

PROJECT PROFILE

ON

DAIRY EQUIPMENTS

PART-I

NAME OF THE PRODUCT : **DAIRY EQUIPMENTS.**

QUALITY & STANDARD : Made of stainless steel grade with 0.7 Cr & Ni 9.

MONTH & YEAR OF
PREPARATION : March, 2012.

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PART-II

A) INTRODUCTION

The past twenty years have seen rapid growth of dairy industry in our country. Under the guidance of National Dairy Development Board, more and more areas are being brought under the milk supply scheme. A modern dairy, even if a small one, requires a variety of equipments for production, preservation and distribution of milk and milk products. This project profile proposes to manufacture all the dairy equipments reserved for small scale sector in one manufacturing unit.

B) MARKET POTENTIAL

At present there are four units in the organised sector and about six units in small scale sector manufacturing dairy equipments. In view of the growing number of dairies, managed by Governments as well as private entrepreneurs, there is scope for a couple of new SSI units to come up in this field. This industry is skilled labour oriented and hence is suitable for an economically developing nation like India.

C) Production Targets:

Manufacturing of 11 different items of dairy equipments are envisaged in this project. A list of the items and the annual production target for each item are given in the table below:

Sl. No.	Equipment	SSI	Reservation No.	Annual Production Target Nos.
1.	Double Cone Mixer		538	6
2.	Micro Pulvariser		539	12
3.	Rotary Dryers		540	6
4.	Centrifuges-basket type		541	6
5.	Evaporating pans (also known as ghee pans)		543	6
6.	Butter Churns		544	6
7.	Curd milks		545	6
8.	Agitators		546	24
9.	Milk Cooling and Ghee settling tanks		542	6
10.	Storage tanks		547	21
11.	Road tankers stainless steel			3

C) BASIS & PRESUMPTIONS

1. The basis for calculation of production capacity is on single shift of 8 hours and 75% of capacity utilisation.
2. Time period for achieving full envisaged capacity utilisation is 4 months.
3. Labour wages: Minimum as declared by Government.
4. Interest rate: 15%.
5. Margin money: 10%
6. Payback period: 5 years.
7. Land cost and construction cost: Rented shed Rs. 15,000/- per month, approx. 1000 sq. mtrs. .

D) IMPLEMENTATION SCHEDULE:

1.	Time required for the preparation of project report.	15 days
2.	Selection of site, registration as SSI	45 days
3.	Arrangement of finance	3 months
4.	Machinery procurement/trial production etc.	1 month
5.	Recruitment of labours	1 months

E) TECHNICAL ASPECTS:

(i) Production Details & Process of Manufacture:

Milk being one of the most easily contaminable food item, hygiene, cleanliness and good workmanship are the key-words in this industry. Stainless steel sheets and sections are the main raw materials. All the surfaces that comes into contact with milk or milk products have to be free of any scratches, crevices or pin holes. Special care is taken during material handling, fabrication and transportation to achieve this. During the processing, sheet metal surfaces are kept covered by means of paper and adhesives. Sheet cutting is done by shearing, abrasive cutting or plasma-cutting depending on the thickness of sheet. Stainless steel welding is done by the MIC process using argon gas. Sheet cutting, bending, welding and finishing are the main process. Some of the accessories and fittings like drive mechanism and statutors can be purchased from sub-contractors.

(ii) Quality Specification:

During the manufacturing process, good care is to be taken to see that the surfaces remain scratch-free and that the joints have smooth surfaces free from crevices. Constant supervision and preventive methods are necessary to achieve this. Indian Standard Specifications are available for the following dairy equipments as well as on many of the dairy processes and products.

		ISS
1.	Road milk tankers	2492
2.	Butter-churn-hand operated	2703
3.	Batch Pasteuriser (Aluminium)	2706
4.	Ghee pans steam jacketed	2829
5.	Farm milk cooling tanks	3661
6.	Settling tanks for ghee	4742 & 4743
7.	Insulated Stainless Steel milk storage tank	4938
8.	Basket type centrifuges	4092

ISI specifies stainless steel grade 0.7 Cr. 19 Ni 9 for manufacture of dairy equipments. In addition to the above steps, it is advisable to have the services of a person trained in Dairy technology.

