

## Crane Safety

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**C**ranes are essential to steel erection, and their use requires careful coordination. To address concerns about safety, training and new technology, OSHA has recently appointed a 23-member negotiated rulemaking committee to work on the revision of its crane and derrick safety standards. "The current OSHA crane standards have not been revised in 30 years," said Committee Member Chip Pocock, of AISC-Member C.P. Buckner Steel Erection. "Technology with cranes has changed. We need to think outside the box, about where cranes will be 30 years from now—and in the interim, we need a standard that provides safety for employees exposed to cranes, even while technology moves forward."

Pocock says that new technology is no substitute for good training. "All the cranes these days have a computer with a load-moment system that gives you a boom angle, and a radius of where that boom and load are, and all the other information that you need as a crane operator," he said. "Manufacturers continue to come up with computer systems that give the operator more information to lift loads safely. But those systems are only operator aids, and are only as reliable as the person sitting in the seat who has programmed them."

The new OSHA standard will cover everything from the basic definition of a crane and crane-inspection criteria to radio signals and operator qualifications. The prevention of injury from overhead power lines is an area that the committee is emphasizing. "The biggest thing that kills people working with cranes is overhead power lines," Pocock said. "New technologies, like proximity warning devices, can help. But we as an industry need to do a better job of training our folks about the hazards of the overhead power lines."

The committee is also working on guidelines to train people in on-the-job assembly and disassembly of cranes. "The current specification is to follow all the manufacturer's recommenda-



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tions and specifications," Pocock said. "But the manufacturers base their recommendations and specifications on their ability to assemble and disassemble cranes on a dead-level concrete pad, with no obstacles like mud, a construction site, or power lines—the types of everyday things that we handle. You're not always able to follow exactly what the manufacturer says."

Another topic that the committee is addressing is qualification and training requirements for signaling crane operators. "Signal people are needed when an operator is in a blind situation, because the operator can't see where the load is at," said Committee-Member Bill Smith of Maxim Crane Works in Baltimore. "But there's been no standard for their training and qualification. Many times the person given the job of signaling is the weakest link. To prevent accidents and injuries, signal people need to understand the dynamics of the crane, boom deflection and swinging. They have to anticipate the momentum and the starts and stops. Many signal people don't know all the necessary signals, and operators have to make adjustments on their own."

### OPERATOR CERTIFICATION

One issue on the table is the possibility of a national requirement for cer-

tification of crane operators. "Certification is needed," Smith said. "It's crazy to think that crane operators run huge pieces of equipment, but most states have no requirement by law of certification."

The National Commission for Certification of Crane Operators (NCCCO) created a certification exam in the early 1990s, and some states already have adopted it as a template for a state test. "The program was established with the desire to improve crane safety on construction sites from the grass-roots level, and in an effort to have the industry take care of its own," said NCCCO Executive Director Graham Brent. "We didn't want 50 states to implement 50 different licensing programs. The idea was to have a national program that the industry would buy into."

The certification exam is both written and practical, and tests four main areas: 1) site and set up of the crane, 2) technical knowledge, 3) operations, and 4) load charts. NCCCO has been recognized by OSHA and accredited by the National Commission for Certifying Agencies (NCCA). West Virginia, Hawaii, New Jersey and California already have adopted certification programs based on the NCCCO's.

Brent says training is key to passing the exam. "Training is what this is all about and we encourage it. Without training, you are unlikely to pass the exam."

### JOIN THE DEBATE

Committee meetings for the new OSHA crane and derrick safety standard are open to the public. Smith encourages interested parties to attend and voice their views. "We're trying to get this black and white," he said. "We don't want gray standards and interpretation in between."

For more information on OSHA's crane-safety standard, please visit [www.osha.gov](http://www.osha.gov) and see docket #S030. For more information on the NCCCO and crane certification, visit [www.nccco.org](http://www.nccco.org). ★