

**PROJECT PROFILE ON
RUBBER RICE POLISHER**

PRODUCT : RUBBER RICE POLISHER

NIC CODE : 25199

PRODUCT CODE : ASICC Code 41999

PRODUCTION : QTY. : 26,88,000 INCHES/YEAR
CAPACITY : VALUE : Rs. 2,41,92,000.00

MONTH & YEAR OF : JANUARY, 2011
PREPARATION

PREPARED BY : CHEMICAL DIVISION
MSME - Development Institute
111&112, B.T. Road,
Kolkata-700108
E.mail dcdi-kolkata@dcsme.gov.in
Visit us : www.msmedikolkata.gov.in
Ph: 2577-0595/97/98/2596

PROJECT PROFILE ON RUBBER RICE POLISHER

1. Introduction :

Rubber Rice Polishers/Rubber Brakes have special application in modern rice mill industries for polishing rice. These products are needed in large quantities in modern rice mill plant. The modern rice mill concept has greatly helped in recovering by product i.e. rice bran and has helped to be economically sound. All new plants installed to polish the rice which has adopted this method and is increasing at the rate of 5% per year with higher yield of materials.

2. Plant Capacity per annum :

<u>Item</u>	<u>Quantity</u>
Rubber Rice Polisher	38,40,000 inches

3. Market & Demand Aspect :

There are more than 900 running modern rice mills in West Bengal. A rice mill require 4 Nos. 24” long Rubber polisher per day to produce 10MT of rice. The total requirement per day is 86400”. At present there is only two to three units in West Bengal to produce the item. So the present unit with its production capacity of 8960” per day can procure the orders from the local rice milling plant.

Further there are also No. of modern rice mills in the adjacent states like, Orissa, Andhrapradesh, Bihar who are regularly procure the Rubber Rice Polishers. The present unit is confident to procure orders of rice polishers from the adjacent states also.

4. Raw materials :

The raw materials required for manufacture Rubber Rice Polisher are natural rubber, rosin, Peptiser, antioxidant, activator, stearic acid, titanium dioxide, accelerator, sulphur, HBS, TMTM, process oil, china clay and silica powder. All the above raw materials are available locally from manufacturers or traders.

5. Manufacturing Process & Source of Technology :

The process involves compounding of rubber with different chemicals and reinforcing fillers in the mixing mill. After mixing, the materials comes in sheet form and is send to cutting machine to cut into different sizes. Then the compounded sheet of different sizes are placed in the mould and pressed in the Hydraulic Press with steam heating arrangement. After moulding the materials are finished, checked and packed.

The product is manufactured as per the existing technology already established in manufacture of different rubber moulded products. The technology is provided by the polymer technologist.

6. Basis of Project Selection :

There are good number of manufacturers of rubber moulded goods in and around Kolkata. These units are having the expertise to manufacture rubber rice polisher with little bit modification in the existing plant and machinery. West Bengal is one of the major rice producer in the country and a good No. of rice mill is working in different district of West Bengal. The requirement of good quality rice polisher is increasing day by day. Further, the adjacent States like Orissa, Andhra pradesh, Bihar, Jharkhand are also having good demand of rice polisher for the rice mill of these States.

7. Presumption :

- a) The estimates are drawn for a production capacity generally considered techno economically viable for a model type of manufacturing unit.
- b) The cost in respect of plant and machinery, raw materials and selling price of finished product are those generally obtained at the time of preparation of project profile and may vary depending upon other various factors.
- c) The salary and wages of staff and labours has been taken as per present market rate.

- d) The time period for achieving full envisaged capacity utilisation is three years.
- e) The project is based on Double shift working per day and 300 working days per annum
- f) The rate of interest on Bank loan has been considered as 13% p.a. which may vary from time to time.

