**MBI**

# CERAMIC COLOURS SCHEME

## Introduction

Ceramic colours are pigments based on Ziroconium and are used directly in enamel slip, pottery, coloured wall tiles, sanitaryware etc. Zirconium based yellow, blue, green and pink stains are used directly for producing coloured wall tiles, etc. Overglaze Ceramic colours of low temperature are widely used for decoration on glazed ceramic articles and to manufacture ceramic transfers. Underglaze Ceramic colours are commoly used for decoration on unglazed ceramic articles which are finally covered with a transparent glaze. The underglaze colours beneath the transparent glaze are stable on firing the glaze upto 1200 C. **Manufacturing Process**The batch of constituents are mixed and then calcination of the batch in crucible at 1000°C to 1300℃ in oil and e lectrically heated furnace is done depending the type of stain. Further processing includes washing of the calcined batch followed by fine grinding by wet milling. Overglaze Ceramic colours are produced by firstly melting at 100 a glass flux in the form of frit. The frit is then mixed with desired amount of stain (pigment) and finally ground by wet milling followed by drying and sieving. Underglaze ceramic colours are produced in the similar fashion as overglaze ceramic colours except that the glass flux for underglaze ceramic colour is only to be calcined at 1150℃-1200℃.Depending upon the making the colour all the selected coour oxides i.e. Zirconium oxide,cobalt Tin oxide,Nagnesium oxide,etc are to be grinded in ball mill or pot mill and calcite in the furnance.

**1 Name of the Product : Ceramic Colours**

**2 Project Cost :**

| | | | | |
|---|---|---|---|---|
| a | Capital Expenditure | | | |
| | Land | : | | **Own** |
| | Workshed in sq.ft | 2000 | Rs. | 400,000.00 |
| | Equipment | : | Rs. | 600,500.00 |
| | 4 ball mills with a capacity of 615 Kg. each, oil fired crucible type furnace, rotary kiln and minor equipment such as weighing balance mixing trays and other accessories | | | |
| | Total Capital Expenditure | | Rs. | 1,000,500.00 |
| b | Working Capital | | Rs. | 375,000.00 |
| | **TOTAL PROJECT COST :** | | **Rs.** | **1,375,500.00** |

**3 Estimated Annual Production Capacity :** **(Rs. in 000)**

| Sr.No. | Particulars | Capacity in Quintals | Rate | Total Value |
|---|---|---|---|---|
| 1 | Pigment of different shed and glass Flux(frit) | 5000.00 | | 2242.07 |
| **TOTAL** | | **5000.00** | **0.00** | **2242.07** |

**4 Raw Material : Rs. 765,000.00**

**5 Packing Material : Rs. 28,000.00**

**6 Wages (5-Skilled & 10-Unskilled) : Rs. 1,000,000.00**

**7 Salaries 1 Manager Rs. 120,000.00**

| | | | | |
|---|---|---|---|---|
| **8** | **Administrative Expenses** | **:** | **Rs.** | **60,000.00** |
| **9** | **Overheads** | **:** | **Rs.** | **60,000.00** |
| **10** | **Miscellaneous Expenses** | **:** | **Rs.** | **20,000.00** |
| **11** | **Depreciation** | **:** | **Rs.** | **80,050.00** |
| **12** | **Insurance** | **:** | **Rs.** | **10,005.00** |
| **13** | **Interest (As per the PLR)** | | | |
| | **a. C.E.Loan** | **:** | **Rs.** | **130,065.00** |
| | **b. W.C.Loan** | **:** | **Rs.** | **48,750.00** |
| | **Total Interest** | | **Rs.** | **178,815.00** |
| **14** | **Working Capital Requirement** | **:** | | |
| | **Fixed Cost** | | **Rs.** | **340,070.00** |
| | **Variable Cost** | | **Rs.** | **1,901,750.00** |
| | **Requirement of WC per Cycle** | | **Rs.** | **373,637.00** |

**15 Cost Analysis**

| Sr.No. | Particulars | Capacity Utilization(Rs in '000) | | | |
|---|---|---|---|---|---|
| | | 100% | 60% | 70% | 80% |
| **1** | **Fixed Cost** | 340.07 | 204.04 | 238.05 | 272.06 |
| **2** | **Variable Cost** | 1902.00 | 1141.20 | 1331.40 | 1521.60 |
| **3** | **Cost of Production** | 2242.07 | 1345.24 | 1569.45 | 1603.46 |
| **4** | **Projected Sales** | 2500.00 | 1500.00 | 1750.00 | 2000.00 |
| **5** | **Gross Surplus** | 257.93 | 154.76 | 180.55 | 206.34 |
| **6** | **Expected Net Surplus** | 178.00 | 75.00 | 101.00 | 126.00 |

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.