

PROJECT PROFILE

on

Manufacturing of Staple Pin

(2019-20)



**Prepared by
Mechanical Division**

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PROJECT PROFILE – STAPLE PIN

A. INTRODUCTION:

The term "stapling" is used for both fastening with straight or bent legs; however, when differentiating between the two, the term "tacking" is used for straight-leg stapling, while the term "stapling" is used for bent-leg stapling when being contrasted with "tacking". The legs of a staple can be allowed to protrude out the back side and folded over to provide greater binding than the friction of straight legs. Modern staples for paper staplers are made from zinc-plated steel wires glued together and bent to form a long strip of staples. Staple strips are commonly available as "full strips" with 210 staples per strip. More expensive stainless steel staples which do not rust are also available. In India, manufacturing has been limited to mostly copper coated staples, which unfortunately rust fast. Also some white staples made from substandard wires have been in the market. Internationally, staples are often described as X/Y (e.g. 24/6 or 26/6), where the first number X is the gauge of the wire, and the second number Y is the length of the shank (leg) in millimeters. Some exceptions to this rule include staple sizes like No. 10. Common sizes for the home and office include: 26/6, 24/6, 24/8, 13/6, 13/8 and No. 10 for mini staplers. Common sizes for heavy duty staplers include: 23/8, 23/12, 23/15, 23/20, 23/24, 13/10, and 13/14.

Market Potential

Staples are commonly considered to be a neat and efficient method of binding paperwork such as letters and documents in all areas of office business. This is predominantly because of the low cost and high availability of the staple, and because its small size does not detract from the content of the document.

The large staples found on corrugated cardboard boxes have folded legs, but they are applied from the outside and do not use an anvil; jaw-like appendages push through the cardboard alongside the legs and bend them from the outside. It is apparent that the staple pins are widely used in office business and hence can be sold easily in domestic market.

B. Technical Aspects

Process of manufacture

The process of making staple pins has been simplified with introduction of sophisticated fully Automatic Staple Pin Making Machines. The preformed round wire is fed to the machine which flattens it and produces the necessary staple pins in pre-determined lengths of 50 staple pins in each length. The formation of this length is assisted by the use of a special staple pin adhesive, also developed in India. The staple pin lengths are packed suitably with each packet containing 1000 pins. 20 of these packets are packed in a box and 40 of these packets are packed in cardboard carton.

2. Quality control and standards

The pins should be manufactured as per relevant Indian specification IS 4224:1972.

3. POLLUTION CONTROL:

These types of units are is not producing any effluents or any other polluting materials. Therefore pollution control measures are not taken into account.

4. ENERGY CONSERVATION NEEDS:

General awareness is to be created for economic use of electricity at all points. Capacitors may be used at suitable points for energy conservation. All machinery and equipment should be properly lubricated and maintained so that they consume less amount of power in use.

C. Production Target:

Annual Production of 700 cartons of staple pins

D. BASIS AND PRESUMPTION:

- (i) The unit is expected to work at 75% efficiency on 8 hrs. Single shift basis for full capacity utilizations.
- (ii) The full capacity utilisation will be achieved in three years. 70% in the first year followed by 85% in the next year and the 100% in subsequent years.

- (iii) Labour and wages mentioned as per prescribed minimum wages and the proprietor is considered as a manager.
- (iv) Interest considered @ 12% in the project provide for recurring and non-recurring investment.
- (v) The cost of land, construction charges, cost of machinery and equipment, raw materials and consumables other expenses etc. initiated in the profile are based on the prices prevailing at the time of project preparation. Therefore, they are subject to necessary changes from time to time based on local conditions.

E. IMPLEMENTATION SCHEDULE:

Activity	Period Starting to Completion	
Survey for collection of data in respect of demand, raw material, including power and fuel availability of technology, pollution control	0	1 Month
Arrangement for margin money	0	1st Months
Preparation of project document and registration and other clearance	1st	2nd Months
Financial assistance	2nd	3rd Months
Selection of site and development of land	3rd	4th months
Make shift office	3rd	4th Months
Purchasing of machines & recruitment of staff	4th	5th Months
Construction of building & selection of machinery	5th	6th Months
Installation of machinery & purchase of raw materials	6th	7th Months
Trial production	7th	8th Months

F FINANCIAL ASPECT:

(i) Land & Building:

Land 250 sq.mtrs. @ Rs.60/- per sq.mtr.-- on rent = 15,000/- per month

(ii) Fixed Capital on Plant & Machinery:

Sl.No.	Description	Ind /Imported	Qty. (Nos.)	Value (Rs.)
1.	Automatic staple pin making machines with electricals	Ind.	6	17,70,000
2	Double ended Bench grinder cap 8" wheel	Ind.	2	60,000
3.	Common tools and measuring instruments	Ind.	1	30,000
4.	Spares and fixtures	Ind.	1	10,000
5.	Total			18,70,000
6.	Office furniture, almirah, office instruments etc.		L.S.	40,000
7.	Electrification & installation charges @ 10% of machinery cost			187000
8.	Total Plant & M/c Cost			20,97,000

