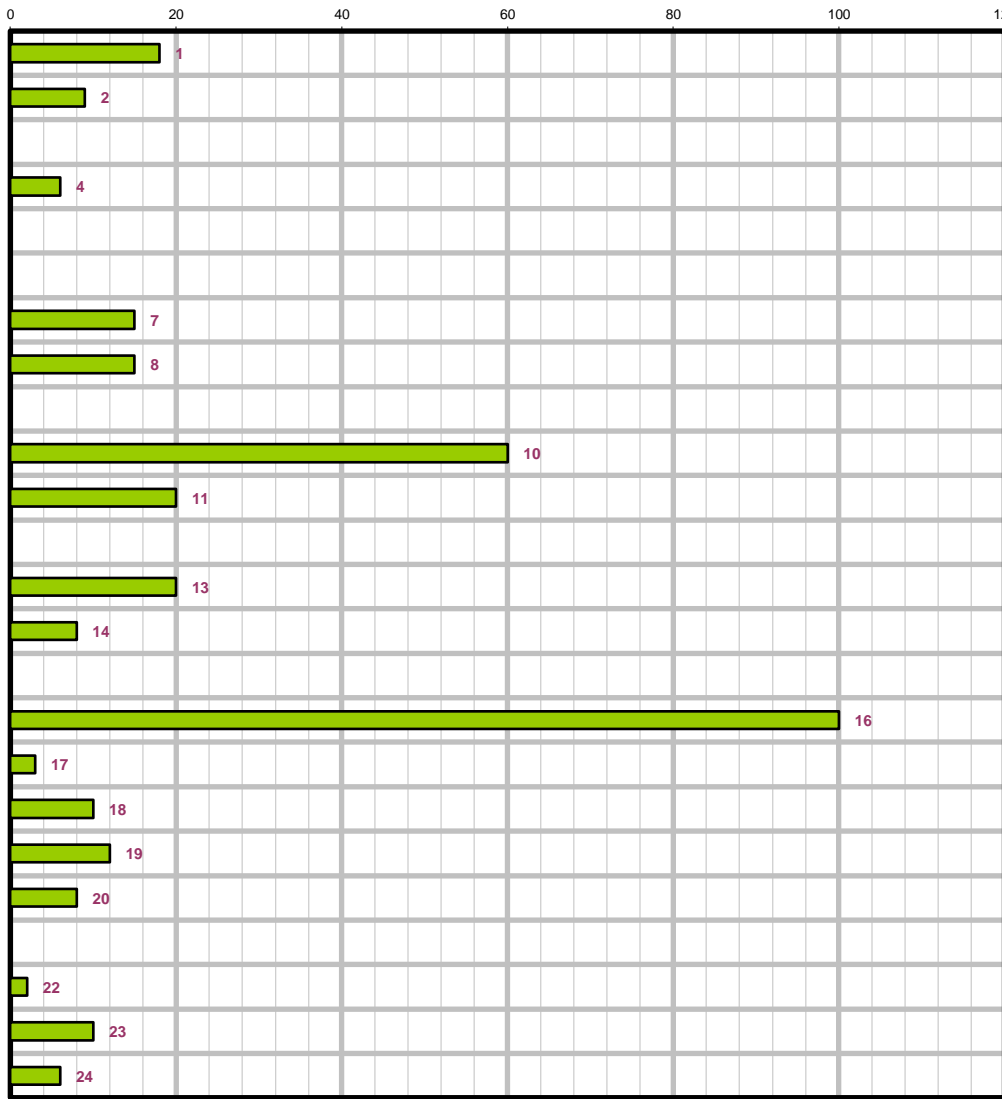
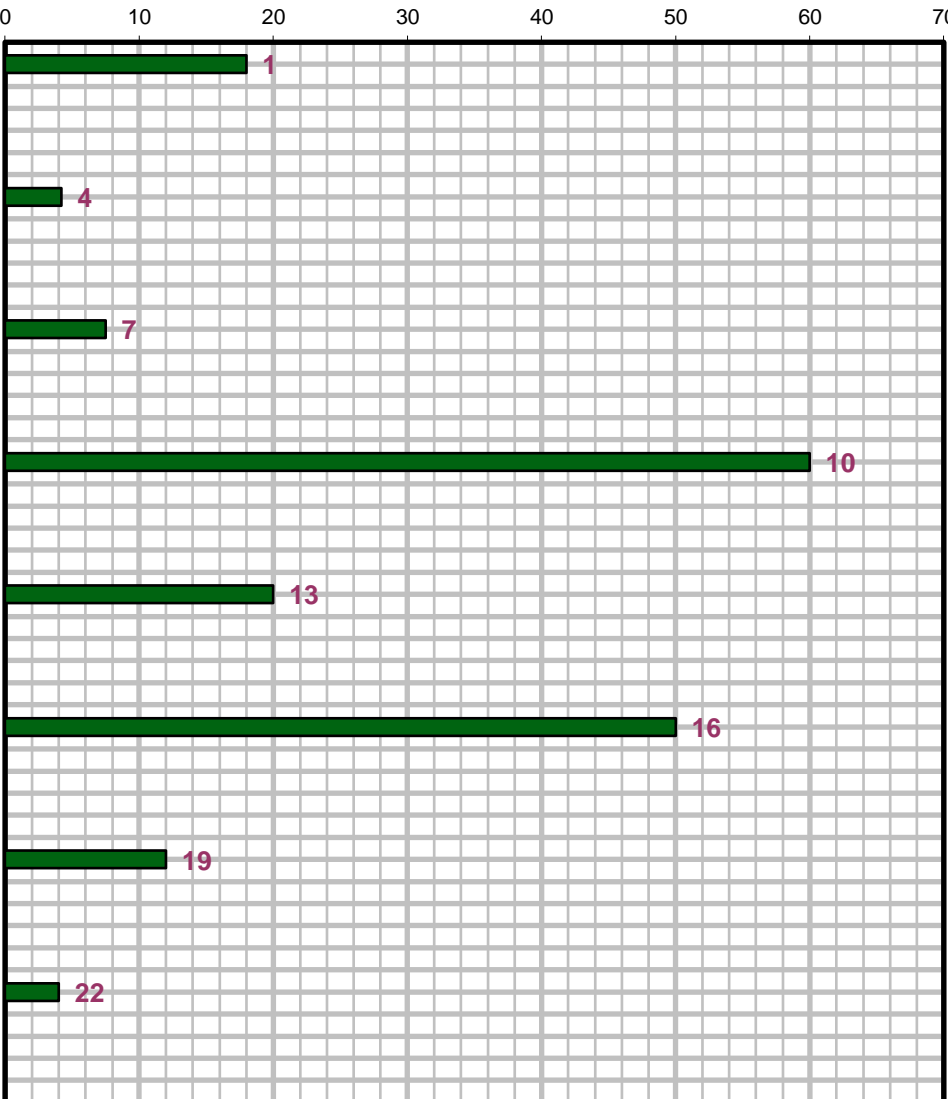


	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1														
2			A Component-oriented Process Failure Risk Analysis Method (Ver. 5) by Professor Paul G. Ranky, PhD, NJIT/MERC								© Copyright by Paul G. Ranky, 1992-to date			
3														
4														
5														
6														
7			Product Name and Appearance Before Process	Goff's NEW Raw Material Prep for Climate Curtains	PFRA Study ID Number	1	Process Code						This PFRA Study was Prepared By	
8			Name of Organization Responsible for the Process	Singh Inc.	Date of This Study (mm/dd/yy)	4/22/2012	Engineering Release Date of Process						PFRA Team	
9			Other Organizations Involved in the Process	Lenze, Datex, Interlake	Original Date of This Study	1/20/2012	Type of Product Processed			Climate curtains and Window Insulator kits			Responsible Organization/ Department	
10			Subcontractors, process Plants Effected	N/A	Revision Number	1	Product Group Classifier						Comments	
11			Product Serial Number and Optional Image Map	N/A	Comments	None	Engineering Release Date of the Product			N/A				
12														
13		Process ID	Describe the Process for Each Process Step and Optionally Illustrate the State of the Device/ Part/ Subassembly/ Object AFTER the Process is Complete	Specify the Tool(s) Used in Each Process Step	Specify the Fixtures / Clamps Used in Each Process Step	List / Identify the Parts / Components Retrieved in Each Process Step	Process Time	Process Cost	Accumulated Process Cost	The PFRA Team Describes / Illustrates the Potential Process Failure Mode and the Effect; the Risk of Failure		Severity Rating	Detection Rating	Occurrence Rating
14								53.00		Proc.ID	Failure Mode(s) and Effect(s)			
15							[sec]	[USD]	[USD]			(1-10)	(1-10)	(1-10)
16		1	Baled recycled vinyl stock is placed on weigh conveyor	Automated Lift system	Weigh Conveyor	Baled Recycled Vinyl Waste	60	0.88	0.88	ID 1.1	Material is Unusable	2	3	3
17										ID 1.2	Automated lift system not working	3	1	3
18														
19		2	The stock is fed to first vibrating screen	None	Screen	Metal and other waste from the bales	30	0.44	1.33	ID 2.1	Vibrating screen not working	3	1	2
