PROJECT PROFILE ON GLASS TOYS

Product : Glass Toys

Product Code : 264104005

Quality Standard. : As per Customers Specification

Production :
Qty – 126000 no. of toys

Value- Rs. 20,66,000/-

Month & Year Of preparation : November, 2010

Prepared By :
MSME-Development Institute
Okhla, New Delhi-110 020
Phone: 26838118, 26838068
Fax : 26838016
INTRODUCTION:

Glass toys are hollow or solid toys made out of fabrication work from either coloured or transparent glass tubes or rods respectively. These glass toys are decorative articles made generally in the form of biological birds, animals, ships and model sets etc. having different shape and size with different attractive colours. These can very well be produced in small scale sector only with the help of a few equipment and little techniques. They are extensively used for the decoration purpose and its unique aesthetic values and performance being displayed in shelves in all the houses, throughout this world.

MARKET POTENTIAL:

Hollow and solid glass toys in the shape of biological birds, animals and models in attractive colours and designs have got good demand in the market and the taste for this item is increasing day by day with medium and affluent class of people due to its aesthetic value and performance. Glass toys are having certain better inherent qualities than plastic and other toys in respect of transparency brilliancy, cleanliness and attraction and hence have more demand for keeping them in drawing room of houses, shops, hotels, restaurant etc. As standard of living and purchasing capacity of our middle class society is improving day by day, the scope of these items is increasing and everlasting for being fragile in nature requiring replacement from time to time. Fabricated glass toys of highly sophisticated nature if made with good workmanship have good market potential in abroad also.

BASIS & PRESUMPTIONS:

i) The unit will operate on single shift basis and 300 working days in a year considering 8 hours/shift.

ii) Capacity utilization – 1st year – 70%, IInd year-80%, IIIrd year onwards – 90%.

iii) Salary & wages are as per minimum wages act of govt.

iv) Margin money – 25%

v) Pay back period of the project is about 7 years
vi) The cost of land, construction charges, machinery & equipment, raw material etc. indicated in the scheme are based on the prices prevailing at the time of project preparation. Hence, these are subject to necessary changes from time to time based on the local condition and availability.

**IMPLEMENTATION SCHEDULE:**

<table>
<thead>
<tr>
<th>i)</th>
<th>Market survey &amp; preparation of project document</th>
<th>1st month</th>
</tr>
</thead>
<tbody>
<tr>
<td>ii)</td>
<td>Registration</td>
<td>2nd month</td>
</tr>
<tr>
<td>iii)</td>
<td>Arrangement of finance/loans</td>
<td>3rd – 4th month</td>
</tr>
<tr>
<td>iv)</td>
<td>Land acquisition &amp; construction of building</td>
<td>5th – 6th month</td>
</tr>
<tr>
<td>v)</td>
<td>Procurement of machinery &amp; equipment &amp; its installation</td>
<td>6th – 7th month</td>
</tr>
<tr>
<td>vi)</td>
<td>Purchase of raw material</td>
<td>7th – 8th month</td>
</tr>
<tr>
<td>vii)</td>
<td>Recruitment of skilled worker &amp; staff</td>
<td>8th – 9th month</td>
</tr>
<tr>
<td>viii)</td>
<td>Trial production</td>
<td>10th month</td>
</tr>
<tr>
<td>ix)</td>
<td>Commercial Production</td>
<td>10th month</td>
</tr>
</tbody>
</table>

**TECHNICAL ASPECT:**

Process of manufacture:

Soda-lime and carving glass rods and tubes of different sizes and colours are used for manufacturing of different types of solid and hollow glass toys. The glass tubes and rods are heated and softened over the burner flame of LPG drawn and fabricated to the desired shape by slightly pulling, bend up, pressing and shaping by the blowing tools. Additional rods/tubes are attached such as legs, hands and other parts to complete the toys. Available charts of animal and birds in the market can also serve as a guide for the purpose. Carving glass rods and tubes which is high heat resistant are used for fabricating complicated toys such as Lord Nahraja, Vagenshwara, ships and action figures of Bharatha Natyam. These articles are durable only if they are made by carving glass because of its low thermal expansion. Solid glass toys will have more attraction when they are given iridescent lustrous and coatings. Likewise, articles made out of glass tubes are more attractive and valuable if they are silvered. The glass toys can be decorated in different colours and designs by applying glass colours and transfer
papers and subsequently taking them into muffle furnace and heating the articles at appropriate temperature. By applying these methods, the value may be added and their aesthetic performance is improved as well.

