



FALL 2012

THE TEST REPORT

A NEWSLETTER OF THE CALIFORNIA COUNCIL OF TESTING AND INSPECTION AGENCIES

PRESIDENT'S MESSAGE



JOHN ATKINSON
PRINCIPAL, HOLDREGE & KULL

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MIKI CRAIG

2012 has come and nearly passed us by with some great accomplishments. Just recently, Felix Baumgartner dove from 24 miles above the earth's surface to return at speeds in excess of 800 miles per hour, setting a new world record. Seems ASTM has a test for just about everything... Wonder if the suit he was wearing underwent ASTM testing before his leap?

CCTIA has also had similar accomplishments this past year. Multiple meetings/presentations with regards to the new structural steel code requirements were held earlier in the year, and just recently CCTIA hosted a Southern California meeting/presentation with Dan Spears of Caltrans regarding the new D.I.M.E. program. Not to end there, our education program has become active again with our first round of seminars due to be completed by November 4, 2012.

As with the trees starting to change color, so comes the process of changing those guiding the direction of CCTIA. As we do each year over the next few months new officers will be nominated for the offices vacated, I personally would like to encourage each of you to participate in this process as it is your chance to help steer the direction of CCTIA.

Again this year CCTIA will be holding its Annual Business Meeting (ABM) in Las Vegas. The fabulous Paris Resort will be the host facility February 8th and 9th. The Executive Board chose to push the ABM from January to February due to other events happening in Las Vegas, and the desire to keep the members cost to a minimum. We anticipate multiple manufacturers and distributors will be part of the ABM, with opportunities for those attending to hear about the latest and greatest being offered to our industry. In addition, the World of Concrete will precede the ABM, allowing for firms to participate in both events during a single visit.

We are in the process of finalizing our plans and securing our speakers for Saturday's business meeting; while during dinner Saturday night, we will honor those who have given their time this past year and welcome in those newly appointed individuals who are willing to give their time in the upcoming year.

Information will soon be distributed with the specifics about the ABM and how you can participate in this once a year event. So mark your calendars now and plan to attend.

Thank you.

John Atkinson
2012 President

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CAN YOU IDENTIFY THESE CONSTRUCTION SAFETY SIGNS?

(Answers on Page 2)





The shortest distance between
two points is always under
construction

~Anonymous



CALTRANS' DIME DATABASE

Submitted by Shoaib Ahrary, Alta Vista Solutions

CCTIA hosted a special event in Southern California for Caltrans to provide an outreach presentation to testing agencies interested in providing Quality Control testing for Caltrans projects on September 11th, 2012. Mr. Dan Speer, Chief, Office of Structural Materials of METS, Caltrans, visited Southern California to provide an overview of the Quality Assurance (QA) program.

Working with the industry officials, Caltrans developed Quality Assurance (QA) specifications for cast-in-place structural concrete as part of ongoing effort to shift quality control responsibilities to contractors. These QA specifications require the contractor to perform sampling and testing of material and submit data to Caltrans. To manage and evaluate test data received from contractors and laboratories throughout the State, a central database needed to be created.

DIME (Data Interchange for Materials Engineering) is a web application developed by Caltrans to allow material testing laboratories the ability to easily submit sample information and test data to Caltrans' database via the internet. DIME can be accessed by visiting:

www.dot.ca.gov/hq/esc/Translab/DIME/

After both contractor's Quality Control (QC) test results and Caltrans' verification test results are received, the DIME program will allow Caltrans to compare and validate the Contractor's QC test results. Samples will be identified using unique sample ID number, to ensure the correct test results are being used for comparison.

Uploading test data to DIME is made easy by providing the Contractor the ability to upload their data in an xml file format. This process will greatly reduce the time and effort required to input data, especially when many tests have been run. DIME also provides a manual method of data input. The data uploaded to DIME is private and not shared.

To register for an account on DIME, an officer of the company must submit a written request on company letterhead for an account. This request should include the following information: name of company/laboratory, street address, e-mail address, and PE license number (if available). Requests should be sent to The Materials Administrator, Attn: DIME, 5900 Folsom Boulevard Sacramento, CA 95819-4612 MS 5.

Once the Contractor's primary account 'Lab Account Manager' is registered, they will have the ability to set up additional user accounts for their company/laboratory. Further documentation about DIME can be accessed by visiting the above web address.

2013 CCTIA ANNUAL BUSINESS MEETING

CCTIA is headed for Paris! The Paris Las Vegas Hotel and Resort, that is! Our Annual Business Meeting and Installation of Officers will be held February 8th and 9th, 2013. Events will include the Opening Reception on Friday night, with the Annual Meeting and Educational Programs on Saturday. Also on Saturday will be the Installation Dinner and Awards Ceremony.

