

Operating Experience Alert

Mobile Crane Tip-over



Critical Risk Area

What You Should Know:

As part of scheduled maintenance activities, a crew was performing lifts to stage material in one of Southern Company's generating facilities. The crew utilized the crane's outriggering system to maximize its lifting capacity. Once staging all materials, they prepared to demobilize and removed the outriggers, placing the crane on tires. The crane operator began rotating the upperworks of the crane and within seconds, the crane tipped backward while landing on its counterweight. After reviewing, it was discovered the crane to have history of issues with the dynamic stabilization system – the crane operator and others confirmed that in multiple times the crane felt unstable while setting it up and during travel, which required servicing and repairs prior to this day. Also, on the day of the incident and once the outriggering system was removed, the boom angle remained in a position greater than the required 75% of the crane's tipping capacity. This created instability at the bottom works of the crane once beginning to rotate the upper works, even though the crane was not carrying any load. Fortunately, no personnel or property was affected because of this incidence.



What You Can Do:

- Follow recommendations (e.g. load chart when the crane is on tires) provided by the manufacturer to ensure the crane will be stable for the next task. One of the best practices is to keep the house-lock engaged prior to removing the outriggers to secure both upper and lower works. Also, lowering the boom angle is required since the crane's load rating has decreased upon removal of its mounting.
- Evaluate site-specific lifting equipment to be operated in the near future (whether rented or owned) and ensure the equipment has safety warning systems (e.g. alarming upon reaching tipping capacity, overload, etc.) and operator checklists or aids.
- In addition, ensure the equipment's maintenance is up-to-date and issues are corrected prior to use.
- Utilize a lift plan to establish logistically where the equipment will be situated and what will be its traveling path to ensure external factors (e.g. obstacles, other jobs, etc.) will not interfere with how the crane will be operated.
- Raise awareness on crane instability during job safety briefings and STOP work if something does not look right.

For more information, contact Mike Watson and/or refer to the following resources on crane usage, training and mobile crane stability: (1) [T&PS Safety and Health - Cranes and Rigging](#), (2) [Mobile Crane Stability](#)