QUALITY CONTROL & STANDARD

There is no standard specification for glass toys. Hence these are to be made as per the consumer requirement and prevailing fashion. The joints, bends and corners of glass solid and hollow toys must be crystal clear and smooth to have good appeal by customers. The tube diameter of the toys should be drawn uniformly and correctly. This can be maintained by skilled labour with good techniques.

Production Capacity (per annum):

<table>
<thead>
<tr>
<th>Quality</th>
<th>1,26,000 no. of toys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>Rs.20,66,000/-</td>
</tr>
</tbody>
</table>

FINANCIAL ASPECTS:

Fixed capital:

Land & Building:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost (in Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land – 150 Sq. mtrs. @ Rs. 600/- per sq. mtr.</td>
<td>90,000</td>
</tr>
<tr>
<td>Building</td>
<td></td>
</tr>
<tr>
<td>Work shed – 50 Sq. mtr. @ Rs.2000/- per sq. mtr.</td>
<td>1,00,000</td>
</tr>
<tr>
<td>Office cum show room - 20 Sq. mtr. @ Rs.2500/- per sq. mtr.</td>
<td>50,000</td>
</tr>
<tr>
<td>Store &amp; Go down - 20 Sq. mtr. @ Rs.2000/- per sq. mtr.</td>
<td>40,000</td>
</tr>
<tr>
<td>Boundary wall etc. – L.S.</td>
<td>30,000</td>
</tr>
<tr>
<td></td>
<td>2,20,000</td>
</tr>
<tr>
<td>Total cost of land &amp; building - L.S.</td>
<td>3,10,000</td>
</tr>
</tbody>
</table>
## Machinery & Equipment:

<table>
<thead>
<tr>
<th>S.No</th>
<th>Particulars</th>
<th>Rate (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>i)</td>
<td>LPG Cylinder 12 nos. @ Rs.1000/- per cylinder</td>
<td>12,000</td>
</tr>
<tr>
<td>ii)</td>
<td>Burners 12 Nos. @ Rs.400/- per burner</td>
<td>4,800</td>
</tr>
<tr>
<td>iii)</td>
<td>Oxygen Cylinder 2 Nos. @ Rs.800/- per cylinder</td>
<td>1,600</td>
</tr>
<tr>
<td>iv)</td>
<td>Oxygen regulator 4 nos. @ Rs.200/- per set</td>
<td>800</td>
</tr>
<tr>
<td>v)</td>
<td>Blowing work benches 12 nos. @ Rs.1200/- per set</td>
<td>14,400</td>
</tr>
<tr>
<td>vi)</td>
<td>Muffle furnace chamber size 600 X 300 mm 440 volt/3 phase load 12 KW and working temp. 750°C 1 No. 800°C with safety devices and automatic temp. control</td>
<td>75,000</td>
</tr>
<tr>
<td>vii)</td>
<td>Racks, beakers, chemical flasks, measuring cylinders etc for silvering work</td>
<td>25,000</td>
</tr>
<tr>
<td>viii)</td>
<td>Office equipment &amp; furniture etc.</td>
<td>5,000</td>
</tr>
<tr>
<td>ix)</td>
<td>Installation charges @ 10%</td>
<td>5,800</td>
</tr>
</tbody>
</table>

|                  | TOTAL                                           | 1,44,400  |
|                  | Say                                             | 1,45,000  |

Total fixed Capital investment = (i) + (ii)
4,55,000

## WORKING CAPITAL REQUIREMENT:

**Salary & Wages (per month)**:

<table>
<thead>
<tr>
<th>S.No</th>
<th>Designation</th>
<th>Nos.</th>
<th>Salary (Rs.)</th>
<th>Total (Rs.) Lakhs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Manager cum Supervisor</td>
<td>2 No.</td>
<td>10000/-</td>
<td>20,000</td>
</tr>
<tr>
<td>2.</td>
<td>Skilled worker</td>
<td>9 Nos.</td>
<td>4000/-</td>
<td>36,000</td>
</tr>
<tr>
<td>3.</td>
<td>Semi-skilled worker</td>
<td>5 Nos.</td>
<td>3000/-</td>
<td>15,000</td>
</tr>
<tr>
<td>4.</td>
<td>Peon-cum-watchman</td>
<td>3 Nos.</td>
<td>2500/-</td>
<td>7,500</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>78,500</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add perquisites etc. @ 15%</td>
<td></td>
<td>11,700</td>
<td></td>
</tr>
</tbody>
</table>
Raw material (per month):