20														
21														
22		3	The vinyl waste is then sent to the second high speed rotating screen	None	Rotating Screen, Motors, Belts	Scrap	30	0.44	1.77	ID 3.1	Failure of screen	5	1	3
23										ID 3.2	Faliure of Motor	5	1	3
24														
25		4	The vinyl is sent to spray wash system	None	Water Spray Nozzles, Pumps	Organic materials	120	1.77	3.53	ID 4.1	Spray Nozzles Blocked	5	3	4
26										ID 4.2	Pumps not working	10	1	2
27														
28		5	Melting Tank	None	Tank, Heaters, Agitators	None	900	13.25	16.78	ID 5.1	Heaters not working	10	1	2
29										ID 5.2	Agitator not working	4	2	1
30														
31		6	Gravity Fed through Screen	None	Screen, Piping, Valves	Metal Scrap that maybe in the stock	30	0.44	17.23	ID 6.1	Screen is blocked	10	5	2
32										ID 6.2	Piping Leaking	3	1	1
33										ID 6.3	Valves closed shut	5	2	1
34		7	Conitnous level Heated Storage Tank	None	Tank, Piping, Level Sensor	None	60	0.88	18.11	ID 7.1	Level Sensor not working	3	1	4
35										ID 7.2	Piping leak	2	4	1
36														
37		8	Gravity fed to Head Box and Forming Unit	None	Piping, Head Box, Rollers	None	45	0.66	18.77	ID 8.1	Piping leak	2	1	1
38										ID 8.2	Line Blockage	5	2	1
39										ID 8.3	Head Box Blocked	2	1	3

	O	P	Q	R	S	T	U	V	W	X	Y	Z
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6												
7	Gurprpeet Singh											
8												
9												
10	None											
11												
12												
13	RPN (Risk Priority Number)	Max. RPN	Tooling Factor	Clamping/ Fixturing Factor	Skill Factor	Any Other Factor You Define	Accumulated RPN	Risk Associated	The Effect of Each Process Step Failure Risk on Other Processes	The Effect of Each Process Step Failure Risk on Other Parts (I.e. components/ objects)	Detection Mode	Recommended Corrective Action(s)
14												
15			0.1-2,1=100%	0.1-2,1=100%	0.1-2,1=100%	0.1-2,1=100%						
16	18	18	1.00	1.00	1.00	1.00	18.00	Low	No Effect	No effect	Material Handling	Communicate material defects to purchasing and suppliers
17	9								Doesn't slow down process, switch to manual trucks		Material Handling	Service Automatic Lift system Regularly
18												
19	6	6	1.00	0.70	1.00	1.00	4.20	Low	No effect on manufacturing more screens down stream	No effect	Material Handling	Check Screen for blockage and mechanical issues
