

# **PROJECT PROFILE**

ON

## **PAPER BAGS AND POUCHES**

Month & Year  
July 2010

**PREPARED BY  
TANSTIA-FNF SERVICE CENTRE  
B-22, INDUSTRIAL ESTATE  
CHENNAI-600032**

Supported by

Friedrich Naumann  
STIFTUNG **FÜR DIE FREIHEIT**

# **PAPER BAGS AND POUCHES**

## **INTRODUCTION**

Of late, owing to the increased awareness of biologically non-disposable nature of the plastics bags, the plastic carrybags are being banned in many cities and urban centres. The disposal and recycling of plastic bags have created havoc and a threat to the environment. Suitable solution to come out of this difficulty is to replace, wherever possible, plastic bags with other bio-degradable materials such as paper bags, cotton bags, jute bags etc., Considering the necessity to solve this problem there is an immediate demand for paper carrybags, which can be made in different sizes and thicknesses.

## **PRODUCT USES & SPECIFICATIONS**

Paper carrybags are used in all types of trade. Some of them are the following.

- Textile Shops
- Bakeries
- Shoe / Chappal Shops
- Grocery Shops
- Fancy Shops
- Book Shops
- Sweet Shops
- Meat / Fish Shops
- Vegetable Shops
- Stationery Shops
- Hardware Shops
- All departmental shops & consumer shops

The Bureau of Indian Standards has not prescribed any standards for paper carry bags. IS:1060-1996 parts 1 to 3 deal with methods of sampling and testing and allied products for various tests, such as bursting strength, tensile strength etc.

## **MARKET POTENTIAL**

The Indian packaging industry is expected to grow to Rs 82,500 crore by 2015 from the current Rs 65,000 crore.

India stands at the 11th position in the world packaging industry, which is \$550-billion, and with the rising consumer demand and new technologies, it is expected to grow at 18-20 per cent from the current 15 per cent, as per Indian Institute of Packaging (IIP).

Among the total packaging sources, plastic packaging is at 6.8 million tonne and growing at 20-25 per cent per annum, **whereas paper packaging is 7.6 million tonne**. Glass packaging contributes to 4-5 per cent and metal 8 per cent. Forty per cent of the total paper production goes for packaging.

Today, whatever we use needs a packaging. Last year, our GDP growth was 8.5 per cent while the packaging industry grew 15 per cent.

### **Indian Packaging Industry**

- The market volume of the Indian packaging industry amounts to about Rs. 77,570 crore and has constantly grown by approximately 15 percent year on year.
- The pace of growth will accelerate to between 20-25 percent over the next five years.
- The highest demand for packaging and the associated equipment come from the food processing industry at 50 percent and from the pharmaceutical industry at 25 percent.
- The large growing middle class, liberalization and organized retail sector are the catalysts to growth in packaging. Also food and Pharma packaging are the key driving segments.

- The Indian food market is estimated to total about Rs. 8,82,350 crore according to the 'India Food Report 2008' published by Research and Markets.
- Food retail turnover is expected to grow from the current Rs 3,39,365 crore mark to 7,27,212 crore by 2025.
- The pharmaceutical industry is expected to average an annual growth of 16 percent till 2012.
- There are about 600-700 packaging machinery manufacturers, 95 percent of which are in the small and medium sector located all over India.
- Indian packaging machinery imports are around Rs 606 crore (20-25 percent) while the Indian packaging machinery exports are rapidly growing.
- Germany and Italy are the largest suppliers of packaging machinery to India but focus is now shifting on Taiwan and China.
- Indian companies are now placing increasing emphasis on attractive and hygienic packaging. This promises enormous potential for the future.

### **Packaging & Allied Industries – The South India Scenario**

- Southern states including Andhra Pradesh, Karnataka, Kerala, Bangalore and Tamil Nadu -- now lead the country in a number of indices, including Packaging.
- South India has emerged as the largest consumer of 'poly ethylene terephthalate' (PET) material for packaging mineral water.
- South India is emerging as a strong pharma hub with strong infrastructure of research facilities and scientists.
- Dairy product packaging constitutes a large portion of the South India Packaging industry.
- Abundant tea production in South India brings opportunities in paper bag packaging industry.
- Retail Sales of packaged food is growing at a rate of 12 percent in South India.

- As Coffee and Spice output in the Southern hemisphere see a steady incline of close to 10 percent individually and export markets pick up again, newer opportunities arise for various packaging segments.
- While major components such as cartons, cans and laminates, which are Bureau of Indian Standards (BIS) certified, are of global standards, the glass bottles and outer cartons are areas that need to be upgraded.

There are certain products for which market demand is always accelerated. Paper bag is also one of such products. In view of Government's proposal for banning plastic bags and pouches, the demand for paper bags and pouches is bound to increase manifold. There is export potential for export of paper bags & pouches. The consumption of paper boards used in packaging industry has been increasing.

