

## PROJECT PROFILE ON BICYCLE RIMS

NAME OF THE PRODUCT : **BICYCLE RIMS.**

PRODUCT CODE : 376860006.

QUALITY & STANDARD : As per IS: 624 – 1991.

PRODUCTION CAPACITY : The production capacity of the unit at 75% capacity utilisation.

| Item         | Quantity                        | Amount (In Rs.) |
|--------------|---------------------------------|-----------------|
| Bicycle Rims | 87000 pair of rims<br>per annum | 68,34,000/-     |

MONTH & YEAR OF PREPARATION : February, 2011.

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## **A) INTRODUCTION**

Since the invention of wheels in the ancient times, transportation became easier, but due to increasing price of fuel and pollution generating mechanized transportation people has enforced and encouraged the use of bicycle. Among all the transportation mode bicycle was preferred most which has one of the major component called as Rim. Rims are manufactured in various designs and sizes depending upon the size of cycle/design of bicycle. The most common type of rims manufactured in India are roadstar model 28" x 1 ½ width. By changing the rolls, the desired shape of the rim can be obtained. Rims are generally manufactured in two thicknesses of strip i.e. 18 gauge (Heavy Duty) for cycle rickshaw and heavy load carrying on the bicycle and 20 gauges for general bicycle use. The project cost has been takenout for the manufacture of 28" x 1 ½"rims.

## **B) MARKET POTENTIAL**

The requirement for bicycle/rickshaw is increasing day by day for the transportation, racing, and exercising purposes. The bicycle industry is growing at a fast rate and thus the demand for rims is bound to increase accordingly. There is also good export potential for the bicycles, in the developing and Middle East countries, which will also give a boost of the rim industry. There is thus a good scope for the development of the industry.

## **C) BASIS & PRESUMPTIONS**

1. The basis for calculation of production capacity is on single shift, working of 25 days per month on 75 % efficiency. The required for achieving envisaged capacity utilization is assumed as one year.
2. BEP for the scheme has been calculated on full capacity utilization.
3. Rate of interest has been taken as 16% on an average. This, however, is likely to change depending upon the location of the project.

4. Labour wages have been taken on the basis of minimum applicable. There are likely to change depending upon the location of the project.
5. Rental charges of Rs. 35/- per Sq. Mtr per month have been taken on an average. This figure is likely to vary depending upon the location of the unit.
6. Margin money requirement differs from project to project and type of entrepreneurs such as women, SC/ST, physically handicapped etc. and the minimum margin money usual asked by the financial institutions and banks are 15%. Margin money up to 25% in some cases is also asked. The entrepreneurs may check the margin money requirement from financial institutions for the project.
7. Term of loan differs from one financial institution to another and in general minimum gestation period is normally 6 months and it could be up to 2 years. Maximum period for repayment of loan is 7 years including gestation period. The entrepreneurs from the concerned financial institutions may find the exact terms and conditions.
8. The cost of machinery and equipments as indicated in the scheme are approximate those ruling at the time of preparation of the scheme. The entrepreneur may check the exact price for specific make and model of the machine selected.
9. Non-refundable deposits, cost of preparation of project report etc. may be considered under preoperative expenses.
10. The provision made in other respects viz; raw materials, utilities, overheads etc. are drawn on the basis of standard variation and output. The cost indicated against each is approximate and based on local market condition and observations. The entrepreneur may find out the exact cost from the concerned sources.
11. The operative period of this project is estimated to be about 10 years considering technology obsolesces.