<table>
<thead>
<tr>
<th>S.No</th>
<th>Particular</th>
<th>Qty. (MT)</th>
<th>Rate (Rs.)</th>
<th>Value (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>i)</td>
<td>Soda glass tubes</td>
<td>40 kg.</td>
<td>@ Rs. 50/- per kg.</td>
<td>2,000</td>
</tr>
<tr>
<td>ii)</td>
<td>Amber glass tubes</td>
<td>20 kg.</td>
<td>@ Rs. 55/- per kg.</td>
<td>1,100</td>
</tr>
<tr>
<td>iii)</td>
<td>Other colored tubes and rods</td>
<td>20 kg.</td>
<td>@ Rs. 55/- per kg.</td>
<td>1,100</td>
</tr>
<tr>
<td>iv)</td>
<td>Chemicals for silvering</td>
<td>L.S.</td>
<td></td>
<td>4,000</td>
</tr>
<tr>
<td>v)</td>
<td>Soda glass rods clear</td>
<td>30 kg.</td>
<td>@ Rs. 50/- per kg.</td>
<td>1,500</td>
</tr>
<tr>
<td>vi)</td>
<td>Colored glass rods</td>
<td>20 kg.</td>
<td>@ Rs. 55/- per kg.</td>
<td>1,100</td>
</tr>
<tr>
<td>vii)</td>
<td>Caorning glass tube</td>
<td>10 kg.</td>
<td>@ Rs. 320/- per kg.</td>
<td>3,200</td>
</tr>
<tr>
<td>viii)</td>
<td>Corning glass rods</td>
<td>10 kg.</td>
<td>@ Rs. 320/- per kg.</td>
<td>3,200</td>
</tr>
<tr>
<td>ix)</td>
<td>Iridescent lusters &amp; coatings</td>
<td>L.S.</td>
<td></td>
<td>2,500</td>
</tr>
<tr>
<td>x)</td>
<td>Packing materials and cord boards</td>
<td>L.S.</td>
<td></td>
<td>6,000</td>
</tr>
</tbody>
</table>

Utilities (per month):

Refilling of LPG cylinder = 24 Nos. @ Rs.250/- per cylinder = 6,000
Refilling oxygen cylinder = 4 Nos. @ Rs.200/- per cylinder = 800
Power 1800 KWH @ Rs.4/- per unit = 7200
Water = 100

Total = 14,100
Other expenses (per month):

<table>
<thead>
<tr>
<th>S.No</th>
<th>Particular</th>
<th>Amount (In Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Telephone</td>
<td>500</td>
</tr>
<tr>
<td>2</td>
<td>Postage &amp; Stationery</td>
<td>300</td>
</tr>
<tr>
<td>3</td>
<td>Repair &amp; Maintenance</td>
<td>200</td>
</tr>
<tr>
<td>4</td>
<td>Insurance</td>
<td>300</td>
</tr>
<tr>
<td>5</td>
<td>Consumables stores etc.</td>
<td>200</td>
</tr>
<tr>
<td>6</td>
<td>Unforeseen expenses</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>1700</strong></td>
</tr>
</tbody>
</table>

Total Recurring Expenditure (per month):

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Particular</th>
<th>Amount (In Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Salary &amp; Wages</td>
<td>90,200</td>
</tr>
<tr>
<td>2</td>
<td>Raw Material</td>
<td>25,700</td>
</tr>
<tr>
<td>3</td>
<td>Utilities</td>
<td>14,100</td>
</tr>
<tr>
<td>4</td>
<td>Other contingent</td>
<td>1,700</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>1,31,700</strong></td>
</tr>
</tbody>
</table>

