Introducing our FREE Dropped Object Software

DROPS Forum
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Presentation Overview

- Who we are
- Subsea Dropped Objects
- Recommended Practice
- Live Demonstration

Who we are

- Founded 2015
- We are passionate about our software
- We want to make understanding risk straightforward for our customers
- Offer FREE Dropped Object Risk Assessment Software

Subsea Dropped Objects

- Suspended loads dropped into sea may damage subsea infrastructure, including pipelines
- Considered a Major Accident Hazard (MAH)
- Requires Risk Assessment to demonstrate risks have been reduced to ALARP
- Further risk reduction measures may be required

Subsea Dropped Objects

- Further risk reduction measures include, but are not limited to:
  - Exclusion zones for lifting being put in place
  - Limits imposed on max. load lifted
  - Reduction in number of lifts performed
- For new builds:
  - Separation between crane and pipeline
  - Burial of pipeline
  - Protection of pipeline e.g. rock dumping, mattresses
  - Install Subsea Isolation Valve (SSIV)

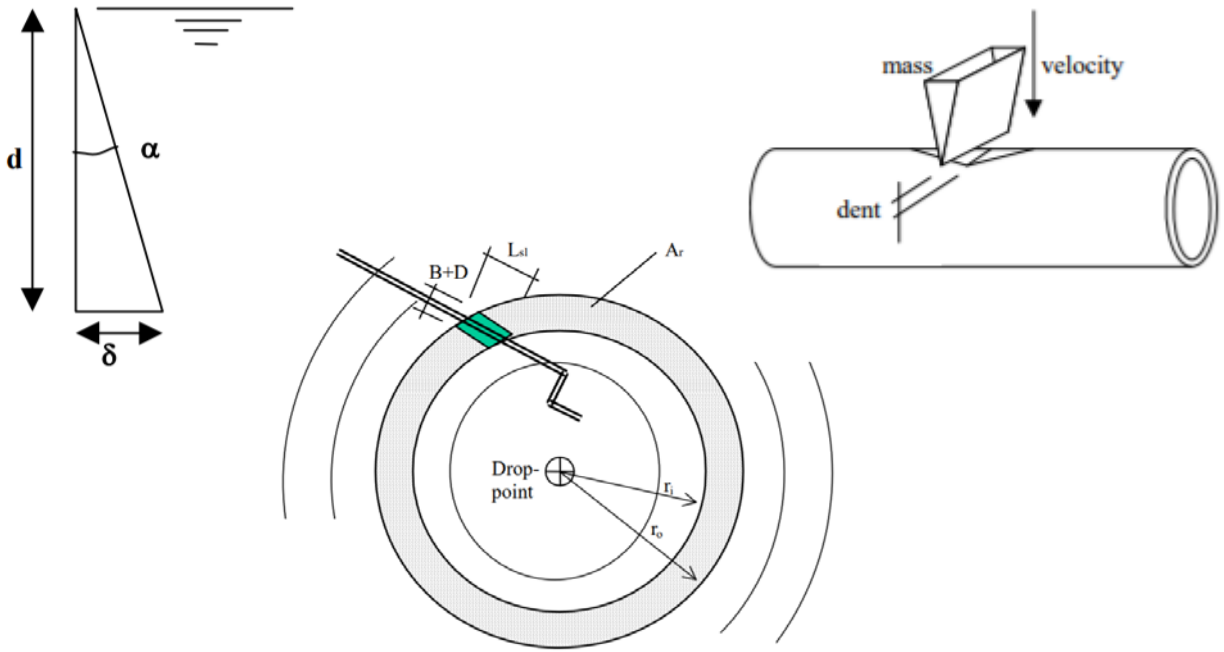
Recommended Practice

- DNV-RP-F107 ‘Risk Assessment of Pipeline Protection’
- Outlines methodology for carrying out a Quantitative Risk Assessment (QRA) of damaging a subsea pipeline
- Used widely throughout industry

- Our software has been validated with the techniques within this document

Recommended Practice

- DNV-RP-F107 uses calculations to determine:
  - Probability of impact from dropped load
  - Risk of hydrocarbons being released



