



DEVELOPMENT DRIVEN. FIELD FOCUSED.

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Technology developed and delivered for the Drilling and Completions Industry.

CSI Technologies is dedicated to developing “State of the Art Technology” in Drilling and Completions that utilizes a combination of laboratory investigation and engineering analysis culminating in optimized field implementation.



PE certifications for cementing

- > P&A operations
- > New drills

Revised deepwater regulations now require PE certified designs for casing and cement programs to confirm well integrity. Registered Professional Engineers at CSI Technologies review cementing programs to assess compliance with BOERME regulations for Permit to Drill applications, P&A operations, completions operations and permit revisions.

Technical support for primary cementing

- > Engineering design and computer modeling
- > On-site quality control
- > Confirmation lab testing

Primary cementing provides zonal isolation and wellbore integrity, which is critical for safety and well productivity over the lifetime of the well. Poor slurry design, inaccurate blending and operational practices may lead to job failure or zonal isolation loss, requiring costly remedial work. CSI Technologies provides comprehensive technical support for primary cementing, including engineering design, computer modeling, and confirmation lab testing to ensure that client requirements are met. On-site quality control ensures that best practices are implemented and the job is executed according to design.



Third-party confirmation testing of cement slurry designs identifies potential issues pre-job, validates the repeatability of previous test results and ensures that both client and regulatory design specifications are met. At CSI Technologies, lab testing is conducted according to API RP 10-B2 specifications, and includes API tests such as rheology, thickening time, fluid loss, compressive strength and free fluid. In addition to conventional laboratory testing, CSI Technologies also conducts specialized tests when further analysis is required by the client. Specialized slurry testing includes gas migration analysis, hydration volume reduction, post-set expansion and determination of cement mechanical properties such as Young's Modulus, Poisson's ratio, tensile strength and confined compressive strength.



Technical support for remedial cementing

- > Bond log analysis
- > Engineering design and computer modeling
- > On-site quality control
- > Confirmation lab testing

Successful remedial cementing operations require pre-job engineering design and simulation as well as on-site quality control to ensure the job is executed according to the design. A cement bond log is an essential tool for the evaluation of cement integrity as well as for the identification of areas requiring remediation. CSI Technologies provides comprehensive technical support for remedial cementing, including bond log analysis and interpretation, engineering design, computer modeling, on-site quality control and confirmation lab testing to ensure that client requirements are met.

Trouble cement jobs

- > Engineering analysis
- > Laboratory performance testing

Identifying the contributing factors to a cement job failure can avoid similar failures in the future. CSI Technologies provides comprehensive post-job investigation for trouble jobs, including engineering analysis and laboratory testing.

Contract R&D for drilling and completions

- > Chemical development
- > New process development
- > Product implementation

CSI Technologies provides contract R&D services for cementing, drilling and completions customized to fit client needs. These services include chemical development, new process development and product implementation, as well as the development and setup of custom large-scale testing when commercially available equipment are unable to fulfill client requirements.

Contract lab testing services

- > Chemical QC

Chemical quality control testing is also available at CSI Technologies to ensure that chemical performance meets required product specifications.

Cementing audit services

- > On-site bulk facility and equipment
- > Laboratory

On-site quality control in the laboratory and the bulk plant ensures that appropriate procedures are being followed and that client quality standards are met. CSI Technologies provides on-site cementing audit services for laboratories and for bulk facilities and equipment.

Resin

Resin systems are an alternative material for oil well applications such as plugs, formation consolidation and remedial annular seals. CSI Technologies offers specialized testing for optimization and quality control of resin systems.



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