Profile No.: 65 **NIC Code: 23960**

STONE CUTTING AND POLISHING UNIT

1. INTRODUCTION:

India has major resources of marble, granite, sandstone, Kota stone, quartzite & slate. Granite resources are largely in South India and Marble deposits are largely in Western India (Rajasthan & Gujarat). Natural stone or sand stone are the most widely used. Variety of stone used for flooring and front elevation or decoration of outer walls. The stones used for front elevation or frontal decoration can be of 4 mm to 14 mm while the stone used in flooring is of 25 mm to 40 mm thickness. Artistic use of stones not only increases the beauty of the house but also reduces the cost of construction.

The stones will be procured from quarries and undertake polishing in the unit. Polished stones are abundantly used in floorings, kitchen slabs , toilets etc. in house constructions in Karnataka and Andharapradesh. These slabs are normally available in one inch thickness. Slabs of various length and breadth are cut in to required sizes and polished into high polishing machine with sand / emery materials as well as water as local lubricants for polishing. The first polishing machine for rough polishing and second one for smooth polishing. There is no specific quality specification prescribed by any institutions. With the growth in the construction industry in the country in general and the State in particular, there has been a growth in the usage of flooring tiles made of stone. This is all the more pronounced by the fact that usage of stones like granite, marble, cudappah are increasingly finding acceptance as flooring materials in the country. These are not only durable but also lend aesthetics to the buildings. . Much would depend on the cost price and the quality of materials supplied.

2. PRODUCT & ITS APPLICATION:

Polished stone tiles or slabs are now being widely used for construction of buildings. They enhance the beauty of the building and reduce maintenance cost. The market for these products is growing in urban areas particularly in middle and upper middle class houses in cities and commercial complexes. the proposed sizes are of the order of 1' x 1' and 1' x 2' (tiles). The product has good market prospects in all important towns in the country.

3. DESIRED QUALIFICATIONS FOR PROMOTER:

Graduate in any science. Promoter with high skill of chemical processing and having contacts with builders is advantage.

4. MARKET POTENTIAL AND MARKETING ISSUES, IF ANY:

Highest producer of dimensional stones in the world accounting for over 35 % of the world stone production. 16.16 million tons of stone production in the year 1997-98 out of a total world production of 61 million tons. And nowadays more than 35nmillion tons of stone produce. Over 3 million people are employed in stone sector.

Export of Stones -India ranks 3rd in world stone exports with a 12 % share. India ranks 1st in Raw Siliceous product (Granite & Sandstone) exports. India ranks 5th in Raw Calcareous product (Marble & Flagging Limestone) exports. India ranks 9th in exports of finished stone products. The bulk (80%) of the Indian stone exports is by way rough granite and marble blocks and only about 20% is by way of value added or branded products. Indian stone industry and the Government have set a target of raising this to 50% over the next 5 years. The bulk of the Indian stones are produced in the Indian states of Rajasthan, Tamilnadu, Karnataka and Andhra Pradesh. Rajasthan accounts for nearly 90% of all the marble produced and the other three states in Southern India produce almost all the granite exported.

5. RAW MATERIAL REQUIREMENTS:

The basic raw material required is different type of stone slab.

6. MANUFACTURING PROCESS:

The technique used for stone polishing is quite simple. Rough stones are first put in the circle of polishing machine, stones can be polished by the machine at a time. During running the machine, small amount of fine sand and water is added at regular intervals. After grating of the surface and the edges, stone is ready for building purpose.

7. MANPOWER REQUIREMENT:

The enterprise requires 8 employees as detailed below**:**

Sr. No.	**Designation of Employees**	**Salary Per Person**	**Monthly Salary ₹**	**Number of employees required**				
				Year-1	**Year-2**	**Year-3**	**Year-4**	**Year-5**
1	Machine Operators	12,000	12000.00	1	1	1	1	1
2	Helpers	8,000	24000.00	3	3	3	4	4
3	Production supervisor	15,000	15000.00	1	1	1	1	1
4	Accounts/Stores Asst	12,500	12500.00	1	1	1	1	1
5	Office Boy	9,000	9000.00	1	1	1	1	1
	Total		72500.00	7	7	7	8	8

