



IUEC INCIDENT SUMMARY

CLOSE CALLS, NEAR MISSES AND INJURIES

“NEAR MISS”



Description of Incident

New Construction Machine Type: Sky Climber
Rise: 8 Stops Hoistway Configuration: Simplex

Speed: Various

Capacity: Limited

- A Mechanic and a second year Apprentice were preparing initial “start up” of a false car, powered by a “sky climber”, on a new construction installation.
- The Apprentice installed four beam clamps on the overhead support beam for sky climber suspension points and rail hoisting points.
- Upon testing the sky climber, running up and placing tension on the cable, one of the beam clamps detached from the overhead support beam and fell to the working platform below.
- The beam clamp wedged in the cut out for the sky climber rope drop and did not fall down the hoistway.
- The mechanic investigated the problem and discovered the beam clamps were installed incorrectly. The apprentice had used the wrong throat of the clamp on the web of the overhead support beam.
- Upon investigation of the incident, numerous hoisting and rigging errors were discovered:
 - Improper guardrail system at working platform
 - Only one lifeline installed in hoistway
 - Lifeline anchorage point installed the on same overhead support beam as the suspended platform
 - Overhead support beam not adequately rated for intended load
 - Improper use of beam clamps for horizontal loading
 - Hoisting rope chafing on sky climber rigging





Construction Industry Regulations & Standards

- **CFR 1926.502(b)(1)** – Requires: “Top edge height of top rails, or equivalent guardrail system members, shall be 42 inches plus or minus 3 inches above the walking/working level.”
- **CFR 1926.502(b)(2)** – Requires: “Midrails”
- **CFR 1926.501(c)(1)** – Requires: “Erect toe boards”
- **CFR 1926.502(d)(10)(i)** – Requires: “Except as provided in paragraph (d)(10)(ii) of this section, when vertical lifelines are used, each employee shall be attached to a separate lifeline.”
- **CFR 1926.500(b)** – Definitions
 - **Anchorage** means a secure point of attachment for lifelines, lanyards, or deceleration devices.
- **CFR 1926.502(d)(15)** – Requires: “Anchorages used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds per employee attached...”
- **CFR 1926.451(g)(3)(iv)** – Requires: “Vertical lifelines, independent of support lines, and suspension ropes shall not be attached to each other, nor shall they be attached to or use the same point of anchorage, nor shall they be attached to the same point on the scaffold or personal fall arrest system.”
- **CFR 1926.251(a)(1)** – Requires: “Rigging equipment for material handling shall be inspected prior to use on each shift and as necessary during its use to ensure that it is safe.”



and ANSI/ASME B30.10. The operator shall also be required to be familiar with the hoist to operate the clamp or lifting system.

Clamp users should be trained in proper rigging procedures for the attachment of the clamp.

Clamp users should be trained to be aware of potential malfunctions of the equipment and instructed to stop operation if such malfunctions occur, and to immediately advise their supervisor.

Clamp users should have normal depth perception, field of vision, reaction time, manual dexterity, and good judgment.

Clamp users should not have a history of or be prone to seizures, loss of physical control, or other conditions that could result in actions of the operator being a hazard to the operator or to others.

Clamp users should not use a clamp or operate lifting system when under the influence of alcohol or drugs.

Clamp is intended only for vertical lifting service or freely suspended unguided loads.



Recommendations & Lessons Learned

- **ALWAYS CONDUCT A THOROUGH INSPECTION EACH DAY OF HOISTING, RIGGING AND PERSONAL FALL ARREST SYSTEMS PRIOR TO USE.**
- Always follow your employer's Safety Policy
- Always perform a JHA/JSA per company policy
- Always follow manufacturers recommendations for proper use of rigging equipment
- Always inspect overhead support beams for proper installation and verify their safe working load
- Never work in a fall hazard without the proper anchorage point
- Never anchor a fall arrest system to the same point as a suspended platform
- Never work in a hoistway that is not protected from falling objects with the proper guardrail system, toe boards, screening and canopy