

DEEPWATER

CATHODIC PROTECTION COMPUTER MODELLING SERVICES

QUICK, COST-EFFECTIVE AND ACCURATE PREDICTIVE MODELLING

Deepwater offers FEM/BEM computer modelling of cathodic protection design to help verify a system's potential distribution and lifetime, evaluate special-case scenarios, determine a structure's remaining CP capacity before retrofitting, optimise a retrofit solution and aid in optimising inspection planning. By offering computer modelling along with cathodic protection system design, review and verification, Deepwater provides a quicker, more accurate and less costly alternative to using outsourced vendors for this service.

EXPERT TEAM

Our team of modelling experts in Deepwater Norway A.S. supports all of our offices worldwide. In addition to their years of experience, they're supported by Ph.D-level electrochemists, CP specialists with collectively dozens of years of offshore measurement and Deepwater's data from hundreds of subsea inspections.

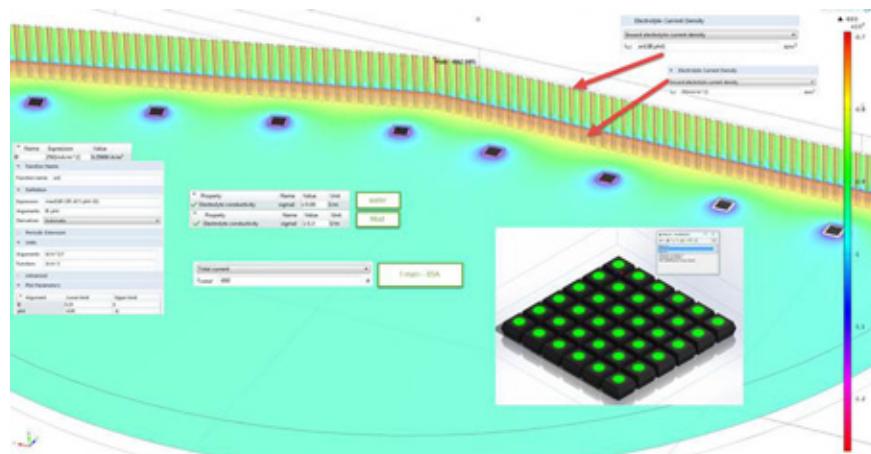
BETTER PREDICTIONS

Predictive modelling enables our engineers to analyse what-if scenarios concerning coating breakdown, loss of anodes and other structure-threatening possibilities. We can also make more exact predictions on anode consumption and end-of-life scenarios. Modelling also allows optimisation of CP retrofit anode distributions, GACP and ICCP hybrid systems and sled designs that minimise anode current interferences.

USER-FRIENDLY

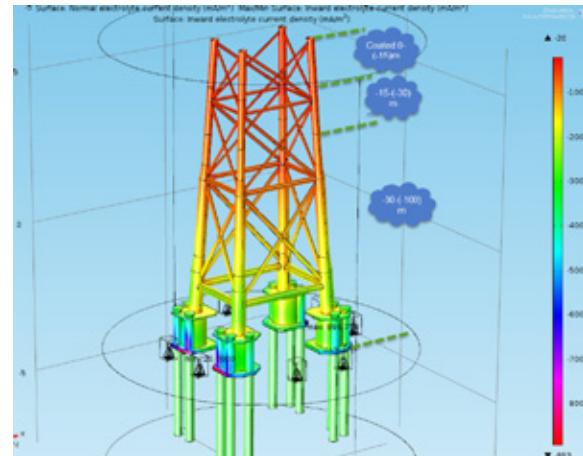
Utilising 3-D structural software with a user-friendly interface makes modelling significantly more efficient. With our live link to CP software, we can easily import or generate structural geometry for our models. For even greater efficiency, we've established a library of in-house retrofit and CP options.

More info at www.stoprust.com



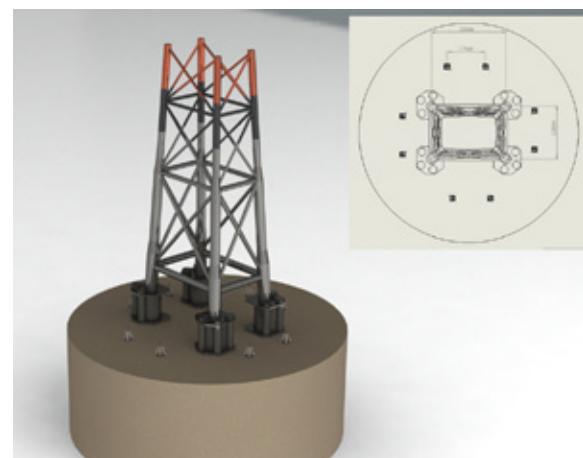
WHARF CP DESIGN AND MODELLING VERIFICATION

Modelling shows how this design will work on a complex project north of Russia, in challenging Arctic conditions that include ice and low conductivity.



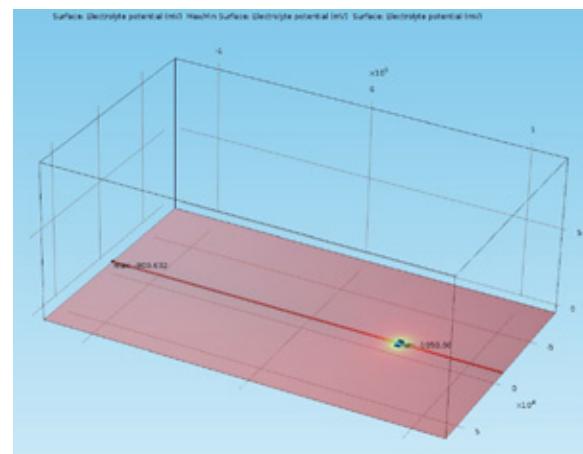
CURRENT DENSITY RESULTS

The model shows the current density distribution on this structure's jacket. The orange area is unprotected, while the yellow sections are cathodically protected.



LOCAL AND GLOBAL MODELS

This is a global model of a jacket with pile clusters, split into three environmental zones with remote galvanic anode sleds around the jacket.



Pipeline Attenuation Plot

Shown is the potential distribution on an isolation-coated pipeline, based on ISO 15589 input.