

Best's Insurance Law Podcast

Here Comes the Boom: An Overview of Crane Related Accidents - Episode #206

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Hosted by: John Czuba, Managing Editor

Guest Expert: Lee Sale from [S-E-A](#)

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John Czuba: Welcome to “Best's Insurance Law Podcast,” the broadcast about timely and important legal issues affecting the insurance industry. I'm John Czuba, Managing Editor of *Best's Insurance Professional Resources*.

We're very pleased to have with us today Lee Sale from Qualified Member expert service provider, [S-E-A](#). Mr. Sale earned his Bachelor of Science degree in mechanical engineering from Louisiana State University, Baton Rouge, Louisiana, and a Master of Business Administration from University of New Orleans.

Lee is a mechanical engineer responsible for investigating failures involving mechanical equipment, systems, products, or industrial failures. Mr. Sale has over 20 years of experience working with heavy industrial and marine facilities.

He has experience with accident and failure analysis related to mechanical systems and components, including those involving facilities, systems, and cranes.

His investigation responsibilities include residential, commercial, industrial, shipyard and shipbuilding, ship construction, marine port facilities, oil and gas, offshore deepwater, and shore-based facilities.

His expertise includes fixed and rotating equipment, diesel and gas engines, generators, cranes, rigging, lifting and handling, heavy transport, mobile equipment, automotive, marine vessel, and outboard equipment.

Mr. Sale is a licensed professional engineer in various states as required, and is a registered professional engineer with the National Council of Examiners for Engineering and Surveying. Lee, we're very pleased to have you with us this morning.

Lee Sale: It's good to be here.

John: Today's discussion is an overview of crane related accidents. Lee, for our first question, how has technology changed cranes over the years? Is there downloadable data available like there is for cars and trucks these days?

Lee: Technology has improved in cranes over the years, but there's still a lot of equipment out there and it can be also a lot of old equipment out there. Depending on the age and the type of the crane as to how much information or downloadable data there may be on the crane.

Older cranes may have little to no data, whereas a modern crane may have very detailed data on board the crane. This data would include a lot of information on a new crane, such as the operator inputs and the crane position.

The data would include the weight of the loads on a mobile crane, a boom angle, boom length, hoist speeds, any faults with the crane. The data can be recorded in very finite increments up to fractions of a second.

Again, like I said, depending on the age of the crane, a newer crane can have very, very good information, and an older crane may have none at all. It depends on the crane and the age.

John: You mentioned the age of the cranes, Lee. What are some of the types of cranes that you've worked with over your career, and what are the major differences between them?

Lee: I was lucky to start out in the shipbuilding industry, and we had many, many types of cranes and hundreds of cranes, everything from mobile cranes to gantry cranes, overhead cranes in buildings, we had tower cranes, and dockside cranes, up to the largest, what they called VLCs, very large cranes.

These are giant, sawhorse looking cranes with always the big name of the company written across. I had a very fun career that started out in shipbuilding, and then it evolved into oil and gas, where I worked on a lot of oil and gas related platform cranes. I've been involved in many, many types of cranes, and not just cranes rigging as well, over many years. It's been a lot of fun, great career.

John: What makes cranes unique for liability losses, Lee?

Lee: Cranes can be a very complex mechanical system. I like to say a mechanical structural hydraulic equipment. They're very complex. The size can vary greatly. You can be talking about a very small overhead chainfall or hoist in a building all the way up to, like I said, a very, very large shipbuilding ship erection crane.

Then, the location. The location makes them unique. Construction sites versus onshore/offshore type cranes. Or, if it's a crane aboard a vessel, that can make it a unique set of issues you may face. Then, the jurisdictions, whether it's onshore or whether it's offshore, makes a very big difference in what law applies.

On top of that, the number of parties involved and the number of people involved in a crane. There's a lot of groups that participate in the operation of a crane.

John: Lee, what regulatory agencies investigate crane related accidents?

Lee: As I said, the jurisdictions can vary, but the regulatory agencies can be federal, state, local, and company investigations. Federal would be OSHA, MSHA, Coast Guard, DOTD. Then, you have for states, you'd have state and local law enforcement agencies. Then, company specific investigations would take place at any time of incident.

John: Lee, what's your advice to an adjuster, attorney, or another claims professional who has a new crane related accident come across their desk?

Lee: I'd say the first thing is, "Don't hesitate to give us a call, to give me a call as soon as possible to offer assistance."

These matters can be very complex, they can involve a lot of people, a lot of parts, a lot of equipment. Just to give you an idea of the assistance we can offer, I had a case where we had a large mobile crane where the boom had failed and caused an unloaded hook and block to fall on a worker at the site.

The failure mode was not immediately obvious, but I was called out by a client early on to come take a look at the crane. While we were looking at the crane, we were presented with the crane itself and not any other parts for the crane that we were aware of.

While looking at the crane, I have a lot of experience in the maintenance, and operations, and technical, and engineering on cranes. While we're looking at this particular crane, I noticed there was another large part of the crane, another boom section.

By looking at this piece, I could tell it went with the crane we were working on or taking a look at on the examination. Once I was able to look at this boom section, I was able to determine that it was a heavier section that had been swapped out on this mobile crane in order to make lifts and further reach lifts.

I was able to determine that that swapping of the boom was the main cause of the failure when combining that information with the physical evidence of the crane being damaged and also the detailed data downloads we were able to get off the crane.

The moral of the story is you need a very experienced expert that has experience in crane operations and also has technical engineering qualifications as well. It's a very rare person, and I'm lucky enough to have those qualifications and experience.

I love to tell clients, "The best thing to do is just give us a call as soon as you can, and we can offer advice and assistance. If we can help, great. If we can't, we'll be more than happy to point you in the right direction. The sooner you call us, the better a job we can do to help you."

John: Lee, who are the key personnel necessary to operate crane?

Lee: There's a lot of persons involved in the ownership and operation of a crane. In a lifting and handling event, you start out with everyone wants to consider the crane operator. That's the biggest guy, the most popular guy in the investigation of the operation of a crane.

There's owners, then there's people involved on the ground, the riggers, who are the people who hook up the loads to the crane and handle the rigging involved in the crane. There's also spotters and signalmen, which are involved in communicating to the crane operator what's going on in the environment, where the load is, where it needs to go.

Overall site responsibilities, there's lift directors or site supervisors who are involved in setting up the operation, making sure that the crane is the right crane, making sure the right people are involved, making sure they have the space to do the work. Then, there's inspectors for the cranes.

Cranes require a lot of maintenance and inspection. These can be frequent inspections or they could be periodic or annual inspections. Annual inspections would be like a third party, and the frequent would be more the people involved in the daily operation of the crane.

Then, there's maintenance technicians and engineers involved in the support of the crane operation. There's many people involved in a crane operation. In an investigation, it becomes very important to capture the information from these persons.

John: Lee, thanks so much for joining us today. Appreciate your experience in a niche market in the insurance industry. I've been involved with the product a long time. That's the first crane expert I came across, so it was a pleasure speaking with you this morning.

Lee: Excellent. I'm glad to be here. It's an interesting field to be in, I will say that.

John: You've just listened to Lee Sale from expert service provider, [S-E-A](#). Special thanks to today's producer, Frank Vowinkel. Thank you all for joining us for "Best's Insurance Law Podcast." To subscribe to this audio program, go to our web page, www.ambest.com/claimsresource. If you have any suggestions for a future topic regarding an insurance law case or issue, please email us at lawpodcast@ambest.com.

I'm John Czuba, and now this message.

Transcription by CastingWords

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