

Safety Alert

MMS

U.S. Department of the Interior
Minerals Management Service
Gulf of Mexico OCS Region

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Worker Fatally Struck by Moving Pipe During Pipelay Operations

A bevel machine operator was fatally injured on a pipelay barge when he was struck by moving pipe during pipelay operations. An MMS investigation revealed that the conveyor system had become inadvertently energized and advanced pipe toward the ready rack where the bevel machine operator was working. The moving pipe on the conveyor system struck the bevel machine operator in the back and pinned him between it and the end of a stationary pipe joint on the ready rack.

The MMS investigation identified the following causes of the accident:

- 1) Inadequate hazard analyses and failure to adequately implement hazards analyses recommendations. The recommended physical barriers such as guards or handrails in the pinch point area were not installed prior to the accident. In addition, although close-circuit television cameras were installed as recommended, they were not working on the day of the accident.
- 2) Failure to adequately implement and adhere to recommendations of the job safety analysis (JSA). The JSA recommended that personnel avoid working in pinch points areas and specifically to stand to the side of the pipe while grinding. The JSA also indicated that personnel should not walk in pinch point areas, although the victim's hand tools were stored such that he was required to pass through the pinch point to retrieve them from storage.

Other contributing causes to the accident included:

1. The inadequacy of the JSA's. Job tasks were often vague rather than specific. The JSA also did not include important steps in the task sequence, and did not address the tasks of specific job functions individually or the methods they would use to communicate and coordinate their tasks.
2. Inadequate supervision. The investigation found that it was routine for personnel to walk in and work in pinch point areas near the conveyor system. MMS could find no evidence that supervisors, who routinely monitored the area, requested or required the crew to cease this practice.

3. Lack of a detailed written job description and formal training for bevel machine operators. The tasks specific to moving and hand grinding pipe were not included in the bevel machine operators' job description. There was also no specific training for the bevel machine operators' other than on-the-job-training.
4. Failure of the bevel machine operator to attend safety meetings. There was no evidence that the bevel machine operator attended any of the safety meetings.
5. Possible inadequate inspection/maintenance of the conveyor system control panel switches. There was no conclusive evidence that proves the condition of a conveyor switch was a contributing factor to the accident. Third party analysis of the control panel switches after the accident found that a conveyor switch was prone to sticking and had damaged internal components. This indicated possible lack of inspection and maintenance of the switch.

Based on the investigation findings, MMS makes the following recommends to Lessees, Operators, and their contractors during pipelay operations:

- Safety barriers should be installed and maintained on pipe lay vessel conveyor systems to limit access to pinch point areas.
- Warning signs should be posted to alert personnel of pinch point areas.
- Supervisory observations should be conducted more frequently in order to monitor work habits of all personnel in all areas, particularly around pipe conveyor systems.
- Lessees should review the company's safety meeting policies with contract personnel and express the importance of conducting safety meetings. The Lessees should also emphasize that documentation of all meetings and those personnel in attendance is required.
- Contractors should consider installing CCTV cameras in conveyor system areas to allow for additional supervision of operations.
- Contractors should provide detailed written job descriptions and implement formal training for specific job duties and responsibilities rather than generalized job descriptions that cover several positions.
- Inspection and maintenance guidelines should be provided for all safety equipment in place, and this equipment should be inspected for proper operation prior to the commencement of a project. Any inoperable equipment should be repaired, replaced, and tested immediately. Proper documentation of safety equipment inspection, maintenance, repairs, and test results should be maintained.

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