FMEA INFORMATION WORKSHEET	ELEMENT	FUNC. LOC.	PM CODE
	Belt Conveyor	BC	PM114003
	COMPONENT	MADE BY	DATE
		Eagle Team	6/18/2001
		REVIEWED BY	DATE

	Function		Functional Failure		Failure Mode (Failure Cause)	Effects of Failure (What happens when it fails)
1	To transfer material from one location to another at a specific rate.	A	Does not transfer material from one location to another at a specific rate.	1	Normal wear of belt	Belt stops. Alarm sounds in control room. Replace belt. Down time: 2 to 12 hours.
				2	Improper adjustment of belt tension at installation	Belt stops. Alarm sounds in control room. Properly adjust tension on belt. Down time: 1 to 3 hours.
				3	Counter weight too light	Belt stops. Alarm sounds in control room. Adjust counter weight ballast for proper belt tension. Down time: 1 to 3hours.
				4	Counter weight binds on framework	Belt stops. Alarm sounds in control room. Resolve the binding condition at the counter weight and frame. Down time: 1 to 8 hours.
				5	Normal wear of take up assembly sheaves	Belt stops. Alarm sounds in control room. Replace the take up assembly sheaves. Down time: 1 to 3 hours.
				6	Normal wear of take up assembly cables	Belt stops. Alarm sounds in control room. Replace the take up assembly cables. Down time: 1 to 3 hours.
				7	Normal wear off hydraulic tensioned	Belt stops. Alarm sounds in control room. Replace the hydraulic tightener. Down time: 1 to 6 hours.
				8	**Reference hydraulic system FMEA**	
				9	Normal wear of mechanical belt tightener	Belt stops. Alarm sounds in control room. Replace the mechanical belt tightener. Down time: 1 to 6 hours.
				10	Normal wear of adjustment screws	Belt stops. Alarm sounds in control room. Replace the adjusting screws on the mechanical belt tightener. Down time: 1 to 4 hours.
				11	corrosion of adjustment screws	Belt stops. Alarm sounds in control room. Replace the adjusting screws on the mechanical belt tightener. Down time: 1 to 4 hours.
				12	Excessive rain on belt	Belt stops. Alarm sounds in control room. Do not run belt during heavy rain storms. Down time: 1 to 24 hours.
				13	Conveyor covers missing on belt conveyor	Belt stops. Alarm sounds in control room. Replace missing conveyor covers on conveyor belt. Down time: 1 to 8 hours.
				14	**Reference Process Station / PLC FMEA**	
				15	Normal wear of bindicator	Belt stops. Alarm sounds in control room. Replace bindicator device in hopper of conveyor belt. Down time: 1 to 2 hours.
				16	Improper adjustment of bindicator	Belt stops. Alarm sounds in control room. Re-adjust bindicator device in hopper of conveyor belt. Down time: 1 to 2 hours.
				17	Loss of signal to bindicator	Loss of electrical interlock. Belt stops. Alarm sounds in control room. Restore bindicator device signal. Down time: 1 to 2 hours.
				18	Normal wear of zero speed switch	Loss of electrical interlock. Belt stops. Alarm sounds in control room. Replace zero speed switch. Down time: 1 to 2 hours.
				19	Loss of signal to zero speed switch	Loss of electrical interlock. Belt stops. Alarm sounds in control room. Restore signal to zero speed switch. Down time: 1 to 2 hours.
				20	Improper adjustment of zero speed switch	Loss of electrical interlock. Belt stops. Alarm sounds in control room. Adjust zero speed switch. Down time: 1 to 2 hours.

