A PROJECT PROFILE FOR MANUFACTURE OF SUGAR CANDY (New)

QUALITY STANDARD	***:***	BIS standard for: Toffee : ***IS:1667:1991*** Hard Boiled Sugar Confectionery (2nd revision) : ***IS:1011:1992***
PRODUCTION CAPACITY	***:***	
QUANTITY	***:***	***300MT***
VALUE	***:***	***Rs. 1,23,72,000/-***
MONTH AND YEAR OF PREPARATION:		**JANUARY,2011**
PREPARED BY	***:***	***FOOD DIVISION*** **MSME- Development Institute** 34, Industrial Area , NUNHAI, AGRA-282 006 Ph. 0562-2280879, 2280882 E-mail : dcdi-agra@dcmsme.gov.in

I. Introduction:

The technology of candy making is based on the science and art of manipulating sugar , the principal ingredient in candy, particularly to achieve special textural effects. This is accomplished primarily by controlling the state of crystallization of the sugar and the sugar – moisture ratio. While the confectioner has many ingredients besides sugar to modify his confection, such as milk products , egg white , food acids , gums starches, fats emulsifiers, flavors, nuts, fruits, chocolate, and others, all of these are secondary to sugar in determining the attributes that characterize the major candy types and some of these ingredients are chosen especially for their influence upon the chemical and physical properties of sugar.

II. Market Potential& Scope:

Sugar candy, A unique mouth freshener with a specific flavour is a part of the Rs 100-crore Parle brand umbrella, which is ranked among Parle top performing Ten products, is being extended to new variants. There are so many flavours available in the market i.e. orange , pineapple, mango ,mint, pan, straberry, grapes etc. and are having good demand among the children. Similar to the existing variants, the new flavours are also being made available in pillow packs priced at 50 paise a unit. In addition, the candies will also be retailed in jars of 250 and 500 units each, besides refill packs. The roll out of the new flavours has been initiated in a few select markets, and will be extended nationally within a month's time.

III. Basis & Presumption:

1. The Project Profile has been prepared on the basis of Single Shift of 8-hrs. a day and 25-working days in a month at 75% efficiency.
2. It is presumed that Ist year, the capacity utilization will be 70% followed by 85% in the next year and 100% in the subsequent year.

3. Depreciation on machinery & equipments has been taken @ 10% minimum. Depreciation on office furniture has been taken @ 20 % per annum.
4. The rates quoted in respect of salaries and wages for skilled worker and others are on the basis of minimum rates in the State of U.P.
5. Interest rate for the fixed and working capital has been taken @ 12% on an average whether financed by the Bankers or Financial Institutional.
6. The margin money required is minimum (30% of the total capital investment).
7. The rental value for the accommodation of office , workshop and other covered area has been taken @ Rs. 30/- per Sq. mtr .
8. The rate quoted in respect of machinery, equipment and raw materials are those prevailing at the time of preparation of the Project Profile and are likely to vary from place to place and suppliers to suppliers. When a tailor made project profile is prepared, necessary changes are to be made.
9. The pay back period may be 5-years after the initial gestation period.
10. The gestation period in implementation of the project may be to the tune of 6 to 9 months which includes making all arrangements, completion of all formalities, market surveys and tie-ups etc. Once all the above arrangements are made and quality/standards achieved the 100% project capacity may be achieved at the end of three years. However, a detailed PERT/CPM/chart with implementation period has been given in the report.
11. To run the unit the balance period of the year, other fruits products such as squashes and juices can be prepared with addition of a few machinery and equipments.

IV. Implementation Schedule:

The implementation of the project includes various jobs/exercises such as procurement of technical know how, transfer of technology, market surveys and tie-ups, preparation of project report, selection of site, registration, financing of project, procurement of machinery and raw materials etc., recruitment of staff, erection/ commissioning of machines, trial production and commercial production etc. In order to efficiently and successfully implement the project in the shortest period the slack period is curtailed to minimum possible and as far as possible simultaneous exercises are carried out. In view of above a CPM-PERT Chart has been illustrated below, According to which a minimum period of 227 days is involved in finally starting the project on commercial basis. By following this process a time period of 82 days can be saved.

Details of Activities
C.P.M.

Activity	Days	Activity	Days	Particulars of activity
1-2	15	1-2	15	Procurement of Tech. know how/ transfer of technology.
3-4	15	3-4	15	Market survey, tie up and obtaining quotations.
4-5	7	2-3	7	Selection of site.
5-6	70	4-5	7	Preparation of Project report

6-7	45	5-6	70	Registration and financing.
7-10	30	6-7	45	Placement of orders for machinery and receipt of machines.
10-11	30	6-8	30	Recruitment of staff and training
11-12	15	6-9	30	Addition/Alteration in rental premises
		8-10	15	Procurement of raw material/ Bought out components
		7-10	30	Erection, Electrification and Commissioning
		10-11	30	Trial Production
		11-12	15	Commercial Production
		227 days		**309 days**

V. Technical Aspect

a. Manufacturing Process:

The Process involve the cooking of Sugar in the stainless steel steam jacketed cooing pan then cooling of syrup on cooling table. after that add all ingredient in the vacuum batch cooker including color and flavor etc. then mixture subject to batch roller then three stage rope sizer then subject to sweet forming machine then subject to three way cooling conveyor then in the end candy wrapping machine to pack the Sugar candy.

c. Quality Control & Standards:

The relevant Bureau of Indian Standards Specification for Toffee is: IS:1667:1991.

