

NOTED APR 06 1984

TER : Q-410
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COMPONENT TASK EVALUATION REPORT

SYSTEM/COMPONENT NO. 03-315A D.G. 102R	TDI PART NO. 03-315A	INITIATOR <i>K. M. Taylor</i> SIGNATURE	DATE 3-29-84	ORGANIZATION <input type="checkbox"/> ENGINEERING <input checked="" type="checkbox"/> QUALITY
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CONDITION DETAILS: ATTACHED INSPECTION REPORTS (10 PAGES) GENERATED BY *Various* DATED *3-28-84* IS CONSIDERED INFORMATIONAL AS NO ACCEPTANCE CRITERIA WAS PROVIDED PRIOR TO THE PERFORMANCE OF THE INSPECTION. *Inspections have been previously reported as unsats during the first teardown of D.G. 102.*

RECOMMENDATIONS: FORWARD TO DESIGN REVIEW FOR EVALUATION AND ALSO TO SEO AND LSU FOR INFORMATION ONLY. Attached IR is UNSATISFACTORY- see sheet 2 for recommended disposition

REQUIRED COMPLETION DATE: 3/29/84

ASSIGNMENT

PORTION ASSIGNED TO <input checked="" type="checkbox"/> ENGINEERING <input type="checkbox"/> QUALITY	RESPONSIBLE CHAIRPERSON <i>Stan Rothberg</i> SIGNATURE	DATE 3/29/84
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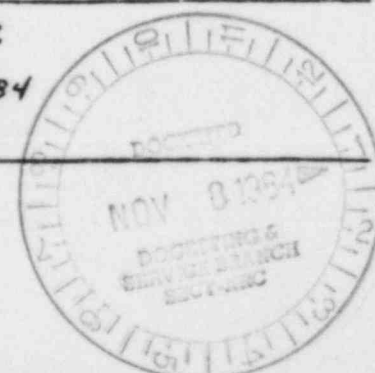
DISPOSITION

DISPOSITION DETAILS: *Follow Procedure 1 outlined on page 2*

DISPOSITION ASSIGNED TO <input checked="" type="checkbox"/> ENGINEERING <input type="checkbox"/> QUALITY <input type="checkbox"/> NONE REQUIRED					
SUPPLIED BY <i>K. Alan</i>	DATE 3-30-84	REVIEWED BY <i>K. Alan</i>	DATE 3-30-84	APPROVED BY <i>K. Alan</i>	DATE 4/6/84
RESP. CHAIRPERSON				PROGRAM MANAGER	

ACTION

ACTION ASSIGNED TO <i>R. Taylor</i>	ACTION COMPLETED BY <i>K. Alan for R. Taylor</i>	DATE 4-10-84
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CC: CKS/GWR/RJN/EFM
TER LOG8412130500 841022
PDR ADOCK 05000322
G PDR

RECOMMENDED
UNSAT TER DISPOSITION

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Distribute for action as follows:

- 1) Design Review (G. Rogers) - Review as part of Design Review Task. Return to Quality Group a statement of acceptability (i.e., inspection information is sufficient for Design Review Group and no further inspections are required) or provide further detailed inspection/criteria, and add to Task Description "review information provided on TER Q-410", for each component affected.
- 2) SDO (J. Kammeyer) - distribute for information.
- 3) LSU/QQA - review for applicability and issue LDR as needed.
- 4) M. Schuster - obtain LDR number as issued for component files and closeout.

STONE & WEBSTER ENGINEERING CORPORATION

Q-410

QUALITY CONTROL
INSPECTION REPORTJOB NUMBER
11600.37DATE
3-28-61SYSTEM(S) OR
PART(S) NAME

LOCATION(S)

REFERENCE
DOCUMENT(S)
P23/12

COMPONENT NAME:

Cylinder Block

DG- 102RI.P. NO. 125 REV. 1 CHG 0TER # Q232 DR-61LILCO LP PROC. 6.2 REV. 1COMPONENT NO. 03-315ADWG. NO. NA

DWG. NO. OR P.O.	ITEM	QTY	DESCRIPTION(S) AND INSPECTION REMARK(S)
	1	3	Performed oil exam on all cylinders per DR-64 all cylinders unsat
NOTE NO. _____			

QUALITY CONTROL INSP./ENG.

