PROJECT REPORT

Of

PLASTIC JERRY CANS

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **Plastic Jerry Cans**.

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 Entreprenuer		xxxxxxxxxx		
2	Constitution (legal Status)		xxxxxxxxxx		
3	Father / Spouse Name		xxxxxxxxxxxx		
4	Unit Address	:	xxxxxxxxxxxxxxxxxxxxxxx		
			District :	xxxxxxx	
			Pin:	xxxxxxx	State: xxxxxxxxxx
			Mobile	xxxxxxx	
5	Product and By Product	:	**PLASTIC JERRY CANS**		
6	Name of the project / business activity proposed :		**PLASTIC JERRY CANS MAKING UNIT**		
7	Cost of Project	:	Rs.32.22 Lakhs		
8	Means of Finance				
	Term Loan		Rs.22.5 Lakhs		
	Own Capital		Rs.3.22 Lakhs		
	Working capital		Rs.6.5 Lakhs		
9	Debt Service Coverage Ratio	:	2.15		
10	Pay Back Period	:	5	Years	
11	Project Implementation Period	:	5-6	Months	
12	Break Even Point	:	54%		
13	Employment	:	12	Persons	
14	Power Requirement	:	30.00	HP	
15	Major Raw materials	:	HDPE Resin, Master Colour		
16	Estimated Annual Sales Turnover (Max Capacity)	:	118.47	Lakhs	
17	Detailed Cost of Project & Means of Finance				

COST OF PROJECT

(Rs. In Lakhs)

Particulars	Amount
Land	Own/Rented
Plant & Machinery	23.50
Furniture & Fixtures	1.50
Working Capital	7.22
Total	**32.22**

MEANS OF FINANCE

Particulars	Amount
Own Contribution	3.22
Working Capital(Finance)	6.50
Term Loan	22.50
Total	**32.22**

PLASTIC JERRY CANS

Introduction: A Jerry can is a container that is used to store liquid. The Jerry cans have become a perfect storage container as they are available in different sizes, shapes, and designs. Additionally, Jerry Cans are also available in several colors which depict different materials being stored. For example, red color depicts gasoline, yellow is for diesel and blue color donates kerosene. Plastic gas cans are cheaper, lighter, and less bulky than metal ones, and more user-friendly. They are constructed from HDPE (Food Grade) Plastic, so are perfectly safe for storing drinking water. Jerry cans are widely used for carrying several dangerous goods including chemicals, as well as diesel and petrol fuels owing to which these cans have to adhere to several regulations and standards laid down by government organizations across different countries. This project report explains the manufacturing process for 5Ltr Jerry can having approximate weight of 200gram each. The project cost may vary with the product variations.

Uses & Market Potential: Based on material, the global jerry can market has been segmented into plastic and metal. Plastic based jerry can segment accounts for the largest share in the global jerry can market. Plastic

being a lightweight, durable, corrosion-resistant, and chemically inert material is widely used for producing jerry cans of various shapes and sizes. High-density polyethylene is one of the most commonly used plastic material for manufacturing jerry cans. High-density polyethylene is a comparatively low-cost material owing to which it is one of the most widely preferred materials across the packaging industry. In addition, it offers excellent resistance to most solvents and has a good low-temperature resistance. Furthermore, it exhibits a strong barrier against moisture. All these properties, in turn, make it ideal for manufacturing jerry cans. The global Jerry cans market is expected to witness a CAGR of around 3% during the forecast period primarily driven by the growth in the chemicals, oil and lubricant industry. Besides, features associated with jerry cans like the leak proof quality, moisture resistant factor, and odourless feature further accelerates the demand for the jerry cans market.

Raw material: Major raw materials are as follows:

1. HDPE Resin
2. Master Colour

Machinery Requirement: Major machines & equipments are as follows:

S No.	Description	Qty.	Amount
1.	Blow moulding machine	1	1490000
2.	Air compressor 15 HP	1	240000
3.	Refrigerator Moisture separator	1	130000
4.	Cooling Tower 30 Tonne	1	80000
5.	Grinder	1	240000
6.	5 Ltr. Blow mould	1	120000
7.	Water Pump 2 HP	1	15000
8	Other equipments & hand tools	Ls	35000
	Total Amount		**2350000**

Manufacturing Process: In plastic jerry can manufacturing, HDPE plastic resin (white or coloured) are used. At first, the raw material is procured from the local authorized vendor and stored in the inventory. The composition of pellets is 97-98 % pellets are of pure HDPE. In this HDPE resins, 2-3% resins of the master colour of the cans are added to impart the necessary colour. The mixture is rotated at high rpm in the rotary mixer so that it is uniformly distributed and thoroughly mixed. Profile dies are mounted into the molding machine as per the desired dimension of the jerry can after approval from the production team.

