

Technical Bulletin

Management of Bevel Diameters



More info:

For more information or assistance, contact FP Drill String Engineering Department at DShelp@fp-g.com

Background

BHA connection bevel diameters (NS-2™ Table 13) are different to HWDP connection bevel diameters (NS-2™ Table 12) and Drillpipe connection bevel diameters (NS-2™ Table 9). Most of the time, there are very few components that are used across these different categories, however, jars and accelerators, are two... and Circ Subs are another. Their cross-use is also often naturally limited further by the connections that are physically cut on these tools. For example, a Circ Sub with 6-5/8" REG connections can only be used in the BHA because that is a connection that is only used in the BHA. Similarly, a set of jars with 5-1/2" FH connections can only be used in the HWDP because that is only a DP/HWDP connection. A potential problem occurs with connections that can be used, like NC-50 or NC-38 on drillpipe, HWDP or in the BHA.

Risk Assessment

The risk is that the jar/accelerator connections are screwed onto HWDP or BHA connections where the bevel diameters do not match, and this is likely

to result in damage of the seal face during use. However, this damage should not cause a leak on the initial run but may evolve on subsequent runs if one of the two components is changed and the damage is shared further to the new connection. At best, it likely means that the returned connection will need to be repaired. In extreme cases, if the make-up torque is also incorrect it may result in material deformation.

Solution

What can be done to prevent this issue?

Operators often only have one provider of complex BHA Tools (Jars, Accelerators, Circ Subs, MWD & Directional) and that provider often also does the Directional Planning and Tool Call-offs. If that is the case then the Co-ordinator can specify what bevels the tools need to be equipped with when he places the tool orders (i.e. Jars & Accelerators to be equipped with bevels as per NS-2™ Table 12 for use in HWDP).

If Verification Technicians are used and made aware of the specifications, they will be able to confirm that the dimensions are correct when it is reviewed prior to load-out.

