PROJECT PROFILE

PRODUCT : PACKAGED DRINKING WATER

PRODUCT CODE : 224103008

QUALITY STANDARD : IS: 14543 - 2004

PRODUCTION CAPACITY : QUANTITY - 45 LAC BOTTLES (1 LITRE)
33.6 LAC BOTTLES (2 LITRES)

VALUE - Rs.4,37,70,000/-

MONTH & YEAR OF PREPARATION : DECEMBER, 2010

PREPARED BY -

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1. INTRODUCTION:

It is universal truth that water is very essential for sustaining life and survival of mankind including animal and plants. Nature has gifted water to all living things. The water used for potable purpose by mankind should be free from undesirable impurities and contamination. Though the water available on the earth is abundant but fresh water fit for human consumption is hardly 3% of total available water, source of which are river springs, pond, rain water and ground water.

The untreated water available from sources like well, bore well and springs is generally not hygienic and unsafe for human consumption. Thus needs treatment and purification to supply hygienic packed water for drinking purpose. As the name implies, the packaged drinking water is the purified water free from contamination, suspended impurities, unwanted colour, diseases causing micro organism and hygienically packed with convenience of use.

Water born diseases are cause of concern world over and lot of money spent on the treatment of diseases caused by contaminated water and problem has assumed alarming proportions due to increasing contamination of ground water. This has given boost to demand for hygienically packed purified water and this is growing rapidly.

2.0 MARKET POTENTIAL

Fresh water available on the earth is in different sources. Most of river, pond and ground water available for drinking purpose is unfortunately contaminated and unhygienic for human consumption. Level of harmful and toxic chemical is on rise and concentration of pathogenic micro organism has risen beyond safe limit resulting in alarming increase in water born diseases. So it has become imperative to treat the water and pack for safe human consumption.

The demand for purified water becomes more during summer season. However, packaged drinking water remain in demand through out the year due to increasing traveling habits of people. The product has wide demand at public places, places of tourist interests. Demand of packaged drinking water is increasing day by day.

3.0 BASIS AND PRESUMPTIONS

(i) The Project is based on Ozone Sterilization Technology. Provision of ultraviolet disinfectant for removal of microbial impurities and raw ground water having TDS upto 250 gram.
(ii) The production capacity is calculated on 3 shifts basis at 70% efficiency and 300 working days a year.

(iii) The cost of Machinery & Equipment and Raw material as indicated refers to a particular make and prices are approximate and are those prevailing at the time of preparation of this Profile.

(iv) The rate of interest on investment is taken at 15% on an average and BEP in the Profile has been calculated on the full capacity utilization.

3.1. IMPLEMENTATION SCHEDULE:

1. Selection of Site: 1 month
2. Preparation of DPR: 2 weeks
3. Filing of EM: 1 week
4. Procurement of Plant & Machinery: 1 month
5. Construction of Building: 3 months
6. Power Connection: 1 month
7. Obtaining BIS licence, Permission from Health Authorities, etc.: 2 months
8. Appointment of Staff & Labour: 1 ½ months
9. Trial Run: 1 week

4.0 TECHNICAL ASPECTS:

4.1 PROCESS OUTLINE:

Raw water is treated with measured quantity of alum for removal of heavy metal and insoluble matters and allowed to settle for about an hour. This water is passed through reverse osmosis plant to remove remaining impurities and excess hardness. This water is then treated with chlorine for disinfection followed by passing through carbon filters to remove undesirable odour, colour and excessive chlorine.

This water is then passed through series of micro filters comprising 5 micron, 1 micron and 0.4 micron filter followed by ultraviolet disinfection system for terminal disinfection. This purified water is tested for quality standard and then packed in suitable PET bottles of various capacities after treating with ozone. These bottles are packed in corrugated boxes. Capacity of bottle may also be shrink wrapped with printed sealing optionally.
4.2 QUALITY CONTROL AND STANDARDS:

The packaged drinking water is essentially has to be BIS Certified. So before marketing the product the enterprise should obtain BIS Certification Licence. Bureau of Indian Standards has laid down following Indian Standard for the product.