In the next step, the barrel heaters are started and brought to the desired temperature to melt down the thermoplastic pellets. The resins are added into the hopper of the extruder. From the hopper, these plastic pellets come into the feed section of the barrel. There is a screw inside the barrel which rotates about the vertical axis and moves the pellets into the heating section of the barrel where these plastic pellets melt to a semi-solid state and are ready to be injected into the mold of the machine.

The molten plastic comes out from extruder at the desired pressure. The profile extruded is called a parison. In jerry cans, there is a requirement of a equal concentration of material at the base as compared to the top. The amount of material is precisely controlled by sensors and controllers.

In the next step, when the parison reaches the blowpipe of Blow Moulding Machine, the dies of the machine get closed. Compressed air is blown at desired pressure through the blowpipe. Under air compression, the parison acquires the desired shape of the die.

After this, the mould dies are cooled using water flow arrangements for the desired cooling time cycle. The molten plastic solidifies and gets separated. Excess lines are trimmed off. In the next step, the jerry cans are inspected for any quality defects. After this, they are packed and dispatched in the required quantity.

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 2500 to 3000Sqft.

Power Requirement: The power consumption required to run all the machinery could be approximated as 30 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 12 including 1 Supervisor, 2 Plant operator, 3 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	-	4.61	7.79	11.42	15.44
Add: Additions	3.22	-	-	-	-
Add: Net Profit	4.38	6.68	8.64	11.01	12.21
Less: Drawings	3.00	3.50	5.00	7.00	8.00
Closing Balance	4.61	7.79	11.42	15.44	19.65
CC Limit	6.50	6.50	6.50	6.50	6.50
Term Loan	20.00	15.00	10.00	5.00	-
Sundry Creditors	0.58	0.66	0.70	0.74	0.79
TOTAL :	**31.69**	**29.94**	**28.62**	**27.68**	**26.93**
APPLICATION OF FUND					
Fixed Assets (Gross)	25.00	25.00	25.00	25.00	25.00
Gross Dep.	3.68	6.81	9.47	11.75	13.69
Net Fixed Assets	21.33	18.19	15.53	13.25	11.31
Current Assets					
Sundry Debtors	3.59	4.26	4.79	5.34	5.92
Stock in Hand	4.46	5.04	5.58	6.14	6.74
Cash and Bank	2.31	2.45	2.73	2.94	2.96
TOTAL :	**31.69**	**29.94**	**28.62**	**27.68**	**26.93**

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PROJECTED PROFITABILITY STATEMENT					
PARTICULARS	**I**	**II**	**III**	**IV**	**V**
A) SALES					
Gross Sale	71.82	85.22	95.70	106.79	118.47
Total (A)	**71.82**	**85.22**	**95.70**	**106.79**	**118.47**
B) COST OF SALES					
Raw Material Consumed	24.99	28.11	29.99	31.86	33.74
Elecricity Expenses	3.20	3.42	3.65	3.88	4.11
Repair & Maintenance	7.18	8.52	9.57	10.68	11.85
Labour & Wages	17.89	19.68	23.62	27.16	31.23
Depreciation	3.68	3.13	2.67	2.27	1.94
Cost of Production	56.94	62.87	69.50	75.86	82.87
Add: Opening Stock /WIP	-	3.21	3.63	4.08	4.55
Less: Closing Stock /WIP	3.21	3.63	4.08	4.55	5.05
Cost of Sales (B)	53.72	62.45	69.05	75.38	82.37
C) GROSS PROFIT (A-B)	18.10	22.76	26.65	31.40	36.10
	25.20%	**26.71%**	**27.85%**	**29.41%**	**30.47%**
D) Bank Interest (Term Loan)	2.44	1.99	1.44	0.89	0.34
ii) Interest On Working Capital	0.72	0.72	0.72	0.72	0.72
E) Salary to Staff	7.69	9.22	11.07	13.28	15.94
F) Selling & Adm Expenses Exp.	2.87	3.41	3.83	4.27	4.74
TOTAL (D+E)	**13.71**	**15.34**	**17.05**	**19.16**	**21.74**
H) NET PROFIT	4.38	7.42	9.59	12.24	14.37
	6.1%	**8.7%**	**10.0%**	**11.5%**	**12.1%**
I) Taxation	-	0.74	0.96	1.22	2.15
J) PROFIT (After Tax)	4.38	6.68	8.64	11.01	12.21

