Final Report

Date 10-16-12

Part 302 B Crank Case
Inspected by Edward Mulvihill

1. Base metal
   - X cast iron
   - ductile iron
   - cast steel
   - cast aluminum
   - other ____________________

2. Machinability
   - X no previous repairs
   - arc-welded
   - brazed
   - heat-related cracks
   - other ____________________

3. Casting shape where cracked
   - X flat
   - inside/outside corner
   - radius
   - other ____________________

4. Cause of damage
   - impact
   - heat
   - freezing
   - X normal operation
   - other ____________________

5. Length of crack/s
   - 7"

6. Material thickness
   - 1 1/2"

7. Operating pressure
   - N/A
8. Operating temperature
   N/A

9. Working environment
   hot
   X cold
   X safety concerns
   describe: H2S

   __________________________
   other ______________________

10. Remachining requirements
    X bolt holes
    bearing bores
    machined surfaces
    other Grinding

11. Customer’s needs
    X permanent repair
    temporary repair
    turnaround time
    describe: __________________
    _________________________
    _________________________
    other ______________________

12. Accessibility
    X room for the tools
    X room for the operator/s
    need for disassembly?
    describe: __________________
    _________________________
    _________________________
    other ______________________

13. Inspection method(s)
    Mag check

14. Damage found:
    7” of crack and 3 bolt holes
Inspection – Magnetic particle test performance on 302B Crank Case to identify cracks and length of crack.

Found—Inspection shows 7 inches of crack and 3 bad bolt holes.
Beginning stitching process on the flange portion of the crank case.
Continue with stitching process
Finish with stitching process, next step is setting up for bolt hole inserts
Preparing for bolt hole inserts
Project complete with stitching pins and inserts in place.