



**Chubb Construction**  
**CSI Country Wide** Case Study Safety Strategy Discussion  
**Construction**  
**Safety**  
**Investigator**

Instructions: The objective of this tool is to provide field supervisors with information to proactively engage workers and discuss safety related concerns that they may encounter. Safety discussions should not be limited to the subject above and should pertain to the activities that workers will be involved in that may have the potential for safety related exposures.

<b>Case Day:</b>	Unknown	<b>Accident Type:</b>	Mobile Crane Accident Overtuned
<b>Relevant laws, rules and codes may include:</b>	1926.550; 1926.550 (a)(1), 1926.550 (a)(2), 1926.550(a)(5), 1926.251		

<b>Case:</b>	A 10.5 ton carrier deck mobile crane in the process of hoisting a load or piping at a, industrial construction project had a stability failure that resulted in the crane overturning and landing on its side.
--------------	--

PLEASE READ CAREFULLY: This is being provided to you as a tool that you may wish to use in providing a safety and risk management program. You are responsible for providing safety and risk management services. We at the Chubb Companies are providing this tool to you in support of our underwriting objectives and we here by disclaim any obligation to oversee or monitor the adherence to required or otherwise reasonable safety and risk control practices. We further disclaim liability for claims or suits relating to the alleged or actual failure to conduct reasonable safety control practices, or relating to the use of or failure to use this document. Please note that neither this tool or any of its components contain every possible operation, inspection requirement or other detail that may be relevant to your project or that may be required by federal or state law, or by local building codes, statutes, or other requirements. This tool is intended only as a guideline, and not as a substitute for consultation with your insurance broker, or for engineering, legal or other professional advice.

©2016 Chubb All rights reserved.

Chubb is the marketing name used to refer to subsidiaries of Chubb Limited, providing insurance and related services. For a list of these subsidiaries, please visit our website, [www.chubb.com](http://www.chubb.com). Insurance is provided by ACE American Insurance Company and its U.S. based Chubb underwriting company affiliates. All products may not be available in all states. This communication contains product summaries only. Coverage is subject to the language of the policies as actually issued. Surplus lines insurance is sold only through licensed surplus lines producers. Loss control evaluations, reports, recommendations and services are made solely to assist the insurer in underwriting and loss control and are not to be construed as an added benefit for the insured, property owner or any other party (this may not apply if loss control services are purchased separately and specifically pursuant to a service agreement). Evaluation for any hazard or condition does not imply that it is covered under any policy. Chubb is the world's largest publicly traded property and casualty insurance group. With operations in 54 countries, Chubb provides commercial and personal property and casualty insurance, personal accident and supplemental health insurance, reinsurance and life insurance to a diverse group of clients. Chubb Limited, the parent company of Chubb, is listed on the New York Stock Exchange (NYSE: CB) and is a component of the S&P 500 index. Copyright ©2016

**Accident  
Detail:**

A certified crane operator running a 10.5 ton mobile crane was in the process of lifting a load of piping which had a weight of 7371 lbs. The crane was equipped with an on board computer with a load cell.

At the time of the lift, the crane was set up within an enclosed building structure supported by a solid concrete floor slab. The cranes outriggers were retracted, the boom was fully extended and the operating radius was 12 ft. The ancillary weight including main block, hook & ball and rigging 1 was an additional 400 lbs

Late in the afternoon the operator began to lift the load of pipe to set it at its designated location. In the process of swinging the load into position the crane overturned.

**Reconstructive  
Safety  
Evaluation:**

- What are some of the possible causes of the accident being discussed?
- What actions could have been taken that might have prevented this accident from occurring?

**Accident  
Scene  
Conclusion:**

- As indicated, the weight of the load being hoisted at the time of the incident was 7371 lb plus the ancillary weight of 400 lbs made this a 7771 lb lift.
- According to the crane's load chart, it's lifting capacity in the configuration at the time of the incident indicated 2875 lbs for "on rubber", 4550 lbs for "on outriggers retracted" and 8400 lbs for "on outriggers extended"
- Since the cranes set up clearly indicated that the out riggers were retracted and in contact with the ground, the crane's lifting capacity in this configuration was 4550 lbs. The 8400 lbs being lifted clearly exceed the crane's capacity causing a stability failure that resulted in overturning the crane.
- During the investigation the crane operator indicated the on board computer did not show he had a problem with the lift. Further investigation indicated that the operator did not read the crane load chart correctly.

