PROJECT PROFILE ON UPHOLSTERY LEATHER (New)

Product Code	**:**	**290609005**
Quality & Standard	**:**	**As per buyers specification**
Production capacity	**:**	**Qty. : 30,000 pieces of upholstery leather i.e. 7,50,000 sq. ft.(per month) Value: Rs. 4,50,00,000/-**
Month and year of preparation	**:**	**December 2010**
Prepared by	**:**	**Leather Division MSME Development Institute Agra Phone No. 05622280879, 2280882**

Introduction:

Upholstery leather manufacturing is in a rapid state of flux at this time like any other branches of the leather industry the. Although the manufacture of upholstery leather has been characterized for years by rocker tannage, with vegetable extracts, the majority of the industry has shifted in the process of shifting to time split drum tanned upholstery leather. At times mineral salt such as chrome and zircromium is used alone or in combination with the vegetable tanning. The primary purpose of such usage is to achieve certain leather effects such as softness but also to "tie-down" the excess vegetable tannins and thus prevent migration, which might lead to a colour change of light coloured finishes.

The finishing of upholstery leather is also undergoing major changes, which have been largely brought about the specifications applied by the automotive industry in efforts to improve the surface characteristics of the leathers used. Other changes in finish materials have been brought about the extensive use of white and pastel leather, for furniture and automobiles.

There are four major grades of upholstery found:

a. Full top grains (top grains, full grain and full top grains)
b. Top grains snuffed (corrected top grains or hand buffs)
c. Deep buff
d. Splits

Market Potentials:

Because of the expanding market of the leather products in the domestic as well as in the export market. A large number of entrepreneurs have started manufacturing leather products like different types of industrials needed leather products. There are large numbers of furniture manufacturers, passenger automobile, and tabletop and

decorative product manufacturers. There is a good demand of upholstery leather due to good export market.

Basis and Presumptions:

a) This project profile 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.
b) Time period of achieving full/envisaged capacity with in three years after production.
c) Arrangements for labour wages has been considered as per minimum labour wages as per rules of State Govt.
d) Interest rate for capital investment has been charged @13%.
e) Margin money / state incentives have been calculated as per rules given by State Govt.
f) The pay back period of the project after are year form its production and total repayment of fixed capital with in 10 years.
g) The cost of land and building has been calculated as per rules of State Govts.
h) Only upholstery leather with sufficient demand have been included in the scheme. The entrepreneur can also include the other type of leather, if demand arises.

Implementations Schedule:

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

i. **Selection of product**: An entrepreneur should select their product range for manufacturing within 15 to 30 days.

ii. **Provisional MSME registration**: After selection to obtain the provisional SSI registration from the commissioner of Industries/ District Industries Center/Director of Industries of the area it will take about two or three days after submitting the required documents.

iii. **Project Report:** After provisional MSME registration, project report is prepared through industrial consultant or Govt. Department like SISI etc. within one week after collecting the quotation / rate list from machinery and raw material suppliers.

iv. **Finance:** Apply to financial institutions like state financial corporation/National Small Industries Corporation Ltd., for machinery and nationalized banks for working capital. This financial exercise will take 3 to 5 months time aporox.
v. **Factory construction:** After taking or sanction of the loan from the above organization, construction of factory building is very important step

and it will take 6 to 8 months time. In the mean while order should be placed to the machinery manufacturers as well as raw material suppliers.

vi. **Trial production:** After that machinery should be installed with in a month's time for production; Trial production should be over with is one or two weeks time and finally commercial production is above mentioned period for its marketing.

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

TECHNICAL ASPECTS:

Process of Manufacture

Raw material: Wet salted cow hides

Soak: Soaked in a drum for one hour and then drum at 3 rpm in running cold water for 20 minutes using a lattice door.

Lime L Suspend 2 days or rocking frames in old lime liquor mended with 0.25% lime and 0.2% sodium sulphide (fused) on volume of liquor.

Liquor: Pelt 5:1 ratio. Follow by 4-6 days in new lime containing 1% lime suspension and 0.1% soda ash. This new lime liquor becomes the old lime liquor after use.

Un hair: Un haring is done by machine.

Flash: Fleshing is done by machine, Examine hides to check selection.
Plump for 1-2 days in 1% lime suspension.

Slit: to required substance

Surface delime: In a paddle, using 0.5% ammonium chloride or sulphate (% on grain split weight at 33^0C).

Bate: 0.5% weak pancreatic bate at 33^0C for 1 hour (% on split weight).

Scud: Scud is done by hand.

Vegetable tannage: In a set of 12 suspender pits the first liquor is 100BK and pH 5.0 and is raised in steps of 230 BK perfit finishing at 40^0BK and pH 4.0.

The bottom 3 pits have rocker movement. These desired blend of extract is diluted with water to slightly over to degree barko meter and run into the top pit. If microbalance alone is used. Alkali must be added to the diluted liquor to reduce the

natural acidity and so raise the pH from 3.2-4.0. The Hides spend one day in each pit and as they are opposite direction.