(iii) **Approximate Power required:** 25 HP

(iv) **Pollution Control Equipment:** Not required.

(v) **Energy Conservation:** Not required.

F) FINANCIAL ASPECTS:

A) Fixed Capital:

(i) Land & Building:

<i>Land & Building rented 250 sq. mtr. (Per month)</i>	20,000/-
Total:	Rs. 20,000/-

(ii) Machinery & Equipment:

Sl. No	Description of machines	Qty. (Nos.)	Price (Rs.)
1.	Lathe machine geared 2 metres with accessories and electricals.	1	1,20,000/-
2.	Drilling machine pillar type 20 mm cap.	1	30,000/-
3.	Plate bending machine 2400 mm suitable for 4 mm sheets.	1	1,50,000/-
4.	Power Hack-saw 200 mm stroke	1	70,000/-
5.	MIG welding set 350 amps. Suitable for Argon gas welding with accessories	1 set	1,60,000/-
6.	Plasma cutting accessories	1 set	50,000/-
7.	Arc welding set 350 amps.	1 set	19,000/-
8.	Hydraulic press 20 tonnes cap.	1	1,20,000/-
9.	Air Compressor	1	16,000/-
10.	Pedestal Grinder	1	16,000/-
11.	Portable electrical grinder, drill and polishing machines	1 set	50,000/-
12.	Work benches & other hand tools		40,000/-
13.	Measuring and testing equipments		40,000/-
14.	Over-head cranes 2 tonnes capacity	1	1,60,000/-
15.	Installation and electrification of machines & equipments		60,000/-
	Total:		11,01,000/-
	Furniture & Office equipments		40,000/-
	Total:		11,41,000/-

(B) Working Capital (Per Month)**(i) Personnel (Salaries & Wages):**

Sl. No.	Designation	No.	Salary	Total (Rs.)
1.	Manager-cum-Engineer	1	12000	12,000/-
2.	Technical Supervisor	1	10000	10,000/-
3.	Accountant	1	8000	8,000/-
4.	Typist	1	6000	6,000/-
5.	Skilled Workers	4	6000	24,000/-
6.	Semi-Skilled Workers	5	6000	30,000/-
7.	Unskilled Workers	3	3000	9,000/-
8.	Watchman	1	3000	3,000/-
9.	Peon	1	3000	3,000/-
10.	Welfare expenses			8,000/-
Total:				1,13,000/-

(ii) Raw Materials including Packaging Requirements (P.M.):

Sl. No.	Particulars	Qty.	Rate/MT	Amount (In Rs.)
1.	Stainless steel sheets in coils and sheets	2.5 MT	2,40,000/- MT	6,00,000/-
2.	Stainless steel rods and sections	400 Kg	240/- Kg	96,000/-
3.	M.S. Sheets & Sections	1 MT	70,000/-MT	70,000/-
4.	Purchased parts and sub-assemblies			2,00,000/-
				9,66,000/-

(iii) Other Contingent Expenses (P.M.):

1	Power & water	1,200/-
2	Consumable stores	20,000/-
3	Maintenance of machinery	11,000/-
4	Transport & conveyance	9,000/-
5	Office expenditure	9,000/-
6	Contingencies	7,000/-
7	Technical consultancy	8,400/-
Total:		76,400/-

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

1.	Personnel	1,13,000/-
2.	Raw Materials	9,66,000/-
3.	Other Contingent Expenses	76,400/-
Total:		11,55,400/-

Total Working Capital for 2 months: Rs. 11,55,400 X 2 = Rs. 23,10,800/-

(v) TOTAL CAPITAL INVESTMENT:

I.	Fixed Capital	11,41,000/-
II.	Working Capital for 2 months	11,55,400/-
Total:		34,51,800/-

Machinery Utilisation:

Assembly is the bottleneck operation. Hence after applying more workers on assembly shop, production can be increased.

