PROJECT REPORT

Of

BATTERY WATER

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **Battery Water 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 REPORT
ON
BATTERY WATER

INTRODUCTION

Water used in Batteries (mainly vehicles) should be free from salts, Chlorine and Iron. These impurities spoil the electrodes and reduces the battery and hence special water with minimum impurities are required for the purpose, known as Battery water. Now a days D.M. Water is being used in the Batteries. Raw water from Open well/Bore well or Corporation can be used for the purpose.
The demand for distilled water required for battery charging is of considerable value. Preparation of distilled water for battery charging seems to be one of the most prospective venture in small cities.

MARKET POTENTIAL

This unit can cover about 30 km radius in semi-urban area which has around 2000 four wheelers and it can also cater to the need of small laboratories. Considering the above consumers, the capacity is fixed at 6.0 lakh litres per year

BASIS AND PRESUMPTIONS:

The approximate estimate for setting up of unit to produce 6.0 lakh litres distilled water per year. The unit will work for 8 hours per day with 300 working days in a Year.

IMPLEMENTATION SCHEDULE:

The unit can be set up in 6 months

TECHNICAL ASPECT:- Batter water is manufactured by an exchange process which has two vertical cylinders made of FRP/Plastic fitted with stand and water quality testing kit, so as to ensure continues quality check of water being produced. This cylindrical vessel contains Resin, which has power to remove all hardness from water . Water passes from bottom of the first cylinder and comes from the top and again goes into the bottom of second cylinder, which again comes out from top of the second column in purest form, free from all salts. In this process water has to pass only through two cylinders and many times, gravity force is only sufficient for the purpose. If sufficient pressure is not there one may use small pump for water feeding. Demineralization is the process of removing mineral salts from Water by using the ion exchange process.
Demineralised Water is Water completely free (or almost) of dissolved minerals
Demineralized Water also known as Deionized Water, Water that has had its mineral ions removed. Mineral ions such as cations of sodium, calcium, iron, copper, etc and anions such as chloride, sulphate, nitrate, etc are common ions present in Water. Deionization is a physical process which uses specially-manufactured ion exchange resins which provides ion exchange site for the replacement of the mineral salts in Water with Water forming H+ and OH- ions. Because the majority of Water impurities are dissolved salts, deionization produces a high purity Water that is generally similar to distilled Water, and this process is quick and without scale buildup. De-mineralization technology is the proven process for treatment of Water. A DM Water System produces mineral free Water by operating on the principles of ion exchange, Degasification, and polishing. Demineralized Water System finds wide application in the field of steam, power, process, and cooling.

Raw Water is passed via two small polystyrene bead filled (ion exchange resins) beds. While the cations get exchanged with hydrogen ions in first bed, the anions are exchanged with hydroxyl ions, in the second one.

Quality Specification IS:
1069-1964 specification

FINANCIAL ASPECTS:

PROJECT AT A GLANCE

1	Name of the Entreprenuer		XXXXXXX	
2	Constitution (legal Status)	:	XXXXXXX	
3	Father's/Spouce's Name		XXXXXXXX	
4	Unit Address	:	XXXXXXXX	
			Taluk/Block:	
			District : XXXXX	
			Pin: XXXXX	State:
			E-Mail : XXXXX	
			Mobile XXXXX	
5	Product and By Product	:	**Battery Water (DM Water)**	
6	Name of the project / business activity proposed	:	**Battery Water (DM Water)**	
7	Cost of Project	:	Rs13.50lac	
8	Means of Finance			
	Term Loan		Rs.6.97 Lacs	
	KVIC Margin Money	-	As per Project Eligibility	
	Own Capital		Rs.1.35 Lacs	
	Working Capital		Rs.5.18 Lacs	
9	Debt Service Coverage Ratio	:	5.19	
10	Pay Back Period	:	5	Years
11	Project Implementation Period	:	6	Months
12	Break Even Point	:	22%	
13	Employment	:	5	Persons
14	Power Requirement	:	3.00	HP
15	Major Raw materials	:	**Ground water, Resin**	
16	Estimated Annual Sales Turnover	:	92.66	Lacs

