



VERIFICATION, PLANNING AND DOCUMENTATION OF SAFE MATERIAL HANDLING (ACCORDING TO NORSOK STANDARDS)

North Sea Offshore Crane and Lifting Conference
Stavanger 25 April.

Eivind Nordeide/ Jan Erik Devold

International player



Employees: 275
Turnover: 72 mill USD

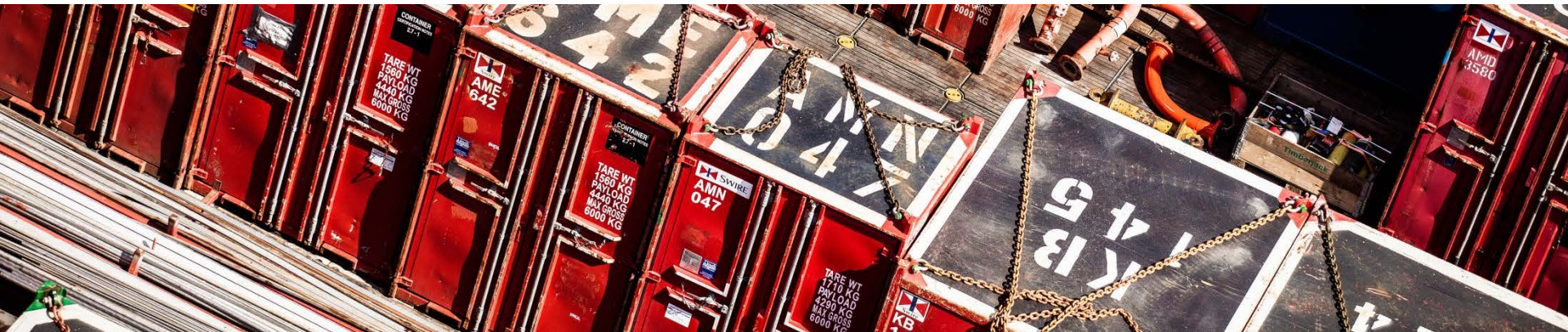
Presentation key- points

- Helping clients to fulfil NORSOK R-003 and R-002 requirements in AoC processes.
- Better HSE when using the material Handling Plan in daily operation



Adding value

- More reliable operations
- Improve health, safety and environment standards
- Avoid downtime
- Ensure compliance with national laws and regulations
- Avoid damage on structure
- Increase technical integrity



- *Good material handling planning will reduce down time to the operation and result in higher efficiency and margins.*

Requirements (Norway)

- According to the Petroleum Safety Authority Norway (PSA) all mobile installations on the Norwegian continental shelf should follow the NORSOK standards for material handling.



Definition of “should” (Norsok):

The term “should” means that other solutions can be chosen than the one recommended in the standard. It shall be documented that the alternative solution provides an equivalent level of safety.

