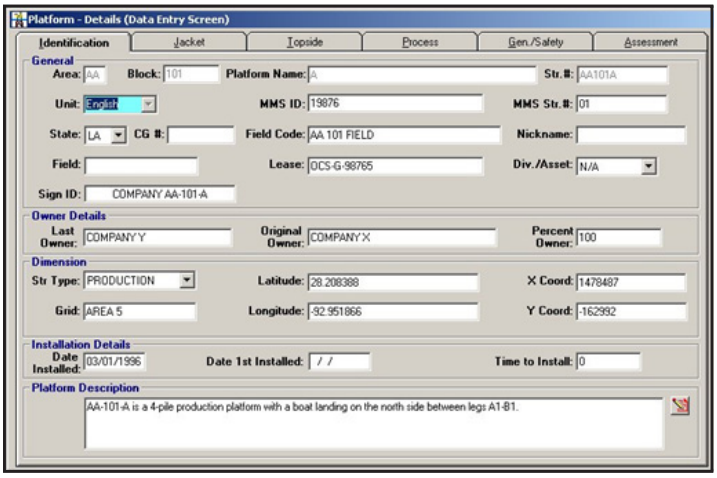
CAIRS V - INSPECTION DATABASE

CAIRS is an acronym for Computer Aided Inspection Reporting System. CAIRS is a family of software programs designed primarily for use in the petrochemical industry. CAIRS data base programs currently exist which store and report on inspection results from PLATFORMS and PIPELINES and is now utilized by over fifty major and independent oil companies.

As a platform package, Oceaneering Asset Integrity now offers the latest system using RDBMS (Relational Data Base Management System) technology to maintain, store, and retrieve data. Microsoft Visual Studio was used to create the front end and Microsoft SQL Server is used as the back end for data storage.

The system has an image viewing feature which allows direct access to digitized inspection photographs, video, documents, etc. which have been submitted to and stored with the database. Another feature allows access to AutoCAD® drawings associated with the inspection by a direct jump from the data base record being viewed into the AutoCAD® program. After leaving the drawing editor you are returned to the original record in the data base.



Introduction To CAIRS V - Platform Inspection Database

- This system was specifically created to address the inspection planning and documentation needs of Platform Owners.
- CAIRS is a network compatible, PC based computer program with a low level of hardware requirements.
- CAIRS is a customized data base that allows input of inspection data using screens (forms) developed using Visual Basic. CAIRS system software is user friendly.

CAIRS Applications

- Platform CAIRS is most suitable for the Topside and Underwater inspection of fixed steel jacket structures, caissons, etc.
- The format is modeled to adhere to API RP 2A guidelines for inspection levels I through IV and includes all jacket associated categories such as cathodic protection, damage, debris, risers, conductors, pump casings, mudline erosion, etc.
- CAIRS is applicable to topside facilities as relates to an API RP 2A Level I inspections for Structural and Coating conditions.
- CAIRS can be modified to accommodate specialized types of inspection data storage and retrieval needs if necessary.

Summary

CAIRS is a relatively simple management tool to control inspection results and to readily utilize those results to monitor the inspection history and condition of offshore structures.

OCEANEERING®

Oceaneering International, Inc. | Asset Integrity | 11911 FM 529 | Houston, TX 77041
email: Inspection@oceaneering.com | www.oceaneering.com

A Few of the Benefits of Using CAIRS

Quality Assurance

- Using the same system over time results in a higher degree of consistency and confidence of recording and reporting than one would normally obtain using different formats for each inspection.
- Data collection forms and computer screens prompt the data recorders, divers and ROV operators to supply more complete inspection information and consistent terminology.
- Inspection history documentation may allow the owner to obtain a higher selling price or eliminate the need for a pre purchase inspection.

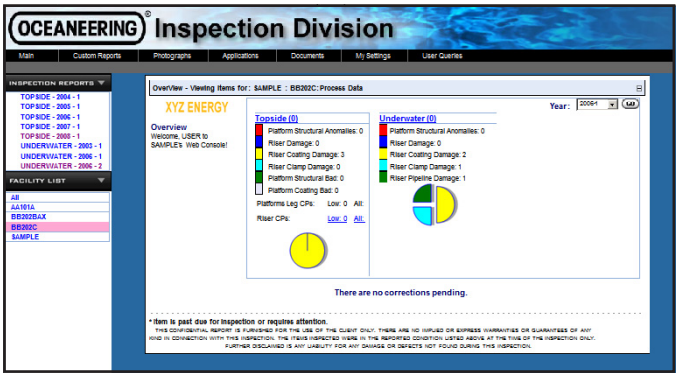
Ease of Data Access and Retrieval.