#### **D) IMPLEMENTATION SCHEDULE:**

| <b>Sl. No.</b> | <b>Activity</b>  | <b>Period</b> |
|----------------|--|---------------|
| i.             | Preparation of project report after calling quotations |               |
|                | a) Calling quotations                                  | 1 month       |
|                | b) Preparation of report                               | 2 weeks       |
| ii.            | Provisional Registration as SSI unit.                  | 2 weeks       |
| iii.           | Financial arrangement                                  | 3 months      |

|       |   |          |
|-------|---|----------|
| iv.   | Purchase and procurement of machines and equipments | 3 months |
| v.    | Installation of Machines and equipments             | 3 months |
| vi.   | Electrification                                     | 1 month  |
| vii.  | Recruitment of Staff and Workers                    | 1 month  |
| viii. | Trial Production                                    | 2 weeks  |

## **E) TECHNICAL ASPECTS:**

### **(i) Process of Manufacture:**

The rims are manufactured out of CRCA strips. The strip roll is mounted on the rim-forming machine and it is formed to the desired shape of the rim. When the strip is passing through the set of rollers the formed strip is cut to the required length and the ends are Welded on the butt-welding machine to make a round rim. The butt-welding seam is then grounded on the grounding machine. The rim is then put on the rim-rounding machine to get perfectly round shape. The nipple holes and valve holes are punched on the power presses. The wheel is then straightened on the straightening machine and it is passed on to the polishing section for buffing and polishing. The rims are then electroplated, polished and packed after inspection.

### **(ii) Quality Control and Standards**

BIS 624-1991 is available on the rims and should be followed for quality control.

### **(iii) Production Capacity:**

| Item         | Quantity                     | Amount (In Rs.) |
|--------------|------------------------------|-----------------|
| Bicycle Rims | 87000 pair of rims per annum | 68,34,000/-     |

**(iv) Power Requirement:**

25 H.P.

**(v) Pollution Control:**

For electroplating process no objection certificate may be taken from pollution control board.

**(vi) Energy Conservation:**

Suitable efficient electrical motors should be used in machines with suitable shunt capacitors.

**F) FINANCIAL ASPECTS:**

**A) Fixed Capital:**

**(i) Land & Building:**

| Description                   | Amount in Rs.  |
|-------------------------------|----------------|
| 250 sq. mtr. Rented per month | 6,000/-        |
| <b>Total:</b>                 | <b>6,000/-</b> |

**(ii) Machinery & Equipment:**

| S. No. | Description   | Ind/ Imp. | Qty. | Value (Rs.) |
|--------|---|-----------|------|-------------|
| 1.     | Rim forming machine (complete with 6 pairs of forming rolls) with 7.5 HP electric motor | Ind       | 1    | 2,40,000/-  |
| 2.     | Butt welding machine  | Ind       | 1    | 60,000/-    |
| 3.     | Seam welding plant complete with electrical   | Ind       | 1    | 24,000/-    |
| 4.     | Butt weld grinding machine with 0.5 HP motor  | Ind       | 1    | 36,000/-    |
| 5.     | Rim rounding machine with 1 HP  | Ind       | 1    | 24,000/-    |
| 6.     | Rim straightening press complete with electrical and 3 HP Motors                        | Ind       | 1    | 30,000/-    |
| 7.     | Power press for nipple hole complete with electrical & 3 HP motor                       | Ind       | 1    | 66,000/-    |

|     |  |     |   |                    |
|-----|--|-----|---|--------------------|
| 8.  | Value hole paneling machine with 1.5 HP motor    | Ind | 1 | 30,000/-           |
| 9.  | Buffing addas with 1.5 HP motor                  | Ind | 2 | 48,000/-           |
| 10. | Electroplating plant complete with acid tank etc | Ind | 1 | 2,40,000/-         |
| 11. | Electrification and installation @ 10%           |     |   | 79,800/-           |
| 12. | Dies & punches, tools, jigs & fixtures etc.      |     |   | 1,00,000/-         |
| 13. | Office furniture & equipments                    |     |   | 36,000/-           |
|     | Preoperative expenses                            |     |   | 36,000/-           |
|     | <b>Total</b>                                     |     |   | <b>10,57,800/-</b> |

