

PROJECT PROFILE

ON

FINISHED LEATHER (LEATHER TANNERY)

Month & Year
December 2009

**PREPARED BY
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STIFTUNG **FÜR DIE FREIHEIT**

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INTRODUCTION

Leather is a material created through the tanning of hides and skins of animals, primarily cattle hide. The tanning process converts the putrescible skin into a durable and versatile material.

Finished leather manufactured from Leather tanneries is the basic material for manufacturing various finished products of leather such as Shoes, Shoe upper, Leather bags, Leather wallets, Leather jackets, Leather gloves, leather wallets, pouches, belts, sports goods, and various other leather products. Finished leather is generally manufactured from raw-hides and skins by using eco-friendly chemicals and by reducing pollution materials . Footwear made out of eco-friendly upper leather are exported to different countries to fulfill the demand of global market as well as the demand of local market. Products made out of eco-friendly leather are evergreen and there is good demand for these items by every category of the people.

Amongst the major producers of finished leather in the world, the Indian Leather industry has a long tradition of supplying high quality leather for the global market with over 2 billion sq. feet of leather produced annually and the capacity to fulfill 10 percent of the global leather requirement.

MARKET

The Global import of Finished Leather increased from US\$16506.14 million

in 2002 to US\$20738.51 million in 2005, growing at a CAGR of 5.87%. India's share has increased from 3.08% to 3.49% during the said period.

	(In Million US\$)				
	2002	2003	2004	2005	2006
Global import	16506.14	18074.64	19812.96	19879.89	20738.51
India's export	508.83	555.71	607.73	636.27	724.00
% Share of India	3.08%	3.07%	3.07%	3.20%	3.49%

Source : World Statistics, ITC, Geneva India's export, DGCI & S

India's export of finished leather touched US\$ 766.93 million in 2007-08, with a share of 22.05% in India's total export. In 2006, India held a share of 3.49% in the global import of finished leather.

The major markets for Indian finished leather are Hong Kong, Italy, Germany, Spain, China, Korea Rep, Indonesia, France and Portugal. Nearly 73.17% of India's export of finished leather is to the above countries.

There has been remarkable demand for leather products and exports of leather garments, shoes, and shoe uppers have been having increasing trend in exports. The figures of leather exports from India in the past have been as under:

Year	Volume in Million US\$
1994-95	1612.16
1995-96	1762.99
1996-97	1618.27
1997-98	1671.90
1998-99	1654.89
1999-2000	1604.35

2000-01	1963.60
2001-02	1936.00
2002-03	1875.21
2003-04	2216.45
2004-05	2379.44
2005-06	2694.59
2006-07	2981.79
2007-08	3480.00
2008-09	3598.64

Source: Council for Leather Exports.

The product wise exports of leather and leather products from India for the past 5 years are as under:

US \$ million

Category	2004-05	2005-06	2006-07	2007-08	2008-09
Finished leather	577.00	606.06	688.05	807.19	673.37
Footwear	601.73	786.76	950.90	1174.03	1243.78
Footwear components	163.67	179.04	212.65	269.30	246.35
Leather garments	318.73	328.44	308.98	345.34	426.15
Leather goods	568.46	649.14	690.66	800.46	873.30
Saddlery and Harness	59.64	76.40	81.85	106.18	92.15
Leather gloves	*	*			
Non-leather footwear	90.21	68.75	48.69	46.02	43.53
Total	2379.44	2694.59	2981.75	3548.51	3598.64

Leather gloves are included in Leather Goods.

Analysis of Export Performance of leather and leather products during

April-March 2007-08 vis-à-vis April-March 2008-09

- The export of leather and leather products for the period April-March 2008-09 touched US\$ 3598.64 million against the performance of US\$ 3548.51 million in the corresponding period of last year, registering a positive growth of 1.41% in Dollar Terms. In rupee terms the export touched Rs.165513.28 million against the previous years performance of Rs.142865.69 million showing a positive growth of 15.85%.
- The export value during 2007.08 was revised upwards by DGCI&S, from US\$ 3477.52 million (Rs.140007.33 million) to US\$ 3548.51 million (Rs.142865.69 million).

