

PROJECT PROFILE ON CRICKET BALLS

Quality & Standard	-	Following I.S. Specification is available to guide the manufacturer of Hockey Sticks. IS: 416 – 1963
Production Capacity	-	30000 Nos. Cricket Balls.
Value	-	Rs. 30, 60, 000/-

CRICKET BALL MADE OF LEATHER

INTRODUCTION:

Cricket is the most popular game in our country but it is also played all over the world; cricket is mainly played in commonwealth countries. After partition of the country in 1947, large number of workers migrated to India. They have subsequently settled down in Meerut (U.P.) and Jalandhar (Punjab), where they started manufacturing cricket balls.

MARKET POTENTIAL:

Cricket ball industry is on firm footing looking to the internal and increase in export demand, there is a good scope for starting new manufacturing units in different parts of the country. About 90 units at Meerut, Jalandhar and other places are engaged in the manufacturing of cricket balls each employing 10 to 30 workers. The production is about 180 thousand dozens per year valued more than Rupees 300 lakhs. The demand for quality goods is increasing hence there is a scope for another 10 to 15 new units every year. The important raw materials required for the manufacturing of cricket balls is

leather, thread, cork, polishes and wool. Fortunately all the items mentioned above except cork are indigenously available. Cork will have to be imported.

BASIS AND PRESUMPTIONS:

1. The project is worked out on 75% efficiency utilization of its manufacturing capacity and taken 300 working days in a year on single shift basis of 8 hours a day.
2. The time for achieving fully envisaged capacity within 3 years after production.
3. Arrangement for labour wages has been considered as per minimum labour wages basis as per rule of labour department of the State Govt. concerned.
4. Interest rate for fixed and working capital has been charged @ 15% on average basis both the heads.
5. Margin money/state incentives has been calculated as per given by the State Govt. concerned.
6. Pay back period for the project after one year from its production and total repayment of fixed capital within 10 years.
7. The cost of land and building has been calculated as per rates of State concerned.
8. The sale prices are ex-godown including packing, sale commission up to 33% to be added by the entrepreneur before fixing the price.
9. Only cricket balls which has sufficient demand have been included in the scheme. The entrepreneur can also include the other types of product if demand arises.

IMPLEMENTATION SCHEDULE:

Every project required some specific time frame for its commercial production and various schedules for its completion are as under.

1. Selection of Product:

An entrepreneur should select their product range for manufacturing within 15 to 30 days.

2. Filing of Enterprise Memorandum:

After selection, an Enterprise Memorandum - 1 is to be filed with the local Directorate of Industries / Distt. Industries Centre of the area and it will take about two days after submitting the required documents.

After commencement of commercial production, Enterprise Memorandum may be filed with District Industries Centre / Directorate of Industries.

3. Project Report:

After filing of EM-1, a project report is prepared through industrial consultants or Govt. Departments like MSME-DI etc. within one week after collecting the quotations/rate list from machinery and raw material suppliers.

4. Finance:

Apply to financial organizations like State Financial Corporations and Nationalized Banks for machinery and working capital. This financial exercise will take 3 to 5 months approximately.

5. Factory Construction:

After taking of sanction the land from District Industries Centre, then construction of factory building is very important step and it will take 6 to 8 months time. In the meanwhile order should be placed to the machinery manufacturers as well as raw materials suppliers.

6. Trial Production:

After that machine should be installed within a month time for production. Trial production should over within two weeks time and finally commercial production in above mentioned period for its marketing.

7. Man Power:

In between machine installation, labour should be recruited for manufacturing the product and contact to work for its and product. Develop commercial relation with concerned official related with the whole process.

TECHNICAL ASPECTS:

1. Manufacturing Process:

Vegetable tanned leather is used in manufacturing of cricket balls. Care is to be taken to see that properly tanned leather is selected and correct pattern cutting is adopted. The butt portion is used for 1st quality balls while belly and shoulder may be used for medium and cheap quality basis for better quality. It is advisable to retan the leather so as to get desired effect. Now-a-days zirconium-cum-full chrome tanned leather is also used for the manufacture of 1st quality cricket balls. As regards other raw materials such as thread, cork, polish and wool, the quality of material used depends upon the quality of balls required to be supplied.