The specification for hard boiled sugar confectionery is : IS 1008 : 1981. The details of specification can be obtained from the Bureau of Indian Standards, Manak Bhavan, 9, Bahadur Shah Zafar Marg , New Delhi-110 002.

d. Production (Target & Value):

1.Production of Sugar Candy : 300MT
2.Value of Sugar Candy : Rs. 1,23,72,000/-

e. Power Requirement: **:25**K.W.

f. Energy Conservation:

The following steps may be taken for the conservation of energy.

1. Machinery & Equipment's parts, which are revolving and reciprocating should be properly, lubricated from time to time with suitable lubricant oil.
2. Lay out of the unit should be in such a way in that no back tracking of material is there.
3. All electric switches may be kept off, when not required.
4. The entire transmission belt will be tightened before starting the work is whereever applicable.
5. Fluorescent tube with electronic Chokes may be used for energy saving. Further recently developed compact fluorescent tubes called (CFT) of 10,15, watts Philips/Glaux made may be used for energy saving and decoration. These self ballasted fluorescent lamps are high efficiency replacements for ordinary bulbs. For same light output, CFLEBs consume about one-fifth the power consumed by ordinary bulbs, thereby saving a lot of energy. The savings get further multiplied when CLEBs are used in air conditioned areas, since the saving of energy by using

CLEBs also corresponds to less heat dissipation reducing load on air conditioners. The life of CFLEBs is about 8000/10000 hours i.e. about 10 times that of ordinary bulb.

The typical payback period in terms of savings of energy bills and cost of ordinary lamps is about 6 months operation. Unlike ordinary bulbs, these CFLEBs provide choice of three colours designated A, B & C, to suit individual requirements.

Electronic Ballast, with protection against high voltage spikes, along with high quality CFLs make these composite CFLEBs (or self ballasted CFLs) Slim, lightweight, efficient and reliable units.

6. As far as possible Solar Energy and day light will be used keeping all the other lights off.
7. As far as possible inductive load of motor will be reduced and high power factor will be used with the aid of capacitors of appropriate sizes.

g. Pollution Control:

1. This industry may be involves pollution to some extent for which State Pollution Control Board has to be approached.
2. Minimum height of shed will be maintained with exhaust fans should be installed for removing decongestion proper ventilation, removal of cokes fumes etc.

VI. Financial Aspects:

(A) Fixed Capital:

1.Land and Building (own) :

Land and Building (rented)
On Rent @ Rs.50/-Sq. meter
Covered Area 100 Sq. meter **5,000/-**

2. Machinery and equipment:

S.No.	Description HP/KW Ind/Imp.	Qty.	Value (Rs)
Production Unit Name of machine with specification			
1.	Vacuum Batch Cooker Cap. : 1000 Kg./shift (SS steam jeketed cooking , 1 HP)	one	1,85,000/-
2.	Sugar Batch Kneader cap.50 Kg., with side plates	one	1,80,000/-
3.	Candy Forming 12" Plast-O-Plast machine with Batch former , three stage rope sizer , threeway conveyor, motor , panel &other die	one	3,10,000/-
4.	Die 12" POP Machine with Brass Punches	five	32,500/-
5.	Candy Wrapping machine double twist style Speed 300 Pcs./Min.	two	6,40,000/-
6.	Heater cum Blower for Candy Wrapping	one	16,000/-
7.	Die Carrier	one	15,000/-
6.	Working table with S.S./Aluminium top	two	5,000/-
7.	Weighing Balance platform type	one	5,000/-
8. .	Aluminium vessels, Mats, cups, Mugs, ladle, spoons, gloves,etc. and misc.equipt.	-	10,000/-
9.	Electrification & Installation Charges @ 10%	-	1,00,000/-
10.	Cost of Office Equipment and other production equipment etc.	-	50,000/-
Total Cost of Machinery & Equipments			**15,49,500/-**
3.	***Pre-Operative Expenses:***		30,000/-
Total Fixed Capital (1+2+3)			**15,83,500/-**

(B) Working Capital (Per month)

(1) Staff and Labour (per month):

S.No.	Description	No.	Salary	Total Value (Rs.)
(a)	**Administrative & Supervisory**			
i)	Manager	one	8000/-	8,000/-
ii)	Accountant	one	4000/-	4,000/-
iii)	Salesman	two	2000/-	4,000/-
iv)	Peon/watchman	one	1500/-	1,500/-
v)	Sweeper	one	1000/-	1,000/-
(b)	**Technical Skilled & Unskilled**			
i)	Skilled Worker	two	4000/-	8,000/-
ii)	Semi Skilled Worker	two	3000/-	3,000/-
iii)	Helper/ Packers	four	1500/-	6,000/-
	TOTAL			**35,500/-**
	Perquisites @ 15 %			5,325/-
		Total		**40,825/-**