	Function		Functional Failure		Failure Mode (Failure Cause)	Effects of Failure (What happens when it fails)
				21	Normal wear of starvation switch.	Loss of electrical interlock. Belt stops. Alarm sounds in control room. Replace starvation switch. Down time: 1 to 2 hours.
				22	Loss of signal to starvation switch	Loss of electrical interlock. Belt stops. Alarm sounds in control room. Restore signal to starvation switch. Down time: 1 to 2 hours.
				23	Improper adjustment of starvation switch	Loss of electrical interlock. Belt stops. Alarm sounds in control room. Re-adjust starvation switch. Down time: 1 to 2 hours.
				24	Improper location of starvation switch	Control room receives starvation alarm. Belt stops. Relocate starvation switch to proper location
				25	Electrical interlocks between vibrating feeder and conveyor failed	Loss of electrical interlock. Belt stops. Alarm sounds in control room. Restore electrical interlock between vibrating feeder and conveyor. Down time: 0.3 to 1 hours.
				26	Electrical interlocks between belt scale - weigher and conveyor failed	Loss of electrical interlock. Belt stops. Alarm sounds in control room. Restore electrical interlock between belt scale - weigher and conveyor. Down time: 0.3 to 1 hours.
				27	Electrical interlocks between weigh bridge and conveyor failed	Loss of electrical interlock. Belt stops. Alarm sounds in control room. Restore electrical interlock between weigh bridge and conveyor. Down time: 0.3 to 1 hours.
				28	Electrical interlocks between weigh belt feeder and conveyor failed	Loss of electrical interlock. Belt stops. Alarm sounds in control room. Restore electrical interlock between weigh belt feeder and conveyor. Down time: 0.3 to 1 hours.
				29	Electrical interlocks between flowmeter bulk material and conveyor failed	Loss of electrical interlock. Belt stops. Alarm sounds in control room. Restore electrical interlock between flowmeter bulk material and conveyor. Down time: 0.3 to 1 hours.
				30	Excessive material on belt	Belt stops. Alarm sounds in control room. Remove excess material from conveyor belt. Down time: 1 to 8 hours.
				31	Excessively hot clinker	Belt stops. Alarm sounds in control room. Replace conveyor belt. Lower the temperature range of clinker on belt. Down time: 1 to 8 hours.
				32	Improper installation of splice	Belt hits tracking switches. Belt stops. Alarm sounds in control room. Replace conveyor belt splice. Down time: 2 to 8 hours.
				33	Belt pulleys out of alignment	Belt hits tracking switches. Belt stops. Alarm sounds in control room. Re-align belt pulleys. Down time: 1 to 4 hours.
				34	Troughing or return rollers out of alignment	Belt hits tracking switches. Belt stops. Alarm sounds in control room. Re-align troughing and/or return rollers. Down time: 1 to 8 hours.
				35	Baffle plates in chutes missing or worn	Belt hits tracking switches. Belt stops. Alarm sounds in control room. Replace baffles in chute. Down time: 1 to 4 hours.
				36	Normal wear of belt scraper	Belt hits tracking switches. Belt stops. Alarm sounds in control room. Replace belt scraper. Down time: 1 to 2 hours.
				37	Material spillage on belt	Belt hits tracking switches. Belt stops. Alarm sounds in control room. Resolve material spillage problem onto belt. Down time: 1 to 8 hours.
				38	Normal wear of tracking switch	Belt hits frame. Motor overloads. Belt stops. Alarm sounds in control room. Center belt. Replace tracking switch. Down time: 1 to 8 hours.
				39	Improper adjustment of tracking switch	Belt hits frame. Motor overloads. Belt stops. Alarm sounds in control room. Center belt. Adjust tracking switch. Down time: 1 to 8 hours.

	Function		Functional Failure		Failure Mode (Failure Cause)	Effects of Failure (What happens when it fails)
				40	Loss of signal from tracking switch	Loss of electrical interlock. Belt stops. Alarm sounds in control room. Restore electrical interlock Down time: 0.3 to 1 hours.
				41	Improper location of tracking switch	Belt hits frame. Motor overloads. Belt stops. Alarm sounds in control room. Center belt. Relocate tracking switch. Down time: 1 to 3 hours.
				42	Normal wear of primary or secondary scraper	Belt drags on spilled or embedded material. Motor overloads. Belt stops. Alarm sounds in control room. Clean up spilled or embedded material. Replace scrapers. Down time: 1 to 3 hours.
				43	Grease or lubricant on belt	Belt slips on spilled grease or lubricant. Belt stops. Zero speed switch activates. Alarm sounds in control room. Clean up spilled grease or lubricant from conveyor belt and all affected areas. Down time: 1 to 5 hours.
				44	**Reference Bearing FMEA**	
				45	Improper application of belt	Belt does not perform properly. Belt stops. Alarm sounds in control room. Replace with proper belt. Down time: 2 to12 hours.
				46	Normal wear of lagging	Belt spins out. Alarm sounds in control room. Replace lagging on head pulley. Downtime 2 to 12 hours.
				47	Improper installation of lagging	Belt spins out. Alarm sounds in control room. Reinstall lagging on head pulley. Downtime 2 to 12 hours.
				48	Normal wear of shaft	Belt stops. Alarm sounds in control room. Replace shaft. Downtime 2 to 12 hours
				49	Foreign object rubbing on shaft	Belt stops. Alarm sounds in control room. Replace shaft. Downtime 2 to 12 hours
				50	Heavy impact on shaft	Belt stops. Alarm sounds in control room. Replace shaft. Downtime 2 to 12 hours
				51	Normal wear of head pulley	Belt stops. Alarm sounds in control room. Replace head pulley Downtime 2 to 12 hours
				52	Normal wear of pulley hub	Belt stops. Alarm sounds in control room. Replace head pulley Downtime 2 to 12 hours
				53	Improper installation of pulley hub	Belt stops. Alarm sounds in control room. Replace head pulley Downtime 2 to 12 hours
				54	Improper pulley application	Belt stops. Alarm sounds in control room. Replace head pulley Downtime 2 to 12 hours
				55	Normal wear of lagging	Belt spins out. Alarm sounds in control room. Reinstall lagging on head pulley. Downtime 2 to 12 hours.
				56	Improper installation of lagging on tail pulley	Belt spins out. Alarm sounds in control room. Replace lagging on tail pulley. Downtime 2 to 12 hours.
				57	Normal wear of tail pulley shaft	Belt stops. Alarm sounds in control room. Replace tail pulley shaft. Downtime 2 to 12 hours
				58	Foreign object rubbing on tail pulley shaft	Belt stops. Alarm sounds in control room. Replace tail pulley shaft. Downtime 2 to 12 hours
				59	Heavy impact on tail pulley shaft	Belt stops. Alarm sounds in control room. Replace tail pulley shaft. Downtime 2 to 12 hours
				60	Normal wear of tail pulley	Belt stops. Alarm sounds in control room. Replace tail pulley Downtime 2 to 12 hours
				61	Normal wear of tail pulley hub	Belt stops. Alarm sounds in control room. Replace tail pulley Downtime 2 to 12 hours
				62	Improper installation of tail pulley hub	Belt stops. Alarm sounds in control room. Replace tail pulley Downtime 2 to 12 hours

