Improper Slinging Results in Fatality

The following is a real-life example of what went wrong and what corrective measures resulted from a fatal incident in the oil and gas industry.

WHAT HAPPENED:
With the use of a crane, the mast was lifted and attached to the rotary beam support and side legs. It was then lowered and pinned to the setback assembly. The assistant driller decided to vary from previous lift procedures and had the assembly lifted so access could be gained to bolts in the toolbox located in the off-driller side of the substructure base.

While lifting the assembled section, the chains broke. The assistant driller and floorman were working under the load and the second floorman was kneeling on top of the beam with his fall protection gear on. Two floormen sustained injuries and were treated in the hospital, but the assistant driller suffered a critical head injury and died on the way to the hospital.

WHAT CAUSED IT:
In the pre-tour meeting, the senior tool pusher instructed the relief crew to work on other projects and not to work on the mast assembly. (The relief crew works under the direct supervision of the tool pusher, who had not arrived on the site because of travel delays.) The crane operator arrived after the meeting and was not aware of the instructions given to the relief crew.

Rigging used to raise the mast and install the rotary beam support legs was not readjusted for hoisting the setback assembly. In addition, the sling assembly was rated for 21.4 tons and the load was 23 tons.

The crane operator lifted the load without warning the crew to leave the working radius of the crane. He did not assess the lifting risk before raising the section with the setback pinned and he did not check the lifting accessories.

CORRECTIVE ACTIONS:
To address this incident, this company instructed personnel to:

- Develop and implement a detailed lifting management plan for mast sub-frame assembly.
- Review lifting arrangements for rotary table support frame
- Clarify roles and responsibilities in lifting operations (crane operators, tool pusher and relief crew) and consider dedicated rigger/operator for

lifting operations.

- Revise lifting gear management plan for drill site and prepare a daily checklist for mobile crane on the drilling site.
- Establish a baseline competency profile for crane operators and riggers and assess them against it. The baseline competency may include additional training and replacement to rectify any gaps.
- Provide means of communication for remote operations on the project.
- Re-evaluate disciplinary actions for safety violations.
- Encourage a culture to stop unsafe work and continue to reinforce hazard awareness.
- Prepare daily written work instructions to tool pushers for relief crew operations.