DIGITAL SOLUTIONS

SESAM™ PIPELINE
SimBuck

DNVGL-RP-F110 is the first ever publicly available pipeline code to provide structural design criteria for high pressure/high temperature pipelines.
SimBuck covers the principles of DNVGL-RP-F110.

SimBuck is made to fit early-phase engineering purposes, featuring integrated input-result sheets covering exposed pipelines and buried pipelines respectively with all necessary input given in short form. Explanations are also given as regular Excel comments in relevant cells.

Seabed type, assumed Hobbs buckling mode, trenching method and method for specifying uplift factors can be selected individually for different global buckling scenarios in consideration.

The program also allows the user to perform parametric/sensitivity studies on global buckling assessment for exposed pipelines, e.g. calculate feed-in lengths and maximum section lengths for a variety of pipe wall thicknesses and Hobbs buckling modes.

Functionalities in SimBuck
- Pre-buckling assessment for exposed pipelines
- Post-buckling checks for exposed pipelines, including predicted feed-in length, maximum distance between buckles, and length of the buckle
- Estimation for the condition Load Factor (y_C) as per DNVGL-RP-F110 for subsequent limit state check
- Recommended intervention measures to ensure minimum number of buckles through required curve radii or length of intermittent rock berms
- Required soil backfill and additional cover height for buried pipelines for different seabed soil types, imperfection heights and trenching method