

PROJECT REPORT

Of

PEN INDUSTRY

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **Pen Industry**.

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 : xxxxxxxx
- 2 Constitution (legal Status) : xxxxxxxx
- 3 Father / Spouse Name : xxxxxxxx
- 4 Unit Address : xxxxxxxxxxxxxxxxxxxxxxxx
- District : xxxxxx
Pin: xxxxxx State: xxxxxxxx
Mobile xxxxxx
- 5 Product and By Product : **PEN**
- 6 Name of the project / business activity proposed : **PEN MAKING UNIT**
- 7 Cost of Project : Rs.15 Lakhs
- 8 Means of Finance
Term Loan Rs.9 Lakhs
Own Capital Rs.1.5 Lakhs
Working Capital Rs.4.5 Lakhs
- 9 Debt Service Coverage Ratio : 2.53
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 40%
- 13 Employment : 9 Persons
- 14 Power Requirement : 20.00 HP
- 15 Major Raw materials : Ball Pen Ink, Ball Pen Tips, Pen Caps, Pen Barrel, Front Cover & Back Cover, Refill tube
- 16 Estimated Annual Sales Turnover (Max Capacity) : 99.20 Lakhs
- 17 Detailed Cost of Project & Means of Finance

COST OF PROJECT

Particulars	(Rs. In Lakhs)	
	Amount	
Land		Own/Rented
Building / Shed 1000 Sq ft		3.00
Plant & Machinery		6.00
Furniture & Fixtures		1.00
Working Capital		5.00
Total		15.00

MEANS OF FINANCE

Particulars	Amount
Own Contribution	1.50
Working Capital(Finance)	4.50
Term Loan	9.00
Total	15.00

PEN INDUSTRY

Introduction: A pen is a tool used for writing or drawing. The ink of the pen is pressed onto paper and dries very fast. Reed pens are the oldest known type of pen. They were made from reeds growing in the delta of the Nile. The ancient Egyptians invented them, and also invented black ink, using soot and gum Arabic. Their pens had split nibs to regulate the flow of ink to the writing tip. This simple design is still used in calligraphy today. A pen is a writing instrument used to apply ink to a surface, usually paper, for writing or drawing. Ruling pens allow precise adjustment of line width, and still find a few specialized uses, but technical pens such as the Rapido-graph are more commonly used. Modern types include ballpoint, rollerball, fountain and felt or ceramic tip pens.



Uses & Market Potential: A pen can be used for pointing and also for gestures, simple text entry, and capturing free-form thoughts in digital ink. The pen used for input has a fine, smooth tip that supports precise pointing, writing, or drawing in ink. Pen is physically a writing instrument which

scribbles ink onto surfaces such as paper, cloth or canvas to produce a shape. It has a mechanism by which ink is made to flow through the tip of the writing instrument in the way it is scribbled onto the surface. Pen is the most important thing which a literate person possesses.

The market for writing instruments in India is estimated at 1600 to 2400 million pieces a year. Out of the all instruments, ball pen market in India is very high. The total market for writing instruments is estimated at Rs 22 billion in value and is growing at around 8 to 10% annually. Major Indian players in the ballpoint pen market are Cello, Lexi, Reynolds, Luxor, Flair and so on. Out of these, Cello, Lexi and Reynolds have a major share of the market. Pen is a commodity product. Hence, price becomes an important differentiator. Price is an important attribute that influences buying decision.

Raw Material: Major raw materials are as follows:

1. Ball Pen Ink
2. Ball Pen Tip
3. Pen Caps
4. Pen Barrel
5. Front & Back cover
6. Refill Tube
7. Packing material

Assuming 1 Batch of pen consists of 100 pens and the raw material cost per batch is Rs. 120-150

Machinery Requirements: Basic machines & equipments are as follows:

S No.	Machine	Unit	Price
1.	Refill Filling Machine	1	350000
2.	Nib Assembling machine	1	200000
3.	Pen Centrifugal	1	30000
4.	Other Hand Tools	Ls	20000
	Total Amount		600000

Manufacturing Process: Pen is a fundamental library instrument composed of 3 basic components Pen, Refill and Cap. Refill manufacturing is being performed and Extruder and Centrifugal Ink Filling Machine are required. The raw material for pen refill is polymer plastic which is feed to extruder via Hooper & Feeder arrangement where these granules are converted to their semi-solid state by utilizing appropriate temperature developed by the extruder followed by which this semi-solid polymer is forced through a die by extruder utilizing its plunger or screw arrangement. Die has section of refill thus a continuous refill tube is obtained from extruder die which is simply cut using a high speed cutter, followed by which ball point nibs are attached to refill, then these refills are plunged into the heads of Centrifugal Ink Filling Machine which fills these refills with ink utilizing centrifugal force. The refills are then collected and kept in their separate bins, all these part's bins are taken to assembly area where the pen is assembled and packaged followed by their filling in cartons and sending the same for sale.