A Statement showing the Product-wise Export performance during April-March 2007-08 vis-à-vis April-March 2008-09 is given below:

CATEGORY	(Value in Million Rs)		
	APR-MAR	APR-MAR	% VARIATION
	2007-08	2008-09	
FINISHED LEATHER	32498.11	30970.72	-4.70%
LEATHER FOOTWEAR	47267.13	57205.46	21.03%
FOOTWEAR COMPONENTS	10842.27	11330.34	4.50%
LEATHER GARMENTS	13903.47	19600.26	40.97%
LEATHER GOODS	32227.20	40165.81	24.63%
SADDLERY AND HARNESS	4274.78	4238.48	-0.85%
NON-LEATHER FOOTWEAR	1852.73	2002.21	8.07%
TOTAL	142865.69	165513.28	15.85%
Source : DGCI &S			

Export Target Vs Achievement

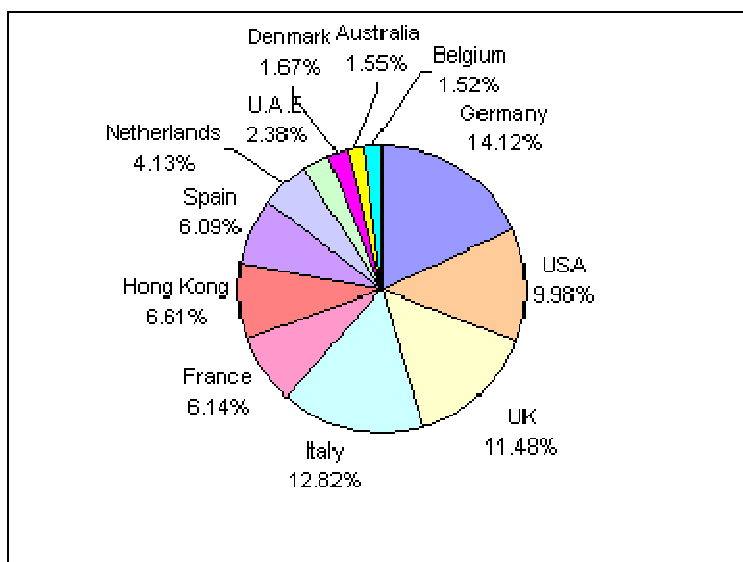
As against the envisaged export target of US\$ 4000 million for the year 2008-09, the actual export performance was US\$ 3598.63 million, recording an achievement of 89.97% over the targeted export. The product specific export target vis-à-vis achievement is given below:

Product Category	Export Target	(In Million US\$)	
		Actual Export	% Achievement
	2008-09	Apr- March 2008-09	
Finished Leather	799.00	673.37	84.28%
Footwear	1816.00	1533.66	84.45%
Leather Garments	380.00	426.15	112.14%
Leather Goods	875.00	873.30	99.81%
Saddlery & Harness	130.00	92.15	70.88%
Total	4000.00	3598.63	89.97%

Country-wise analysis

- The major markets for Indian leather products are Germany with a share of 14.12%, Italy 12.82%, UK 11.48%, USA 9.98%, Hong Kong 6.61%, Spain 6.09%, France 6.14%, Netherlands 4.13%, UAE 2.38% and Australia 1.55%. *These 10 countries together accounts for nearly 75.30% of India's total leather products export.*
- Overall positive growth is seen in markets like Germany 3.02%, USA 15.43%, France 11.34%, Spain 1.44%, Netherlands 10.40%, Australia 10.55%, Denmark 21.24%, Switzerland 1.09%, Austria 5.97%, Japan 26.93%, U.A.E. 12.54%, Finland 7.85% and Saudi Arabia 20.60%
- Overall decline is seen in markets like UK 1.06%, Italy 5.96%, Hong Kong 15.39%, Russia 23.86%, New Zealand 2.55%, Greece 24.43%, Canada 4.41%, Sweden 2.47%. South Africa 19.56%, and Portugal 15.38%