20												
21												
22	15	15	1.00	0.50	1.00	1.00	7.50	Low	High level of rejects going to melting tank	Upset the melting tank	Manufacturing department	Check screen for blockage and mechanical issues
23	15											
24												
25	60	60	1.00	1.00	1.00	1.00	60.00	Low	Organic junk going to melting tank, Undesirable vinyl liquid	Delay / financial loss	Manufacturing department	Check spray wash system service regularly to insure proper function
26	20								Water pumps not working	improper washing	Manufacturing department	Check pumps and have back ups on hand
27												
28	20	20	1.00	1.00	1.00	1.00	20.00	Low	Delay the forming and manufacturing process	Delay / financial loss	Manufacturing department	Check gas supply line and pilot light
29	8								Delay in the melting process and uneven mixing	Delay / financial loss	Manufacturing department	Check circuit breaker and motor
30												
31	100	100	1.00	0.50	1.00	1.00	50.00	Low	Delay the forming and manufacturing process	Delay / financial loss	Manufacturing department	Clean screen
32	3								Less material going to forming/Pressure loss	Delay / financial loss	Manufacturing department	Install temporary piping patch
33	10								Delay in the forming process	Delay / financial loss	Manufacturing department	Clear blockage
34	12	12	1.00	1.00	1.00	1.00	12.00	Low	No effect	No effect	Manufacturing department	Check input and output signal
35	8								Less material going to forming/Pressure loss	Delay / financial loss	Manufacturing department	Install temporary piping patch
36												
37	2	10	1.00	0.40	1.00	1.00	4.00	Low	Less material going to forming/Pressure loss	Delay / financial loss	Manufacturing department	Install temporary piping patch
38	10								Delay in the forming process	Delay / financial loss	Manufacturing department	Clear blockage
39	6								Delay in the forming process	Delay / financial loss	Manufacturing department	Replace with secondary box

	AA	AB	AC	AD	AE
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13	Corrective Action(s) Taken and Date (mm/dd/yr)	RPN for Each Failure Mode		Accumulated RPN for Each Failure Mode	
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