



एमएसएमई-विकास संस्थान
सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय, भारत सरकार
22 गोदाम औद्योगिक सम्पदा, जयपुर,
राजस्थान-302006

परियोजना रिपोर्ट

पैकेज्ड ड्रिंकिंग वॉटर 1 ली0 क्षमता

PACKAGED DRINKING WATER (1 LITRE CAPACITY)

PROJECT PROFILE
Packaged Drinking Water(1 litre Capacity)

Product	PACKAGED DRINKING WATER
NIC Code (2008)	11043.
Production Capacity	24 Lakhs Bottles (1.0 Ltr)per Annum (with one shift of 8 hours)
Month & Year of preparation	July 2020
Prepared by	Chemical Division, MSME-Development Institute, 22 Godam, Industrial Estate, Jaipur – 302006 Telephone : 0141-2210553 Telefax : 0141-2210553 Web : http://www.dcmsme.gov.in Email: dcdi-jaipur@dcmsme.gov.in

INTRODUCTION:

It is needless to mention that water, a compound of hydrogen and oxygen is a precious natural gift which is very essential for survival of mankind including animals. The water used for potable purposes should be free from undesirable impurities. The water available from untreated sources such as Well, Boreholes and spring is generally not hygienic and safe for drinking. Thus it is a desirable and necessary to purify the water and supply under hygienic conditions for human drinking purpose as the name implies. The mineral water is the purified water fortified with requisite amounts of minerals such as barium, iron, manganese etc., which can be absorbed by human body. It is either obtained from natural resources like spring and drilled wells or it is fortified artificially by blending and treating with mineral salts. The mineral water shall be manufactured and packed under hygienic conditions in properly washed and cleaned bottles in sterilized conditions.

MARKET & DEMAND:

Unfortunately sufficient safe potable water is not available everywhere in the country, either harmful chemical substances are found in the layers of earth which enter into water or it may be contaminated due to pathogenic micro-organisms. If such water is consumed, the body suffers from water-borne diseases. Due to this, it has become imperative to process and bottle safe potable water for mankind in prevailing conditions. The demand for purified water becomes more during summer season. Although few companies have already entered in the bottling of safe potable water and mineralized water, but still a huge gap is there between demand and supply at all metropolitan cities and towns. The product is widely accepted in offices, restaurants, railway stations, airport, bus stands, hospitals and to some extent in rich households. So there is good scope for establishing the units for processing and bottling plain and mineralized drinking water in different parts of the country.

IMPLEMENTATION SCHEDULE:

The following steps involves in the implementation of the project :-

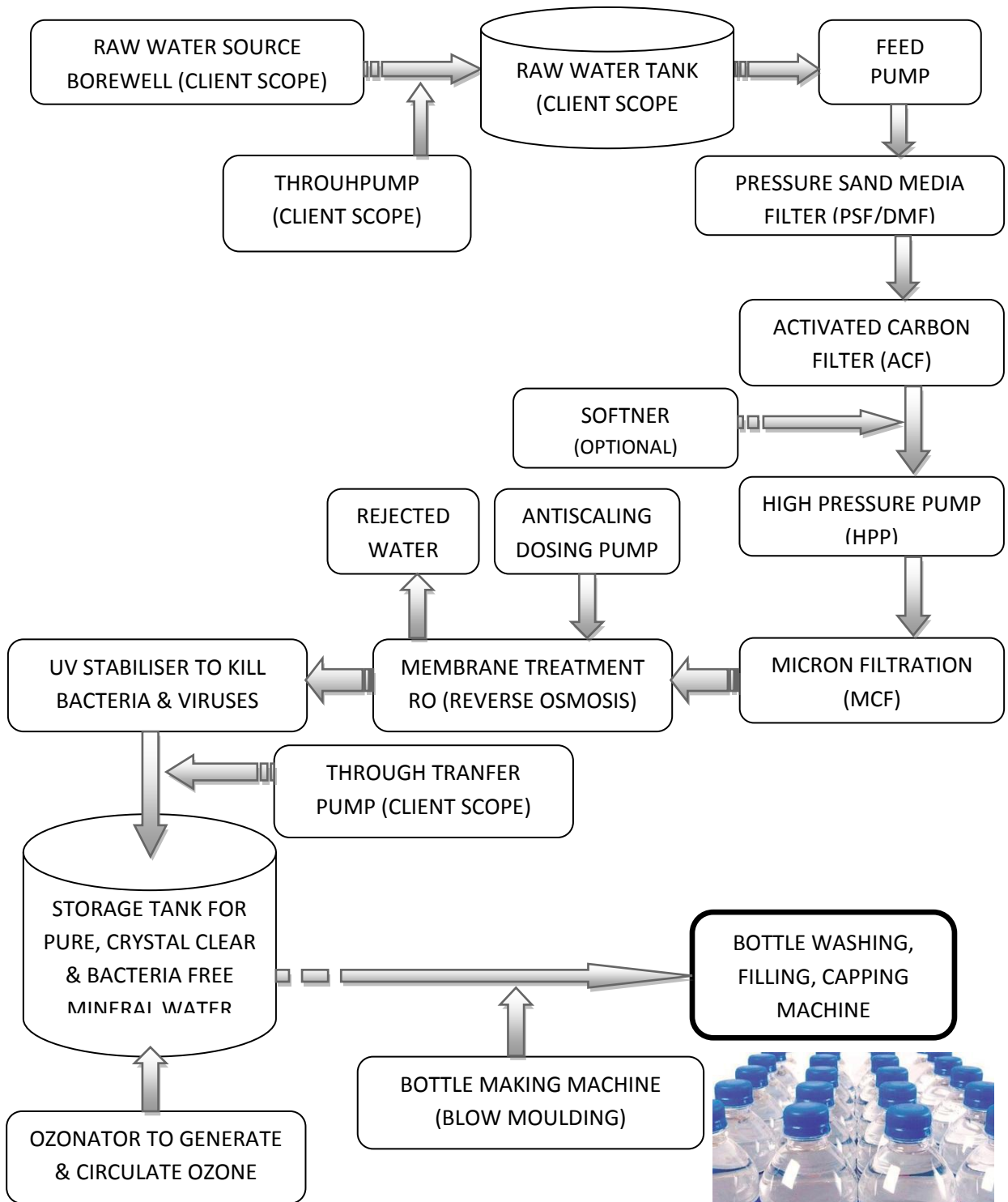
- I. Selection of Site.
 - II. Form of Ownership.
 - III. Feasibility Report.
 - IV. Udyam Registration.
 - V. Arrangement of Finance.
 - VI. Rent /Lease deed etc..
 - VII. Plant Erection and Electrification.
 - VIII. Recruitment of Manpower.
 - IX. Arrangement of raw materials including packaging materials.
 - X. Selection of marketing channel.
 - XI. Miscellaneous power and water connection, Pollution Control Board clearance etc.
- (Normally 3-6 months is required to implement the project.)

