

**IN-FIELD SERVICES**  
**GEIS Pipeline Integrity Team NDE**

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**Pacific Gas & Electric Company**  
**Hydrostatic Test Dig from November 8, 2011 to January 0, 1900**  
**T30\_L132\_Leak\_MP-15.0029**  
**Documents Contained Within:**

H-Form Report T30\_L132\_Leak MP-15.0029  
NDE Reports of T30\_L132\_Leak MP-15.0029  
Photo Report of T30\_L132\_Leak MP-15.0029

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Authors:

Date:



<b>DA/ILI</b>	<b>DA</b>	<b>ILI</b>
Route Number: L-132	Site Designation: T30_Leak	ILI Log Distance: _____
Date of Excavation: 11/8/2011	N-Segment: _____	RMP-11 Ref. Section: Table 5.6.2
Mile Point: 15.0029	IMA Number: _____	Reference Girth Weld: _____
Examination Performed By: Redacted	Region Number: _____	Distance From Girth Weld: _____
PG&E Project Manager: Mark Cabral/Redacted	Subregion # (ICDA): _____	
Approved By: _____	Stationing: _____	
Order Number: 41497351		

**Excavation Priority:**  Immediate  Scheduled (For ILI -  1 Year  Other)  Monitor  Effectiveness  ICDA

**Excavation Reason:**  ECDA  ILI  Recoat  ICDA  Other  Leak

If practical, take P/S or CIS reads before excavation: \_\_\_\_\_ N/A

**Excavation Details:**

U/S Ditch Start GPS Coordinates (Uncorrected Field Measurement)  
 Northing: \_\_\_\_\_ PDOP: \_\_\_\_\_ Planned Excavation Length (Ft.): \_\_\_\_\_  
 Easting: \_\_\_\_\_ Acc~: \_\_\_\_\_ Actual Excavation Length (Ft.): 13.2

Centerline GPS Coordinates (Uncorrected Field Measurement)  
 Northing: \_\_\_\_\_ PDOP: \_\_\_\_\_ GPS File Name: N/A  
 Easting: \_\_\_\_\_ Acc~: \_\_\_\_\_

D/S Ditch End GPS Coordinates (Uncorrected Field Measurement)  
 Northing: \_\_\_\_\_ PDOP: \_\_\_\_\_  
 Easting: \_\_\_\_\_ Acc~: \_\_\_\_\_

**1.0 Data Before Coating Removal**

1.1 **Native Soil Type:**  Clay  Rock  Sand  Loam  Wet  Other \_\_\_\_\_

1.1A **Backfill Material Found:**  Sand  Slurry  Native Depth of Cover (Ft.): 2.5

Comments: N/A

1.2 **Coating Type:**  HAA  Somatic  Plastic Tape  Wax Tape  FBE  Powercrete  
 Bare/None  Paint  Other: Coal tar Comments: N/A

Coating Thickness (Inches): 0.32 Number of Layers: 2

1.3 **Holiday Testing Performed?:**  Yes  No Voltage Used: \_\_\_\_\_ Map Location of Holidays Below.  
 Device Used:  Coil  Wet Sponge Comments: \_\_\_\_\_

1.4 **Pipe-to-Soil Potentials in Ditch (-mV):**

US: 12:00	-507.000	3:00	-566.000	6:00	-562.000	9:00	-499.000
DS: 12:00	-571.000	3:00	-570.000	6:00	-570.000	9:00	-572.000

Comments: Some of the upstream soil was disturbed.

1.5 **Soil Resistivity in Ditch (Ω-cm):**  
 Method:  4-Pin 1,843.00  Soil Box 2,345  
 Comments: The lawn sprinklers went off before taking 4-pin reading. SRM-100 US: N/A DS: N/A

1.6 **Soil Sample Location** Comments: Downstream cross-section at depth of 5.8ft.

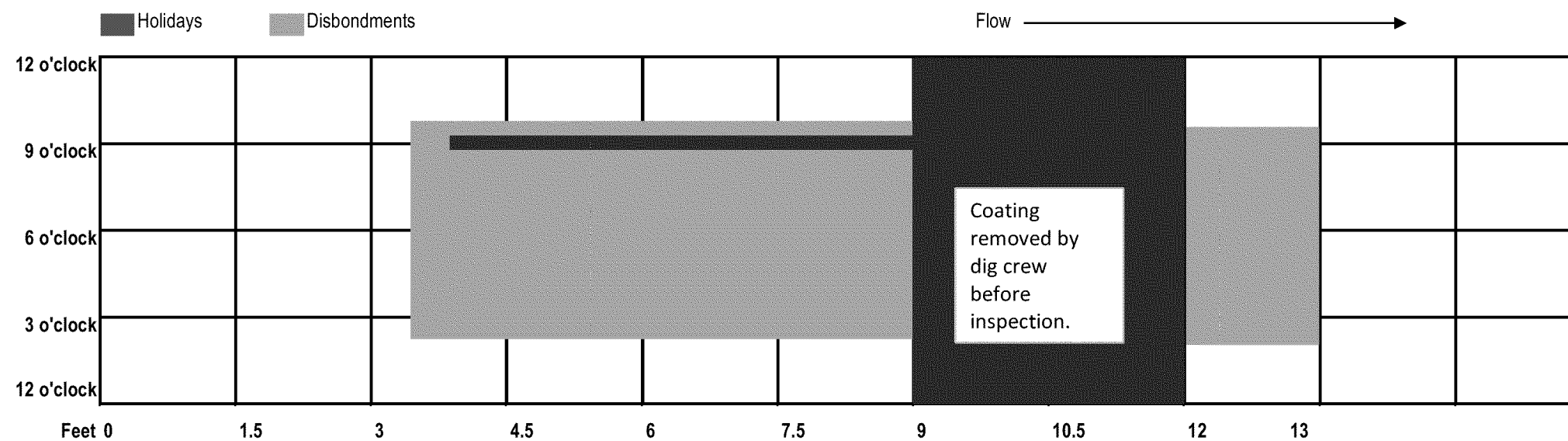
1.7 **Ground Water Present?:**  Yes  No Sample(s) Collected?:  Yes  No Sample pH: N/A

Comments: N/A

1.8 **Coating Condition:**  Good - Adhered to Pipe  Fair - Coating Partially Disbonded or Degraded  
 Poor - Coating Significantly Disbonded or Missing

Comments: Exposed pipe from -0.00' to 13.00'. The dig crew removed coating from 4ft to 9ft centered around the 9:00 looking for the leak and completely removed the coating from 9ft to 12.35ft. The coating was disbonded from 3ft to 13ft for 2:33 to 9:22.

1.9 **Map of Coating Degradation\*:** Zero Reference Point: US Ditch Start  
 \*Note any calcareous deposit locations



CaCO3	- Calcareous deposits containing calcium
FeO	- General iron oxide with scale
3 FeCO3	- Calcareous deposits containing iron

Form H: Direct Examination Data Sheet - Page 2 of 10

<b>DA/ILI</b>	<b>DA</b>	<b>ILI</b>
Route Number: <u>L-132</u>	Site Designation: <u>T30_Leak</u>	ILI Log Distance: _____
Date of Excavation: <u>11/8/2011</u>	N-Segment: _____	RMP-11 Ref. Section: <u>Table 5.6.2</u>
Mile Point: <u>15.0029</u>	IMA Number: _____	Reference Girth Weld: _____
Examination Performed By: <u>Redacted</u>	Region Number: _____	Distance From Girth Weld: _____
PG&E Project Manager: <u>Mark Cabral Redacted</u>	Subregion # (ICDA): _____	
Approved By: _____	Stationing: _____	
Order Number: <u>41497351</u>		

1.10 Photos Taken?\*:  Yes  No  
 \*See Photo Log for additional information.

1.11 Coating Sample Taken?:  Yes  No Location of Sample: N/A

1.12 Liquid Underneath Coating?:  Yes  No If Yes, pH of Liquid: \_\_\_\_\_

1.13 Corrosion Product Present?:  Yes  No If Yes, Was Sample Taken?:  Yes  No  
 Comments: A deposit was found 10.6ft to 12.35 and was centered at 6:22 with a width of 28.5in.

1.14 Soil pH (Sb Electrode): Upstream: 6.5 Downstream: 6.5 Pipe pH: 6.0

**2.0 Data After Coating Removal**

2.1 Pipe Temperature (°F): 55.5 Measured Pipe Diameter (In.): 24

2.2 Weld Seam Type:  DSAW  SSAW  ERW  SMLS  
 Spiral  Lap  Flash  AO Smith  IF CAN'T DETERMINE, VISUALLY PERFORM MACROETCH & LOCATE

2.3 Girth Weld Coordinates & Identify Type (See Table 5.7.3):  
 Northing: N/A PDOP: N/A US / DS  
 Easting: N/A Acc: N/A SMLS  
 Elevation: N/A LS Weld Clock Position(s): \_\_\_\_\_

2.4 Damage Found:  
 Corrosion Damage  Yes  No Mechanical Damage  Yes  No  
 Other Damage: Through-wall hole, see attached pages for additional details.

2.5 UT Wall Thickness Measurements:

	US / DS		US / DS		US / DS		US / DS	
	TDC:							
4 O'clock	0.265	1 O'clock	0.269	2 O'clock	0.266	3 O'clock	0.276	
8 O'clock	0.283	5 O'clock	0.287	6 O'clock	0.285	7 O'clock	0.283	
		9 O'clock	0.274	10 O'clock	0.275	11 O'clock	0.276	

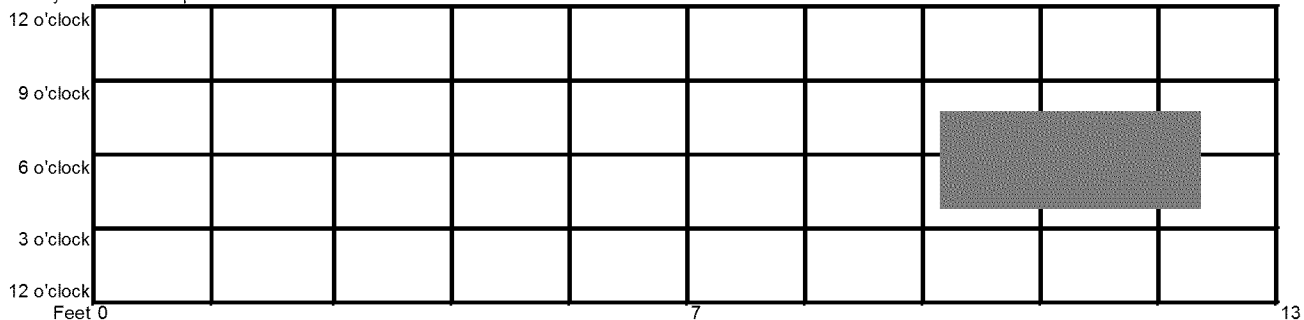
UT Wall Thickness Grid @ 6:00 is required. Be sure to attach grid to H-Form electronically. See page 6 of 10.

2.6 Wet Fluorescent Mag. Part. Is Required. Comments: 30 Linear indications were found on the exposed pipe.  
 Were there any linear indications?  Yes  No If Yes, attach NDE report electronically as part of the H-Form.  
 Report to include black light and white light photos of indications.

2.7 Take Photos to Document Corrosion and Other Anomalies\*  
 \*See Photo Log for additional information.

2.8 Overview Map of Corroded Area\*:  
 \*See Pit Depth Measurement Grid for additional information Zero Reference Point: Ditch start

\*Note any calcareous deposits.







EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

<p><u>DA/ILI</u>                  Route Number: <u>L-132</u>                  Date of Excavation: <u>11/8/2011</u>                  Mile Point: <u>15.0029</u>                  Examination Performed By: <u>Redacted</u>                  PG&amp;E Project Manager: <u>Mark Cabral Redacted</u>                  Approved By: _____                  Order Number: <u>41497351</u></p>	<p><u>DA</u>                  Site Designation: <u>T30_Leak</u>                  N-Segment: _____                  IMA Number: _____                  Region Number: _____                  Subregion # (ICDA): _____                  Stationing: _____</p>	<p><u>ILI</u>                  ILI Log Distance: _____                  RMP-11 Ref. Section: <u>Table 5.6.2</u>                  Reference Girth Weld: _____                  Distance From Girth Weld: _____</p>
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Grid Size = 0.5 Inch x 0.5 Inch (specify grid size)  
 Clock Position (specify below)

Anomaly #	VOL-01	Grid #																					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A		0.000	0.002	0.023	0.007	0.000	0.019	0.014	0.000	0.000	0.000	0.000											
B		0.000	0.000	0.016	0.053	0.006	0.000	0.021	0.019	0.000	0.000	0.000											
C		0.005	0.014	0.026	0.077	0.163	0.016	0.020	0.014	0.005	0.000	0.000											
D		0.012	0.026	0.021	0.124	0.045	0.043	0.070	0.060	0.004	0.000	0.000											
E		0.044	0.166	0.083	0.020	0.039	0.280	HOLE	0.132	0.099	0.010	0.000											
F		0.000	0.124	0.058	0.010	0.000	0.111	0.195	0.199	0.078	0.000	0.000											
G		0.000	0.000	0.000	0.000	0.000	0.008	0.024	0.023	0.000	0.000	0.000											
H		0.000	0.000	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.032	0.027											
I		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.024											
J																							
K																							
L																							
M																							
N																							
O																							
P																							
Q																							
R																							
S																							
T																							
U																							
V																							
W																							
X																							

AXD: 10.96' (from US ditch start)  
 Clock: 6:02  
 Axial Length: 3.5"  
 Circumferential Width: 5.8"  
 Max Depth: Through-wall (E7)

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

<p><u>DA/ILI</u></p> <p>Route Number: <u>L-132</u></p> <p>Date of Excavation: <u>11/8/2011</u></p> <p>Mile Point: <u>15.0029</u></p> <p>Examination Performed By: <u>Dedacted</u></p> <p>PG&amp;E Project Manager: <u>Mark Cabral Dedacted</u></p> <p>Approved By: _____</p> <p>Order Number: <u>41497351</u></p>	<p><u>DA</u></p> <p>Site Designation: <u>T30_Leak</u></p> <p>N-Segment: _____</p> <p>IMA Number: _____</p> <p>Region Number: _____</p> <p>Subregion # (ICDA): _____</p> <p>Stationing: _____</p>	<p><u>ILI</u></p> <p>ILI Log Distance: _____</p> <p>RMP-11 Ref. Section: <u>Table 5.6.2</u></p> <p>Reference Girth Weld: _____</p> <p>Distance From Girth Weld: _____</p>
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Grid Size = .5 Inch x .5 Inch (specify grid size)  
 Clock Position (specify below)

	Anomaly # <u>VOL-02</u>			Grid # _____																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			
A	0.000	0.000	0.000					AXD: 9.68 (From US Ditch Start) Clock: 6:15 Axial Length: 0.400" Circumferential Width: 0.300" Max Depth: 0.041"																	
B	0.000	0.041	0.000																						
C	0.000	0.000	0.000																						
D																									
E																									
F																									
G																									
H																									
I																									
J																									
K																									
L																									
M																									
N																									
O																									
P																									
Q																									
R																									
S																									
T																									
U																									
V																									
W																									
X																									

PIT DEPTH GRID 2 OF 2

INTERNAL CORROSION WALL LOSS GRID

<b>DA/ILI</b>	<b>DA</b>	<b>ILI</b>
Route Number: <u>L-132</u>	Site Designation: <u>T30_Leak</u>	ILI Log Distance: <u>NA</u>
Date of Excavation: <u>10/9/2011</u>	N-Segment: <u>NA</u>	RMP-11 Ref. Section: <u>Table 5.6.2</u>
Mile Point: <u>14.995</u>	IMA Number: <u>NA</u>	Reference Girth Weld: <u>NA</u>
Examination Performed By: <u>Redacted</u>	Region Number: <u>NA</u>	Distance From Girth Weld: <u>NA</u>
PG&E Project Manager: <u>Redacted</u>	Subregion # (ICDA): <u>NA</u>	
Approved By: <u>NA</u>	Stationing: <u>NA</u>	
Order Number: <u>0</u>		

Grid Size = 1 Inch x 1 Inch

Clock Position (specify below)

All measurements are in inches.

UT Grid is centered @ 6:00 position on pipe.

	1	2	3	4	5	6	7	8	9	10	11	12
A	0.298"	0.294"	0.293"	0.291"	0.288"	0.285"	0.287"	0.285"	0.284"	0.284"	0.287"	0.282"
B	0.299"	0.299"	0.292"	0.296"	0.290"	0.286"	0.284"	0.287"	0.289"	0.287"	0.286"	0.285"
C	0.296"	0.294"	0.290"	0.294"	0.294"	0.298"	0.286"	0.287"	0.286"	0.288"	0.292"	0.292"
D	0.299"	0.294"	0.299"	0.290"	0.295"	0.294"	0.287"	0.284"	0.292"	0.292"	0.289"	0.281"
E	0.294"	0.296"	0.289"	0.285"	0.288"	0.287"	0.295"	0.291"	0.294"	0.282"	0.295"	0.284"
F	0.297"	0.292"	0.290"	0.294"	0.297"	0.285"	0.286"	0.287"	0.284"	0.291"	0.285"	0.292"
G	0.289"	0.292"	0.287"	0.285"	0.288"	0.285"	0.292"	0.287"	0.288"	0.286"	0.281"	0.284"
H	0.294"	0.291"	0.299"	0.286"	0.283"	0.287"	0.285"	0.292"	0.287"	0.288"	0.285"	0.291"
I	0.292"	0.289"	0.297"	0.285"	0.282"	0.284"	0.287"	0.288"	0.284"	0.289"	0.292"	0.282"
J	0.291"	0.284"	0.285"	0.296"	0.282"	0.285"	0.296"	0.294"	0.287"	0.294"	0.291"	0.282"
K	0.290"	0.283"	0.285"	0.284"	0.281"	0.290"	0.290"	0.282"	0.284"	0.284"	0.291"	0.277"
L	0.299"	0.286"	0.287"	0.284"	0.291"	0.285"	0.282"	0.280"	0.281"	0.284"	0.280"	0.279"

INTERNAL CORROSION GRID









Redacted



**INSPECTION & LIFE EXTENSION SERVICES**

<b>MAGNETIC PARTICLE EXAMINATION REPORT</b>							<input type="checkbox"/> Nuclear	<input checked="" type="checkbox"/> Non-Nuclear	
To: <b>Pacific Gas &amp; Electric Company</b>				From: <b>Redacted</b>		Date: <b>11/9/2011</b>			
Project: <b>T30_L132_Leak_MP-15.0029</b>									
PG&E Purchase Order No: <b>41497351</b>				GEIS Job No: <b>LAPI0015</b>					
Item	Weld <input checked="" type="checkbox"/>	Structural <input type="checkbox"/>	Casting <input type="checkbox"/>	Machinery <input type="checkbox"/>	Mach. Parts <input checked="" type="checkbox"/>	Pipe <input type="checkbox"/>	N/A <input type="checkbox"/>	Other: <b>N/A</b>	
	Non-Weld <input checked="" type="checkbox"/>	Plate <input type="checkbox"/>	Pipe <input checked="" type="checkbox"/>	Bar <input type="checkbox"/>	Casting <input type="checkbox"/>	Mach. Parts <input type="checkbox"/>	N/A <input type="checkbox"/>	Other: <b>N/A</b>	
Material	Size <b>24"</b>	Material Thickness <b>0.281"</b>	Type of Base Material <b>Carbon Steel</b>		Type of Filler Material <b>C/S Smooth</b>		Weld <input type="checkbox"/> N/A	<input type="checkbox"/> As Welded <input checked="" type="checkbox"/> As Welded	
Location	<b>Redacted</b>				System <b>L-132</b>				
Acceptance Standards	<b>Customer Specifications</b>				Procedure <b>GEIS QCP # 500 Rev 15</b>				
Type of Check	Initial <input checked="" type="checkbox"/>	Plate Edge <input type="checkbox"/>	In Process <input type="checkbox"/>	Back Gouge <input type="checkbox"/>	Root Pass <input type="checkbox"/>	Repair <input type="checkbox"/>	12 Hour <input type="checkbox"/>	24 Hour <input type="checkbox"/>	Final <input type="checkbox"/>
Type of Inspection	<input type="checkbox"/> Longitudinal	<input type="checkbox"/> Coil	<input type="checkbox"/> DC Probe	<input checked="" type="checkbox"/> Continuous	Other:				
	<input checked="" type="checkbox"/> Wet	<input type="checkbox"/> Dry	<input type="checkbox"/> Direct Contact	<input checked="" type="checkbox"/> Residual					
	<input type="checkbox"/> Circular	<input type="checkbox"/> AC Prod	<input checked="" type="checkbox"/> Yoke	<input type="checkbox"/> Other					
MT Yoke & Model - Serial No. / Blacklight Model - Serial No. <b>Magnaflux Y-1 - S# 2101 / Spectroline BIP - S# 1664050</b>					Surface Preparation Method <b>Abrasive Blasting (Walnut Shells) - NACE 2 Finish</b>				
Inspection Medium / Color / Batch No. <b>Magnaglo 14A / Flourescent Green / 11F30K</b>					Demagnetization Method / Equipment <b>N/A</b>				
Reference: Summary				See Attachment			Results of Inspection		
<b>The following areas were requested to be inspected:</b> Bare pipe: 9.00" to 12.35" from original U/S ditch start.							- 11 linear indications found.		
<b>Summary:</b> Indications LIN-4 Thru 11 were remediated by buffing. Indications LIN-01 to LIN-03 were covered by the B-Sleeve.									
Please see additional MT, UT and photo report for additional details on indications (UT = depths, MT for locations and length)									
Copy To: Pacific Gas & Electric Company GE Inspection Services (Los Angeles)				Requested By: <b>Redacted / Mark Cabral</b>			Reported By (Technician): <b>Redacted</b>		
				<input checked="" type="checkbox"/> Customer Specifications <input type="checkbox"/> Accept <input type="checkbox"/> Reject			NDT supervisor: <b>Redacted</b>		

NOTICE: THIS EXAMINATION REPORT IS A REPORT OF THE RESULTS OF THE NDT PROCEDURE ACTUALLY PERFORMED BY THIS COMPANY IT IS SUBJECT TO THE LIMITATIONS OF THE TESTING SPECIFICATIONS AND PROCEDURES WHICH WERE UTILIZED. BY FURNISHING THIS REPORT, **GE INSPECTION & LIFE EXTENSION SERVICES** DOES NOT GUARANTEE ANY CONDITION OF THE TESTED SPECIMEN.