8. Production Capacity per annum (at 70% capacity utilization):

<u>Item</u>	<u>Quantity</u>	<u>Value</u>
Rubber Rice Polisher	26,88,000 inches	Rs. 2,41,92,000.00

9. Utilities :

- 1. Electricity 1,08,000 KW hr. per year
- 2. Fuel Oil 20,400 ltrs. per year
- 3. Water 6,00,000 ltrs. per year

10. FINANCIAL ASPECTS :

A. Fixed Capital :

1. Land & Building :

Covered shed - 3000 sq.ft Rs. 15,000.00 Rented. per month

2. Plant & Machinery :

a) Rubber Mixing Mill size 14" x 36" complete with 40HP motor and other standard accessories	2 Nos. @ Rs. 5,00,000/-	Rs. 10,00,000.00
b) Hydraulic Press size : 30" x 30" 4 Delite complete with Hydraulic pump with 2HP motor and other standard accessories	2 Nos. @ Rs.4,00,000/-	8,00,000.00
c) Non IBR Baby Boiler Oil fired complete with pump, blower, chimney and other standard accessories	1 No. @ Rs. 2,50,000.00/-	Rs. 2,50,000.00
d) Cutting Machine with 1 HP motor and cutting table	1 No.	1,00,000.00
e) Dice & moulds	L.S.	2,00,000.00
f) Laboratory equipment	L.S.	3,00,000.00
g) Water arrangement with pump, storage tank and pipeline	L.S.	<u>1,50,000.00</u> Rs. 28,00,000.00
h) Installation & electrification		2,80,000.00
i) Furniture & fixture including computer, etc.		1,50,000.00
j) Preliminary & preoperative expenses		3,00,000.00
k) Contingencies @ 5% on Plant & Machinery		<u>1,40,000.00</u>
Total Fixed Capital :		Rs. 36,70,000.00

B. Working Capital per month :**I. Salary & Wages :**

Manager cum chemist	1 No. @ Rs. 12000.00	Rs.12,000.00
Skilled labour	4 Nos. @ Rs.5,000.00	20,000.00
Unskilled labour	8 Nos. @ Rs.3,000.00	24,000.00
Clerk cum Accountant	1 No. @ Rs.5,000.00	5,000.00
Peon	1 No. @ Rs.3,000.00	3,000.00
Watchman	2 Nos. @ Rs.3,000.00	<u>6,000.00</u>
		Rs. 70,000.00
	Add 20% benefit	<u>14,000.00</u>
		Rs. 84,000.00

II. Raw materials estimation per month :

1. Natural rubber	7 MT @ Rs. 150/per kg.	Rs. 4,20,000.00
2. Rosin	200kgs. @ Rs. 75/kg.	15,000.00
3. Peptisizer	10 kgs. @ Rs. 400/kg.	4,000.00
4. Antioxidant	52 kgs. @ Rs. 300/kg.	15,600.00
5. Activator (zinc oxide)	300 kgs. @ Rs. 90/kg.	27,000.00
6. Stearic acid	100 kgs. @ Rs. 70/kg.	7,000.00
7. Titanium dioxide	300 kgs. @ Rs.150/kg.	45,000.00
8. Accelerator	100 kgs. @ Rs. 250/kg.	25,000.00
9. Sulphur	200 kgs @ Rs. 20/kg.	4,000.00
10. HBS	10 kgs. @ Rs.300/kg.	3,000.00
11. TMT	10 kgs. @ Rs.400/kg.	4,000.00
12. Process oil	1000 kgs. @ 50/kg.	50,000.00
13. China clay	11 MT @ Rs. 5/kg.	55,000.00
14. Silica Powder	1.5 MT @ Rs.355/kg.	<u>52,500.00</u>
		Rs.13,57,100.00

III. Utilities per month:

1. Electricity	9000 KW hr. @ Rs. 6.00	Rs. 54,000.00
2. Fuel Oil	1700 ltrs. @ Rs. 35.00	59,500.00
3. Water	50,000 ltrs.	<u>5,000.00</u>
		Rs. 1,18,500.00

IV. Other Miscellaneous Recurring Expenses per month :

Rent	Rs. 15,000.00
Consumable stores	20,000.00
Insurance/Tax	10,000.00
Repair/Maintenance	10,000.00
Postage/Stationery	5,000.00
Transportation	15,000.00
Office expenses	5,000.00
Other Misc. expenses	<u>5,000.00</u>
	Rs. 85,000.00

C. Total Working Capital per month :

a) Salary & Wages	Rs. 84,000.00
b) Raw materials	Rs. 13,57,100.00
c) Utilities	Rs. 1,18,500.00
d) Other Miscellaneous Recurring Expenses	<u>Rs. 85,000.00</u>
	Rs. 16,44,600.00

