PUSH PINS, GEM CLIPS, STAPLE PINS & SAFETY PINS

1. INTRODUCTION:

Staple pins and Gem clips are most commonly used office stationery items. While Safety pins are essentially the part of clothing and fashion accessory. All of these products are made from small diameter wires in automatic machines specially designed to produce them.

These are used in all offices and establishments and all are having recurring demand for these products. The demand is always growing with the increase in number of offices and industrial establishments.

All the products are made by automatic machines specially made for the purpose.

2. PRODUCT & ITS APPLICATION:

Staple pins for stationary and office use are manufactured out of 0.4 mm to 1.8 mm dia and shape of mild steel with hardness and coating viz. Galvanized copper or chrome coating as per requirements. Staples are widely used to bunch together the papers with help of Stapler machine, which forces pins to pierce the papers and ends are bent to hold them together securely.

Gem clips are used to bunch together between the clip due to its spring action. The clip holds them in bunch but does not damage them. These are made from 0.4 mm to 2 mm mild steel, galvanized chrome plated or PVC coated wires.

Safety pins and normal push pins have sharp end to pierce the papers or cloth or any such sheet. Safety pins have a safety head to hold and cover the sharp end to prevent accidental injury. These products have multiple uses other than offices viz in domestic or personal use.

3. DESIRED QUALIFICATIONS FOR PROMOTER:

Any graduate can take up this project as mostly these products are made in automatic machines.

4. MARKET POTENTIAL AND MARKETING ISSUES. IF ANY:

The number of commercial organizations and industries are increasing year after year. The globalization and liberalization of industry and trade have also given birth to various commercial establishments and this provides ample scope for units manufacturing office stationery items. Since these pins and clips are having wide use in offices, and they are meant normally for a single use, there is huge potential for a quality producer. These pins find wide application to keep together sheets of paper, cheque, common known bills, album photos, bags and government files, in financial institutions, other commercial establishments even restaurants, traders' offices, garment industry, leather industry, rubber industry and any shop delivering the materials in packets and so on. The growth of these items will be consistent.

The most important issue for the entrepreneur to ensure good quality by selecting proper quality of wires and selecting proper machine that can give proper quality of finished products.

5. RAW MATERIAL REQUIREMENTS:

The main raw material is different gauges and types of hard drawn wires with hardness and tensile strength suitable for each of products. These wires of good quality have good tensile strength ranging from 700 to 1500 N/mm2 and the specification relates to American standard SAE 1018 -1065. Staple pin will also need glue that holds pins together in a staple strip. The safety pins will require strips for the heads. The pickling and nickel plating and galvanizing materials are available in market.

6. MANUFACTURING PROCESS:

Staple pins for stationary and office use are manufactured out of 0.4 mm to 0. 8 mm galvanized wires of Mild steel with galvanizing. The wires are made flat /square, cut, bent and glued together in an automatic machine. Now a days Staple pins made from metal strips of varying thickness for upholstery and wooden furniture work. These are made in automated machines suitable to process strips. The pins should be manufactured as per relevant Indian specification IS 4224:1972.

Gem clips and push pins are having sharpened ends and manufactured in automatic machines. The wires are pre-processed as below --

Straightening and cutting hard drawn wires to required lengths in the machine
Pickling and cleaning the pins in a plastic container
Plating with Nickel in plating equipment
Drying the plated pins in a drying drum
Feeding of Hard drawn plated bright wire to automatic pin making machine
Packing in cartons and dispatching

These pins made from hard drawn MS or stainless steel wires of 18 to 22 gauge wires. These wires have spring effect. The wires are processed by automatic machine where wire is straightened and then given consecutive bending at specific lengths to get the final U or Gem clip. Some pins are manufactured from ms wires coated with PVC coating with different colors.

Push pins are cut to size and sharpened at both ends in an automate. The sharpened wires after pickling and plating, are then fed to another automate, where it is cut in to two and the ends are head is cold formed. Some of the wires may be given plastic head by dipping the end in molten plastic and round plastic beads are formed to give and final paper pin is obtained.

The safety pins are a special design and is made in automate machine where it is cut and sharpened. The caps are made from strips in an automate where strip is punched and deep

drawn in a die to get cap sleeve. These wires and sleeves are then fed in to another automate where they are wires are bent and the cap sleeve is pressed to get final product in one go.

Staple Pins when made the glued strips of 50 staple pins are formed. These strips are then packed in a packet each containing 20 Strips. These packets are boxed in to carton each containing 50/100 /200 packets for dispatch. Gem clips, push pins and safety pins are available in Boxes containing 20/50/100 clips.

7. MANPOWER REQUIREMENT:

The unit shall require highly skilled service persons. The unit can start from 8 employees initially and increase to 23 or more depending on business volume.