GE Energy  
INSPECTION SERVICES

<b>MT Results (Measurements)</b>		<input type="checkbox"/> Nuclear	<input checked="" type="checkbox"/> Non-Nuclear
To: <b>Pacific Gas &amp; Electric Company</b>		From: <input type="text" value="Redacted"/>	Date: <b>11/9/2011</b>
Project: <b>T30_L132_Leak_MP-15.0029</b>			
PG&E Purchase Order No: <b>41497351</b>		GEIS Job No: <b>LAPI0015</b>	
Location	<input type="text" value="Redacted"/>	System	<b>L-132</b>
Acceptance Standards	<b>Customer Specifications</b>	Procedure	<b>GEIS QCP # 500 Rev 15</b>
LIN-01 AXD: 10.75 ft, Clock 8:55, Axial Length: 2.0 in, Circ. W: 0.30 in			
LIN-02 AXD: 10.92 ft, Clock 9:19, Axial Length: 1.60 in, Circ. W: 0.02 in			
LIN-03 AXD: 10.95 ft, Clock 8:30, Axial Length: 1.30 in, Circ. W: 0.03 in			
LIN-04 AXD: 11.40 ft, Clock 8:33, Axial Length: 4.00 in, Circ. W: 0.04in			
LIN-05 AXD: 11.64 ft, Clock 8:14, Axial Length: 1.70 in, Circ. W: 0.03 in			
LIN-06 AXD: 11.85 ft, Clock 9:00, Axial Length: 4.10 in, Circ. W: 0.018 in			
LIN-07 AXD: 9.6 ft, Clock 2:01, Axial Length: 0.60 in, Circ. W: 0.05in			
LIN-08 AXD: 9.8 ft, Clock 2:44, Axial Length: 1.00 in, Circ. W: 0.20 in			
LIN-09 AXD: 10.10 ft, Clock 2:55, Axial Length: 0.40 in, Circ. W: 0.02 in			
LIN-10 AXD: 12.12 ft, Clock 1:41, Axial Length: 0.50 in, Circ. W: 0.20 in			
LIN-11 AXD: 12.3 ft, Clock 1:51, Axial Length: 0.60 in, Circ. W: 0.20 in			
<b>NOTE:</b>			
LIN 04, 05, 06, 07, 08, 09, 10 and 11 were remediated with buffing by PG&E personnel. Removal was verified with MT. Lin -01, 02, and 03 were left on the pipe and were covered by the B-Sleeve.			
<b>**Please see attached UT and photo report for additional information.</b>			
Copy To: <i>Pacific Gas &amp; Electric Company</i> <i>GE Inspection Services (Los Angeles)</i>		Requested By: <input type="text" value="Redacted"/> /Mark Cabral <input checked="" type="checkbox"/> Customer Specifications <input type="checkbox"/> Accept <input type="checkbox"/> Reject	Reported By (Technician): <input type="text" value="Redacted"/> NDT supervisor: <input type="text" value="Redacted"/>

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GE Energy  
**INSPECTION & LIFE EXTENSION SERVICES**

MAGNETIC PARTICLE EXAMINATION REPORT							<input type="checkbox"/> Nuclear	<input checked="" type="checkbox"/> Non-Nuclear	
To: <b>Pacific Gas &amp; Electric Company</b>				From: <b>Redacted</b>		Date: <b>11/9/2011</b>			
Project: <b>T30_L132_Leak_MP-15.0029</b>									
PG&E Purchase Order No: <b>41497351</b>				GEIS Job No: <b>LAPI0015</b>					
Item	Weld <input checked="" type="checkbox"/>	Structural <input type="checkbox"/>	Casting <input type="checkbox"/>	Machinery <input type="checkbox"/>	Mach. Parts <input checked="" type="checkbox"/>	Pipe <input type="checkbox"/>	N/A <input type="checkbox"/>	Other: <b>N/A</b>	
	Non-Weld <input checked="" type="checkbox"/>	Plate <input type="checkbox"/>	Pipe <input checked="" type="checkbox"/>	Bar <input type="checkbox"/>	Casting <input type="checkbox"/>	Mach. Parts <input type="checkbox"/>	N/A <input type="checkbox"/>	Other: <b>N/A</b>	
Material	Size <b>24"</b>	Material Thickness <b>0.281"</b>	Type of Base Material <b>Carbon Steel</b>		Type of Filler Material <b>C/S Smooth</b>		Weld <input type="checkbox"/> N/A	<input type="checkbox"/> As Welded <input checked="" type="checkbox"/> As Welded	
Location	<b>Redacted</b>				System <b>L-132</b>				
Acceptance Standards	<b>Customer Specifications</b>				Procedure <b>GEIS QCP # 500 Rev 15</b>				
Type of Check	Initial <input checked="" type="checkbox"/>	Plate Edge <input type="checkbox"/>	In Process <input type="checkbox"/>	Back Gouge <input type="checkbox"/>	Root Pass <input type="checkbox"/>	Repair <input type="checkbox"/>	12 Hour <input type="checkbox"/>	24 Hour <input type="checkbox"/>	Final <input type="checkbox"/>
Type of Inspection	<input type="checkbox"/> Longitudinal		<input type="checkbox"/> Coil		<input type="checkbox"/> DC Probe		<input checked="" type="checkbox"/> Continuous		Other:
	<input checked="" type="checkbox"/> Wet		<input type="checkbox"/> Dry		<input type="checkbox"/> Direct Contact		<input checked="" type="checkbox"/> Residual		
	<input type="checkbox"/> Circular		<input type="checkbox"/> AC Prod		<input checked="" type="checkbox"/> Yoke		<input type="checkbox"/> Other		
MT Yoke & Model - Serial No. / Blacklight Model - Serial No. <b>Magnaflux Y-6 - S# 2101 / Spectroline BIB150PX - S# 1597251</b>					Surface Preparation Method <b>Abrasive Blasting (Walnut Shells) - NACE 2 Finish</b>				
Inspection Medium / Color / Batch No. <b>Magnaglo 14A / Flourescent Green / 11F30K</b>					Demagnetization Method / Equipment <b>N/A</b>				
Reference: Summary				See Attachment				Results of Inspection	
<b>The following areas were requested to be inspected:</b> Bare pipe: 3.50" to 9.50" from original U/S ditch start. Indications LIN-1 Thru 19 were remediated by ARB by buffing.							19 linear indications found.		
							No relevant indications@time of inspection		
<b>Summary:</b>									
Please see MT, UT and photo report for additional details on indications (UT = depths, MT for locations and length)									
Copy To: Pacific Gas & Electric Company GE Inspection Services (Los Angeles)				Requested By: <b>Redacted</b> / <b>Mark Cabral</b>			Reported By (Technician): <b>Redacted</b>		
				<input checked="" type="checkbox"/> Customer Specifications <input type="checkbox"/> Accept <input type="checkbox"/> Reject			NDT supervisor: <b>Redacted</b>		

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GE Energy  
INSPECTION SERVICES

<b>MT Results (Measurements)</b>		<input type="checkbox"/> Nuclear	<input checked="" type="checkbox"/> Non-Nuclear
To: <b>Pacific Gas &amp; Electric Company</b>		From: <input type="text" value="Redacted"/>	Date: <b>11/9/2011</b>
Project: <b>T30_L132_Leak_MP-15.0029</b>			
PG&E Purchase Order No: <b>41497351</b>		GEIS Job No: <b>LAPI0015</b>	
Location	<input type="text" value="Redacted"/>	System	<b>L-132</b>
Acceptance Standards	<b>Customer Specifications</b>	Procedure	<b>GEIS QCP # 500 Rev 15</b>
LIN-01 AXD: 4.23 ft, Clock 12:35, Axial Length: 2.500 in, Circ. W: 0.800 in			
LIN-02 AXD: 4.78 ft, Clock 3:34, Axial Length: 0.050 in, Circ. W: 0.700 in			
LIN-03 AXD: 5.20 ft, Clock 3:03, Axial Length: 2.000 in, Circ. W: 0.500 in			
LIN-04 AXD: 5.52 ft, Clock 3:14, Axial Length: 1.000 in, Circ. W: 0.400 in			
LIN-05 AXD: 6.03 ft, Clock 4:10, Axial Length: 1.200 in, Circ. W: 0.100 in			
LIN-06 AXD: 6.87 ft, Clock 3:08, Axial Length: 1.300 in, Circ. W: 0.020 in			
LIN-07 AXD: 7.95 ft, Clock 1:13, Axial Length: 1.300 in, Circ. W: 0.500 in			
LIN-08 AXD: 3.15 ft, Clock 1:59, Axial Length: 10.200 in, Circ. W: 3.000 in			
LIN-09 AXD: 4.45 ft, Clock 11:52, Axial Length: 2.700 in, Circ. W: 1.000 in			
LIN-10 AXD: 4.49 ft, Clock 11:02, Axial Length: 1.000 in, Circ. W: 0.300 in			
LIN-11 AXD: 4.98 ft, Clock 10:15, Axial Length: 0.700 in, Circ. W: 0.300 in			
LIN-12 AXD: 6.54 ft, Clock 10:38, Axial Length: 1.500 in, Circ. W: 0.200 in			
LIN-13 AXD: 7.17 ft, Clock 10:48, Axial Length: 0.800 in, Circ. W: 0.100 in			
LIN-14 AXD: 7.38 ft, Clock 9:25, Axial Length: 1.700 in, Circ. W: 0.400 in			
LIN-15 AXD: 7.50 ft, Clock 10:43, Axial Length: 6.000 in, Circ. W: 2.000 in			
LIN-16 AXD: 8.03 ft, Clock 10:38, Axial Length: 0.300 in, Circ. W: 0.100 in			
LIN-17 AXD: 8.38 ft, Clock 10:57, Axial Length: 2.000 in, Circ. W: 0.300 in			
LIN-18 AXD: 7.38 ft, Clock 7:56, Axial Length: 0.200 in, Circ. W: 0.050 in			
LIN-19 AXD: 8.15 ft, Clock 7:51, Axial Length: 1.400 in, Circ. W: 1.000 in			
<b>NOTE:</b>			
LIN-01 Thru 19 were remediated by ARB by buffing. Removal was verified with MT. See UT report for information on final wall-thicknesses.			
**Please see attached UT and photo report for additional information.			
Copy To: <i>Pacific Gas &amp; Electric Company</i> <i>GE Inspection Services (Los Angeles)</i>		Requested By: <input type="text" value="Redacted"/> <b>Mark Cabral</b>	Reported By (Technician): <input type="text" value="Redacted"/>
		<input checked="" type="checkbox"/> Customer Specifications <input type="checkbox"/> Accept <input type="checkbox"/> Reject	NDT supervisor: <input type="text" value="Redacted"/>

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**GE Energy**  
**Inspection & Life Extension Services**

