

PROJECT PROFILE
ON
CO-EXTRUDED MULTILAYER FILMS

MONTH & YEAR
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CO-EXTRUDED MULTILAYER FILMS

INTRODUCTION

Co-extruded films are manufactured for different applications. Three layers blown film extrusion is a process of simultaneously extruding in molten stage three polymers which adhere to each other through a common die to form an integral film of unique strength and properties.

MARKET

The plastics industry seems to be going through a major change as the processing units shift focus from traditional packaging to newer segments such as equipment manufacturing for automobiles, agriculture, poultry farming, agriculture and blown films. The plastics product manufacturing and processing business, which employs over 3.6 million people directly in India, is considered as one of the most sought after industries among the entrepreneurs and start-ups in India. The industry is growing at an annual rate of over 15 per cent and the emerging segments include agro-based as well as consumer based.

The proposed investment of Rs 1.5 lakh crore (\$37 billion) in upstream industry to set up 11 petrochemical complexes in India is expected to provide impetus for growth of polymer consumption to 15 million tonnes by 2015 according to Mr. Ashok Goel, President, Plastindia Foundation.

The Indian plastics industry, he said, has seen a consistent growth of over 15 per cent over the past five years, and the per-person consumption has doubled over the last four years to eight kg in 2010. This is expected to increase to 10 kg by 2012 and to be on par with the global consumption, 27 kg, by 2020 because of the increasing consumption across sectors like packaging, infrastructure, agriculture, automobiles, healthcare and FMCG.

In agriculture alone, around 17 million hectares are to be brought under drip irrigation according to the Union Ministry of Agriculture over the next three-four years. This leads to a tremendous potential for use of plastics in irrigation and plastic pipes, Mr. Goel said.

INDIA- one of the fastest growing economies of the world, is all set to attain the premier status along with China. India is a favoured destination for overseas investors and offers the advantages of an open economy, increasing liberalization, a stable democratic political scenario, highly skilled work force with fluency in English. After liberalization of the economy in 1992, the Government of India has been quite supportive of industry in general, taking many steps over the years for the conducive growth of business. These measures favouring economic growth, are being continuously taken by the Indian Government, irrespective of the change in power. The Government of India is endeavouring to achieve GDP growth of more than 7% in the next 10 years. It is quite possible that plastics could grow at 14%, based on historical performance.

The Indian plastics industry, with more than 4 million tons consumption in 2003 is well spread all over India. While it is estimated to be fragmented across more than 30,000 processors, the large processors are less than 100. These 100 have about 35% share of the plastics processing industry.

The historical growth of the plastics industry over the last few decades is at an impressive 12-14%, which is twice the GDP growth. The major driver of this growth is the increased standard of living of people in India (housing the second largest population in the world). It is estimated that almost 35% of the 1.2 billion population has a purchasing power equivalent to that in European countries.

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With the growth in consumption, plastic production in India is likely to grow by 60 per cent to touch 12.75 million tonne by 2012, according to a industry body. "Plastic is an integral part of our life and its consumption is growing every year. We are expecting the production to grow by 60 per cent in line with the consumption which will be around 12.75 million tonne by FY 12," according to All India Plastics Manufacturers' Association (AIPMA) .

At present, the plastic production as well as the consumption is about eight million tonne. The consumption has grown significantly over the last two decades and India is projected to be number three in plastic usage by 2015. India's plastics processing sector will grow from 69,000 machines to 150,000 machines by the year 2020. India's demand for plastics in irrigation alone is pegged to cross 2.5 million tonnes by 2015. Indian automobile industry is growing at more than 18% p.a. and is hungry for plastics. The plastics processing industry is a source of great potential for global businesses. There is tremendous scope for innovative technological upgradations.

