August 7, 2010

To: Cyclotron Facility
   Mike Snow, Walt Fox, Hermann Nann,
   Tim Clarke, Michael Endris

Subject: Weld Inspection

7/29/2010

The 1½" diameter elbow welded to 2 sections of pipe, all were Stainless type 304. Visual Inspection was preformed on the butt weld both sides of the elbow, the face reinforcement was acceptable, the weld profile was acceptable. There was no undercut or overlap present. The root reinforcement was convex and showed not to be constrictive to flow of tubing.

   The weld was made with Argon backing gas and filler wire by a certified welder to ASME Section IX.

8/6/2010

The parts to be inspected were marked with the drawing number as well as a sequence number to be inspected.

   Sequence #1 drawing # 312640-000 exit elbow the butt welds had face reinforcement that were acceptable, the weld profiles were acceptable, there was no undercut or overlap present, the root reinforcement was convex and not constrictive to flow of tubing.
Sequence #2 Drawing # 312645-003 cross which had flanges and square butt inside .08 weld size there was a problem with the ovality of the pipe therefore some of welds on the inside were not of joint design of a square butt. But the welds showed an even transition from flange to pipe, this needs to be looked at from the engineering side and not from the weld inspection side.

The fillet welds on the outside called for 3/16" fillet weld and were undersized and there was some undercut. These welds need to be re-welded and filled to the size called out on the print with repairs to the undercut as weld the intermittent sequence was not what the print called for. The first measurement is the length of weld and second is the center to center distance.

Sequence #3 didn't have a drawing # or drawing available but Mike Snow was to find the drawing with weld sizes. The welds on the tubing showed acceptable profiles and were convex.

Sequence #4 Drawing # 315340-000 relief valve support fillet welds were undersized and had some undercut these need to be re-welded to size on print and undercut repaired. Attention given to the intermittent sequence

The ovality of pipe was major and the square butt weld was a fillet weld and not a smooth transition from flange to pipe this again needs to looked at from the engineering side rather than from the weld inspection side.

Sequence #5 drawing # 312645-006 jumper the fillet welds were undersized and there was presence of undercut. Fillet welds need to be welded to size on print and undercut repaired.

Sequence #6 drawing # 312645-005 adaptor the fillet welds were undersized and there was presence of undercut. Fillet welds need to be welded to size on print and undercut repaired.

Respectfully Inspected,

Bennie D. Flynn

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