(2) Raw Material (per month):

S.No.	Description with specification	Qty.	Rate	Value (Rs.)
i)	Sugar	25 ton	28/-per Kg.	7,00,000/-
ii)	Other Materials i.e. chemicals, herb extracts, flavours, colors etc.	200Kg.	-	20,000/-
iii)	Packaging material	-	-	50,000/-
				7,70,000/-

(3) Utilities (per month):

Electricity		10,000/-
Water		1,000/-
		11,000/-

(4) Other Expenditure (per month)

1.	Postage & Stationary	1,000/-
2.	Advertisement	5,000/-
3.	Telephone	1,000/-
4.	Repair & Maintenance	1,000/-
5.	Transportation	1,000/-
6.	Consumable	1,000/-
7.	Sales expenses	5,000/-
8.	Insurance	1,000/-
9.	Misc. Expenses	2,000/-
	Total:	**18,000/-**

Total Recurring Expenditure (per month):

1) Salary & Wages	40,825/-
2) Raw Material	7,70,000/-
3) Utilities	11,000/-
4) Other Contingent Expenses	18,000/-
Total:	**8,39,825/-**
***Working Capital for three months*:**	25,19,475/-

Total Capital Investment:

Fixed capital:	15,83,500/-
Working capital for 3 months:	25,19,825/-
Total:	**41,02,975/-**

VII. ***MACHINERY UTILIZATION:***

It is expected that during first year machine utilization will be 70% and during second year 85% and 100% in subsequent years.

VIII.. FINANCIAL ANALYSIS:

1. ***Cost of Production (per annum):***

(a)	Total Recurring Cost per year	1,00,77,900/-
(b)	Depreciation on Machinery & Equipment @ 10%	1,40,000/-
(c)	Depreciation on Office Equipments & furniture @ 20%	10,000/-
(d)	Interest on Total Capital Investment @ 12 %	4,92,357/-
	Total:	**1,07,20,257/-**
	Say	**1,07,20,000/-**

2. Turn Over(per annum):

Sales turnover per Month

S.No.	Description	Qty.(Kg.)	Rate(per Kg.)	Value (Rs.)
(i)	Flavoured candy	25,000	55/-	13,75,000/-
		Less sales expenses@ 30%		3,43,750/-
			Say	3,44,000/-
	Net Sales Realization(turn over) per month:			**10,31,000/-**
	So Net Sales Realization(turn over) per Year :			***1,23,72,000/-***

3. Net Profit per annum before Income Tax : **16,52,000/-**
(Sales- cost of production)

4. Net Profit Ratio: =Net profit x 100 / Turn over

=16,52,000 x 100 / 1,23,72,000

= 13.35%

5. Rate of Return: =Net profit x 100 / Total investment

=16,52,000 x 100 / 41,02,975

= **40.26%**

IX. BREAK EVEN ANALYSIS:

(1) Fixed Cost (per annum)

(a) Total Depreciation (on m/c. & equipment, dies, tools, furniture):	1,40,000/-
(b) Rent:	60,000/-
(c) Interest on borrowing:(Total Investment):	4,92,357/-
(d) Insurance:	6,000/-
(e) 40% of salary:	1,95,960/-
(f) 40% of utilities:	52,800/-
(g) 40% of other contingent expenses: (Excluding rent & insurance)	86,400/-
Total:	**10,33,517/-**

(2). Break Even Point (B.E.P) = Fixed Cost x 100 / Fixed cost + profit

= 10,33,517 x 100 / 10,33,517+16,52,000

=38.48%

X. LIST OF MACHINERY & RAW MATERIAL SUPPLIERS:

1. Dhiman Systems (India) Ltd
   DSIL Group complex, Kapurthala Road , Nakdar- 144 040 Dist. Jalandhar , Punjab
2. Dhiman Industries(Regd.)
   Dakhni Gate, Nakdar- 144 040 Dist. Jalandhar , Punjab
3. Smith's Engineering Works
   Shed No. C-1 B 139, G.I.D.C., Vatva , Ahmedabad-382 445
4. Authentic Designer's
   C-112,Sector-10,Noida-201 301(U.P)
5. Ghaziabad Printing & Packing Industry (P) Ltd.
   Opp. Ganesh Tent House, Near DPS, Meerut Road ,Ghaziabad
6. Aroras Box & Cartons Pvt Ltd.
   39th K.M. , Delhi-Jaipur Road (N.H.No.8), Gurgaon-122 001(Haryana)
7. Jain Packaing Products
   33,Sarai Pipal Thala, Behind Mangat Ram Dal Mill, Subzi Mandi ,Azadpur, Delhi-110033
8. United Packaging
   19/21, Shakti Nagar ,Delhi-110 007
9. Rajat Electronics
   1309,A-5. First Floor, Pan Mandi, Sadar Bazar,Delhi-6

ADDRESSES OF RAW MATERIAL SUPPLIERS:

Local dealers.

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