

LAMPIRAN

POTENTIAL FAILURE MODE AND EFFECT ANALYSIS (FMEA)

Process Responsibility : Body Shop
 Key date : Dec'07

: PSW gun over heat
 : 2007/All Model
 : Rustam.E (Eng); Yudha (Mtn); Pardiman (Prod)

tem
 Model Year(s)/Vehicle(s)
 Core Team

Requirements Process Function	Potential Failure Mode	Potential Effect(s) of Failure	Class	Potential Cause(s) Mechanism(s) of Failure	Occur	Current Process controls	Detect	RPN	Recommended actions	Responsible Y & Target Completion date	Action Results				
											Action taken	Sev	Occ	Det	RPN
1. PSW GUN	1. PSW gun over heat	- Mesin tidak dapat bekerja	8	- System pendinginan yang kurang baik	10	- Pengecekan sirkulasi air sebelum mulai bekerja	8	640	- Maintenance tidak hanya mengecek sirkulasi air pendingin tapi juga kondisi air pendingin	- MINTNC	Maintenance metakukan proses blow down setiap hari sebelum be kerja & blown down main pipe setiap bulan	8	10	5	400
				- Welding parameter tidak standard (siklus spot welding)	7	- Setting welding berdasarkan jumlah mesin welding yang ada	8	448	- Menurunkan formula untuk setting welding berdasarkan jumlah point spot	- ENG	- Menerapkan formula welding quantity	8	7	5	280
				- Balancer yang tidak standard	7	- Satu PSW gun satu balancer	8	448	- Menambahkan balancer pada setiap kick less kabel yang panjang (2.5m)	- MINTNC	- Menambahkan balancer pada setiap kickless kabel yang panjang	8	1	2	16

FMEA Number : 002/FMEA/VB
 Page : 1/1
 Prepared by : Rustam Effel
 FMEA Date (Orig) : Dec'07 (Sep)

POTENTIAL FAILURE MODE AND EFFECT ANALYSIS (FMEA)

Process Responsibility : Body Shop
 Key date : Dec'07

em : Kabel kontroll shoot
 Model Year(s)/Vehicle(s) : 2007/All Model
 Core Team : Rustam.E (Eng); Yudha (Mtn); Pardiman (Prod)

Requirements	Potential Failure Mode	Potential Effect(s) of Failure	Class	Potential Cause(s) Mechanism(s) of Failure	Occur	Current Process controls	Detect	RPN	Recommended actions	Responsibility & Target Completion date	Action Results			
											Action taken	Sev	Occ	Det
1. PSW GUN	(2)Kabel kontrol shoot	- Proses produksi terhenti	8	- Material kabel kontrol mudah putus - Adanya system electrical yang instalasinya kurang baik	7	7 - monthly check (u/ item tertentu replcement part ditunggu sampai terjadi brake down)	8	448	- adanya sistem preventive & prediktive mintc scheduling yg baik (d disesuaikan dg data MTBF & MTTR yang ada. - Pengecekan pemasangan electrical system berdasarkan wiring diagram	- Eng & M	8	1	2	16
					7	7 - Pengecekan pemasangan equipment hanya dilakukan secara fungsi alat	4	96		- MINTNC	8	1	2	16

POTENTIAL FAILURE MODE AND EFFECT ANALYSIS (FMEA)

FMEA Number : 004/FMEA/Box
 Page : 1/1
 Prepared by : Rustam Effie
 FMEA Date (Orig) : Dec'07 (Sep

Item : Pin jig; patah & Clamp longgar
 Process Responsibility : Body Shop
 Key date : Dec'07

Model Year(s)/Vehicle(s) : 2007/All Model
 Core Team : Rustam.E (Eng); Yudha (Min); Pardiman (Prod)

Requirements	Potential Failure Mode	Potential Effect(s) of Failure	Class	Severity	Potential Cause(s) Mechanism(s) of Failure	Occur	Current Process controls	Detect	RPN	Recommended actions	Responsibility & Target Completion date	Action Results			
												Action taken	Sev	Occ	Det
1. ASSY JIG	(1) PIN jig patah/ rusak	- Proses produksi terhenti		8	- Sistem preventive mntc yg tidak baik - Kondisi accuracy part yg tdk baik	8 8	8 - diganti apabila ada kerusakan 8 - No control	8 10	512 640	- melakukan preventive mntc schedull w/ kondisi PIN - monthly check w/ part inspection supplier	- Mntc - Eng	8 8	1 1	2 2	16 16
					- Metode bekerja operator yg tidak baik	8	8 - No control	10	640	- Regular training mengenai assembly method yg baik (yearly)	-Prod	8	1	2	16
	(2) Clamping yg longgar	- Accuracy assembly part.NG		8	- Sistem preventive mntc yg tidak baik	8	8 - diganti apabila ada kerusakan 8 - No control	8 10	512 640	- melakukan preventive mntc schedull w/ kondisi PIN - Regular training mengenai assembly method yg baik (yearly)	- Mntc -Prod	8 8	8 8	2 2	128 128