	Function		Functional Failure		Failure Mode (Failure Cause)	Effects of Failure (What happens when it fails)
				63	Improper tail pulley hub application	Belt stops. Alarm sounds in control room. Replace tail pulley Downtime 2 to 12 hours
				64	Normal wear of lagging on bend pulley	Belt spins out. Alarm sounds in control room. Reinstall lagging on bend pulley. Downtime 2 to 12 hours.
				65	Improper installation of lagging on bend pulley	Belt spins out. Alarm sounds in control room. Replace lagging on bend pulley. Downtime 2 to 12 hours.
				66	Normal wear of shaft	Belt stops. Alarm sounds in control room. Replace bend pulley shaft. Downtime 2 to 12 hours
				67	Foreign object rubbing on shaft	Belt stops. Alarm sounds in control room. Replace bend pulley shaft. Downtime 2 to 12 hours
				68	Heavy impact on shaft	Belt stops. Alarm sounds in control room. Replace bend pulley shaft. Downtime 2 to 12 hours
				69	Normal wear of bend pulley	Belt stops. Alarm sounds in control room. Replace bend pulley Downtime 2 to 12 hours
				70	Normal wear of bend pulley hub	Belt stops. Alarm sounds in control room. Replace bend pulley Downtime 2 to 12 hours
				71	Improper installation of bend pulley hub	Belt stops. Alarm sounds in control room. Replace bend pulley Downtime 2 to 12 hours
				72	Improper bend pulley application	Belt stops. Alarm sounds in control room. Replace bend pulley Downtime 2 to 12 hours
				73	Normal wear on belt	Belt stops. Motor stops. Alarm sounds in control room. Replace belt Downtime 2 to 12 hours
				74	Normal wear of splice	Belt stops. Motor stops. Alarm sounds in control room. Resplice belt Downtime 2 to 12 hours
				75	Normal wear of troughing or return rollers failed	Belt stops. Motor stops. Alarm sounds in control room. Replace troughing or return rollers. Downtime 2 to 12 hours
				76	Excessive buildup on troughing or return rollers	Belt stops. Motor stops. Alarm sounds in control room. Remove buildup from troughing or return rollers. Downtime 2 to 12 hours
				77	Improper application of belt	Belt stops. Motor stops. Alarm sounds in control room. Replace belt Downtime 2 to 12 hours
				78	Foreign object through belt	Belt stops. Motor stops. Alarm sounds in control room. Remove foreign object from belt and repair belt. Downtime 2 to 12 hours
				79	Belt skirting improperly adjusted	Material leaks from belt. Belt must be stopped and skirting re-adjusted or replaced. Downtime 2 to 4 hours
				80	Improper application of belt skirting	Material leaks from belt. Belt must be stopped and skirting re-adjusted or replaced. Downtime 2 to 4 hours
				81	Normal wear of zero speed switch	Loss of electrical interlock. Belt stops. Alarm sounds in control room. Replace zero speed switch. Down time: 1 to 2 hours.
				82	Loss of signal to zero speed switch	Loss of electrical interlock. Belt stops. Alarm sounds in control room. Restore signal to zero speed switch. Down time: 1 to 2 hours.
				83	Improper adjustment of zero speed switch	Loss of electrical interlock. Belt stops. Alarm sounds in control room. Adjust zero speed switch. Down time: 1 to 2 hours.
				84	Normal wear of hopper high level switch	Loss of electrical interlock. Material backs up and stops belt. Replace high level switch. Downtime 1 to 2 hours.
				85	Improper adjustment of hopper high level switch	Loss of electrical interlock. Material backs up and stops belt. Readjust high level switch. Downtime 1 to 2 hours.
				86	Loss of signal of hopper high level switch	Loss of electrical interlock. Material backs up and stops belt. Restore signal to high level switch. Downtime .3 to 1 hour.