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 1000 to 1500Sqft. Civil work will cost Rs 3 Lac. (Approx.)

Power Requirement: The power consumption required to run all the machinery could be approximated as 20hp

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 9 including 1 Supervisor, 1 Plant operator, 2 unskilled worker, 1 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.

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 CASH FLOW STATEMENT					
PARTICULARS	I	II	III	IV	V
SOURCES OF FUND					
Own Contribution	1.50	-			
Reserve & Surplus	2.58	3.51	4.63	5.71	7.04
Depriciation & Exp. W/off	1.30	1.13	0.97	0.84	0.73
Increase In Cash Credit	4.50				
Increase In Term Loan	9.00	-	-	-	-
Increase in Creditors	1.22	0.16	0.16	0.17	0.17
TOTAL :	20.09	4.79	5.76	6.72	7.95
APPLICATION OF FUND					
Increase in Fixed Assets	10.00	-	-	-	-
Increase in Stock	2.94	0.41	0.43	0.45	0.46
Increase in Debtors	3.92	0.72	0.63	0.66	0.69
Repayment of Term Loan	1.00	2.00	2.00	2.00	2.00
Taxation	-	-	-	0.57	0.70
Drawings	1.00	1.50	2.50	3.00	4.00
TOTAL :	18.85	4.63	5.56	6.68	7.86
Opening Cash & Bank Balance	-	1.24	1.40	1.61	1.65
Add : Surplus	1.24	0.16	0.21	0.04	0.09
Closing Cash & Bank Balance	1.24	1.40	1.61	1.65	1.74

PROJECTED BALANCE SHEET					
PARTICULARS	I	II	III	IV	V
SOURCES OF FUND					
Capital Account					
Opening Balance	-	3.08	5.09	7.22	9.36
Add: Additions	1.50	-	-	-	-
Add: Net Profit	2.58	3.51	4.63	5.14	6.34
Less: Drawings	1.00	1.50	2.50	3.00	4.00
Closing Balance	3.08	5.09	7.22	9.36	11.70
CC Limit	4.50	4.50	4.50	4.50	4.50
Term Loan	8.00	6.00	4.00	2.00	-
Sundry Creditors	1.22	1.37	1.53	1.70	1.87
TOTAL :	16.79	16.96	17.25	17.56	18.07
APPLICATION OF FUND					
Fixed Assets (Gross)	10.00	10.00	10.00	10.00	10.00
Gross Dep.	1.30	2.43	3.40	4.24	4.98
Net Fixed Assets	8.70	7.58	6.60	5.76	5.02
Current Assets					
Sundry Debtors	3.92	4.63	5.26	5.92	6.61
Stock in Hand	2.94	3.35	3.78	4.23	4.69
Cash and Bank	1.24	1.40	1.61	1.65	1.74
TOTAL :	16.79	16.96	17.25	17.56	18.07

