TOMTEC-EXACO PTE LTD

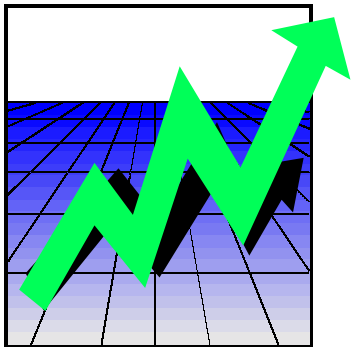
HC PROJECT TITLE:

CONSTRUCTION TRACEABILITY / WELDMAPPING / STRUCTURE CAD DATABASE PROGRAM FOR OFFSHORE & FPSO QA/QC.

Description:
Implemented a Construction / Fabrication Quality Control and Assurance database program (network version) for major shipyards that are engaged in large offshore and marine projects where QA/QC forms part of the requirement and document submittals.

Pull items:
This QC/QA program proven reliable, user friendly (in fact must be very friendly as will be used by shipyard's staff) and competitively priced.

TOMTEC EXACO (S) (an ISO 9002 certified company) has studied numerous shipyards on their Quality Assurance programs that basically can be lined up onto verification and control of these areas:



1. Non-destructive testing conducted on the vessels.
2. Destructive testing and verifications.
3. Liaison with Classification Societies at both the field and engineering level.
4. Liaison with Owner's Representative at the field level.
5. Qualifications of welders.
6. Traceability of welders to structure of repairs and or new construction.
7. Documentation of all Quality records.
8. Traceability of structural cutting plans and steel mill certificates.
9. Documentation of drawing files.
10. Summarizing QC/QA report for client's auditors.

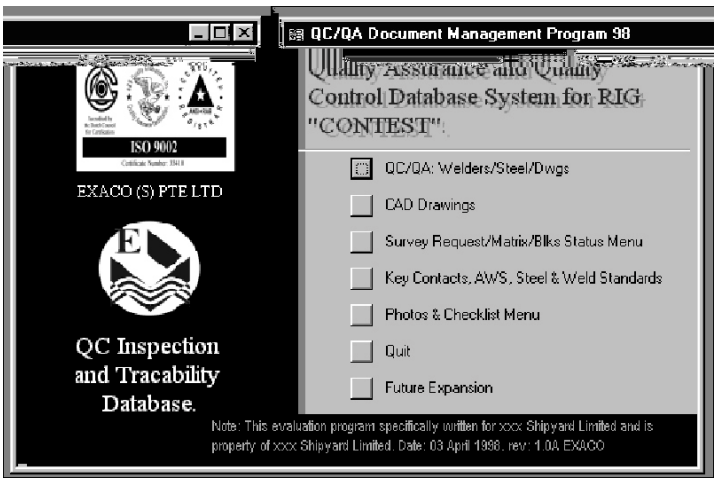
Currently, these Quality related activities are being conducted by the QC/QA department where specific QA engineers are assigned to specific projects/ships.

While daily planning allows these QA/QC engineers to prepare various hardcopies

MARINE QUALITY ASSURANCE DATABASE
by: TOMTEC EXACO (S) PTE LTD
Project 532
Client Ref: **2001-7810**

requisition forms for Owner's Representative (Superintendent), Classification Surveyors and Contractors a day or two before hand, the dynamic changes of events and large facility (compound of a shipyard) always make it unproductive in carrying many papers around (particularly onboard).

Also, project QC/QA is not solely undertake by a single person and in general, always a team effort with all involved channeling to the success of the project.

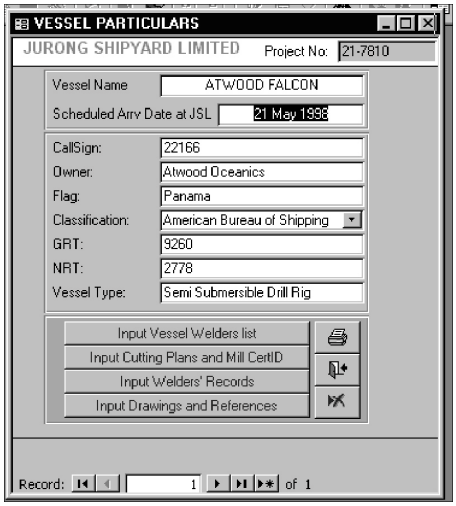


TOMTEC-EXACO has since implemented such a system (in Windows 95/98 environment) for a specific Oil Rig project. This project is still on-going with two QC inspectors assigned to daily check and updates all Quality records to satisfy the client and the shipyard's needs.

This QC/QA program captures all the information as listed above and more. The program provides screen display of summary of AWS D1.1 welding standards and various nomenclatures of welding terminology.

All Project members and contact numbers are listed within the program with auto-dial facility (i.e. with PC station linked to a modem phone, you could simply point to the person you wish to talk to and dial his number (htel, pager, etc) and speak to him).

Have you ever go through thick stack of design drawings to find what you really want? And more often unable to locate it as someone has since taken it away? This QC/QA program allows you to flip through hundreds of design drawings in a thumbnail bitmap screen display with full description of the drawing. You could then print onto your printer on the spot!



