



BEASY Corrosion Optimisation

Used in conjunction with the Corrosion & CP and the CRM software the BEASY Optimisation software provides a comprehensive solution for engineers who need to:-

- Optimise CP system operation
- Identify optimum anode locations
- Design ICCP control parameters
- Minimise signatures
- Use onboard data and/or signature to predict condition of the vessel

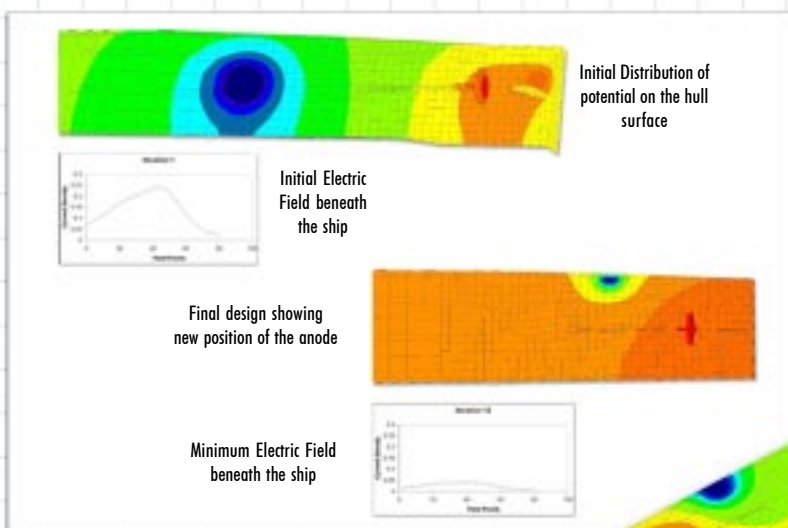
Automate the Process of Predicting ICCP Anode Currents

Define the requirements of the simulation to achieve your objectives. With the optimisation software you can define the goals of the simulation and the constraints on the design. For example the user can:-

- Define the required potentials on the vessel
- Define the maximum and minimum potentials to avoid under and over protection
- Specify that the potentials on the vessel should be as even as possible

Search for the Optimum Anode Location

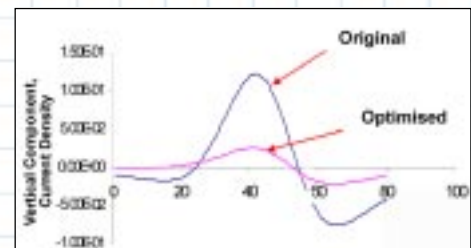
The search for the optimum anode location can be automated in the same way as the optimum anode current can be predicted



BEASY CORROSION OPTIMISATION INCLUDES ALL THE ABOVE FEATURES PLUS AN EASY TO USE USER INTERFACE AND WIZARDS TO GUIDE THE USER

Minimise the Electric Field

The objectives of the simulation can include practically any of the variables in the model. For example the surrounding electric field can be minimised automatically or the ICCP system modified to match a target signature



Predicting the condition of the vessel

In most simulations we assume what the condition of the vessel is (e.g. the condition of the paint/coating the areas of damage etc). With the optimisation tools you can predict the condition of the vessel and locate areas of damage given to any of the following types of information:-

- The anode currents
- The reference cell potentials and/or
- The values of the electric field surrounding the vessel.

Computer Requirements:

Windows 95, 98, NT, 2000 or Unix Workstation.

BEASY is compatible with existing modelling tools such as PATRAN and IDEAS.

Windows users can also use BEASY's own modelling tools.

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BEASY Corrosion Optimisation How it Works

How it Works

- The user describes to the system the objectives of the model, the constraints on the design and what variables can be changed. BEASY CP Optimisation then automatically searches for the solution which meets the criteria. For example to determine the optimum anode currents:

Objective

- Determine the minimum current to protect the structure

Design Variables

- The user defines which anodes are to be used

Constraints

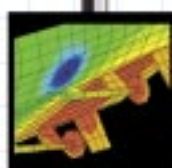
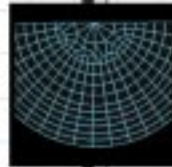
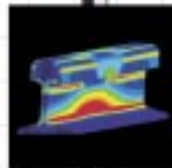
- The user defines the restrictions on the model. In this case all the structure is to be protected so the minimum and maximum (in case we wish to avoid over protection) potential is defined

The Wizard

- A key feature of the CP Optimisation system is the "Wizard". The wizard guides the user through the process of setting up the model, achieving the objectives and visualising the results.
- The wizard automatically indicates the types of calculations that can be performed based on the data available.



- The wizard enables the user to change all the properties of the model without using the CAD interface. The materials and anode properties can be defined in the spreadsheet type interface. Therefore users who are not familiar with the CAD type model building tools can change the design quickly and easily.



- Similarly, the characteristics of the cathodic protection system can be specified in one spreadsheet view. Both impressed and sacrificial systems can be defined. In this case the impressed anodes are selected and the range of allowable currents defined.

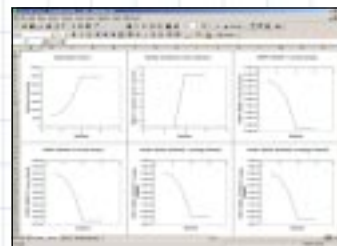


- Finally the constraints on the metallic surfaces can be defined. In this case the maximum and minimum protection potential is specified.



- Once the software starts to search for the solution, an on screen display of the state of the design is provided through the systems link to EXCEL.

- The link to EXCEL also enables the results to be viewed and easily transferred to other applications.



Further information

For further information on this and other BEASY software, logon to:

www.beasy.com

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