PROJECTED CASH FLOW STATEMENT					
PARTICULARS	**I**	**II**	**III**	**IV**	**V**
SOURCES OF FUND					
Own Contribution	3.22	-			
Reserve & Surplus	4.38	7.42	9.59	12.24	14.37
Depriciation & Exp. W/off	3.68	3.13	2.67	2.27	1.94
Increase In Cash Credit	6.50				
Increase In Term Loan	22.50	-	-	-	-
Increase in Creditors	0.58	0.07	0.04	0.04	0.04
TOTAL :	**40.86**	**10.63**	**12.31**	**14.56**	**16.35**
APPLICATION OF FUND					
Increase in Fixed Assets	25.00	-	-	-	-
Increase in Stock	4.46	0.58	0.54	0.57	0.59
Increase in Debtors	3.59	0.67	0.52	0.55	0.58
Repayment of Term Loan	2.50	5.00	5.00	5.00	5.00
Taxation	-	0.74	0.96	1.22	2.15
Drawings	3.00	3.50	5.00	7.00	8.00
TOTAL :	**38.55**	**10.49**	**12.02**	**14.34**	**16.33**
Opening Cash & Bank Balance	-	2.31	2.45	2.73	2.94
Add : Surplus	2.31	0.14	0.28	0.21	0.02
Closing Cash & Bank Balance	**2.31**	**2.45**	**2.73**	**2.94**	**2.96**

COMPUTATION OF MAKING OF PLASTIC JERRY CANS			
Item to be Manufactured Plastic Jerry Cans			
Manufacturing Capacity per day		1,000	Pcs
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		3,00,000	Pcs
Total Production per Annum		3,00,000	5 Ltr each pc
Year		Capacity Utilisation	PLASTIC JERRY CANS
I		70%	2,10,000.00
II		75%	2,25,000.00
III		80%	2,40,000.00
IV		85%	2,55,000.00
V		90%	2,70,000.00

COMPUTATION OF RAW MATERIAL					
Item Name		Quantity of Raw Material	Unit	Unit Rate	Total CostPer Annum (100%)
HDPE Resin		45,000.00	Kg	72.00	32,40,000.00
Master Colour		2,200.00	Kg	150.00	3,30,000.00
					-
Total					**35,70,000.00**
Total Raw material in Rs lacs					35.70

Raw Material Consumed	Capacity Utilisation		Amount (Rs.)		
I	70%		24.99		
II	75%		28.11	5% Increase in Cost	
III	80%		29.99	5% Increase in Cost	
IV	85%		31.86	5% Increase in Cost	
V	90%		33.74	5% Increase in Cost	

COMPUTATION OF SALE					
Particulars	**I**	**II**	**III**	**IV**	**V**
Op Stock	-	10,500.00	11,250.00	12,000.00	12,750.00
Production	2,10,000.00	2,25,000.00	2,40,000.00	2,55,000.00	2,70,000.00
	2,10,000.00	2,35,500.00	2,51,250.00	2,67,000.00	2,82,750.00
Less : Closing Stock(15 Days)	10,500.00	11,250.00	12,000.00	12,750.00	13,500.00
Net Sale	1,99,500.00	2,24,250.00	2,39,250.00	2,54,250.00	2,69,250.00
Sale Price per 5 Ltr. can	36.00	38.00	40.00	42.00	44.00
Sale (in Lacs)	**71.82**	**85.22**	**95.70**	**106.79**	**118.47**

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL					
PARTICULARS	I	II	III	IV	V
Finished Goods					
(15 Days requirement)	3.21	3.63	4.08	4.55	5.05
Raw Material					
(15 Days requirement)	1.25	1.41	1.50	1.59	1.69
Closing Stock	**4.46**	**5.04**	**5.58**	**6.14**	**6.74**

COMPUTATION OF WORKING CAPITAL REQUIREMENT			
Particulars	**Amount**	**Margin(10%)**	**Net Amount**
Stock in Hand	4.46		
Less:			
Sundry Creditors	0.58		
Paid Stock	**3.88**	**0.39**	**3.49**
Sundry Debtors	3.59	0.36	3.23
Working Capital Requirement			**6.72**
Margin			0.75
MPBF			**6.72**
Working Capital Demand			**6.50**

BREAK UP OF LABOUR				
Particulars		Wages	No of	Total
		Per Month	Employees	Salary
Supervisor		28,000.00	1	28,000.00
Plant Operator		22,000.00	2	44,000.00
Unskilled Worker		14,000.00	3	42,000.00
Helper		10,000.00	2	20,000.00
Security Guard		8,000.00	1	8,000.00
				1,42,000.00
Add: 5% Fringe Benefit				7,100.00
Total Labour Cost Per Month				1,49,100.00
Total Labour Cost for the year (In Rs. Lakhs)			9	17.89