<b>ULTRASONIC EXAMINATION REPORT</b> <input type="checkbox"/> <input checked="" type="checkbox"/>						Nuclear	Non-Nuclear	
To: <b>Pacific Gas &amp; Electric Company</b>				From: <input type="text" value="Redacted"/>	Date: <b>11/9/2011</b>			
Project: <b>T30_L132_Leak_MP-15.0029</b>								
PG&E Purchase Order No: <b>41497351</b>				GEIS Job No: <b>LAPI0015</b>				
<b>Item</b>	Weld <input checked="" type="checkbox"/>	Structural <input type="checkbox"/>	Casting <input type="checkbox"/>	Machinery <input type="checkbox"/>	Mach. Parts <input type="checkbox"/>	Pipe <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>	Other:
	Non-Weld <input checked="" type="checkbox"/>	Plate <input type="checkbox"/>	Pipe <input type="checkbox"/>	Bar <input type="checkbox"/>	Casting <input type="checkbox"/>	Mach. Parts <input type="checkbox"/>	N/A <input type="checkbox"/>	Other:
<b>Material</b>	Size: <b>30"</b>	No. of Pieces: <b>1</b>	Type of Base Metal: <b>Carbon Steel</b>	Type of Filler Material: <b>C/S</b>		Weld: <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> Smooth <input checked="" type="checkbox"/> As Welded		
<b>Location</b>	<input type="text" value="Redacted"/>			System: <b>L-132</b>				
<b>Acceptance Standards</b>	<b>Customer Specifications</b>			Procedure: <b>QCP-601</b>				
<b>Type of Inspection</b>	Soundness <input checked="" type="checkbox"/>	Thickness <input checked="" type="checkbox"/>	Bond <input type="checkbox"/>	<b>Transducer</b>			Transducer Serial No.: 561320	
	Pulse Echo <input type="checkbox"/>	Angle-Beam <input type="checkbox"/>	Other <input type="checkbox"/>	<input type="checkbox"/> Single Crystal	<input checked="" type="checkbox"/> Dual Crystal	<b>Couplant / Batch #</b> Sonatest Ultragel II / 25-901 07225 AF		
	<b>UT Equipment/Model</b> Panametrics 36DL plus Serial # 982000403 Calibration Date: 10/10/2011 Calibration Due: 1/09/2012			Frequency: 5 MHz	Size: 0.312"			Angle: 0°
				<input checked="" type="checkbox"/> Flat	<input type="checkbox"/> Concave	<input type="checkbox"/> Convex		
				Standard	Material	Notch Depth	Serial No.:	
<input checked="" type="checkbox"/> Step Wedge				<input type="checkbox"/> Tube Wedge	Material: C/S	Thickness Range: 0.100" to 0.500"	Serial No.: A-111	
<b>Reference: Summary</b>				See Attachment		<b>Results of Inspection:</b>		
<b>The following areas were requested to be inspected:</b> Baseline readings & final grinding pass readings for LIN-04-11 12" lamination scans at cut-line locations.  ** Please see attached reports for additional information.				- No relevant indications at time of inspection.				
				- No relevant indications at time of inspection.				
Copy To: Pacific Gas & Electric Company GE Inspection Services (Los Angeles)				Requested By: <input type="text" value="Redacted"/> <b>Mark Cabral</b>		Reported By (Technician): <input type="text" value="Redacted"/>		
				<input checked="" type="checkbox"/> Customer Specifications <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Reject		NDT Supervisor: <input type="text" value="Redacted"/>		

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GE Energy  
INSPECTION SERVICES

<b>MT Results (Measurements)</b>		<input type="checkbox"/> Nuclear	<input checked="" type="checkbox"/> Non-Nuclear
To: <b>Pacific Gas &amp; Electric Company</b>		From: <b>Redacted</b>	Date: <b>10/9/2011</b>
Project: <b>T30_L132_Leak_MP-15.0029</b>			
PG&E Purchase Order No: <b>41497351</b>		GEIS Job No: <b>LAPI0015</b>	
Location	<b>Redacted</b>	System	<b>L-132</b>
Acceptance Standards	<b>Customer Specifications</b>	Procedure	<b>QCP-601</b>
UT readings for baseline & final grinding pass on LIN-04: Max metal loss was 0.011" (Baseline = 0.275" - Final =0.264")			
UT readings for baseline & final grinding pass on LIN-05: Max metal loss was 0.017" (Baseline = 0.285" - Final =0.268")			
UT readings for baseline & final grinding pass on LIN-06: Max metal loss was 0.006" (Baseline = 0.285" - Final =0.279")			
UT readings for baseline & final grinding pass on LIN-07: Max metal loss was 0.023" (Baseline = 0.274" - Final =0.251")			
UT readings for baseline & final grinding pass on LIN-08: Max metal loss was 0.013" (Baseline = 0.276" - Final =0.263")			
UT readings for baseline & final grinding pass on LIN-09: Max metal loss was 0.014" (Baseline = 0.277" - Final =0.263")			
UT readings for baseline & final grinding pass on LIN-10: Max metal loss was 0.020" (Baseline = 0.284" - Final =0.264")			
UT readings for baseline & final grinding pass on LIN-11: Max metal loss was 0.020" (Baseline = 0.284" - Final =0.264")			
<b>NOTE:</b>			
LIN-04 to 11 were remediated by buffing and removal was verified with MT. LIN-01, 02, and 03 were covered by the B-Sleeve.			
**Please see attached MT and photo report for additional information.			
Copy To: <i>Pacific Gas &amp; Electric Company</i> <i>GE Inspection Services (Los Angeles)</i>		Requested By: <b>Redacted</b> / <b>Mark Cabral</b>	Reported By (Technician): <b>Redacted</b>
		<input checked="" type="checkbox"/> Customer Specifications <input type="checkbox"/> Accept <input type="checkbox"/> Reject	NDT supervisor: <b>Redacted</b>

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GE Energy  
INSPECTION SERVICES

<b>MT Results (Measurements)</b>		<input type="checkbox"/> Nuclear	<input checked="" type="checkbox"/> Non-Nuclear
To: <b>Pacific Gas &amp; Electric Company</b>		From: <b>Redacted</b>	Date: <b>11/9/2011</b>
Project: <b>T30_L132_Leak_MP-15.0029</b>			
PG&E Purchase Order No: <b>41497351</b>		GEIS Job No: <b>LAPI0015</b>	
Location	<b>Redacted</b>	System	<b>L-132</b>
Acceptance Standards	<b>Customer Specifications</b>	Procedure	<b>QCP-601</b>
UT readings for baseline & final grinding pass on LIN-01: Max metal loss was 0.014" (Baseline = 0.294" - Final =0.282")			
UT readings for baseline & final grinding pass on LIN-02: Max metal loss was 0.020" (Baseline = 0.287" - Final =0.268")			
UT readings for baseline & final grinding pass on LIN-03: Max metal loss was 0.019" (Baseline = 0.293" - Final =0.278")			
UT readings for baseline & final grinding pass on LIN-04: Max metal loss was 0.024" (Baseline = 0.296" - Final =0.274")			
UT readings for baseline & final grinding pass on LIN-05: Max metal loss was 0.016" (Baseline = 0.285" - Final =0.268")			
UT readings for baseline & final grinding pass on LIN-06: Max metal loss was 0.015" (Baseline = 0.283" - Final =0.268")			
UT readings for baseline & final grinding pass on LIN-07: Max metal loss was 0.022" (Baseline = 0.287" - Final =0.266")			
UT readings for baseline & final grinding pass on LIN-08: Max metal loss was 0.008" (Baseline = 0.280" - Final =0.276")			
UT readings for baseline & final grinding pass on LIN-09: Max metal loss was 0.021" (Baseline = 0.290" - Final =0.275")			
UT readings for baseline & final grinding pass on LIN-10: Max metal loss was 0.017" (Baseline = 0.294" - Final =0.282")			
UT readings for baseline & final grinding pass on LIN-11: Max metal loss was 0.020" (Baseline = 0.284" - Final =0.268")			
UT readings for baseline & final grinding pass on LIN-12: Max metal loss was 0.023" (Baseline = 0.286" - Final =0.264")			
UT readings for baseline & final grinding pass on LIN-13: Max metal loss was 0.017" (Baseline = 0.286" - Final =0.272")			
UT readings for baseline & final grinding pass on LIN-14: Max metal loss was 0.018" (Baseline = 0.286" - Final =0.270")			
UT readings for baseline & final grinding pass on LIN-15: Max metal loss was 0.016" (Baseline = 0.277" - Final =0.263")			
UT readings for baseline & final grinding pass on LIN-16: Max metal loss was 0.012" (Baseline = 0.282" - Final =0.271")			
UT readings for baseline & final grinding pass on LIN-17: Max metal loss was 0.019" (Baseline = 0.283" - Final =0.267")			
UT readings for baseline & final grinding pass on LIN-18: Max metal loss was 0.014" (Baseline = 0.286" - Final =0.275")			
UT readings for baseline & final grinding pass on LIN-19: Max metal loss was 0.016" (Baseline = 0.284" - Final =0.270")			
<b>NOTE:</b>			
LIN-01 thru 19 were remediated by ARB by buffing.			
**Please see attached MT and photo report for additional information.			
Copy To: Pacific Gas & Electric Company GE Inspection Services (Los Angeles)		Requested By: <b>Redacted</b> / <b>Mark Cabral</b> <input checked="" type="checkbox"/> Customer Specifications <input type="checkbox"/> Accept <input type="checkbox"/> Reject	Reported By (Technician): <b>Redacted</b> NDT supervisor: <b>Redacted</b>

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GE Energy  
INSPECTION & LIFE EXTENSION SERVICES

MICROBIOLOGICAL INFLUENCED CORROSION EXAMINATION REPORT							<input type="checkbox"/> Nuclear	<input checked="" type="checkbox"/> Non-Nuclear
To: <b>Pacific Gas &amp; Electric Company</b>				From: Redacted		Date: <b>11/8/2011</b>		
Project: <b>T30_L132_Leak_MP-15.0029</b>								
PG&E Purchase Order No: <b>41497351</b>				GEIS Job No: <b>LAPI0015</b>				
Location Redacted		System <b>L-132</b>						
Acceptance Standards		Customer Specifications			Procedure <b>GEIS QCP # 1908 Rev 1</b>			
Sample #	Sample Description	pH	Carbonate (CO <sub>3</sub> <sup>-</sup> ) Bubbles = (+) for CO <sub>3</sub> <sup>-</sup> No Bubbles = (-) for CO <sub>3</sub> <sup>-</sup>	Sulfide (S <sup>-</sup> ) Black/ Brown color = (+) for S <sup>-</sup>	Ferrous Iron (Fe <sup>+2</sup> ) Ferrozine Reaction: Purple color = (+) for Fe <sup>+2</sup>	Ferric Iron (Fe <sup>+3</sup> ) Reducing Solution: Purple Color = (+) for Fe <sup>+3</sup>	Calcium (Ca) Red color = (+) for Ca Blue color = (-) for Ca	
1	Downstream Cross section	6.5	Positive	Negative	Negative	Positive	Positive	
2	DEP-01_AXD= 10.60'	6.0	Positive	Negative	Positive	Positive	Positive	
3								
4								
5								
6								
Copy To: Pacific Gas & Electric Company GE Inspection Services (Los Angeles)				Requested By: Redacted / Mark Cabral		Reported By (Technician): Redacted		
				<input type="checkbox"/> Customer Specifications <input type="checkbox"/> Accept <input type="checkbox"/> Reject		NDT supervisor: Redacted		

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Overview of coating being removed to find leak