Material handling- phases

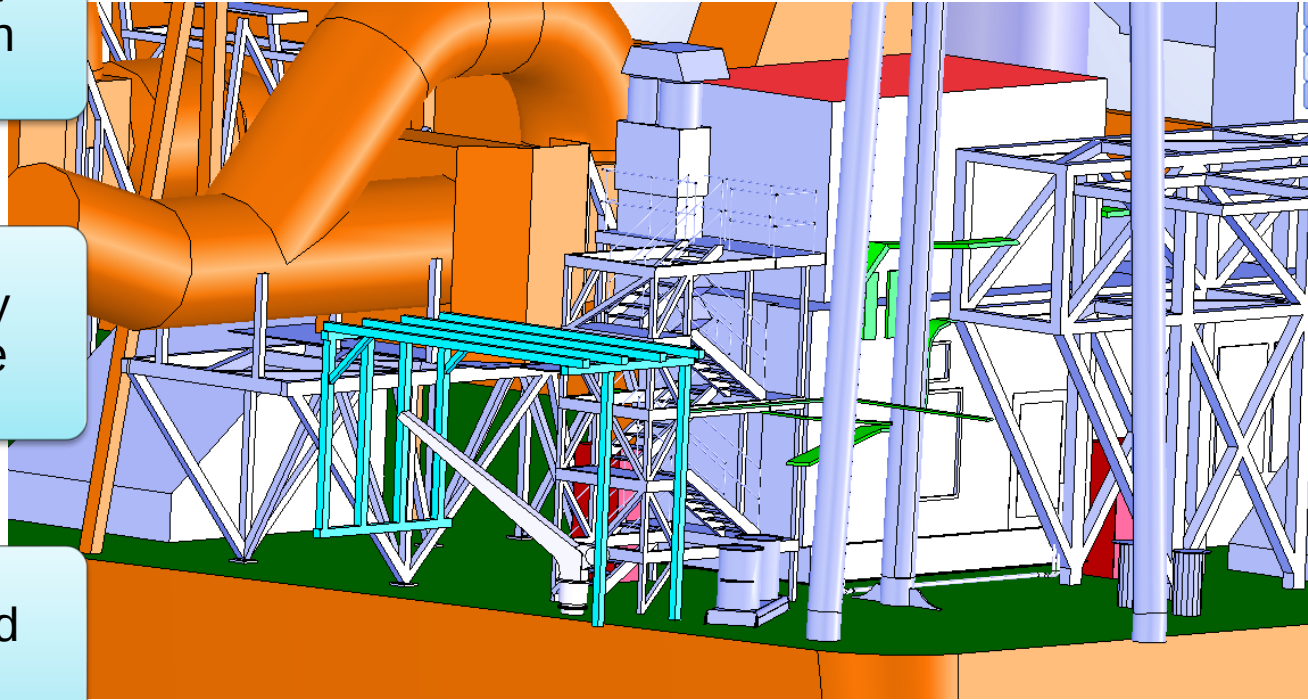


Design

Document
preparation

Regulatory
assistance

Review and
update



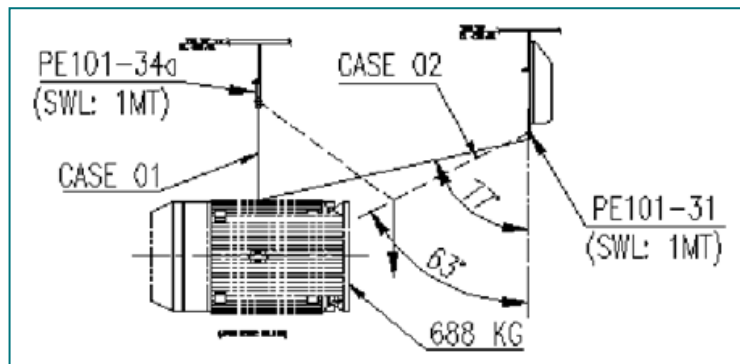
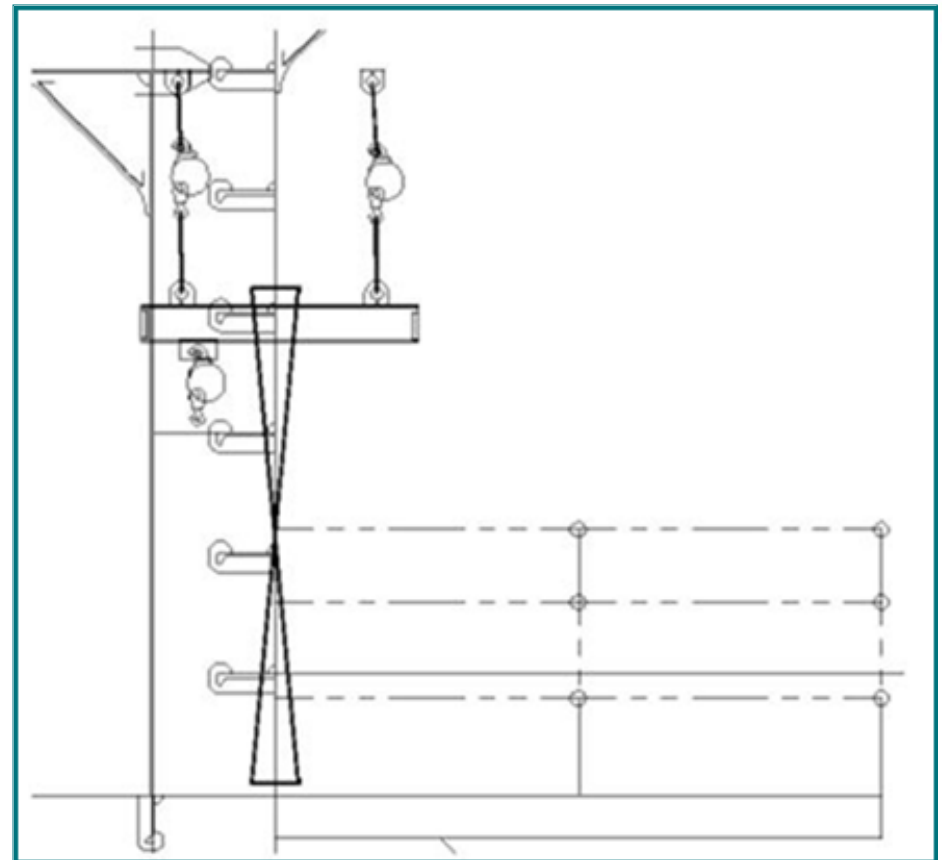
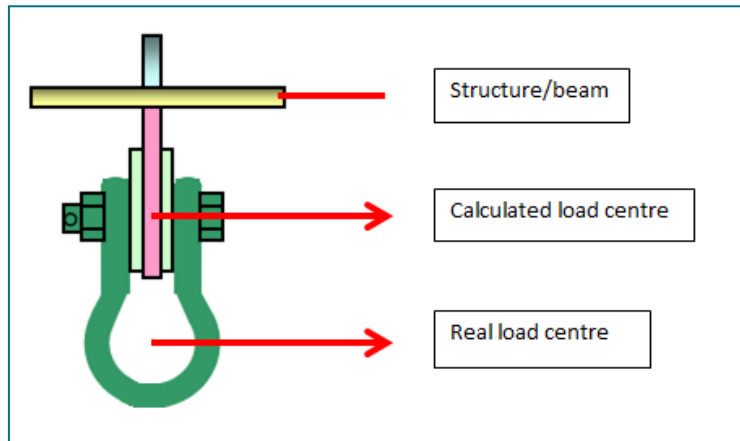
Examples