DATE

PAGE

3-28-61

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LIQUID PENETRANT EXAMINATION REPORT

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A. MATERIAL Carbon Steel		TYPE	FABRICATED PROCESS	
		GEOMETRY	<input type="checkbox"/> PIPE <input type="checkbox"/> PLATE <input type="checkbox"/> ROD <input checked="" type="checkbox"/> OTHER:	
CROSS SECTION THICKNESS	MAX MIN	PIPE DIA.	SURFACE CONDITION	<input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUNDED <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER
	N/A	N/A		

B. SIDE PROCEDURE No. 6.2 Rev 1	SURFACE/MAT'L. TEMP. 80°	MATE. NO. 71108	MWR/RR. No.
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INSPECTION MATERIALS	BRAND	DESIGNATION	BATCH NO.
1. PRE-CLEANER	MagnaFlux	SKC NF/2070	84A028
2. PENETRANT	Spickcheck	SKC HF/SKC 5	81E180
3. EMULSIFIER AND/OR REMOVER	MagnaFlux	SKC-NF/2070	84A028
4. DEVELOPER	MagnaFlux	SKD NF/2070	83H041
5. POST EXAMINATION CLEANER	MagnaFlux	SKC NF/2070	84A028

SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY

Per Performer LP on all cylinders Per CR-6-1
all cylinders unsat.

C. EVALUATION	REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.
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LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)
1 See Sketch	1/2"	Linear	Res. Cylinder #1
2 See Sketch	External throat 360°	Surface Pitting	Res. Cylinder #1 Best effort Performed
3 See Sketch	1/8"	Linear	Res. Cylinder #1
4 See Sketch	1/2"	Linear	Res. Cylinder #1
D. ACCEPTANCE CRITERIA	4.2	OPERATOR <u>V. H. [Signature]</u> Level <u>VII</u> Date <u>3-25-84</u>	

E. ATTEST	<u>[Signature]</u>	<u>3-25-84</u>
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 COMPONENT I.D.
Cylinders Block
C3 315 11

SYSTEM

R43

PLANT/LOCATION

DG 102

2

Page 3 of 3

Cylinder Block

03-315-A

IP 125

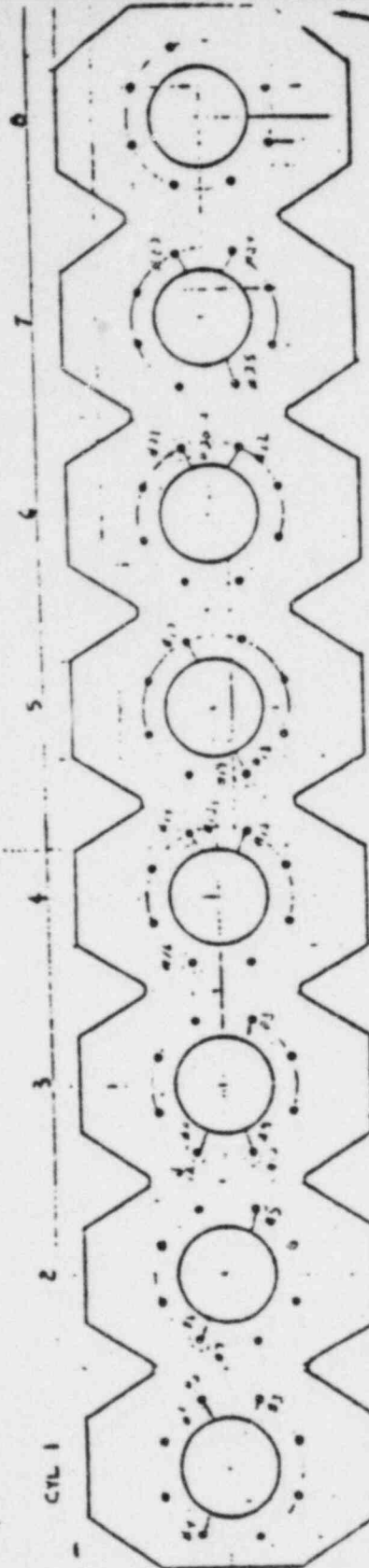
Rev 1

Change 0

INT. CYLINDER BLOCK

DG-102

SOUTH



GENERATOR END

NORTH

NOTES: 1) THIS IS ONLY A REPRESENTATIVE SECTION OF THE T-1 CYLINDER BLOCK.

