

NC 19587, Update after grinding 3 indications

Disposition:

The three indications for which the disposition was to grind in the original NCR 19587 were ground; the results are shown in the figures which follow.

- Indication #8: The first began as a linear indication 2" long; after grinding to a depth of .25", it remained, but its length was reduced to 1.2". This is located between coolant line holes, and if the crack did grow, it would likely grow to the second hole, which would act as a crack stopper . Therefore we agreed to accept as is.
- Indication #21: The second began as a linear cluster indication 0.3" long; after grinding to a depth of .15" the longest was still 0.3". However, this is in a thick wall area where the stress is low; we concluded that it was extremely unlikely that crack growth would result in any significant structural degradation. Consequently, we concluded that it best to leave this as is rather than continuing to grind and likely significantly increasing the size of the cavity.
- Indication #3: The third began as a linear cluster; grinding opened up a cluster of porosity. This is located in the cast "boss" for the lead block attachment holes, and this is a low stress region . Consequently, this was accepted as is.

Accepted by:

Tech. Rep.

RLM

Indication # 8. Initially - Linear, length 2.00", D-76 (between cooling holes sheet 9, zone D7)

After grinding - 1.2" total (.7 continuous + another aligned .3 segment) remain after grinding approximately .25" deep.



Indication #21. Initially - Linear cluster, longest .300", D-87
After grinding – Approximately .3" long after grinding to a depth of approximately .15"



Indication #3 Initially - Linear, length .300", on pad near lead block slot.
After grinding – a pocket of indications was opened.



Customer: ENERGY INDUSTRIES OF OHIO

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Part: SE141-116 / MODULAR COIL WINDING FORM TYPE

Drawing ID: SE141-116

Revision: 8

Customer P.O.: S005242-F/Ln:5
Serial No./Qty: C5

Reported By: MIKE GRIFFITH

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Problem: PART IS REJECTED PER ASTM A903/A903M LEVEL 1.
SEE ATTACHMENT FOR SIZES AND LOCATIONS.

Proposed Disposition:

CUSTOMER TO ADVISE.

Number of additional pages: 11

Customer Disposition: Use As Is Rework Repair Scrap Replace

The defects indicated on the attached were reviewed in detail by David Williamson and Phil Heitzenroeder while communicating with Frank Malinowski, Roy Sheppard, and Mike Griffeth at MTM. MTM sent additional photos requested, and each defect was discussed in detail. Based on these discussions, it was jointly decided that the indications should be dispositioned as indicated in the attached Excel spreadsheet.

Approved by:

Phil
Heitzenroeder

Digitally signed by Phil Heitzenroeder
DN: CN = Phil Heitzenroeder, C = US,
O = PPPL, OU = Mech. Eng. Division
Reason: I agree to 'specified' portions
of this document
Date: 2006.04.19 17:52:27 -04'00'

Brad
Nelson

Digitally signed by Brad Nelson
DN: cn=Brad Nelson, c=US,
o=ORNL, ou=FED,
email=nelsonbe@ornl.gov
Date: 2006.04.19 21:59:39
-04'00'

Tech. Rep.

