CONSTRUCTION RISK MITIGATION THROUGH CONFORMITY ASSESSMENT

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National Commission for the Certification of Crane Operators (NCCCO)

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Key Concepts

- Construction is inherently “risky”
- Property and people are the ones at risk
- Inadequate risk mitigation = accidents and incidents
- NCCCO born out of a grass-roots initiative
- **Conformity assessment** was (is) core element of initiative: certification and accreditation
Construction in the ’80s

- Personnel certification an “alien” concept
- No history of third-party evaluation
- ANSI (B30) & OSHA standards light on detail
- No federal requirement; 5 states had rules
- No pathway to compliance
- Lip service to personnel competency assessment widespread
ANSI Accreditation to ISO 17024

ISO/IEC 17024
Personnel Certification Body
#0756
Mobile, Tower, Overhead,
Articulating, and Service Truck
Crane Operator, Digger Derrick
Operator; Signalperson,
Rigger Level I and Level II,
Crane Inspector, and Lift Director
Programs Accredited
Where’s the Value?

- Established credibility
  - Market
    - Employer adoption
    - Project owners requirement
    - Insurance industry approval
    - Industry membership associations endorsements
  - Federal/State/Local Jurisdictions
    - OSHA recognition
    - State adoption
- Redefined “Certification” for the Industry
- Distinguished it from Training
Industry Recognition
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OSHA Signs Agreement with CCO

National Crane Operator Certification Program Recognized

Washington, DC, February 26, 1999 - The U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) and the National Commission for the Certification of Crane Operators (NCCCO) have signed a voluntary cooperative agreement to recognize crane operator certification issued by NCCCO. This agreement facilitates the recognition of second-party certifications provided by NCCCO.

The NCCCO has been accredited by the American National Standards Institute (ANSI) and the American Society of Mechanical Engineers (ASME) to establish and administer a certification program for crane operators.

The agreement recognizes the NCCCO's certification program as an equivalent to OSHA's required training and certification for crane operators. This agreement is part of OSHA's ongoing efforts to improve workplace safety and health.

1. PURPOSE:

The purpose of this agreement is to provide a voluntary joint effort for OSHA and NCCCO to recognize crane operator certification programs. The NCCCO has developed and validated certification programs that meet the requirements of ANSI/ASME B30.5 (American National Standards Institute/ American Society of Mechanical Engineers) as referenced by 29 CFR 1926.550(a)(1) and (b)(2).

Establishment of a crane operator certification program through joint efforts of the labor and industry will be an important step forward in promoting the common goal of safer crane operation. As this certification program becomes more widely used, education and training will become primary factors in developing and maintaining qualified crane operators in the construction industry. Certification will become the natural progression in crane operators' careers as they gain more education, training, and experience working with the multitude of equipment in use today and the increasingly more advanced cranes of the future.
OSHA Recognizes Accredited Personnel Certification

“An accredited certification program that attests to the qualifications and experience of crane operators will provide employers and OSHA with a valuable tool in determining if crane operators are “qualified” to perform their tasks.”

“The benefit to the employer is that the presence of NCCCO certified crane operators on a job site will be an indicator to [OSHA] compliance officers that the crane(s) is being operated by someone with demonstrated knowledge and ability.”

“The execution of this agreement with NCCCO should have an immediate, significant and beneficial impact on safe crane operations.”

Voluntary Agreement between OSHA and NCCCO signed February 26, 1999
Where’s the Value?

- Established credibility
  - Market
    - Employer adoption
    - Project owners requirement
    - Insurance industry approval
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Recognize or require CCO Certification by law
Legislation proposed (recognizes CCO Certification)
CCO Certification not recognized in legislation
Licensing not required

Mandatory Training Requirement Only
Where’s the Value?

- Established credibility
  - Market
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    - State adoption
- Redefined “Certification” for the Industry
- Distinguished it from Training
The Ultimate Test: Does it Work?

How to determine?

- Program Growth
- Follow the Data
- State Reports
- Insurance Position
- Survey Employers
- Poll Certificants
By the Numbers

- 150,000 individuals certified since inception
- 90,000 currently certified
- More than 350,000 certifications issued
- 1,000,000 written + practical tests administered
- 120+ training firms nationwide (unaffiliated)
The Ultimate Test: Does it Work?

How to determine?

