



# Safety Alert

From the International Association of Drilling Contractors

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ALERT 00-15

## ADDITIONAL SERIOUS INCIDENTS WITH MISMATCHED HAMMER UNIONS

### WHAT HAPPENED:

Although two alerts have been issued on this equipment already, incidents are still occurring in the drilling industry. The serious potential consequences of mismatching 2" hammer unions warrant issuing another one. Below are two recent incidents.

One incident occurred when a 1502 wing nut male sub union holding a pressure sensor was attached to a 602 female union on the mud pump. The 1502 union and pressure sensor blew off the discharge of a mud pump.

Another incident occurred when one service company's 1502 wing nut for the male sub was made up to another service company's 602 female half. While attempting to test the surface casing, the rams were closed and the standpipe pressure was slowly brought up. The intended test pressure was to be 1500 psi. When the pressure reached 1300 psi, the 1502 union stripped out and blew off and struck a third party service employee causing serious injury.

### WHAT CAUSED IT:

Female 1502 male sub half wing nuts will make up on 602 or 1002 female thread halves, appear to be tight, and hold pressure for a time. Once the pressure reaches the give point, allowing the 1502 wing nut and whatever is attached to it blow off.

### CORRECTIVE ACTIONS:

- Continue efforts to spread this issue across the industry. Refer to IADC Safety Alerts 98-01 and 99-33 for additional information on mismatched hammer unions.
- Implement pipe management systems to address pipe and end connections.
- Inspect all service company 2" unions to ensure that they match the rig's and/or other third party unions before the service companies are allowed to connect their equipment to each others connections or to the rig's connections.
- Educate rig personnel and service company representatives as to the hazards of mismatching hammer unions as well as how to identify the different types of unions.
- Post "Danger" signs indicating the type of 2" hammer union in use on the connection points of rig equipment.
- "Go/No Go" ring gauges are available to verify size of thread half components. Wood Machine Company, Tulsa, Oklahoma, USA (phone: 918-438-2412) manufacturers one such gauge.
- Include in all Job Safety Analyses (JSAs) and Safety Meetings for tasks that deal with connecting 2" hammer unions, discussion on the seriousness of mismatched hammer unions. Also include discussion on how to identify the difference between 1502, 1002 and 602 hammer unions.

**The Corrective Actions stated in this alert are one company's attempts to address the incident, and do not necessarily reflect the position of IADC or the IADC HSE Committee.**

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