	Function		Functional Failure		Failure Mode (Failure Cause)	Effects of Failure (What happens when it fails)
				87	Improper location of hopper high level switch	Material backs up and stops belt. Relocate high level switch. Downtime 1 to 2 hour.
				88	Normal wear of counterweight proximity switch	Belt stops. Alarm sounds in control room. Replace proximity switch. Downtime 1 to 2 hours
				89	Improper adjustment of counterweight proximity switch	Belt stops. Alarm sounds in control room. Readjust proximity switch. Downtime .3 to 1 hours
				90	Loss of signal to proximity switch	Belt stops. Alarm sounds in control room. Restore power to proximity switch. Downtime .3 to 1 hours
				91	Normal wear of trip cord switch	Belt stops. Alarm sounds in control room. Replace trip cord switch. Downtime 1 to 2 hours
				92	Improper adjustment of trip cord switch	Belt stops. Alarm sounds in control room. Readjust trip cord switch. Downtime .3 to 1 hours
				93	Loss of signal to proximity switch	Belt stops. Alarm sounds in control room. Restore signal to trip cord switch. Downtime .3 to 1 hours
				94	**Reference Low Voltage motor FMEA**	
				95	**Reference gear box FMEA**	
				96	**Reference coupling FMEA**	
				97	**Reference chain or belt drive FMEA**	
				98	**Reference vibrating feeder FMEA**	
				99	**Reference belt scale - weigher FMEA**	
				100	**Reference weigh bridge FMEA**	
				101	**Reference weigh belt feeder FMEA**	
				102	**Reference flowmeter bulk material FMEA**	
2	To comply with all Environmental standards	A	Does not comply with Environmental standards	1		

	Function		Functional Failure		Failure Mode (Failure Cause)	Effects of Failure (What happens when it fails)

FAILURE MODE CAUSE ANALYSIS WORKSHEET					ELEMENT Belt Conveyor		FUNC. LOC. BC	Made by Eagle Team	Date 6/18/2001	
					COMPONENT 0		PM CODE PM114003	Reviewed by 0	Date 12/30/1899	
F	**FF**	**FM**	**Functional Failure**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Level 6**	**Level 7**
1	A	1	Does not transfer material from one location to another at a specific rate.	Belt slipping	Improper tension of belt	Belt stretched	Normal wear of belt			
		2				Improper adjustment of belt tension at installation				
		3				Belt tightener failed	Gravity take up failed	Counter weight too light		
		4						Counter weight binds on framework		
		5						Take up assembly sheaves failed		
		6						Take up assembly cable failed		
		7					Hydraulic belt tensioner failed	Normal wear off hydraulic tensioner.		
		8						**Reference hydraulic system FM**		
		9					Mechanical belt tensioner failed	Normal wear of mechanical belt tensioner		
		10						Adjustment screws failed	Normal wear of adjustment screws	
		11							corrosion of adjustment screws	
		12			Excessive moisture on belt	Excessive rain on belt				
		13				Conveyor covers missing on belt conveyor				
		14			Overloaded conditions on belt	Process Station / PLC failed	**Reference Process Station / PLC FM**			
		15				Bindicator failed	Normal wear of bindicator			
		16					Improper adjustment of bindicator			
		17					Loss of signal to bindicator			
		18				Zero speed switch failed	Normal wear of zero speed switch			
		19					Loss of signal to zero speed switch			
		20					Improper adjustment of zero speed switch			
		21				Starvation switch failed	Normal wear of starvation switch.			
		22					Loss of signal to starvation switch			
		23					Improper adjustment of starvation switch			

