

TOP 5 CRITICAL EQUIPMENT READINESS PROGRAM
ECA DEPLOYMENT

FS Code : A6-U15-FS001.1		Equipment 15-K-101T				Asset Holder : RCC				Status Updated : 07 May 2009										
Failure Mode Risk Assessment																				
Sequence Number		Credible Ways of Equipment Failure												Impact On The Sysytem		Total Cons. (USD)	Likelihood	Crit. Code	RAM Crit.	
3		Fouling problem pada tahun 2004, 2007, 2008												RCC Shut down 23 hari (5+11+7) dan harus evakuasi catalyst		2.096.545,25	0.5 - 4 YRS3	A4C	H	
Strategi		Action		Critical Issue		PIC	Frek	1	2	3	4	5	6	7	8	9	10	11	12	Remark
Maint. & Reliabilitas		1.	Monitoring vibrasi trust bearing	Vibrasi tinggi yang di akibatkan adanya kenaikan pressure pada 1st stage discharge MAB (normal pressure 14 kg/cm ²)		JPK Rel	1 minggu	√	√	√	√	√	√	√	√	√	√	√	√	
		2.	Penggantian catridge filter lube oil	Adanya kenaikan delta P lube oil		JPK	6 bulan					√						√		
Operational			Monitoring analisa steam product		Ada kenaikan silica content dalam steam product		Ops.	1/ hari	√	√	√	√	√	√	√	√	√	√	√	
			Mengatur injeksi chemical		Ada kenaikan silica content dalam steam product		Ops.	1/ hari	√	√	√	√	√	√	√	√	√	√	√	
			Mengatur level HBW di steam drum (15-V-101/101B/117) & mengatur continuos blowdown		Ada kenaikan silica content dalam steam product		Ops.	1/ hari	√	√	√	√	√	√	√	√	√	√	√	
			Monitoring temperatur lube oil		Adanya kebuntuan di seal cooler lube oil		Ops.	2/shift	√	√	√	√	√	√	√	√	√	√	√	
			Moniting pressure lube oil		Ada kebuntuan di filter lube oil		Ops.	2/shift	√	√	√	√	√	√	√	√	√	√	√	
			Monitoring level lube oil		Adanya kebocoran lube oil di sistem		Ops.	2/shift	√	√	√	√	√	√	√	√	√	√	√	
			Analisa Lube Oil		lube oil mengalami kontaminasi		Ops.	1 bulan	√	√	√	√	√	√	√	√	√	√	√	
			Menjalankan oil purifier pump secara berkala		water content pada lube oil melibihi batas maksimum (max. 0,5% volume)		Ops.	1 bulan	√	√	√	√	√	√	√	√	√	√	√	
Improvement			Injeksi chemical		Adanya deposit silica pada turbin		Ops.	continue	√	√	√	√	√	√	√	√	√	√		
			Memasang fasilitas wet washing		Adanya deposit silica pada turbin		JPK	1x psg				√								
Mat'l. Req.																				
Kimap		Description				QTY Req.	UI	PM	RUTIN	QTY MSL	Q1	Q2	Q3	Q4	STATUS	PIC	Remark			
1.		Shoe assembly off Journal bearing assembly																		
2.		Thrust Pad set																		
OPI COACH																				
Approval																				
MANAJER PRODUKSI					MANAJER RELIABILITY										MANAJER JPK					
Iwan Soemantri					Syahyuli SB										Nur Hendro					