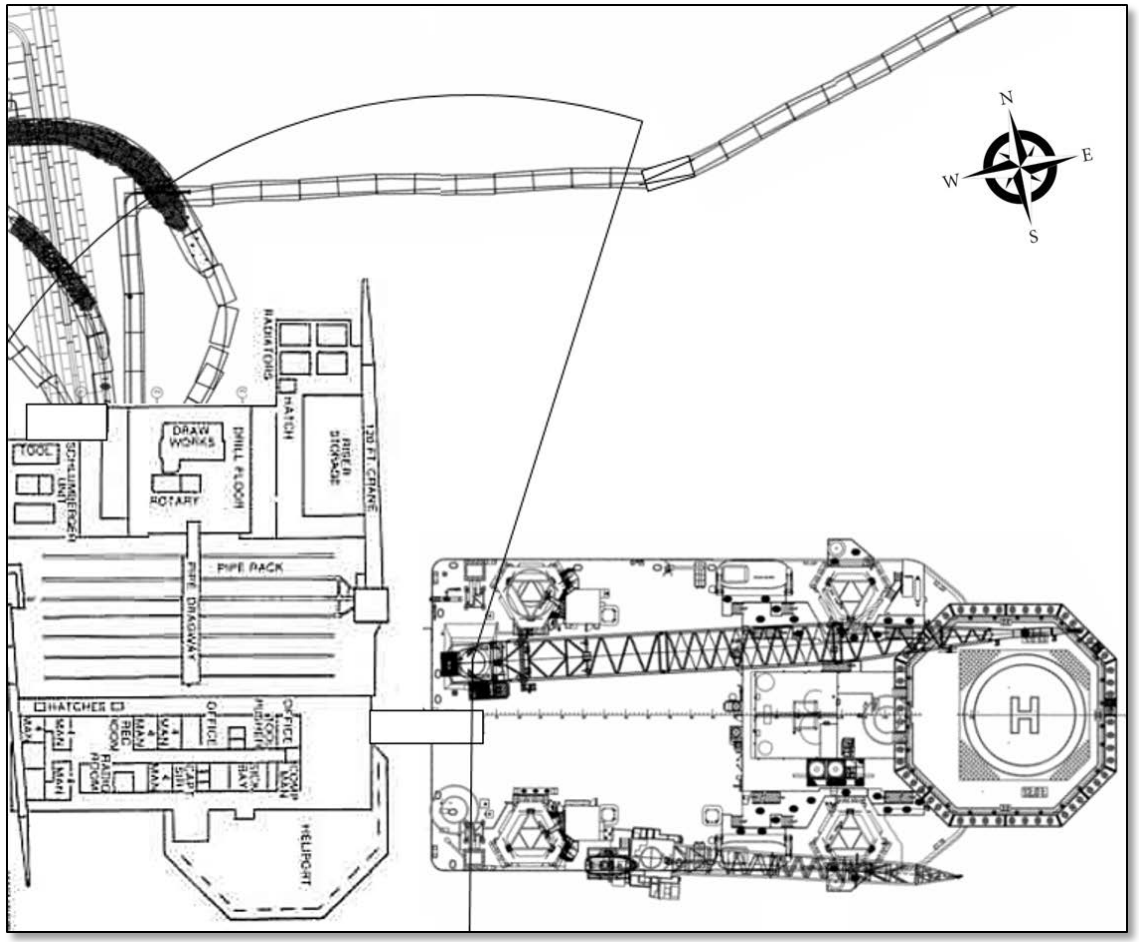
LIVE DEMONSTRATION

Live Demonstration

- New Study
- Draw-Pipeline™ Tool
- Design Basis
- Results
- PDF Download

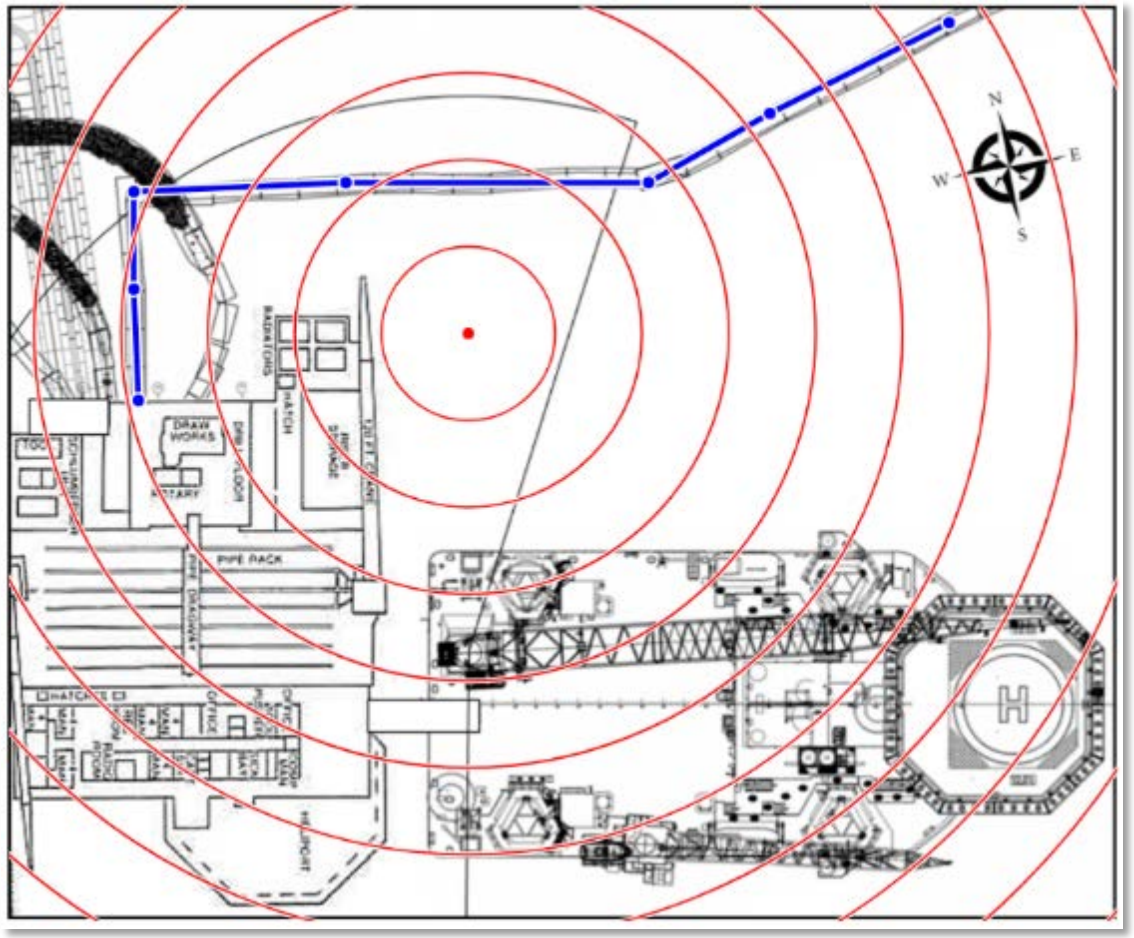
New Study

- Upload subsea layout drawing



Draw-Pipeline™ Tool

- Scale image, choose drop-point and then draw the pipeline



Design Basis

- Enter pipeline details, number and size of lifts, water depth etc.

Pipeline Data

Type of pipeline	Steel Pipeline	
Contains Hydrocarbons?	☑	