Close up of removed coating to find leak



Overview of coating being removed to find leak



Close up of removed coating to find leak





Close up of leak



Close up of leak



Close up of leak



Close up of pipe stenciling



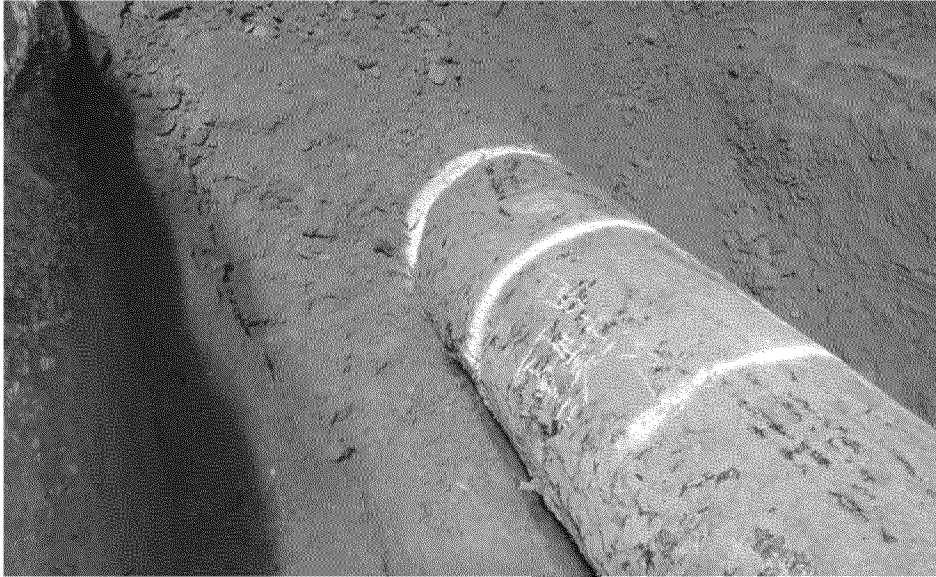




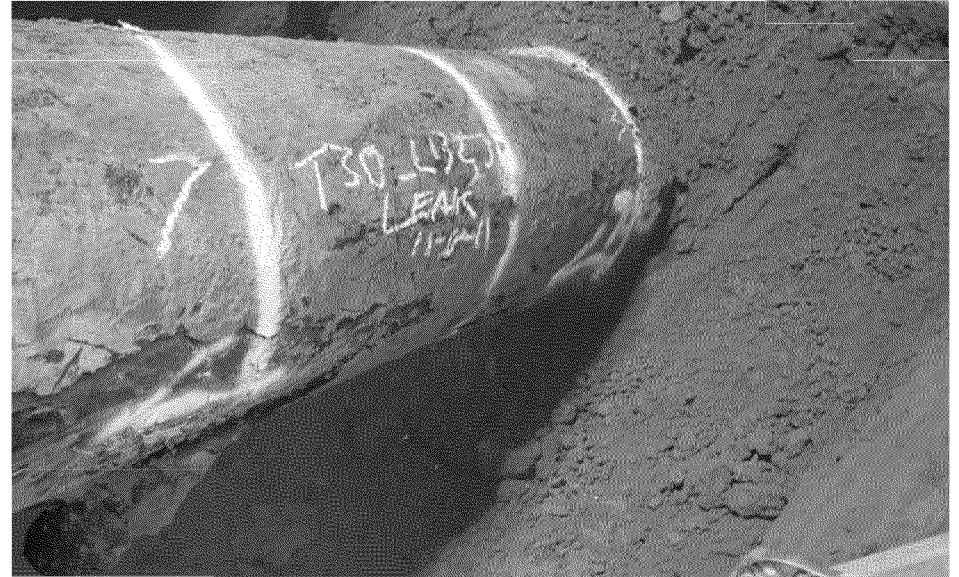
Overview of soil stratification



Overview of soil stratification



Overview of coating condition 3.00ft to 8.00ft, 3:00 position

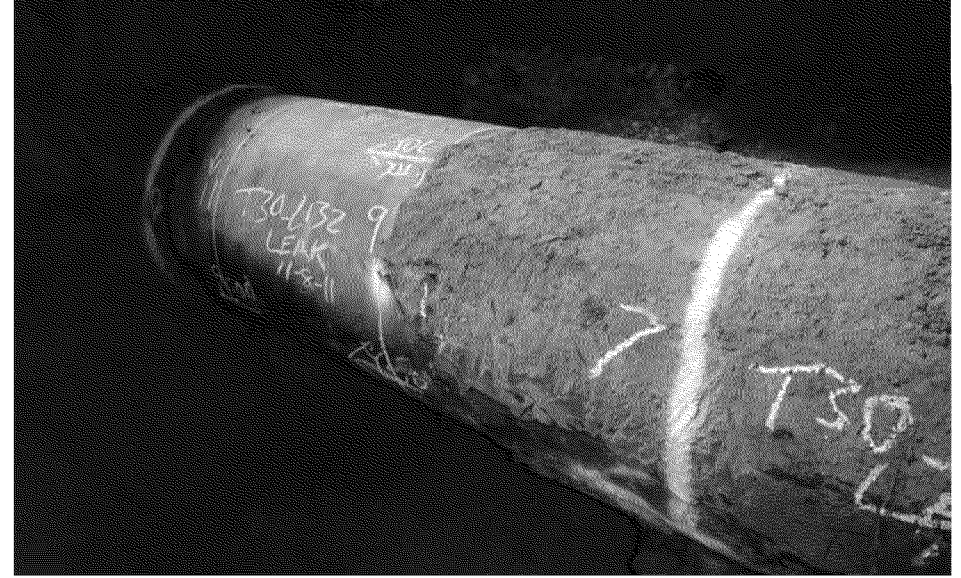


Overview of coating condition 3.00ft to 8.00ft, 9:00 position

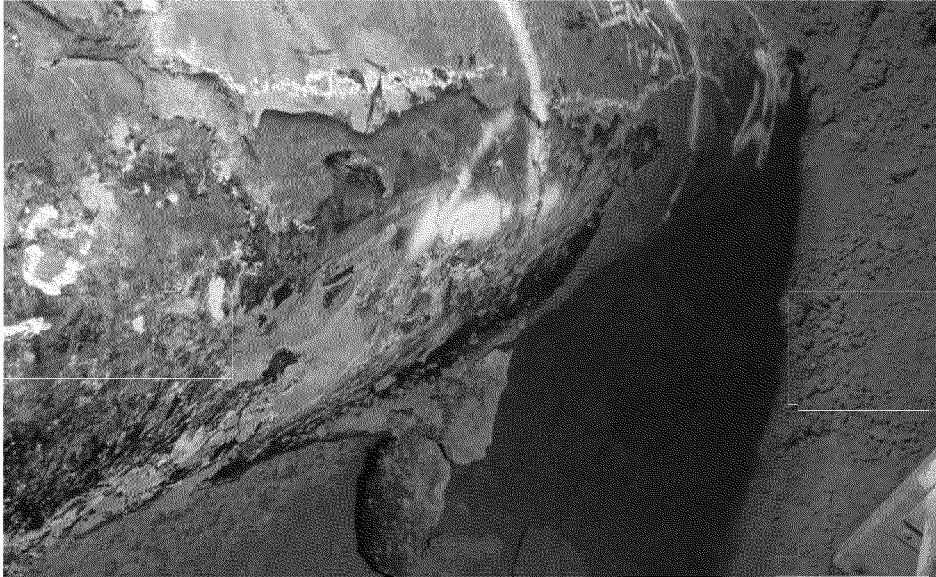




Overview of coating condition 8.00ft to 13.00ft, 3:00 position



Overview of coating condition 8.00ft to 13.00ft, 9:00 position



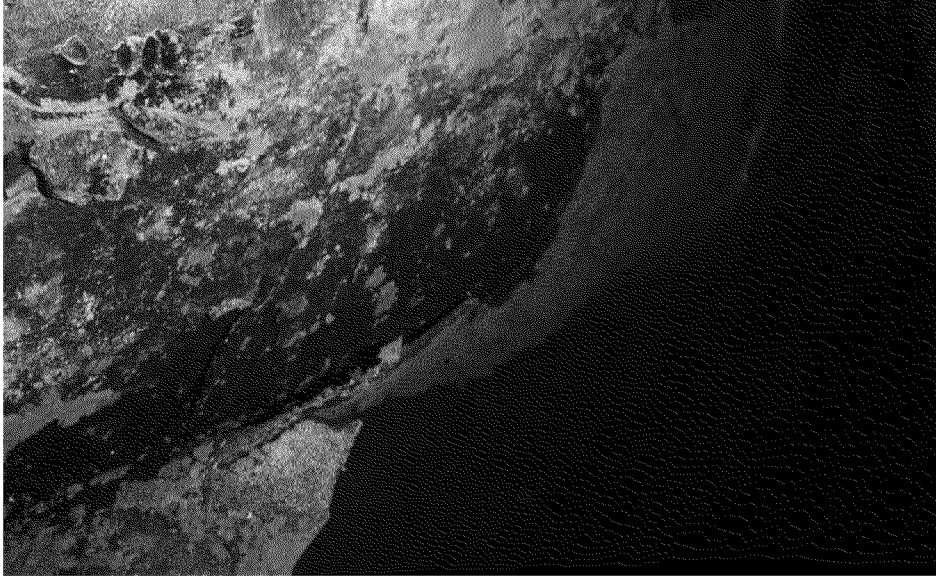
Close up of DIS-01 and coating removed to find leak



