



ReliaBuilder® Risk Ranking Software

Failure Evaluation

Unit: Functions: 01 Feed System - Provide feed to unit at rates of 50 MDD and 75% (Feed Surge Churn, Heater Charge Pump, Prohibiter, Heater)

Equipment ID: 100P-000A

Description: HEATER CHARGE PUMP

Equipment Type: MP-0EN CENTRIFUGAL PUMP

Occurr	Howev?	Mode	Description
EXT			EXTERNALLY LEAKS
FTR			FALS TO RUN
INF			INTERNAL FAILURE

Occurr	Effct	Description	Dimension	Score
EN-REL		RELEASES OF HAZARDOUS MATERIAL TO THE ATMOSPHERE	Environmental	4
OP-EV		EVIDENT LOSS OF REDUNDANCY	Safety	3
OP-RES		OPERATOR RESPONSE REQUIRED TO MITIGATE FAILURE EFFECTS	Production	2
SA-UNS		RESULTS IN UNSAFE CONDITION		

Overall Score: 28

Critical Basis: ENV FAILURE RESULTS IN INTOLERABLE ENVIRONMENTAL IMPACT

Drawing #: 100P001

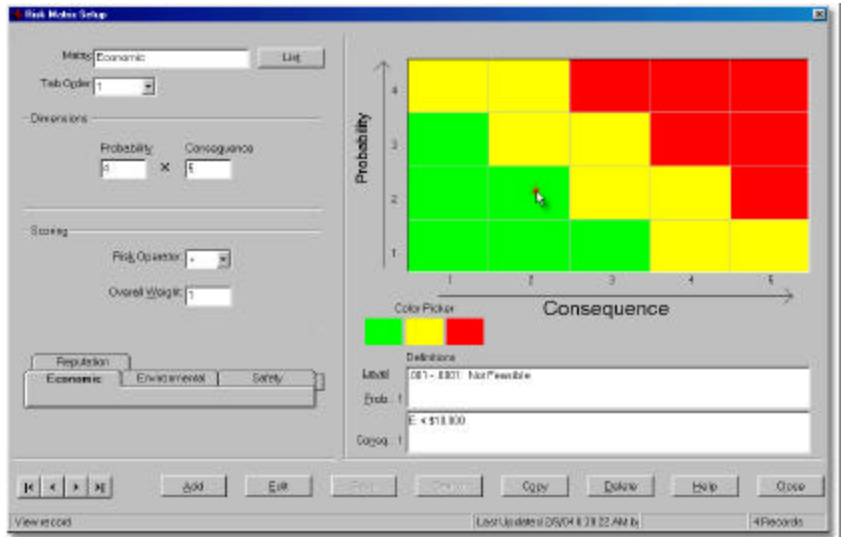
Comments: Heater Charge Pump - Pumps feed from Feed Surge Churn D-1 to Heater P-1. Run one of two pumps. Pump can be manually isolated and bypassed. External leaks and internal hydrocarbon. Failure to run is evident or low total flow alarm FAL-001. Dedicated tube of system. Between bearing pump. API 684 3263, 500 HP motor.

- Operational Objectives, Functions, and Criticality Evaluation via Failure Modes and Effects Analysis
- Smart lookups by Equipment Type for potential Failure Modes

- User-Defined Risk Matrices
- Point and Click Scoring
- Assets scored by Highest Individual and Combined Score
- Provides prioritization for Planning and Scheduling, and Emergent Work



- **Matrices are defined by users to match corporate standards**
- **Matrices can be weighted**
- **Risk scoring methods are also user-defined**



Risk Ranking Detail - by Equipment Type

Plant: ART ReliaBuilder RCM Demo
System: Demo System

Equipment ID:	HEATER CHARGE PUMP					
Equipment Type:	MP-CEN	CENTRIFUGAL PUMP				
Function:	D1	Feed Systems - Provide feed to unit at rate of 50 MOPD and 700 F. (Feed Surge Drum, Heater Charge Pumps, Pro				
Criticality:	Critical					
Failure Modes:	Code:	Description:				
	GCT	EXTERNALLY LEAKS				
	FTB	FAIL TO RUN				
	INT	INTERNAL FAILURE				
		Critical? Hidden?				
		No No				
		No No				
		No No				
Risk Matrix:	Probability	Consequence	Ranked Score	Matrix Weight	Composite	Ratio
Economic	4	+	5	5.00	1.0000	5.00
Environmental	4	+	4	8.00	1.0000	8.00
Safety	4	+	4	8.00	1.0000	8.00
Reputation	4	+	3	7.00	1.0000	7.00
			High Score:	8.00	Overall Score:	

- **Flexible Reporting Module, prints to paper or other electronic formats (.doc, .xls, etc.)**
- **Multiple filtering & sorting criteria**
- **Results can be exported for use in other systems**

- **Results of Risk-Ranking can be imported into ART's ReliaBuilder-RCM software**

ART is a full service Reliability Consulting and Technology provider, specializing in the implementation of integrated reliability management solutions.

- * **Reliability Centered Maintenance**
- * **Maintenance & Reliability Assessments**
- * **Root Cause Failure Analysis**

- * **Reliability / Availability Modeling**
- * **Operator Surveillance Technology**
- * **Computer Based Training (CBT)**



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