16 Detailed Cost of Project & Means of Finance

COST OF PROJECT

(Rs. In Lacs)

Particulars	Amount
Land	Rented/Owned
Building & Civil Work (2000 Sq Ft)	3.00
Plant & Machinery	3.85
Furniture & Fixtures	0.61
Pre-operative Expenses	0.28
Working Capital Requirement	5.76
Total	**13.50**

MEANS OF FINANCE

Particulars	Amount
Own Contribution @10%	1.35
Term Loan	6.97
Workign Capital Finance	5.18
Total	**13.50**

	General	**Special**
Beneficiary's Margin Monery	10%	5%
(% of Project Cost)		

PLANT & MACHINERY

PARTICULARS	QTY.	RATE	AMOUNT IN RS.
Resin based Demineralised plant -250 ltr/hour. Capacity with accessories	1.00	200000.00	200000.00
Plastic drums for Storage of water	LS	5000.00	5000.00
Bore well	LS	100000.00	100000.00
Hot air Blower for shrink packaging of water	LS	10000.00	10000.00
Quality control Equipments ,Ph meter, Hardness testing	LS	20000.00	20000.00
Misc Tools and Packaging filling Machine	LS	50,000.00	50,000.00
TOTAL			**385,000.00**

PROJECTED CASH FLOW STATEMENT

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
SOURCES OF FUND					
Share Capital	1.35	-			
Reserve & Surplus	9.21	9.78	12.47	14.66	16.79
Depriciation & Exp. W/off	0.91	0.82	0.71	0.62	0.54
Increase in Cash Credit	5.18	-	-	-	-
Increase In Term Loan	6.97	-	-	-	-
Increase in Creditors	1.68	0.28	0.28	0.28	0.28
Increase in Provisions	0.36	0.04	0.04	0.04	0.05
TOTAL :	**25.66**	**10.92**	**13.50**	**15.60**	**17.66**
APPLICATION OF FUND					
Increase in Fixed Assets	7.46	-	-	-	-
Increase in Stock	4.35	4.22	1.22	1.22	1.22
Increase in Debtors	3.09	0.40	0.64	0.52	0.52
Increase in Deposits & Adv	2.50	0.25	0.28	0.30	0.33
Repayment of Term Loan	-	1.74	1.74	1.74	1.97
Taxation	-	0.98	2.49	2.93	3.36
TOTAL :	**17.40**	**7.59**	**6.38**	**6.72**	**7.41**
Opening Cash & Bank Balance	-	8.26	11.59	18.71	27.59
Add : Surplus	8.26	3.33	7.12	8.88	10.25
Closing Cash & Bank Balance	**8.26**	**11.59**	**18.71**	**27.59**	**37.84**

PROJECTED BALANCE SHEET

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
SOURCES OF FUND					
Capital Account	1.35	1.35	1.35	1.35	1.35
Retained Profit	9.21	18.01	27.99	39.71	53.15
Term Loan	6.97	5.22	3.48	1.74	- 0.23
Cash Credit	5.18	5.18	5.18	5.18	5.18
Sundry Creditors	1.68	1.96	2.24	2.52	2.80
Provisions & Other Liab	0.36	0.40	0.44	0.48	0.53
TOTAL :	**24.75**	**32.13**	**40.68**	**50.99**	**62.78**
APPLICATION OF FUND					
Fixed Assets (Gross)	7.46	7.46	7.46	7.46	7.46
Gross Dep.	0.91	1.73	2.44	3.06	3.60
Net Fixed Assets	6.55	5.73	5.02	4.40	3.86
Current Assets					
Sundry Debtors	3.09	3.49	4.13	4.65	5.17
Stock in Hand	4.35	8.57	9.79	11.02	12.24
Cash and Bank	8.26	11.59	18.71	27.59	37.84
Deposits & Advances	2.50	2.75	3.03	3.33	3.66
TOTAL :	**24.75**	**32.13**	**40.68**	**50.99**	**62.78**
	-	-	-	-	-