4.3 PRODUCTION CAPACITY (ANNUAL):

Quantity: 45 lac Bottles (1 litre) & 33.6 lac Bottles (2 litre)
Value: Rs.4,37,70,000/-

4.4 MOTIVE POWER:

The unit would need approx.25,000 kwh electric motive power per month.

4.5 POLLUTION CONTROL:

Although the enterprise is non-polluting but it is advisable that NOC must be obtained from the competent authority i.e. State Pollution Control Board and proper utilization of waste water generated by RO plant should be ensured.

4.6 ENERGY CONSERVATION:

Suitable measures should be adopted to optimize the use of energy and provision of energy saving devices are advised to conserve energy and to have check on this regular energy auditing must be carried out. Proper ventilation and arrangement of natural light in working shed are advisable.

5.0 FINANCIAL ASPECTS:

5.1 Fixed Capital:

5.1.1 Land & Building

<table>
<thead>
<tr>
<th>Description</th>
<th>Area</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>2000 Sq. Meters</td>
<td>7.0 lacs</td>
</tr>
<tr>
<td>Total Covered Area for filtration, R.O. unit.</td>
<td>600 Sq.Mtrs.</td>
<td>33.0 lacs</td>
</tr>
<tr>
<td>Packing Material Storage, Laboratory, Office &amp; Godown etc.</td>
<td>400 Sq.Mtrs.</td>
<td>40 lacs</td>
</tr>
</tbody>
</table>

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### 5.1.2 PLANT & MACHINERY (All indigenous):

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty</th>
<th>Total (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Alum treatment tanks</td>
<td>3 Nos.</td>
<td>1,50,000</td>
</tr>
<tr>
<td>(ii) Chlorination tanks SS</td>
<td>2 Nos.</td>
<td>1,00,000</td>
</tr>
<tr>
<td>(iii) Reverse Osmosis Plant Cap. 5000 litre/hr.</td>
<td>1 No.</td>
<td>8,50,000</td>
</tr>
<tr>
<td>(iv) Filters (Sand, Carbon and Micro filters)(5, 1 and 0.4 mic mm size)</td>
<td>1 Set</td>
<td>75,000</td>
</tr>
<tr>
<td>(v) Ultra Violet disinfectant system</td>
<td>1 No.</td>
<td>40,000</td>
</tr>
<tr>
<td>(vi) Electronic doser for alum</td>
<td>1 No.</td>
<td>37,500</td>
</tr>
<tr>
<td>(vii) Electronic doser for chlorine</td>
<td>1 No.</td>
<td>37,500</td>
</tr>
<tr>
<td>(viii) Ozone Generator Capacity</td>
<td></td>
<td>3,90,000</td>
</tr>
<tr>
<td>(ix) Raw and purified water collection tanks with motor/ pump and other accessories</td>
<td>4 Nos.</td>
<td>2,00,000</td>
</tr>
<tr>
<td>(x) Automatic bottle rinsing, filling and capping machine</td>
<td>2 Nos.</td>
<td>17,75,000</td>
</tr>
<tr>
<td>(xi) Shrink Wrapping machine for bottle labeling</td>
<td>2 Nos.</td>
<td>37,000</td>
</tr>
<tr>
<td>(xii) Misc. tools and equipment</td>
<td>L.S.</td>
<td>1,75,000</td>
</tr>
<tr>
<td>(xiii) Laboratory equipments and analytical instruments</td>
<td>L.S.</td>
<td>2,25,000</td>
</tr>
<tr>
<td>(xiv) Electrification and installation charges @ 10% of Plant &amp; Machinery</td>
<td></td>
<td>4,19,200</td>
</tr>
<tr>
<td>(xv) Cost of Office Equipment and furniture including computer &amp; printer</td>
<td></td>
<td>1,00,000</td>
</tr>
<tr>
<td>(xvi) Deep Bore Tube well as water source</td>
<td></td>
<td>1,75,000</td>
</tr>
</tbody>
</table>