Outer Diameter (D)	508	mm
Wall Thickness (t)	18	mm
Yield Stress (σy)	450	N/mm^2

Additional Protection

Impact resistance of additional protection	0	kJ ?

Environmental Data

Water Depth	100	m

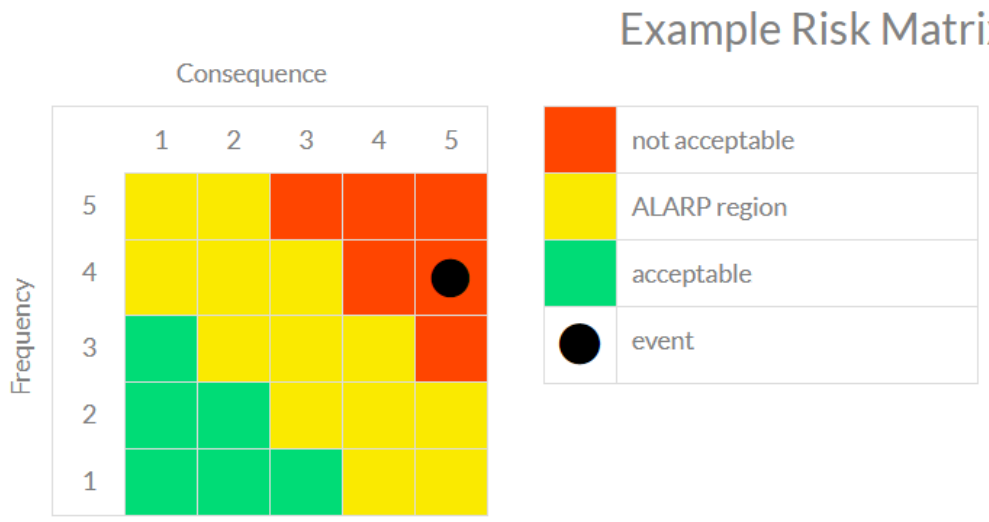
Classification of Objects

No	Description	Weight in air (tonnes)	Breadth (m)	Number lifted per year
1	Flat/Long shaped	<2	12	30
2		2 to 8	12	50
3		>8	12	5
4	Round/Box shaped	<2	5	40
5		2 to 8	5	15
6		>8	5	35
7	Round/Box shaped	>>8	5	0
				175