PROJECTED PROFITABILITY STATEMENT

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
A) SALES					
Gross Sale	92.66	104.68	124.02	139.62	155.22
Total (A)	**92.66**	**104.68**	**124.02**	**139.62**	**155.22**
B) COST OF SALES					
Raw Mateiral Consumed	72.00	84.00	96.00	108.00	120.00
Elecricity Expenses	0.26	0.30	0.34	0.39	0.43
Repair & Maintenance	-	1.05	1.24	1.40	1.55
Labour & Wages	2.38	2.61	2.87	3.16	3.48
Depriciation	0.91	0.82	0.71	0.62	0.54
Consumables and Other Expense	1.85	2.09	2.48	2.79	3.10
Cost of Production	77.40	90.87	103.65	116.36	129.11
Add: Opening Stock /WIP	-	0.75	4.37	4.99	5.62
Less: Closing Stock /WIP	0.75	4.37	4.99	5.62	6.24
Cost of Sales (B)	76.65	87.25	103.03	115.73	128.48
C) GROSS PROFIT (A-B)	16.02	17.42	20.99	23.89	26.74
	17%	**17%**	**17%**	**17%**	**17%**
D) Bank Interest (Term Loan)	0.60	0.73	0.53	0.33	0.12
Bank Interest (C.C. Limit)	0.52	0.52	0.52	0.52	0.52
E) Salary to Staff	1.06	1.16	1.28	1.41	1.55
F) Selling & Adm Expenses Exp.	4.63	5.23	6.20	6.98	7.76
TOTAL (D+E)	**6.81**	**7.64**	**8.52**	**9.23**	**9.95**
H) NET PROFIT	9.21	9.78	12.47	14.66	16.79
I) Taxation	-	0.98	2.49	2.93	3.36
J) PROFIT (After Tax)	9.21	8.80	9.98	11.72	13.43

COMPUTATION OF MANUFACTURING OF BATTERY WATER

Items to be Manufactured **Battery Water**

Manufacturing Capacity per day	-	2,000.00	Lts
	-		
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		600,000.00	Ltrs
Year		Capacity	Ltrs
		Utilisation	
IST YEAR		60%	360,000
IIND YEAR		70%	420,000
IIIRD YEAR		80%	480,000
IVTH YEAR		90%	540,000
VTH YEAR		100%	600,000

COMPUTATION OF RAW MATERIAL

Item Name		Quantity of	Recovery	Unit Rate of	Total Cost
		Raw Material		/ Lts	Per Annum (100%)
		Lts			
Plastic cans 5 Lts,2.50lts, Resins,label	100%	600,000.00	100%	20.00	120.00
			Total (Rounded off in lacs)		120.00

Annual Consumption cost (In Lacs) 120.00

Raw Material Consumed	Capacity Utilisation	Amount (Rs.)
IST YEAR	60%	72.00
IIND YEAR	70%	84.00
IIIRD YEAR	80%	96.00
IVTH YEAR	90%	108.00
VTH YEAR	100%	120.00

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
Finished Goods					
(15 Days requirement)	0.75	4.37	4.99	5.62	6.24
Raw Material					
(15 Days requirement)	3.60	4.20	4.80	5.40	6.00
Closing Stock	**4.35**	**8.57**	**9.79**	**11.02**	**12.24**

COMPUTATION OF WORKING CAPITAL REQUIREMENT

Particulars			Total
			Amount
Stock in Hand			4.35
Sundry Debtors			3.09
		Total	7.44
Sundry Creditors			1.68
Working Capital Requirement			**5.76**
Margin			0.58
Working Capital Finance			**5.18**

BREAK UP OF LABOUR

Particulars		Wages Per Month	No of Employees	Total Salary
Technician		10,000.00	1	10,000.00
Skilled Worker		8,000.00	1	8,000.00
Unskilled Worker		5,000.00	2	10,000.00
				18,000.00
Add: 10% Fringe Benefit				1,800.00
Total Labour Cost Per Month				19,800.00
Total Labour Cost for the year (In Rs. Lakhs)				2.38