The cutting of pieces can be done manually as well as by mechanical clicking process. Two sections are stitched together in seamless stitch which runs inside the leather and are called cups. It should be noted that there should not be more than 25 to 26 stitches in the manufacture of joint otherwise the stitches might tear the leather. Quality is the most important part of a ball and therefore, utmost care should be taken to manufacture the same. The main components of the quilt which consists of a core of layers of cork and wool wounded. Care should be taken that the weight of the quilt is uniform. The quilt size is measured through a “Go” “No Go” ring. When the quilt is formed, it is wet. However, it should be allowed to dry so as to avoid shrinkage. Experience shows that it takes 3 to 6 months to dry them well. Now a days, electric drying over with thermostat control is being utilized for drying the quilts which does not take more than 36 hours. Two pieces are cut and joined through invisible stitches described earlier, put in a mould (Katori) and ordinary hand operated or hydraulic press is used to shape the half cup under the pressure. Care should be taken while pressing so that wrinkles do not appear in the cup. The dried quilt with two cups is placed in between the two spherical half mould of a toggle-operated vice facing each other. The skilled worker has to be very careful in stitching 80 to 84 stitches on the full circle for first quality balls and for cheaper quality, these are 60 to 72. This stitching provides the main strength to the balls. The balls so stitched are clamped in a special mould holding clamps to give the desired shape of the balls. The skilled workers are to be very careful

when making the final stitching. They have to do the stitching in two parallel rows to the initial stitching in supplementary stage and it helps the bowler in delivery and spinning the balls. The balls are then stamped in an electrically heated stamping press. An attractive and good polish is needed which is normally obtained by using synthetic enamel like duco finish. There is also demand for unglazed balls.

(2) Quality Specifications:

IS: 416 – 1963 under revision for Cricket Balls. The minimum and maximum weight of cricket balls is as under:

		Men	Women	Junior
a.	Special Grade	156 to 163 gms.	140 to 150 gms	133 to 143 gms
b.	Grade-I-II	150 to 165 gms.	140 to 150 gms.	133 to 143 gms.

(3) Production Target Per Annum:

a.	1 st Quality cricket balls	=	6000 Nos.	=	Value Rs. 9,00,000/-
b.	2 nd Quality Cricket Balls	=	12000 Nos.	=	Value Rs. 12,00,000/-
c.	Cheap quality cricket balls	=	12000 Nos.	=	Value Rs. 9,60,000/-

Total : 30,60,000/-

(4) Motive Power: = Domestic

(5) Pollution control: No Pollution Control measures are required for Cricket Balls

(6) Energy Conservation:

The regular maintenance of plant and machinery is required for better performance and conservation of Energy.

FINANCIAL ASPECTS:

Fixed Capital:

1. Land and Building:

- a. Land 300 Sq. meter @ 3,000/- Per Sq. meter = 9,00,000/-
- b. Built up area 200 Sq. meter 5000/- per Sq. meter = 10,00,000/-
- c. Other constructions and arrangement for water supply = 1,00,000/-

Total: 20,00,000/-

2. Machinery and equipments:

Sr. No.	Description	Nos.	Value (Rs.)
1.	Core seasonsing oven 2 ½' x 2' x 4' with 1/16 H.P. Motor, Thermostat power control having capacity of 24 dozens balls	1 No.	40,000/-
2.	Power operated press 10 Ton capacity complete with motor for pressing cup and rounding the balls	1 No.	75000/-
3.	Stamping press electrically heated with thermostatic control	1 No.	10,000/-

4.	Other equipments a. Bench vices toggle operated b. Ordinary rounding press with metal moulds c. Stitching frames d. Katori press e. Testing tools	} L.S.	30,000/-
5.	Electrification, installation and transportation charges @ 10%		12,500/-
6.	Other office equipments such as table chair etc.		25,000/-
		Rs.:	1,92,500/-

(3) Pre-operated expenses

17,500/-

Total Fixed Capital: (1 + 2 + 3) =

22,10,000/-

(4) Working Capital (Per Month):

1. Personnel/Indirect labour:

Sr. No.	Description	Nos.	Salary P.M.	Total Rs.
1.	Manager-cum-expert	1 No.	10,000/-	10,000/-
2.	Supervisor	1 No.	5,000/-	5,000/-
3.	Clerk-cum-cashier	1 No.	5,000/-	5,000/-
4.	Salesman	1 No.	5,000/-	5,000/-
5.	Chowkidar	1 No.	3,500/-	3,500/-
6.	Typist	1 No.	4,000/-	4,000/-

7.	Accountant (Part Time)	1 No.	3,000/-	3,000/-
8.	Clerk (Part Time)	1 No.	2,000/-	2,000/-
9.	Sweeper (Part time)	1 No.	1,000/-	1,000/-
			Rs.	38,500/-
	Perquisites @20%		Rs.	7,700/-
			Total Rs.	46,200/-

Direct Labour:

Labour charges for 100 Balls (Rs.)