RLM

Major Tool Implemented By: _____ **Title:** _____ **Date:** _____

PT Inspection Results of C5 – NC19587

MTM Workorder #: 65707/5.0

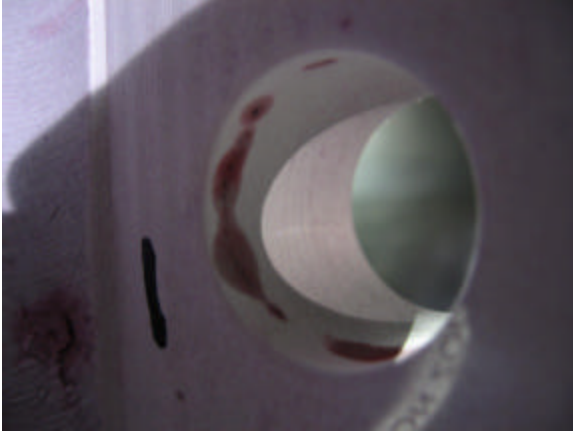
NC19587

SE141-116 C5 MODULAR COIL WINDING FORM TYPE-C

PENETRANT TEST: TYPE II, METHOD A, FORM E

REJECT INDICATIONS PER ASTM A903/A903M

1. Linear cluster, longest 1.250", side D, (1.130 diameter hole in foot)



2. Linear cluster, longest .450", under E flange, under small wing



3. Linear, length .300", on pad near lead block slot



PT Inspection Results of C5 – NC19587

4. Linear cluster, longest .300", O.D. of D flange near hole 7



5. Linear length .500", D flange face near hole 16



6. Linear w/cluster porosity, longest .800", D-20



PT Inspection Results of C5 – NC19587

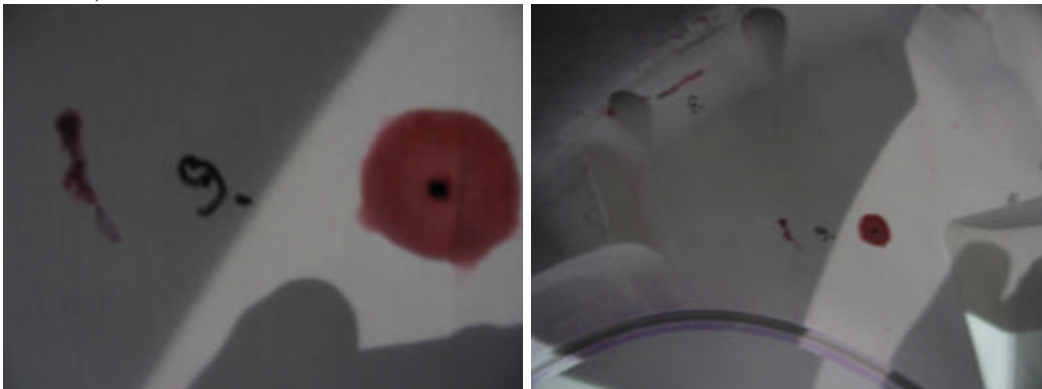
7. Linear (void), length .400"x .100", D-79 (bottom of cutout sheet 4, zone D5)



8. Linear, length 2.00", D-76 (between cooling holes sheet 9, zone D7)



9. Linear, .600" / rounded .125", D-75 (these are below VPI groove in high stress area)



PT Inspection Results of C5 – NC19587

10. Linear cluster, longest .200", O.D. flange on leg, D-72



11. Linear (void) length .500", O.D. flange, E-64

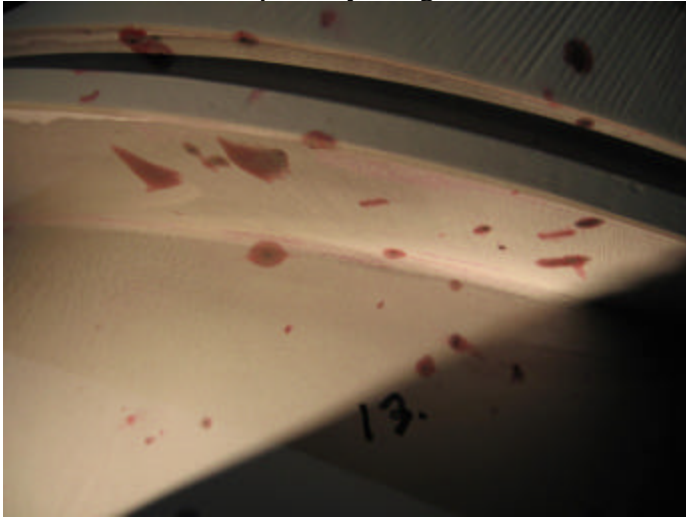


12. Linear cluster w/porosity, longest .800", D-60 (outside of large wing surface)



PT Inspection Results of C5 – NC19587

13. Linear cluster w/porosity, longest .500" D-60



14. Linear, length .150", D-43



15. Linear cluster, longest .200", T-face, hole 48



PT Inspection Results of C5 – NC19587

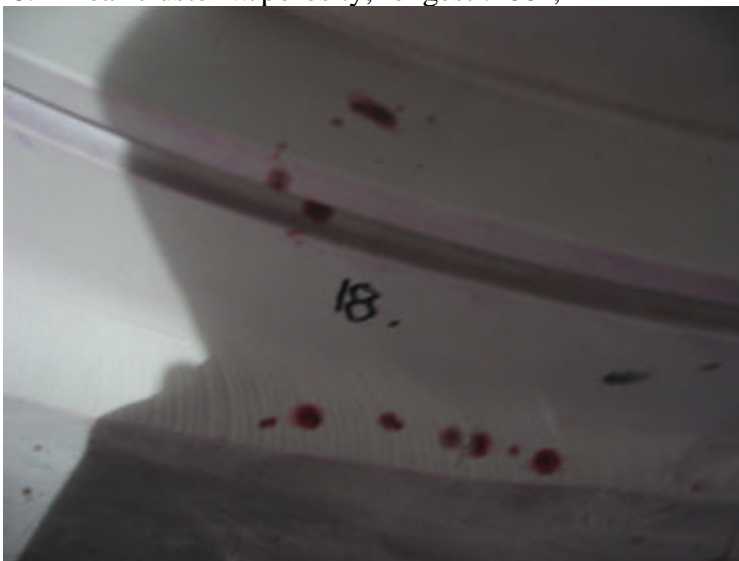
16. Linear, length .200", T face, hole 61