BREAK UP OF SALARY				
Particulars		Salary	No of	Total
		Per Month	Employees	Salary
Manager		25,000.00	1	25,000.00
Accountant cum store keeper		20,000.00	1	20,000.00
Sales		16,000.00	1	16,000.00
Total Salary Per Month				61,000.00
Add: 5% Fringe Benefit				3,050.00
Total Salary for the month				64,050.00
Total Salary for the year (In Rs. Lakhs)			3	7.69

COMPUTATION OF DEPRECIATION				
Description	Land	Plant & Machinery	Furniture	**TOTAL**
Rate of Depreciation		**15.00**%	**10.00**%	
Opening Balance	Leased	-	-	-
Addition	-	23.50	1.50	25.00
	-	23.50	1.50	25.00
		-	-	
TOTAL		23.50	1.50	25.00
Less : Depreciation	-	3.53	0.15	3.68
WDV at end of Ist year	-	19.98	1.35	21.33
Additions During The Year	-	-	-	-
	-	19.98	1.35	21.33
Less : Depreciation	-	3.00	0.14	3.13
WDV at end of IInd Year	-	16.98	1.22	18.19
Additions During The Year	-	-	-	-
	-	16.98	1.22	18.19
Less : Depreciation	-	2.55	0.12	2.67
WDV at end of IIIrd year	-	14.43	1.09	15.53
Additions During The Year	-	-	-	-
	-	14.43	1.09	15.53
Less : Depreciation	-	2.16	0.11	2.27
WDV at end of IV year	-	12.27	0.98	13.25
Additions During The Year	-	-	-	-
	-	12.27	0.98	13.25
Less : Depreciation	-	1.84	0.10	1.94
WDV at end of Vth year	-	10.43	0.89	11.31

REPAYMENT SCHEDULE OF TERM LOAN						11.0%	
Year	**Particulars**	**Amount**	**Addition**	**Total**	**Interest**	**Repayment**	**Cl Balance**
I	Opening Balance						
	Ist Quarter	-	22.50	22.50	0.62	-	22.50
	Iind Quarter	22.50	-	22.50	0.62	-	22.50
	IIIrd Quarter	22.50	-	22.50	0.62	1.25	21.25
	Ivth Quarter	21.25	-	21.25	0.58	1.25	20.00
					2.44	2.50	
II	Opening Balance						
	Ist Quarter	20.00	-	20.00	0.55	1.25	18.75
	Iind Quarter	18.75	-	18.75	0.52	1.25	17.50
	IIIrd Quarter	17.50	-	17.50	0.48	1.25	16.25
	Ivth Quarter	16.25		16.25	0.45	1.25	15.00
					1.99	5.00	
III	Opening Balance						
	Ist Quarter	15.00	-	15.00	0.41	1.25	13.75
	Iind Quarter	13.75	-	13.75	0.38	1.25	12.50
	IIIrd Quarter	12.50	-	12.50	0.34	1.25	11.25
	Ivth Quarter	11.25		11.25	0.31	1.25	10.00
					1.44	5.00	
IV	Opening Balance						
	Ist Quarter	10.00	-	10.00	0.28	1.25	8.75
	Iind Quarter	8.75	-	8.75	0.24	1.25	7.50
	IIIrd Quarter	7.50	-	7.50	0.21	1.25	6.25
	Ivth Quarter	6.25		6.25	0.17	1.25	5.00
					0.89	5.00	
V	Opening Balance						
	Ist Quarter	5.00	-	5.00	0.14	1.25	3.75
	Iind Quarter	3.75	-	3.75	0.10	1.25	2.50
	IIIrd Quarter	2.50	-	2.50	0.07	1.25	1.25
	Ivth Quarter	1.25		1.25	0.03	1.25	-
					0.34	5.00	

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	8.06	9.81	11.30	13.29	14.15
Interest on Term Loan	2.44	1.99	1.44	0.89	0.34
Total	10.50	11.81	12.75	14.18	14.49
REPAYMENT					
Repayment of Term Loan	2.50	5.00	5.00	5.00	5.00
Interest on Term Loan	2.44	1.99	1.44	0.89	0.34
Total	4.94	6.99	6.44	5.89	5.34
DEBT SERVICE COVERAGE RATIO	**2.12**	**1.69**	**1.98**	**2.41**	**2.71**
AVERAGE D.S.C.R.			**2.15**		

COMPUTATION OF ELECTRICITY				
(A) POWER CONNECTION				
Total Working Hour per day		Hours	8	
Electric Load Required		HP	30	
Load Factor			0.7460	
Electricity Charges		per unit	7.50	
Total Working Days			300	
Electricity Charges				4,02,840.00
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%				4.57
Year		**Capacity**		**Amount**
				(in Lacs)
I		70%		3.20
II		75%		3.42
III		80%		3.65
IV		85%		3.88
V		90%		4.11

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