

PROJECT REPORT

Of

MARBLE INLAY SCULPTURE UNIT

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding Marble Inlay Sculpture Unit.

The objective of the pre-feasibility report is primarily to facilitate potential entrepreneurs in project identification for investment and in order to serve his objective; the document covers various aspects of the project concept development, start-up, marketing, finance and management.

[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]

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PROJECT AT A GLANCE

- 1 Name of the Entrepreneur : xxxxxxxxxxx
- 2 Constitution (legal Status) : xxxxxxxxxxx
- 3 Father / Spouse Name : xxxxxxxxxxx
- 4 Unit Address : xxxxxxxxxxxxxxxxxxxxxxxxx
- District : xxxxxxxx
- Pin: xxxxxxxx State: xxxxx
- Mobile xxxxxxxx
- 5 Product and By Product : **MARBLE INLAY SCULPTURE**
- 6 Name of the project / business activity proposed : **MARBLE INLAY SCULPTURE MAKING UNIT**
- 7 Cost of Project : Rs.11.66 Lakhs
- 8 Means of Finance
- Term Loan Rs.6.66 Lakhs
- Own Capital Rs.1.17 Lakhs
- Working Capital Rs.3.84 Lakhs
- 9 Debt Service Coverage Ratio : 2.98
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 44%
- 13 Employment : 12 Persons
- 14 Power Requirement : 2.00 KW
- 15 Major Raw materials : Marble, Semi precious stones red oxide, Traditional glue, Hand operated emery wheel
- 16 Estimated Annual Sales Turnover (Max Capacity) : 94.28 Lakhs
- 17 Detailed Cost of Project & Means of Finance

COST OF PROJECT

(Rs. In Lakhs)

Particulars	Amount
Civil Work	5.40
Furniture & Fixtures	2.00
Working Capital	4.26
Total	11.66

MEANS OF FINANCE

Particulars	Amount
Own Contribution	1.17
Working Capital(Finance)	3.84
Term Loan	6.66
Total	11.66

2. INTRODUCTION

Marble Inlay work is in practice since Mughal era. Few descendants of erstwhile generations of the artisans engaged in inlay work in Mughal era are still engaged in same profession. Decorative items, sculptors and other artistic things are designed from marble and precious stone or gold wire inlay work is done over those. Sculptors created by the existing artisans of this district are used in various temples of the country. Except sculptors, replicas of various things are made here with the fine touch of marble or precious metal inlay work. Though various people are associated with this industry in different forms but only few artisans belong to original generation of artisans of Mughal era. Of all the Mughal Emperors, Shah Jahan was the greatest patron of the arts in general and architecture, in particular. For him no amount of money or time was too much to create enduring, everlasting architectural wonders that would wow the world and stand the test of centuries of time. It is in his buildings that one sees the confluence of Mughal art and Italian pietra dura. This industry has huge potential and employability to support rural population.

3. Market Potential:

Marble inlay works now are crafted in very innovative ways. They have studied the interest of the present day requirements and are specialized in different trendy products like plates, boxes, trays, coaster-sets, chess boards, backgammon board, vases, wine cups, pen holders, photo frames, statues, corporate gifts, calligraphy etc. the cost of these products varies depending upon the size and work involved in producing it. A marble inlay table top may cost anywhere in between 80 US dollars which is again subjected to change depending upon the size and intricacy of work involved in it.

4. Product Description:

4.1.Product Uses: Inlay work on delicate precious stone began in the workshops of Florence in Italy around the end of the 16th century. This was known as PIETRA DURA, which means hard (dura) stone (pietra). The Italians created an art form that the world came to appreciate and pietra dura appeared on a range of objects from decorative panels to hand-carved bird to flower motifs to cabinet fronts to table tops to presents from travelers to Emperors in the resplendent Mughal courts in faraway India.

