

WATER REPELLENT CEMENT PAINT

1. Product : Water Repellent Cement Paint
2. NIC Code : 2694
3. Product Code : 94116
4. Production Capacity : 990 tonns/annum
5. Month & year of Preparation : March 2011
6. Prepared by : Export Division,
MSME-DI,Kolkata

INTRODUCTION

Water Repellent Cement is a Paint based on Portland Cement with the addition of pigments, fillers, accelerators and water repellent substances. These paints which have largely superseded the simple Cement washes are supplied as a dry powder and mixed with water before use, but for darker colours ordinary cement could be substituted as base. For external faced decoration lighter colour paints are in general preferred, because the colour is matchless conspicuously affected by the formation of sporadic 'Fade' films of calcium carbonate over the surface. Cement paints are used externally to prevent rain penetration, as well as for decorative purposes, and can retain some water roofing qualities for as long as ten years on vertical surfaces. For making different colours cement paints a certain percentage of pigments is used in the base cement paint. The pigments must be lime free and the hydrated lime should not exceed 8% of unhydrated CaO and MgO.

MARKET

It has been observed in almost all the masonry constructions water penetrates into and seeps through quite readily-when it does, the beauty and durability of the masonry constructions is affected. The absorbed water dissolves water soluble salts within the masonry and while drying up it creates an unsightly sporadic fade film of calcium carbonate. When water passes entirely through the masonry it will dumped the interior walls, crack the plaster, peel off the paint and wall coverings. In cold areas the water

freezes within masonry and expands, causing cracking and spoiling, which makes the appearance of the surface scarred and chipped. To overcome this problem one has to bear a constant recurring expenditure on the maintenance of building. The proposed water repellent cement paint has a property to prevent rain water penetration as well as can retain water proofing qualities as long as ten years, thus enabling the users to maintain the evergreen look of the building for years together without recurring investment.

Moreover keeping pace with the present economic reform people of India is thinking real estate investment is a better investment and opting for construction of house, this cement paint has many connotation value and in spite of tough economy, people will search for this product because of its multidirectional benefits of costs.

BASIS AND PRESUMPTION :

1. The price of raw materials and the finished paints have been kept constant, through out ten years, any change in the price of raw materials would change the prices of paints.
2. For working shed a rented accommodation @ 12,000/- General Maintenance of the building shall be borne by the owner.
3. Labour wages are taken at minimum applicable.
4. Interest rate on capital investment has been considered @ 15% per annum.
5. Operative period of the project is about 10 years. Considering Technology obsolescence rate and period of repayment of loan.
6. Considered operating cycle of the process of making cement paints and its realization time about 15 days stock of raw materials while calculating working capital.
7. The unit will work for 300 days a year in two shifts of 8 hrs. each. The efficiency of men and machinery were considered as 80% for achieving full capacity production.
8. Cost of machinery and equipment, raw materials and consumables, other expenses etc. indicated in the profile are based on the price prevailing at the time of project preparation.

9. The depreciation on building, plant and machinery have calculated at 10%, the miscellaneous fixed assets will depreciate 12.6% per annum.
10. Product mix 70% white and 30% colour.
11. Plastic/ Polythene packs of 5, 10, 20 and 50 Kgs followed by HDPE will weave bags, shall be considered as the mode of packing cement paints.
12. The power bill has been estimated on the basis of present tariff rate of State Electricity Board

IMPLEMENTATION SCHEDULE :

Sl.No.	Activity	Period
1.	Processing of loan application and sanction of loan	2 Months
2.	Disbursement of loan 1 st installment	1 Month
3.	Building construction	3 Months
4.	Machinery selection & placement of orders	1 Month
5.	Order processing by suppliers and receipt of M/c at site.	5 Months
6.	Formalities with the electricity Board & Connection of power line.	4 Months.
7.	Procurement of raw materials & packing materials	1 Month
8.	Errection of machineries, trial run comprising of operator training idle running of machineries trial production.	1 Month

TECHNICAL ASPECTS :

i. Manufacturing Process :

Portland Cement Powder, Hydrated lime water repellents, Hygroscopic Salt, Titanium dioxide, calcium carbonate, silicious fillers are suitably proportioned in a hopper. The whole material is fed from the top into ball mill and allowed the material for 12 hrs. Dry grinding. The unloaded material through belt conveyor is collected in different silos.