Scour: The grain in drum, using warm sumac leaf is fusion at 33^0C for 30 minutes. Wash off and Horse up.

Fat liquor: In drum using 0.25 kg sulphate cod lever oil per hide at 35 degree centigrade for 45 minutes.

Horse up to drain.

Dry: Slowly over poles.

Finishing: Finishing in this type of leather the flexibility to the very soft in the case of cushion, upholstery. In all cases it is essential that the finish should be ruff fast in colour, glass or non-glass and should be cleanable with a damp cloth. Originally, it was finished by application of a bottom-sealing coat of polyacrylate dispensing dried and then spray finished with pigmented on tinted nitro-cellulose lacquers, usually plated or embossed. Unless carried out carefully, there is always the possibility of the film becoming brittle due to plasiciser migration or yellowing on exposure to sunlight. Polyurethane finishes have distinctive vantages. Coat (1) is sprayed to give good wetting and anchorage to the leather. Coat (2) is sprayed to cover, dried and plated at 73^0 and 150 kg. Per sq.cm. As second leveling spray coat (2) may be necessary. At this stage the leather may be boarded or preferably dry-drummed until the plated effect is lost and an attractive broken or natural grin is achieved. Finally, the urethane coat is applied.

Quality control and standard:

The upholstery leather industry has done far more then any other segment of the industry in developing test method and specifications for the product. A major reason for these developments is the result of the relatively large percentage of the product sold to the automotive industry which days on specification. The work of the upholstery industry has been done through the technical committee of the upholstery leather group working, very effectively, with the technical staff of the various auto motive companies and suppliers. Although all the leather sold to the automotive industry is sold on definite specifications, the upholstery leather industry has extended this principle into the furniture leather field. In a number of instances very extensive the technical committee has carried out work is attempting to set specifications and develop method that can be related realistically to service performance. Particular tests and specifications that have been done here resistance to fading, resistance to flex and resistance to cold. The following test methods are used as basis of specifications on upholstery leather:

a) Breaking strength
b) Elongations (stretch)
c) Stitch tear resistance static
d) Stitch tear resistance – dynamic
e) Colour fastness – fadeo meter
f) Colour fastness – south florida exposure

g) Abrasion resistance
h) Cold temperature resistance
i) Flex resistance
j) Resistance to blocking
k) Resistance to cracking
l) Resistance to bleeding
m) Resistance to sulfides
n) Resistance to perspiration

The common chemical requirements covered include moisture, fat; pH. The mor subjective requirement of satisfactory upholstery leather such as colour, grains, embossing, depth, temper hand etc. are covered descriptively of course, all specifications include a statement of the requirements of thickness, area, type of finish etc.

Production capacity:

Quality: 30,000 pcs of upholstery leather i.e. equivalent to 7,50,000 sq.ft. per annum.
Value Rs. 5,62,50,000/=

Motive power: 75 KW

Pollution control:

The pollution control measures are to be given at most attention as the Bafflement coming out of the process are very toxic and they are likely to effect the flora and fauna of water, it deposed off into the river. Moreover, effluents are also, likely to degrade the fertility of land. So proper effluent treatment plants are to be set up in the tannery to treat the effluent and make the treated water go out into river.

Energy conservation: Energy is spent in the tannery in the form of electricity and fuel. Hence there exists a lot of scope for conservation of electricity and fuel as a measure of energy conservation.

The workers should be properly trained to operate the machine as and when required. They should be trained to yield maximum units during the machine operation and should not allow the machine to run by motive power unnecessary. The electricity limes should be properly made and checked at regular intervals. In respect of fuel, proper attention is to be taken case of. The boilers should be properly maintained. Misuse of fuel in the form of wood, petrol, and kerosene should be avoided.

FINANCIAL ASPECT:
(A) Fixed capital
(i) Land & Building (Per month)

Land 1000 sq. mtr.
Building (covered area) 500 sq.mtr. on rent per month. 35,000

(ii) Machinery and Equipment

Sl. No.	Description	Qty.	Rate (Rs.)	Value (Rs.)
1.	Wooden paddle of vat size 8'x7' on 10 HP-1000 rpm AC motor starter and velt)	2	55,000	1,10,000
2.	Wooden drum 8'x6' with starter and motor 10 HP.	2	1,30,000	2,60,000
3.	Fleshing machine	1	3,00,000	3,00,000
4.	Splitting machine 1800mm. with 15 HP motor and starter	1	5,50,000	5,50,000
5.	Unhearing machine 1800mm. with 15HP motor and starter	1	4,30,000	4,30,000
6.	Hydraulic press with 25HP motor and starter	1	12,50,000	12,50,000
7.	Spray booth with compressor	2	100,000	200,000
8.	Measuring machine 1800mm. with JHP motor	1	3,00,000	3,00,000
9.	Generator set 50 KVA	1	4,50,000	4,50,000
10.	Working table toggles	L.S	100,000	100,000
11.	Testing equipments		-	100,000
12.	Pollution control equipments (effluent treatment plant)			5,00,000
13.	Cost of power connection including transformer		-	4,50,000
	And Electrification and installation @10% of cost of machinery		-	
15.	Cost of office equipment including furniture		-	75,000
iii.	Pre operative expenses, project cost non-refundable deposits		-	1,00,000
			Total fixed capital =	**51,75,000**

(B) Working capital (per month)

(I) Personnel (Per month)

Administrative and supervisory.