4.2.Raw Material: It is usually done on predefined patterns like floral design or geometrical design already engraved on the marble and then small pieces of marble of different shades are cut delicately to fit in these grooves precisely. The engraved portions are also filled with other attractive materials like coloured glasses or precious gem stones. Some of the required materials are:

- Marble
- Semi precious stones red oxide
- Traditional glue
- Hand operated emery wheel

Average raw material cost: Rs.220-240 (Approx.)

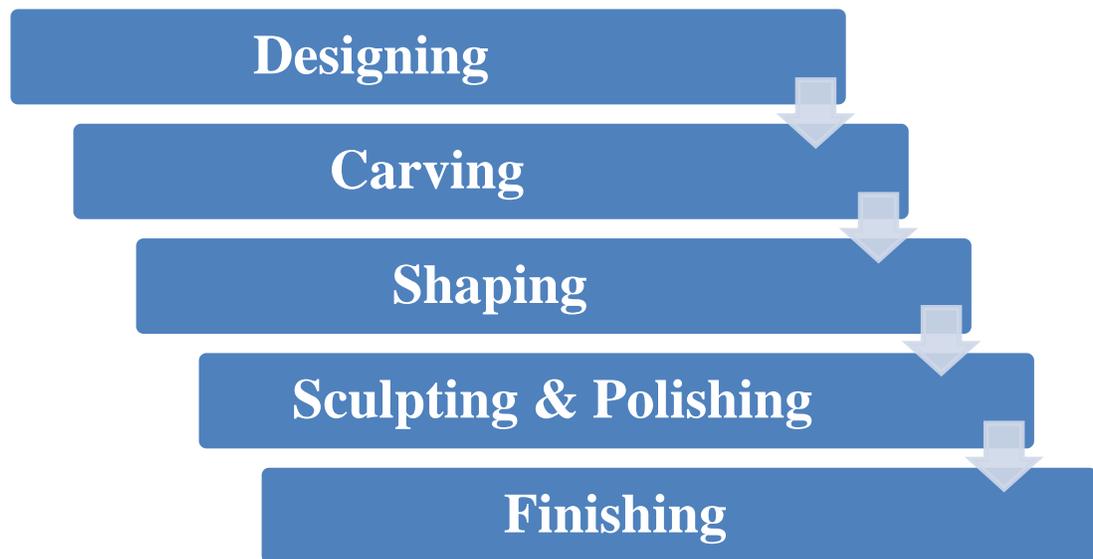
4.3.Manufacturing Process: Marble inlay is a closely protected traditional art and only a few experts are skilled enough to do justice to it in this day and age. The delicate process involves carefully cutting and engraving marble shapes by hand. To begin with, a predefined pattern, like say, a floral or geometrical design is engraved on the marble slab. After this, small pieces of marble of different shades are cut delicately to precisely fit and slipped into these grooves.

Apart from marble, many other materials can also be used to adorn the marble inlay spaces:

- Inlay work begins with a design – it could be a motif that’s floral or geometrical – which is cut out on a brass sheet. This is then placed on marble and drawn. Next, the marble is carved out. Slices of colored stones (precious and less-precious), which have in the meantime been shaped and polished, are then delicately laid into the marble with adhesive. At times, a heat treatment is given to particular stone to get a shading effect, e.g. heating Jaisalmer (Yellow) stone to get a red colour.
- Once the inlay work is completed and has dried, it’s time for the surface and edges to be polished and shined. In order to give it a shine that lasts for decades, the polish work is done using a stone bar. It is now ready-to- go.
- It is then cut according to the required shape and size. Then all these pieces of the crafted stone are brought together on the base stone and then the base stone is marked with care for the further process of engraving. Once the base stone is ready the different slices of the colored stones are fixed on the appropriate engraved stones with the help of special glues meant for this purpose.
- Then the entire work including the surface and the edges are finally polished and then buffed up to give a glossy and gleaming rich look. The black kuddaph or the sand stone is also sometimes used in the process which gives it a very attractive and polished look.
- Finally the finished example is passed to polishing specialists, who use finely powdered “trade secret” mixtures of polishing compounds for

this purpose. The traditional polish lasts 5 times longer than “modern wax” polish. However it is a procedure which is closely protected by only few expert exponents today.