8. IMPLEMENTATION SCHEDULE:

The project can be implemented in 4 months' time as detailed below:

Sr. No.	Activity	Time Required *(in months)*
1	Acquisition of premises	1.00
2	Construction (if applicable)	1.00
3	Procurement & installation of Plant & Machinery	1.00
4	Arrangement of Finance	2.00
5	Recruitment of required manpower	1.00
	Total time required *(some activities shall run concurrently)*	4.00

9. COST OF PROJECT:

The project shall cost ₹ 20.25 lacs as detailed below:

Sr. No.	Particulars	₹ in Lacs
1	Land	2.00
2	Building	2.00
3	Plant & Machinery	7.50
4	Furniture, Electrical Installations	1.00
5	Other Assets including Preliminary / Pre-operative expenses	0.75
6	Margin for Working Capital	7.00
	Total	**20.25**

10. MEANS OF FINANCE:

Bank term loans are assumed @ 75 % of fixed assets. The proposed funding pattern is as under:

Sr. No.	Particulars	₹ in Lacs
1	Promoter's contribution	5.06
2	Bank Finance	15.19
	Total	**20.25**

11. WORKING CAPITAL CALCULATION:

The project requires working capital of ₹ 7.00 lacs as detailed below:

Sr. No.	Particulars	Gross Amt	Margin %	Margin Amt	Bank Finance
1	Inventories	3.50	0.25	0.88	2.63
2	Receivables	1.75	0.25	0.44	1.31
3	Overheads	1.75	100%	1.75	0.00
4	Creditors	-		0.00	0.00
	Total	7.00		3.06	3.94

12. LIST OF MACHINERY REQUIRED:

A detail of important machinery is given below: Power Requirement: 25 HP

Sr. No.	Particulars	UOM	Qtty	Rate (₹)	Value (₹ in Lacs)
	Plant & Machinery / equipments				
a)	***Main Machinery***				
i.	Stone cutting machine	NOS.	1	275000	2.75

Sr. No.	Particulars	UOM	Qtty	Rate (₹)	Value
ii.	Stone polishing Machine	Nos	1	125000	1.25
iii.	Stone Lifting machines	Nos	1	150000	1.50
IV	pumps, Water tanks, tools	Nos	1	100000	1.00
V	installation , erection electr.			50,000	0.50
vi	taxes and transportation			50000	0.50
	sub-total Plant & Machinery				**7.50**
	Furniture / Electrical installations				
a)	Office furniture	LS	1	50000	0.50
b)	Stores Almirah	LS	1	0	0.00
c)	Computer & Printer	L. S.	1	50000	0.50
	sub total				**1.00**
	Other Assets				
a)	preliminary and preoperative				0.75
	sub-total Other Assets				0.75
	Total				**9.25**

13. PROFITABILITY CALCULATIONS:

Sr. No.	Particulars	UOM	Year-1	Year-2	Year-3	Year-4	Year-5
1	Capacity Utilization	%	60%	70%	80%	90%	100%
2	Sales	₹. In Lacs	21.00	24.50	28.00	31.50	35.00
3	Raw Materials & Other direct inputs	₹. In Lacs	13.33	15.55	17.78	20.00	22.22
4	Gross Margin	₹. In Lacs	7.67	8.95	10.22	11.50	12.78
5	Overheads except interest	₹. In Lacs	4.30	4.57	5.11	5.27	5.38
6	Interest	₹. In Lacs	1.52	1.52	1.01	0.76	0.61
7	Depreciation	₹. In Lacs	5.25	3.75	2.63	1.88	1.69
8	**Net Profit before tax**	₹. In Lacs	**-3.40**	**-0.90**	**1.48**	**3.60**	**5.10**

14. BREAKEVEN ANALYSIS:

The project shall reach cash break-even at 46.85 % of projected capacity as detailed below:

Sr. No.	Particulars	UOM	Value
1	Sales at full capacity	₹. In Lacs	35.00
2	Variable costs	₹. In Lacs	22.22
3	Fixed costs incl. interest	₹. In Lacs	5.99
4	BEP = FC/(SR-VC) x 100 =	% of capacity	46.85%