F	FF	FM	Functional Failure	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
		24					Improper location of starvation switch			
		25				Electrical interlocks failed	Electrical interlocks between vibrating feeder and conveyor failed			
		26					Electrical interlocks between belt scale - weigher and conveyor failed			
		27					Electrical interlocks between weigh bridge and conveyor failed			
		28					Electrical interlocks between weigh belt feeder and conveyor failed			
		29					Electrical interlocks between flowmeter bulk material and conveyor failed			
		30				Excessive material on belt				
		31			Excessive heat on belt	Excessively hot clinker				
		32			Belt out of alignment	Improper installation of splice				
		33				Belt pulleys out of alignment				
		34				Troughing or return rollers out of alignment				
		35				Baffle plates in chutes missing or worn				
		36				Excessive buildup on rollers	Belt scraper failed	Normal wear of belt scraper		
		37					Material spillage on belt			
		38				Tracking switch failed	Normal wear of tracking switch			
		39					Improper adjustment of tracking switch			
		40					Loss of signal from tracking switch			
		41					Improper location of tracking switch			
		42			Foreign object jamming belt	Primary or secondary scraper failed	Normal wear of primary or secondary scraper			
		43			Grease or lubricant on belt					
		44			Bearing failed	**Reference Bearing FM**				
		45			Improper application of belt					

F	FF	FM	Functional Failure	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
		46			Head pulley failed	Lagging failed	Normal wear of lagging			
		47					Improper installation of lagging			
		48				Shaft failed	Normal wear of shaft			
		49					Foreign object rubbing on shaft			
		50					Heavy impact on shaft			
		51				Normal wear of head pulley				
						Bearing failed				
		52				Pulley hub failed	Normal wear of pulley hub			
		53					Improper installation of pulley hub			
		54				Improper pulley application				
		55			Tail pulley failed	Lagging failed	Normal wear of lagging			
		56					Improper installation of lagging			
		57				Shaft failed	Normal wear of shaft			
		58					Foreign object rubbing on shaft			
		59					Heavy impact on shaft			
		60				Normal wear of tail pulley				
						Bearing failed				
		61				Pulley hub failed	Normal wear of pulley hub			
		62					Improper installation of pulley hub			
		63				Improper pulley application				
		64			bend pulley failed	Lagging failed	Normal wear of lagging			
		65					Improper installation of lagging			
		66				Shaft failed	Normal wear of shaft			
		67					Foreign object rubbing on shaft			
		68					Heavy impact on shaft			
		69				Normal wear of bend pulley				
						Bearing failed				
		70				Pulley hub failed	Normal wear of pulley hub			
		71					Improper installation of pulley hub			
		72				Improper pulley application				
		73		Belt failed	Normal wear on belt					
		74			Splice failed	Normal wear of splice				

F	FF	FM	Functional Failure	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
						Improper installation of splice				
		75				Troughing or return rollers failed	Normal wear of troughing or return rollers failed			
		76					Excessive buildup on troughing or return rollers			
							Bearing failed			
						Misalignment of belt				
						Belt scraper failed				
		77			Improper application of belt					
		78			Foreign object through belt					
		79			Belt skirting improperly adjusted					
		80			Improper application of belt skirting					
		81			Safety switch failed	Zero speed switch failed	Normal wear of zero speed switch			
		82					Loss of signal to zero speed switch			
		83					Improper adjustment of zero speed switch			
		84				Hopper high level switch failed	Normal wear of hopper high level switch			
		85					Improper adjustment of hopper high level switch			
		86					Loss of signal of hopper high level switch			
		87					Improper location of hopper high level switch			
		88				Counterweight proximity switch failed	Normal wear of counterweight proximity switch			
		89					Improper adjustment of counterweight proximity switch			
		90					Loss of signal to proximity switch			
		91				Trip cord switch failed	Normal wear of trip cord switch			
		92					Improper adjustment of trip cord switch			
		93					Loss of signal to proximity switch			
		94		Motor failed	**Reference Low Voltage motor FM**					
		95		Gear box failed	**Reference gear box FM**					
		96		Coupling failed	**Reference coupling FM**					

F	FF	FM	Functional Failure	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
		97		Drive system failed	**Reference chain or belt drive FM**					
		98		Vibrating feeder failed	**Reference vibrating feeder FM**					
		99		Belt scale - weigher failed	**Reference belt scale - weigher FM**					
		100		Weigh bridge failed	**Reference weigh bridge FM**					
		101		Weigh belt feeder failed	**Reference weigh belt feeder FM**					
		102		Flowmeter bulk material failed	**Reference flowmeter bulk material FM**					

