

Crane Rental Association of Canada Annual Conference



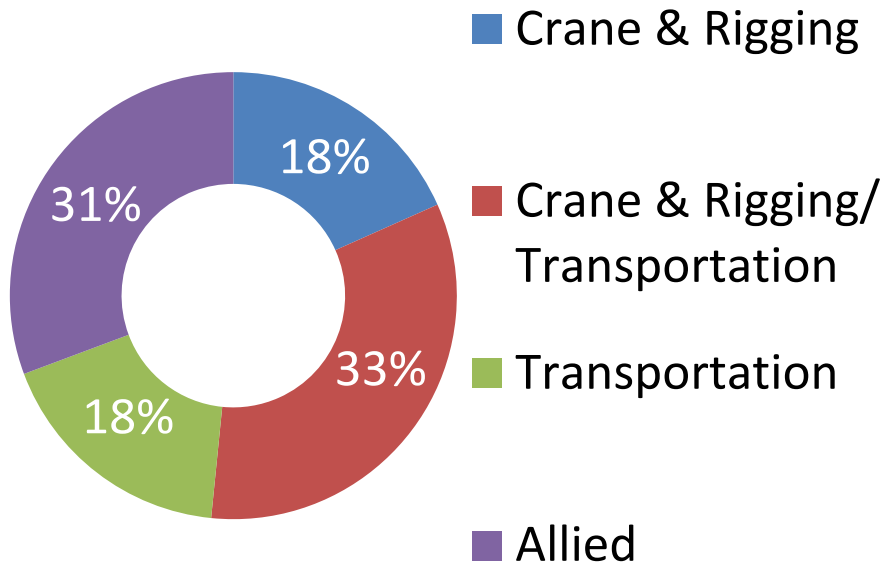
Beth O'Quinn
Vice President
June 4, 2016

Who is SC&RA?

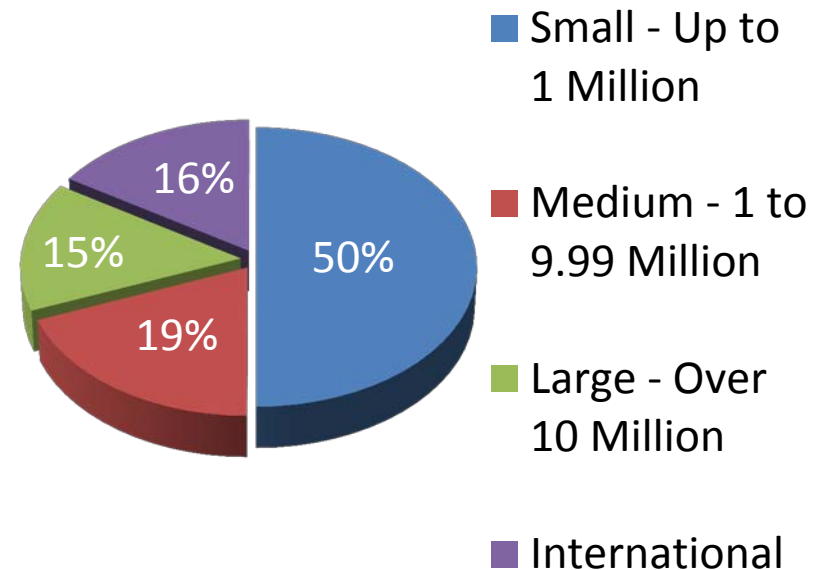
- Founded in 1948 in Washington, D.C.
- 1,300 Member Companies in 46 Countries
- Crane
- Rigging
- Millwright
- Specialized Transportation
- Allied

SC&RA Members

By Industry



By Revenue



SC&RA Role in Industry

- Advocacy
- Education
- Professional Development
- Safety Promotion and Recognition
- Networking
- Recruiting New Industry Talent



Guide to Mobile Crane Safety Management

Edited and Published by



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Mobile Crane Safety Management System

- Define objectives, roles and responsibilities
- Allocate and manage resources
- Document procedures
- Measure progress
- Evaluate results
- Provide for continuous improvement

Mobile Crane Safety Management System

Key Elements



- Risk
- Lift Classification
- Lift Planning
- Jobsite Issues

Mobile Crane Safety Management System

Key Elements

RISK

- Risk Management
- Failure Modes and Causes
- Risk Matrix

Mobile Crane Safety Management System

Key Elements

RISK MATRIX				
Consequence Probability	Negligible (1)	Marginal (2)	Critical (3)	Catastrophic (4)
Certain (5)	(5) (Moderate)	(10) (High)	(15) (Extreme)	(20) (Extreme)
Likely (4)	(4) (Moderate)	(8) (High)	(12) (High)	(16) (Extreme)
Possible (3)	(3) (Low)	(6) (Moderate)	(9) (High)	(12) (High)
Unlikely (2)	(2) (Low)	(4) (Moderate)	(6) (Moderate)	(8) (High)
Rare (1)	(1) (Low)	(2) (Low)	(3) (Low)	(4) (Moderate)

Mobile Crane Safety Management System

Key Elements

LIFT CLASSIFICATION

- Critical
- Intermediate
- Standard

Key Elements of Mobile Crane Safety Management Systems

Level of Risk	Lift Classification Category	Corresponding Level of Written Lift Plan Documentation
Exceptionally High	Critical Lift	<ul style="list-style-type: none"> • Plan and elevation view drawings • Crane capacity determination • Lift analysis (% of crane capacity) • Crane foundation loadings • Rigging details • Load transport details if appropriate • Load manipulation details
Moderate	Intermediate Lift	Intermediate Lift Summary form
Low	Standard Lift	Shift Lifting Log

