



Construction Manager (CM)

A Materials Control, Welding and NDE Management
Program for Structures

General Information

Overview

Construction Manager (CM) is designed to support the management of all aspects of Project Inspection. A strong emphasis is placed on tracking the welding and non-destructive examination of fabricated structures as well as the Welders and Inspectors involved in Project fabrication.

CM is pre-loaded with Welder and Inspector qualifications, Drawing Lists, Project Specifications, and Material Specifications. This “pre-loading” gives CM the ability to cross reference fabrication information and NDE reports with known values and evaluate the data’s validity. Data entry automation techniques are utilized anywhere possible to decrease the amount of data entry points and reduce the amount of data entry errors.

Numerous built in reports designed to filter before or after the report is viewed helps to fill out the complete CM program. From inception to closeout CM is designed to maintain your inspection records and report on their results.

Highlights

- Customize Project Preferences
- Detailed Material Specifications
- Welder Qualification Records
- Inspector Qualifications
- Verification of Welder Qualifications
- NDE Requirements Monitored
- Discrepancies Automatically Logged
- Real-time Reports and Charts
- Electronic Import of Contractor Data
- Security Features
- Multiple Projects in a single database

When Should CM be Used?

CM can be used for projects of any size and complexity where control of material, welding and NDE is important. The Program is designed to provide users with the ability to select features applicable to the most demanding projects, e.g. welding conformance. Documentation records maintained by the program produce detailed reports for the project team. Upon completion of the project, the program can be compiled into read only version. This can be used to provide electronic documentation for archival purposes, or to be handed over to the client.

Program Concept

CM processes material, welding and NDE information submitted by contractors to document work performed. The Program is pre-loaded with project design data – Drawing, material lists, material specifications, weld numbers and welder qualification records. When contractor information is entered in the Program, it is automatically reviewed and verified to be in conformance to requirements. Discrepancies are immediately logged in a register for clearance. Materials and welds are automatically cleared by the Program when total conformance to requirements is completed.

Program Features

CM is designed with a multitude of unique features; including, automatic verification of material requirements during fabrication; verification of welder qualifications for each weld; automatic control of the amount of NDE performed; discrepancy alerts to show when non-conforming data is entered; and, real-time reporting.

Master Library

CM contains a Master Library where technical specifications, welding procedures and company practices are stored for use by the Program on individual projects. For example, the Material Specification tables are used for calculations within the Program. The library of welding procedures can be referenced when setting up a project and selecting those applicable to the project. Preferred terminology used by a company can be stated in the library and will be used in drop-down box selections within the Program. The Master Library provides a company with the means to 'customize' the Program for their use.

Material Specifications

Material specifications for a project can be customized during project creation. As materials are received, their specific chemical properties, mechanical testing information and any additional requirements are checked against the existing requirements in CM. Discrepancies in the material can be tracked and NCR's created for discrepant materials.

Nesting plan information can also be entered into the system. The system will verify the selected material against the nesting plan requirements. Only approved material can be associated to nesting plans. From there the individual parts can be assigned to the appropriate construction drawings. The material information is passed on to the drawing allowing for users to track back to the exact piece of material used during construction.

Welder Qualification Records

Detailed welder qualification records are stored in CM. The Program references these records as fabrication data provided by contractors is entered in the Program. The Program verifies, at the Users option, numerous variables to verify qualification, e.g. is a qualification record current, is the welder qualified for the process? When discrepancies occur, the Program provides an immediate alert.

NDE Requirements Monitored

CM can automatically track NDE status of welds. NDE requirements are entered, and the program ensures that they are met. The program also monitors the status of repairs. The NDE tracking is maintained on piling/rolled can assemblies, plating assembly and beam assembly. NDE Technicians can be tracked and their qualifications verified. It is very sensitive to the cost of performing excessive NDE; therefore, a detailed system of alerts is utilized throughout the Program to be assured that the proper amount of NDE is performed.

Discrepancies

When non-conforming data is entered into an Material Review screen, the Program creates screen alerts and automatically makes an entry in the Discrepancy Log. Discrepancies include use of unqualified welders and improper heat numbers when material traceability is required. Users are to review the Discrepancy Log periodically and clear items whenever appropriate.

Security and Access

CM is designed with a security system that controls access to the Program. Four (4) basic access levels are available: Administrator, Power User, Data Entry, and Guest. Guest access is on a read-only basis and can be granted to project team members and/or client representatives who have a need for access to reports and status. Access to the Program is on a password basis as granted by the Administrator.

Reports and Charts

Numerous reports and charts are built into CM. They are automatically up-dated when data is entered. Users have the ability to control details of reports being viewed. Each report is setup so the User can select which portion of the report is to be viewed. For example, a complex report may have numerous portions selected for individual viewing.