For getting different colours – pigments are added in suitable proportions alongwith the batch. The finished product (Cement Paints) is packed in HDPE Polythene lined packet of 5, 10, 20 & 50 Kgs. Capacity and stored in a well-ventilated dry humidity controlled room.

ii. **Quality Standards :**

The Bureau of Indian Standards, British Standards and American Standards have laid down the specifications :

IS:2645-1964 Integral Cement water proof.

BS : 1014 : 1961

US : TT-P-21

IS : 5410-1969 Cement paints colour as required.

iii. **Production Capacity**

Quantity	Rate (Rs.)
990 Tone /Annum	1,08,90,000/-

iv. **Approximate Power Requirement** : 52 HP

FINANCIAL ASPECTS :

Fixed Capital :

1. **Land & Building :**

Land : 2630 sq.mtr., Building (Work shed 819 sq.mtr., Stores 50 sq.mtr., Laboratory & office 50 sq.mtr, Overhead tank, well and pump set, toilet) : Rented Rs.12,000/-P.M.

2. **Machinery & Equipments (Indigenous) :**

Sl. No.	Description	No.	Rate (Rs.)
1.	Ball Mill 4'x4', 7.5HP	6 nos.	5,40,000/-
2.	Ball Mill 600mm x 600mm, 3HP	1 no.	60,000/-
3.	Belt conveyer 60' length 100mm wide 1HP	1 no.	70,000/-
4.	Totally enclosed belt bucket elevator of 20' height with 1 HP motor	1 no.	30,000/-
5.	Weighing balance capacity 500 Kgs.	1 no.	10,000/-
6.	Silos OF 100 Kgs. Each made out of 3 mm sheet	6 nos.	30,000/-
7.	Spring Balance 500 Kgs. maximum	6 nos.	30,000/-
8.	Bag sewing machine	1 no.	30,000/-

POLLUTION CONTROL			
9.	Pollution control equipment complete with ducts, Blowers and filter bad system	1 no.	1,00,000/-
10.	Laboratory equipment	L.S.	50,000/-
	TOTAL	:	Rs.9,50,000/-
11.	Installation & erection @ 15%	:	1,42,500/-
12.	Office furniture & equipments	L.S.	25,000/-
13.	Diesel Engine	:	3,00,000/-
	TOTAL	:	Rs.14,17,500/-

3. Pre-operative expenses :

i.	Preliminary Expenses, such as Registration fee, legal fee, processing fee with different institution.	Rs.10,000/-
ii.	Traveling & Negotiation	Rs.5,000/-
iii.	Trial run expenses, salary of staff during construction period.	Rs.20,000/-
iv.	Security deposit JSEB	Rs.25,000/-
	TOTAL	Rs.60,000/-

4. Total Fixed Cost :

1.	Land and Building	on Rent
2.	Machineries and Equipments	Rs.14,17,500/-
3.	Preoperative Expenses	Rs.60,000/-
	TOTAL	Rs. 14,77,500/-

WORKING CAPITAL (PM) :

1. Personnel :

A. Administration

Sl.No.	Designation	No.	Total (Rs.)
i.	General Manager	1	7,000/-
ii.	Clerk-cum-typist	1	1,200/-
iii.	Peon	1	800/-
iv.	Watchman	2	1,600/-
	TOTAL	:	Rs.10,600/-
	Add 15% for service benefits		1,590/-
	TOTAL	:	Rs.12,190/-

B.	Production		
i.	Supervisor	2	10,000/-
ii.	Skilled worker	7	8,400/-
iii.	Lab. Chemist	1	2,500/-
	TOTAL	:	Rs.20,900/-
	Add 15% for service benefits		3,135/-
	TOTAL	:	Rs.24,035/-
C.	Sales		
i.	Sales Representatives	1	3,600/-
	Add 15% for social benefits	:	540/-
	TOTAL	:	Rs.4,140/-