**Total**: 47,86,200

**Rounded to**: 47,86,000
5.1.3 TOTAL FIXED CAPITAL:

1. Land & Building .......................... 40,00,000
2. Plant & Machinery ....................... 47,86,000
3. Pre-operative expenses including Delivery Van ........ 12,04,000

Total ........................................ 99,90,000

5.2 B. WORKING CAPITAL (Per Month)

5.2.1 STAFF & LABOUR:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Salary (Rs.)</th>
<th>Amount (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>Works Manager</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>(ii)</td>
<td>Accountant cum Cashaier</td>
<td>4,000</td>
<td>4,000</td>
</tr>
<tr>
<td>(iii)</td>
<td>Clerk cum Typist</td>
<td>3,000</td>
<td>3,000</td>
</tr>
<tr>
<td>(iv)</td>
<td>Store cum Purchase Officer</td>
<td>3,500</td>
<td>3,500</td>
</tr>
<tr>
<td>(v)</td>
<td>Sweeper/Cleaner</td>
<td>2,500</td>
<td>2,500</td>
</tr>
<tr>
<td>(vi)</td>
<td>Production Manager</td>
<td>8,000</td>
<td>8,000</td>
</tr>
<tr>
<td>(vii)</td>
<td>Chemist cum Supervisor</td>
<td>5,000</td>
<td>5,000</td>
</tr>
<tr>
<td>(viii)</td>
<td>Lab Assistant</td>
<td>2,500</td>
<td>2,500</td>
</tr>
<tr>
<td>(ix)</td>
<td>Skilled Worker including Maintenance Staff</td>
<td>3,500</td>
<td>52,500</td>
</tr>
<tr>
<td>(x)</td>
<td>Unskilled Workers</td>
<td>2,500</td>
<td>10,000</td>
</tr>
<tr>
<td>(xi)</td>
<td>Watchman/Peon</td>
<td>2,500</td>
<td>7,500</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1,08,500</td>
<td></td>
</tr>
</tbody>
</table>

Add 15% perquisites ................................ 16,275

Total ........................................ 1,24,775

Rounded to ....................................... 1,25,000

5.2.2 RAW MATERIAL (Per Month):

1. PET Bottles with Cap
   (i) 1 litre size - 3,78,000 Nos. 9,00,000
   (ii) 2 litre size - 2,82,000 Nos. 9,85,000
2. Corrugated Boxes, tape, labels, etc.  
   7,85,000
3. Misc. Chemicals  
   30,000

**Total :** 27,00,000

**5.2.3 UTILITIES (Per Month) :**

(i) Electricity  
   1,37,500
(ii) Fuel & Others  
   2,500

**Total: 1,40,000**

**5.2.4 OTHER CONTINGENT EXPENSES (Per Month) :**

(i) Postage & Stationery  
   750
(ii) Phone  
   750
(iii) Advertisement & Publicity  
   2,000
(iv) Consumable Stores & Maintenance  
   3,000
(v) Transport Charges / Conveyance Charges  
   5,000
(vi) Sales Expenses/ Sales Commission  
   8,000
(vii) Insurance & Taxes  
   1,875
(viii) Licence & Other fee  
   2,000
(ix) Miscellaneous Expenses  
   1,000

**Total : 24,375**
Rounded 24,500

**5.2.5 WORKING CAPITAL (Per Month) :**

(i) Staff & Labour  
   1,25,000
(ii) Raw Materials/ Packaging Materials  
   27,00,000
(iii) Utilities  
   1,40,000
(iv) Recurring Expenses  
   24,500

**Total : 29,89,500**
6.0 **WORKING CAPITAL FOR 3 MONTHS:**

\[ 29,89,500 \times 3 = Rs.89,68,500 \]

7.0 **TOTAL CAPITAL INVESTMENT:**

(i) Fixed Capital \quad 99,90,000

(ii) Working Capital (for 3 months) \quad 89,68,500

\[ \text{----------------} \]
\[ 1,89,58,500 \]