Major markets for Indian Leather Products and their import share



Trend in Major importing Countries of Leather & Leather Products

(Value in Million US\$)

COUNTRY	APR-MAR		% change
	2007-08	2008-09	
GERMANY	493.34	508.26	3.02%
U.S.A.	311.21	359.22	15.43%
U.K.	417.64	413.23	-1.06%
ITALY	490.77	461.52	-5.96%
FRANCE	198.52	221.03	11.34%
HONG KONG	280.97	237.72	-15.39%
SPAIN	216.07	219.18	1.44%
RUSSIA	15.77	12.01	-23.86%
NETHERLANDS	134.75	148.77	10.40%
AUSTRALIA	50.44	55.76	10.55%
NEWZEALAND	5.61	5.46	-2.55%
DENMARK	49.58	60.12	21.24%
GREECE	23.57	17.82	-24.43%
CANADA	36.92	35.29	-4.41%
SWITZERLAND	25.79	26.07	1.09%
SWEDEN	38.99	38.03	-2.47%
S. AFRICA	27.90	22.45	-19.56%
AUSTRIA	25.68	27.22	5.97%
BELGIUM	55.32	54.77	-1.00%
JAPAN	15.95	20.24	26.93%

PORTUGAL	56.93	48.17	-15.38%
CHINA	55.46	49.96	-9.92%
IRELAND	8.15	6.37	-21.92%
U.A.E.	76.23	85.79	12.54%
Source : DGCIS			

The Government of India had identified the Leather Sector as a Focus Sector in its Foreign Trade Policy 2004-09 in view of its immense potential for export growth prospects and employment generation. Accordingly, the Government is also implementing various Special Focus Initiatives under the Foreign Trade Policy for the growth of leather sector. Hence, considering the current export trends and the previous growth rates, the export target in respect of leather & leather products is envisaged to touch US\$ 7.03 billion mark by the financial year 2013-14.

There is a good demand for the Indian finished leather and the demand is increasing. The finished leather is converted into value added products and therefore the supply of the finished leather has to be increased.

There exists a large raw material base. This is on account of population of 194 million cattle, 70 million buffaloes and 95 million goats. According to the latest census, India ranks first among the major livestock holding countries in the world. With 48 million of sheep, it claims the sixth position. These four species provide the basic raw material for the leather industry.

The annual availability of about 200 million hides and skins is the main strength of the industry. Some of the goat/calf/sheep skins available in

India are regarded as specialty products commanding a premium market. Abundance of traditional skills in tanning, finishing and manufacturing downstream products and relatively low wage rates are the two other factors of comparative advantage for India.

The leather industry is spread in different segments, namely, Tanning & Finishing, Footwear & Footwear components, Leather Garments, Leather Goods including saddlery & Harness, etc. the estimated production capacity in different segment is furnished in the following table; -

Product	Capacity
Hides	65 million pieces
Skins	170 million pieces
Footwear & Footwear components	
a) Leather Footwear	776 Million pairs
b) Leather shoe uppers	112 million pairs
c) Non-leather Footwear	960 million pairs
Leather garments	18 million pieces
Leather goods	60 million pieces
Industrial gloves	52 million pieces
Saddles	0.10 million pieces

(Source: Council for Leather Exports)

The China has emerged as a major competitor for India holding nearly 27% of world market followed by Italy with 15%. India's share is only 2.59%, which has to be improved. The Council of Leather Exports has been successful recently promoting Indian exports after its delegation's visit to Latin American Countries, when they could muster large export orders.