F	FF	FM	Functional Failure	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7

Information Reference			Evaluation of Consequences				CM H1 S1 O1	SR H2 S2 O2	SD H3 S3 O3	Default Tasks						1=Run 0=Off
F	FF	FM	H	S	E	O	.N1	.N2	.N3	H4	H5	S4	Proposed Task	Frequency	Trade	Man hours	Cond
1	A	1	Y	N	N	Y	Y						Inspect conveyor belting for excessive wear	1 month	mechanical	1	0
1	A	1	Y	N	N	Y	Y						Inspect conveyor belting for excessive wear	1 shift	operation	0.3	1
1	A	2	Y	N	N	Y	Y						Inspect conveyor belting for proper adjustment of tension before start-up	ea repair	mechanical	0.3	0
1	A	3	Y	N	N	Y	Y						Inspect belt for slippage after load is applied.	ea repair	mechanical	0.3	1
1	A	4	Y	N	N	Y	Y						Inspect counter weight for free movement during start up.	ea repair	mechanical	0.3	1
1	A	5	Y	N	N	Y	Y						Inspect the take up assembly sheaves for excessive wear	1 month	mechanical	0.5	0
1	A	6	Y	N	N	Y	Y						Inspect the take up assembly cables for excessive wear	1 month	mechanical	0.5	0
1	A	7	Y	N	N	Y	Y						Inspect the hydraulic tensioner for excessive wear	1 month	mechanical	0.5	0
1	A	8											**Reference hydraulic system RCM**				
1	A	9	Y	N	N	Y	Y						Inspect the mechanical tensioner for excessive wear	1 month	mechanical	0.5	0
1	A	10	Y	N	N	Y	Y						Inspect the adjusting screws for excessive wear	1 month	mechanical	0.3	0
1	A	11	Y	N	N	Y	Y						Inspect the adjusting screws for corrosion	1 month	mechanical	0.3	0
1	A	12											Do not run conveyor belt during periods of excessive rain				
1	A	13	Y	N	N	Y	Y						Inspect conveyor frame for missing covers	1 shift	operation	0.3	1
1	A	14											**Reference Process Station / PLC RCM**				
1	A	15	Y	N	N	Y	Y						Test bindicator for proper operation	6 month	instrumentation	1	0
1	A	16	Y	N	N	Y	Y						Test bindicator for proper operation	6 month	instrumentation	1	0
1	A	17	Y	N	N	Y	Y						Test bindicator by simulation for loss of signal	6 month	instrumentation	0.3	0
1	A	18	Y	N	N	Y	Y						Test zero speed switch for proper operation	6 month	instrumentation	0.3	0
1	A	19	Y	N	N	Y	Y						Test zero speed switch by simulation for loss of signal	6 month	instrumentation	0.3	0
1	A	20	Y	N	N	Y	Y						Test zero speed switch for proper operation	6 month	instrumentation	0.3	0
1	A	21	Y	N	N	Y	Y						Test starvation switch for proper operation	6 month	instrumentation	0.3	0
1	A	22	Y	N	N	Y	Y						Test starvation switch by simulation for loss of signal	6 month	instrumentation	0.3	0
1	A	23	Y	N	N	Y	Y						Test starvation switch for proper operation	6 month	instrumentation	0.3	0
1	A	24	Y	N	N	Y	Y						Inspect the starvation switch for proper location during installation	ea repair	instrumentation	0.3	0
1	A	25	Y	N	N	Y	Y						Test electrical interlocks by simulation between vibrating feeder and conveyor	6 month	instrumentation	0.3	0
1	A	26	Y	N	N	Y	Y						Test electrical interlocks by simulation between belt scale - weigher and conveyor	6 month	instrumentation	0.3	0
1	A	27	Y	N	N	Y	Y						Test electrical interlocks by simulation between weigh bridge and conveyor	6 month	instrumentation	0.3	0
1	A	28	Y	N	N	Y	Y						Test electrical interlocks by simulation between weigh belt feeder and conveyor	6 month	instrumentation	0.3	0
1	A	29	Y	N	N	Y	Y						Test electrical interlocks by simulation between flowmeter bulk material and conveyor	6 month	instrumentation	0.3	0
1	A	30	Y	N	N	Y	Y						Monitor amperage reading on conveyor for excessive load	1 hour	operation	0.3	1
1	A	31	Y	N	N	Y	Y						Monitor material on conveyor for excessive temperature	1 hour	operation	0.3	1
1	A	32	Y	N	N	Y	Y						Inspect splice for proper installation during installation	ea repair	mechanical	0.3	0
1	A	33	Y	N	N	Y	Y						Inspect belt pulleys for proper alignment	1 month	mechanical	0.5	0
1	A	34	Y	N	N	Y	Y						Inspect troughing and return rollers for proper alignment	1 month	mechanical	2	0
1	A	35	Y	N	N	Y	Y						Inspect interior of chutes for missing or excessively worn baffle plates	1 month	mechanical	0.3	0
1	A	36	Y	N	N	Y	Y						Inspect belt scrapers for excessive wear	1 shift	operation	0.3	0
1	A	37	Y	N	N	Y	Y						Inspect conveyor system for sources of material spillage onto belting.	1 shift	operation	0.5	0
1	A	38	Y	N	N	Y	Y						Test the tracking switches for proper operation	1 month	instrumentation	0.3	0
1	A	39	Y	N	N	Y	Y						Test the tracking switches for proper adjustment	1 month	instrumentation	0.3	0
1	A	40	Y	N	N	Y	Y						Test tracking switches by simulation for loss of signal	1 month	instrumentation	0.3	0
1	A	41	Y	N	N	Y	Y						Inspect the tracking switches for proper location during installation	ea repair	mechanical	0.3	0
1	A	42	Y	N	N	Y	Y						Inspect primary and secondary scrapers for excessive wear	1 shift	operation	0.3	0
1	A	43	Y	N	N	Y	Y						Inspect traction side of conveyor belting for spilled oil or grease	1 shift	operation	0.3	0
1	A	44											**Reference Bearing RCM**				
1	A	45	Y	N	N	Y	Y						Inspect conveyor belting for proper application before installation	ea repair	mechanical	0.3	1