Close up of DIS-01 and coating removed to find leak







Close up of DIS-01 and coating removed to find leak



Close up of DIS-01 and coating removed to find leak

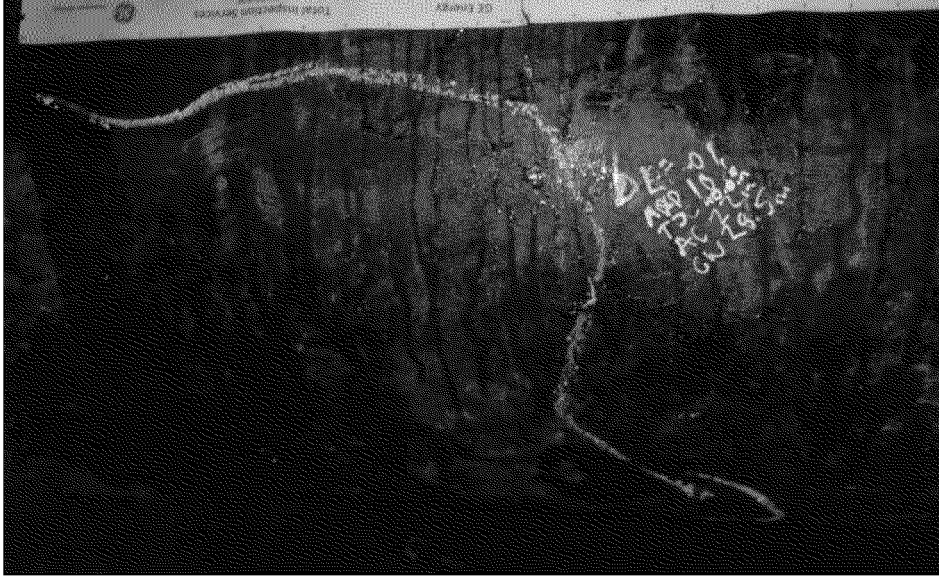


Overview of deposits layout 3.50ft to 12.35ft, 3:00 position



Overview of deposits layout 3.50ft to 12.35ft, 9:00 position

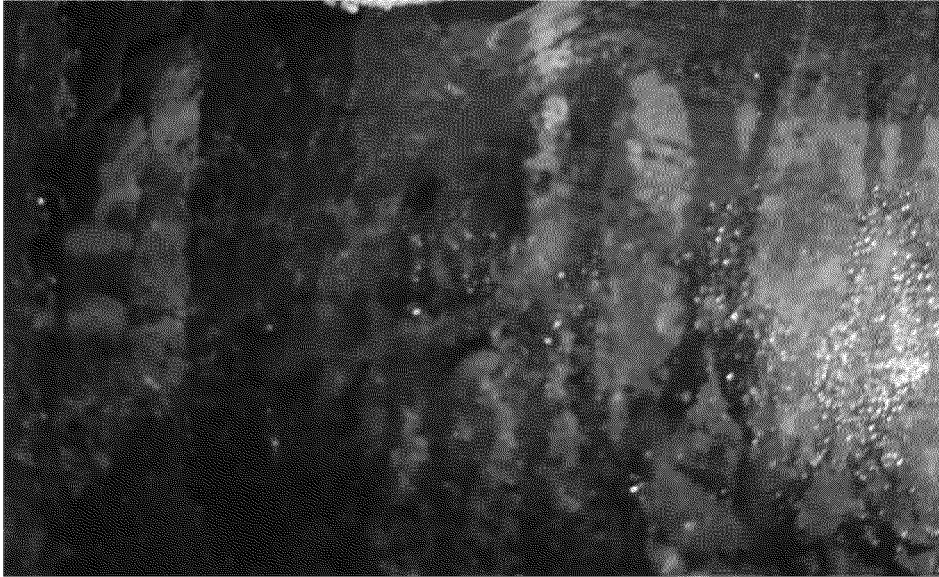




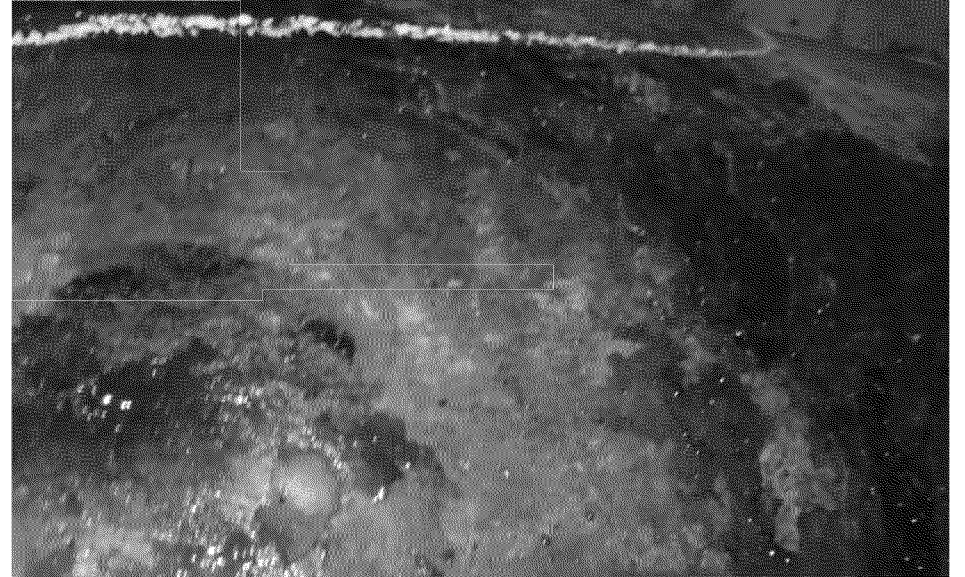
Overview (with measurements) of DEP-01



Close up of DEP-01



Close up of DEP-01



Close up of DEP-01







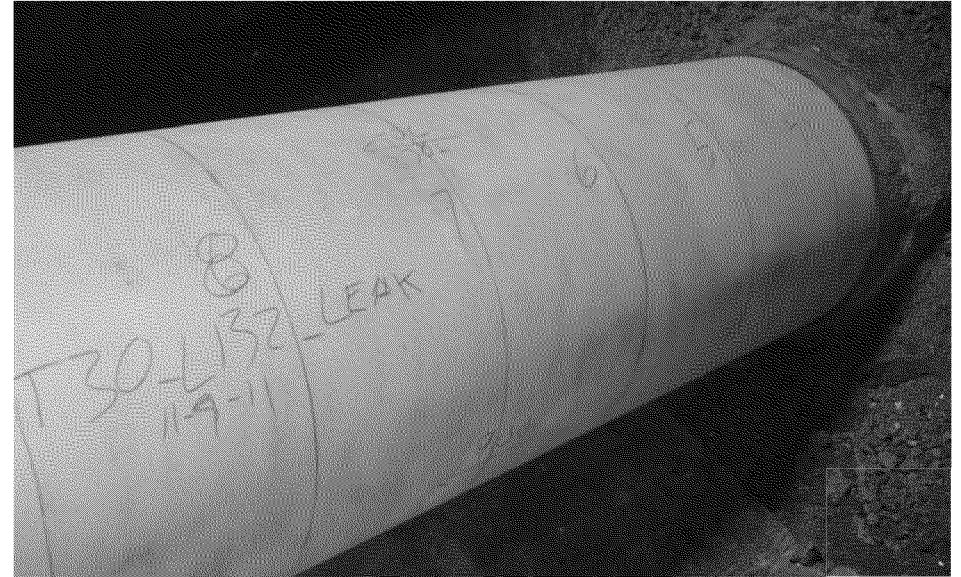
Close up of DEP-01



Pipe pH

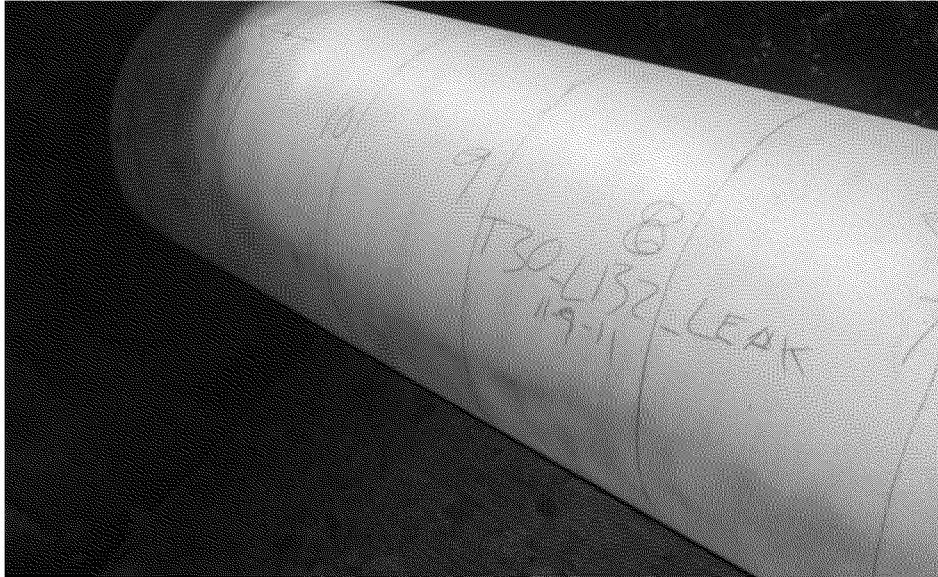


Overview of MPI layout 3.50ft to 8.00ft, 3:00 position



Overview of MPI layout 3.50ft to 8.00ft, 9:00 position

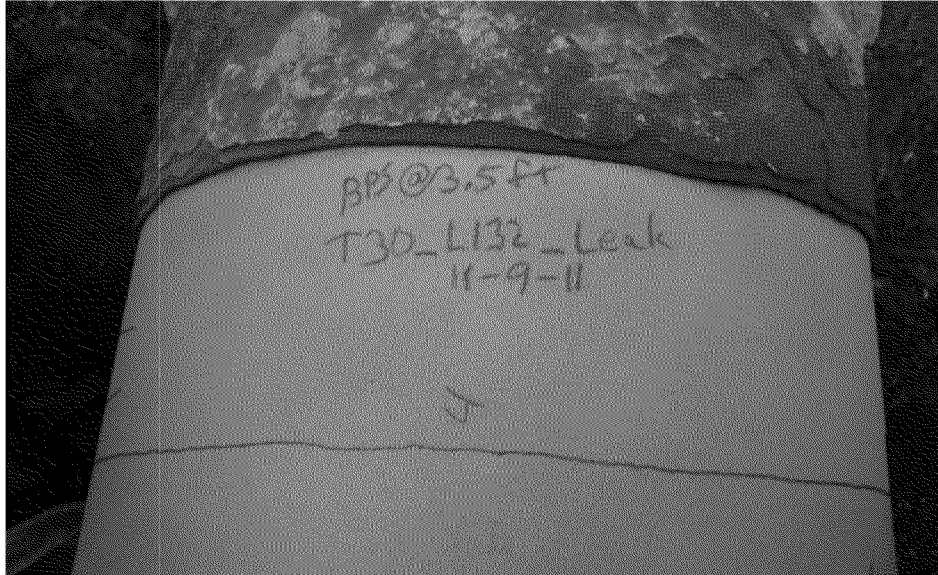




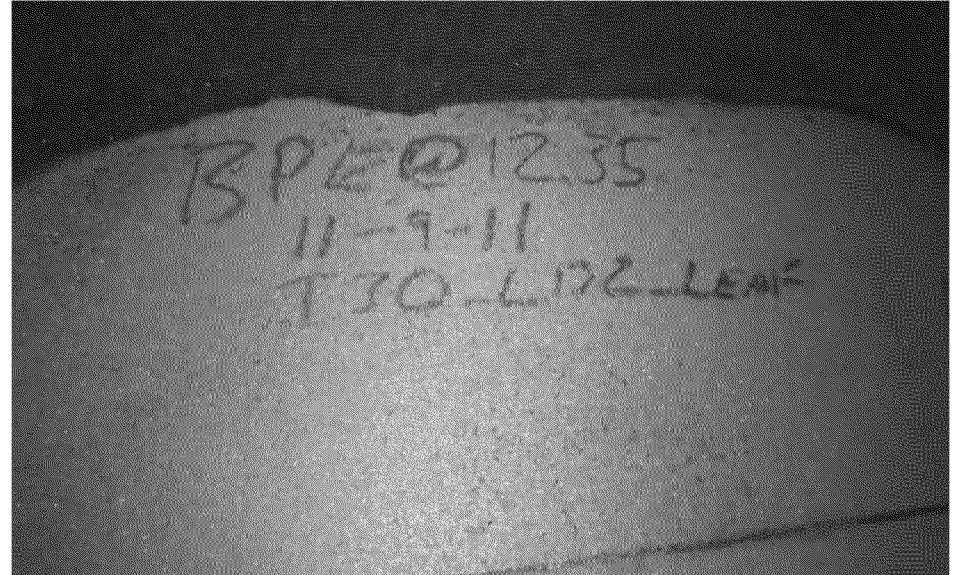
Overview of MPI layout 8.00ft to 12.35ft, 3:00 position