TOP 5 Critical Equipment Readiness Program

ECA DEPLOYMENT

FS Code : A6-U15-FS001				Equipment 15-K-102A/B												Asset Holder				
Failure Mode Risk Assessment																				
Sequence Number		Credible Ways of Equipment Failure														Impact On The Sysytem	Total Cons. (USD)	Likelihood	Crit. Code	RAM Crit.
1		Adanya kenaikan vibrasi pda Bearing blower.														Steam product loss ± 240T/H	232.267	0 - 0,5yrs	A3D	H
Strategi		Action	Critical Issue	PIC	Frek	1	2	3	4	5	6	7	8	9	10	11	12	Remark		
	1.	Bearing inspection and recorded.PDF	Adanya kenaikan vibrasi	Rel.	1/minggu	√	√	√	√	√	√	√	√	√	√	√	√	√		
	2.	Axial vibration Monitoring	Adanya kenaikan vibrasi krn bearing lock nut loose	Rel.	1/minggu	√	√	√	√	√	√	√	√	√	√	√	√	√		
	3.	Bearing temperature monitoring	Adanya kenaikan temperatur	Rel.	1/minggu	√	√	√	√	√	√	√	√	√	√	√	√	√		
	4.	Regreasing	Grease berkurang/kotor, viskositas berubah	JPK	2/minggu	√	√	√	√	√	√	√	√	√	√	√	√	√		
Operational		1.	Pengaturan discharge pressure	Adanya kenaikan vibrasi	OPS	Continue	√	√	√	√	√	√	√	√	√	√	√	√		
Improvement		1.	Memasang jaringan speed indikator yang dapat dimonitoring di DCS	Adanya indikasi flow yang tidak stabil	JPK	1 kali						√								
Mat'l Req.																				
Kimap		Description			QTY Req.	UI	PM	RUTIN	QTY MSL	Q1	Q2	Q3	Q4	STATUS	PIC	Remark				
1.																				
OPI COACH																				
Approval																				
MANAJER PRODUKSI					MANAJER RELIABILITY										MANAJER JPK					
Iwan Soemantri					Syahyuli SB										Nur Hendro					

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ECA DEPLOYMENT

FS Code :		A6-U15-FS001		Equipment												16-K-101		Asset Holder			
Failure Mode Risk Assessment																					
Sequence Number		Credible Ways of Equipment Failure														Impact On The Sysytem	Total Cons. (USD)	Likelihood	Crit. Code	RAM Crit.	
2		Governor & Bearing Problem														Loss product LPG,Propylene, & polygasoline	7.929.833	0,5 -4 yrs	A4C	H	
Strategi		Action		Critical Issue		PIC	Frek	1	2	3	4	5	6	7	8	9	10	11	12	Remark	
Maint. & Reliabilitas		1.	Monitoring vibrasi trusth bearing	Vibrasi tinggi yang di akibatkan adanya kenaikan pressure pada 1st stage discharge MAB (normal pressure 14 kg/cm ²)		JPK,Rel	1 minggu	√	√	√	√	√	√	√	√	√	√	√	√		
		2.	Penggantian catridge filter lube oil	Adanya kenaikan delta P lube oil		JPK	6 bulan			√						√					
Operational		3.	Monitoring analisa steam product	Ada kenaikan silica content dalam steam product		Ops.	1/ hari	√	√	√	√	√	√	√	√	√	√	√	√		
		4.	Mengatur injeksi chemical	Ada kenaikan silica content dalam steam product		Ops.	1/ hari	√	√	√	√	√	√	√	√	√	√	√	√		
		5.	Mengatur level HBW di steam drum (15-V-101/101B/117) & mengatur continuos blowdown	Ada kenaikan silica content dalam steam product		Ops.	1/ hari	√	√	√	√	√	√	√	√	√	√	√	√		
		6.	Monitoring temperatur lube oil	Adanya kebuntuan di seal cooler lube oil		Ops.	2/shift	√	√	√	√	√	√	√	√	√	√	√	√		
		7.	Moniting pressure lube oil	Ada kebuntuan di filter lube oil		Ops.	2/shift	√	√	√	√	√	√	√	√	√	√	√	√		
		8.	Monitoring level lube oil	Adanya kebocoran lube oil di sistem		Ops.	2/shift	√	√	√	√	√	√	√	√	√	√	√	√		
		9.	Analisa Lube Oil	lube oil mengalami kontaminasi		Ops.	1/ bulan	√	√	√	√	√	√	√	√	√	√	√	√		
		10.	Menjalankan oil purifier pump secara berkala	water content pada lube oil melibihi batas maksimum (max. 0.5% volume)		Ops.	1/bulan	√	√	√	√	√	√	√	√	√	√	√	√		
		Improvement			Injeksi chemical	Adanya deposit silica pada turbin		Ops.	continue	√	√	√	√	√	√	√	√	√	√	√	
					Memasang fasilitas wet washing	Adanya deposit silica pada turbin		JPK	1x psq			√									
Mat'l Req.																					
Kimap		Description		QTY Req.	UI	PM	RUTIN	QTY MSL	Q1	Q2	Q3	Q4	STATUS	PIC	Remark						
1.		Shoe assembly off Journal bearing assembly																			
		Thrust Pad set																			
OPI COACH																					
Approval																					
MANAJER PRODUKSI				MANAJER RELIABILITY										MANAJER JPK							
Iwan Soemantri				Syahyuli SB										Nur Hendro							