- At last the whole project is carefully checked by the trained eyes and hands of the “Ustad” before delivery to the art gallery.



5. Project Components:

5.1. Land: The industrial setup requires space for carving, cutting, crafting, designing and polishing. area. Also some of the area of building is required for office staff facilities, documentation, office furniture, etc. Thus, the approximate total area required for complete small scale factory setup is 1200-1300Sq. ft. approximately.

5.2. Civil Work: This is more of a manual work involving the delicate process of cutting and engraving marble shapes.

- Workshop Area- This area includes the tool setup and foundation space for all equipments, work floor area, and necessary carving, cutting, crafting, designing and polishing. Total workshop area is approx. 500Sqft.
- Inventory Area- This area includes the storage space for all the raw materials, tooling and die storage space and finished goods. Total inventory area is approx. 400Sqft.
- Office Area – This space includes staff working region, their accommodation space, canteen area, medical facility etc. Total workshop area is approx. 200Sqft. This may be considered above the ground floor.
- Parking Space, Electricity Utensils Mounting Space, and Others. This could be approx. 200Sqft.

Land and building requirement may vary depending on the size of project. Approximate Civil Work Cost will be Rs.5.40 lakhs.

5.3. Tools & Equipment's: This is more of a manual work involving the delicate process of cutting and engraving marble shapes. Although some of tools and machines used for cutting, designing and polishing are:

Traditional geometric tools	The foundation of the entire process by dividing the marble panel in symmetric sections using traditional geometric tools, and making a final sketch of the selected design	
Saan & Kamaani	The lapidary artists, who shape the selected gem stones on a hand driven tool	

	known as “Saan & Kamaani”. These artists demonstrate exceptional precision in transforming these gem stones in delicate floral motifs	
Hand operated Emery wheel	The items are shaped and polished by means of an emery wheel. Sometimes heat treatment is applied to certain stones to get a shading effect.	
Chiseling tools (Tankiya & Narzi)	Using hand held chisels, the master setters engrave the marble with great care, to make grooves which correspond exactly with the gemstones. Such is the accuracy of the process that once inlaid there is no visible gap between the edge of the stone and the marble.	

Average Tools and Equipment’s cost will be Rs. 0.60 Lakh (Approx.) exclusive of GST & installation cost.

5.4. Miscellaneous Assets: There are many varieties of coloured stone available for utilization in marble inlay work: malachite, cornelian, jasper, mother of pearl, abalone shell, lapis lazuli, agnate, coral, turquoise and tiger eye to name just a few. The grooves are filled with their precisely corresponding shapes of coloured stone and secured in place with white putty made from oil, lead oxide and wax. Once the design is

completely dry, the piece is polished with a mixture of sand, water and emery paper to give a shiny smooth finish.

- ✓ Water Supply Arrangements
- ✓ Electricity Installation
- ✓ Furniture
- ✓ Stationary

5.5. Power Requirement: The power required must be around 1-2 KW.

5.6. Man Power Requirement: Following manpower is required:

- Skilled/Unskilled Worker-8
- Helper-2
- 2 Skilled worker including Sales Personal and Accountant.

6.

**FINANCIAL
ASPECTS**

PROJECTED BALANCE SHEET

PARTICULARS	I	II	III	IV	V
<u>SOURCES OF FUND</u>					
<u>Capital Account</u>					
Opening Balance	-	2.22	3.42	4.70	6.24
Add: Additions	1.17	-	-	-	-
Add: Net Profit	2.15	3.20	4.08	5.23	6.29
Less: Drawings	1.10	2.00	2.80	3.70	4.80
Closing Balance	2.22	3.42	4.70	6.24	7.72
CC Limit	3.84	3.84	3.84	3.84	3.84
Term Loan	5.92	4.44	2.96	1.48	-
Sundry Creditors	0.77	0.86	0.96	1.06	1.17
TOTAL :	12.75	12.56	12.46	12.62	12.73
<u>APPLICATION OF FUND</u>					
Fixed Assets (Gross)	7.40	7.40	7.40	7.40	7.40
Gross Dep.	0.74	1.41	2.01	2.54	3.03
Net Fixed Assets	6.66	5.99	5.39	4.86	4.37
Current Assets					
Sundry Debtors	1.93	2.26	2.54	2.83	3.14
Stock in Hand	3.10	3.50	3.91	4.36	4.82
Cash and Bank	1.05	0.81	0.61	0.57	0.40
TOTAL :	12.75	12.56	12.46	12.62	12.73
	-	-	-	-	-

