

PROJECT REPORT

Of

ALUMINIUM FABRICATION

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **Aluminium Fabrication**.

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.]

[Lucknow Office:](#) Sidhivinayak Building ,
27/1/B, Gokhley Marg, Lucknow-226001

[Delhi Office :](#) Multi Disciplinary Training
Centre, Gandhi Darshan Rajghat,
New Delhi 110002

Email : info@udyami.org.in
Contact : +91 7526000333, 444, 555



PROJECT AT A GLANCE

- 1 Name of the Entrepreneur : xxxxxxxxx
- 2 Constitution (legal Status) : xxxxxxxxx
- 3 Father / Spouse Name : xxxxxxxxxxxx
- 4 Unit Address : xxxxxxxxxxxxxxxxxxxxxxxx
- District : xxxxxx
Pin: xxxxxx State: xxxxxxxxx
Mobile : xxxxxx
- 5 Product and By Product : **ALUMINIUM FABRICATION**
- 6 Name of the project / business activity proposed : **ALUMINIUM FABRICATION UNIT**
- 7 Cost of Project : Rs.17.56 Lakhs
- 8 Means of Finance :
Term Loan Rs.10.8 Lakhs
Own Capital Rs.1.76 Lakhs
Working capital Rs.5 Lakhs
- 9 Debt Service Coverage Ratio : 2.89
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 43%
- 13 Employment : 11 Persons
- 14 Power Requirement : 25.00 HP
- 15 Major Raw materials : Aluminium Extruded sections, Pipe, Clips, Glass sheets, Chemicals, other consumables
- 16 Estimated Annual Sales Turnover (Max Capacity) : 82.54 Lakhs
- 17 Detailed Cost of Project & Means of Finance

COST OF PROJECT

(Rs. In Lakhs)

Particulars	Amount
Land	Own/Rented
Plant & Machinery	9.80
Furniture & Fixtures	2.20
Working Capital	5.56
Total	17.56

MEANS OF FINANCE

Particulars	Amount
Own Contribution	1.76
Working Capital(Finance)	5.00
Term Loan	10.80
Total	17.56

ALUMINIUM FABRICATION

Introduction: Aluminum fabricated items like doors, windows, staircase, hand rails and supports, railings for verandas, corridors etc. have become that standard accepted feature in most modern buildings. The use of aluminum in business and office complexes , buildings, theatres ,auditorium is very extensive for functional as well as decorative purposes. Similarly in residential buildings also aluminum doors, windows, railings, grill works etc. are used extensively. Textile shops and other trading shops in lighter materials too are going in for shelves made of aluminum for tacking purposes.



Uses & Market Potential: The many advantages of aluminum such as lightweight, strength, corrosion resistance, durability, ease in fabrication, attractive appearance and easy maintenance make it a popular material for use in modern building. Aluminum required for use in buildings are available from large scale manufacturers-such as Balco, Jindal, Hindalco etc. as extruded sections in various shapes and sizes for specific uses. These sections are also available through their local dealers. The usual length of these sections is 12 ft. 24 meters. Fabricators anodized these to desired colours and fabricate the

items as per the customer's requirements. These items have good appearance and finish and the maintenance expenses are almost nil while steel and wooden items require regular painting and polishing periodically.

The development and construction activities being interlinked, there is good scope for aluminium fabrication units for meeting the growing demand of new building for offices, business and shopping complexes theatres etc. Aluminium fabricated and anodized items like doors, windows, railings, staircases, shelves; ladders, etc. are being increasingly used in the modern constructions on considerations of durability and appearance. In the present trend , theatres restaurants, hotels, shopping complexes, office premises and other luxurious building are fast replacing wooden materials with aluminium-fabricated items. The consumption of these items is on the increase.

Raw material: Major raw materials are as follows:

1. Aluminium Extruded Sections such as Book Type Hand Rail 100 mm size
2. 25 mm sq. Pipe
3. Flat with different sections
4. Handle Section for Doors
5. Clips
6. Glass sheet
7. Chemical for anodizing
8. Other consumables such as Hinges, Screws, Bolts, Locks, etc.

