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Automatic Blister Defoiling Machine

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ABSTRACT :

Blister packages for pharmaceuticals consist of two basic packaging components leading material and forming films. The leading material consist of a cover material made by aluminum that has a heat seal lacquer on own side to acts as a sealing agent, and another side coated with the sealing agent faces products and forming films with plastic material. At the time of packing lower cover not match with the upper cover & printing mistake on the cover. So reject all tablets in the cover that tablets can be remove by blister defoiling machine reduce the time and effort.

In pharmaceutical industry different product having different size and shape, according to that the pack size of blister is varying. Some strip are rejected while printing mistake and packing mistake, So this strips are not through it must defoiled and come to back in line. For this defoiling purpose the manual defoiling is not corrects solution. So we are going to make ***Defoiling Machine*** *is used for defoiled the tablets and capsules from the blister.*

INTRODUCTION

The Blister Package:

Different product having different size and shape, according to that the pack size of blister is varying. When the batch start it is necessary to check the set the packaging machine according to pack size. While setting this machine many strips are carried out as the rejected strips. Some strip are rejected while printing mistake and packaging mistake. So this strips are not through it must defoiled and come to back in line. For this defoiling purpose the manual defoiling is not a correct solution. So defoiling machine is used for defoiling the tablets and capsules from the blister.

Blister packages for pharmaceuticals consist of two basic packaging. Component lading materials and forming films. The lading materials consist of a supporting materials, e.g. aluminum that has a heat seal lacquer on own sides to act as a sealing agent, and on the other side an assortment of other layers depending on the end requirements of the blister package (tamper-evident, child resistance, or simple unit does delivery). The side coated with the sealing agent faces products and forming films. The forming film can be a monolayer sheet of pvc or a composite of other materials or coating to increase the water vapor barrier effect. The forming film of composite is the packaging component that receives the dosage form in deep-dram pockets. Plastic forming film such as PVC, polypropylene (PP)and polyester (PTE) can be Thermoformed, but other formable structure containing aluminum and cold light resistance is required, light-protective or opaque forming films can be employed.

Rigid PVC is currently the most widely used forming film because of its ideal thermoforming characteristics. A typical thickness before thermoforming is 250 micrometer (10mil).PVC does not provide a good barrier for moisture-sensitive product. When better barrier properties are required in a thermoform able blister. PVC is laminated or coated with other materials. Because of environmental issues, other materials such as PP completely for blister usage with PVC. In the medical device industry it has been completely replaced by materials such as PET.

There has been a considerable effort to replace PVC with PP as a support material for blister packaging its moisture barrier properties are comparable to PVDC-coated PVC in some cases. However, the processing properties of PP pose a problem.

The narrow temperature range required for thermoforming PP and the temperature of the subsequent cooling process must be precisely controlled. PP packages are not as rigid as those made from PVC and PVC composites is not as problematic.

PET competes effectively with PVC medical packaging because of its strength and superior resistance to sterilizing effect. However, it is poor moisture – vapor barrier and its enhancement by PVDC are not viable because Of environmental concerns about plastics that contain chlorine. Replacing PVC with PP allows compliance with environmental standards in some pharmaceuticals markets. This material is cold from instead of being thermoformed. Such packages required more packaging materials than thermoplastic films for the packaging of the same number and same size of tablets or capsules. These coating must precisely match chemically the respective forming film (PVC, PP, or PET), a permanent sealing strength of the blister must fall within predetermined tolerances for the package to the functional.

HEADINGS

1.Introduction

Different product having different size and shape, according to that the pack size of blister is varying. When the batch start it

is necessary to check the set the packaging machine according to pack size. While setting this machine many strips are carried out as the rejected strips. Some strip are rejected while printing mistake and packaging mistake. So this strips are not through it must defoiled and come to back in line. For this defoiling purpose the manual defoiling is not a correct solution. So defoiling machine is used for defoiling the tablets and capsules from the blister.
Package access can be varied through selection of various lading structure. The use of simple hard of soft tempered foils permits the classical push through feature of blister packages. When paper is laminated on t the aluminum, the product is accessed by peeling of the lading materials. For child resistance, PTE is added to the paper-foil lamination. Child resistance is achieved by peeling of the leading prior to pushing out the dosage from.

FIGURES AND TABLES:
TABLES:
COSTING:

COST OF MATERIAL

1) TOTAL COST OF MATERIAL:

Part Name	Material	Wt in kg	Rate / kg	Total Rate
Upper plate	M.S	3	60	180
Shaft	M.S	4	60	240
Supporting frame	M.S	10	60	600
			TOTAL	**1020/-**

TOTAL COST OF MATERIAL = 1020/-

2) COST OF MACHINENING:

Machine Name	Using Time (min)	Rate /hr	Total Rate Rs/-
Lath m/c	90	500	750
Power Hacksaw	165	200	400
Welding	130	400	800
Grinding	20	100	50
Drilling	45	200	100
		TOTAL	**2100/-**

TOTAL COST OF MACHINENING = 2100/-

COST OF STANDARD PART :

Sr.No.	name	Qty.	rate	Total rate
1	PADESTAL BEARING	4	200	800
2	RUBBER ROLLER	1	200	200
3	GEARED MOTOR	1	600	600
4	TRANSFORMER	1	700	700

5	MOTOR PULLEY	1	60	60
6	SHAFT PULLEY	1	100	100
7	BELT	1	30	30
8	RUBBER FOUNDATION	4	20	80
9	NUT & BOLT	10	10	100
TOTAL				**2670/-**

COST OF STD PART =2670/-
COST OF TRANSPORTATION & OVERHEAD = 150 / -

COST OF PROJECT =
Cost of material + Cost of machinating + Cost of STD part + Cost of transportation & overhead
= 1020 + 2100 + 2670 + 150
= 5940/-Rs.

FIGURE:

CONCLUSION

It gives us immense pleasure to have completed our project Semi Automatic Defoiling Machine as per project analysis and time estimate that is in 5 months.

Our project Semi Automatic Defoiling Machine was designed on experimental basic and so adopted and chooses all channels that assure quality. After the successful completion of the complete model it is now for sure that the model can will be

employed on large scale with machine increase in cost of around Rs.6000/- of semi Automatic Defoiling Machine. The present that we have developed is capable of overcoming all the drawbacks of previous and in addition will provide extra utilities such as better space utilization, remote placement of semi Automatic Defoiling Machine, added luxury, etc.

Another noticeable aspect is that the maintenance is the least. The lubrication of joint is eliminated.

Further modifications that can be carried out are;

- Effort required for the Semi Automatic Defoiling Machine is very less.
- Time: Time required for semi Automatic Defoiling Machine is less.
- However cost of this modification should also be considered.
- Upper shaft lifting can be done by hydraulic system.
- Variable speed changes done easily so automatically production rate changes.

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