17. Linear cluster, longest .300", D-30



18. Linear cluster w/porosity, longest .200", D-22

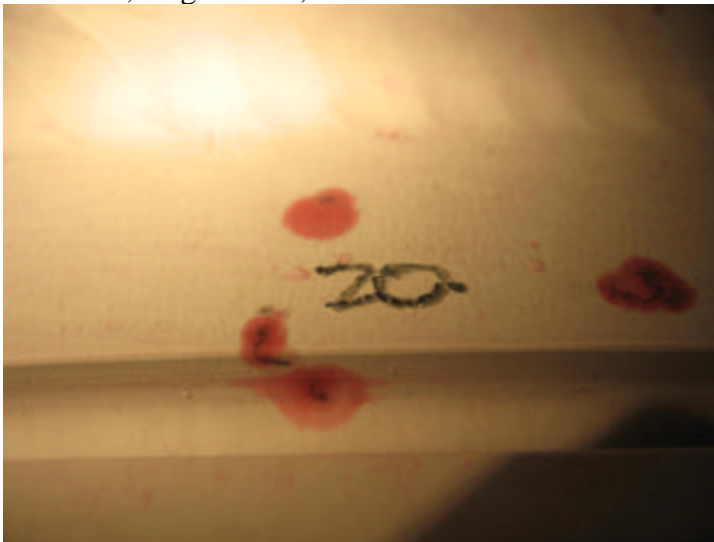


PT Inspection Results of C5 – NC19587

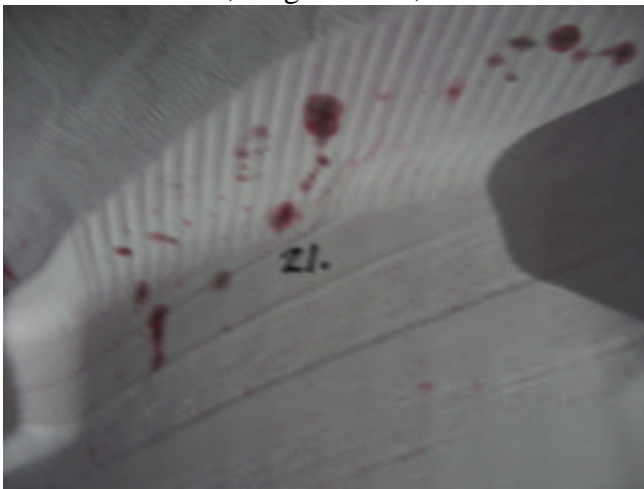
19. Single rounded, .350", D-8 (this is on the long leg of the T near the face)



