
Customer: ENERGY INDUSTRIES OF OHIO

Contact: NANCY HORTON
E-Mail: NKHFlowen@aol.com

Telephone: 216-496-2314
Fax: 216-328-2001

Part: SE141-116 / WINDING FORM TYPE-C

Drawing ID: SE141-103 Revision: 3
Links: 1-Type:W: 65707/4.0 Sub: 0 Op: 20

Customer P.O.: S005242-F/Ln:4
Serial No./Qty: C4

Reported By: MIKE GRIFFITH
E-Mail: mGriffith@MajorTool.com

Telephone: 317-636-6433
Fax: 317-634-9420

Problem: There are several miscellaneous machining defects in various locations on the castings. The attached summary shows the sizes and locations of the defects.

3/27/06 - revision to original NC

The tool gouge reported on page 5 of the attachment was mistakenly blended out after the initial report was sent.

Proposed Disposition:

Customer to advise disposition of each of the reported items.

Number of additional pages: 9 pages

Customer Disposition: Use As Is Rework Repair Scrap Replace

The list of indications were reviewed during a joint NCSX and EIO conference call on 3/24/06. Based on that review, all were accepted as is.

On 3/27, MTM reported that the tool gauge on pg. 5 was mistakenly blended out. This is acceptable.

Root Cause 1:

Resource: WHITE TEAM, ENGINEERING

Description: At the end of the manufacturing process the casting is marked up to identify the location of PT failures and miscellaneous gouges for reporting to our customer. There are also several items identified that require additional hand working that do not need to be submitted for approval. Due to the number of marked up areas, it becomes very difficult to clearly communicate which areas need additional blending and which areas are to be left as is.

Corr Actn: 1:

Action: 03/28/06 By: 242-M.GRIFFITH

Description: In order to clearly identify areas that are not to be hand worked, florescent labels have been printed with the words "DO NOT BLEND". These labels will be applied to the casting during the visual inspection process as required.

Approved by:

Tech. Rep.

RLM

Miscellaneous Machining and Casting Issues



Counterbore adjacent to Poloidal Break on E Flange.JPG

Counterbore is next to Poloidal Break on the E flange. Approximately 60% of counterbore cleaned up 100%. The area of non cleanup has tooling gouges and is approximately .050" in depth.



Miscellaneous Machining and Casting Issues



Noncleanup of foot on back side of D flange.JPG

This area is beneath the leg shown on sheet 4, zone C5. Instead of the 2.38" spot face on the back side, we typically machine this entire surface to a full cleanup. The two holes in this view do not have a 100% cleanup. The photo below shows that the flange thickness in this area is approximately 1.100" in the thinnest cross section.



D flange foot thickness of 1.100.JPG

Miscellaneous Machining and Casting Issues



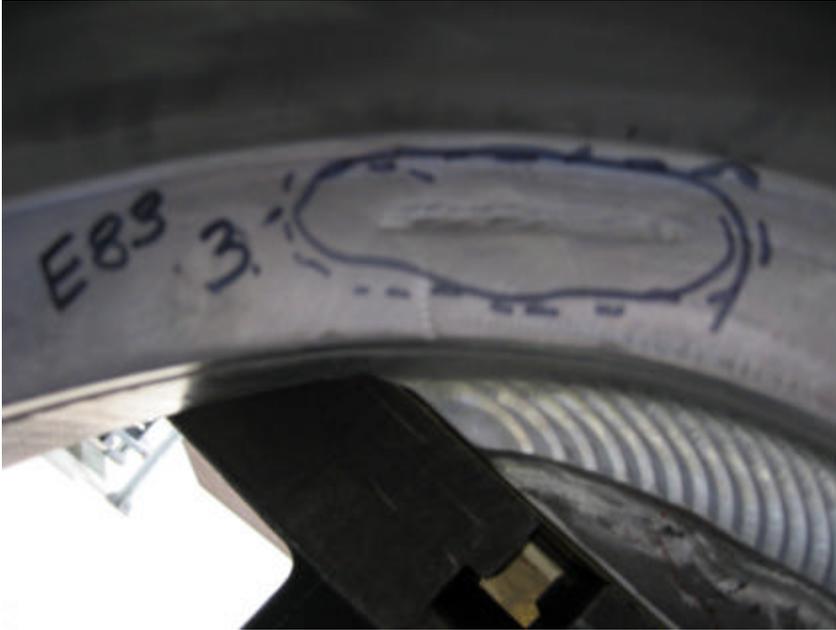
Tool Gouge short leg E37 wide view.JPG

This is a tooling gouge on the short leg of the “T” on the E flange side located close to hole 37. The gouge is approximately .590” in length by .200” wide and .005” in depth.



Tool Gouge short leg E side adjacent to hole 37.JPG

Miscellaneous Machining and Casting Issues



Tooling Gouge short leg E83 wide veiw.JPG

This is a tooling gouge on the short leg of the "T" on the E flange side located close to hole 83. The gouge is approximately 2.200" in length by .200" wide and .008" in depth.



Tooling Gouge short leg E side adjacnet to hole 83.JPG

Miscellaneous Machining and Casting Issues



Tool Gouge short leg E side adjacent to hole 57.JPG

This is a tooling gouge on the short leg of the “T” on the E flange side located close to hole 57. The gouge is approximately .800” in length by .200” wide and .010” in depth.