G) FINANCIAL ANALYSIS:**i. Cost of Production (Per annum)**

Sl. No.	Particulars	Value(Rs.)
1.	Raw material	1,15,92,000/-
2.	Salaries & Wages	13,56,000/-
3.	Other expenses	9,16,800/-
4.	Depreciation on machinery and equipment @ 10%	1,14,100/-
5.	Depreciation on Furnace @ 20%	20,000/-
6.	Interest on Total Capital Investment @ 15%	5,17,770/-
Total: -		1,44,96,670/-

ii. Turnover (Per Annum)

Sl. No.	Item	Value (Rs.)
1.	Double cone mixer 300 Kg/hr cap. @ Rs. 30,000X6	18,00,000/-
2.	Micro pulveriser 100 kg cap. @ Rs. 72,000/-	8,64,000/-
3.	Rotary dryers 2500 mm X 1000 mm @ Rs. 1,20,000/-	7,20,000/-
4.	Centrifuges – basket type 500 lit/hr @ Rs. 2,00,000/-	12,00,000/-
5.	Evaporating pans (or ghee pans) cap. 1000 lit. @ Rs. 2,50,000/-	15,00,000/-
6.	Butter churna 300 lit. cap. @ Rs. 3,00,000/-	18,00,000/-
7.	Curd mills 500 lit/hr @ Rs. 2,00,000/-	12,00,000/-
8.	Agitators for horizontal tanks @ Rs. 48,000/-	11,52,000/-
9.	Storage tanks 15,000 lit @ Rs. 5,00,000/-	15,00,000/-
10.	Storage tanks 5000 lit @ Rs. 1,60,000/-	9,60,000/-
11.	Road tankers stainless steel 5000 lit. cap. @ Rs. 1,60,000/-	4,80,000/-
12.	Storage tanks 1000 lit cap. @ Rs. 15,00,000/-	18,00,000/-
13.	Milk cooling & ghee settling tanks 3000 lit cap. @ Rs. 1,60,000/-	9,60,000/-
Total:		1,59,36,000/-

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

Turn Over	(-)	Cost of Production	=	14,39,330/-
1,59,36,000/-	(-)	1,44,96,670/-		

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

Profit/annum X 100	14,39,330/- X 100	=	9.03%
Turnover/Annum	1,59,36,000/-		

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

Net Profit/annum X 100	14,39,330/- X 100	=	41.69%
Total Capital Investment	34,51,800/-		

BREAK EVEN POINTi) **Fixed Cost (Per Annum):**

1.	Depreciation	Rs.	1,14,100/-
2.	Interest on Capital Investment	Rs.	5,17,770/-
3.	40% of Salary & Wages	Rs.	5,42,400/-
4.	40% of other contingent expenses	Rs.	3,66,720/-
	Total:-	Rs.	15,40,990/-

ii) **Net Profit per year****B.E.P. %**

Fixed Cost X 100	15,40,990/- X 100	=	52%
Fixed Cost + Profit	15,40,990/- + 14,39,330/-		

Addresses of Machinery & Equipment Suppliers:

1. M/Indian Oxygen Ltd.,
P-34, Taratala Road, Kolkata – 700053.
2. M/s Quality Engineers,
Below Shastri Bridge, Baroda.
3. M/s Malik Electric Works,
1, Victoria Cross Lane, Mumbai-10.

4. M/s R. K. Machine Tools Pvt. Ltd.,
Industrial Area 'A', Ludhiana.
5. M/s Accumax Ltd., Rajkot.
6. M/s Mehelec Engineers,
GPO Box No. 1868, 64 SB Single Road, Fort, Mumbai – 23.
7. M/s Gujrat Small Industries Corporation, (Marketing Division),
Navdeep Building, Ahmedabad – 380 014.
8. M/s Jaymes Engg. Co.,
Tilak Road, Nr. Zakaria Masjid, Ahmedabad.
9. M/s Internatinal Machine tool Corporation,
5, Bank Street, Fort, Mumbai – 23.

Addresses of Raw Material Suppliers:

1. M/s Salem Steel Plant, – For Stainless Steel
Salem. (Tamilnadu).
2. Nearest SAIL Depot Or State Small Ind. Corpon. – For Mild Steel.

Office at Kanpur.

PSB*March 2012*