- “ Weight up to 500 kg portable hoisting equipment (generally a manual chain block) and dedicated padeye will be used. Padeyes will be properly designed, certified and welded where considered necessary. Where lifting facilities is necessary and padeyes are not fitted, ***beam clamps to be used.***
- “ Parts of equipment with a mass larger than 1T and a removal frequency above 3 years are considered permanent and ***no specific lifting or handling equipment is considered.***
- “ In case of the size of load is bigger than the available access routes, alternative material handling arrangements ***shall be looked into.***

Examples



Examples



Construction

Verification on yard

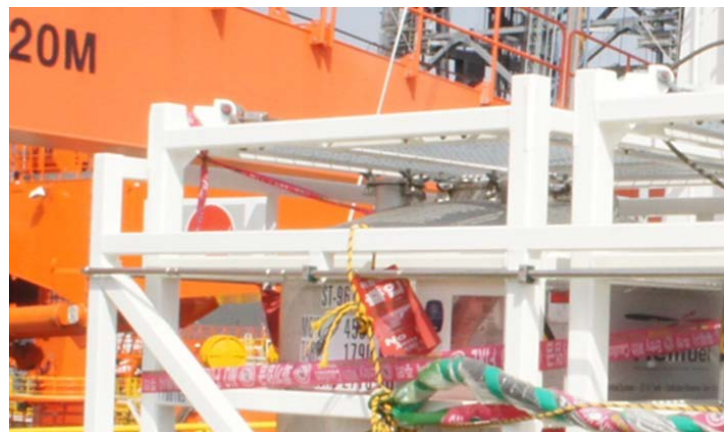
Verification of
subcontractor delivery

Verification of proposed
solutions from yard

Propose solutions to
identified gaps



Examples



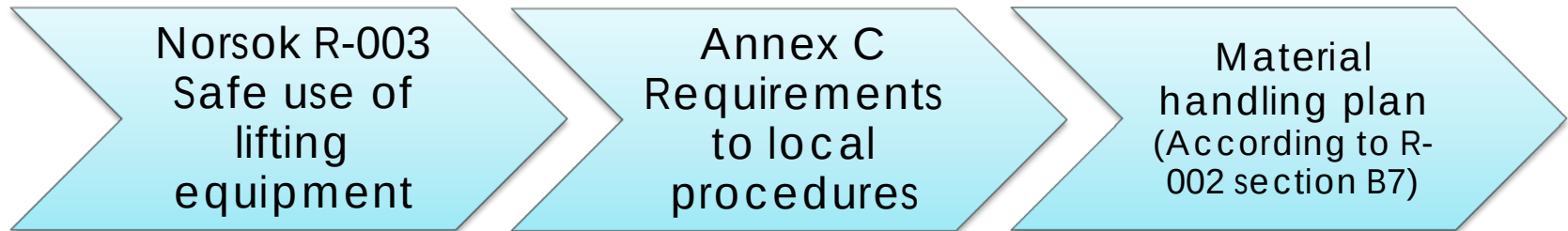
Examples



Operation (Material handling plan)

Why material handling plan:

Requirements:



Or/ and:

- Better planning.
- More efficient and better lifting.
- Safe lifting.
- Reduce down time.

Operation (Material handling plan)

