



QC³

Emerson Process Management has provided commissioning services for over 30 years. Our software tool, Quality Control Inspection for Construction and Commissioning (QC³), was developed to meet our customers' requirements for improved inspection, commissioning processes, and documentation.



The Challenge

Plant commissioning is often incomplete due to poorly documented processes, inconsistent practices, and inefficient project scheduling. Without clearly defined procedures and consistent, hard-copy verification of the completed work, commissioning projects are often delayed during startup.

The Solution

QC³ eliminates the guesswork of traditional commissioning initiatives by providing standardized inspection/commissioning procedures, which are completed electronically using a personal digital assistant (PDA). Progress reports are generated immediately upon synchronization of the PDA.



The functionality features of QC³ include:

- check list creation—digital signatures are captured using the PDA to sign off completed items; completed check lists can be “beamed” to other users
- deficiencies record—digital photographs are captured with the PDA and synchronized to the database; voice memos can also be captured to add clarity
- attachment inclusion—photographs are attached by device type, system, or tag; other attachments can include hazard and operability (HAZOP), Microsoft Word, Excel, or commissioning procedure documents
- audit capability—PDAs are used to audit quality assurance (QA) documentation
- synchronization—to eliminate manual data entry, all as-built data, digital images, and test results are synchronized

Benefits

QC³ is a proven, comprehensive tool that benefits construction and commissioning projects of any size by:

- providing fast, easy access to equipment information
- enforcing data integrity
- ensuring project quality assurance
- improving the project audit trail
- reducing the project reporting time
- reducing startup costs and delays

Technology Expertise

QC³ is a Microsoft SQL Server database tool that supports multiple users and access levels. It is compatible with PDAs for quick and convenient data collection. Synchronization of data between the

field and office is made easy via the Internet. This user-friendly application performs construction and commissioning functions, such as:

- producing commissioning person-hour estimates
- producing commissioning check lists
- providing consistent, timely status reports
- generating standardized documentation
- maintaining a current history of each activity
- allowing migration of data into maintenance management programs, such as SAP, JD Edwards, and INtools

QC³ ensures due diligence by providing a comprehensive corporate audit trail. Equipment deficiencies are rated by level of criticality and tracked through to signoff. Quality control (QC) packages contain all relevant documents, such as piping and instrumentation drawings (P&IDs), location drawings, loop drawings, datasheets, and QC checklists. QC³ also retains historical information and comments for future maintenance activities.

QC³ provides sophisticated project reporting functions. At the click of a button, our customers can generate system and area status reports. These are easily e-mailed using Adobe PDF Writer. QC³ also allows access to reports, based on personnel level. For example, construction and commissioning schedulers can be given read-only access to status reports, while managers can quickly and easily create progress reports at any time.

Satisfied Customers

A partial list of satisfied QC³ customers includes:

- NOVA Chemicals Corporation
- Suncor Energy
- Syncrude Canada

Emerson Instrument and Valve Services
7175 12th Street SE
Calgary, Alberta, Canada T2H 2S6
T +1 (403) 258-6200
F +1 (403) 258-6201
www.EmersonProcess.com

Other locations:
Edmonton, Alberta, CAN
Red Deer, Alberta, CAN

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