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PROJECTED PROFITABILITY STATEMENT					
PARTICULARS	I	II	III	IV	V
A) SALES					
Gross Sale	58.73	69.52	78.96	88.85	99.20
Total (A)	58.73	69.52	78.96	88.85	99.20
B) COST OF SALES					
Raw Material Consumed	24.30	27.45	30.69	34.02	37.44
Electricity Expenses	1.45	1.61	1.77	1.93	2.10
Repair & Maintenance	8.81	10.43	11.84	13.33	14.88
Labour & Wages	12.47	14.35	16.50	18.97	21.82
Depreciation	1.30	1.13	0.97	0.84	0.73
Cost of Production	48.33	54.96	61.78	69.10	76.96
Add: Opening Stock /WIP	-	1.72	1.98	2.24	2.52
Less: Closing Stock /WIP	1.72	1.98	2.24	2.52	2.82
Cost of Sales (B)	46.61	54.70	61.51	68.82	76.67
C) GROSS PROFIT (A-B)	12.11	14.81	17.45	20.04	22.52
	20.63%	21.31%	22.10%	22.55%	22.71%
D) Bank Interest (Term Loan)	0.98	0.80	0.58	0.36	0.14
ii) Interest On Working Capital	0.50	0.50	0.50	0.50	0.50
E) Salary to Staff	7.18	8.62	10.17	11.70	12.86
F) Selling & Adm Expenses Exp.	0.88	1.39	1.58	1.78	1.98
TOTAL (D+E)	9.53	11.30	12.82	14.32	15.48
H) NET PROFIT	2.58	3.51	4.63	5.71	7.04
	4.4%	5.1%	5.9%	6.4%	7.1%
I) Taxation	-	-	-	0.57	0.70
J) PROFIT (After Tax)	2.58	3.51	4.63	5.14	6.34

COMPUTATION OF MAKING OF PEN			
Item to be Manufactured Pen			
Manufacturing Capacity per day		15000	Pens
1 Batch consists of		100	Pens
No of Batches per day		150.00	Batches
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		45,000	Batches
Total Production per Annum		45,000	Batches
Year		Capacity	PEN
		Utilisation	
I		45%	20,250.00
II		50%	22,500.00
III		55%	24,750.00
IV		60%	27,000.00
V		65%	29,250.00

Raw Material Consumed	Capacity	Rate per batch(100 pens)	Amount (Rs.)
	Utilisation		
I	45%	120.00	24.30
II	50%	122.00	27.45
III	55%	124.00	30.69
IV	60%	126.00	34.02
V	65%	128.00	37.44

COMPUTATION OF SALE					
Particulars	I	II	III	IV	V
Op Stock	-	675.00	750.00	825.00	900.00
Production	20,250.00	22,500.00	24,750.00	27,000.00	29,250.00
	20,250.00	23,175.00	25,500.00	27,825.00	30,150.00
Less : Closing Stock(10 Days)	675.00	750.00	825.00	900.00	975.00
Net Sale	19,575.00	22,425.00	24,675.00	26,925.00	29,175.00
Sale Price per Batch(100 pens)	300.00	310.00	320.00	330.00	340.00
Sale (in Lacs)	58.73	69.52	78.96	88.85	99.20

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL					
PARTICULARS	I	II	III	IV	V
Finished Goods					
(10 Days requirement)	1.72	1.98	2.24	2.52	2.82
Raw Material					
(15 Days requirement)	1.22	1.37	1.53	1.70	1.87
Closing Stock	2.94	3.35	3.78	4.23	4.69

COMPUTATION OF WORKING CAPITAL REQUIREMENT			
Particulars	Amount	Margin(10%)	Net Amount
Stock in Hand	2.94		
Less:			
Sundry Creditors	1.22		
Paid Stock	1.72	0.17	1.55
Sundry Debtors	3.92	0.39	3.52
Working Capital Requirement			5.07
Margin			0.56
MPBF			5.07
Working Capital Demand			4.50

BREAK UP OF LABOUR				
Particulars	Wages Per Month	No of Employees	Total Salary	
Supervisor	25,000.00	1	25,000.00	
Plant Operator	20,000.00	1	20,000.00	
Unskilled Worker	16,000.00	2	32,000.00	
Helper	12,000.00	1	12,000.00	
Security Guard	10,000.00	1	10,000.00	
				99,000.00
Add: 5% Fringe Benefit				4,950.00
Total Labour Cost Per Month				1,03,950.00
Total Labour Cost for the year (In Rs. Lakhs)		6		12.47

BREAK UP OF SALARY				
Particulars	Salary Per Month	No of Employees	Total Salary	
Manager	22,000.00	1	22,000.00	
Accountant cum store keeper	20,000.00	1	20,000.00	
Sales	15,000.00	1	15,000.00	
Total Salary Per Month				57,000.00
Add: 5% Fringe Benefit				2,850.00
Total Salary for the month				59,850.00
Total Salary for the year (In Rs. Lakhs)		3		7.18