Total Wages bill per month = **Rs.40,365/-**

2. Raw Material (Per Month) :

Sl.No.	Particulars	Qty.	Rate/T	Value(Rs.)
1.	White Cement	660	10,000/-	66,00,000/-
2.	Hydrated Lime	250	2,000/-	5,00,000/-
3.	Water repellent	10	15,000/-	1,50,000/-
4.	Hygroscopic salt	50	2,500/-	1,25,000/-
5.	Zinc sulphate	50	20,000/-	10,00,000/-
6.	Calcium Carbonate	30	1,500/-	45,000/-
7.	Silica aggregate	300	2,000/-	6,00,000/-
8.	Pigments	15	500/Kg.	75,00,000/-
9.	Packing materials (5 Kgs, 10 Kgs, 20 kgs, 50 kgs.)	58410 Bags		4,55,400/-
	TOTAL	:		Rs.1,69,74,400/-
	Raw materials & consumables (Per month)			14,14,616/-
	Raw materials & consumables for 15 days.			7,07,308/-

3. Utilities :

Power	Rs.15,000/-
Diesel	Rs.13,125/-
Water	Rs.200/-
TOTAL	Rs. 28,345/-

4. Other contingent expenses (Per Month) :

1.	Postage & Stationery	Rs.1,000/-
2.	Telephone	Rs.1,000/-
3.	Repair & maintenance	Rs.1,200/-
4.	Transport / conveyance	Rs.1,500/-
5.	Lubricant & Misc. expenditure	Rs.1,200/-
6.	Insurance & Taxes	Rs.1,200/-
	TOTAL :	Rs.7,100/-

5. Working Capital (Per Month) :

1.	Personnel	40,365/-
2.	Raw material & consumable for 15 days	7,07,308/-
3.	Utilities	28,325/-
4.	Rent	12,000/-
	Other contingent exp.	7,100/-
	Total	Rs.8,00,000/-

Total Capital Investment :

i.	Machinery & Equipments Pre-operative exp.	Rs.14,77,500/-
ii.	Working Capital for one months	Rs.8,00,000/-
	TOTAL :	Rs.22,77,500/-

FINANCIAL ANALYSIS :

Cost of Production (Per Year)

1.	Total recurring expenditure	Rs.96,00,000/-
2.	Depreciation on machinery a equipment @ 10%	Rs.94,250/-
3.	Depreciation on office furniture & Laboratory equipment & Gen. Set @ 12.6%	Rs.59,850/-
4.	Interest on total capital investment @ 15%	Rs.3,41,625/-
	TOTAL :	Rs.1,00,95,725/-

2. Turn Over [per year] :

By sales of 990 Tone of Net Cement paint : **Rs.1,08,90,000/-**
@ Rs. 11,000/-Tone

3. Gross Profit : 7,94,275/-

4. Net Profit (50% tax) : 3,97,137/-

5. Net Profit Ratio : 3.65%

6. Rate of Return : 35%

7. Break Even Point

Fixed Cost :

Depreciation on plant & machinery	:	Rs.94,250/-
Depreciation on office furniture, Lab. & Gen. Set	:	Rs.59,850/-
Interest on total capital Investment	:	Rs.3,41,625/-
40% of salary	:	Rs.1,92,000/-
Rent	:	Rs.1,44,000/-
40% of other expenses (Insurance, Telephone etc.)	:	Rs.34,080/-
Power	:	Rs.1,80,000/-
TOTAL	:	Rs.10,45,805/-

Break Even Point :

$$\frac{\text{Fixed Cost} \times 100}{\text{Fixed Cost} + \text{Net profit}} = \frac{10,45,805 \times 100}{10,45,805 + 7,94,275} = 56.8\%$$

Name and Address of Machinery Suppliers :

1.	M/s. Aristo Fabricators, 3, Ambica Mukharjee Road, Kolkata-56.
2.	M/s. Ghosh Metal Works (P) Ltd., Vill. GHORAMORA SERAMPORE, Distt. Hooghly, West Bengal.
3.	M/s. Durgapur Engineering Co. Ltd., 33/1. Netajee Subhash Road, Room No. 448, Kolkata –01.
4.	M/s. Gajanan Minerals Pvt. Ltd., B-47, Ist phase, Adityapur Industrial Estate, Jamshedpur-832109.
5.	M/s. Kerakrome, G-27, Patel Nagar III, Gaziabad-01.
6.	M/s. J.K. Cement, Nimbahare.
7.	M/s. J.G. Trading Co., Prndential India, 5 Gopinath Market, Below PNB, Gali Batashar, Khari Bauli, Delhi-06.