## B) Working Capital (Per Month):

### (i) Personnel:

| Sl. No. | Designation                     | No. | Salary        | Total (Rs.)     |
|---------|---------------------------------|-----|---------------|-----------------|
| 1.      | Manager                         | 1   | 4800/-        | 4,800/-         |
| 2.      | Accountant                      | 1   | 3000/-        | 3,000/-         |
| 3.      | Clerk                           | 2   | 1800/-        | 3,600/-         |
| 4.      | Supervisor                      | 1   | 3000/-        | 3,000/-         |
| 5.      | Skilled Workers                 | 6   | 2100/-        | 12,600/-        |
| 6.      | Semi Skilled Workers            | 4   | 1560/-        | 6,240/-         |
| 7.      | Helpers                         | 4   | 1440/-        | 5,760/-         |
| 8.      | Peon/Chowkidar                  | 2   | 1440/-        | 2,880/-         |
|         |                                 |     | <b>Total:</b> | <b>41,880/-</b> |
|         | Add Perquisites @ 15% of salary |     |               | 6,282/-         |
|         |                                 |     | <b>Total:</b> | <b>48,162/-</b> |
|         |                                 |     | <b>Say;</b>   | <b>48,160/-</b> |

### (ii) Raw Materials including Packaging Requirements:

| Sl. No. | Particulars  | Amount (In Rs.)   |
|---------|--|-------------------|
| 1.      | CRCA Strips enrolls 185 SWG 14 MT & 705 SWG @ 18000/- MT | 3,02,400/-        |
| 2.      | Elctro Plating Chemical                                  | 60,000/-          |
|         | <b>Total:</b>  | <b>3,62,400/-</b> |

### (iii) Utilities:

|    |                               |                 |
|----|-------------------------------|-----------------|
| 1. | Power 3700 KW @ 2.50 per unit | 11,1100/-       |
| 2. | Water charges L/S             | 3000/-          |
|    | <b>Total:</b>                 | <b>11,400/-</b> |

**(iv) Other Contingent Expenses (P.M.):**

|    |                             |                 |
|----|-----------------------------|-----------------|
| 1  | Rent                        | 6,000/-         |
| 2  | Transportation              | 6,000/-         |
| 3  | Packing material            | 1,800/-         |
| 4  | Repair & Maintenance        | 2,400/-         |
| 5  | Advertisement and Publicity | 2,400/-         |
| 6  | Postage & Stationery        | 1,200/-         |
| 7  | Oil & Lubricants            | 1,200/-         |
| 8  | Consumable items            | 1,800/-         |
| 9  | Miscellaneous               | 1,200/-         |
| 10 | Insurance                   | 600/-           |
|    | <b>Total:</b>               | <b>24,600/-</b> |

**(v) Working Capital / Total Recurring Expenditure (P.M.):**

|    |                           |                   |
|----|---------------------------|-------------------|
| 1. | Personnel                 | 48,160/-          |
| 2. | Raw Materials             | 3,62,400/-        |
| 3. | Utilities                 | 11,400/-          |
| 4. | Other Contingent Expenses | 24,600/-          |
|    | <b>Total:</b>             | <b>4,46,560/-</b> |

**(vi) Total working capital for 3 months  $4,46,560 \times 3 = \text{Rs.}13,39,680/-$**

**C) TOTAL CAPITAL INVESTMENT:**

|     |                              |                    |
|-----|------------------------------|--------------------|
| I.  | Fixed Capital                | 10,57,800/-        |
| II. | Working Capital for 3 months | 13,39,680/-        |
|     | <b>Total:</b>                | <b>23,97,480/-</b> |

