# POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS (FMEA)

Drawing#Stand Revision Date/Leve									FMEA Number _FMEA1_   Page 1 of 5   Prepared By:   FMEA Date (orig.)   (Rev)							
Process Function			S			O c		D e			Responsibilit	Acti	on I	Resu	lts	
Requirements	Potential Failure Mode	Potential Effects(s ) of Failure	e v	Class	Potential Cause(s)/ Mechanism of Failure	c u r	Current Process Controls	t e c t	R P N	Recommended Action	y & Target Completion Date	Actions Taken	S e v	O c c	D e t	1
Receiving/Receiving Inspection	Seam in wire	Cracked Parts	7	Major	Supplier's Quality System Not Effective	2	Vendor Certification, QAP03	2	28	Vendor Development Program	XXX 7/98	PUP03, Personnel	7	2	2	28
Transfer/Store in Appropriate Area	Handling Damage	Nicks, Dents in product	3	Minor	Operators need training	2	Operator Training Prog.	1	6	Certification Prog, Operator Trng.	XXX 8/98	Operators Trained, develop maint.list	3	2	1	6
Heading	Wrong Diameter/ Lengths	Bad Product	6	Key	Tool Failure	3	SPC, machine and inspection procedures	3	54	Update Proc., buy monitoring system & train operators	Management 8/98	Purchased Impax monitors, updated procedure s and trained operators	5	3	3	45

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Drawing# Revision Date/Lev		Key Date								FMEA NumberFMEA1_ Page 2 of 5 Prepared By FMEA Date (orig.) (Rev)						
Process Function	Potential Failure	Potential Effects(s	S e v		Potential Cause(s)/	0 c c	Current Process	D e t	R P	Recommended	Responsibilit y & Target Completion	Actions	on F S			R
Requirements	Mode	) of Failure		Class	Mechanism of Failure	u r	Controls	e c t	Ν	Action	Date	Taken	e v	c		1
Wash	Visual non- conformity	Dirty/ Stained parts	4	Major	Oily/Dirty water in tanks—lack of process control	5	Work instr., Operator Training	3	60	Visual standards, revise instruction/ Maintenance	XXX 8/98	Visual standards added, maint. added to WI	4	5	3	60
Secondary/Special Processes	Crushed parts	Scrapped material	6	Major	Machine Set-up and feed	3	Operator Training	3	54	Update procedures, detection equipment	XXX 7/98	Laser detection equipment bought, procedure revised	6	2	2	24
Secondary/Special Processes	No hole in part/no washer on part	Function affected/ Rework required	6	Major	Broken drill/machine malfunction	3	OpTraining Inspection Procedures	3	54	Try different alloy drills, revise procedures, add maintenance	XXX 7/98	Increased inspection frequency, trying new drills, revised procedure s	6	2	2	24

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Drawing# Revision Date/L	vision Date/Level			n Date/Level Key Date									FMEA NumberFMEA1_ Page 3 of 5 Prepared By FMEA Date (orig.) (Rev)					
Process Function			s			O c		D e			Responsibilit	Actio	on F	lesu	lts			
Requirements	Failure	Potential Effects(s) of Failure	e v	Class	Potential Cause(s)/ Mechanism of Failure	c u r	Current Process Controls	t e c t	R P N	Recommended Action	y & Target Completion Date	Actions Taken	S e v	O c c	D e t			
Secondary/Special Processes	part/wrong	Reduced/No functionality	6	Major	Operator Training lacking/machine out of adjustment	3	On-the-Job Training, SPC & Insp Procedure	3	54	Further training, revise procedures	XXX 9/98	More training, revised proc. To add maint./ more training						
Wash		Dirty/ Stained parts	5	Major	Oily/Dirty Water in tanks – lack of process control	3	Work instr., Operator Training	3	45	Visual standards, revise instruction/ Maintenance	XXX 9/98	Visual standards added, maint. added to WI						
Inspect	0	Part functionality affected	5	Minor	Damaged measuring device	3	Procedures, Gage software	3	30	Develop device specific procedures, revise calibration	XXX 9/98	Revised proc., contracted outside vendor						

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Drawing# Revision Date/Leve	el		_		cess Responsibi / Date						FMEA NumberFMEA Page 4 of 5 Prepared By FMEA Date (orig.) (Rev)					
Process Function			s			0 c		D e			Responsibilit	Acti	ion R	esul	ts	
Requirements	Potential Failure Mode	Potential Effects(s) of Failure	e v	Class	Potential Cause(s)/ Mechanism of Failure	c u r	Current Process Controls	t e c t	R P N	Recommended Action	y & Target Completion Date	Actions Taken	S e v	O c c	D e t	R P N
Transfer to Outside Vendor	Plating too thin	Visual nonconfor m	3	Minor	Plating not to agreed specification	1	Purchasing Proc., ANSI Standards	2	6				3	1	2	6
Return to Reed & Prince	Nicked, Damaged parts to Brainin (customer )	Appearance Fuctionality	3	Minor	Road Hazards	1	HSPP&D procedures	2	6				3	1	2	6
Receiving/Final Inspection	Oily parts	Visual nonconf.	4	Minor	Final Operation Missed	2	Routings and Final Inspection Procedures	2	16	Operator Training & Inspector Trng.	XXX 8/98	Inspectors Shipping & Operators trained for visual inspection / Work Instr. revised	4	1	2	8

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Process Function	Detential	Potential	S			O c		D e			Responsibilit	Action Results					
Requirements	Failure	Effects(s ) of Failure	e v	Class	Potential Cause(s)/ Mechanism of Failure	c u r	Current Process Controls	t e c t	R P N	Recommended Action	Page 5 of 5   Prepared By_FMEA Date   Responsibilit   y & Target   Completion   Date   XXX   9/98   Instru-revissarea   Instru-revissarea	Actions Taken	S e v	с	e	1	
Storage/Packaging		Customer Rejection	5	Minor	Overcrowded Storage area	3	Operator Training	3	30	Hire Materials person for better control over inventory		Personnel hired, work instr. Created					
Shipment		Customer Dissatisfa ction	5	Minor	Inefficiencies in Shipping department	3	Work Instructions	3	30			Instruction revised, area reorganized	5	2	3	30	

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