COMPUTATION OF DEPRECIATION					
Description	Land	Building/shed	Plant & Machinery	Furniture	TOTAL
Rate of Depreciation		10.00%	15.00%	10.00%	
Opening Balance	Leased		-	-	-
Addition	-	3.00	6.00	1.00	10.00
	-	3.00	6.00	1.00	10.00
		-	-	-	
TOTAL		3.00	6.00	1.00	10.00
Less : Depreciation	-	0.30	0.90	0.10	1.30
WDV at end of Ist year	-	2.70	5.10	0.90	8.70
Additions During The Year	-	-	-	-	-
	-	2.70	5.10	0.90	8.70
Less : Depreciation	-	0.27	0.77	0.09	1.13
WDV at end of IInd Year	-	2.43	4.34	0.81	7.58
Additions During The Year	-	-	-	-	-
	-	2.43	4.34	0.81	7.58
Less : Depreciation	-	0.24	0.65	0.08	0.97
WDV at end of IIIrd year	-	2.19	3.68	0.73	6.60
Additions During The Year	-	-	-	-	-
	-	2.19	3.68	0.73	6.60
Less : Depreciation	-	0.22	0.55	0.07	0.84
WDV at end of IV year	-	1.97	3.13	0.66	5.76
Additions During The Year	-	-	-	-	-
	-	1.97	3.13	0.66	5.76
Less : Depreciation	-	0.20	0.47	0.07	0.73
WDV at end of Vth year	-	1.77	2.66	0.59	5.02

REPAYMENT SCHEDULE OF TERM LOAN						11.0%	
Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
I	Opening Balance						
	Ist Quarter	-	9.00	9.00	0.25	-	9.00
	IInd Quarter	9.00	-	9.00	0.25	-	9.00
	IIIrd Quarter	9.00	-	9.00	0.25	0.50	8.50
	Ivth Quarter	8.50	-	8.50	0.23	0.50	8.00
					0.98	1.00	
II	Opening Balance						
	Ist Quarter	8.00	-	8.00	0.22	0.50	7.50
	IInd Quarter	7.50	-	7.50	0.21	0.50	7.00
	IIIrd Quarter	7.00	-	7.00	0.19	0.50	6.50
	Ivth Quarter	6.50	-	6.50	0.18	0.50	6.00
					0.80	2.00	
III	Opening Balance						
	Ist Quarter	6.00	-	6.00	0.17	0.50	5.50
	IInd Quarter	5.50	-	5.50	0.15	0.50	5.00
	IIIrd Quarter	5.00	-	5.00	0.14	0.50	4.50
	Ivth Quarter	4.50	-	4.50	0.12	0.50	4.00
					0.58	2.00	
IV	Opening Balance						
	Ist Quarter	4.00	-	4.00	0.11	0.50	3.50
	IInd Quarter	3.50	-	3.50	0.10	0.50	3.00
	IIIrd Quarter	3.00	-	3.00	0.08	0.50	2.50
	Ivth Quarter	2.50	-	2.50	0.07	0.50	2.00
					0.36	2.00	
V	Opening Balance						
	Ist Quarter	2.00	-	2.00	0.06	0.50	1.50
	IInd Quarter	1.50	-	1.50	0.04	0.50	1.00
	IIIrd Quarter	1.00	-	1.00	0.03	0.50	0.50
	Ivth Quarter	0.50	-	0.50	0.01	0.50	-
					0.14	2.00	

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>	3.88	4.64	5.60	5.98	7.07
Interest on Term Loan	0.98	0.80	0.58	0.36	0.14
Total	4.85	5.43	6.18	6.34	7.21
<u>REPAYMENT</u>					
Repayment of Term Loan	1.00	2.00	2.00	2.00	2.00
Interest on Term Loan	0.98	0.80	0.58	0.36	0.14
Total	1.98	2.80	2.58	2.36	2.14
DEBT SERVICE COVERAGE RATIO	2.46	1.94	2.40	2.69	3.37
<u>AVERAGE D.S.C.R.</u>			2.53		

COMPUTATION OF ELECTRICITY			
(A) POWER CONNECTION			
Total Working Hour per day	Hours		8
Electric Load Required	HP		20
Load Factor			0.7460
Electricity Charges	per unit		7.50
Total Working Days			300
Electricity Charges			2,68,560.00
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%			3.22
Year	Capacity		Amount
			(in Lacs)
I	45%		1.45
II	50%		1.61
III	55%		1.77
IV	60%		1.93
V	65%		2.10

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