**G) FINANCIAL ANALYSIS:**

**i) Cost of Production (Per annum)**

| <b>Sl. No.</b> | <b>Particulars</b>   | <b>Value(Rs.)</b> |
|----------------|--|-------------------|
| 1.             | Total recurring cost   | 53,58,720/-       |
| 2.             | Depreciation on machinery and equipment @ 10%                    | 79,800/-          |
| 3.             | Depreciation on dies, punches, tools, jigs & fixtures etc. @ 25% | 27,000/-          |
| 4.             | Depreciation on office furniture & equipment @ 20%               | 7,200/-           |

|                 |  |                    |
|-----------------|--|--------------------|
| 5.              | Interest on total capital investment @ 17% | 4,07,571/-         |
| <b>Total: -</b> |  | <b>58,80,291/-</b> |

**ii) Sales/Turnover (Per Annum)**

| Sl. No. | Item         | Quantity | Rate (Rs.) | Value (Rs.)        |
|---------|--------------|----------|------------|--------------------|
| 1.      | Bicycle Rims | 67000/-  | 102/-      | <b>68,34,000/-</b> |

**iii) NET PROFIT (Per annum) Before Taxation:**

|             |     |                    |   |                   |
|-------------|-----|--------------------|---|-------------------|
| Turn Over   | (-) | Cost of Production | = | <b>9,53,710/-</b> |
| 68,34,000/- | (-) | 58,80,290/-        |   |                   |

**iv) PROFIT RATIO ON SALES (Per Annum):**

|  |   |   |               |
|--|---|---|---------------|
| $\frac{\text{Profit/annum} \times 100}{\text{Turnover/Annum}}$ | $\frac{9,53,710/- \times 100}{68,34,000/-}$ | = | <b>13.95%</b> |
|--|---|---|---------------|

**v) RATE OF RETURN (Per Annum):**

|  |   |   |               |
|--|---|---|---------------|
| $\frac{\text{Net Profit/annum} \times 100}{\text{Total Capital Investment}}$ | $\frac{9,53,710/- \times 100}{23,97,480/-}$ | = | <b>39.78%</b> |
|--|---|---|---------------|

**BREAK EVEN POINT**

**Fixed Cost:**

|                |   |     |                       |
|----------------|---|-----|-----------------------|
| 1.             | Rent  | Rs. | 72,000/-              |
| 2.             | 40% of Salary & Wages   | Rs. | 2,31,168/-            |
| 3.             | 40% of other contingent expenses (excluding rent & insurance) | Rs. | 1,44,000/-            |
| 4.             | Insurance   | Rs. | 7,200/-               |
| 5.             | Total depreciation  | Rs. | 1,14,000/-            |
| 6.             | Interest on capital investment                                | Rs. | 4,07,571/-            |
| <b>Total:-</b> |   |     | <b>Rs. 9,75,939/-</b> |

**B.E.P.**

|  |   |   |               |
|--|---|---|---------------|
| $\frac{\text{Fixed Cost} \times 100}{\text{Fixed Cost} + \text{Profit}}$ | $\frac{9,75,939/- \times 100}{9,75,939/- + 9,53,710/-}$ | = | <b>50.58%</b> |
|--|---|---|---------------|



### **Names & Address of Machinery & Equipment Suppliers:**

1. M/s. Bilco Industries, Nirankari Street No-2, Indl. Area 'B' Ludhiana.
2. M/s. Sharma Engg. Works, Shahdara Indl. Area, New Delhi.

#### **Power Press**

3. M/s. Amar Engg. & Fabricators, Plot No-5, Sector-24, NIT, Faridabad.
4. M/s. Prem Engg. Works, 22, Okhla Indl. Area, New Delhi 20

#### **Welding plants**

5. M/s. Gaisu Electricals, Link Road, Ludhiana.
6. M/s. Chawla Arc Welding Transformer, 1478, S.P. Mukherjee Marg, Delhi

#### **7. Electroplating Plant**

8. M/s. Segonds & pawls Pvt. LTd, B-27, Wazirpur Indl. Area, Delhi 52.
9. M/s. S.P. Singh & CO., G.T. Road, Dhalewal, Ludhiana.

### **Address of Raw Material Suppliers:**

1. Steel Authority of India (Raw Material Yard) of Concerned State.
2. Local Market.