The Government has recently set up Leather Technology mission to augment resources, improvement in quality and other technical aspects of leather production. The problems of effluent have been solved with the setting up of individual Effluent Treatment Plants and Common Effluent Treatment Plants. All necessary steps are being taken to boost the exports on one side and to maintain matching quality of production on the other by technological advancement.

The Global Import of Leather Goods in terms of value was around US\$ 4955 million, accounting for a share of 7.26% in the total global import of leather and leather products. India's export of total global import of leather goods is around US\$ 444 million holding a share of 7.60% in the global import of this product. There is thus enormous scope for furthering our export of leather products.

The major markets for Indian Leather and leather products are the USA, Germany, the UK, Italy, France, Spain and within lands accounting for almost 72% of total export.

INSTALLED CAPACITY

Product	Capacity per day	Capacity per annum 300 days per annum
Finished Leather	4000 Sq.ft	1200000 Sq.ft

PLANT AND MACHINERY

Sl.No	Name of the Machinery	Qty	Value
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1.	Wooden paddle with motor starter etc. (Complete in all respect) size 8' x 7' with 10 HP motor 1000 RPM	2	2.25
2.	Tanning drum 8'x6' with 10HP motor and starter (Complete in all respect)	2	4.50
3.	Fleshing machine 1800mm working width with 20HP motor and starter	1	2.25
4.	Experiment drum 3'x3' with 5HP motor and starter	1	0.83
5.	Shaving machine single width 7.5HP motor and starter	2	2.25
6.	Dyeing and fat liquoring drum size: 8'x6' with 10HP motor and starter	2	4.50
7.	Reversible type setting machine 1800mm working width with 15HP motor and starter	1	2.63
8.	Through feed buffing machine 1800mm working width with 15HP motor and starter	1	3.00
9.	Toggle chamber with 10 Plate toggle drier unit (Complete unit)	1	3.00
10.	Slow comb staking M/c with 75HP Motor	2	1.95
11.	Spray chamber with one compressor and two spray systems with exhaust system (complete in all respect)	1	1.50
12.	Electronic area measuring machine 1800mm working width with motor (Complete)	1	4.00
13.	Weighing scale, working table and other hand tools, Lab Equipment and Misc Items	LS	0.75

	etc		
14.	Cost of pollution control system	1	5.00
15.	Cost of tube well, OHD, Water Supply system, Oil fired baby Boiler etc.	1	3.60
16.	Diesel generator set 50KVA with standard accessories etc.	1	3.75
17.	Cost of transformer and other electrical accessories and other legal expenses etc.	1	4.88
18.	Electrification and Installation charges	1	4.88
	TOTAL		60.00

MANUFACTURING PROCESS

Raw Materials: Wet salted cow hides lower quality average weight 1.5 kg each

De-salting: Remove the salt by mechanical method to reduce the Pollution.

Soaking: The hides are soaked in pits containing 1 to 2% lime 100% water.

Soaked well washed and soaked wt is noted

Liming: Paddle liming

Water: 200%

Clarizyme: 0.5%

Sodium sulphide: 2%

On soaked wt

Lime: 10%

Time 18 to 20 hours.

Unhairing, fleshing and fleshed wt is to be noted

Deliming: (Drum Process) – 1st wash with water

Water: 100% Run 30 to 45 minutes.

Ammonium sulphate: 1% to 1.5% and check pH.

Drain and wash well

Pickling: Water 50 to 100%

Salt 5% Run for 20 minutes.

Add: Sulphuric acid = 1% (Dilute with 10% water)

Formic Acid = 25% (on Acid wt)

Run for 1 hr and get the cross section pH equal to solution of drum. Left over night, Run for 30 minutes and check pH = 2.8 to 3.0

Drain 50% of pickle bath and add.

Chrome powder = 4%

Run for = 1 hr and add

Chrome powder = 4%

Run for 1 hr check penetration, add water 100% and basified with Sodium formate

Or

Ammonium bicarb = 0.5%

Sodium bi-carbonate = 1%

Feed in 4 to 6 feed after de-solving in water.

