

ASSET CONDITION EVALUATION TOOL *Acet*

Oceaneering Asset Integrity and NDT provide a software system supporting the management of corrosion, inspection and plant integrity processes.

The suite of system modules are used to store, analyse and assess the various data formats gathered through inspection and monitoring and can be used to assist in the implementation of the following key steps within the corrosion management strategy:

- **Data Storage** - equipment details, design information, inspection data.
- **Planning** - schedule work activities.
- **Execution of Work** - implement inspection strategy, gather data.
- **Analysis** - anomalies, results, data, information, risk assessment.
- **Review** - performance, strategies.
- **Improvement** - modify inspection strategy, recommendations, repairs

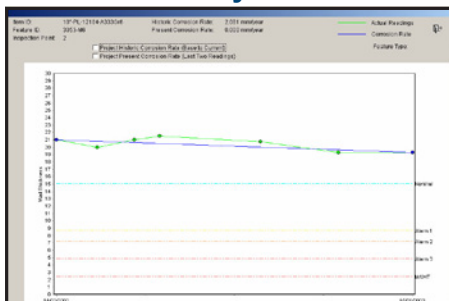
Data Storage

Planning

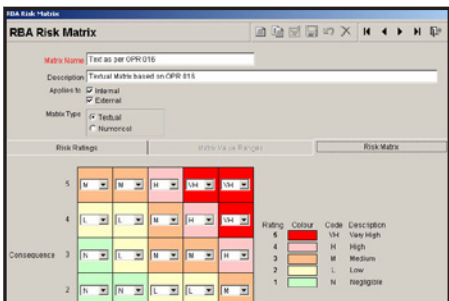
Execution of work



Analysis



Review



Improvement

The success of any corrosion management strategy is reliant upon many activities including auditing, measurement of performance, effective analysis and reporting procedures, which provide feedback ensuring continuous improvement.

The ACET corrosion and inspection management system is an integral part of the corrosion management strategy and has been specifically designed to form part of an integrated asset management approach through data storage, analysis and assessment.



ACET SYSTEM MODULE - OVERVIEW

CORE MODULE - DATA STORAGE

The Core module sits at the heart of ACET and is directly linked to each of the other system modules. The core module is used to:

- Store the equipment list and equipment details
- Provide system navigation and database searches
- Capture and display some of the results generated elsewhere in the system.

RISK ASSESSMENT MODULE - REVIEW

The Risk Assessment module is linked to the core and process modules and uses information from these modules as part of its assessment. The risk assessment module is used to:

- Assess the probability, consequence and risk of failure
- Determine the most economic frequency of inspection
- Assist in determining the inspection methods

PROCESS STREAM MODULE

The Process Stream module is linked to the core and risk assessment modules and stores process conditions and historical changes to these conditions during the asset lifecycle. The process stream module is used to:

- Store and display process variables including temperatures, pressures, fluid type, concentrations, flow-rate, etc.
- Calculate potential corrosion rates

MONITORING MODULE

The Monitoring module is linked to the core module and stores probe and coupon monitoring equipment details and data. The monitoring module is used to:

- Record equipment service installation and removal details
- Store monitoring equipment details
- Calculate process stream corrosion rates

INSPECTION MODULE

The Inspection module is linked to the core, exceptions, trending and gauge interface modules and supports a variety of non-destructive inspection methods. The inspection module is used to:

- Store data and information gathered from inspection
- Create planned inspections for the gauge interface
- Create inspection work-packs
- Auto create anomalies based on user defined thresholds

GAUGE INTERFACE MODULE - EXECUTION OF WORK

The Gauge Interface module is linked to the inspection module and supports the transfer of the equipment work-scope to the inspection gauge. The gauge interface module is used to:

- Electronically transferred information and data to and from the inspection equipment
- Increase the reliability of measured data
- Track all work packs exported and imported

TRENDING MODULE - ANALYSIS

The Trending module is linked to the inspection and core modules and presents wall thickness data, from inspection, numerically and graphically. The trending module is used to:

- Predict equipment corrosion rates and retiral dates.
- Flag the worst-case (earliest retiral date) prediction.

EXCEPTIONS MODULE - IMPROVEMENT

The Exceptions module is linked to the inspection and core modules and stores both anomaly (defects) and failure details. The exceptions module is used to:

- Store defect and failure information, status, recommendations and repair or replacement details.

INTEGRATED PLANNING MODULE - PLANNING

The Integrated Planning module is linked to the core module and acts as an interface between the system and the clients preferred planning tool. The integrated planning module is used to:

- Filter on several key criteria including date ranges, inspection categories and overdue items.
- Display important reference information associated with performing an inspection including: restrictions, locations, drawings, insulation, coating and material.
- Export and displayed data and information from ACET on the inspection plan.

MULTIMEDIA MODULE

The Multimedia module is linked to the core, inspection and exception modules. The multimedia module is used to:

- Attach, view and edit many different types of files (images, drawings, video, documents, etc) within the ACET environment.

REPORTING MODULE

The Reporting module is linked to the core module and incorporates a set of standard reporting formats. The reporting module is used to:

- Filter and display system data and results in a standard format.
- Create a customised Excel export
- Create an Excel template for data input