Sr. No.		1 st Quality Cricket balls	2 nd Quality Cricket Balls	Cheaper quality Cricket balls
1.	Washing and drying of leather	280	240	175
2.	Clicking	150	130	110
3.	Inner joint sewing	150	130	110
4.	Outer joint sewing	150	130	110
5.	Outer ward sewing	550	400	300
6.	Katori cutting and pressing	75	50	30
7.	Rounding and stamping	75	50	30
8.	Preparation of gola from cork and wool	300	180	140
		1730	1310	1005

Total Direct Labour Cost (P.M.):

-	500 1 st Quali8ty cricket balls	=	8,650/-
-	1000 second quality cricket balls	=	13,100/-
-	1000 cheap quality cricket balls	=	10,050/-

Total: **31,800/-**

Rs. **46,200/-**

Total: **78,000/-**

2. Raw Material including packing materials (P.M.):

Sr. No.	Description	1 st Quality 5 ½ Oz cricket ball		2 nd Quality 5 ½ Oz cricket balls		5 ½ Oz 3 rd quality cricket balls	
		Qty.	Value (Rs.)	Qty.	Value (Rs.)	Qty.	Value (Rs.)
1.	Cork wood imported	6.5 Kg.	1625	7.5 kg.	1500	3.5 Kg	525
2.	Woolen yarn	4 Kg.	1220	3.5 Kg	875	2.25 Kg.	450
3.	Leather vegetable tanned Cow hides of 2.8 mm above	14 Kg.	1050	12 Kg.	840	12 Kg.	600
4.	Rubber gola	--	--	--	--	50 gms	120
5.	Rang Kat (Sod. Hydro sulphate)	200 gms	100	200 gms	80	150 gms	60
6.	Totary (Tartaric acid)	250 gms	10	250 gms	10	--	06
7.	Red colour	350 gms	140	300 gms	120	250 gms	100
8.	Tallow	600 gms	48	500 gms	40	400 gms	32
9.	Oil sarson	300 gms	21	250 gms	17	200 gms	14
10.	Thread L-9	12 balls	72	12 balls	72	12 balls	72
11.	Thread 28-5	4.5 ball	60	4.5 ball	60	4 ball	60
12.	Leather cutting	2.5 Kg.	20	2.5 kg.	20	2.5 Kg.	20
13.	Synthetic glue	70 to 100 gms	10	70 to 100 gms	10	70 gms	08
14.	Lacquer/paint	0.700 lit	140	0.600 lit	120	0.400 lit	80
15.	Thinner	0.900 lit	36	0.800 lit	32	0.700 lit	28

16.	Stamping foil	10 ft	80	10 fed	80	9 feet	72
17.	Card board boxes for packing outer	1 box	28	1 box	28	1 box	28
18.	Card board box for ball packing	17 Pcs	24	17 Pcs	24	17 Pcs	24
19.	Tarred paper	2mtr.	08	2 mtr.	08	2 mtr.	08
20.	Polythene bag	400 gms	40	400 gms	40	400 gms	
21.	Polythene sheeting	100 gms	10	100 gms10	10	100 gms	10
22.	Sutli	100 gms	10	100 gms	10	100 gms	10
23.	Strap fixer	08 pcs	04	08 pcs	04	08 pcs.	04
24.	Poly strip	5 mtr.	04	5 mtr.	04	5 mtr.	04
25.	Misc expenditure	--	04	--	02	--	12
		--	4744	--	4006	--	2347

2. Total Raw material required (P.M.):

-	500 Nos. 1 st quality cricket balls	23,720/-
-	1000 Nos. 2 nd quality cricket balls	40,060/-
-	1000 Nos. cheap quality cricket balls	23,470/-