Run for 1 hr check PH = 3.8 to 4

Drain the chrome bath and collect it for chrome recovery.

Preserve the pelt in separate bath with suitable eco-friendly preservative, pile the stock for 1 to 2 days. Then samming and conditioning, splitting shaving operation is done and shaved wet is noted.

Wet back with working the hides with 200% water and pile for over night.

Rechroming:

Water = 50%

Basic chrome powder = 4%

Run for 1 hr add water = 50%

Run for 30 minutes.

Add: Sodi-bi-carb = 1%

Sodi-formate = .5%

Run for 1 hr ., check

pH 3-8 to 4 Pile O/N

Neutralisation:

Water = 100%

Sodi-formate = 1% Run for 30 minutes to

Vernaten EKM 2% 45 minutes check pH – 4.8 to 5.8

Drain, Wash well

Dyeing and Fat Liquoring and Retanning:

Hot Water = 10%

Suitable dye = ½ % to 1%

Run for 30 minutes and

Add:

Suitable fat liquor = 4 to 6%

Run for 1 hr and add

Retaining syntan = 3% and run for 30 minutes

Fixed with formic acid = 0.25%

Run for 15 minutes check and drain.

Wash the pelt in hot water and pile for over night.

Next day sammed, setting and drying operation is done. After drying, post tanning operation are done. Then the goods are ready for finishing. The goods are finished as per requirement by using pigments and binder and finally top coat with lacquer is applied to prevent the bleeding of colour. The leather is then assorted, measured and packed for dispatch.

RAW MATERIALS

The Raw materials required for the production at full capacity is given below:

Calculation of Raw Materials	Unit	Qty	Rate-Rs	Rs.lakhs
Wet salted cow hides	sft	1200000	23	276.00
Chemicals	For sft	1200000	15	180.00
				456.00

LOCATION LAND AND BUILDING

The infrastructural facilities required for the project by way of land and building is the following.

Land area	1 acre
Built up area-Sq.ft	13200
Cost of building	Rs.56.00 lakhs

UTILITIES

The utilities required for the project are the following

POWER

Power	160 HP
I.e	119.36
No. Of Working hours	8
Per day	955 Kwhrs
Per annum	286500 Kwhrs
Rate per unit	Rs.5.25

Power charge per annum	Rs.15.04 lakhs
Fuel per annum- Furnace oil	3.60 18.64

WATER

Water required 50000 litres per day.

MANPOWER

The manpower requirement for the project is given below

Category	Nos.	Monthly Salary	Total monthly Salary
Production Manager	1	15000	15000
Supervisor	1	8000	8000
Assistant	1	4000	4000
Accountant	1	6000	6000
Substaff	3	3000	9000
Machine operators	5	7000	35000
Skilled workers	7	7000	49000
Total	19		126000
Add Benefits		0.20	25200
			151200
Annually		Rs.lakhs	18.14

SCHEDULE OF IMPLEMENTATION

If the financing arrangements are finalized the project can be implemented in three months time.

COST OF PRODUCTION AND PROFITABILITY ASSUMPTIONS

A cost and profitability statement projected for the first 3 years of operations is given in Annexure. The profitability is based on the following assumptions.

Assumptions

Installed capacity	1200000 sq.ft per annum
Capacity utilisation	Year-1 -60% Year -2 -70% Year-3 onwards- 80%
Selling price	Rs.50.per sq.ft

Raw materials	As per the details given above
Packing materials	As per details given above
Power	Rs.18.64 lakhs per annum at 100%
Wages and salaries	Rs. 18.14 lakhs with increase 5% every year.
Repairs and Maintenance	Rs.1.20 lakhs per annum
Depreciation	Written down value method -15 % on machinery
Selling general and administrative expenses	Rs.1.00 lakh per month
Interest on Term loan	13% per annum
Interest on working capital	13 % per annum
Income tax	34 % on profits

ADDRESSES OF MACHINERY AND EQUIPMENT SUPPLIERS

1. Gopi Engineering works

2/73 MC Road

Madanur

Vellore-635804

2. M/s. Prototype Development and

Training Centre

Sector – B/84,

Guindy Industrial Estate,

Chennai – 600 097.

