



New Legislation Affects The Crane Industry

Most people in the construction world heard about the new laws that came out for confined spaces a little while ago. At the same time as that legislation was brought in, the construction regulations for electrical safety were virtually completely restructured as well. However, along with these high profile changes to the Construction Regulations, other changes affecting the crane industry were also brought in with significantly less fanfare.

These changes relate to multi-tiered loads for cranes and to operating equipment near power lines. The new rules are more stringent than past practice and require that special procedures be developed to ensure worker's safety. The changes came into effect in September of 2006 so everyone should be following them now. Here's a primer on the new regulations.

We've Moved!

Once again, we outgrew our office. Our new address is at the bottom of the page. All other information is unchanged. Please update your records.

Rules For Steel Erection

If you're in the steel erection business, you probably know the term "Christmas Treeing" as related to lifting a load of beams. Basically, this is rigging up a number of structural items into a single multi-tiered load and lifting the entire group of them up to the connectors standing on the structure. The connectors then place each item in place starting with the bottom member and working up to the top. Once the hook is empty, the operator lowers it to the rigging crew on the ground to load up the next set of members while the connectors finish bolting up the steel. The process can greatly improve the speed of erection, but can also be hazardous if not carried out properly.



To address this hazard, Section 103 of the Construction Regulations have been greatly expanded and now give very detailed requirements. While you should check out the latest set of regulations for yourself to get the full details, here are the main highlights:

- 1) A multi-tiered load is defined as two or three individually rigged structural steel pieces that are aligned vertically, remain horizontal during lifting, and are all simultaneously lifted by a single crane.
- 2) A multi-tiered load shall,
 - a) not contain structural steel pieces that are bundled together;
 - b) not contain more than three structural steel pieces;
 - c) not use one structural steel piece to support another;
 - d) have each structural steel piece independently slung back to the main load hook or master link;
 - e) be lowered only by a crane using power-controlled lowering.
- 3) Before beginning a multi-tiered lifting operation at a project, a written procedure has to be developed by a professional engineer. Among other things, the procedure must:

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- a) Include design drawings providing the rigging sizes and arrangement, structural steel arrangement and sizes, etc.
 - b) Identify the crane, its capacity, maximum radius, and provide any limitations of the crane,
 - c) Detail how the load weight will be determined
 - d) Identify all safety hazards such as wind, weather, other local equipment, ground conditions, etc.
 - e) Provide a means of load control
 - f) Specify the extent of inspection of all rigging and structural items prior to each lift
 - g) Specify any additional inspections or other work to be carried out by a professional engineer to ensure the safety of a worker and the conditions requiring this work to be done.
- 4) The employer responsible for the multi-tiered lift must provide a written document listing (by name) each worker involved in the lift operation, their job title and their duties
 - 5) The employer must ensure that the engineered procedure is provided and reviewed with the workers and that the procedures are fully implemented. Any deviations from the engineered procedures have to be approved by the engineer in writing before proceeding with the lift.
 - 6) A copy of the engineered procedures, any deviations to the procedure, and of the document described in item 4 above has to be kept on site while the multi-tiered operation is in progress.
 - 7) The Ministry of Labour now has to be informed prior to any multi-tiered hoisting operation is carried out. This can be done via fax, e-mail, or a telephone call.

While these rules are tough and can seem a bit onerous for an experienced steel erection company, we can help you through them by creating a flexible engineered procedure that is practical and tailored to your own company's specific needs. Give us a call, and our experienced rigging engineers will quickly get you in compliance with these rules with a minimum of fuss.

Operation of Equipment Near Power Lines

Under the old rules, it was enough to have a signalman present to ensure that the crane did not come closer than the minimum approach distance to power lines as specified in the Construction Regulations. While that rule still exists, now that the electrical hazards portion of the regulations has been revamped, the safety measures have stepped up.

The main addition here is, you guessed it, a written procedure. The constructor now has to develop and implement a written procedure that will ensure that no part of a vehicle or equipment, or its load will come closer than the minimum approach distance.

The procedure is to be provided to each employer on a project. It is then the duty of each employer to provide and explain the written procedures to their workers prior to starting work on the project.

The procedures must include

- Adequate visible warning, visible to the operator, must be placed in the vicinity of the hazard
- The operator is to be given written notification of the hazard before beginning work
- A sign, visible to the operator and warning of the hazard must be placed at the operator's station.

Make your work environment safer:

- ✓ Ask for your written notification of electrical hazards before entering a site.
- ✓ Tell your supervisor or the site superintendent if you see an unmarked electrical hazard
- ✓ ALWAYS look up for electrical lines.

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