## **TECHNICAL ASPECTS**

### **PRESENT PROJECT**

The project proposed is to manufacture paper carry bags. With the machineries proposed from indigenous sources about 10,000 bags of different sizes can be manufactured per hour.

For this proposed project calculation, on a conservative basis 5000 bags per hour is taken as capacity. The total capacity providing on single shift basis is assumed at 40000 bags. The capacity per annum is 120,00,000 bags.

### **SIZES OF BAGS**

The maximum size bags, which can be manufactured by the machine, are the following:

Paper bags	:	8cm X 12cm (3.2" X 4¾")
(Flat Type)		to
		50cm X 50cm (20" X 20")

Paper bags : 8cm X 2cm X 12cm (3.2" X 0.8" X 4.8")  
(Sachet type) to  
50cm X 12cm X 50cm (20" X 4.8" X 20")

**Paper Carry bags :** by fixing the Bottom Board,

Handles : All the above sizes

(Eyeletting & tag fixing manual)

The bags may be plain style colour or double colour printed.

## **PLANT & MACHINERY**

The machinery consists of the following:

Fully Automatic Special type paper bag making unit with the following attachments & accessories.

- a) Single Slit Slitting unit to size the paper from big width to small width to produce small bags with 3 HP Motor
- b) Double Colour Flexo printing unit with attachment
- c) 3 HP Motor for Main drive
- d) 12 Nos Flat type size plates and , 12 Nos Sachet type size plates
- e) 48 Nos Size Gear Wheels
- f) 12 Nos Stereo rollers
- g) One bag cutting machine
- h) Eye letting Machine

- i) The total cost of the above Plant & Machinery works out to Rs. 6.50 Lakhs from reputed indigenous manufacturer

## MANUFACTURING PROCESS

The whole process involved in the manufacture of paper bags is automatic, starting with printing and ending with stacking up of finished bags. The paper roll is initially cut into proper width and they are fed into the printing unit first. After the printing is done the roll goes into the bag making section where it is folded, pasted, sheared and stacked. The bags will be plain bags or sachetted bags with folds in the middle.

## RAW MATERIALS CALCULATION (FOR 120 LAKHS BAGS)

The paper bags can be manufactured from different varieties of papers ranging from 44 GSM (Grams per Square Metre) to 160 GSM with Burst Factor ranging from 2 to 30. Besides Kraft paper, Wrapper paper, Art paper, Butter paper, Wax coated paper also can be used to manufacture paper bags. The following working is related to a particular size namely 36cm X 40cm with a centre width of 120 GSM Kraft paper.

### RAW MATERIALS CALCULATION (FOR 120 LAKHS BAGS)

<b>Kraft Paper 120 GSM</b>	<b>Qty.</b>	<b>Rate</b>	<b>Value</b>
For Bag Size 36cm X 40cm X width 9 cm	<b>MT</b>		<b>Rs. Lakhs</b>
Requirement per Bag	53		
Add : Wastage 5%	3		
	<u>56</u>	672	25000
			168.00
Glue	Re. 0.03	per Bag	3.60
Printing Ink	Re. 0.2	per Bag	24.00
Eyelets	Re. 0.03	per Bag	3.60
Cotton Tags	Re. 0.08	per Bag	9.60
			<u><b>208.80</b></u>

## Raw Materials Cost per Bag

1.74

### LAND & BUILDING REQUIREMENT

A shed with a floor area of 800 sqft on rental basis. Rs. 8000 per month Advance  
Rs.0.80 lakhs.

### UTILITIES

**Electricity:** Power requirement is 6 HP connected load.

**Water:** Water is required only for human consumption.

### MANPOWER

Category	Nos	Monthly salary-Rs	Total -Rs
1. Operators	1	6000	6000
2. Helpers	2	4000	8000
3. Packing- unskilled	2	4000	8000
4. Supervisor	1	8000	8000
5. Office Assistant	1	5000	5000
6. Sales Rep.	2	5000	10000
			45000
Add : Benefits 20%			9000
	<b>Total</b>		<b>54000</b>



Annually			6.48
----------	--	--	------

## **IMPLEMENTATION SCHEDULE**

The machines are available from supplier within one month's period. The project can be implemented within one month period.

## **COST & PROFITABILITY ASSUMPTIONS**

1. The unit would work for 300 days on single shift basis. The installed capacity is 120 lakhs paper bags p.a.
2. The selling price is assumed at Re.2.00 per bag.
3. Raw Materials cost is assumed at Rs. 1.74 per bag as per calculations furnished.
4. Power charges works out to Rs. 0.30 lakhs per annum (Rs. 2500 per month).
5. Wages & Salaries works out to Rs.6.48 lakhs P.A as per the detail given above with annual increase of 5%.
6. Repairs & Maintenance is assumed at Rs. 3000 p.m with annual increase of 5%
7. Depreciation calculated @ 15% on Plant & Machinery on WDV method.
8. Admn. Expenses is assumed at Rs. 2.40 lakhs p.a. (Rs. 20000 per month) with annual increase of 5%
9. Selling expenses are assumed at Rs1.08 lakhs during first year.
10. Interest on TL is provided at 12% p.a. on reducing balance.
11. Interest on WC is provided at 12% p.a.
12. Income tax is provided at 33.22% on profit.

