Drilling Software | Sophisticated Yet Simple

CEMLab®

Cement Lab Data Management System

Overview

The design and testing of slurry are integral aspects of every cementing job. This process is both time-consuming and costly due to the variability of conditions across different wells. Traditionally, cementing engineers and lab technicians relied on paper forms to record test results. With the introduction of Microsoft Excel®, people began to take advantage of electronic filing. This significantly improved reporting quality; however, what was missing with this approach was the management of numerous reports and search functions.

Without an efficient lab database, challenges such as difficulty in designing cement slurries, waste of resources in having to repeat similar tests, managing large amounts of slurry data, lack of evidence when problems arise, and non-standard practices across labs within a company.

To streamline cement lab operations, Pegasus Vertex—A LINQX Company, developed CEMLab, an integrated database management application. CEMLab formulates slurry, calculates lab amounts for all ingredients (cement, dry and liquid additives, salts, and water), stores API test results, and generates weight-up sheets and lab reports.

This software provides quick access to slurry formulations and testing statuses anywhere, anytime. Its advanced search function enables users to swiftly locate formulas and tests.

Benefits

Efficiency and Productivity

- Stores all slurry formulations and test results in one place, providing easy access and reducing search time.
- Includes all slurry, spacer and washer industrial standard tests.
- Compatible with Azure Active Directory (Azure AD).
- Support single sign-on (SSO).

Cost Savings

- By optimizing resource use and reducing the need for repetitive tests, CEMLab helps lower operational costs.
- Enhances overall lab efficiency, allowing more tests to be conducted in less time.

Quality Control

- Ensures consistent procedures across different labs within a company.
- Automated calculations and data entry minimize human error, improving overall data accuracy.

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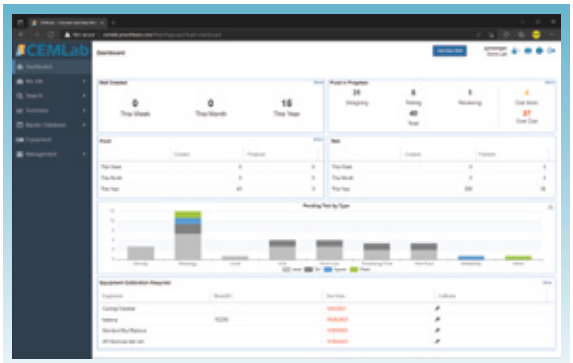
CEMLab®–Cement Lab Data Management System

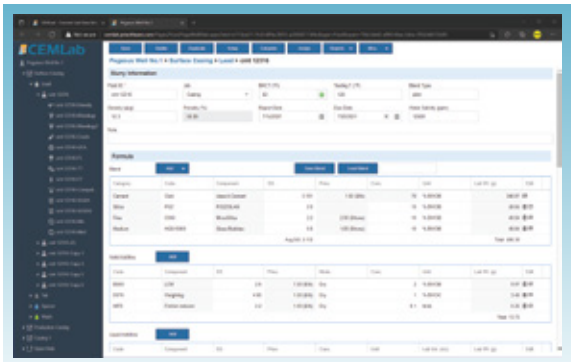
Features

- Web-based application
- Centralized database for multiple labs
- Integration with Azure Active Directory
- Multi-user online collaboration
- Formulation designs and calculations for lead slurry, tail slurry, spacer, and wash
- 16 standard tests and user-define test
- Search by various combined criteria
- Job tracking and due date checking
- Sample management
- Equipment database with calibration and usage monitor
- Remote submission of test and review requests
- Lot number, mixing order, history log
- Cost calculation and super sack functionality

  Lab management and user management with permission assignment (admin only)



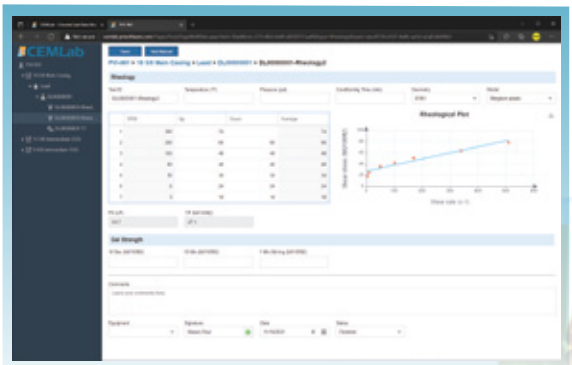
Dashboard



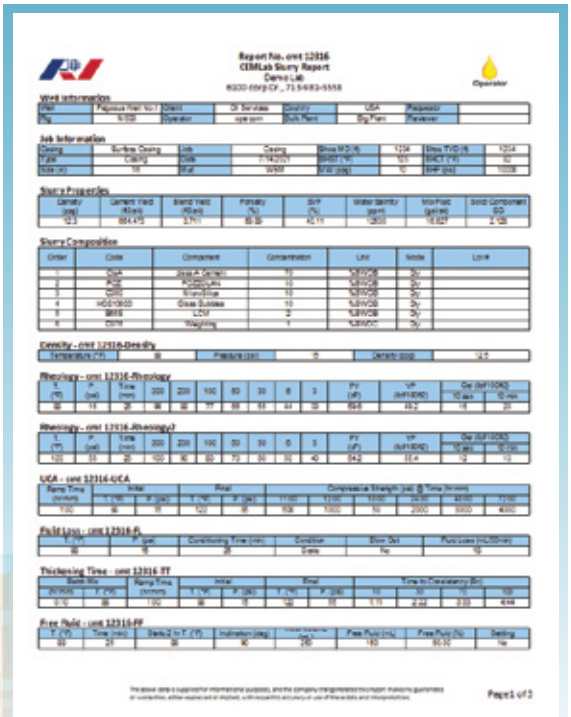
Slurry Design

Server Requirements

- **Deployment Options**: Single-server or two-server architecture
- **CPU**: 6-core (single) or 2× 4-core (app + DB)
- **Memory**: 12 GB RAM (single) or 8 GB RAM each (app + DB)
- **Storage**: 80 GB SSD (single) or 40 GB SSD each (app + DB)
- **OS & Framework**: Windows Server 2019+ with .NET 4.0
- **Web Server**: IIS 10.x or higher
- **Database**: SQL Server 2016 Express or higher



Rheology (Test)



Cementing Lab Report

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