Information Reference			Evaluation of Consequences				CM	SR	SD	Default Tasks						1=Run 0=Off
							H1	H2	H3							
							S1	S2	S3							
							O1	O2	O3							
F	FF	FM	H	S	E	O	.N1	.N2	.N3	H4	H5	S4	Proposed Task	Frequency	Trade	Man hours	Cond
1	A	46	Y	N	N	Y	Y						Inspect all pulleys for excessive wear of lagging	1 month	mechanical	0.3	0
1	A	47	Y	N	N	Y	Y						Inspect pulley for proper installation of lagging during installation	ea repair	mechanical	0.3	0
1	A	48	Y	N	N	Y	Y						Inspect pulley shafts for excessive wear	1 month	mechanical	0.5	0
1	A	49	Y	N	N	Y	Y						Inspect pulley shafts for foreign object creating excessive wear	1 shift	operation	0.3	0
1	A	50	Y	N	N	Y	N	N	N				Run to failure				
1	A	51	Y	N	N	Y	Y						Inspect head pulley for excessive wear	1 month	mechanical	0.3	0
1	A	52	Y	N	N	Y	Y						Inspect head pulley hubs for excessive wear	1 month	mechanical	0.3	0
1	A	53	Y	N	N	Y	Y						Inspect head pulley hubs for proper installation during installation	ea repair	mechanical	0.3	0
1	A	54	Y	N	N	Y	Y						Inspect head pulley hubs for proper application before installation	ea repair	mechanical	0.3	0
1	A	55	Y	N	N	Y	Y						Inspect all pulleys for excessive wear of lagging	1 month	mechanical	0.3	0
1	A	56	Y	N	N	Y	Y						Inspect pulley for proper installation of lagging during installation	ea repair	mechanical	0.3	0
1	A	57	Y	N	N	Y	Y						Inspect pulley shafts for excessive wear	1 month	mechanical	0.5	0
1	A	58	Y	N	N	Y	Y						Inspect pulley shafts for foreign object creating excessive wear	1 shift	operation	0.3	0
1	A	59	Y	N	N	Y	N	N	N				Run to failure				
1	A	60	Y	N	N	Y	Y						Inspect tail pulley for excessive wear	1 month	mechanical	0.3	0
1	A	61	Y	N	N	Y	Y						Inspect tail pulley hubs for excessive wear	1 month	mechanical	0.3	0
1	A	62	Y	N	N	Y	Y						Inspect tail pulley hubs for proper installation during installation	ea repair	mechanical	0.3	0
1	A	63	Y	N	N	Y	Y						Inspect tail pulley hubs for proper application before installation	ea repair	mechanical	0.3	0
1	A	64	Y	N	N	Y	Y						Inspect all pulleys for excessive wear of lagging	1 month	mechanical	0.3	0
1	A	65	Y	N	N	Y	Y						Inspect pulley for proper installation of lagging during installation	ea repair	mechanical	0.3	0
1	A	66	Y	N	N	Y	Y						Inspect pulley shafts for excessive wear	1 month	mechanical	0.5	0
1	A	67	Y	N	N	Y	Y						Inspect pulley shafts for foreign object creating excessive wear	1 shift	operation	0.3	0
1	A	68	Y	N	N	Y	N	N	N				Run to failure				
1	A	69	Y	N	N	Y	Y						Inspect bend pulley for excessive wear	1 month	mechanical	0.3	0
1	A	70	Y	N	N	Y	Y						Inspect bend pulley hubs for excessive wear	1 month	mechanical	0.3	0
1	A	71	Y	N	N	Y	Y						Inspect bend pulley hubs for proper installation during installation	ea repair	mechanical	0.3	0
1	A	72	Y	N	N	Y	Y						Inspect bend pulley hubs for proper application before installation	ea repair	mechanical	0.3	0
1	A	73	Y	N	N	Y	Y						Inspect conveyor belting for excessive wear	1 month	mechanical	0.3	0