Total working capital requirement (for 3 months)
Rs.1,31,700x3

3,95,100

Total Capital Investment:

Fixed Capital
4,55,000

Working capital (3 months)
3,95,100

Total
8,50,000
FINANCIAL ANALYSIS:

Cost of Production (per annum):

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Recurring expenses</td>
<td>15,80,400</td>
</tr>
<tr>
<td>2</td>
<td>Depreciation on Building @ 5%</td>
<td>11,000</td>
</tr>
<tr>
<td>3</td>
<td>Depreciation on plant &amp; machinery @ 10%</td>
<td>14,000</td>
</tr>
<tr>
<td>4</td>
<td>Depreciation on office equipment &amp; furniture @ 20%</td>
<td>1,000</td>
</tr>
<tr>
<td>5</td>
<td>Interest on capital investment @ 12.00% p.a.</td>
<td>1,02,000</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td><strong>17,08,400</strong></td>
</tr>
</tbody>
</table>

Turnover (Per year)

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>i)</td>
<td>Soda lime glass plain &amp; coloured toys on an average 1,10,000 nos. @ Rs.15/- per toy</td>
<td>16,50,000</td>
</tr>
<tr>
<td>ii)</td>
<td>Carving toys 16,000 nos. @ Rs.26/- per toy</td>
<td>4,16,000</td>
</tr>
<tr>
<td></td>
<td>Net Sales</td>
<td><strong>20,66,000</strong></td>
</tr>
</tbody>
</table>

Net Profit (per annum):

Sales per annum – cost of production
20,66,000 – 17,08,400 = 3,57,600

Net Profit Ratio:

\[
\text{Net Profit Ratio} = \frac{\text{Profit}}{\text{Sales (per year)}} \times 100
\]

\[
= \frac{3,57,600}{20,66,000} \times 100
\]

= 17.30%
Return On Investment

Profit \times 100
\text{Total investment}

= \frac{3,576,000 \times 100}{8,50,000}

= 42\%

Break Even Point:

\textbf{Fixed Cost}

<table>
<thead>
<tr>
<th>Fixed Cost</th>
<th>Value (in Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depreciation on building @ 5%</td>
<td>11,000</td>
</tr>
<tr>
<td>Depreciation on Machinery @ 10%</td>
<td>14,000</td>
</tr>
<tr>
<td>Depreciation on office equipment @ 20%</td>
<td>1,000</td>
</tr>
<tr>
<td>Interest on Total Investment @ 12%</td>
<td>1,02,000</td>
</tr>
<tr>
<td>Insurance</td>
<td>3,600</td>
</tr>
<tr>
<td>40% of salary &amp; wages</td>
<td>4,32,960</td>
</tr>
<tr>
<td>40% of other expenses</td>
<td>6,720</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,71,280</strong></td>
</tr>
</tbody>
</table>

\textbf{B.E.P.}

= \frac{\text{Fixed cost} \times 100}{\text{Fixed cost} + \text{Profit}}

= \frac{5,71,280 \times 100}{5,71,280 + 3,57,600}

= 61\%
NAME & ADDRESS OF PLANT AND MACHINERY SUPPLIERS

1. M/s. Toshniwal Brothers,
   607 A, Ist main, 2nd State
   Rajaji Nagar, Bangalore.

2. M/s. Indian Oxygen & Acetylane company,
   7 A, Vaidyanathe, Mudali Street,
   Madras-21

3. M/s. Jain Scientific Glass Works,
   Bengali Mohalla, Ambala Cantt.-133001

4. M/s. Veer Workshop
   B-57, Nariana Indl. Area,

5. M/s. Mehandiratta & Associates
   Hathras Road, Naraich,
   Agra-282006

ADDRESS OF RAW MATERIAL SUPPLIERS

1. M/s. Borosil Glass work Ltd.,
   44, Khanna construction House,
   Dr. R.G. Thadani Marg,
   Worli, Bombay-18.

2. M/s. Saraikella Glass Works (P) Ltd.,
   P.O. Bara Hahera, Konnagar Rly. Station,
   Distt. Hooghly, West Bengal.

3. M/s. Hi-Tech Glass Factory,
   Dholpur, Rajasthan

4. M/s. Manohar Glass Works,
   Station road, Firozabad. (U.P.)