Results

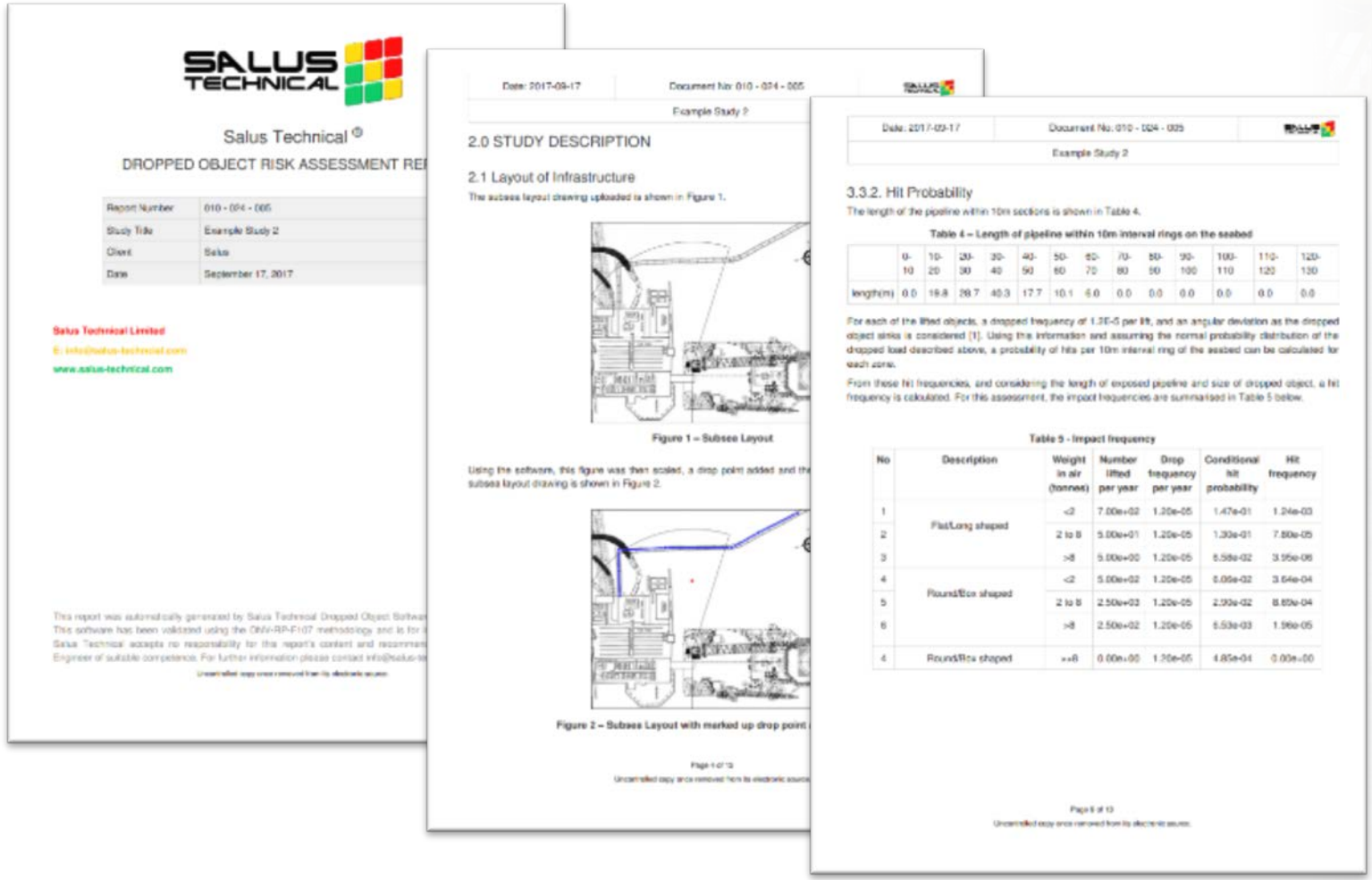
- Risk assessment performed automatically
- Results available instantly

Annual hit frequency	2.57e-03	
Annual frequency of failure	2.32e-03	* for "Steel Pipeline"
Frequency of ignited release	2.32e-04	



PDF Download

- Technical Report immediately available for download



Summary

- Completely FREE
- Available for use right now at www.salus-technical.com
- Validated with DNV-RP-F107
- Dropped Object Risk Assessment performed automatically
- Results and Technical Report available immediately

- Thank you for listening

Any questions?

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