

PRO

PREPARED BY		
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REVIEWED BY STRIDES PHARMA		
APPROVED BY STRIDES PHARMA		
Assessment reference:	16614	Number of operatives:
Type of machine:	Sachet Cartoning Machine	Number of shifts per week:
Machine location:	USA	Usage (hours per week):
Machine description:	Sachet Cartoning Machine	Operating manuals:
Machine manufacturer:	BAR	SOP's
Machine model:	p780	Operatives' training record:
Machine serial number:		Warning signs:
Modifications from 'as-supplied':	None	Raw materials:
Energy sources:	Electrical Power and Compressed Air	Maintenance manual:
Energy source ratings:	Electrical - 3phase, 480V 60Hz Pneumatic - Air @6bar.	Maintenance training record:
Safety measures:	(eg. PLd safety architecture)	Access by untrained visitors:
Assessment carried out by:	OB, RB	
Assessment date:	08.01.2024	
Assessment reviewed by:		
Assessment review date:		
Version:	1.0	

RML Assumptions: Machine has no electronic guarding at all at initial assessment, frame is present.

Keywords: See "Example Keywords" sheet for further keywords

LO (Likelihood of Occurrence)		
0.033	Almost impossible	Only in extreme circumstances
1	Highly unlikely	Though conceivable
1.5	Unlikely	But could occur
2	Possible	But unusual
5	Even chance	Could happen
8	Probable	Not surprising
10	Likely	To be expected
15	Certain	No doubt

FE (Frequency of Exposure)	
0.5	Annually
1	Monthly
1.5	Weekly
2.5	Daily
4	Hourly
5	Constantly

DPH (Degree of Possible Harm)	
0.1	Scratch or bruise
0.5	Laceration or mild ill-effect
2	Break of minor bone or minor illness (temporary)
4	Break of major bone or major illness (temporary)
6	Loss of one limb, eye, hearing (permanent)
10	Loss of two limbs or eyes (permanent)
15	Fatality

NP (Number of Persons at risk)	
1	1-2 persons
2	3-7 persons
4	8-15 persons
8	16-50 persons
12	50+ persons

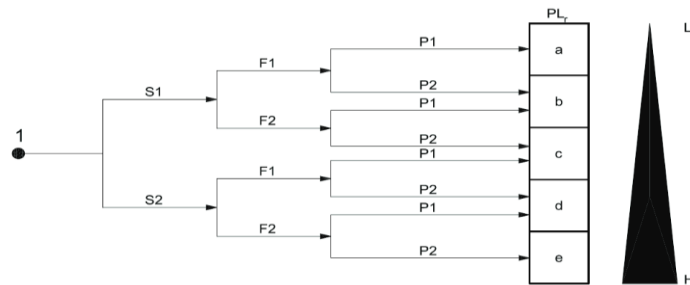
No.	Assembly	Machine Location	Type of Hazard	Potential consequences
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No.	Assembly	Machine Location	Type of Hazard	Potential consequences
3	Camera / Scanner Assembly	Camera / Scanner Assembly	Radiation hazards (Optical radiation (infrared, visible high intensity lights))	acute radiation syndrome ("radiation sickness")
			Electric Shock/Fire Hazard	1.Serious injury or death may occur. 2.If Camera fails, the Robot will not recognize the Sachets

TOCOL APPROVAL

DESIGNATION	SIGNATURE AND DATE
Automation	
DESIGNATION	SIGNATURE AND DATE
Automation	
Design	
DESIGNATION	SIGNATURE AND DATE
DESIGNATION	SIGNATURE AND DATE

1
Supplied
As required, per post assembly Hazop.
As required, per post assembly Hazop.
Supplied
Operators & maintenance to be trained upon installation
Prohibited



Key

- 1 starting point for evaluation of safety function's contribution to risk reduction
- L low contribution to risk reduction
- H high contribution to risk reduction
- PL_r required performance level

Risk parameters:

- S severity of injury
- S1 slight (normally reversible injury)
- S2 serious (normally irreversible injury or death)
- F frequency and/or exposure to hazard
- F1 seldom-to-less-often and/or exposure time is short
- F2 frequent-to-continuous and/or exposure time is long
- P possibility of avoiding hazard or limiting harm
- P1 possible under specific conditions
- P2 scarcely possible

HRN	Risk
0-5	Negligible
5-50	Low, significant
50-500	High
Over 500	Unacceptable

HRN = LO x FE x DPH x NP

(k)

Comments	Initial assessment						Action required	Re-assessment after taking action				
	LO	FE	DPH	NP	HRN	Risk level		LO	FE	DPH	NP	HRN

Comments	Initial assessment						Action required	Re-assessment after taking action				
	LO	FE	DPH	NP	HRN	Risk level		LO	FE	DPH	NP	HRN
<p>Hazards - Damage to eyes Why is the hazard there - Continuously Eye contact with the camera lights What drives the hazard - Camera Light. How could harm be caused - Operator directly contact with camera . Why would the hazard occur - Operator intervention or inspection around the conveyor Potential occurrence of hazard - Possible Possible harm -acute radiation syndrome</p>	2	4	2	1	16	Low, significant	Operator / Maintenance Staff Awareness Warning Signs	2	4	2	1	16
<p>Hazards - Electric Shock Why is the hazard there - Use of Unapproved Power Supplies What drives the hazard - Camera/Scanner. How could harm be caused - Operator directly contact with camera . Why would the hazard occur - Operator intervention or inspection around the conveyor Potential occurrence of hazard - unlikely Possible harm -Serious injury or death may occur.</p>	1.5	1	0.5	1	16	Low, significant	Maintain Regular Maintenance	1.5	1	0.5	1	16

	Residual Risk Action Required	Componets/Instruments might Damage				Remarks
Risk level		Componets/ Instruments Details	LO	Critical Spare	Recommended Spare	

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		Componets/ Instruments Details	LO	Critical Spare	Recommended Spare	
Low, significant	Operator / Maintenance Staff Awareness and Training	1.Camera	1.5	--	✓	
Low, significant	Maintain Regular Maintenance	2.Scanner	1.5	--	✓	