Machinery Requirements: Major machines & equipments are as follows:

S No.	Description	Qty.	Amount
1.	Heavy duty cut off machine with 2HP motor, starter, etc	1	40000
2.	Drilling machine 12mm cap with 0.5 HP Motor	1	17000
3.	Portable Electric Drill	2	6000
4.	Double ended Bench Grinder 200 mm dia. With 0.75 HP Motor	1	11000
5.	Anodising Plant complete with Rectifier and necessary tanks of 14ft. length and initial chemicals	1	850000

6.	Other equipments & hand tools	Ls	50000
	Net Amount		974000
	Net Amount (Round off)		980000

Manufacturing Process: Manufacturing Process involves anodizing the aluminium-extruded sections first and then fabrication. Anodising process involves buffing, pickling, in acid solution then cleaning in water, neutralizing in chemical and keeping the extruded sections in anodizing tank for specified time. These are again washed in water and dried in sun or by any other means. After anodizing the sections are to be fabricated as per design and sizes of customers by cutting, bending, joining by screwing or riveting, assembling with glass/board and beading wherever necessary. Handles, locks, tower bolts, stoppers etc. are also fitted as per requirements.

Area: The industrial setup requires space for Inventory, workshop or manufacturing area, space for power supply utilities and auxiliary like Generator setup. 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 industrial setup is 1500 to 2000Sqft.

Power Requirement: The power consumption required to run all the machinery could be approximated as 25 Hp

Manpower Requirement: There are requirement of skilled machine operators to run the machine set. Experience quality engineers are required for desired quality control. Some helpers are also required to transfer the material from one work station to other. Office staffs are required to maintain the documentation. The approximate manpower required is 11 including 1 Supervisor, 2 Plant operator, 2 unskilled worker, 2 Helper and 1 Security guard. 3 Skilled worker including Accountant, Manager and Sales person.

Bank Term Loan: Rate of Interest is assumed to be at 11%

Depreciation: Depreciation has been calculated as per the Provisions of Income Tax Act, 1961

Approvals & Registration Requirement:

Basic registration required in this project:

- GST Registration
- Udyog Aadhar Registration (Optional)
- Choice of a Brand Name of the product and secure the name with Trademark if require.
- NOC from State Pollution Control Board

Implementation Schedule:

S No.	Activity	Time required
1.	Acquisition of premises	1-2 Months
2.	Procurement & installation of Plant & Machinery	1-2 Months
3.	Arrangement of Finance	1.5-2 Months
4.	Requirement of required Manpower	1 Month
5.	Commercial Trial Runs	1 Month
	Total time Required (some activities shall run concurrently)	5-6 Months

FINANCIALS

PROJECTED BALANCE SHEET					
PARTICULARS	I	II	III	IV	V
SOURCES OF FUND					
Capital Account					
Opening Balance	-	3.48	5.58	7.55	9.65
Add: Additions	1.76	-	-	-	-
Add: Net Profit	4.72	5.60	6.47	7.10	7.45
Less: Drawings	3.00	3.50	4.50	5.00	5.30
Closing Balance	3.48	5.58	7.55	9.65	11.79
CC Limit	5.00	5.00	5.00	5.00	5.00
Term Loan	9.60	7.20	4.80	2.40	-
Sundry Creditors	0.60	0.69	0.74	0.79	0.85
TOTAL :	18.68	18.46	18.09	17.84	17.64
APPLICATION OF FUND					
Fixed Assets (Gross)	12.00	12.00	12.00	12.00	12.00
Gross Dep.	1.69	3.14	4.38	5.44	6.35
Net Fixed Assets	10.31	8.86	7.62	6.56	5.65
Current Assets					
Sundry Debtors	2.77	3.23	3.53	3.83	4.13
Stock in Hand	3.77	4.23	4.60	4.97	5.33
Cash and Bank	1.83	2.13	2.34	2.48	2.53
TOTAL :	18.68	18.46	18.09	17.84	17.64

