



OETIO Safety Conference

On June 21 and 22, 2008, the Operating Engineers Training Institute of Ontario put on a Safety Conference for their union constituents. The weekend session covered mobile cranes on the Saturday and tower cranes on the Sunday. The session was well attended with approximately 80-100 operators participating in the seminars.

Speakers were brought in from industry as well as from the Ministry of Labour to discuss topics ranging from fall protection to the recent safety blitzes the Ministry has been conducting. We were invited by OETIO to provide a seminar on Tower Crane Inspection for the Sunday session.

Ministry Of Labour Safety Blitzes

Chris Beatson from the Ministry of Labour discussed the results of the recent tower crane safety blitzes that were performed in the past year. Numerous fines and stop work orders were written up relating to unsafe mechanical, electrical and structural issues noted by the inspectors. A follow up blitz was conducted a few months after the first one to check on any improvements. Again a number of fines and stop work orders were handed out, many for the same issues. The message from the Ministry – **clean up your act or it will cost you!**

While the Ministry is planning to continue checking on the tower crane industry, Mr. Beatson indicated that the coming year will see blitzes on mobile cranes, concrete pumpers, and roll over protective structures (ROPS). Electrical hazards will also be a focus of attention.

Having recently added a number of new safety inspectors, the Ministry is ready to go ahead with these programs. Make sure you're ready when they walk through your door!

Tower Crane Inspection Seminar

Our seminar on Tower Crane Inspection discussed the governing legislation and standards in Ontario. Mainly these are Ontario's Regulations for Construction Projects (O.Reg. 213/91) and CSA standard Z248 "Code for Tower Cranes".

The focus was to inform the operators what to expect from a third party inspection company and how to make sure that

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they are getting a good inspection. The discussion included:

- Details of the inspection requirements from the Regulations and CSA standard
- Evaluating the competence of the inspector and the engineer
- Methods used for inspection
- Structural areas requiring inspection by the engineer (or his designate)
- Inspection recommendations for tower crane operators
- Typical defects found on other cranes

(Continued Over)

The seminar concluded by reminding the attendants that the purpose of inspection is to improve the safety of the crane – not just to get a certificate for the lowest price. That said, they are in a good position to ensure that the third party inspection company does a good job instead of just a quick one.

You can download our presentation on our website at www.domson.ca.

Raising the Bar For Tower Crane Inspection

Ontario has a pretty old fleet of tower cranes at its disposal and, more and more, there are calls for mandatory retirement and / or derating schedules being thrown about. While we don't want to weigh in on this philosophical discussion here, one thing is for sure – a well maintained crane will operate better and more safely than one that is not. Part of this maintenance should include a strong inspection program.

The Construction Regulations in Ontario (O.Reg 213/91) require tower cranes to be inspected by a professional engineer or his designate using non-destructive testing according to CGSB methods on **all** structural elements prior to the crane being erected. This means that more than just the mast bolts need to be tested by magnetic particle inspection.

Magnetic particle inspection (MPI) should also be performed on the mast, jib, and counterjib sections themselves, especially at the connection points. The connection point lugs on the machinery deck are critical and should be MPI checked as should the welds in the apex. Still to be tested are the hook and block, the trolley, wedge sockets, climbing assemblies, etc, etc.

It is impossible to properly inspect all these items by non-destructive methods as required by law in 2 or 3 hours, or less, as is often being done these days. So how do you know if you're getting the job done right?

Magnetic particle inspection requires that test areas be clean of grease, oil and other foreign materials. While it's unreasonable to expect the paint to be removed, doing MPI over paint that is too thick, not tightly adhering, or cracked is a waste of time. To inspect these areas, a little paint has to be removed locally near the weld being tested to obtain meaningful results. If this preparatory cleaning is not being done on all the structural members – you know the inspector is either going through the motions or not doing his job at all. **Don't allow it!**

Ultimately, industry plays a large role in dictating to inspection companies how good the inspection must be. It's time to raise the bar to at least meet what the law has set out before these older cranes start taking their toll as they did in New York. We'll all be safer for it.

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