

Plastic Moulded Luggage

PRODUCT CODE	:	30380100
QUALITY AND STANDARDS	:	As per buyers requirements
PRODUCTION CAPACITY	:	Qty.: (per annum) Nos.
		16" Brief case 27000
		18" Brief case 21000
		20" Brief case 18000
MONTH AND YEAR OF PREPARATION	:	January, 2003
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INTRODUCTION

Plastic luggage's like Brief Cases, Suitcases etc. are manufactured from high-density polyethylene, ABS plastics, polypropylene and glass reinforced plastic etc. Its main application is for string of items while travelling. This type of luggage is tailor-made, sometimes, for different applications i.e. for delicate use like ladies vanity cases, moderate use like ordinary travelling bags or rough use while on tour. New designs and shapes are being constantly developed to facilitate easy handling while travelling which offers increasing durability.

Luggage bags are being developed using new and tougher grades of plastic resins, sometimes reinforced with glass fibre and other fillers, to improve certain specific properties as well as to reduce the cost.

MARKET POTENTIAL

There is a vast market available for luggage and considering the population of our country; there is ample scope for growth of this industry. Tailor-made luggage is available to cater to the needs of different income group's people and for a variety of applications. Use of plastic in luggage industry is ever increasing and it will go on replacing other conventional materials such as wood, ply, metal, leather etc. rapidly. There is a good scope for luggage items in the international market also.

BASIS AND PRESUMPTIONS

1. In the project injection moulding machine having clamping force 350 tonnes is used.
2. The unit will work on single shift basis.

3. The calculations have been carried out on three types of products. Brief cases piece has been taken as below:
 - 16" Brief case– 45 pieces 1 hr. 600 gm
 - 18" Brief case– 35 pieces 1 hr. 700 gm
 - 20" Brief case– 30 pieces 1 hr. 800 gm
4. If necessary other household items can be produced on this machine.
5. Wastage has been considered at a rate of 2%
6. The time period for achieving full/envisaged capacity utilization is three years.
7. The labour wages are considered as per the prevailing rates these may vary from place to place.
8. The margin money is 25% for fixed capital and working capital.
9. Costs in respect of land and building, machinery and equipments, raw materials and selling prices of the finished products etc. are those generally obtained at the time of preparation of the project profile and may vary depending on various factors.
10. The rate of interest has been taken as 14% per annum.

IMPLEMENTATION SCHEDULE

- 1) Six months' period is required for preparation of project report, selection of site and SSI registration etc.

- 2) One year is required for availability of finance/loan, construction of factory shed, machinery procurement, erection and commissioning, trial runs and recruitment of staff and labour, permanent registration etc.

TECHNICAL ASPECTS

Process of Manufacture

The required raw material is fed into the hopper of the injection-moulding machine and heated in the cylinder. The required mould is kept in the locking unit. The plastic melt is stored in front of the screw in a small adjustable chamber. The predetermined volume of plastic melt is injected into the closed mould at a very high pressure by forward motion of screw. After 5 to 15 seconds, the solidification of plastic fed melt being in the mould (Which is constantly cooled by cold water circulation), the injected material is kept under pressure for sometime to ensure adequate filling of the mould and to prevent back-flow of material.

Further time is allowed to lapse for cooling and material is ejected from the mould when it becomes rigid by air stream or by mechanical ejectors.

After the two parts of the item are ready, metallic fittings, locks, handles etc. are fixed as per requirement of the luggage.

Production Capacity

Quantity: 66000 pieces of brief cases/suit cases per month on single shift of 16", 18", 20" size.

FINANCIAL ASPECTS

A. Fixed Capital

(i) Land and Building

	Area sq. mtrs.	Rate Rs./ Sq. mtr.	Value (Rs.)
Land	500	500	2,50,000
Built-up area Including store	250	2000	5,00,000
Total cost of land and building			
	Total		7,50,000

(ii) Machinery and Equipments

Description	Qty. (Nos.)	Value (Rs.)
<i>(a) Production Unit</i>		
Injection Moulding Machine (Mould Clamping force 350 Tonnes Cap.)	1	44,75,000
Scrap Grinder	1	50,000
Dry Colour Mixer	1	30,000
Air Compressor	1	15,000
Mould lifting equipment	1	15,000
Water Pump and Tank		15,000
Set of Moulds		8,00,000
Misc. tools and equipments		20,000
<i>(b) Testing Equipments</i>		
		20,000
(c) Electrification and installation Charges @ 10% of cost of Machinery and equipment		5,44,000
(d) Total cost of machinery and equipment		59,84,000
(e) Cost of office equipment/ working table etc.		26,000
Total		60,10,000

(iii) Pre-operative Expenses (per month) (Rs.)