POTENTIAL FAILURE MODE AND EFFECT ANALYSIS (FMEA)

FMEA Number : 005/FMEA/Box
 Page : 1/1
 Prepared by : Rustam Effi
 FMEA Date (Orig) : Dec'07 (Sep)

Item : Kabel kontrol shoot
 Model Year(s)/Vehicle(s) : 2007/All Model
 Core Team : Rustam.E (Eng); Yudha (Mtn); Pardiman (Prod)

Process Responsibility : Body Shop
 Key date : Dec'07

Requirements Process Function	Potential Failure Mode	Potential Effect(s) of Failure	Severity	Occur	Current Process controls	Detect	RPN	Recommended actions	Responsibility & Target Completion date	Action Results															
										Action taken	Sev	Occ	Det	RPN											
(3) Bolt / nut yg longgar/hilang	- Accuracy assembly part yang NG	- Sistem preventive mntc yg tidak baik	8	8	- diganti apabila ada kerusakan	8	512	- melakukan preventive mntc schedull w/ kondisi bolt/nut	- Mntc	8	1	2	16												
														- monthly check w/ part inspection supplier	- Eng	8	1	2	16						
																				- Regular training mengenai assembly method yg baik (yearly)	- Prod	8	1	2	16
(4) Poly uretan yang aus	- Accuracy assembly part yang NG	- Sistem preventive mntc yg tidak baik	8	8	- diganti apabila ada kerusakan	8	512	- melakukan preventive mntc schedull w/ kondisi PIN	- Mntc	8	1	2	16												
														- penyediaan spare part yang berkala	- Mntc	8	1	2	16						

POTENTIAL FAILURE MODE AND EFFECT ANALYSIS (FMEA)

FMEA Number : 007/FMEA/Bod
 Page : 1/1
 Prepared by : Rustam Effendi
 FMEA Date (Orig) : Dec'07 (Sep)

Item : Air hoist tidak dpt dioperasikan
 Model Year(s)/Vehicle(s) : 2007/All Model
 Core Team : Rustam.E (Eng); Yudha (Mtn); Pardiman (Prod)
 Process Responsibility : Body Shop
 Key date : Dec'07

Requirements Process Function	Potential Failure Mode	Potential Effect(s) of Failure	Class sev	Potential Cause(s) Mechanism(s) of Failure	Occur	Current Process controls	Detect	RPN	Recommended actions	Responsibility & Target Completion on date	Action Results			
											Sev	Occ	Det	RPN
3. Air Hoist	(1) Tidak dapat dioperasikan	- Transfer proses gagal	8	- Sistem preventive mntc yg tidak baik (system brake tidak berfungsi dengan baik) - Supply udara yang kurang	10	- Di repair apabila terjadi kerusakan - Air pressure control	8	640	- Menambahkan FRL untuk setiap air hoist - additional pressure if not enough	- Mntc	8	10	2	160
	(2) Tali safety putus	- Part yang ditransfer damage/rusak	10	- Tidak adanya safety equipment standard - Saat pemasangan tidak dilakukan pengecekan safety equipment	9	- diganti apabila ada kerusakan - No control	8	720	- menentukan item yang tepat untuk preventive mntnce - Dilakukan pengecekan safety equipment berkala	- Mntc	8	1	5	40
										- Mntc	8	1	2	16

POTENTIAL FAILURE MODE AND EFFECT ANALYSIS (FMEA)

FMEA Number : 008/FMEA/Body/NML
 Page : 1/1
 Prepared by : Rustam Effendi
 FMEA Date (Orig) : Dec'07 (Sept'07)

Item : Stud bolt tidak dpt dioperasikan
 Model Year(s)/Vehicle(s) : 2007/All Model
 Core Team : Rustam, E (Eng); Yudha (Mtn); Pardiman (Prod)

Process Responsibility : Body Shop
 Key date : Dec'07

Requirements Process Function	Potential Failure Mode	Potential Effect(s) of Failure	Class	Potential Cause(s) Mechanism(s) of Failure	Occur	Current Process controls	Detect	RPN	Recommended actions	Responsibility & Target Completion date	Action Results			
											Action taken	Sev	Occ	Det
Stud bolt machine	(1) Tidak dapat dioperasikan	- Proses produksi terhenti	8	- Welding parameter yang digunakan tidak standard - Operator tidak menjalankan mesin dengan metode yg baik (sesuai standard sos)	10	- Welding parameter setting berdasarkan trial & error	8	640	- Setting welding para meter tidak hanya berdasarkan trial & error tapi juga berdasarkan standard part welding - Dilakukan training berkala sehingga operator tidak hanya tau lapangan tapi jg teoritical	- ENG & M	8	1	2	16
					10	- On job training pada operator	8	640		- Prod	8	10	8	640