Norsok R-002

B.7 Material handling plan

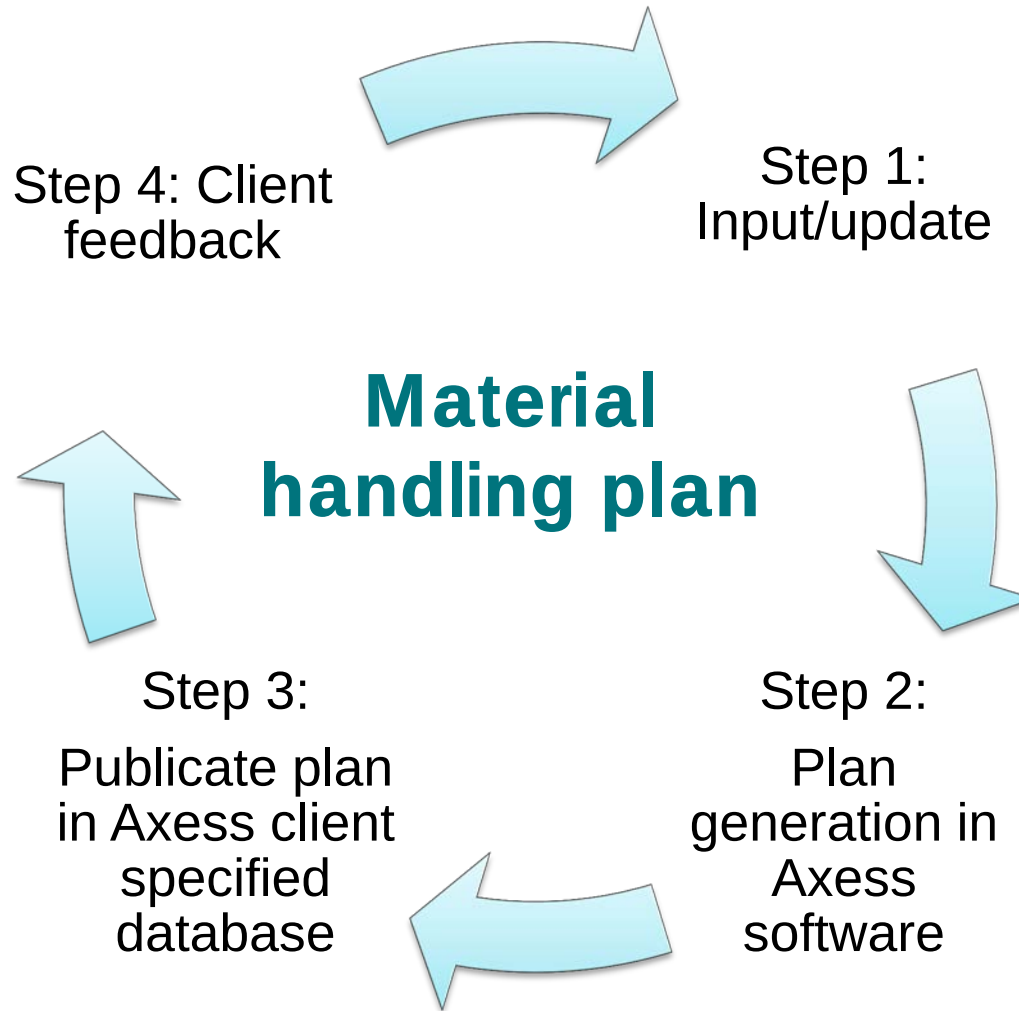
The material handling philosophy, in the final as-built version, shall be included in the material handling plan

Norsok R-002

B.2 General requirements

Modification projects shall update existing philosophies, studies and plans, if relevant.

Operation



Operation (Material handling plan)

Presentation and update:
The Axxess way.

Documents

Main handling plan: [Download](#)
User manual: [Download](#)

Search for equipment by tag number

Tag No. [Search](#)

Lookup equipment by type, system or room/area code

Equipment type

Equipment system

Room/area code

[Search](#)

Tag no.:	844-EM-003-A
Item type:	MOTOR
Item description:	
Size/rating:	/
System:	
Room/area:	
Compartment code:	
Location (Z, X, Y)	400, 2900, 6900
Weight (kg):	35
Height (m):	330, 330,
Vendor:	ABB
Vendor references	
Revision no:	
Revision date:	

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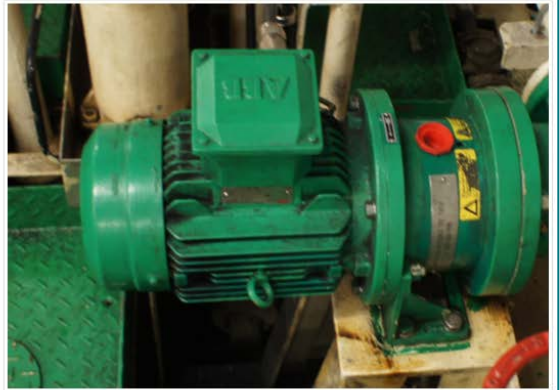
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4/22/2013 10:23:10 AM By jdevold For user comments

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Plan according to Norsok
R-002 requirements

Material handling database

- o Online material handling plans
- o Developed to gather and present material handling information
- o Documents easily searchable
- o Method for feedback and comments directly in database
- o Excellent reporting tool



Work safe, play safe



The background is a solid teal color. A white horizontal line and a white diagonal line intersect at a small white circle. A dashed white line also extends from the intersection point towards the bottom right corner.

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