3.M/s. Bengal Machinery Co Pvt Ltd,

9A, New Tangra Road,

Kolkata – 700 046.

4. M/s. Shalimar Engg Works

12-B, Prabhuram Sarkar Lane,
Kolkata 15.

5. M/s. Annapurna Engg Works
F-10/2, MIDC Shirola,
Kolhapur.

RAW MATERIAL SUPPLIERS

1. Wet salted raw-hides are available in the local raw-hides market of Kolkata and various centres in Tamil Nadu

CHEMICAL SUPPLIERS

1. M/s. BASF India Ltd.
2. M/s. Bayer (India) Ltd
3. M/s. Sandoz (P) Ltd
4. M/s. Leather Chemicals and Industries Ltd.
A-1, New Alipur, Kolkata
5. M/s Chromtan India (P) Ltd
14 Temple Street,
Kolkata.
6. M/s. Balmer Laurie and Co.,
10, Spic Tank Road, Chetpur,
Chennai.
7. M/s. Golden Chemical (P) Ltd
Vileparle,
Mumbai-56
8. M/s. Tamil Nadu Chromates and Chemical Ltd.
13, Nungam Bakkam High Road
Chennai 600 034.
9. M/s. Allied Resin Chemical Ltd.

134/1, M.G. Road,
Kolkata.

FINANCIAL ASPECTS
1. COST OF PROJECT

	(Rs.lakhs)
Land	30.00
Building	56.00
Plant & Machinery	60.00
Other Misc. assets	5.00
Pre-Operative expenses	10.00
Margin for WC	12.54

	173.54

2.MEANS OF FINANCE

Capital	64.04
Term Loan	109.50

	173.54

3.COST OF PRODUCTION & PROFITABILITY STATEMENTS

Years	1	2	3
Installed Capacity (SQ.ft p.a.)	1200000	1200000	1200000
Utilisation	60%	70%	80%
Production/Sales (sq.ft p.a.)	720000	840000	960000
Selling Price	Rs.50	sq.ft	
Sales Value	360.00	420.00	480.00
Sales Value	360.00	420.00	480.00
Raw Materials	273.60	319.20	364.80
Power	11.18	13.05	14.91
Wages & Salaries	18.14	19.05	20.00
Repairs & Maintenance	1.20	1.26	1.32
Depreciation	16.35	14.23	12.39
Cost of Production	320.47	366.79	413.42

Admin, & General expenses	12.00	12.60	13.23
Interest on Term Loan	14.24	12.46	8.90
Interest on Working Capital	7.03	7.03	7.03
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Total	353.74	398.88	442.58
Profit Before Tax	6.26	21.12	37.42
Provision for tax	2.13	7.18	12.72
Profit After Tax	4.13	13.94	24.70
Add: Depreciation	16.35	14.23	12.39
Cash			
Accruals	20.48	28.17	37.09

4. WORKING CAPITAL:

	Months	Values	%	Margin	Bank
	Consumptions			Amount	Finance
Raw Materials	1.00	22.80	25%	5.70	17.10
Finished goods	0.50	13.35	25%	3.34	10.01
Debtors	1.00	30.00	10%	3.00	27.00
Expenses	1.00	0.50	100%	0.50	0.00
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		66.65		12.54	54.11

Say -
-> Rs.54.08 lakhs

6. PROFITABILITY RATIOS BASED ON 80% UTILISATION

<u>Profit after Tax</u>	24.70
Sales	480.00
	_____ 5%