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PROJECTED PROFITABILITY STATEMENT					
PARTICULARS	I	II	III	IV	V
A) SALES					
Gross Sale	55.40	64.69	70.62	76.69	82.54
Total (A)	55.40	64.69	70.62	76.69	82.54
B) COST OF SALES					
Raw Material Consumed	25.89	29.45	31.72	33.98	36.25
Electricity Expenses	2.34	2.53	2.73	2.92	3.12
Repair & Maintenance	2.22	2.59	2.82	3.07	3.30
Labour & Wages	12.60	13.23	14.55	16.30	17.93
Depreciation	1.69	1.45	1.24	1.06	0.91
Cost of Production	44.74	49.25	53.06	57.34	61.51
Add: Opening Stock /WIP	-	2.48	2.76	3.01	3.27
Less: Closing Stock /WIP	2.48	2.76	3.01	3.27	3.52
Cost of Sales (B)	42.26	48.97	52.81	57.08	61.26
C) GROSS PROFIT (A-B)	13.15	15.72	17.81	19.62	21.28
	23.73%	24.30%	25.22%	25.58%	25.78%
D) Bank Interest (Term Loan)	1.17	0.96	0.69	0.43	0.17
ii) Interest On Working Capital	0.55	0.55	0.55	0.55	0.55
E) Salary to Staff	5.04	6.05	7.26	7.98	8.78
F) Selling & Adm Expenses Exp.	1.66	1.94	2.12	2.30	2.48
TOTAL (D+E)	8.42	9.50	10.62	11.26	11.97
H) NET PROFIT	4.72	6.22	7.19	8.35	9.31
	8.5%	9.6%	10.2%	10.9%	11.3%
I) Taxation		0.62	0.72	1.25	1.86
J) PROFIT (After Tax)	4.72	5.60	6.47	7.10	7.45

PROJECTED CASH FLOW STATEMENT					
PARTICULARS	I	II	III	IV	V
<u>SOURCES OF FUND</u>					
Own Contribution	1.76	-			
Reserve & Surplus	4.72	6.22	7.19	8.35	9.31
Depriciation & Exp. W/off	1.69	1.45	1.24	1.06	0.91
Increase In Cash Credit	5.00				
Increase In Term Loan	10.80	-	-	-	-
Increase in Creditors	0.60	0.08	0.05	0.05	0.05
TOTAL :	24.57	7.75	8.48	9.47	10.27
<u>APPLICATION OF FUND</u>					
Increase in Fixed Assets	12.00	-	-	-	-
Increase in Stock	3.77	0.46	0.37	0.37	0.36
Increase in Debtors	2.77	0.46	0.30	0.30	0.29
Repayment of Term Loan	1.20	2.40	2.40	2.40	2.40
Taxation	-	0.62	0.72	1.25	1.86
Drawings	3.00	3.50	4.50	5.00	5.30
TOTAL :	22.74	7.45	8.28	9.33	10.22
Opening Cash & Bank Balance	-	1.83	2.13	2.34	2.48
Add : Surplus	1.83	0.31	0.20	0.14	0.06
Closing Cash & Bank Balance	1.83	2.13	2.34	2.48	2.53

COMPUTATION OF SALE					
Particulars	I	II	III	IV	V
Op Stock	-	135.00	146.25	157.50	168.75
Production	2,700.00	2,925.00	3,150.00	3,375.00	3,600.00
	2,700.00	3,060.00	3,296.25	3,532.50	3,768.75
Less : Closing Stock(15 Days)	135.00	146.25	157.50	168.75	180.00
Net Sale	2,565.00	2,913.75	3,138.75	3,363.75	3,588.75
Sale Price per sqmt	2,160.00	2,220.00	2,250.00	2,280.00	2,300.00
Sale (in Lacs)	55.40	64.69	70.62	76.69	82.54

COMPUTATION OF MAKING OF ALUMINIUM FABRICATION			
Item to be Manufactured Aluminium Fabrication			
Manufacturing Capacity per day		15	Sqmt
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		4,500	Sqmt
Total Production per Annum		4,500	Sqmt
Year		Capacity	ALUMINIUM FABRICATION
		Utilisation	
I		60%	2,700.00
II		65%	2,925.00
III		70%	3,150.00
IV		75%	3,375.00
V		80%	3,600.00