TECHNICAL ASPECTS:

(i) Process of Manufacture:

Raw water to be processed is collected in tanks. A known quantity is pumped in to the above tank where the water is dozed with alum for coagulation with heavy metals or insoluble matters. The water after coagulation is allowed to settle for an hour. The impurities may be removed by reserved osmosis techniques also. The supernatant water is taken to the chlorination tank where primary disinfection is brought about by bubbling chlorine gas. The water is then passed through sand filters for trapping of un-dissolved impurities. The water after sand filtration is passed through carbon filters for removal of odour, colour and also for de-chlorination. It is then passed through series of micro fillers comprising 5 micron, 1 micron and 0.4 micron filter followed by ultraviolet disinfection system for terminal disinfection. Packing is done in PET bottles of 1 litre capacity through an automatic rinsing, filling and capping machine fitted with an ozone generator. The bottle after capping isshrinks wrapped (optical) and packed in corrugated boxes of one dozen each.

FLOW OF WATER TREATMENT RO PLANT as per BIS



(ii) Quality Control and Standards:

The plain drinking water has to be bottled in pet bottle as per IS:14543-1998.

(iii) Motive Power: 50 HP

(iv) Production Capacity (Per Annum):

Quantity: 24 lakh bottles (1 Liter) Per Annum

Value :Rs. 168.0 Lakhs

(v) Pollution Control:

The unit will not create any pollution problems. However, entrepreneur should obtain NOC from concerned State Pollution Control Board.

(vi) Energy Conservation: Suitable measures should be adopted to use electricity

(vii) Permission to be taken from local municipal body /ground water dept for ground water exploitation.

BASIS & PRESUMPTIONS:

- The production has been calculated on the basis of single shift of 8 hours and 300 working days in a year.
- The full production capacity presumed to be achieved in the 2nd year of operation.
- Labor wages has been considered basing on market rates but not less than the rates prescribed by the Government at the locality.
- The interest rate on an average has been taken on 10% on capital investment.

Financial Aspects:

i. Fixed Cost:

Rent		Rs 50,000
Land	1000 sq.m.	
Building	750 sq.m	
Factory shed including, laboratory		
Store, Godawn , Office.		

