



PipeLay.

PipeLay is a state-of-the-art software application developed with industry participation, for efficient offshore pipeline installation analysis in both deep and shallow water.

PipeLay has been developed by MCS Kenny in collaboration with key industry partners to provide a modern, easy to use, state-of-the-art solution to the problems associated with deep and shallow water pipeline installation analysis.

PipeLay has been designed from the ground up as a specialised engineering tool allowing data to be input in language familiar to the pipeline installation engineer, rather than in more complex finite element terms. The software automates many of the tasks associated with building finite element models, running analyses and presenting results in a report-ready format.

PipeLay has been widely validated against third party software and it is now generally regarded as the superior tool of choice for offshore pipeline installation analysis within the industry today.

Key Features

- A wealth of powerful analytical capabilities, allowing accurate and realistic modelling

- Sophisticated graphical model builder allows complex models to be built in minutes
- Automatic model optimization to achieve user-specified installation criteria, including pipeline tension, stress/strain, departure angle, tip separation and much more
- Linear and non-linear material properties
- Rigid and elastic seabed contact models with anisotropic Coulomb friction and flat, sloping or arbitrary seabed profiles
- A range of options for modelling rollerbox contact
- Realistic Pipe-In-Pipe and Pipe-On-Pipe models
- Fixed and floating stinger capabilities
- Fatigue analysis module for weld damage estimation during installation
- Finite element engine based on the industry-leading time domain offshore analysis software **Flexcom**, backed by over 25 years of experience
- Automated mesh generation, analysis steps and results post-processing

Key Features - Continued

- Includes detailed in-line structure model for PLETs, PLEMs, ITAs, etc.
- Supports a variety of tensioner definitions
- Allows numerous outputs including 3D animations, plots, tabulated parameters and summary results
- Integrates DNV local buckling checks
- Offers sophisticated quality control features
- Sentinel HASP 'software' dongle licensing

Applications

- Complete generality with any feasible scenario allowed, for example:
- Deep and shallow water pipeline installation
- Start-up procedures:
 - Sheave
 - Stab and hinge over
 - Dead man anchor
- Abandonment and recovery
- In-line structure installation
- As-laid spans
- Davit lift
- SCR transfer and much more...

Benefits

- Increased productivity for installation engineers
- Easy to use, modern Windows based application that works in today's computing environment
- Support for all feasible installation scenarios
- Sophisticated and accurate finite element solver based on **Flexcom**
- Significant level of detail achievable including complex in-line structures
- Backed by the MCS Kenny established track record of continuous product development in addition to unrivalled client maintenance and support services, with over 90% of queries addressed within one working day to help keep client projects on track

Learn More

Contact the MCS Kenny Software Business Development team for more information on **PipeLay** and other industry leading solutions in the MCS Kenny advanced software range.
Email: software@mcskenny.com

MCS Kenny software is designed to the highest development standards backed up by renowned global customer support services. MCS Kenny software delivers tangible efficiency benefits to hundreds of leading oil and gas industry customers around the world. MCS Kenny is a Wood Group Company.