Room rates will run \$119/Thursday and \$149/Friday and Saturday, and are subject to 12% Clark County taxes. Reserve your room early by calling **1-800-722-5597** and be sure to provide event code **SPCCT3** to receive these discounted rates

CCTIA's Executive Board has again voted to subsidize this popular event, holding the member's cost to \$150 per person for the fourth year in a row.

Look for event and registration information coming soon in your mailbox.

ANSWER TO CONSTRUCTION SAFETY SIGNS

1. Obstacles
2. Low Temperatures
3. Laser Beam

FAQ 10.054

SPECIFIED STRENGTH OF CYLINDERS VS CORES

Q *Submitted by Terry Egland, P.E., San Leandro, California*

On a recent project, the concrete column strengths for one pour fell short of the specified 4,000 psi. Cores were taken in accordance with CBC 2010 Section 1905.6.5 and ACI 318 Section 5.6.5. Due to project schedules and forming techniques, cores were taken vertically from the column tops. Subsequent strength testing indicated acceptable results and the project continued with only this small blip. Afterwards, our client questioned our field testing. They claimed that if the core testing results met the requirements of the Code, the cylinder testing was obviously incorrect and therefore refused to pay for the coring. What is the relationship between the strength indicated by the test cylinders compared with the strength of the concrete in the structure?

A *Submitted by Peter Grossman, P.E., a Senior Consultant with Testing Engineers, Inc. He can be reached at peter@testing-engineers.com*

Test specimens (cylinders) are made, cured and tested under certain standard conditions that are usually appreciably different from the conditions existing in the structure. The value of field-cast test specimens is that they give a measure of the **strength potential** (they evaluate the materials and mix as supplied by the producer, to ascertain the concrete meets project specifications). Test specimens are not intended to yield an exact strength of the concrete in the structure, and the **actual strength of the concrete in the structure can be appreciably different**. Besides variable environmental site conditions and curing, other variables between test specimens and the concrete in the structure include variations of mix components, water content, size and shape of the structure, workmanship, degree of consolidation, possible presence of defects such as rock pockets, restraint, and combinations of loading in the structure. It is because of these unknowns that the Structural Engineer must consider a factor of safety when the structure is designed.

Variations in cylinder strengths are not always reflective of a problem in the structure. For instance, if three sets of specimens are made from one day's concrete placement and maintained under identical conditions throughout the test duration, there is no assurance they will all fail at the same strength when they are tested at the same age. In fact, each one will almost always break at a different strength. These are normal variations, and should be expected.

Cored specimens are usually obtained days or weeks, even months, after the laboratory testing of cylinders. This additional time must be taken into account when comparing cylinder and core test results. In addition, cored specimens are tested in a dry or moist condition, but rarely in the saturated condition similar to test cylinders. It is well documented that dry specimens have a higher compressive strength than saturated specimens.

We do know that there are variations in the strength of the structure that are not caused by basic variations in the concrete itself. For example when cores are taken from a column, the cores from the upper portion of the column invariably indicate lower strength than the cores from the bottom portion of the column. The reason is that the concrete near the bottom was compacted by static hydraulic head of the concrete being worked above, yet there was no change in mix or materials.

FAQ's

Got a question about codes, materials, inspections, testing, or certification? Check out the *Frequently Asked Questions* on our website! More than 30 postings, many printable for sharing with others! Just go to www.cctia.org.



Success is to be measured not so much by the position that one has reached in life as by the obstacles he has overcome.

- Booker T. Washington





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SEE US AT:

WWW.CCTIA.ORG



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THE CALIFORNIA
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TESTING AND
INSPECTION
AGENCIES**

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LITTLE KNOWN FACTS...

The Main Library at Indiana University sinks over an inch every year because when it was built, engineers failed to take into account the weight of all the books that would occupy the building.

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TERRACON CONSULTING ENGINEERS &
SCIENTISTS
TESTING ENGINEERS, INC.
TWINING, INC.
URS/SIGNET TESTING LABORATORIES
YOUNGDAHL CONSULTING GROUP, INC.

UPCOMING MEETINGS...

NOVEMBER 15, 2012 — 12:00 P.M. — GENERAL MEETING & PROGRAM
HILTON GARDEN INN, 2200 GATEWAY COURT, FAIRFIELD

DECEMBER 20, 2012 — 3:00 P.M. — GENERAL MEETING
FOUR POINTS BY SHERATON, 5115 HOPYARD ROAD, PLEASANTON

FEBRUARY 8-9, 2013 — ANNUAL MEETING & INSTALLATION OF OFFICERS
PARIS LAS VEGAS HOTEL & CASINO, LAS VEGAS BLVD., LAS VEGAS, NV.



COMPANY NAME
STREET ADDRESS
CITY, STATE 00000