(iii) Pre-operative expenses @ 2.0 % ----- Rs. 41,940

TOTAL FIXED CAPITAL (i+ii+iii) ----- Rs. 21,38,940

WORKING CAPITAL (PERMONTH):

I. Staff & Labour Expenses:

(a) Administrative:

Sl.No.	Description	Nos.	Rate (Rs.)	Amount (Rs.)
1	Manager	1	14,000	14,000
2	Sales & Marketing Staff	1	7,000	7,000
3	Production Supervisor	1	8,500	8,500
4	Clerk/Accountant/Store keeper	1	7,000	7,000
5	Peon/Chowkidar	1	3,000	3,000
6	Skilled Workers	6	7,000	42,000
7	Semi skilled Workers	2	5,000	10,000
8	Helpers	1	3,000	3,000
9	Total			94,500
10	Perquisite @ 15% of salary			14,175
11	Grand Total			1,08,675

II. Raw Materials (per month):

SI.No.	Description	Qty.	Value (Rs.)
1.	Preformed wire (round wire)@ Rs. 70 per kg.	250 Kg	17,500
2.	Adhesive @ Rs. 250 per ltrs.	110 Ltrs	27,500
3.	Packing material/boxes	LS	25,000
	Total		70,000

III. Utilities (per month):

	Units	Rs.
Power	1,200	4,800
Water L.S	L.S	1,000

IV. Other Contingent expenses (P.M.):

SI.No.	Description	Values (Rs.)
1.	Rent	15,000
2.	Postage and stationery	1,000
3.	Travelling and transport	5,000
4.	Repairs and maintenance	3,000
5.	Advertisement and publicity	3,000
6.	Insurance	1,000
7.	Consumable stores	5,000
8.	Telephone charges	2,000
9.	Selling expenses	7,000
10.	Misc. expenditure	3,000
11.	Total	45,000

V. Total recurring expenditure (per month):

1.	Staff and labour	1,08,675
2.	Raw material	70,000
3.	Utilities	5,800
4.	Other contingent expenses	45,000
	Total	2,29,475

VI. Total working capital (2 months basis) Rs. 4,58,950

2. Total capital investment:

1.	Machinery and equipment	21,38,940
2.	Working Capital (for 2 Months)	4,58,950
	Total	25,97,890

3. Financial Analysis:

a. Cost of Production:

1.	Total recurring cost per year	27,53,700
2.	Depreciation on plant and machinery @ 10%	1,87,000
3.	Depreciation on Dies, Jigs & Fixtures @ 20%	8,000
4.	Depreciation on office equipments @ 20%	8,000
5.	Interest on total capital investment @ 12%	3,11,747
	Total	32,68,447

b. Total Sales (per year):

Annual Production of 700 No's of cartons No.10 staple pin

By sale of 700 cartons @ Rs. 6,000/ carton

Total Sales per annum = Rs. 42,00,000

c. Net Profit (per year) (Before Tax)

Profit = Total sales – cost of production

= 42,00,000 - 32,68,447

= Rs. 9,31,553

d. Profit Ratio:= Net profit x 100 / Total turn over

= 9,31,553 x 100 / 42,00,000

= 22.18 %

e. Rate of Return:= Net profit x 100 / Total investment

= 9,31,553 x 100 / 25,97,890

= 35.86 %

**f. Break Even Point:
Fixed cost (per year):**

1.	Rent	1,80,000
2.	Interest	3,11,747
3.	Depreciation of machinery & equipments, tools @ 10%	1,87,000
4.	Depreciation on Dies, Jigs & Fixtures @ 20%	8,000
5.	Depreciation of office equipment @ 20%	8,000
6.	40% of salaries and wages	5,21,640
7.	40% of other expenses including utilities and excluding rent	1,71,840
	Total fixed cost (FC)	Rs. 13,88,226

$$\text{BEP} = \text{FC} \times 100 / \text{FC} + \text{Profit}$$

$$= 13,88,226 \times 100 / (13,88,226 + 9,31,553) = 59.84 \%$$

ADDRESSES OF MACHINERY & EQUIPMENT SUPPLIERS:

1. ABM Fasteners (India) Pvt Ltd
79A, Pocket GG-1, Vikas Puri, New Delhi - 110 018, India
2. S. B. Machine Tools
3/4, Lane No.-11, Anand Parbat Indl. Area, New Rohtak Road, New Delhi - 110005, India
3. Bumra Industrial Corporation
G.T. Road, Putlighar, Amritsar - 143001, Punjab, India
4. Allied Machinery Corpn.
9, Gokal Ka Bagh, 100 Ft. Road, East Mohan Nagar, Amritsar - 143001, Punjab, India

NAMES AND ADDRESSES OF RAW MATERIALS SUPPLIERS:

Raw material can be purchased from the local suppliers available in the market.