



# Safety Alert

From the International Association of Drilling Contractors

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ALERT 99-33

## MORE ON MISMATCHED HAMMER UNIONS

Representatives from operators, drilling contractors, service companies, suppliers, and manufacturers held an industry wide meeting in Houston in November 1999 to continue discussions on ways to eliminate and/or control the mismatched hammer union hazard (see IADC Safety Alert 98-01). A quick and universal engineering solution appears elusive.

The key areas discussed at this meeting were as follows:

1. Discussed actions taken to date by individual companies to eliminate or control the mismatched hammer union problem.
2. Discussed the actions taken by manufacturers to redesign the hammer unions.
3. Discussed the pros and cons associated with standardization on one size union.
4. Discussed possible ways to eliminate and/or control the problem industry wide.

### CONCERNS:

1. Connecting Figure 602 & 1002 unions with 1502 unions: the mismatched unions appear to make up, but will fail under pressure.
2. Manufacturers have had three meetings. However, each time they proposed a solution, another problem then developed creating mismatches elsewhere.
3. If 1502's are put in place of 602's on a low-pressure line, there is concern that Company reps and supervisors might try to pressure the line up to 1502 ratings.

### POSSIBLE CORRECTIVE ACTIONS:

1. Color code high-pressure piping across entire industry – including end connections/hammer unions. One company uses system of color striping.
2. Develop an API Recommended Practice and/or API/IADC Specification as a long-term solution.
3. Implement pipe management systems to address pipe and end connections. Important to be able to trace and maintain documentation of testing of pipe and end connections.
4. Shift to 3" hammer unions at connection points. Swedge up instead of swedge down.
5. Spread this information throughout the industry through newsletters and alerts.
6. The manufacturer representatives said their companies would be available to help develop training modules and provide training to a trainer from the different consumer/end user companies.
7. The manufacturers have at least one more possible "design fix" that they are evaluating.
8. "Go/No Go" ring gauges are available to verify size of thread half components. Wood Machine Company, Tulsa, Oklahoma, USA (phone: 1/918-438-2412) manufactures one such gauge.

**Note:** The complete minutes of the industry wide meeting can be found on the IADC web site (<http://iadc.org>) in the HSE Committee section.

**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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