COMPUTATION OF RAW MATERIAL					
Item Name	Quantity of	Unit	Rate per MT	Total CostPer	
Aluminium extruded sections such as Book type hand rail 100mm size	1,728.00	mtr.	220.00	3,80,160.00	
25mm sq. Pipe	10,800.00	mtr.	50.00	5,40,000.00	
Flat 50 mm x 1.5mm Thick	1,728.00	mtr.	90.00	1,55,520.00	
112mm x 50mm Section	1,200.00	mtr.	210.00	2,52,000.00	
63mm x 38mm Section	4,320.00	mtr.	120.00	5,18,400.00	
50mm x 25mm Section	4,320.00	mtr.	45.00	1,94,400.00	
Handle section for Doors	218.00	mtr.	170.00	37,060.00	
Glass sheet/ Board 3mm/4.5mm	2,076.00	Sqmt.	500.00	10,38,000.00	
Chemical & other consumables	Lumsum			12,00,000.00	
Total				43,15,540.00	
Total Raw material in Rs lacs				43.16	

Raw Material Consumed	Capacity	Amount (Rs.)	
	Utilisation		
I	60%	25.89	
II	65%	29.45	5% Increase in Cost
III	70%	31.72	5% Increase in Cost
IV	75%	33.98	5% Increase in Cost
V	80%	36.25	5% Increase in Cost

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL					
PARTICULARS	I	II	III	IV	V
<u>Finished Goods</u>					
(15 Days requirement)	2.48	2.76	3.01	3.27	3.52
<u>Raw Material</u>					
(15 Days requirement)	1.29	1.47	1.59	1.70	1.81
Closing Stock	3.77	4.23	4.60	4.97	5.33

COMPUTATION OF WORKING CAPITAL REQUIREMENT			
Particulars	Amount	Margin(10%)	Net Amount
Stock in Hand	3.77		
Less:			
Sundry Creditors	0.60		
Paid Stock	3.17	0.32	2.85
Sundry Debtors	2.77	0.28	2.49
Working Capital Requirement			5.35
Margin			0.59
MPBF			5.35
Working Capital Demand			5.00

BREAK UP OF LABOUR				
Particulars	Wages Per Month	No of Employees	Total Salary	
Supervisor	18,000.00	1	18,000.00	
Plant Operator	15,000.00	2	30,000.00	
Unskilled Worker	12,000.00	2	24,000.00	
Helper	10,000.00	2	20,000.00	
Security Guard	8,000.00	1	8,000.00	
				1,00,000.00
Add: 5% Fringe Benefit				5,000.00
Total Labour Cost Per Month				1,05,000.00
Total Labour Cost for the year (In Rs. Lakhs)		8		12.60

BREAK UP OF SALARY				
Particulars	Salary Per Month	No of Employees	Total Salary	
Manager	18,000.00	1	18,000.00	
Accountant cum store keeper	12,000.00	1	12,000.00	
Sales	10,000.00	1	10,000.00	
Total Salary Per Month				40,000.00
Add: 5% Fringe Benefit				2,000.00
Total Salary for the month				42,000.00
Total Salary for the year (In Rs. Lakhs)		3		5.04

COMPUTATION OF DEPRECIATION				
Description	Land	Plant & Machinery	Furniture	TOTAL
Rate of Depreciation		15.00%	10.00%	
Opening Balance	Leased	-	-	-
Addition	-	9.80	2.20	12.00
	-	9.80	2.20	12.00
		-	-	
TOTAL		9.80	2.20	12.00
Less : Depreciation	-	1.47	0.22	1.69
WDV at end of Ist year	-	8.33	1.98	10.31
Additions During The Year	-	-	-	-
	-	8.33	1.98	10.31
Less : Depreciation	-	1.25	0.20	1.45
WDV at end of IInd Year	-	7.08	1.78	8.86
Additions During The Year	-	-	-	-
	-	7.08	1.78	8.86
Less : Depreciation	-	1.06	0.18	1.24
WDV at end of IIIrd year	-	6.02	1.60	7.62
Additions During The Year	-	-	-	-
	-	6.02	1.60	7.62
Less : Depreciation	-	0.90	0.16	1.06
WDV at end of IV year	-	5.12	1.44	6.56
Additions During The Year	-	-	-	-
	-	5.12	1.44	6.56
Less : Depreciation	-	0.77	0.14	0.91
WDV at end of Vth year	-	4.35	1.30	5.65