2) NOT TO SCALE.

Michael J. Taylor
quintanilla
John Ngall

Q-410
3-28-84
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SENDER — RETAIN YELLOW COPY
FORWARD WHITE AND PINK COPIES.

REPLIER — RETURN WHITE COPY
RETAIN PINK COPY FOR FILE.

INTEROFFICE CORRESPONDENCE

Q-410

Pg 6/12

TO: K. MORROW	LOCATION	SUBJECT / REFERENCE / J.O. NO.
FROM: D P JOHNSON	LOCATION	ET OF CYLINDER #7, STUD HOLES #2, 3, 6 & 7. D6-102 5315A
MESSAGE: —		

ET OF STUD HOLES #2, 3, 6 & 7 of CYLINDER #7 was conducted. NO CRACK GROWTH was observed relative to the inspection OF 3/8/84.

STUD HOLE #7 has a measured LENGTH ON THE ID OF the CYLINDER OF 0.96". This compares to a length of 0.99" measured on 3/8/84 and is within the uncertainty of the measurement.

STUD HOLE #6 & #2 have cracks extending to the ~~base~~ bevel on the first stud. The same results were observed on ~~the~~ 3/8/84.

NO RELEVANT INDICATIONS were observed ~~on~~ IN STUD HOLE #3. Inspection Reports are ATTACHED

3-28-84

DATE

Duane P. Johnson

SIGNATURE

TELEPHONE

REPLY:

DATE

SIGNATURE

TELEPHONE

Failure
Analysis
Associates

EDDY CURRENT EXAMINATION REPORT

Q-410

Pg 7/12

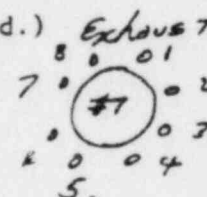
Material		Type: <u>GRAY IRON</u>	Fabricated process:	<input type="checkbox"/> Welded <input type="checkbox"/> Worked	<input checked="" type="checkbox"/> Cast	ET
		Geometry: <input type="checkbox"/> Pipe <input type="checkbox"/> Plate <input type="checkbox"/> Rod <input checked="" type="checkbox"/> Other: <u>CYLINDER BLOCK</u>				
Cross section thickness:	Max. <u>N/A</u> Inch	Min. <u>N/A</u> Inch	Surface condition:	<input checked="" type="checkbox"/> Machined <input type="checkbox"/> As fabricated	<input type="checkbox"/> Ground <input type="checkbox"/> Other:	
NDE Procedure no. <u>11.8</u>			Job no. <u>3315A</u>	Report no. <u>840328</u>		127

Sketch or other detail (Use other side if more space is needed.)

AREA OF EXAMINATION:

STUD HOLES # 2, 3, 6, 7; CYLINDER # 7 DG 102

AREA OF HOLES BETWEEN HEAD MATING SURFACE AND BEGINNING OF THREADS.



Indication no.	Magnitude of indication	Length of indication	Remarks
HOLE # 7	5.6 @ -1.0	0.96"	
HOLE # 6	6.6 @ -2.8	TO THREADS	
HOLE # 2	6.0 @ -2.4	TO THREADS	
HOLE # 3	—	—	RELEVANT NO INDICATIONS

Sketch or other data (use other side)

Acceptance criteria	SEE NDE 11.8 PROCEDURE	Operator: <u>D.B. Johnson</u> Level: <u>III</u> Date: <u>3-28-84</u>
Attest	<u>D.B. Johnson</u> Responsible certified personnel	<u>III</u> <u>3-28-84</u> Level Date