8.0 **FINANCIAL ANALYSIS:**

8.1 **COST OF PRODUCTION (Per Annum):**

(i) Total Recurring Expenses \quad 3,58,74,000

(ii) Depreciation on Building @ 5% of Cost \quad 1,65,000

(iii) Depreciation on Plant & Machinery @ 10% per annum \quad 4,68,000

(iv) Depreciation on Office Equipment & furniture @ 20% \quad 20,000

(v) Interest on Total Capital Investment @ 15% \quad 28,43,775

\[ \text{--------------------} \]
\[ \text{Total : } 3,93,70,775 \]
\[ \text{Say : } 3,93,71,000 \]

8.2 **TURN OVER (Annual):**

By sale of -
45 lakh bottles of 1 litre @ 4.5 \quad 2,02,50,000

3360000 bottles of 2 litre @ 7.00 \quad 2,35,20,000

\[ \text{--------------------} \]
\[ 4,37,70,000 \]

8.3 **PROFITABILITY:**

8.3.1 Total Profit Per Annum \quad - \quad 43,99,200

8.3.2 Net Profit Ratio \quad - \quad 10.0\%
8.2.3 Rate of Return on Investment - 23.2%

8.3.4 Break Even Point - 48.9%

B.E.P = \frac{FC \times 100}{FC + P}

(A) FIXED COST (FC) :

(i) Depreciation on Plant & Machinery and Building 6,33,300
(ii) Interest on Investment 28,43,775
(iii) 40% of Salary & Wages 6,00,000
(iv) 40% of Other Expenses other than Insurance 1,08,000
(v) Insurance 22,500

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42,07,275
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(B) PROFIT (P) :

\frac{FC \times 100}{FC + P} = \frac{42,07,275 \times 100}{86,06,275} = 48.9\

9.0 NAME & ADDRESSES OF MACHINERY & EQUIPMENT SUPPLIERS :

(1) M/s Rays Water Technology,
CRT, 111 AM, No.25-B, 1\textsuperscript{st} Floor,
Laxmipuram, Ganapathy,
Coimbatore – 641 006
Phone: 0422-2523765

(2) M/s Masseach Associates,
No.13, Manohar Mahal, Moghal Lane, Mahim,
Mumbai – 400 016.
Phone: 022-24377702

(3) M/s Cristal Mineral Water Systech,
No.107, Thirupathi Complex,
M.G. Road, Paradise Circle,
Hyderabad – 500 001.
Phone: 040-65160390 , FAX: 040-66486905
(4) M/s Sai Aquafresh,
X-10, 2nd Floor, Mani Market, West Patel Nagar,
New Delhi – 110 008.
Phone: 011-25881093 , FAX: 011-25880739

(5) M/s Neel Hydrotech,
1992, Udhai Sadan, Madi Wale Colony,
Sadashiv Path,
Pune – 411030 (Maharashtra)
Phone: 020 -24476611, FAX: 020-24476611

(6) M/s Aquatech Systems,
S.No.247/2/2D, Plot No.2 & 3, New Ganesh Nagar,
Chinchwad Pune,
Pune – 411 001 (maharashtra)
Phone: 020-27453395, FAX: 020-27453395

(7) M/s N.B Industries,
A-23,Meladi Estate, Opp. Meladi Mata Mandir,
Near Gota, Railway Crossing, Gota Road,
Ahmedabad – 382 481

(8) M/s E.C Packaging Pvt. Ltd.,
14/7, Milestone, Mathura Road,
Faridabad – 121 003.
Phone: 0129-4192900/2277698, FAX: 0129-2255602.

(9) M/s Ozone Technologies,
C-225, Sector-63,
Noida – 201 301
Phone: 0120-4227679, FAX: 0120-4259442

(10) M/s Numatik Engineers Pvt. Ltd.,
Shop No.6, Bobby Pathak Avenue,
Opp. Rotary Garden, Dahisar East,
Mumbai – 400 068.
Phone: 022-26480866/28483848

(11) M/s Ion Exchange India Ltd.,
Ticcon House Road, Mahalaxmi,
Mumbai – 400 011.

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