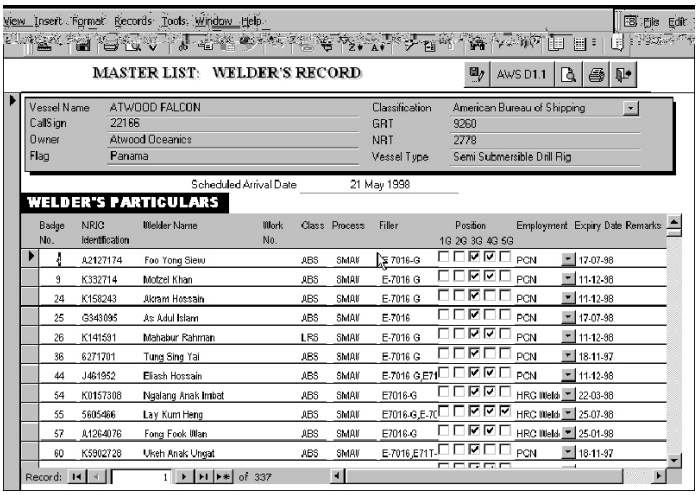
Welders' Traceabilty and Welding Procedures Used

There are different welder grades and capturing assigned welders to different areas of the pre-fabrication, post-fabrication and installation can be a huge task if not documented proper.

Our QC/QA program not only allows ease of inputing these data but similarly able to sort specific records of each and every welder together with the welding seam he welded.

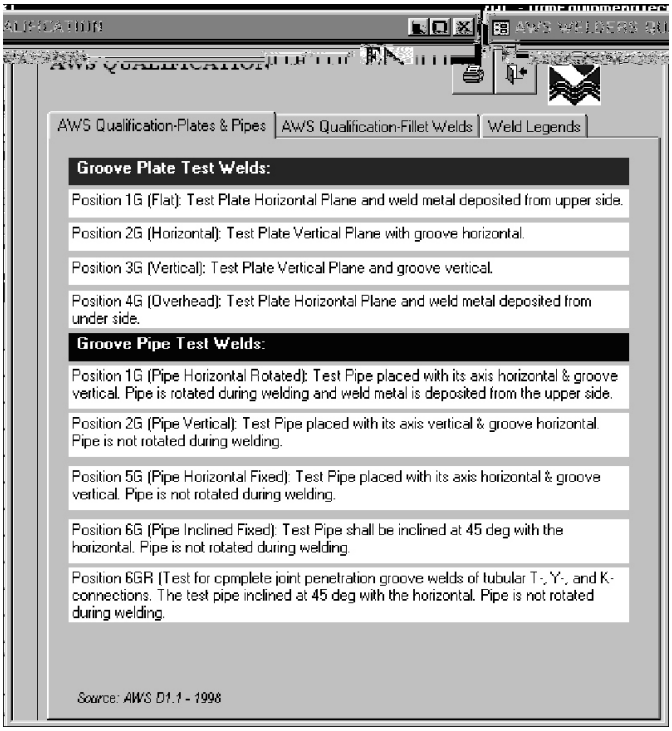
Approved welding procedures are also listed and captured within the database for ease of tracking and lining them up on specific location used onboard the vessel.

Cutting Plans and Mill Certificates



Ensuring which plate and grade that were installed on various sections of the vessel is also key consideration particularly to both the Owner and Classification Society Surveyor.

QC/QA program updates these records in-line with the Mill Certificate approvals, size, thickness and any lamination checks conducted.



A summary then could be sorted which outlined how many high tensile grades, etc were used on board this vessel.

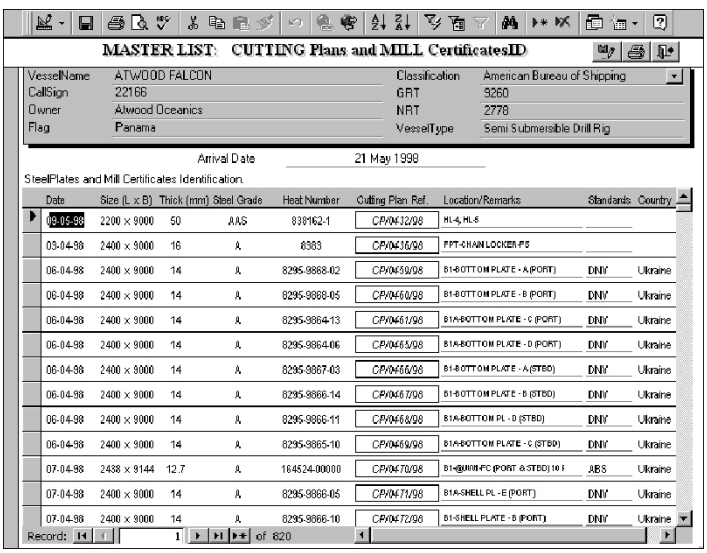
A PC screen shot allows understanding what are the grades used and what are the related properties.

The QC/QA program has been tailored to specifically meet the requirements of the shipyard along with the high demand from the Shipowners.

The ease of use along with networking capability has made this program an invaluable tool for our team of QC inspectors in finalizing the documentation for owner's auditor.

The cost saving in preparation of numerous photocopies of mill certificates, plotting of drawings, print and reprint of requisition forms for surveyors and owner's representative, time spent in travelling to various sections of the yard and auditor's documentation printing for this project will amount to more than S$15,000.00. This is estimate for a short stay (less than 4 months) of a ship undergoing minor repair here in Singapore dockyard.

With the success implementation of this Shipyard QC/QA network program, EXACO look forward implementing this program to all major shipyards in this region and also the Computerized QC/QA program forms part of the Quotation submittals and tender bids from Shipyards here to our International Clients.



TOMTEC-EXACO

Project Div.

www.post1.com/~exaco

VARIOUS OUTPUT FORMS OF QC/QA PROGRAM.