Key Elements of Mobile Crane Safety Management Systems

SAMPLE LIFT CLASSIFICATION WORKSHEET												
Load ID	Load Weight	Working in Hazardous Area	Load Above 100 ft Elevation	Tandem Lift Required	Risk Matrix Value > 15	Crane Make Model	Boom Length	Max Load Radius	Rating Chart Capacity	% Chart Capacity	Lift > 90% Chart Capacity	90% > Lift > 75% Chart Capacity
		No	No	No	No						No	No
		Yes-Critical	Yes-Critical	Yes-Critical	Yes-Critical						Yes-Critical	Yes - Intermediate
		No	No	No	No						No	No
		Yes-Critical	Yes-Critical	Yes-Critical	Yes-Critical						Yes-Critical	Yes - Intermediate
		No	No	No	No						No	No
		Yes-Critical	Yes-Critical	Yes-Critical	Yes-Critical						Yes-Critical	Yes - Intermediate
		No	No	No	No						No	No
		Yes-Critical	Yes-Critical	Yes-Critical	Yes-Critical						Yes-Critical	Yes - Intermediate
		No	No	No	No						No	No
		Yes-Critical	Yes-Critical	Yes-Critical	Yes-Critical						Yes-Critical	Yes - Intermediate
		No	No	No	No						No	No
		Yes-Critical	Yes-Critical	Yes-Critical	Yes-Critical						Yes-Critical	Yes - Intermediate
		No	No	No	No						No	No
		Yes-Critical	Yes-Critical	Yes-Critical	Yes-Critical						Yes-Critical	Yes - Intermediate

Key Elements of Mobile Crane Safety Management Systems

LIFT PLANNING



- Prepare a Plan
- Site Factors
- Load Issues
- Crane Selection
- Emergency/
Contingency Plan
- Rigging Plan

Key Elements of Mobile Crane Safety Management Systems

LIFT PLANNING

- Who Should be Involved?
- Management of Change
- Lift Plan Documentation
- Lift Plan Review
- Review Specifics of Plan



Key Elements of Mobile Crane Safety Management Systems

SAMPLE TYPICAL LIFT PLAN PREPARATION/REVIEW RESPONSIBILITIES			
Entity	Critical Lift	Intermediate Lift	Standard Lift
Lifting Contractor & Owner's Representative	Categorize Each Lift	Categorize Each Lift	Categorize Each Lift
Lifting Contractor or Site Supervisor	Prepare Lift Plan Drawings & Documentation	Prepare Intermediate Lift Summary	
Crane Operator	Review Lift Plan Drawings & Documentation	Review Intermediate Lift Summary	Enter Lift In Shift Lift Log
Owner's Plant Operation Representative	Develop/Review Contingency Plan If One Is Required	Develop/Review Contingency Plan If One Is Required	
Lifting Contractor's Lift Specialist or 3rd Party	Review Lift Plan Drawings & Documentation		
Lift Director	Review Lift Plan Drawings & Documentation	Review Intermediate Lift Summary	Review Operator's Lift Log
Owner's Representative or Site Supervisor	Review Lift Plan Drawings & Documentation		
Safety & Health Representative	Review Lift Plan Drawings & Documentation		

Comments:

- 1) The review process should result in either "approval" or revision of the Lift Plan
- 2) Not all "Entities" will be involved in every lifting operation

Key Elements of Mobile Crane Safety Management Systems

JOBSITE ISSUES

- Roles & Responsibilities
- Equipment
- Crane Foundations
- Crane Loadings
- Good Practices for Safe Operations



Key Elements of Mobile Crane Safety Management Systems

JOBSITE ISSUES

- Hazard Awareness
- Load Testing
- Weather Factors
- Field Audit



Key Elements of Mobile Crane Safety Management Systems

SAMPLE LIFT PERFORMANCE RESPONSIBILITIES

Entity	Critical Lift	Intermediate Lift	Standard Lift
Lift Director	Understand Lift Plan; Complete Pre-Lift Checklist Supervise Lift	Understand ILS*; Complete Pre-Lift Checklist Supervise Lift	Complete Pre-Lift Checklist Sign Shift Log
Crane Operator	Complete Shift Inspection; Understand Lift Plan; Safely Perform Lift	Complete Shift Inspection; Understand ILS*; Safely Perform Lift	Complete Shift Inspection & Shift Crane Log; Safely Perform Lift
Signal Person	Understand Lift Plan Signal Crane Operator Clearly	Understand ILS* Signal Crane Operator Clearly	Understand Lift Work Required Signal Crane Operator Clearly
Rigger	Understand Lift Plan; Examine Rigging Items; Rig Load Per Lift Plan	Examine Rigging Items Rig Load Properly for Safe Lifting	Examine Rigging Items Rig Load Properly for Safe Lifting

* ILS is the Intermediate Lift Summary form

Key Elements of Mobile Crane Safety Management Systems

SAMPLE CHECKLISTS

- Pick & Carry
- Pre-Lift
- Field Audit
- Shift/Daily/Monthly Inspection
- Lattice Boom Crane Annual Inspection
- Telescoping Boom Crane Annual Inspection
- Lift Planning



Questions?

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