Machinery & Equipment:

Sl.No.	Description	Qty / Nos.	Amount (Rs.)
1	Sand Filter	1	50,000
2.	Chlorination Tanks made of S. Steel with Electronic Dozer	2	1,50,000
3.	Alum Treatment Tanks with Electronic Dozer	1	1,50,000
4.	Activated Carbon Filter	1	60,000
5.	Reverse Osmosis Plant 1000 Ltr/ Hr.	1	2,00,000
6.	Micron Filters	3	60,000
7.	Ultra violet Disinfectant System	1	50,000
8.	Ozone Generator	1	1,50,000
9.	Raw and purified water collection tanks with motor & accessories	4	2,00,000
10.	Automatic Rinsing Filling and Capping Machine	1	8,00,000
11.	Shrink Wrapping Machine for Bottle – 0.15	1	30,000
12.	Miscellaneous Tools & Equipment, Pipeline etc. Plastic Crates etc.	-	2,00,000
13	Laboratory Testing and Quality Control, Micro-Biological Instruments etc.	-	2,50,000
14	Cost of Deep Bore Tube well for Water Reservoir	-	2,00,000
	Electrification and installation charges @10% of Plant & Machinery.	-	2,50,000
	Total		28,00,000

WORKING CAPITAL:**a) STAFF & LABOR**

1. Manager/Chemist	1 No.	25,000	25,000
2. Plant operator	4 No.	15,000	60,000
3. Clerk	1 No.	12,000	12,000
4. Skilled Workers	2 Nos.	11,000	22,000
5. Unskilled Workers	1 Nos.	8,000	8,000
6. Watchman	1No.	8,000	8,000
Add: Perquisites @ 15%			20,250
	TOTAL: Rs		1,55,250

b) RAW MATERIALS:

Sl. No	Item	Qty.(MT)	Rate (Rs.)	Value (Rs. lakh)
1	PET / PVC Bottled including cap labels etc.	2.00 lakh Bottles of 1 lit. size	3.00	6,00,000
2	Chemical and Reagents etc.	L.S		50,000
3	Corrugated Boxes, Strips, Tap, Label etc.	L.S		1,70,000
				8,20,000

c) UTILITIES:

Power, Electricity, fuel etc.	Rs 50,000/ month
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d) OTHER CONTINGENT EXPENSES:

i. Repairs, maintenance and replacement	5,000
ii. Office expenditure	5,000
iii. Insurance	5,000
iv. License & other fees	20,000
iv. Telephone	1,000
v. Transport	20,000
vi. Miscellaneous expenses	4,000
vii Rent of Building	50,000
Sub Total	1,10,000
Total recurring expenditure per month (a+b+c+d)	11,35,250
Total working capital for 3 months	34,05,750

TOTAL CAPITAL INVESTMENT:

a. Fixed Capital	28,00,000
b. Working Capital for 3 months.	34,05,750
TOTAL:	62,05,750
	or say 62,06,000

MACHINERY UTILIZATION:

80% of utilization has been taken into consideration on all the machinery.

FINANCIAL ANALYSIS:	
1. Cost of Production per annum:	
a.Total recurring cost	1,36,23,000
b. Depreciation on machinery & equipments 10%	2,80,000
c. Interest on total capital investment @ 10%	6,20,600
TOTAL:	1,45,23,600
Turnover per year:	
No. of Packed water bottle per year = 24,00,000	
Cost of Packed water bottle 24,00,000 @ 7.0(Rs) = 1,68,000,00	
Net profit per year	
1,68,000,00 – 1,45,23,600 = Rs22,76,400	
Net Profit Ratio:	
Net profit per year × 100 / Turnover = 13.6 %	
Break Even Point:	
Fixed Cost:	
Total Depreciation	2,80,000
Interest on total capital investment	6,20,600
40% of personnel expenditure	7,45,200
40% of utilities	2,40,000
40% of other contingent expenditure	1,92,000
Rent & License & other fees	8,40,000

Total fixed cost :Rs 29,17,800

Rate of return:

Net profit × 100 / Total investment

$$22,76,400 \times 100 / 62,06,000 = 36.7\%$$

Break Even Point:

Fixed Cost X 100 / Fixed Cost + Profit

$$\frac{2917800 \times 100}{2917800 + 2276400} = 56.2\%$$

Names & Addresses of Machinery & Equipment Suppliers:

1. M/s Dharmandan Techno Projects Pvt. Ltd. 166 to 169, Shiv city Industries-3, Nr. Radhe Krishna Residency, Mankna Road N.H.-8 Surat-394325, Gujarat ,India Ph 02616137777/00 , Mob.9081000619
2. M/s Enviro Tech utility, 32-A, Main Patel Road, Opp. Wings Show Room, West Patgel Nagar, New Delhi-110 008.
- 3 M/s Watrion Water & Filter Engg. Pvt. Ltd., 1 Harsivan Apartment, Ground Floor, (Behind Canara Bank) West J. P. Road, Andheri (West) P. B. No. 7372, Mumbai-700 059.
4. M/s M/s Retail Agencies, 55-III Main Road, Gandhi Nagar, Chennai-700 020.
5. M/s Ion Exchange India Ltd., Ticcon House, Dr. E. House Road, Mahalaxmi, Mumbai-400 011.
6. M/s Alpha Engineering, 158, Pocket – E-20, Sector-III, Rohini, Delhi-110 085.