D. Total Working Capital for 3 months :

1. Salary & Wages	Rs. 2,52,000.00
2. Raw materials	40,71,300.00
3. Utilities	3,55,500.00
4. Other Miscellaneous recurring expenses	<u>2,55,000.00</u>
	Rs.49,33,800.00

E. Total Capital Investment :

1. Fixed Capital	Rs. 36,70,000.00
2. Working capital for 3 months	<u>49,33,800.00</u>
	Rs. 86,03,800.00

11. Financial analysis :

i) Cost of Production per year :

1. Total Recurring expenditure	Rs. 1,97,35,200.00
2. Depreciation on Plant & Machinery including installation, electrification and contingencies @ 10% p.a.	3,22,000.00
3. Depreciation on Furniture & Fixture @ 20% p.a.	30,000.00
4. Interest on total Capital Investment @ 14% p.a.	<u>12,04,532.00</u>
	<u>Rs.2,12,91,732.00</u>

ii) Turn over per year :

By sale of 26,88,000 of Rubber Rice Polisher @ 9.00/per inch
= Rs. 2,41,92,000.00

iii) Net Profit per year :

Turn over per year - Cost of production per year

= Rs. 2,41,92,000 - Rs. 2,12,91,732.00 = Rs. 29,00,268.00

iv) Profit Ratio on Sale = $\frac{29,00,268 \times 100}{2,41,92,000}$ = 12% (approx.)

v) Rate of return = $\frac{29,00,268 \times 100}{86,03,880}$ = 33.7%

vi) **BEP Analysis** :

Fixed Cost :

1. Depreciation on Plant/Machinery	Rs.	3,22,000.00
2. Depreciation on furniture/fixtue		30,000.00
3. Interest on Total Capital Investment		12,04,532.00
4. Rent		1,80,000.00
5. Insurance		1,20,000.00
6. 40% of Salary & wages		4,03,200.00
7. 40% of other expenses excluding rent, insurance but including utility		<u>8,56,800.00</u>
	Rs.	<u>31,16,532.00</u>

$$\begin{aligned} \text{B.E.P} &= \frac{\text{Fixed Cost} \times 100}{\text{Fixed Cost} + \text{Profit}} = \frac{31,16,532 \times 100}{31,16,532 + 29,00,268} \\ &= \frac{31,16,532}{6016800} \\ &= 51.80\% \text{ of utilised capacity} \\ &= 36.26\% \text{ of installed capacity} \end{aligned}$$

12. List of supplier addresses

a) Plant & Machinery:

1. M/s. Baranagar Metal Casting Co.,
109, B.T.Road, Kolkata-700108
2. M/s. Uttam Singh & Sons (Regd.),
B-61, Mayapuri, Phase-II, Industrial Area, New Delhi-64
3. M/s. Sohal Engineering Works,
L.B.S. Marg, Bhandup, Mumbai-400078

4. M/s. Modern Engineering Works,
310, Jogani Indl. Estate,
541, Senapati Bapat Marg, Dadar, Mumbai-400078
5. M/s. Haradhan Das & Brothers
209, Belilious Rd., Howrah
6. M/s. G.M.Engg. Works,
Howrah Amta Road, P.O. Vill. Bankra,
Howrah-711403
7. M/s. Sehgal ?Design Plates (P) Ltd.,
49, Jhowtala Rd., Kolkata-700019

b) **Raw materials:**

1. M/s. Raei Polymers & Chemicals Co.,
7, Waterloo St., Kolkata-700069
2. M/s. Rubber & Chemical Trading Corpn.,
7, Colootola St., Kolkata-700073
3. M/s. Hindusthan Rubber Trading Co.,
66A, Dr. Suresh Sarkar Rd., Kolkata-700014
4. Jan Co.,
3, Portuguese Church St.,
Room No. 20, Kolkata-700001

13. Resource Center of Technology :

- a) Rubber and Plastic (Polymer) Technology Division,
Science College, Rajabazar, Kolkata
- b) Rubber & Plastic (Polymer) Technology Division,
I.I.T., Kharagpur

14. List of units set up by using this Project Profile : Not available