Overview of MPI layout 8.00ft to 12.35ft, 9:00 position



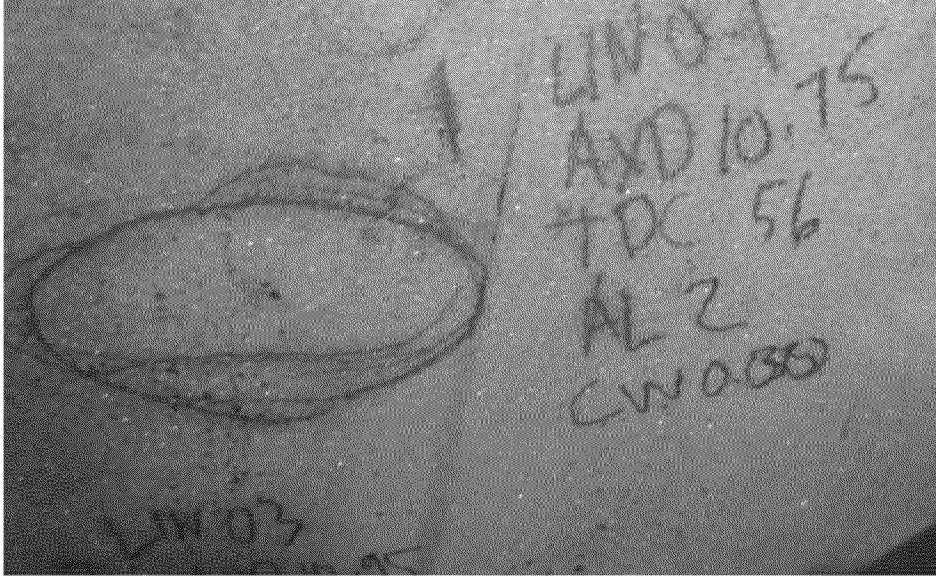
Overview of bare pipe start



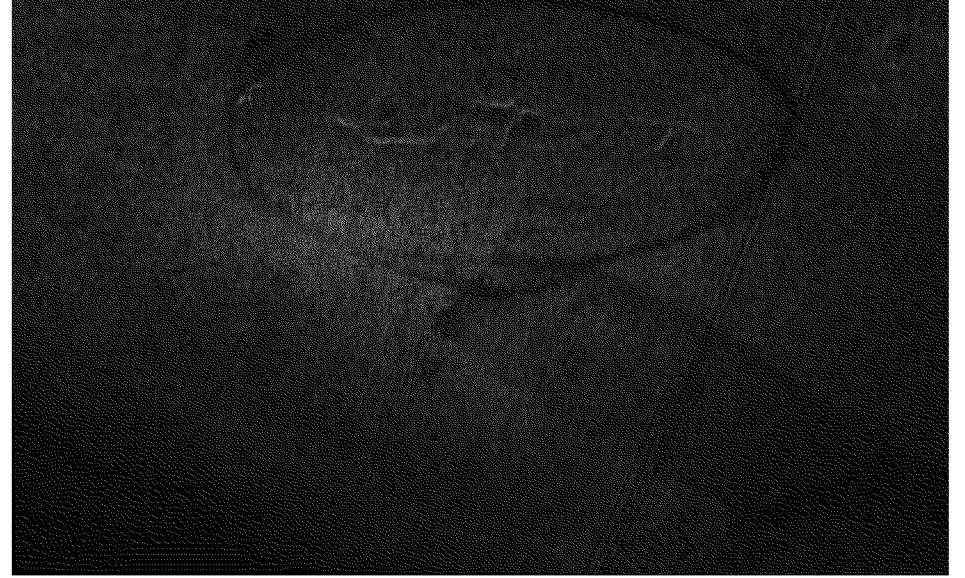
Overview of bare pipe end







Overview of MT Indications of LIN-01



Close up of MT Indications of LIN-01

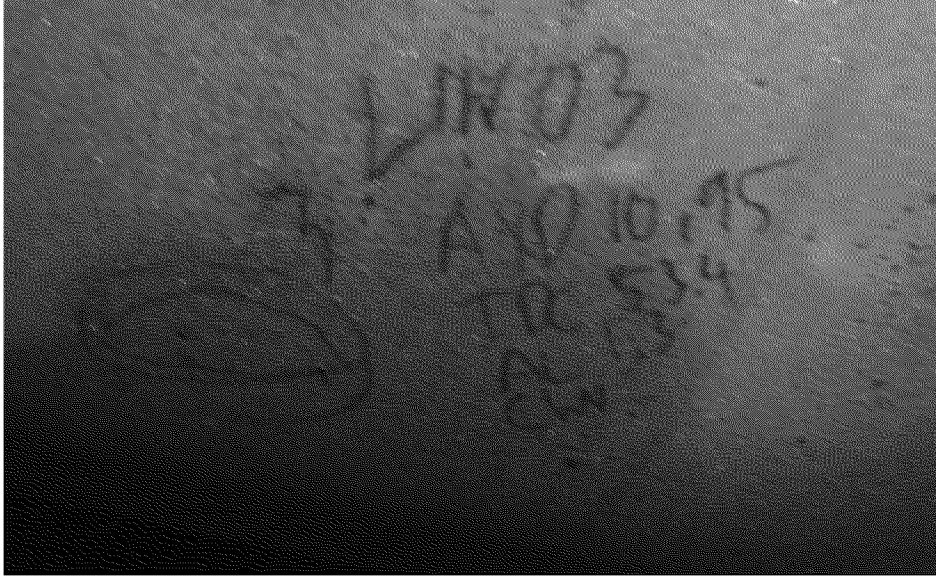


Overview of MT Indications of LIN-02

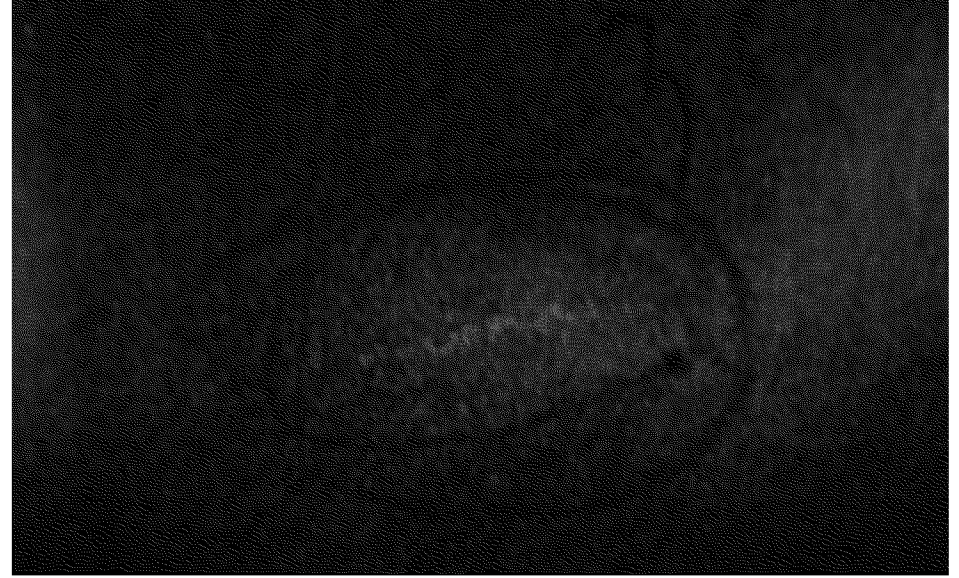


Close up of MT Indications of LIN-02

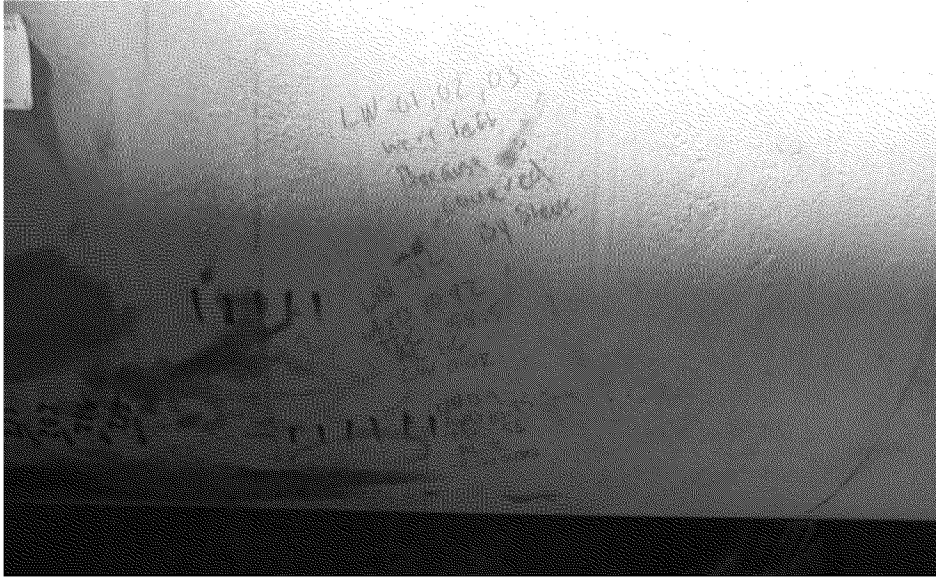




Overview of MT Indications of LIN-03



Close up of MT Indications of LIN-03



Overview of LIN-01, 02 and 03 that were cover by B-Sleeve



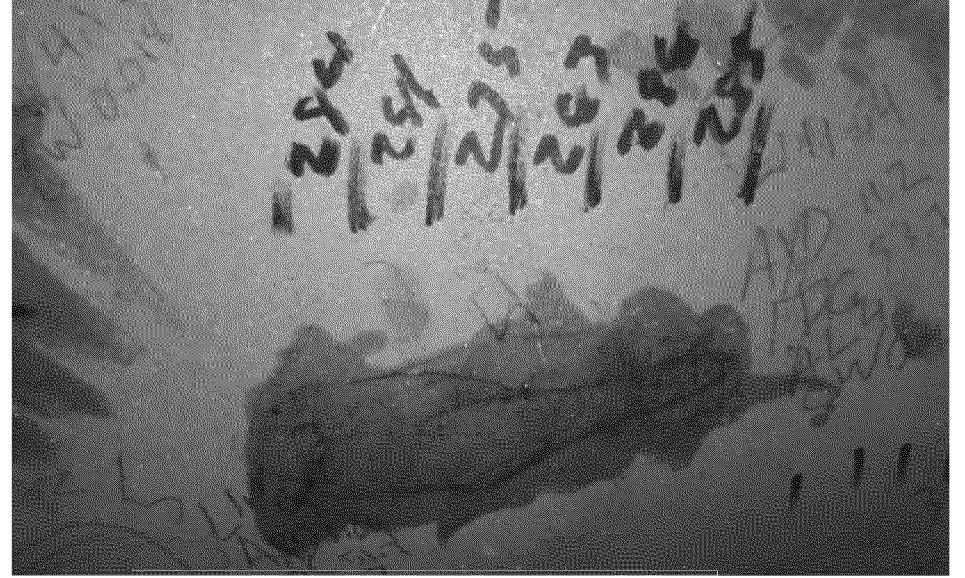
Overview of MT Indications of LIN-04







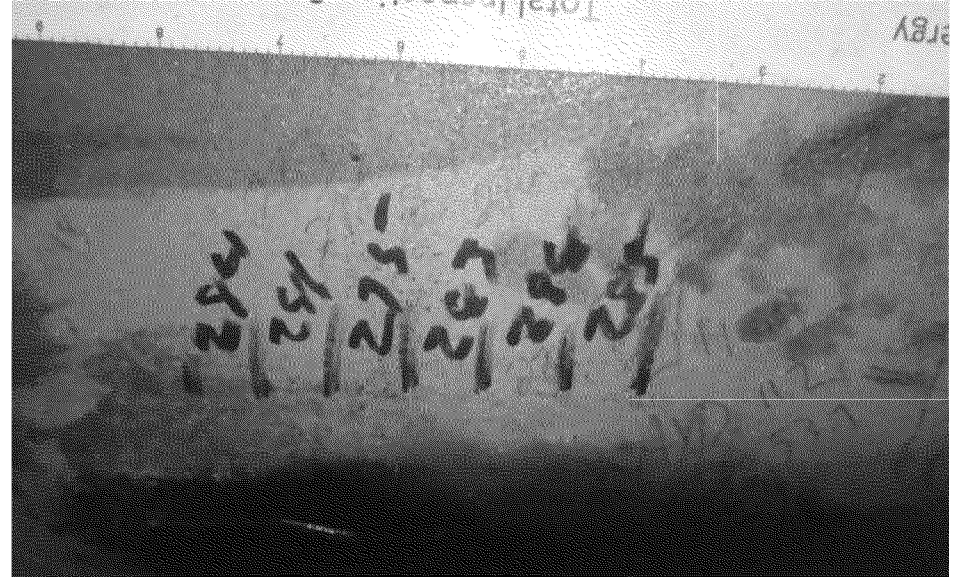
Close up of MT Indications of LIN-04



Overview of pre buff area (RWT) LIN-04



Overview post grind (MPIOK) of LIN-04

