

**Commissioner of Industries  
Hyderabad  
Andhra Pradesh**

## **Glazed Wall Tiles**

### **1. Nature of Product and Its Applications**

Glazed ceramic tiles have been in use in the construction industry for quite some. With the improvement in standard of living in all segments of society, aesthetic aspects in the construction industry, especially in housing has become important, consequently, the need for good looking flooring and good looking walls has arisen.

Unlike the tiles produced by well known companies such as Spartek Ceramics, Regency Ceramics, etc., which are costly, the tiles produced by indigenous technology developed by Central Glass & Ceramic Research Institute (CGCRI), Calcutta are cheap and suitable for low cost housing schemes and dwellings.

### **2. Market Potential**

Housing is essential need for mankind and there is even increasing demand for low cost dwelling in India. Therefore, there is an increasing demand for ceramic tiles in general and low cost ceramic tiles for flooring and facings in particular, for low cost rural housings. The estimated demand for these tiles is about 4 lakh tonnes during 1997-98.

### **3. Installed Capacity**

The installed capacity of the unit is 810 Mt of tiles per annum on single shift basis with 300 working days. This capacity would be equivalent to 15,000 sq. ft. per day.

### **4. Raw Materials**

Body raw materials, glazer materials and sagar material are the three main raw materials for manufacture of these glazed wall tiles. About 962 MT of body raw materials are required for the installed capacity of 810 MT per annum. These raw materials cost about Rs. 400 per tonne.

Glazer material to the extent of 96.2 MT is required per annum. The cost of this material is about Rs.4,000/- per MT. 600 sagars are required per kiln and life of sagars is taken to be 10 cycles. About 450 MT of Sagars are required per annum, the cost being Rs.400 per tonne.

### **5. Technology/Manufacturing Process**

The process of manufacture of single fired matt glazed ceramic tiles as developed by CGCRI, Calcutta is as follows:

- Primary crushing of non-plastics in jaw crusher
- Secondary crushing in disintegrator
- Coarse sieving in a vibrator
- Fine grinding and batch mixing in ball mill
- Moisturization and binder mixing in U-mixer
- Granulation in granulator

- Semi-dry pressing in friction press
- Glazing by spraying
- Loading in saggars and kiln furniture
- Firing

The technology developed is highly cost effective because it utilises the indigenous machinery, simple dry grinding process, traditional but improved down draft kiln and finally the low grade raw materials.

## 6. Plant and Machinery

### 6.1 Major Equipments

The major equipment required by the unit are jaw crusher, disintegrator, triple deck vibrating machine, ball mill, demixer, granulator, friction press, glazed spraying unit and weighing machine.

### 6.2 Suppliers of Equipments

i. Paramount Chem-Plas Equipments (P) Ltd  
Tilak Road, Hyderabad 500 001

ii. Enfab  
C-2, IIInd Floor, Shanti Niwas  
Mettuguda, Secunderabad 500017

iii. Chem Project Engineers  
Plot B-35, BHEL-AIC  
R C Puram, Hyderabad 500032

## 7. Location

Availability of raw materials is the main consideration for the location of the unit. The other factors are nearness to market, infrastructure facilities and availability of skilled labour.

## 8. Infrastructure

Manpower : 24 Nos  
Power : 40 HP  
Fuel (Diesel Oil) : 200 Litres/day

## 9. Cost of the Project and Means of Finance

### Cost of Project

	Particulars	Rs. Lakhs
a.	Land and land development (5,000 sq yds)	3.00
b.	Building and civil construction (5,000 sq ft)	8.25
c.	Plant and machinery	14.30
d.	Miscellaneous fixed assets	0.50
e.	Preliminary and preoperative expenses	0.76
	Total fixed capital	26.81
	Working capital margin	1.59

Total project cost	28.40
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Total working capital requirement in 1st year : 4.31

#### Means of Finance

- Promoters contribution:	10.98
- Term loan:	17.43

#### 10. Annual Operating Expenses

Assumed operation @ 70% of installed capacity in 3rd year

	Particulars	Rs. Lakhs
a.	Raw material	6.65
b.	Packaging material and consumables	1.14
c.	Utilities	4.75
d.	Salaries and wages - Prdn.	3.86
e.	Factory overheads	0.29
f.	Admn. and management expenses	3.10
g.	Financial expenses	2.12
	- Interest on term loan	0.70
	- Interest on working capital	
h.	Depreciation	0.97
i.	Selling expenses	1.91
	Total	25.49

Net sales realisation :	36.22
Pre-tax profit :	10.73
a. Break even point @ 70% capacity utilisation :	43.00%
b. Rate of return on investment before taxes :	37.78%