EDDY CURRENT CALIBRATION REPORT

Q-410

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Job No. 3315A Date 3-28-84 Report No. 840328-12
 Material Description GRAY IRON
 Code or Specification FAAA NDE 11.8 Full On N/A Full Off N/A
 Reference Standard PAD 3315A Instrument M12-17 S/N 8010881
840227

Instrument

Freq. 500 KHZ Gain OC Volts/div 0.5 Phase 278
 Test Probe FAAA ECP 200B S/N 200B-1
 Reference Probe FAAA ECP 200P S/N 200P-1

CALIBRATION

4.5 units @ -2.5 L/O 2.6 units @ +1.5 L/O
3.5 units @ 0 L/O 2.4 units @ +2.5 L/O

STRIP CHART RECORDER

Type N/A S/N N/A
 Channel 1 Channel 2
 Sen N/A Sen N/A
 Position @ Null Point N/A Position @ Null Point N/A
 Chart Speed N/A mm/sec

Calibration Check

Time <u>12:15</u>	Phase <u>278</u>	Gain <u>OC</u>
Time <u>12:43 EOT</u>	Phase <u>278</u>	Gain <u>OC</u>
Time _____	Phase _____	Gain _____
Time _____	Phase _____	Gain _____
Time _____	Phase _____	Gain _____
Time _____	Phase _____	Gain _____
Time _____	Phase _____	Gain _____
Time _____	Phase _____	Gain _____
Time _____	Phase _____	Gain _____
Time _____	Phase _____	Gain _____

Examiner D.P. Johnson Level III Examiner _____ Level _____
 R&D-KR-3

Failure
Analysis
Associates

EDDY CURRENT EXAMINATION REPORT

Q-410

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Material		Type: <u>Gray</u> <u>IRON</u>	Fabricated process:	<input type="checkbox"/> Welded <input type="checkbox"/> Worked	<input checked="" type="checkbox"/> Cast	ET
		Geometry: <input type="checkbox"/> Pipe <input type="checkbox"/> Plate <input type="checkbox"/> Rod <input checked="" type="checkbox"/> Other: <u>CYLINDER BLOCK</u>				
Cross section thickness:	Max. <u>N/A</u> Inch	Min. <u>N/A</u> Inch	Surface condition:	<input checked="" type="checkbox"/> Machined <input type="checkbox"/> As fabricated	<input type="checkbox"/> Ground <input type="checkbox"/> Other:	
NDE Procedure no. <u>118</u>		Job no. <u>3365A</u>		Report no. <u>840328-13</u>		

Sketch or other detail (Use other side if more space is needed.)

CAST
1ST THREAD AREA OF STUD HOLES # 7, 6, 3, 2
CYL. #7 DG 102

Indication no.	Magnitude of indication	Length of indication	Remarks
HOLE #7			NO RELEVANT INDICATIONS
HOLE #6			NO RELEVANT INDICATIONS
HOLE #2			NO RELEVANT INDICATIONS
HOLE #3			NO RELEVANT INDICATIONS

Sketch or other data (use other side)

Acceptance criteria	SEE NDE 11.8 PROCEDURE	Operator: <u>D.P. Johnson</u> Level: <u>III</u> Date: <u>3-28-84</u>
Attest	<u>D.P. Johnson</u> Responsible certified personnel	<u>III</u> <u>3-28-84</u> Level Date

EDDY CURRENT CALIBRATION REPORT

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1.1.10

Job No. 3315A Date 3-28-84 Report No. 840328-13
 Material Description GRAY IRON
 Code or Specification FAA NDE 11.8 Full On N/A Full Off N/A
 Reference Standard FAA 3315A Instrument M12-17 S/N 8010881
840227

Instrument

Freq. 500 KHz Gain 12 Volts/div 0.5 Phase 278
 Test Probe FAA ECP 200 B S/N 200 B-1
 Reference Probe FAA ECP 200 P S/N 200 P-1

CALIBRATION

4.2 units @ 0 L/O 28 units @ +3.0 L/O
3.5 units @ +1.0 L/O _____ units @ _____ L/O

