

Standard Operating Procedures

*Adapting GlassBore[®] to Unlined Accessories
EUE 8RD Tubular Goods*



Focus on Safety and Quality

Supplement to Standard Operating Procedure for *GlassBore[®]* and *GlassLine[®]* Tubular Products

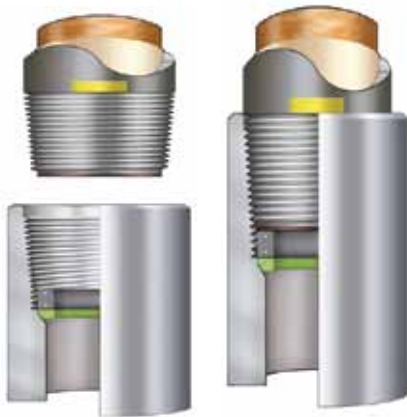
Adapting Unlined Accessories or Wellhead Components to GlassBore® Tubing

When making up GlassBore® tubing to unlined accessories or wellhead fittings there must be an effort to insure against leakage of fluid or gas past the CLS compression ring (C-Ring). To adapt an unlined accessory or surface fitting (packer, wellhead flange, gas lift mandrel, etc.) to the GlassBore® tubing, it is necessary to create a surface that will accommodate the CLS compression ring. This is made possible by the use of an accessory adapter ring.

A box or collared connection of an unlined accessory will normally require an adapter ring (P/N xxxPREXT) placed inside the shoulder before a C-Ring is inserted. A pin connection for an unlined accessory will require accessory ring (P/N xxxPRINT) to support a C-Ring before it is made up into the collared end of the GlassBore® tubing. In both cases the accessory ring is helping to duplicate the dimensions and geometry of the flanged ends of the GlassBore® lined tubing.

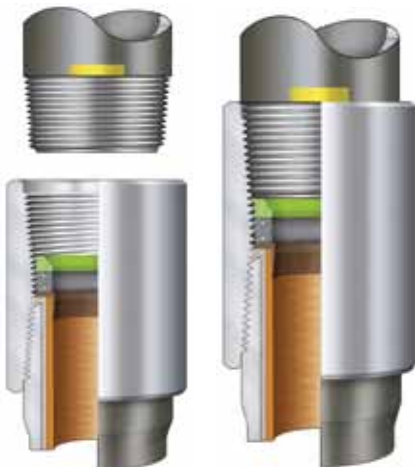
There may be occasions where the client may exercise his discretion and request that the CLS field rep leave out the accessory ring- these are instances that can be brought for discussion between the field service coordinator and the client quality manager.

Figure 1



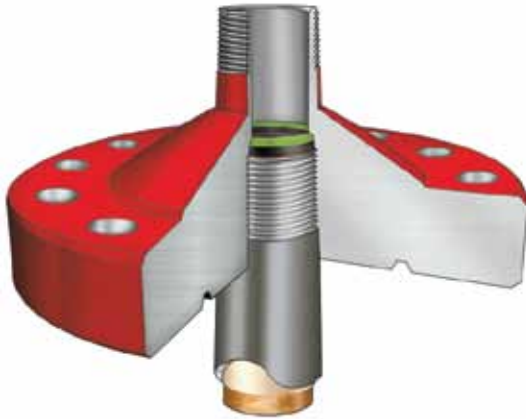
To adapt to a collared or box connection, the externally-beveled accessory ring is dropped into the shoulder of the connection to form a surface for the compression ring to seat and uniformly distribute compressive force when the connection is made up tight. It is recommended that the CLS field service representative install the adapter ring, make-up the accessory to the hand tight position, and mark the pin side (male thread end) with a band to guide final make-up.

Figure 2



To adapt to a pin connection, the internally-beveled accessory ring is placed over the pin to form a surface for the compression ring to duplicate the flanged end of a lined pin connection and to distribute compressive force when the connection is made up tight. It is recommended that the CLS field service representative install the adapter ring, make-up the accessory to the hand tight position, and mark the pin side (male thread end) with a band to guide final make-up.

Figure 3



Similarly to figure 1 above, to adapt to the box of a EUE 8RD flange or threaded wellhead component, the externally-beveled accessory ring is paced into the shoulder of the component (as illustrated) before make up to the connection. Again, this will provide a platform for the C-Ring to compress against. As always it is recommended that the CLS field service representative install the adaptor ring, make-up the GlassLine[®] nipple, tubing sub or full length joint to the hand tight position, and mark the pin side with a band to guide final make-up.

Emphasis on Quality and Communication

To stay consistent with CLS recommended procedure and client quality standards, it is important that that the client operations supervisor and the CLS field representative work together and follow this SOP guideline. Without exception, there should be a unified effort to communicate any special circumstances that might preclude the well service crew and all CLS representation from following these recommendations.

HSE and Quality Issue Chain of Communication

In the event that a safety or quality issue is not being addressed on a Client location, DO NOT HESITATE to call the first person or people in the following chain of communication:



SAFETY

- If a medical emergency, contact 911 then proceed with the following
- All Medical Incidents call CLS Supervisor
 - CLS Supervisor to notify HSE Manager (Rike Tipton 432.559.5176)
 - CLS Supervisor to notify Client Operations Supervisor
 - HSE Manager to notify Client HSE Manager for client reporting procedure



QUALITY

- Call CLS Supervisor
- Call Client Operations Supervisor at request of CLS Supervisor only
 - CLS Supervisor to notify Client Operations Supervisor in all cases

YOU HAVE THE RIGHT TO SHUT DOWN THE WELLSITE OPERATION FOR ALL SAFETY AND QUALITY CONSIDERATIONS. NOTIFY YOUR SUPERVISOR IMMEDIATELY.



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COMPOSITE LINING SYSTEMS

GlassBore® GlassLine® GlassWrap® APPLIED PLASTICS