CAIRS can provide several types of reports that range from a specific inspection inquiry to a full formal report. Most full inspection reports are posted to the OI Client Customer Website

http://inspection.oceaneering.com/

Client Website Home Page

Reports can be viewed or downloaded by logging into the website, selecting the platform from the facilities list at the left, and selecting the desired inspection.



Selecting an Inspection Report

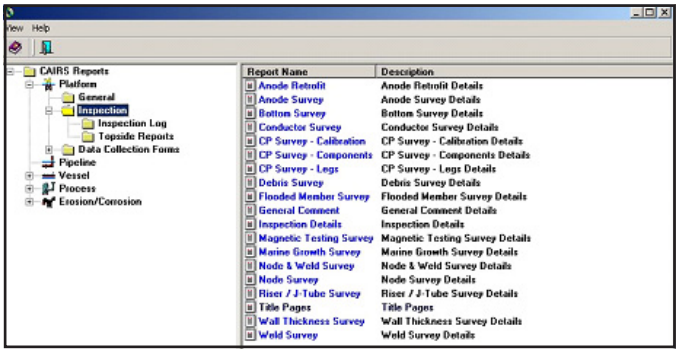
- CAIRS output offers an organized and consistent reporting format that is well suited for engineering/management reporting and for official inspection documentation.
- The use of the versatile searching and sorting features of CAIRS provides a powerful tool to analyze inspection results and isolate anomalies.
- As a complement to the inspection data, CAIRS permits a quick “look see” of inspection results via graphics interfaces with AutoCAD® and digitized images.

Increased Efficiency

- Increased efficiency can be realized onshore with pre inspection planning and work scope production. Inspection histories of structures can be readily determined and critical areas targeted for re inspection
- Increased efficiency producing inspection documentation and reports for regulatory bodies. Annual reports, engineering evaluation summaries, and drawings can all be produced from the same place.
- Reduced cost by eliminating unnecessary or duplicate inspections. By being able to quickly determine the condition and inspection history of a structure, a determination may be made to increase the inspection interval; or eliminate the inspection if the structure is scheduled for removal or sale.

Regulations

- Reassures regulatory bodies that an inspection program is in place.
- Allows more timely submittal of documentation to regulatory bodies.
- Regulatory reports can be modified and submitted into “canned” reports within the CAIRS system. Reports that are submitted on a regular basis are available in a “pick-list” format as shown below.



CAIRS Software

CAIRS V - Inspection Data Base
CAIRS V contains Platform and Pipeline modules.

The Platform module allows for the storage of inspection data obtained during API Level I, II, III, and IV type surveys. CAIRS then uses this data to generate the associated inspection reports.

The Pipeline module is tailored less to the storage of inspection data and more to the storage of specific pipeline segment information necessary for maintaining regulatory reporting compliance.

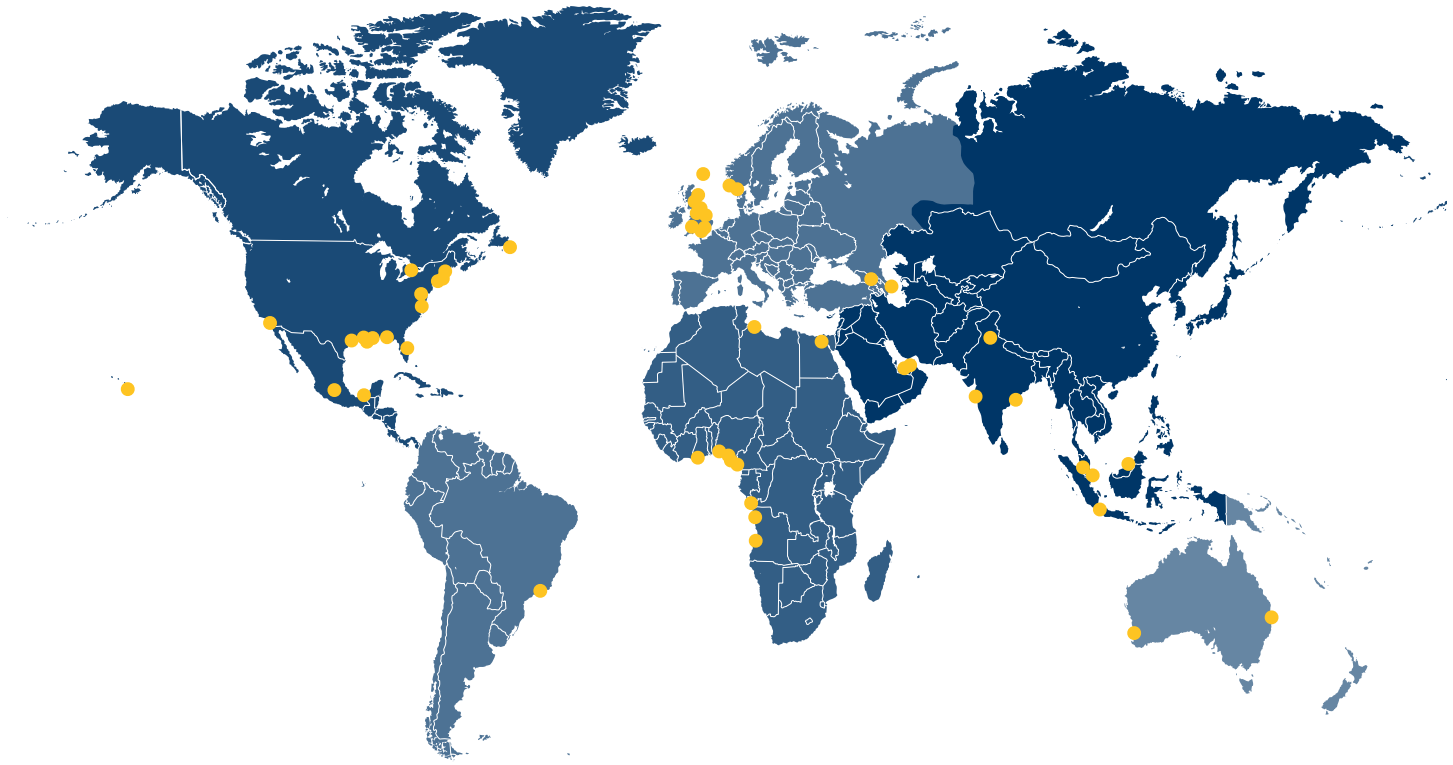
The following are included in the Platform module:

- Baseline Structural, Safety, Production Details
- Inspection Specific Details
- Topside Survey
- Cathodic Protection Survey
- Anode Survey
- Anode Retrofit Log
- Marine Growth Survey
- Debris Survey
- Bottom Survey
- Riser/J Tube Survey
- Conductor Survey
- Anomaly / Repair Status Survey
- Selected Node and Weld Survey
- Flooded Member Survey
- UT Wall Thickness Surveys (structural)
- MT Survey
- Photograph Log
- Video Log
- Drawing Log
- Document Log
- General Comments

The following are included in the Pipeline module:

- Baseline Identification, Construction, Design, and Operational Details
- Inspection Specific Details
- Coupon Details
- BOEMRE Status Details
- Hydrotest Details
- Failure Records
- Departure Records
- Cathodic Protection Survey
- Pressure Safety Valve Details
- Shutdown Valve Details
- Pressure Safety Device Inspection
- Pressure Safety Valve Inspection
- Riser Valve Inspection

CAIRS is marketed by the Asset Integrity Division of Oceaneering International, Inc. Our main software office is located in Houston, Texas.



United States
San Diego, California
Gales Ferry, Connecticut
Orlando, Florida
Panama City, Florida
Pearl Harbor, Hawaii
Bayou Vista, Louisiana
Houma, Louisiana
Lafayette, Louisiana
Morgan City, Louisiana
New Iberia, Louisiana
New Orleans, Louisiana
Cataumet, Massachusetts
Hanover, Maryland
Portsmouth, New Hampshire
Austin, Texas
Corpus Christi, Texas
Clear Lake, Texas
Houston, Texas ★
Ingleside, Texas
Chesapeake, Virginia

International
Cabinda, Angola
Lobito, Angola
Luanda, Angola
Perth, W.A., Australia
Baku, Azerbaijan
Macaé, Brasil
Niteroi, Brasil
Rio de Janeiro, Brasil
St. John's, Newfoundland, Canada
Cairo, Egypt
Malabo, Equatorial Guinea
Tbilisi, Georgia
Takoradi, Ghana
Mumbai, India
Chandigarh, India
Kakinada, India
Balikpapan, Indonesia
Batam, Indonesia
Handil, Indonesia
Jakarta, Indonesia
Tripoli, Libya
Kuala Lumpur, Malaysia
Miri, Sarawak, Malaysia
Mexico D.F., Mexico
Cd. del Carmen, Mexico
Ikeja, Lagos, Nigeria
Port Harcourt, Nigeria
Warri, Nigeria
Nodeland, Norway
Stavanger, Norway
Jurong, Singapore
Zug, Switzerland
Abu Dhabi, U.A.E.
Dubai, U.A.E.
Aberdeen, Scotland, U.K.
Gloucester, England, U.K.
Immingham, England, U.K.
London, England, U.K.
Mossbank, Shetland Islands, U.K.
Port Clarence, North Tees, U.K.
Rosyth, Scotland, U.K.
Southampton, England, U.K.
Stockton, England, U.K.
Swansea, Wales, U.K.
Rochester, England, U.K.
Whitley Bridge, England, U.K.
Wilton, England, U.K.

★ Denotes Corporate Office

OCEANEERING®