PLEASE READ CAREFULLY: This is being provided to you as a tool that you may wish to use in providing a safety and risk management program. You are responsible for providing safety and risk management services. We at the Chubb Companies are providing this tool to you in support of our underwriting objectives and we here by disclaim any obligation to oversee or monitor the adherence to required or otherwise reasonable safety and risk control practices. We further disclaim liability for claims or suits relating to the alleged or actual failure to conduct reasonable safety control practices, or relating to the use of or failure to use this document. Please note that neither this tool or any of its components contain every possible operation, inspection requirement or other detail that may be relevant to your project or that may be required by federal or state law, or by local building codes, statutes, or other requirements. This tool is intended only as a guideline, and not as a substitute for consultation with your insurance broker, or for engineering, legal or other professional advice.

©2016 Chubb All rights reserved.

Chubb is the marketing name used to refer to subsidiaries of Chubb Limited, providing insurance and related services. For a list of these subsidiaries, please visit our website, [www.chubb.com](http://www.chubb.com). Insurance is provided by ACE American Insurance Company and its U.S. based Chubb underwriting company affiliates. All products may not be available in all states. This communication contains product summaries only. Coverage is subject to the language of the policies as actually issued. Surplus lines insurance is sold only through licensed surplus lines producers. Loss control evaluations, reports, recommendations and services are made solely to assist the insurer in underwriting and loss control and are not to be construed as an added benefit for the insured, property owner or any other party (this may not apply if loss control services are purchased separately and specifically pursuant to a service agreement). Evaluation for any hazard or condition does not imply that it is covered under any policy. Chubb is the world's largest publicly traded property and casualty insurance group. With operations in 54 countries, Chubb provides commercial and personal property and casualty insurance, personal accident and supplemental health insurance, reinsurance and life insurance to a diverse group of clients. Chubb Limited, the parent company of Chubb, is listed on the New York Stock Exchange (NYSE: CB) and is a component of the S&P 500 index. Copyright ©2016

**Preventive  
Safety  
Measures  
Include:**

- Determine the weight of every load to be lifted and determine the ancillary weight in order to obtain the total weight that the crane will, be lifting.
- Determine the crane set up and configuration for each lift including but not limited to boom length, operating radius, outrigger configuration, crane levelness, ground conditions, wind and overhead interference including electrical.
- Once you have ascertained the information noted above, determine if the load to be lifted is within the safe working capacity of the crane load chart.
- Make sure the computer is properly programmed and functioning for the cranes set up and configuration when being utilized but do not rely solely on the crane's onboard computer to determine if the crane can safely lift the desired load.
- Conduct daily and periodic inspections of the crane to ensure its components are functioning properly.
- Ensure the rigged load's center of gravity has been properly determined and verify that the appropriate rigging equipment and techniques are being utilized.
- Conduct pre-lift meetings with the crew to review procedures and protocols.

PLEASE READ CAREFULLY: This is being provided to you as a tool that you may wish to use in providing a safety and risk management program. You are responsible for providing safety and risk management services. We at the Chubb Companies are providing this tool to you in support of our underwriting objectives and we here by disclaim any obligation to oversee or monitor the adherence to required or otherwise reasonable safety and risk control practices. We further disclaim liability for claims or suits relating to the alleged or actual failure to conduct reasonable safety control practices, or relating to the use of or failure to use this document. Please note that neither this tool or any of its components contain every possible operation, inspection requirement or other detail that may be relevant to your project or that may be required by federal or state law, or by local building codes, statutes, or other requirements. This tool is intended only as a guideline, and not as a substitute for consultation with your insurance broker, or for engineering, legal or other professional advice.

©2016 Chubb All rights reserved.

Chubb is the marketing name used to refer to subsidiaries of Chubb Limited, providing insurance and related services. For a list of these subsidiaries, please visit our website, [www.chubb.com](http://www.chubb.com). Insurance is provided by ACE American Insurance Company and its U.S. based Chubb underwriting company affiliates. All products may not be available in all states. This communication contains product summaries only. Coverage is subject to the language of the policies as actually issued. Surplus lines insurance is sold only through licensed surplus lines producers. Loss control evaluations, reports, recommendations and services are made solely to assist the insurer in underwriting and loss control and are not to be construed as an added benefit for the insured, property owner or any other party (this may not apply if loss control services are purchased separately and specifically pursuant to a service agreement). Evaluation for any hazard or condition does not imply that it is covered under any policy. Chubb is the world's largest publicly traded property and casualty insurance group. With operations in 54 countries, Chubb provides commercial and personal property and casualty insurance, personal accident and supplemental health insurance, reinsurance and life insurance to a diverse group of clients. Chubb Limited, the parent company of Chubb, is listed on the New York Stock Exchange (NYSE: CB) and is a component of the S&P 500 index. Copyright ©2016