



Hazardous activity identification process

Prepared by	Number	Date
HSE section	HMS/RV2601E	22/03/2011
Approved by	Page	Replaces
The Rector		01/12/2006



Unit: (Department)

Mechanical and Industrial Engineering

Date: 15.01.2019

Line manager:

Torgeir Welo

Participants in the identification process (incl. function):

Student and Nuria Espallargas

(supervisor, student, co-supervisor, others)

Short description of the main activity/main process:

Master project for student Connie Iren Senland Fjelle.

Is the project work purely theoretical? (YES/NO)

NO

*Answer "YES" implies that supervisor is assured that no activities**requiring risk assessment are involved in the work. If YES, briefly describe the activities below. The risk assessment form need not be filled out.*

Signatures:

Responsible supervisor:

Student:

ID nr.	Activity/process	Responsible person	Existing documentation	Existing safety measures	Laws, regulations etc.	Comment
1	Corrosion experiments	Student	HMS handbook		Arbeidsmiljøloven	
2	Dry tribotesting	Student	HMS handbook		Arbeidsmiljøloven	
3	Tribotesting in seawater	Student	HMS handbook		Arbeidsmiljøloven	
4	Characterization by using IFM, SEM, EDS and light microscope	Student	HMS handbook		Arbeidsmiljøloven	
5	Solder wire on SDSS sample	Student	HMS handbook		Arbeidsmiljøloven	
6	Cutting of SDSS samples	Student	HMS handbook		Arbeidsmiljøloven	



Risk assessment

HMS/KKS

Prepared by	Number	Date
HSE section	HMS/RY2603E	04/02/2011
Approved by	Page	Replaces
The Rector		03/02/2010



Unit: (Institute)

Line manager:

Participants in the identification process (incl. function):

(supervisor, student, co-supervisor, others)

Risk assessment of:

Signatures:

Responsible supervisor:

Master project for student Connie Iren Senland Fjelle.

Student

Mechanical and Industrial Engineering

Torgeir Welo

Student and Nuria Espallargas

Date: 15.01.2019

ID nr.	Activity from the identification process form	Potential undesirable incident/strain	Likelihood:				Consequence:			Risk value (human)	Comments/status Suggested measures
			(1-5)	Human (A-E)	Environment (A-E)	Economy /material (A-E)					
1	Corrosion experiments	Current	2	B	A	B				B2	
2	Dry tribotesting	Hair in the tribometer during movement, damage of equipment	2	B	A	B				B2	
3	Tribotesting in seawater	Damage of equipment	2	A	A	B				A2	
4	Characterization by using IFM, SEM, EDS and light microscope	Damage of equipment	2	A	A	D				A2	
5	Solder wire on SDSs sample	Damage of equipment, burn accident	2	B	A	A				B2	
6	Cutting of SDSs samples	Damage of equipment	1	A	A	A				A1	

Risk value = Likelihood (1, 2, ...) x consequence (A, B, ...). Risk value A1 means very low risk. Risk value E5 means very large and serious risk

Likelihood		Consequence				
Value	Criteria	Grading		Human	Environment	Economy/material
1	Minimal: Once every 50 year or less	E	Very critical	May produce fatality/ies	Very prolonged, non-reversible damage	Shutdown of work > 1 year.
2	Low: Once every 10 years or less	D	Critical	Permanent injury, may produce serious health damage/sickness	Prolonged damage. Long recovery time.	Shutdown of work 0.5-1 year.
3	Medium: Once a year or less	C	Dangerous	Serious personal injury	Minor damage. Long recovery time	Shutdown of work < 1 month
4	High: Once a month or less	B	Relatively safe	Injury that requires medical treatment	Minor damage. Short recovery time	Shutdown of work < 1 week
5	Very high: Once a week	A	Safe	Injury that requires first aid	Insignificant damage. Short recovery time	Shutdown of work < 1 day

MATRIX FOR RISK ASSESSMENT

CONSEQUENCE	Very critical	E1	E2	E3	E4	E5
	Critical	D1	D2	D3	D4	D5
	Dangerous	C1	C2	C3	C4	C5
	Relatively safe	B1	B2	B3	B4	B5
	Safe	A1	A2	A3	A4	A5
		Minimal	Low	Medium	High	Very high
LIKELIHOOD						

Explanation of the colors used in the risk matrix.

Color	Description
Red	Unacceptable risk. Safety measures must be implemented.
Yellow	Measures to reduce risk shall be considered.
Green	Acceptable risk.