Total: 64,250/-

3. Utilities (Per Month):

-	Electricity	3,500/-
-	Fuel	1,000/-
-	Water	500/-

Total: 5,000/-

4. Other contingent expenses (P.M.):

-	Stationery & postage	1,000/-
-	Advertisement/Publicity	1,000/-
-	Maintenance & Repair	1,500/-
-	Transport	1,500/-
-	Travel expenses	2,000/-
-	Insurance	1,000/-

Total: 8,000/-

5. Total recurring expenditure (P.M.):

-	Salary	78,000/-
-	Raw material	64,250/-
-	Utilities	5,000/-
-	Other expenses	8,000/-

Total: 1,55,250/-

6.	Working capital for 3 months	4,65,750/-
7.	<u>Total Capital Investment:</u>	
1.	Fixed Capital	22,10,000/-
2.	Working capital for 3 months	4,65,750/-

	Total:	26,75,750/-

	Say:	26,76,000/-

Machinery utilization:

It is proposed to utilize minimum 80% capacity of the installed capacity.

FINANCIAL ANALYSIS (Per Year):

1.	<u>Cost of Production (Per Year):</u>	
-	Total recurring cost per year	18,63,000/-
-	Depreciation on building @ 5%	1,00,000/-
-	Depreciation on machinery @ 10%	13,750/-
-	Depreciation on tools @ 20% P.A.	6,000/-
-	Depreciation on office equipment @ 25% P.A.	6,250/-
-	Interest on Investment @ 15% P.A.	4,01,400/-

	Total Rs.:	23,90,400/-

	Say Rs.:	23,90,000/-
2.	<u>Turnover per year:</u>	
	<u>By Sale of :</u>	
1.	Cricket ball 1 st quality 6000 Nos. @ Rs. 150/- per ball	9,00,000/-
2.	Cricket ball-2 nd quality 12000 Nos. @ Rs. 100/- per ball	12,00,000/-
3.	Cricket ball cheap quality of 12000 Nos. @ Rs. 80/- per ball	9,60,000/-

Total:

30,60,000/-

3. Net Profit (Per year):

= Turnover – cost of production

= Rs. 30,60,000 - 23,90,000 = 6,70,000/-

4. Net Profit Ratio on Sales (%):

Profit per Annum

= ----- x 100

Turnover

6,70,000

= ----- x 100 = 21.89%

30,60,000

5. Net Profit on Investment/Return:

Profit per annum

= ----- x 100

Total investment

6,70,000

= ----- x 100 = 25.04%

26,76,000

6. Break-even-Analysis:

Fixed cost per annum x 100

= B.E.P. -----

Fixed cost + Annual profit

a) Fixed Cost Per Annum:

- Total depreciation 1,26,000/-

- Insurance 12,000/-

- Total interest 4,01,400/-

- 40% of other expenses and utilities 57,600/-
- 40% of salary & wages 3,74,400/-

Total Rs. 9,71,400/-

b) Break-even-Percentage:

$$\begin{aligned}
 & 9,71,400 \times 100 \\
 = & \frac{\text{-----}}{9,71,400 + 6,70,000} \\
 & 9,71,400,00 \\
 = & \frac{\text{-----}}{16,41,400} \qquad \qquad \qquad \mathbf{59.18\%}
 \end{aligned}$$

ADDRESSES OF MACHINERY & EQUIPMENT SUPPLIERS:

1. M/s. Golden Engg. Works, Basti Adda, Jalandhar – I
2. M/s. N.S. Industries, 7, Basti Road, Jalandhar – 2.
3. M/s. Mistri Ram Rakha, Basti Nau, Jalandhar – 2
4. M/s. Modi Mills, Modi Nagar (U.P.)

ADDRESSES OF RAW MATERAIL SUPPLIERS:

1. M/s. K.C. Verma & Co., Basti Nau, Jalandhar – 2.
2. M/s. Avtar Singh and Sons, Basti Sheikh Road, Jalandhar – 2 (Punjab)
3. M/s. Girdhari Lal, Model House Road, Near Ravidas Chowk, Jalandhar – 3.
4. M/s. E.K. Omkar Leather Tannery, Nurmahal Road, Phillaur, Dist. Jalandhar (Pb.)

ddn/-