1	A	74	Y	N	N	Y	Y						Inspect conveyor belt splice for excessive wear	1 shift	operation	0.3	1
1	A	75	Y	N	N	Y	Y						Inspect troughing and return rollers for excessive wear	1 shift	operation	0.3	1
1	A	75	Y	N	N	Y	Y						Inspect troughing and return rollers for excessive wear	1 month	mechanical	1	0
1	A	76	Y	N	N	Y	Y						Inspect troughing and return rollers for excessive build up	1 shift	operation	0.5	1
1	A	77	Y	N	N	Y	Y						Inspect conveyor belting for proper application before installation	ea repair	mechanical	0.3	1
1	A	78	Y	N	N	Y	N	N	N				Run to failure				
1	A	79	Y	N	N	Y	Y						Inspect belt skirting for proper adjustment	1 shift	operation	0.3	1
1	A	80	Y	N	N	Y	Y						Inspect belt skirting for proper application before installation	ea repair	mechanical	0.3	1
1	A	81	Y	N	N	Y	Y						Test zero speed switch for proper operation	6 month	instrumentation	0.3	0
1	A	82	Y	N	N	Y	Y						Test zero speed switch by simulation for loss of signal	1 month	instrumentation	0.3	0
1	A	83	Y	N	N	Y	Y						Test the zero speed switch for proper adjustment	1 month	instrumentation	0.3	0
1	A	84	Y	N	N	Y	Y						Test the hopper high level switch for proper operation	1 month	instrumentation	0.3	0
1	A	85	Y	N	N	Y	Y						Inspect the hopper high level switch for proper adjustment	1 month	instrumentation	0.3	0
1	A	86	Y	N	N	Y	Y						Test hopper high level switch by simulation for loss of signal	1 month	instrumentation	0.3	0
1	A	87	Y	N	N	Y	Y						Inspect the hopper high level switch for proper location during installation	ea repair	mechanical	0.3	0
1	A	88	Y	N	N	Y	Y						Test the counter weight proximity switch for proper operation	1 month	instrumentation	0.3	0
1	A	89	Y	N	N	Y	Y						Test the counter weight proximity switch for proper adjustment.	1 month	instrumentation	0.3	0
1	A	90	Y	N	N	Y	Y						Test counter weight proximity switch by simulation for loss of signal	1 month	instrumentation	0.3	0
1	A	91	Y	N	N	Y	Y						Test the trip cord switch for proper operation	1 month	instrumentation	0.3	0
1	A	92	Y	N	N	Y	Y						Test the trip cord switch for proper adjustment	1 month	instrumentation	0.3	0
1	A	93	Y	N	N	Y	Y						Test proximity switch by simulation for loss of signal	1 month	instrumentation	0.3	0
1	A	94											**Reference Low Voltage motor RCM**				
1	A	95											**Reference gear box RCM**				
1	A	96											**Reference coupling RCM**				

Information Reference			Evaluation of Consequences				CM H1 S1 O1	SR H2 S2 O2	SD H3 S3 O3	Default Tasks							1=Run 0=Off
F	FF	FM	H	S	E	O	.N1	.N2	.N3	H4	H5	S4	Proposed Task	Frequency	Trade	Man hours	Cond
1	A	97											Reference chain or belt drive RCM				
1	A	98											Reference vibrating feeder RCM				
1	A	99											Reference belt scale - weigher RCM				
1	A	100											Reference weigh bridge RCM				
1	A	101											Reference weigh belt feeder RCM				
1	A	102											Reference flowmeter bulk material RCM				