(Project cost, non-refundable deposits)	10,000
Total fixed capital (i+ii+iii)	67,70,000

B. Working Capital (per month)

(i) Personnel

Designation	Nos.	Salary (Rs.)	Total (Rs.)
Production In charge	1	10,000	10,000
Machine Operator	1	4,000	4,000
Skilled Workers	1	3,000	3,000
Unskilled workers	2	1,500	3,000
Clerk-cum-Typist	1	2,000	2,000
Peon/Watchmen	2	1,500	3,000
Salesman	2	5,000	10,000
Total			35,000
<i>Perquisites @ 15% of Salaries</i>			5,250
Total			40,250
Or say			40,000

(ii) Raw Materials Including Packaging Requirement (per month)

Particulars	Qty. Kgs.	Rate (Rs.)/Kgs.	Value (Rs.)
HDPE/PP	3800	50	1,90,000
Metallic fixtures Locks, 125/piece			
Rexene @ for 5600 including wastage			7,00,000
Total			8,90,000

(iii) Utilities (per month) (Rs.)

Power total connected load (100 kW)	30,000
Water	2,000

(iv) Other Contingent Expenses (per month) (Rs.)

Postage and Stationery	1,000
Telephone	2,000
Advertisement and Publicity	1,000
Transport charges	1,000
Consumable stores	1,000
Repairs and Maintenance	1,000
Miscellaneous Expenditure	1,000
Total	8,000

(v) Total Recurring Expenditure (per month) (Rs.)

I. Staff and Labour	40,000
II. Raw Materials	8,90,000

III. Utilities	32,000
IV. Other Contingent Expenses	8,000
Total	9,70,000

(vi) Total Working Capital Rs. 29,10,000
(on 3 months basis)

C. Total Capital Investment

(i) Fixed	67,70,000
(ii) Working Capital	29,10,000
Total	96,80,000

Machinery Utilization

The bottleneck equipment for the manufacture of plastic moulded luggage is injection-moulding machine. The capacity of the machine is 66,000 Nos. of briefcases per annum on single shift basis.

FINANCIAL ANALYSIS

1. Cost of Production (per year)		(Rs.)
Total recurring cost	1,16,40,000	
Depreciation on building @5%	25,000	
Depreciation on machineries @10%	5,98,000	
Depreciation on office equipment @ 20%	5,200	
Interest on total investment @ 14%	13,55,200	
Total	1,36,23,8000	
Or say	1,36,24,0000	

2. Turnover (per year)

Item	Qty.	Rate (Rs.)	Values (Rs.)
By Sale of 16" Brief Case	27000	225	60,75,000
By Sale of 18" Brief Case	21000	250	52,50,000
By Sale of 20" Brief Case	18000	275	49,50,000
Total			1,62,75,000

3. Net Profit (per year)

$$\begin{aligned} \text{Profit} &= \text{Turnover} - \text{Cost of Production} \\ &= \text{Rs. } 1,62,75,000 - 1,36,24,000 \\ &= \text{Rs. } 26,51,000 \end{aligned}$$

4. Net Profit Ratio

$$\begin{aligned} &= \frac{\text{Net Profit Per year} \times 100}{\text{Turn Over}} \\ &= \frac{26,51,000 \times 100}{1,62,75,000} \\ &= 16.28\% \end{aligned}$$

5. Rate of return

$$\begin{aligned} &= \frac{\text{Net Profit Per year} \times 100}{\text{Total investment}} \\ &= \frac{26,51,000 \times 100}{96,80,000} \\ &= 27.38\% \end{aligned}$$

(6) Break-even Point (% of Total Production Envisaged)

(i) Fixed Cost		(Rs.)
a) Depreciation on machinery and equipment	5,98,400	
b) Depreciation on office equipment	5,200	
c) Depreciation on building	25,000	
c) Interest on total capital investment	13,55,200	
d) 40% of salary and wages	1,92,000	
e) 40% of other contingent expenses excluding Rent and insurance	38,400	
Total	22,14,200	
Or say	22,14,000	

(ii) Net Profit (per year)

$$\begin{aligned} \text{B.E.P.} &= \frac{\text{F.C.} \times 100}{\text{F.C.} + \text{Profit}} \\ &= \frac{22,14,000 \times 100}{22,14,000 + 26,51,000} \\ &= \frac{22,14,000 \times 100}{48,65,000} \\ &= 45.50\% \end{aligned}$$

Addresses of Machinery and Equipment Suppliers

1. M/s. DGP Windsor India Ltd.
E-6, U2 Road,
Wogle Industrial Estate,
Thane-400604
2. M/s. Sunanda Industrial machinery, A Division of Mafatlal Industries Ltd.
109, Standard House,
83, Maharshi Karup Road,
Mumbai
3. M/s. Indian Hydraulic Inds. Pvt. Ltd.
70, Shivaji Marg Indl. Area,
New Delhi-15
4. M/s. Ferromatik Milacron India Ltd.
Plot No. 92, Phase-1 G.I.D.C Vatva,
Ahmedabad-382445.

Addresses of Raw Material Suppliers

1. M/s. Indian Petrochemicals Corporation Ltd.
P.O. Petrochemicals Township,
Vadodara-391346,
(Gujarat.)
2. M/s. Reliance Industries Ltd.
Swastik Mill Compound,
V.N.Purav Marg,
Chembur,
Mumbai-400 071.
3. Gas Authority of India Ltd.
16, Bhikaji Cama Place,
R. K Puram,
New Delhi-110066.