



SAFETY ALERT



JKKP/DOSH

TOWER CRANE ACCIDENT DUE TO FAILURE OF COUNTER JIB PLATFORM CONNECTION PIN



An accident has occurred involving a tower crane at a construction site. In this incident, two (2) connection pins of the counter jib platform were broken. This has led to the counter jib platform disconnecting or detaching from the connection and then falling from its original position. However, it is still stuck at the joints because there are two (2) more pin connectors that hold the structure of the counter jib platform. The dislodged and fallen counter jib platform has pulled the 'A' frame structure and boom crane towards the rear direction (counter jib direction). This caused a boom crane over-luff and the counterweight load to be dropped on the construction floor. There were no injuries and fatalities in these accidents.

Accident Preventive Measures:

1. Tower crane components including connection pin should be inspected and tested by a responsible person according to the manufacturer's instructions before being erected and operated.
2. The Tower crane pin connection must meet the standards set by the manufacturer of tower crane in terms of materials, strength and design specifications.
3. Only the correct type and grade of connection pins should be used when connecting any part of the tower crane.
4. Connection pin used to connect any part of the tower crane sections must be compatible with crane components and are not defective.
5. The installation of pin connector should be carried out according to the manufacturer's manual instructions and should be done by the responsible person.
6. Visual inspection on the pin connectors and locking devices should be conducted periodically to ensure that all pin connectors and locking devices are properly positioned, secure and in good physical condition and without any damage. Visual inspection shall be conducted in accordance with the requirements of the tower crane manufacturer and by the responsible person.
7. If the connection pin of the crane has been damaged and there are risks to safety, it should be immediately taken out of service before the pin connector fails and operator prevented from operating the crane.
8. A preventative inspection, maintenance and testing program will help ensure a crane is safe to use. Inspections and maintenance should be done in accordance with the manufacturer's instructions or according to relevant technical standards and good engineering practice principles.

References:

1. Guidelines For Public Safety and Health at Construction Sites, JKKP Malaysia.
2. Code Of Practices for Safe Use Of Tower Crane , Second Edition. Occupational Safety and Health Branch , Labour Of Department, HK.
3. Safe Work Australia , Guide to Tower Cranes.