Sl. No.	Description	Nos.	Salary	Total
1.	Tanner-cum-Manager	1	15,000	15,000
2.	Supervisor	1	7,000	7,000
3.	Clerk-cum-Accountant	1	5,000	5,000
4.	Watchman	1	3,000	3,000
5.	Sweeper	1	3,000	3,000
	Technical			
6.	Machine operator	6	6,000	36,000
7.	Skilled worker	6	6,000	36,000
8.	Unskilled worker	10	3,000	30,000
			Total	1,35,000
	Perquisites @ 20% of salaries			27,000
				1,62,000

II) Raw material (including packing material) (Per month)

1.	Raw cow hides	2500 pcs pf 62500 sq.ft	1000/- per hide	25,00,000
2.	Processing and finishing chemicals	62500 sq. ft	20/- per sq. ft.	12,50,000
			Total	**37,50,000**

III) Utilities (per month)

Power	40,000
Fuel cost	9,500
Total =	**49,500**

IV) Other contingent's expenses (per month)

		Rs.
1.	Rent	35,000
2.	Postage and stationery	2,000
3.	Telephone	4,000
4.	Repair and maintenance	6,000
5.	Transportation	5,000
6.	Advertisement and publicity	2,500
7.	Insurance	5,000
8.	Oil and lubricants	4,000
9.	Traveling and conveyance	8,000
10.	Sundry expenses	5,000

11.	Sales expenses	5,000
	Total =	**81,500**

V) Total recurring expenditure (per month)

1.	Personal salaries	1,65,000
2.	Raw material	37,50,000
3.	Utilities	49,500
4.	Other contingent expenses	81,500
	Total =	**40,43,000**

VI) Total working capital (for 3 months)

40,43,000 x 3 = 1,21,29,000

C. Total capital investment

i.	Fixed capital	51,75,000
ii.	Working capital	1,21,29,000
	Total =	**1,73,04,000**

Machinery Utilization:

Anticipated utilization of the machinery is about 75 to 80%. All machine operators are important. Hence, it is difficult to single out any particular machine operation to be bottleneck. However, machines like fleshing, splitting un haring, embossing occupy an important position in the manufacture of upholstery leather. Hence proper control and monitoring is required so that an even flow of production is assured. Moreover, the supervisory personnel should be effective enough to reduce the down time of the machines carry out regular maintenance of the machines and timely feeding of materials and instructions.

Financial Analysis

i.	Cost of production (per year)	Rs.
a)	Total recurring cost	4,85,16,000
b)	Depreciation on machinery and equipment @10%	4,50,000
c)	Depreciation on office equipments and furniture @ 20%	15,000
d)	Interest rate @ 13% on total investment	22,49,500
	Total =	5,12,30,500
	Say	5,12,30,000

2. Turnover (per annum)
   By sale of 750000 sq.ft. @ Rs.75 = 5, 62, 50,000

3. Net profit (per year)
   Rs. 5, 62, 50,000- 5,12,30,000 = 50, 20, 000

4. Profitability

$$\frac{\text{Net profit x 100}}{\text{Turnover}}$$

$$= \frac{50,\,20,\,000}{5,\,62,\,50,\,000} = \mathbf{8.9\%}$$

5. Return on Investment

$$= \frac{\text{Net profit per year x 100}}{\text{Capital Investment}}$$

$$= \frac{50,\,20,\,000 \times 100}{1,73,04,000} = \mathbf{29\%}$$

6. Break even point

Fixed cost (per Annum)

a)	Rent	4,20,000
b)	Depreciation	4,65,000
c)	Interest on total investment	22,49,500
d)	40% of wages and salaries	7,77,600
e)	40% of other contingents expenses and utilities (excluding rent and insurance)	4,36,800
		43, 48, 900

$$\text{B.E.P.} = \frac{\text{Fixed cost x100}}{\text{Fixed cost + Net profit}}$$

$$= \frac{4348900 \times 100}{4348900 + 5020000} = \mathbf{46.4\%}$$

Address of machinery and equipment suppliers

1. M/S Shiva Engg. Co., Ambur, Vellore Distt, Tamilnadu.
2. M/S Bengal Tanning Machinery Co.(P)Ltd., 9-A, New Tangra Road Kolkata-46.
3. M/S Shalimar Engg. Works, 12-B, Prabhuram Sarkar Lane, Kolkata-15.

Address of raw material suppliers.

1. M/S Leather Chemicals and Industries Ltd., A-1, New Alipur, Kolkata.
2. M/S Allied Resin Chemicals Ltd., 134/1, M.G.Road Kolkata-11.
3. M/S B.A.S.F. India Ltd., Telecom House, E, Moses Road, Mumbai.

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