Sr No	Type of Employees	Monthly Salary	No of Employees				
			Year 1	Year 2	Year 3	Year 4	Year 5
1	Skilled Operators	18000	4	4	5	6	6
2	Semi-Skilled/ Helpers	7000	6	8	10	12	12
3	Supervisor/ Manager	30000	1	1	1	1	1
4	Accounts/ Marketing	16000	1	2	2	2	2
5	Other Staff	7000	4	6	8	8	8
	TOTAL		16	21	26	29	29

8. IMPLEMENTATION SCHEDULE:

The unit can be implemented within 6 months from the serious initiation of project work.

Sr No	Activities	Time Required in Months
1	Acquisition of Premises	2
2	Construction (if Applicable)	2
3	Procurement and Installation of Plant and Machinery	2
4	Arrangement of Finance	2
5	Manpower Recruitment and start up	2
	Total Time Required (Activities run concurrently)	6

9. COST OF PROJECT:

The unit will require total project cost of Rs 62.96 lakhs as shown below:

Sr No	Particulars	In Lakhs
1	Land	0.00
2	Building	0.00
3	Plant and Machinery	46.00
4	Fixtures and Electrical Installation	2.55
5	Other Assets/ Preliminary and Preoperative Expenses	2.50
6	Margin for working Capital	11.91
	TOTAL PROJECT COST	62.96

10. MEANS OF FINANCE:

The project will require promoter to invest about Rs 24.67 lakhs and seek bank loans of Rs 38.29 lakhs based on 70% loan on fixed assets.

Sr No	Particulars	In Lakhs
1	Promoters Contribution	24.67
2	Loan Finance	38.29
	TOTAL:	62.96

11. WORKING CAPITAL REQUIREMENTS:

Working capital requirements are calculated as below:

Sr No	Particulars	Gross Amount	Margin %	Margin Amount	Bank Finance
1	Inventories	4.33	40	1.73	2.60
2	Receivables	9.45	50	4.72	4.72
3	Overheads	3.73	100	3.73	0.00
4	Creditors	4.33	40	1.73	2.60
	TOTAL	21.82		11.91	9.91

12. LIST OF MACHINERY REQUIRED:

Sr No	Particulars	UOM	Quantity	Rate	Total Value
	Main Machines/ Equipment				
1	Staple Wire flattening machine	Nos	2	200000	400000
2	Staple Wire gluing machine	Nos	1	180000	180000
3	Staple forming Automate	Nos	2	250000	500000
4	Safety pin Wire cutting machine	Nos	1	150000	150000
5	Wire End Sharpening machine	Nos	3	180000	540000
6	Safety Pin Cap Forming machine	Nos	1	200000	200000
7	Safety Pin assembly machine	Nos	1	100000	100000
8	Gem Clip – Forming Automate	Nos	2	250000	500000
9	Push Pin Cutting and heading machine	Nos	1	250000	250000
10	Pickling bath	Nos	1	350000	350000
11	Wire galvanizing /plating Unit	Nos	2	200000	400000
12	Packaging and Boxing machine – Automate	Nos	4	150000	600000
	Subtotal:				4170000
	Tools and Ancillaries				
1	Automate Tooling and Dies	LS	1	350000	350000
2	Misc. tools etc.	LS	1	80000	80000
	Subtotal:				430000
	Fixtures and Elect Installation				
	Storage racks and trolleys	LS	1	75000	75000
	Other Furniture	LS	1	40000	40000
	Telephones/ Computer	LS	1	40000	40000
	Electrical Installation	LS	1	100000	100000
	Subtotal:				255000
	Other Assets/ Preliminary and Preoperative Expenses	LS	1	250000	250000
	TOTAL PLANT MACHINERY COST				5105000

13. PROFITABILITY CALCULATIONS:

Sr No	Particulars	UOM	Year Wise estimates				
			Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
1	Capacity Utilization	%	40	50	60	75	85
2	Sales	Rs Lakhs	56.68	70.85	85.03	106.28	120.45
3	Raw Materials & Other Direct Inputs	Rs Lakhs	25.95	32.44	38.93	48.66	55.14
4	Gross Margin	Rs Lakhs	30.73	38.42	46.10	57.63	65.31
5	Overheads Except Interest	Rs Lakhs	17.00	17.00	17.00	17.00	17.00
6	Interest	Rs Lakhs	5.36	5.36	5.36	5.36	5.36
7	Depreciation	Rs Lakhs	5.11	5.11	5.11	5.11	5.11
8	Net Profit Before Tax	Rs Lakhs	3.27	10.95	18.64	30.16	37.85

14. BREAK EVEN ANALYSIS

The project is can reach break-even capacity at 35.74 % of the installed capacity as depicted here below:

Sr No	Particulars	UOM	Value
1	Sales at Full Capacity	Rs Lakhs	141.71
2	Variable Costs	Rs Lakhs	64.88
3	Fixed Cost incl. Interest	Rs Lakhs	27.46
4	Break Even Capacity	% of Inst Capacity	35.74