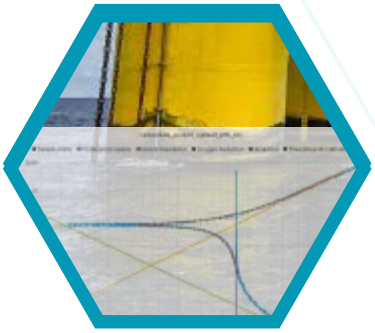
POLCURVEX

BEASY POLCURVEX is a Polarization Database management and analysis software typically used by design engineers, corrosion engineers/scientists and research staff to quickly assess the corrosion risk of material combinations exposed to aqueous environments. Galvanic corrosion is one of the primary, and most costly, corrosion mechanisms observed when different metals and finishes are coupled. Materials compatibility analysis has traditionally been done by comparing potential differences in galvanic series only. This old school approach can be misleading and lead to suboptimal selections. POLCURVEX provides a more reliable approach to materials selection considering the full polarisation curves of the materials involved, current density variability and corrosion rates at coupling conditions.

In addition POLCURVEX aligns with MIL-STD-889D standards and provides powerful tools and dedicated algorithms for theoretical analysis of polarisation curves and de-convolution. BEASY POLCURVEX provides a laboratory validated databases ready to use, but also allows creating / managing own data. In addition, it can readily export data for corrosion modelling software such as BEASY Corrosion Manager for more complex scenarios.

APPLICATIONS AND BENEFITS

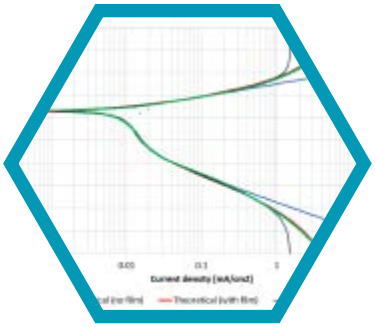
- Predict corrosion rates of metals and finishes when they are galvanically coupled and self-corrosion rates of the individual materials
- Deconvolution of polarization curves using a user-friendly, dynamic, graphical interface to understand the underlying corrosion kinetics
- Management of an Electrochemical Database which can be easily added to for current metals and finishes and those to be developed in the future.
- Supports new requirements in MIL-STD-889D
- Importing experimental polarisation data from potentio-stats commonly used in the industry
- Predicting polarization data as a function of film thickness
- Exporting data to BEASY Corrosion Manager and BEASY CP software
- Design engineers can quickly assess the corrosion risk of different material combinations.
- Create more corrosion resistant designs through improved material selection.



POLARIZATION CURVE ANALYTICS

Galvanic corrosion is commonly assessed by comparing difference in metal potential, with higher corrosion risk being associated with larger differences in metal potentials. Given the high cost of corrosion maintenance, it is important to shift from "Find and Fix" to "Predict and Prevent". PolCurveX satisfies both designers and maintenance engineers concerned with coating performance and inspection scheduling.

Allowing users to deconvolute experimental potentiodynamic polarization curves into electrochemical rate equations, and using a dynamic graphical interface, users can adjust sliders and fit each of the rate equations to the polarization curve.. The fitting parameters are displayed in real-time with this easy-to-use process.



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