- Program Growth
- Follow the Data
- State Reports
- Insurance Position
- Survey Employers
- Poll Certificants
Ontario Crane-Related Deaths

<table>
<thead>
<tr>
<th>no. /year</th>
<th>/100k workers</th>
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<tbody>
<tr>
<td>1969-1978</td>
<td>85 8.5 3.95</td>
</tr>
<tr>
<td>1979-2002</td>
<td>51 2.1 0.76</td>
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</tbody>
</table>

- Death Rate down 80%
- Crane and rigging accidents as % of all construction accidents down 50%
# The California Experience

## CRANE ACCIDENTS, June ’02–’05 vs. June ’05–’08

<table>
<thead>
<tr>
<th><strong>FATAL ACCIDENTS</strong></th>
<th>’02–’05</th>
<th>’05–’08</th>
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</thead>
<tbody>
<tr>
<td>High-Voltage line contacts</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Struck by Loads</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Mobile Cranes Overturned</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Cases</strong></td>
<td>10</td>
<td>2</td>
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</tbody>
</table>

80% decrease

<table>
<thead>
<tr>
<th><strong>NON-FATAL ACCIDENTS</strong></th>
<th>’02–’05</th>
<th>’05–’08</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Voltage Line Contact</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Struck by Loads</td>
<td>18</td>
<td>3</td>
</tr>
<tr>
<td>Mobile Cranes Overturned</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Cases</strong></td>
<td>30</td>
<td>13</td>
</tr>
</tbody>
</table>

57% decrease
The Ultimate Test: Does it Work?

How to determine?

- Program Growth
- Case Studies
- State Reports
- Insurance Position
- Survey Employers
- Poll Certificants
The Ultimate Test: Does it Work?

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- Program Growth
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Case Studies

• Large General Contractor (north-west):
  – Crane operators CCO-certified: 350
  – “To have qualified operators in the seat before making a lift reduces our risk tremendously. CCO certification has helped us reduce our crane incidents by 31% in one year.”

• Large General Contractor (south):
  – Crane operators CCO-certified: 206
  – “By requiring CCO certification for all operators, we decreased our crane incident cost by 80% in the first year of implementation.”
Case Studies

• Large crane rental company (north-east):
  – Crane operators CCO-certified: 365
  – “Having nearly 100% of our operators CCO certified has given our customers a high level of confidence in our employees’ abilities to get the job done and get it done safely.”

• Large general contractor (Gulf states):
  – Crane operators CCO-certified: 125
  – “By saving money on costly crane accidents, we have been able to spend money on the purchase of new equipment.”
The Ultimate Test: Does it Work?

How to determine?

• Program Growth
• Case Studies
• State Reports
• Insurance Position
• Survey Employers
• Poll Certificants
“CCO has helped me do my job”

“By staying certified it helps to keep me aware of the industry standards and regulations."

"The ability to quickly decipher load charts for any type of crane."

“Anybody can hop on a crane and start operating but to do it safe and know the fundamentals means going to school and learning the do's and don'ts of operating.”
Three Decades of Experience:
An NCCCO Survey of Three-Time Recertificants
Survey Three-Time Recertificants

Certification has . . .

-- made me a “safer operator” 87%
-- helped me “do my job better” 86%
-- made me “more professional” 89%
“CCO has made me a safer operator”

“It has made me more professional even though I have been operating cranes for 42 years.”

“I'm more aware of power lines, outrigger pad setup, cribbing; just basically more aware of the hidden dangers.”

"I feel that my ability to read and understand load charts has improved, and I've learned the importance of crane safety."

“I can foresee—and stop—likely safety problems before someone is hurt.”
OUR VISION

A global lifting environment in which crane and crane-related risks are reduced, performance records improved, training needs stimulated, and overall safety enhanced.
Other Observations

• Limitations of Conformity Assessment
  – “Tool in the Toolbox” *not* Panacea

• Collateral benefits
  – Engaging future workforce
Engaging the Next Generation

Collateral benefits

Engaging future workforce

Limitations

“Tool in the Toolbox” not Panacea

NATIONAL COMMISSION CERTIFICATION
for the Certification of Crane Operators

NCCCO Mission:
To develop effective performance standards for those who work in and around cranes; provide fair, valid, and reliable assessments of the knowledge and skill; and as an authority in the industry, source of reliable information.

CCO Certification Programs:
- Crane Operator
- Crane Operator
- Overhead Crane Operator

National Commission for the Certification of Crane Operators
Filling the Skills Gap

Lift & Move USA
A world of job opportunities