

# Safety Alert

**MMS**

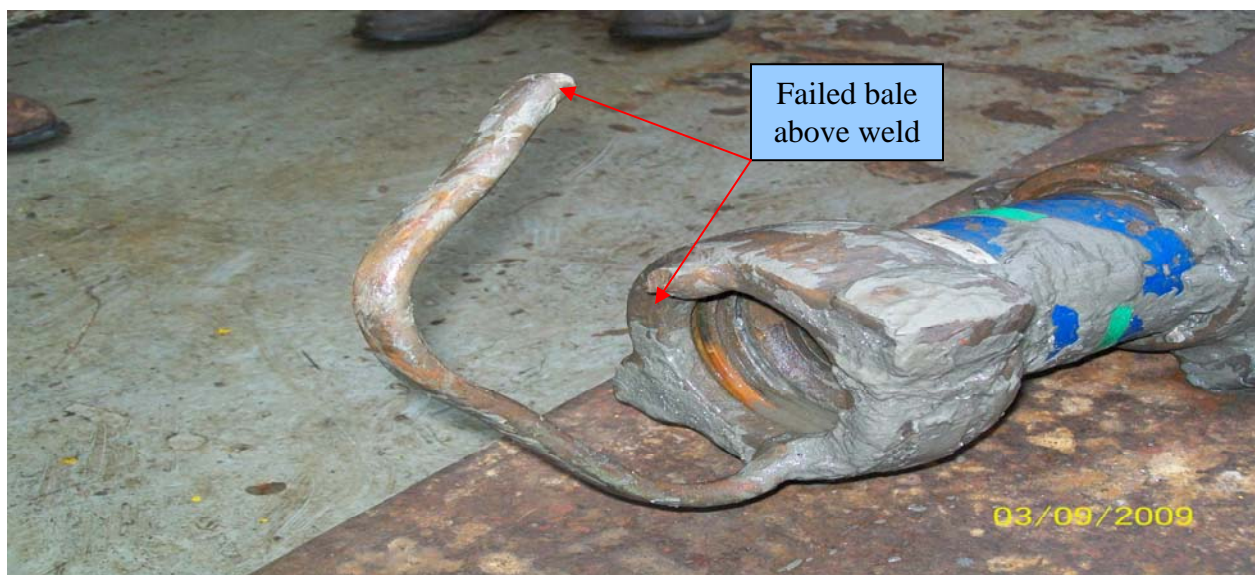
U.S. Department of the Interior  
Minerals Management Service  
Gulf of Mexico OCS Region

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## Drilling Rig Air-Operated Hoist Operation Fatality

Recently an accident resulted in one fatality and injury on a jack-up rig during use of air-operated hoist (air tugger) to lift 50 feet of 2-inch rubber hose, approximately 400 pounds, for testing the well's 13-3/8 inch x 9-7/8 inch casing annulus in preparation of sidetracking the well. A WECO Figure 1502 hammer union had previously been modified to include the addition of a welded bale that would be used as the lifting connection (*see Figure 1*). When the hose assembly was lifted approximately 30 feet into the derrick above the rig floor, the modified union failed just above the weld on one end of the bale. The first Floor Hand (FH-1), standing near the center of the rig floor but not directly under the assembly, received life threatening injuries (unresponsive but breathing) subsequent to being struck on the top of his hardhat by the modified hammer union. FH-1 was pronounced deceased approximately 2 hours later in the hospital's emergency room. The second Floor Hand (FH-2), standing next to the hand railing on the rig floor and manipulating the hose to protect the load from snagging, was initially knocked down by the hose, arose to move away from the railing when he was knocked down a second time by the air tugger's wire rope that back-lashed subsequent to the loss of load weight. FH-2 sustained superficial injuries.



**Figure 1: Modified WECO Figure 1502 hammer union with failed welded bale**

A Minerals Management Service (MMS) Panel investigation into this accident revealed that the direct cause of the accident was the use and failure of the modified WECO Figure 1502 hammer union with welded bale being used as the lifting connection. This lifting connection was being used in spite of the Contractor's Health, Safety and Environmental (HSE) policy stating that homemade or modified lifting equipment shall never be used.

Therefore, the MMS recommends the following:

- Non-approved/non-certified (homemade/field manufactured) lifting equipment should be immediately removed (discarded) and immediately brought to management's attention.
- In order for lift equipment inspection/maintenance programs to be effective, Operators and their Contractors should:
  - Include visual inspections prior to use.
  - Properly clean, grease and/or oil equipment after each use.
  - Ensure that any lifting component is used only in accordance with the manufacturer's specifications and instructions for use.
  - Replace the equipment when it exceeds the manufacturer's recommended use.

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