PROJECTED PROFITABILITY STATEMENT

PARTICULARS	I	II	III	IV	V
<u>A) SALES</u>					
Gross Sale	58.00	67.77	76.11	85.00	94.28
Total (A)	58.00	67.77	76.11	85.00	94.28
<u>B) COST OF SALES</u>					
Raw Material Consumed	33.00	36.96	41.04	45.44	49.98
Electricity Expenses	0.22	0.25	0.27	0.29	0.31
Tools & Consumables	0.60	0.69	0.79	0.91	1.05
Labour & Wages	14.74	16.81	19.16	21.46	23.60
Depreciation	0.74	0.67	0.60	0.54	0.49
Cost of Production	49.31	55.37	61.86	68.64	75.43
Add: Opening Stock /WIP	-	2.00	2.27	2.54	2.84
Less: Closing Stock /WIP	2.00	2.27	2.54	2.84	3.15
Cost of Sales (B)	47.31	55.10	61.58	68.34	75.12
C) GROSS PROFIT (A-B)	10.69	12.67	14.53	16.66	19.15
	18.44%	18.70%	19.09%	19.60%	20.32%
D) Bank Interest i) (Term Loan)	0.72	0.59	0.43	0.26	0.10
ii) Interest On Working Capital	0.42	0.42	0.42	0.42	0.42
E) Salary to Staff	4.79	5.75	6.55	7.34	8.07
F) Selling & Adm Expenses Exp.	2.61	2.71	3.04	3.40	3.77
TOTAL (D+E+F)	8.54	9.47	10.44	11.42	12.36
H) NET PROFIT	2.15	3.20	4.08	5.23	6.79
	3.7%	4.7%	5.4%	6.2%	7.2%
I) Taxation	-	-	-	-	0.50
J) PROFIT (After Tax)	2.15	3.20	4.08	5.23	6.29

PROJECTED CASH FLOW STATEMENT

PARTICULARS	I	II	III	IV	V
<u>SOURCES OF FUND</u>					
Own Contribution	1.17	-			
Reserve & Surplus	2.15	3.20	4.08	5.23	6.79
Depreciation & Exp. W/off	0.74	0.67	0.60	0.54	0.49
Increase In Cash Credit	3.84				
Increase In Term Loan	6.66	-	-	-	-
Increase in Creditors	0.77	0.09	0.10	0.10	0.11
TOTAL :	15.33	3.96	4.78	5.88	7.38
<u>APPLICATION OF FUND</u>					
Increase in Fixed Assets	7.40	-	-	-	-
Increase in Stock	3.10	0.40	0.41	0.44	0.46
Increase in Debtors	1.93	0.33	0.28	0.30	0.31
Repayment of Term Loan	0.74	1.48	1.48	1.48	1.48
Taxation	-	-	-	-	0.50
Drawings	1.10	2.00	2.80	3.70	4.80
TOTAL :	14.27	4.20	4.97	5.92	7.55
Opening Cash & Bank Balance	-	1.05	0.81	0.61	0.57
Add : Surplus	1.05	- 0.24	- 0.20	- 0.04	- 0.17
Closing Cash & Bank Balance	1.05	0.81	0.61	0.57	0.40

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL

PARTICULARS	I	II	III	IV	V
<u>Finished Goods</u>					
(10 Days requirement)	2.00	2.27	2.54	2.84	3.15
<u>Raw Material</u>					
(10 Days requirement)	1.10	1.23	1.37	1.51	1.67
Closing Stock	3.10	3.50	3.91	4.36	4.82