STRIP CHART RECORDER

Type N/A S/N N/A
 Channel 1 Channel 2
 Sen N/A Sen N/A
 Position @ Null Point N/A Position @ Null Point N/A
 Chart Speed N/A mm/sec

Calibration Check

Time	Phase	Gain
<u>12:45</u>	<u>278</u>	<u>12</u>
<u>12:55 EOT</u>	<u>278</u>	<u>12</u>
Time	Phase	Gain
Time	Phase	Gain
Time	Phase	Gain
Time	Phase	Gain
Time	Phase	Gain
Time	Phase	Gain
Time	Phase	Gain
Time	Phase	Gain
Time	Phase	Gain

Examiner D.P. [Signature] Level III Examiner _____ Level _____
 R&D-KR-3

Failure
Analysis
Associates

EDDY CURRENT EXAMINATION REPORT

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Material		Type: <u>GRAY IRON</u>	Fabricated process:	<input type="checkbox"/> Welded <input type="checkbox"/> Worked	<input checked="" type="checkbox"/> Cast	ET
		Geometry: <input type="checkbox"/> Pipe <input type="checkbox"/> Plate <input type="checkbox"/> Rod <input checked="" type="checkbox"/> Other: <u>CYLINDER BLOCK</u>				
Cross section thickness:	Max. <u>N/A</u> Inch	Min. <u>N/A</u> Inch	Surface condition:	<input checked="" type="checkbox"/> Machined <input type="checkbox"/> As fabricated	<input type="checkbox"/> Ground <input type="checkbox"/> Other:	
NDE Procedure no. <u>11.8</u>		Job no. <u>3315A</u>		Report no. <u>840328-11</u>		

Sketch or other detail (Use other side if more space is needed.)

1ST THREAD BEVEL, STUD HOLES #2 + 6
CYLINDER #7, DG 102

Indication no.	Magnitude of indication	Length of indication	Remarks
HOLE #6	3.6 @ +2.0 100%		
HOLE #2	4.0 @ +0.6 80%		

Sketch or other data (use other side)

Acceptance criteria	SEE NDE 11.8 PROCEDURE	Operator: <u>DQ. Johnson</u> Level: <u>III</u> Date: <u>3-28-81</u>
Attest	<u>DQ. Johnson</u> Responsible certified personnel	<u>JH</u> <u>3-28-81</u> Level Date

11.1.10

EDDY CURRENT CALIBRATION REPORT

Q-410

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Job No. 3315A Date 3-28-84 Report No. 840328-14
 Material Description GRAY IRON
 Code or Specification FAA NDE 11.8 Full On N/A Full Off N/A
 Reference Standard RA0 3315A Instrument MIZ 17 S/N B010881
840227

Instrument

Freq. 2 MHz Gain 24 Volts/div 0.5 Phase 206
 Test Probe FAA ECP 100P S/N 100 P-2
 Reference Probe FAA ECP 100B S/N 100 B-1

CALIBRATION

5.0 units @ +0.5 L/O _____ units @ _____ L/O
3.7 units @ +2.6 L/O _____ units @ _____ L/O

STRIP CHART RECORDER

Type N/A S/N N/A

Channel 1

Sen N/A
 Position @ Null Point N/A
 Chart Speed N/A mm/sec

Channel 2

Sen N/A
 Position @ Null Point N/A

Calibration Check

Time <u>13:17</u>	Phase <u>206</u>	Gain <u>24</u>
Time <u>13:21</u> EOT	Phase <u>206</u>	Gain <u>24</u>
Time _____	Phase _____	Gain _____
Time _____	Phase _____	Gain _____
Time _____	Phase _____	Gain _____
Time _____	Phase _____	Gain _____
Time _____	Phase _____	Gain _____
Time _____	Phase _____	Gain _____
Time _____	Phase _____	Gain _____
Time _____	Phase _____	Gain _____

Examiner DD. Johnson
 R&D-KR-3

Level III

Examiner _____

Level _____

This inspection report is acceptable for
design review

Q-410
03-315A

K. Solon for R. Taylor
4-10-84