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DOUBLE CONTAINMENT HDPE SYSTEMS CONSIDERATIONS

Simultaneous Fused Systems

Simultaneous fused DCS (Double Containment System) piping systems, like HCF's Symal-Fuse™ system, are the easiest to install vs. split-heater type DCS systems. Depending on the complexity of the system, it can affect your installation success from one type to the other.

Double Symal-Fuse™ Ends- Double Symal-Fuse™ ended pipe lengths create the most reliable system for in the field installation. Since both pipes are locked in place by factory welds, this system lends itself to simpler installation. These are the most expensive systems available and work in predetermined lengths only.

Single Symal-Fuse™ Ends- Single Symal-Fuse™ ended pipe lengths are the next most reliable system for in the field installation as well as much more economical and most often used. With one end of the pipe length locked in place by a factory weld you have a system that can be cut to length and fit where needed. There is more technical knowledge and experience needed with this type of system.

Open Ended Ends – Open ended pipe lengths that have a press fit end spacer only on both ends have the potential to slip during the fusion process unless installed by a factory qualified technician with the proper equipment. (Note most fittings are manufactured this way, and work properly in a fitting configuration).

Open Ended Ends w/ Extrusion Welded End Spacers – This type of system, if done properly with adequate extrusion welds in place, can create an effective system. The potential problem comes from possible extrusion weld bonding breakage between the end spacer and the two pipe walls during transportation and installation. Dropping the pipe or flexing it too much during transport can cause the extrusion weld (which is a surface non-penetrating weld) to crack or break. This separation could cause the inner pipe to slip during the simultaneous fusion process and of course you would never see it.

Split Heater- Separately Fused Systems

Double Containment piping systems can be assembled using two separate pipe sizes and by using a specially designed split heater in combination with the standard butt fusion heater. These are the potential methods.

Method "A"

1. Fuse several lengths of pipe together in each size, several times.
2. Remove internal bead on the containment (outer) pipe. (So not to catch on the casing spacers when pulled together).
3. Install casing spacers on the carrier (inner) pipe.
4. Fish a line through the containment pipe to pull the carrier pipe through.
5. Pull the carrier pipe into the containment pipe. And establish a partially assembled section, or "unit".
6. Put the two pipe units into the fusion machine with inserts to hold the carrier pipe and keep the containment pipe out of the machine. Fuse the carrier pipe.
7. Once the fusion has cooled, change the inserts in the machine to the containment pipe size and using a split heater, fuse the containment pipe.
8. After cooling remove the combined unit from the machine and repeat.
9. Note, moving the outer pipe back and forth becomes more difficult as the combined sections get larger.

Method "B"

1. Install spacers on carrier pipe sections.
2. Slide a carrier pipe into each containment pipe section.
3. Put two sections of pipe into the machine and fuse the carrier pipe as in method "A".
4. Once the fusion has cooled, change the inserts in the machine to the containment pipe size and using a split heater, fuse the containment pipe.
5. After cooling remove the combined unit from the machine and repeat.
6. Note, this method does not require removing the internal bead and it is easier to move the added piece back and forth vs. longer sections.

Method "C"

1. Fuse the carrier pipe and strip the outer bead.
2. Fuse the containment pipe and strip the inner bead.
3. Fish a rope through the containment pipe.
4. Pull one pipe inside the other.

Note, in this method, no centering or casing spacers are us