Contents of .zip-file

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The folder *Beam model* contains all Abaqus input files and Python scripts related to the beam model. If serial analyses are to be run using MATLAB scripts, the accompanying Python scripts (*.py) for the model must be used. Otherwise, Abaqus input files (Analysis.inp) can be run separately in Abaqus CAE for each load case.

The folder *Shell model* contains all Abaqus input files and Python scripts related to the shell model. Also, the Patran-Pre files (Svalbard.db and Svalbard.db.jou) are included. The Patran-Pre model Svalbard.inp (generated from Svalbard.db) is an input file for Abaqus *without* boundary conditions and loads. This file *must* be present if serial analyses are to be run using MATLAB, along with the corresponding Python scripts (*.py). Otherwise, Abaqus input files (Analysis.inp) can be run separately in Abaqus CAE for each load case without the presence of Svalbard.inp.

The folder *Design ramming load* contains a PDF-file with the DNV design ice ramming load for the vessel KV Svalbard.

The folder *Matlab scripts* contains all scripts (*.m) necessary to run serial Abaqus analyses from MATLAB. The main file *runanalysis.m* is run with the desired Python script as input. All scripts are described within the code using comments.

The folder *Figures* contains all figures presented in the thesis report.

Script	*Description*
Standard.py	Dynamic analysis with beam model
QuasiBeam.py	Quasi-static analysis with beam model
Shell.py	Dynamic analysis with shell model
QuasiShell.py	Quasi-static analysis with shell model
Early.py	Left-skewed pulse shape (beam model)
Late.py	Right-skewed pulse shape (beam model)
Decay.py	Linearly decaying pulse shape (beam model)
Parabolic.py	Parabolic pulse shape (beam model)
Pointmass.py	Lumped mass model (beam model)
Damping.py	Constant critical damping ratio (beam model)
Integration.py	Implicit time integration (beam model)
AdjustedBeam.py	Modified beam model for reproducing measurement data