TOP REALIZING IMPACT TOGETHER

IMPROVE RELIABILIY OF ASSETS THROUGH EQUIPMENT CRITICALITY ANALYSIS

A MAJOR PART OF SUCCESS AND PREVENTION OF DOWNTIME COSTS LIES IN PRO-ACTIVE ASSET MANAGEMENT. AN EQUIPMENT CRITICALITY ANALYSIS SHOWS WHICH EQUIPMENT IS CRITICAL IN TERMS OF SUSTAINABLE OPERATION, PRODUCTION COSTS, SAFETY, PROTECTION OF THE ENVIRONMENT AND PREVENTION OF LEGAL OR CLASS LIMITATIONS.

INTRODUCTION

Pro-active asset management is an integral part of a larger successful business process. The Equipment Criticality Analysis focusses on the maintenance of physical asset reliability.

Apart from that, an Equipment Criticality Analysis focusses on those parts of the asset, which are critical in terms of safety, environment, process / operation or legal/ class restrictions.

This is translated to effective preventive maintenance processes and the spare part policy.

"I CAN PREDICT THINGS. I CAN IMPROVE THE UPTIME AND THE RELIABILITY. I CAN INTERVENE AND CAUSE A BETTER OUTCOME BEFORE THERE'S A PROBLEM"

Michael Dell - Founder Dell Computers

PROCESS

Step 1: Build the mother list

Elaboration of the mother list per asset, containing all physical equipment, systems, etc. Items will be numbered with an unique ID. The list can be derived from existing maintenance systems like Star, Marad, Maximo, etc.

Step 2: Assess criticality per item

Assess the degree of criticality by using a proven TOP-method, looking at:

- Consequence on safety;
- Consequence on environment;
- Risk failure starting up;
- Risk failure in operation;
- Level Emergency stop;
- Effect on production;
- Complexity;
- Costs repair/ replacement.

Step 3: Implement outcome in maintenance system

Provision of a procedure, describing the chosen method and setup in order to be able to perform and review the assessment at a later stage.

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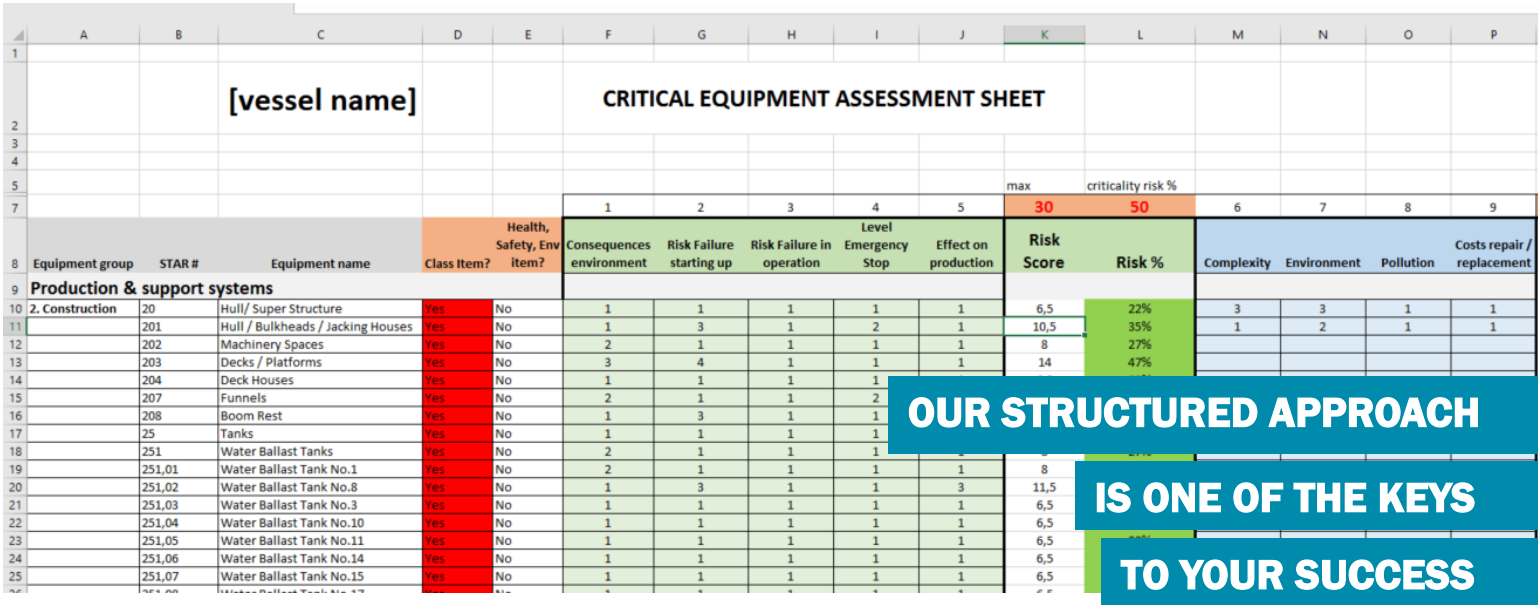

[vessel name]

CRITICAL EQUIPMENT ASSESSMENT SHEET

Equipment group	STAR #	Equipment name	Class Item?	Health, Safety, Env item?	1 Consequences environment	2 Risk Failure starting up	3 Risk Failure in operation	4 Level Emergency Stop	5 Effect on production	Risk Score (max 30)	Risk % (criticality risk % 50)	6 Complexity	7 Environment	8 Pollution	9 Costs repair / replacement
Production & support systems															
2. Construction	20	Hull/ Super Structure	Yes	No	1	1	1	1	1	6,5	22%	3	3	1	1
	201	Hull / Bulkheads / Jacking Houses	Yes	No	1	3	1	2	1	10,5	35%	1	2	1	1
	202	Machinery Spaces	Yes	No	2	1	1	1	1	8	27%				
	203	Decks / Platforms	Yes	No	3	4	1	1	1	14	47%				
	204	Deck Houses	Yes	No	1	1	1	1							
	207	Funnels	Yes	No	2	1	1	2							
	208	Boom Rest	Yes	No	1	3	1	1							
	25	Tanks	Yes	No	1	1	1	1							
	251	Water Ballast Tanks	Yes	No	2	1	1	1							
	251,01	Water Ballast Tank No.1	Yes	No	2	1	1	1	1	8					
	251,02	Water Ballast Tank No.8	Yes	No	1	3	1	1	3	11,5					
	251,03	Water Ballast Tank No.3	Yes	No	1	1	1	1	1	6,5					
	251,04	Water Ballast Tank No.10	Yes	No	1	1	1	1	1	6,5					
	251,05	Water Ballast Tank No.11	Yes	No	1	1	1	1	1	6,5					
	251,06	Water Ballast Tank No.14	Yes	No	1	1	1	1	1	6,5					
	251,07	Water Ballast Tank No.15	Yes	No	1	1	1	1	1	6,5					

OUR STRUCTURED APPROACH IS ONE OF THE KEYS TO YOUR SUCCESS

BENEFITS

1. Compliance with legal requirements and codes (ISM/ ISO 55000);
2. Inherent process safety with reduced capital and operational costs;
3. To the point and realistic output for preventive maintenance procedures;
4. Direct input for spare part policy, prevention of too much spares in store or critical spare not available in time;
5. Minimizing of problems during commissioning and early operation;
6. Opportunity of sharing knowledge and decision making and learning across engineering functions.

INTERESTED?

We are happy to tell you more and provide you with a demo, examples and an offer.

Please contact us at:

+31 (0)10 820 9868 or info@top-advies.nl

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