INSTALLED CAPACITY

Product	Installed capacity per hour	No of working hours per day	Capacity per day	Capacity per annum 300 days per annum
CO-EXTRUDED FILM	262.5 Kgs	8	2100 Kgs	630 MTs

PLANT AND MACHINERY

Sl. No	Description	Nos	Rs. lakhs
1	Three layer co-extrusion blown film plant with single screw 47 mm extruder and accessories	1	39.80
2	Corona surface treatment	1	2.70
3	Three/ four colour rotogravure printing machine	1	5.50
4	Slitter cum grinder machine	1	3.80
5	Testing machine		2.20
6	Electricals		6.00
	Total		60.00

MANUFACTURING PROCESS

The plasticised and homogenised thermoplastic material is injected into a locked (clamped) mould with sufficient injection speed and pressure. After the melt is cooled in the mould, it is opened to remove the moulded articles. This is a cyclic process. Automatic injection moulding machine is the basic machinery involved in this project.

RAW MATERIALS

For -630 MTs			
	Qty-MTs	Rate/MT	Value Rs lakhs
LLDPE/LDPE	642.60	83000	533.36
Printing ink			9.00
TOTAL			542.36
Packing materials	630.00	100	0.76

LOCATION LAND AND BUILDING

Built up area-Sq.ft	2500
Rent p.m.-Rs.10 per sq.ft	25000
Advance-10 months. Rs	250000

UTILITIES

Three phase-	KW	110.00
Power charges Rs. lakhs p.a		3.63
Power & fuel		3.63
Water- For process-Litres per day		2000
For human consumption-litres/day		200

MANPOWER

	Nos	Monthly wages	Total
Supervisor	1	8000	8000
Skilled	3	6000	18000
Unskilled	6	4000	24000
Accounts Assistant	1	5000	5000
Sales Executive	1	6000	6000

Security	2	4000	8000
sub total			69000
Add benefits		20%	13800
Total per month			82800
TOTAL PER ANNUM-Rs. lakhs			9.94

SCHEDULE OF IMPLEMENTATION

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

COST OF PRODUCTION AND PROFITABILITY

Assumptions

Installed capacity	630 MT of Co-extruded film per annum
Capacity utilisation	Year-1 -60% Year -2 -70% Year-3 onwards- 80%
Selling price Per MT	Rs.98000 per MT
Raw materials	As per the details given above
Packing materials	As per details given above
Power	Rs.3.63 lakhs per annum at 100%
Wages and salaries	Rs. 9.94 lakhs with increase 5% every year.
Repairs and Maintenance	Rs.0.60 lakh per annum
Depreciation	Written down value method -15 % on machinery
Selling general and administrative expenses	Rs.30000 per month
Interest on Term loan	14% per annum
Interest on working capital	14% per annum
Income tax	34% on profits

LIST OF MACHINERY SUPPLIERS

1. Boolani engineering Corporation, Prabhadevi Industrial estate, 403, Veer savarkar Marg, Mumbai-400 025
2. Windsor India Ltd, 2 J, Century Plaza, Teynampet, Chennai – 600 018.
3. Euro pack Machines India Pvt Ltd, 52 Bindal Industrial
4. Ambica Engineering & Wire Products, L 45, GIDC Estate, Odher, Ahmedabad – 382415,
5. Hind Hydraulics & Engineers, Faridabad, Plot No. 13, Sector 74, Faridabad – 121005.
6. Prasad Groups & Companies, Plot No. 14 – 16 GIDC Industrial Estate, Phase 1 Valva, Ahmedabad – 382445
7. HMT International Ltd,
8. Kolsite MachineFabrik ltd, Vereva desai Road, Mumbai-400 058
9. Textair Plastics & Hydraulics, 18-Ambal Nagar Main Road, Ekkattuthangal-97.
10. Klockner Windsor India Ltd, 2-J Mound Road, Teynampet-18,