## **MACHINERY SUPPLIERS**

1. M/s. Yenykey Machine Tools, SF No. 362, Thadagam Road (Next to JM Hospital), Coimbatore-641025.
2. M/s. Jandu Engineering Works (Regd.), R-31, Vikas Marg, Shakarpur, Delhi-110092.
3. Tao Media, Jayveer Traders,132/1 Kaleeswara Nagar, Coimbatore- 641009

## DEALERS / MANUFACTURERS OF KRAFT PAPERS

1. M/s. Ballarpur Industries Ltd., 2-B, 24, CNC Road, Chennai-600105.
2. M/s. Seshasayee Paper & Board Mills Ltd., Pallipalayam Cauvery PSPO, Erode.
3. M/s. Arihant Paper & Boards, 80, Vellalar Street, Chennai-600058.
4. Besant Paper House, 64(New 90), Narayana Mudali Street, Chennai-600079.
5. Several other paper dealers in Anderson Street & Bunder Street, Chennai-600001.

<b>COST OF PROJECT</b>	<b>Rs. lakhs</b>
Land & Building-Rental Advance	0.80
Plant & Machinery	6.50
Other Misc. assets	0.50
Pre-op. expenses	0.35
Working Capital Margin	<u>3.70</u>
	<b><u>11.85</u></b>
<b>MEANS OF FINANCE</b>	
Capital	6.60
Term Loan	<u>5.25</u>
	<b><u>11.85</u></b>

## COST OF PRODUCTION & PROFITABILITY STATEMENT

	<b>Rs. Lakhs</b>		
	<b>1</b>	<b>2</b>	<b>3</b>
Installed Capacity (No. of bags-in lakhs)	120.00	120.00	120.00
Utilisation (%)	60%	70%	80%
Production/Sales-lakh bags.	72.00	84.00	96.00
Selling Rate	Re.	2.00	per bag
Sales Value (Rs. lakhs)	<u>144.00</u>	<u>168.00</u>	<u>192.00</u>
Raw Materials	125.28	146.16	167.04
Power	0.30	0.35	0.40
Wages & Salaries	6.48	6.80	7.14

Repairs & Maintenance	0.36	0.38	0.40
Depreciation	1.03	0.87	0.74
Cost of Production	133.45	154.56	175.72
Administration & Gen. Expenses	2.40	2.52	2.65
Selling Exp.	1.08	1.26	1.44
Interest in Term Loan	0.48	0.36	0.27
Interest on Working Capital	1.26	1.26	1.26
<b>Total</b>	<b>138.67</b>	<b>159.96</b>	<b>181.34</b>
Profit Before Tax	5.33	8.04	10.66
Provision for Taxes	1.81	2.73	3.62
Profit After Tax	3.52	5.30	7.04

### FINANCIAL RATIOS

<u>Profit After tax</u> Sales	<u>7.04</u> 192.00	4%
<u>Profit before Interest &amp; Tax</u> Total Investment	<u>12.19</u> 22.35	55%
<u>Profit after Tax</u> Promoters Capital	<u>7.04</u> 6.60	107%

### ASSESSMENT OF WORKING CAPITAL

		Requirement	%	Margin Amount	Bank Finance
Raw Materials	1/2 month	5.22	25%	1.31	3.92
Finished Goods	1/4 month	2.78	25%	0.70	2.09
Debtors	1/2 month	6.00	25%	1.50	4.50
Expenses	1 month	0.20	100%	0.20	0.00
		14.20		3.70	10.50

**Say Rs. 10.50**

### CALCULATION OF BREAK EVEN LEVEL

**SALES @ 80%** 192.00

**LESS: VARIABLE EXPENSES**

Raw Materials	167.04
Power	0.40
Selling Exp.	1.44
Interest on Working Capital	1.26
	<u>170.14</u>

**CONTRIBUTION** **21.86**

**FIXED EXPENSES**

Wages & Salaries	7.14
Repairs & Maintenance	0.40
Depreciation	0.74
Admn. & General Exp.	2.65
Interest in Term Loan	0.27
	<u>11.20</u>

PROFIT 10.66  
BREAK-EVEN LEVEL 41%  
CASH BREAK EVEN LEVEL 41%

FC	x	80%
FC + P		
11.20	x	80%
10.73+11.14		
11.20	x	80% = 41%
21.87		