BREAK UP OF SALARY

Particulars		Salary Per Month	No of Employees	Total Salary
Manager		-	-	-
Accountant		8,000.00	1	8,000.00
Total Salary Per Month				8,000.00
Add: 10% Fringe Benefit				800.00
Total Salary for the month				8,800.00
Total Salary for the year (In Rs. Lakhs)				1.06

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	3.85	0.61	7.46
	-	3.00	3.85	0.61	7.46
Less : Depreciation	-	0.30	0.58	0.03	0.91
WDV at end of Ist year	-	2.70	3.27	0.58	6.55
Additions During The Year	-	-	-	-	-
	-	2.70	3.27	0.58	6.55
Less : Depreciation	-	0.27	0.49	0.06	0.82
WDV at end of IInd Year	-	2.43	2.78	0.52	5.73
Additions During The Year	-	-	-	-	-
	-	2.43	2.78	0.52	5.73
Less : Depreciation	-	0.24	0.42	0.05	0.71
WDV at end of IIIrd year	-	2.19	2.36	0.47	5.02
Additions During The Year	-	-	-	-	-
	-	2.19	2.36	0.47	5.02
Less : Depreciation	-	0.22	0.35	0.05	0.62
WDV at end of IV year	-	1.97	2.01	0.42	4.40
Additions During The Year	-	-	-	-	-
	-	1.97	2.01	0.42	4.40
Less : Depreciation	-	0.20	0.30	0.04	0.54
WDV at end of Vth year	-	1.77	1.71	0.38	3.86

REPAYMENT SCHEDULE OF TERM LOAN 11.5%

Year	Particulars	Amount	Addition	Total	Interest	Repayment	Cl Balance
IST YEAR	Opening Balance						
	Ist Quarter	-	6.97	6.97	-	-	6.97
	Iind Quarter	6.97	-	6.97	0.20	-	6.97
	IIIrd Quarter	6.97	-	6.97	0.20	-	6.97
	Ivth Quarter	6.97	-	6.97	0.20	-	6.97
					0.60	-	
IIND YEAR	Opening Balance						
	Ist Quarter	6.97	-	6.97	0.20	0.44	6.53
	Iind Quarter	6.53	-	6.53	0.19	0.44	6.10
	IIIrd Quarter	6.10	-	6.10	0.18	0.44	5.66
	Ivth Quarter	5.66		5.66	0.16	0.44	5.22
					0.73	1.74	
IIIRD YEAR	Opening Balance						
	Ist Quarter	5.22	-	5.22	0.15	0.44	4.79
	Iind Quarter	4.79	-	4.79	0.14	0.44	4.35
	IIIrd Quarter	4.35	-	4.35	0.13	0.44	3.92
	Ivth Quarter	3.92		3.92	0.11	0.44	3.48
					0.53	1.74	
IVTH YEAR	Opening Balance						
	Ist Quarter	3.48	-	3.48	0.10	0.44	3.05
	Iind Quarter	3.05	-	3.05	0.09	0.44	2.61
	IIIrd Quarter	2.61	-	2.61	0.08	0.44	2.18
	Ivth Quarter	2.18		2.18	0.06	0.44	1.74
					0.33	1.74	
VTH YEAR	Opening Balance						
	Ist Quarter	1.74	-	1.74	0.05	0.44	1.31
	Iind Quarter	1.31	-	1.31	0.04	0.44	0.87
	IIIrd Quarter	0.87	-	0.87	0.03	0.55	0.32
	Ivth Quarter	0.32		0.32	0.01	0.55	- 0.23
					0.12	1.97	

CALCULATION OF D.S.C.R

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
CASH ACCRUALS	10.12	9.62	10.69	12.34	13.97
Interest on Term Loan	0.60	0.73	0.53	0.33	0.12
Total	10.72	10.35	11.21	12.67	14.10
REPAYMENT					
Instalment of Term Loan	1.74	1.74	1.74	1.97	1.97
Interest on Term Loan	0.60	0.73	0.53	0.33	0.12
Total	2.34	2.47	2.27	2.30	2.09
DEBT SERVICE COVERAGE R	**4.58**	**4.19**	**4.95**	**5.52**	**6.74**
AVERAGE D.S.C.R.			**5.19**		