REPAYMENT SCHEDULE OF TERM LOAN						11.0%	
Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
I	Opening Balance						
	Ist Quarter	-	10.80	10.80	0.30	-	10.80
	IInd Quarter	10.80	-	10.80	0.30	-	10.80
	IIIRD Quarter	10.80	-	10.80	0.30	0.60	10.20
	Ivth Quarter	10.20	-	10.20	0.28	0.60	9.60
					1.17	1.20	
II	Opening Balance						
	Ist Quarter	9.60	-	9.60	0.26	0.60	9.00
	IInd Quarter	9.00	-	9.00	0.25	0.60	8.40
	IIIRD Quarter	8.40	-	8.40	0.23	0.60	7.80
	Ivth Quarter	7.80		7.80	0.21	0.60	7.20
					0.96	2.40	
III	Opening Balance						
	Ist Quarter	7.20	-	7.20	0.20	0.60	6.60
	IInd Quarter	6.60	-	6.60	0.18	0.60	6.00
	IIIRD Quarter	6.00	-	6.00	0.17	0.60	5.40
	Ivth Quarter	5.40		5.40	0.15	0.60	4.80
					0.69	2.40	
IV	Opening Balance						
	Ist Quarter	4.80	-	4.80	0.13	0.60	4.20
	IInd Quarter	4.20	-	4.20	0.12	0.60	3.60
	IIIRD Quarter	3.60	-	3.60	0.10	0.60	3.00
	Ivth Quarter	3.00		3.00	0.08	0.60	2.40
					0.43	2.40	
V	Opening Balance						
	Ist Quarter	2.40	-	2.40	0.07	0.60	1.80
	IInd Quarter	1.80	-	1.80	0.05	0.60	1.20
	IIIRD Quarter	1.20	-	1.20	0.03	0.60	0.60
	Ivth Quarter	0.60		0.60	0.02	0.60	0.00
					0.17	2.40	

Door to Door Period 60 Months
Moratorium Period 6 Months
Repayment Period 54 Months

<u>CALCULATION OF D.S.C.R</u>					
PARTICULARS	I	II	III	IV	V
<u>CASH ACCRUALS</u>	6.41	7.05	7.71	8.16	8.36
Interest on Term Loan	1.17	0.96	0.69	0.43	0.17
Total	7.58	8.00	8.41	8.59	8.52
<u>REPAYMENT</u>					
Repayment of Term Loan	1.20	2.40	2.40	2.40	2.40
Interest on Term Loan	1.17	0.96	0.69	0.43	0.17
Total	2.37	3.36	3.09	2.83	2.57
DEBT SERVICE COVERAGE RATIO	3.20	2.38	2.72	3.04	3.32
AVERAGE D.S.C.R.			2.89		

COMPUTATION OF ELECTRICITY				
(A) POWER CONNECTION				
Total Working Hour per day		Hours	8	
Electric Load Required		HP	25	
Load Factor			0.7460	
Electricity Charges		per unit	7.50	
Total Working Days			300	
Electricity Charges				3,35,700.00
Add : Minimim Charges (@ 10%)				
(B) DG set				
No. of Working Days			300	days
No of Working Hours			0.3	Hour per day
Total no of Hour			90	
Diesel Consumption per Hour			8	
Total Consumption of Diesel			720	
Cost of Diesel			65.00	Rs. /Ltr
Total cost of Diesel			0.47	
Add : Lube Cost @15%			0.07	
Total			0.54	
Total cost of Power & Fuel at 100%				3.90
Year		Capacity		Amount
				(in Lacs)
I		60%		2.34
II		65%		2.53
III		70%		2.73
IV		75%		2.92
V		80%		3.12

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