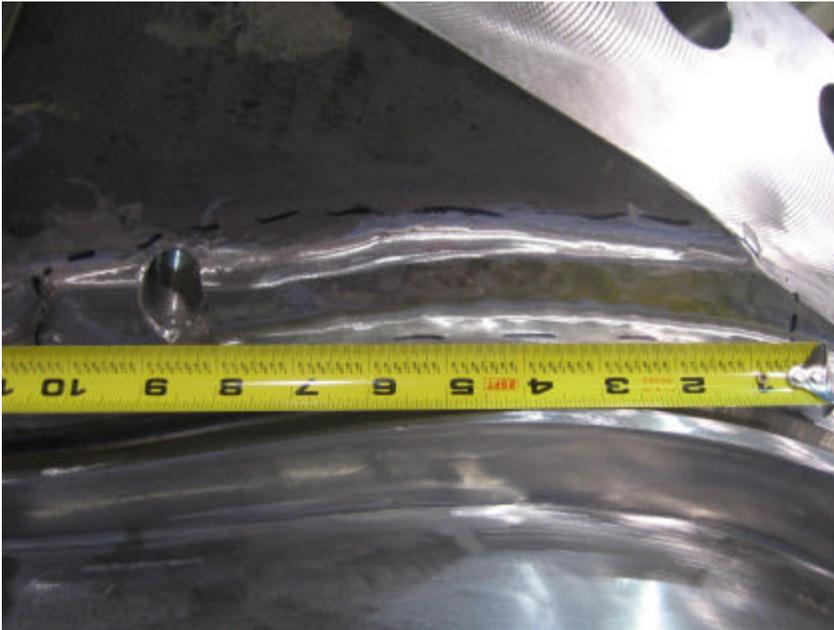
Tool Gouge short leg E57 wide view.JPG

Miscellaneous Machining and Casting Issues



D side interference below VPI groove location 1.JPG

These pictures show the interference below the VPI groove located adjacent to poloidal break on the D side from hole 11 to 13. The interference to the gage is approximately .100" - .200" over a length of about 10".



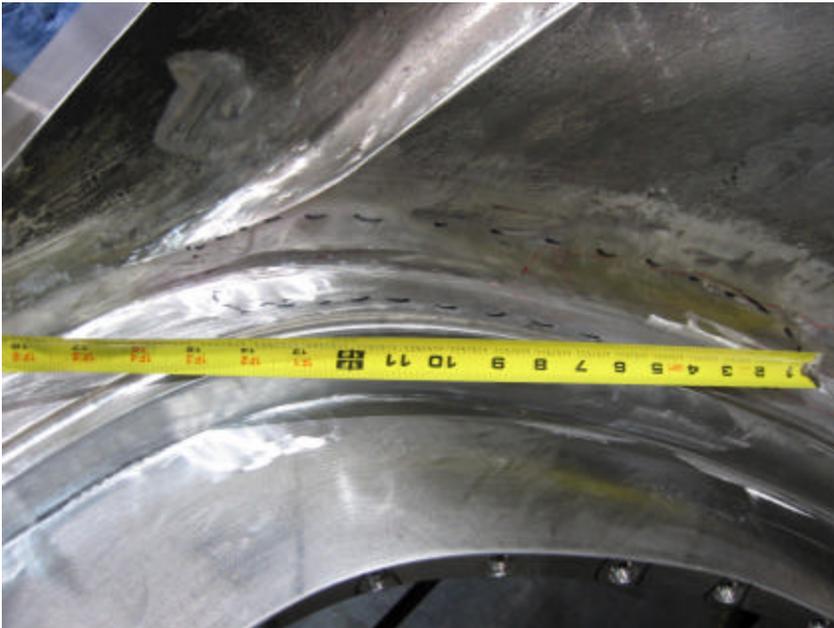
D side interference below VPI groove location 1 wide view.JPG

Miscellaneous Machining and Casting Issues



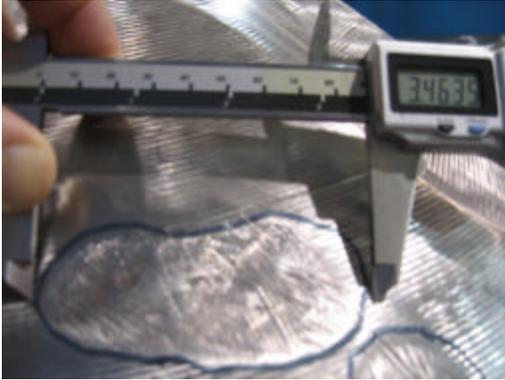
D side interference below VPI groove location 2.JPG

These pictures show the interference below the VPI groove located on the D side from hole 45 to 50. The interference to the gage is approximately .200" - .300" over a length of about 15".



D side interference below VPI groove location 2 wide view.JPG

Miscellaneous Machining and Casting Issues



Casting noncleanup on D side large wing.JPG



Casting noncleanup on D side large wing 2.JPG



Casting noncleanup D side large wing wide view.JPG

The above pictures show noncleanup after final machining on the large flange of the D side. The depths are approximately .02 - .04".



Miscellaneous Machining and Casting Issues



Tool Gouge in cast wall D side section PT11 sheet 7.JPG

This photo shows a tooling gouge in the cast wall located below the 6.5" opening shown on sheet 7 section view PT11. Gouge is approximately 1.470" x .800. The casting wall in this area measures 1.3". The gouge is approximately .25" in depth.