COMPUTATION OF WORKING CAPITAL REQUIREMENT

Particulars	Amount	Margin(10%)	Net Amount
Stock in Hand	3.10		
Less:			
Sundry Creditors	0.77		
Paid Stock	2.33	0.23	2.10
Sundry Debtors	1.93	0.19	1.74
Working Capital Requirement			3.84
Margin			0.43
MPBF			3.84
Working Capital Demand			3.84

REPAYMENT SCHEDULE OF TERM LOAN

11.0%

Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
I	Opening Balance						
	Ist Quarter	-	6.66	6.66	0.18	-	6.66
	Iind Quarter	6.66	-	6.66	0.18	-	6.66
	IIIrd Quarter	6.66	-	6.66	0.18	0.37	6.29
	Ivth Quarter	6.29	-	6.29	0.17	0.37	5.92
					0.72	0.74	
II	Opening Balance						
	Ist Quarter	5.92	-	5.92	0.16	0.37	5.55
	Iind Quarter	5.55	-	5.55	0.15	0.37	5.18
	IIIrd Quarter	5.18	-	5.18	0.14	0.37	4.81
	Ivth Quarter	4.81		4.81	0.13	0.37	4.44
					0.59	1.48	
III	Opening Balance						
	Ist Quarter	4.44	-	4.44	0.12	0.37	4.07
	Iind Quarter	4.07	-	4.07	0.11	0.37	3.70
	IIIrd Quarter	3.70	-	3.70	0.10	0.37	3.33
	Ivth Quarter	3.33		3.33	0.09	0.37	2.96
					0.43	1.48	
IV	Opening Balance						
	Ist Quarter	2.96	-	2.96	0.08	0.37	2.59
	Iind Quarter	2.59	-	2.59	0.07	0.37	2.22
	IIIrd Quarter	2.22	-	2.22	0.06	0.37	1.85
	Ivth Quarter	1.85		1.85	0.05	0.37	1.48
					0.26	1.48	
V	Opening Balance						
	Ist Quarter	1.48	-	1.48	0.04	0.37	1.11
	Iind Quarter	1.11	-	1.11	0.03	0.37	0.74
	IIIrd Quarter	0.74	-	0.74	0.02	0.37	0.37
	Ivth Quarter	0.37		0.37	0.01	0.37	- 0.00
					0.10	1.48	

Door to Door Period 60 Months

Moratorium Period 6 Months

Repayment Period 54 Months

CALCULATION OF D.S.C.R

PARTICULARS	I	II	III	IV	V
CASH ACCRUALS	2.89	3.87	4.68	5.77	6.77
Interest on Term Loan	0.72	0.59	0.43	0.26	0.10
Total	3.61	4.46	5.11	6.04	6.87
REPAYMENT					
Repayment of Term Loan	0.74	1.48	1.48	1.48	1.48
Interest on Term Loan	0.72	0.59	0.43	0.26	0.10
Total	1.46	2.07	1.91	1.74	1.58
DEBT SERVICE COVERAGE R.	2.47	2.15	2.68	3.46	4.35
AVERAGE D.S.C.R.			2.98		

9. Assumptions:

1. Production Capacity of Marble Inlay Sculptures is 100 Pieces per day. First year, Capacity has been taken @ 50%.
2. Working shift of 10 hours per day has been considered.
3. Raw Material stock and Finished goods closing stock has been taken for 10 days.
4. Credit period to Sundry Debtors has been given for 10 days.
5. Credit period by the Sundry Creditors has been provided for 7 days.
6. Depreciation and Income tax has been taken as per the Income tax Act, 1961.
7. Interest on working Capital Loan and Term loan has been taken at 11%.
8. Salary and wages rates are taken as per the Current Market Scenario.
9. Power Consumption has been taken at 2 KW.
10. Selling Prices & Raw material costing has been increased by 3% & 2% respectively in the subsequent years.

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