TOP 5 Critical Equipment Readiness Program

ECA DEPLOYMENT

FS Code :		Equipment19-PG-0204-A2A1-4"-H25												Asset Holder													
Failure Mode Risk Assessment																											
Sequence Number		Credible Ways of Equipment Failure																Impact On The Sysytem		Total Cons. (USD)		Likelihood		Crit. Code		RAM Crit.	
1		Pipa mengalami Corrosion Under Insulation																Unit 19 & stop		2.822.590		4-30 yrs		A4B		H	
Strategi		Action		Critical Issue		PIC		Frek		1	2	3	4	5	6	7	8	9	10	11	12	Remark					
Maint. & Reliabilitas		1. Mengganti pipa		Pipa bocor		JPK		1X						√													
		2. Melapisi pipa dgn primer coat		Barrier rusak		JPK		1X						√													
		3. Mengganti isolasi		isolasi rusak/terkontaminasi air		JPK		1X						√													
		4. Monitoring CUI		CUI tidak terkontrol		Rel		1/bulan		√	√	√	√	√	√	√	√	√	√	√	√	√					
Operational																											
Improvement		Analisa penggunaan insulation coating		Potensi insul. terkontaminasi tinggi		REL,JPK		1						√													
Mat'l Req.																											
Kimap		Description				QTY Req.		UI		PM		RUTIN		QTY MSL		Q1	Q2	Q3	Q4	STATUS		PIC		Remark			
1.		Rockwool																									
		Metal Jacketing																									
		Tapping Screw																									
		Sealant																									
		Pipa CS A53 4"																									
		Primer coat																									
OPI COACH																											
Approval																											
MANAJER PRODUKSI						MANAJER RELIABILITY												MANAJER JPK									
Iwan Soemantri						Syahyuli SB												Nur Hendro									

TOP 5 Critical Equipment Readiness Program

ECA DEPLOYMENT

FS Code :				Equipment												BMS CO Boiler												Asset Holder			
Failure Mode Risk Assessment																															
Sequence Number		Credible Ways of Equipment Failure																Impact On The Sysytem		Total Cons. (USD)		Likelihood		Crit. Code		RAM Crit.					
LLCP-BC900917-502		Air Register macet, Selenoid di fuel gas failure																Steam product loss ± 240T/H		234.090,85		0 - 0,5yrs		A3D		H					
Strategi		Action		Critical Issue		PIC		Frek		1	2	3	4	5	6	7	8	9	10	11	12	Remark									
Maint. & Reliabilitas		1.																													
		2.																													
Operational																															
Improvement																															
Mat'l Req.																															
Kimap		Description				QTY Req.		UI		PM		RUTIN		QTY MSL		Q1	Q2	Q3	Q4	STATUS		PIC		Remark							
1.																															
OPI COACH																															
Approval																															
MANAJER PRODUKSI						MANAJER RELIABILITY												MANAJER JPK													
Iwan Soemantri						Syahyuli SB												Nur Hendro													