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Concrete Design & Testing System
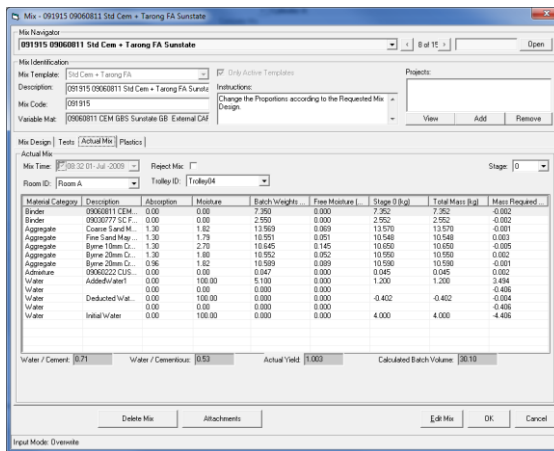
A Concrete Quality Data Repository

As concrete producers strive to improve the quality of their products and services, the need arises to implement and maintain a data management system that does more than just hold test results. Such systems must be easy to use for accurate and timely data entry, and provide efficient data organization for retrieval of data. The Concrete Design & Testing System (CDTS) is the data management tool tailored to your industry.

Concrete LIMS

CDTS has all the features that you would expect in a full featured LIMS.

- Field calculations allow for the system to be customized mimicking the worksheets already used in the lab.

- Data validation for the analysts is handled by checking new data against predefined ranges. Color coding and other mechanisms warn the analyst against possible data entry errors.

- Data validation for the lab manager is handled by a data review or publishing feature that allows the lab manager to easily review all data entered by the analysts.

- Interfaces to balances, compression machines, length comparators and other laboratory instruments allows for the option of speeding up the data entry process for the analysts and guarantees there are no errors in typing the results into the system.

- The secured database logs all transactions of a mix's test results. The audit log can display the analyst name associated to any test result. The reason why data is overwritten is also recorded along with the original value.

- A work list schedule reports when specimens need to be tested.

- Full integration with Process Solutions LIMS modules, such as the Instrument Calibration & Maintenance System (ICMS), Analyst Certification module (ACS), and Automated Reporting.

Project Management

The project management screens records the details of why the analytical testing is done and allows for multiple concrete mixes to be grouped together.

The project management subsystem is customized to each installation. In some cases the project record in CDTS only stores a name, ID number and date. In other installations the project tracks cost and billing information, approval statuses, reporting requirements definition, project outlines, proposals and conclusions.

Material Management

Materials are broken into 7 major categories; cement, supplementary cementitious, course aggregate, fine aggregate, admixtures, fibers, and water. Materials are further identified by their product type, supplier/source of the materials, and the date they were produced or shipped.

Information from the material's test certificate can be entered into the system. The material properties can be reported with the concrete performance properties.

Mix Designs

Mix designs, which define materials and ratios, allow for comparison between multiple concrete mixes based on a single difference. The difference may be as slight as the time of production of a single material. By knowing this difference between two mixes in one parameter, that parameter's impact on concrete performance can be judged by comparing the test results of the two mixes

Batching

Aggregate materials can be batched prior to the actual mixing of the concrete. The design of the mix is automatically adjusted according to new moisture or absorption retesting done on the aggregate

Searching and Reporting

The search dialog allows for searching on multiple parameters. The concrete mixes returned can be limited by the name of the mix design name used. Results can be filtered to only provide concrete mixes using a material from a specific supplier over a given date range. Test results can also be searched against. The ability to find test results of similar projects in the past can reduce the amount of new analytical work required by the lab for a new project.

Pocket CDTS

Pocket CDTS as an optional application that supports all CDTS functionality but is specifically designed to run on smaller portable devices. Extensive use of barcode scanning technology allows quick, accurate entry of data into a wireless device fully integrated with CDTS. Pocket CDTS supports batch entry, mix entry and complete test entry and review.

Customer Assurance and Support

Process Solutions has been providing concrete laboratory solutions since 1999 and our background in cement extends well beyond that. This is important as it means that we understand the needs, issues and working environment of the industry.

We work with clients to design and/or customize their solution, and to install, implement and maintain the necessary hardware and software. This process typically includes on-site time to survey the site and confirm requirements before detailed planning and implementation start.

Process Solutions can provide customized ongoing maintenance and support agreements. Our Customer Care group carries out on-site installations, and provides full-time Help Desk support.

Most importantly, we aim to establish client partnerships for the long term. We develop on-going working relationships that will enable you to get the most from your existing solution(s), and at the same time help us to further develop our portfolio by understanding and satisfying your needs.

We are continually updating and improving our core technologies. Relying on user feedback makes our software better suited to the concrete and cement industry, and all of our software is tailored to your individual requirements.

For More Information

CDTS offers both a traditional LIMS and a powerful data repository tool specifically designed for concrete quality testing. It provides many benefits, including simplistic data organization and easy data retrieval, by grouping mix samples into project records; as well as intuitive data entry of sample test results.

Any information about the effect of different quantities or materials can be researched in the data repository to answer client questions, resolve problems or to determine a more effective concrete mix.

If you would like to discuss our concrete quality data repository for your laboratory, please contact our Quality & Environmental Solutions Manager:

Ian Harrison

Telephone: (780) 452-2227 ext. 5267
E-mail: ian.harrison@pscl.com
Visit our web site at www.pscl.com