	5,500
Supervisors	3	3,500	10,500
Accountant/Clerk	1	3,000	3,000
Firemen	4	3,000	12,000
Moulders	2	2,800	5,600
Skilled Workers	25	2,200	55,000
Un-skilled Workers	15	1,800	27,000
Decorators	2	2,000	4,000
Peons	2	1,800	3,600
Electrician	1	2,000	2,000
Total			1,34,700
<i>Add Perquisites @ 15%</i>			20,205
Total			1,54,905
or Say			1,54,900

(ii) Raw Materials

Particulars	Quantity	Rate (Rs.)	Cost (Rs.)
Bone ash	9 MT	11,200	1,00,800
China clay	2.4 MT	2,650	6,360
Felspar	6.1 MT	1,000	6,100

Particulars	Quantity	Rate (Rs.)	Cost (Rs.)
Frit	1 MT	17,000	17,000
Plaster of Paris	2 MT	2,100	4,200
Fire clay	3.0 MT	1,575	4,725
Sillimanite	0.18 MT	3,700	666
Decoration paper	L.S.	10,000	10,000
Packing material	L.S.	10,000	10,000
Other Contingent expenses	L.S.	6,500	6,500
Total			1,66,351
or Say			1,66,400

(iii) Utilities (Rs.)

Power 48 HP	15,000
Diesel L.D.O. 12 KL @ Rs. 16,000 per K.L.	1,92,000
Total	2,07,000

(iv) Other Contingent Expenses (Rs.)

Postage and Stationery	1,800
Advertisement and publicity	1,200
Insurance	2,800
Telephone Bills	2,000
Consumables	1,200
Repair and Maintenance	1,200
Miscellaneous Expenses	1,500
Total	11,700

(v) Total Working Capital (per month) (Rs.)

Raw Materials	1,66,400
Salaries and Wages	1,54,900
Utilities	2,07,000
Other Contingent Expenses	11,700
Total	5,40,000
Working Capital for 3 months (5,40,000 x 3)	16,20,000

C. Total Capital Investment

Fixed Capital	Rs. 47,94,000
Working Capital for 3 months	Rs. 16,20,000
Total	Rs. 64,14,000

FINANCIAL ANALYSIS

(1) Cost of Production (per annum)	(Rs.)
Total Recurring Cost	64,80,000
Depreciation on Building @ 5%	46,500
Depreciation on furnace @ 20%	4,04,000
Depreciation on Plant and Machinery @ 10%	38,600
Depreciation on Furniture and Fixtures @ 20%	19,200
Interest on Total Capital Investment @ 14%	8,97,960
Total	78,86,260

(2) Turnover (per annum)

Item	Quantity	Rate (Tonnes)	Value (Rs.)
Bone China Waxes and Art ware			
Grade A	50 M.T.	85,000	42,50,000
Grade B	80 M.T.	65,000	52,00,000
Total			94,50,000

(3) Net Profit (per annum)

$$\begin{aligned}
 &= \text{Turnover} - \text{Cost of Production} \\
 &= \text{Rs. } 94,50,000 - 78,86,260 \\
 &= \text{Rs. } 15,63,740
 \end{aligned}$$

(4) Net Profit Ratio

$$\begin{aligned}
 &= \frac{\text{Net Profit per annum} \times 100}{\text{Turn Over per annum}} \\
 &= \frac{15,63,740}{94,50,000 \times 100} \\
 &= 16.55\%
 \end{aligned}$$

(5) Rate of Return

$$\begin{aligned}
 &= \frac{\text{Net Profit per annum} \times 100}{\text{Total Capital Investment}} \\
 &= \frac{15,63,740 \times 100}{64,14,000} \\
 &= 24.38\%
 \end{aligned}$$

(6) Break-even Point

Fixed Cost	(Rs.)
1. Depreciation on Building	46,500
2. Depreciation on Plant and Machinery and Furnace	4,42,600
3. Depreciation on Furniture and Fixture	19,200
4. Interest on Borrowings @ 14%	8,97,960
5. 40% of Salary and Wages	7,43,520
6. 40% of Other Contingent Expenses	42,720
7. Insurance	33,600
Total	22,26,100

B.E.P.

$$\begin{aligned}
 &= \frac{\text{Fixed Cost} \times 100}{\text{Fixed Cost} + \text{Profit}} \\
 &= \frac{22,26,100 \times 100}{22,26,100 + 15,63,740} \\
 &= \frac{22,26,100 \times 100}{37,89,840} \\
 &= 58.74\%
 \end{aligned}$$

Addresses of Plant and Machinery/ Furnace Suppliers

1. M/s. Shiv Industries
206, Veena Dalvi Industrial Estate,
Oshiwara, Jogeshwari (W),
Mumbai - 400 102
2. M/s. Erich Magnetics
176/6B/10, Old Tijab Mill,
Bholanath Nagar, Shahadra,
Delhi - 110 032
3. M/s. Amic Industries Private
Limited
10, B.T. Road, Kolkata - 700 056
4. M/s. Eleind Engineering Private
Limited,
D-20/2, Okhla Industrial Area,
Phase - II, New Delhi - 110 020

Raw Material Suppliers

1. M/s. Alam Ji Plaster Udyog
Ramji Ki Gol,
Tehsil Gurmalani,
Barmer (Rajasthan)
2. M/s. Ceekay Plasters and
Chemicals,
64, Industrial Area, Bikaner
(Rajasthan)
3. M/s. Tower Minerals
Post Office- Malpur,
Zenipur,
(Rajasthan)
4. M/s. Mahavir Minerals Private
Limited
Jautani Bazar,
Ajmer,
(Rajasthan)