20. Linear, length .200", D-5



21. Linear cluster, longest .300", D-87

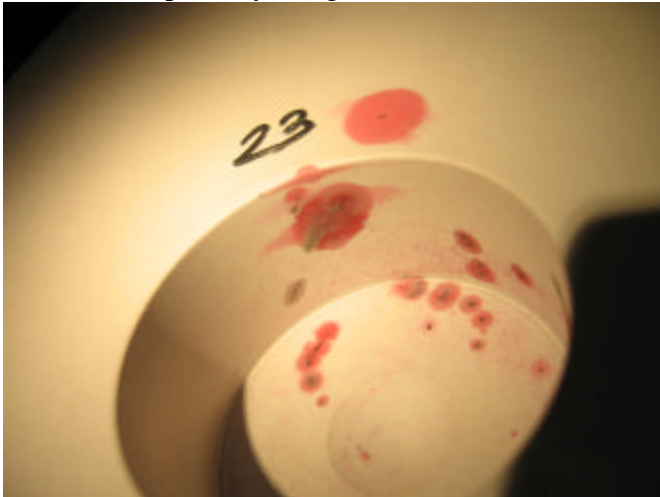


PT Inspection Results of C5 – NC19587

22. Linear, length .200", D-80



23. Linear w/porosity, longest .500", D face, 2" blind hole

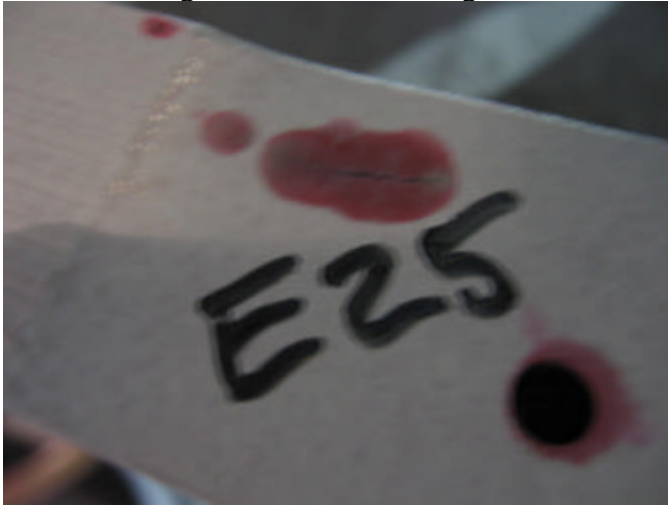


24. Linear, length 1.00", O.D. E flange 79



PT Inspection Results of C5 – NC19587

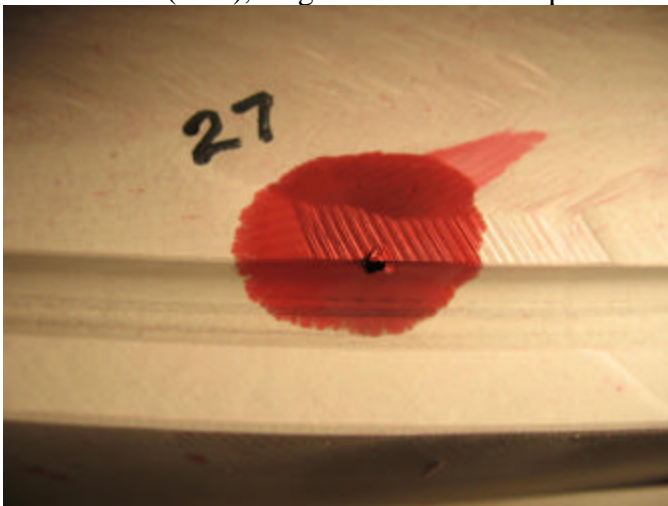
25. Linear, length .550", O.D. E flange 78



26. Linear cluster w/porosity, longest .200", E-60

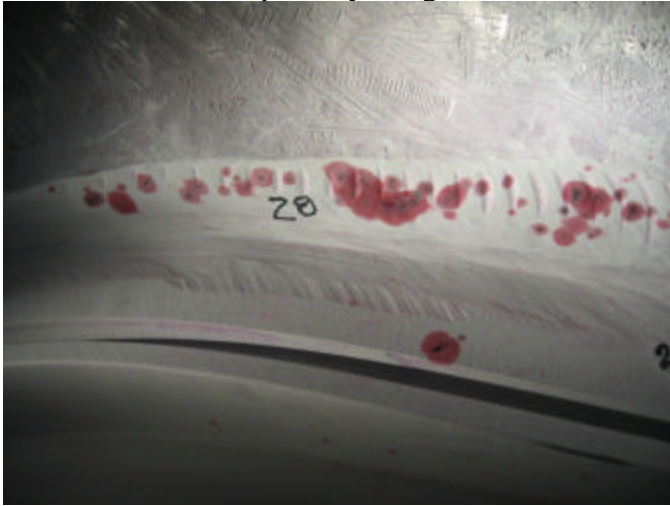


27. Rounded (void), length .150" x .600" depth

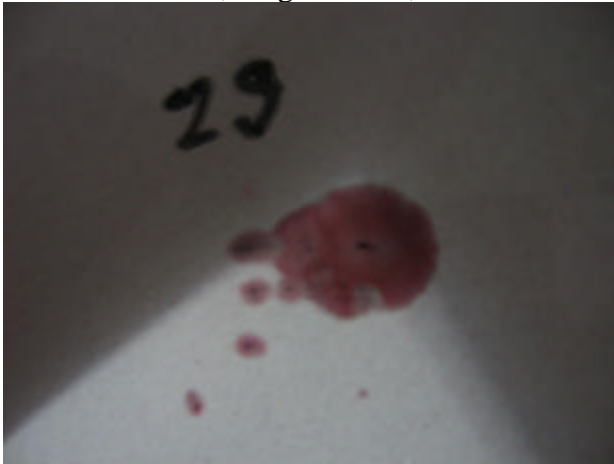


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28. Linear cluster w/porosity, longest .600", E-55



29. Linear cluster, longest .600", E-49



30. Linear (void), length .300" x .250" depth, E-4



PT Inspection Results of C5 – NC19587

31. Linear cluster, longest .400", E-14



Resolution for C5 DP Indications

4/18/2006

4/19/2006

Indication # Disposition

Final disposition

1 Grind	As is
2 Grind	As is
3 Grind	grind
4 As Is	As is
5 better view	As is
6 better view	As is
7 Grind	As is
8 Grind	grind
9 As Is	As is
10 better view	As is
11 better view	As is
12 Grind	As is
13 better view	As is
14 grind but be careful to leave corner!	As is
15 grind	As is
16 grind	As is
17 better view	As is
18 grind	As is
19 better view	As is
20 grind	As is
21 grind	grind
22 grind	As is
23 grind large indication under 23.	As is
24 grind	As is
25 grind	As is
26 better view	As is
27 grind carefully	As is
28 grind	As is
29 as is	As is
30 better view	As is
31 grind	As is