LIST OF RAW MATERIAL SUPPLIERS

- Lucky Plastics, 421-c, Sngar Road Gpathy CBE-641006,
Maruthi Plastic, Old – 3 Thirupali ST Sowcarpet- 600 079,
Reliance Industries Ltd A-1 Towers 5th Floor No.89 Dr Radhakrishnan Salai
Mylapore Chennai 600 004.
Shri Swastic Plastics, 57/2, Thirupalli Street – 79,
Abs Plastics Ltd, 51 Gidc Industrial Estate, Nadesari – 391340.
Polychem Ltd, 74 Jamshedji Tata Road, Mumbai – 400 020

FINANCIAL ASPECTS

1. COST OF PROJECT

	[Rs.lakhs]
Land & Building (Advance)	2.50
Plant & Machinery	60.00
Other Misc. assets	1.00
Pre-Operative expenses	4.00
Margin for WC	8.87
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	76.37
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2. MEANS OF FINANCE

Capital	31.37
Term Loan	45.00
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	76.37
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3. COST OF PRODUCTION & PROFITABILITY STATEMENT

	[Rs.lakhs]				
Years	1	2	3	4	5
Installed capacity-MTs	630	630	630	630	630
Utilisation	60%	70%	80%	80%	80%
Production/sales-MTs	378	441	504	504	504

Selling Price-Rs.					
Per MT	98000	98000	98000	98000	98000
Sales Value (Rs.lakhs)	370.44	432.18	493.92	493.92	493.92
Raw Materials	325.41	379.65	433.89	433.89	433.89
Packing Materials	0.45	0.53	0.60	0.60	0.60
Power & fuel	2.18	2.54	2.90	2.90	2.90
Wages & Salaries	9.94	10.43	10.95	11.50	12.08
Repairs & Maintenance	0.60	0.66	0.73	0.80	0.88
Depreciation	9.00	7.65	6.50	5.53	4.70
Cost of Production	347.58	401.46	455.57	455.22	455.05
Selling, Admin, & General exp	3.60	3.78	3.97	4.17	4.38
Interest on Term Loan	6.30	5.51	3.94	2.36	0.79
Interest on Working Capital	4.90	4.90	4.90	4.90	4.90
Total	362.38	415.65	468.38	466.65	465.12
Profit Before Tax	8.06	16.53	25.54	27.27	28.80
Provision for tax	2.74	5.62	8.68	9.27	9.79
Profit After Tax	5.32	10.91	16.86	18.00	19.01
Add:	9.00	7.65	6.50	5.53	4.70
Depreciation					
Cash Accruals	14.32	18.56	23.36	23.53	23.71
Repayment of Term loan	0.00	11.25	11.25	11.25	11.25

4. WORKING CAPITAL:

	Months Consumptions	Values	%	Margin Amount	Bank Finance
Raw Materials	0.50	13.56	25%	3.39	10.17
Consumables	2.00	0.08	25%	0.02	0.06
Finished goods	0.50	14.48	25%	3.62	10.86
Debtors	0.50	15.44	10%	1.54	13.90
Expenses	1.00	0.30	100%	0.30	0.00
		43.86		8.87	34.99

5. PROFITABILITY RATIOS BASED ON 80% UTILISATION

$$\frac{\text{Profit after Tax}}{\text{Sales}} = \frac{16.86}{493.92} = 3\%$$

$$\frac{\text{Profit before Interest and Tax}}{\text{Total Investment}} = \frac{34.38}{111.36} = 31\%$$

$$\frac{\text{Profit after Tax}}{\text{Promoters Capital}} = \frac{16.86}{31.37} = 54\%$$

6. BREAK EVEN LEVEL

Fixed Cost (FC):

[Rs.lakhs]

Wages & Salaries	10.95
Repairs & Maintenance	0.73
Depreciation	6.50
Admin. & General expenses	3.97
Interest on TL	3.94
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	26.09
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Profit Before Tax (P) 25.54

$$\text{BEL} = \frac{\text{FC} \times 100}{\text{FC} + \text{P}} = \frac{26.09}{51.63} \times \frac{80}{100}$$

40% of installed capacity