COMPUTATION OF SALE

Particulars	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
Op Stock	-	3,600	21,000	24,000	27,000
Production	360,000	420,000	480,000	540,000	600,000
	360,000	423,600	501,000	564,000	627,000
Less : Closing Stock	3,600	21,000	24,000	27,000	30,000
Net Sale	356,400	402,600	477,000	537,000	597,000
Sale Price per MT	26.00	26.00	26.00	26.00	26.00
Sale (in Lacs)	**92.66**	**104.68**	**124.02**	**139.62**	**155.22**

COMPUTATION OF ELECTRICITY

(A) POWER CONNECTION				
Total Working Hour per day		Hours	8	
Electric Load Required			3	
Load Factor			0.7460	
Electricity Charges		per unit	8.00	
Total Working Days			300	
Electricity Charges (8 Hrs Per day)				42,969.60
Add : Minimim Charges (@ 10%)				
(B) D.G. SET				
No. of Working Days			300	days
No of Working Hours			-	Hour per day
Total no of Hour			-	
Diesel Consumption per Hour			8	
Total Consumption of Diesel			-	
Cost of Diesel			65.00	Rs. /Ltr
Total cost of Diesel			-	
Add : Lube Cost @15%			-	
Total			**-**	
Total cost of Power & Fuel at 100%				0.43
Year		**Capacity**		**Amount**
				(in Lacs)
IST YEAR		60%		0.26
IIND YEAR		70%		0.30
IIIRD YEAR		80%		0.34
IVTH YEAR		90%		0.39
VTH YEAR		100%		0.43

BREAK EVEN POINT ANALYSIS

Year	I	II	III	IV	V
Net Sales & Other Income	92.66	104.68	124.02	139.62	155.22
Less : Op. WIP Goods	-	0.75	4.37	4.99	5.62
Add : Cl. WIP Goods	0.75	4.37	4.99	5.62	6.24
Total Sales	**93.41**	**108.30**	**124.64**	**140.24**	**155.84**
Variable & Semi Variable Exp.					
Raw Material & Tax	72.00	84.00	96.00	108.00	120.00
Electricity Exp/Coal Consumption at 85%	0.22	0.26	0.29	0.33	0.37
Manufacturing Expenses 80%	1.48	2.51	2.98	3.35	3.73
Wages & Salary at 60%	2.06	2.27	2.49	2.74	3.01
Selling & adminstrative Expenses 80%	3.71	4.19	4.96	5.58	6.21
Intt. On Working Capital Loan	0.52	0.52	0.52	0.52	0.52
Total Variable & Semi Variable Exp	**79.99**	**93.74**	**107.24**	**120.52**	**133.83**
Contribution	**13.43**	**14.56**	**17.40**	**19.72**	**22.01**
Fixed & Semi Fixed Expenses					
Manufacturing Expenses 20%	0.37	0.63	0.74	0.84	0.93
Electricity Exp/Coal Consumption at 15%	0.04	0.05	0.05	0.06	0.06
Wages & Salary at 40%	1.37	1.51	1.66	1.83	2.01
Interest on Term Loan	0.60	0.73	0.53	0.33	0.12
Depreciation	0.91	0.82	0.71	0.62	0.54
Selling & adminstrative Expenses 20%	0.93	1.05	1.24	1.40	1.55
Total Fixed Expenses	**4.22**	**4.77**	**4.94**	**5.06**	**5.22**
Capacity Utilization	**60%**	**70%**	**80%**	**90%**	**100%**
OPERATING PROFIT	**9.21**	**9.78**	**12.47**	**14.66**	**16.79**
BREAK EVEN POINT	**19%**	**23%**	**23%**	**23%**	**24%**
BREAK EVEN SALES	**29.34**	**35.52**	**35.34**	**36.02**	**36.96**

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