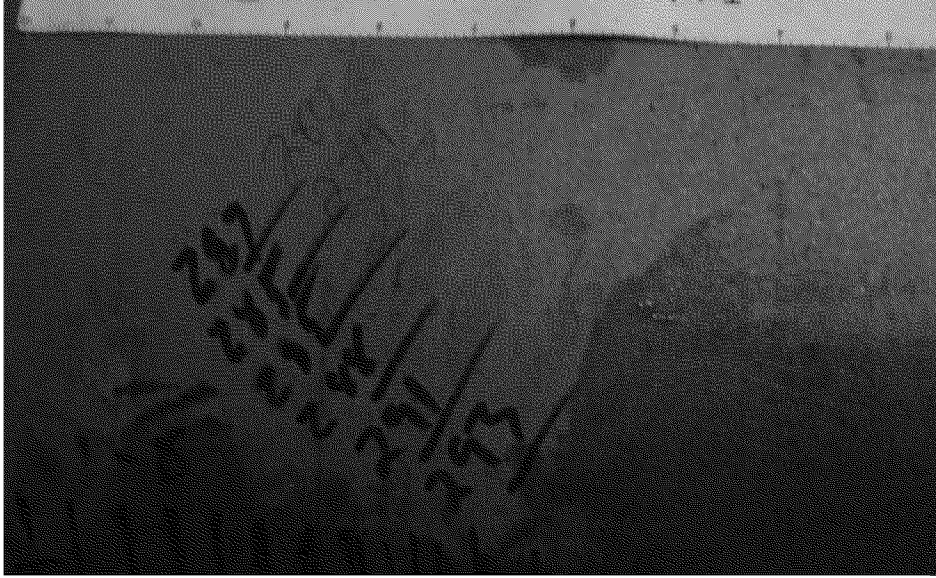


Close up post grind (RWT) of LIN-04

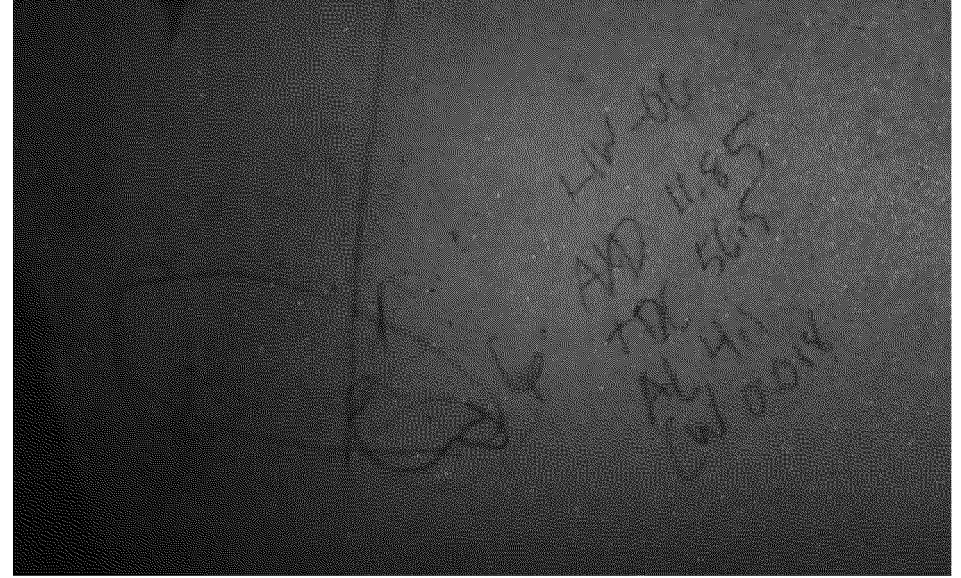








Close up post grind (RWT) of LIN-05



Overview of MT Indications of LIN-06



Close up of MT Indications of LIN-06



Close up post grind (RWT) of LIN-06





Overview post grind (MPIOK) of LIN-06



Overview of pre buff area (RWT) LIN-06



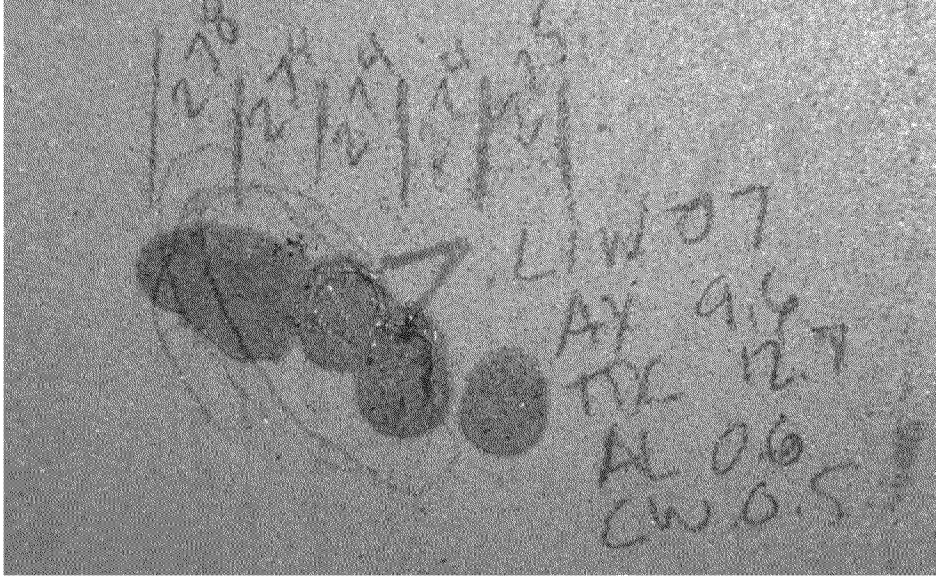
Overview of MT Indications of LIN-07



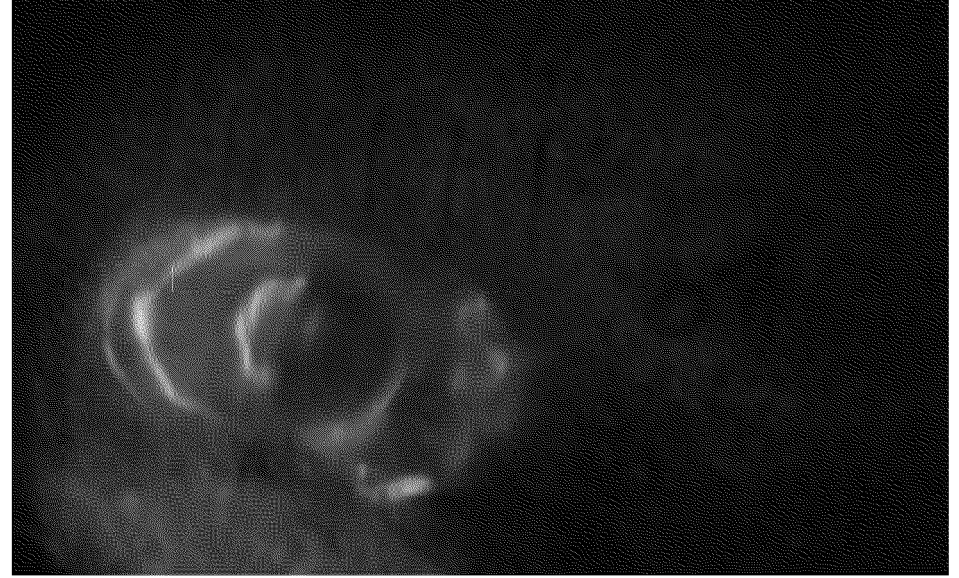
Close up of MT Indications of LIN-07







Close up post grind (RWT) of LIN-07



Overview post grind (MPIOK) of LIN-07



Overview of pre buff area (RWT) LIN-07

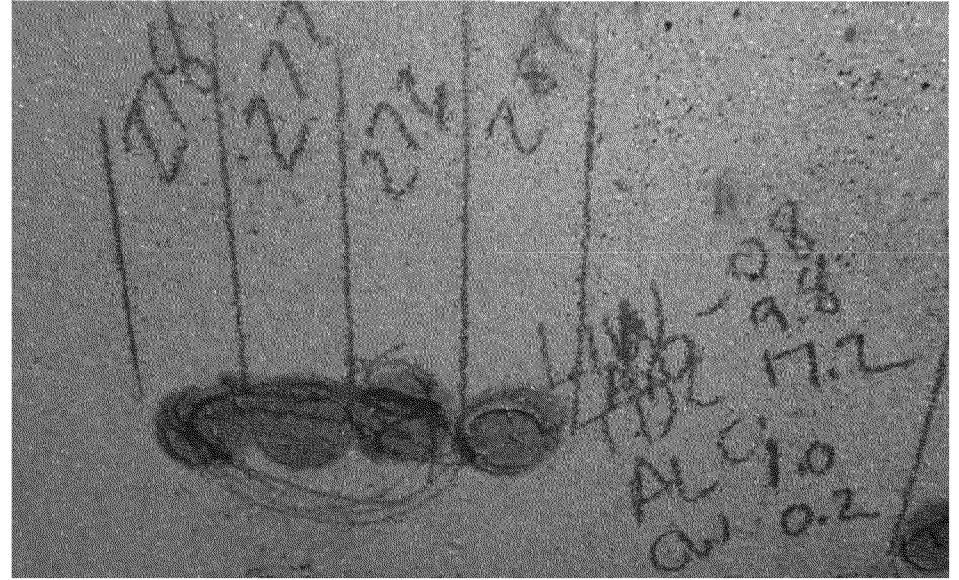


Overview of MT Indications of LIN-08

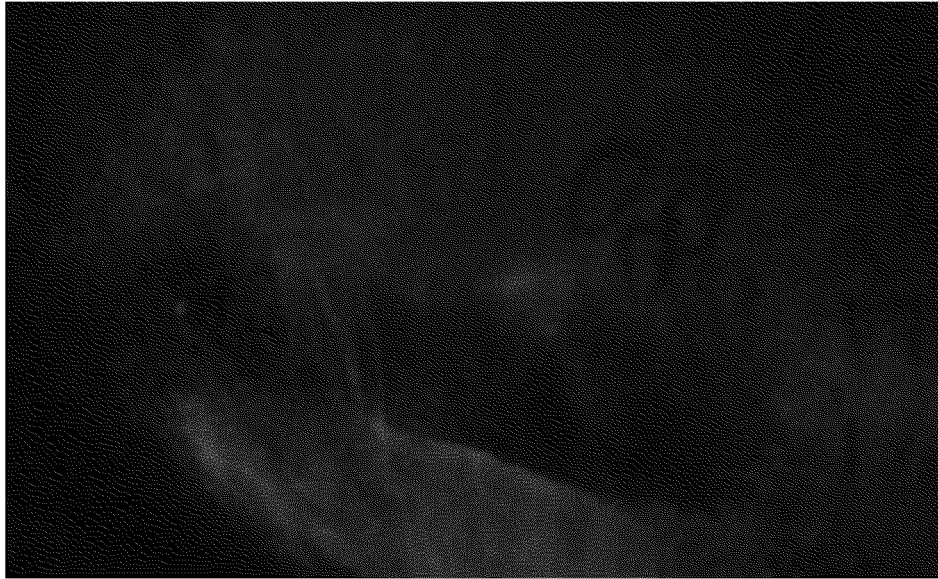




Close up of MT Indications of LIN-08



Overview of pre buff area (RWT) LIN-08



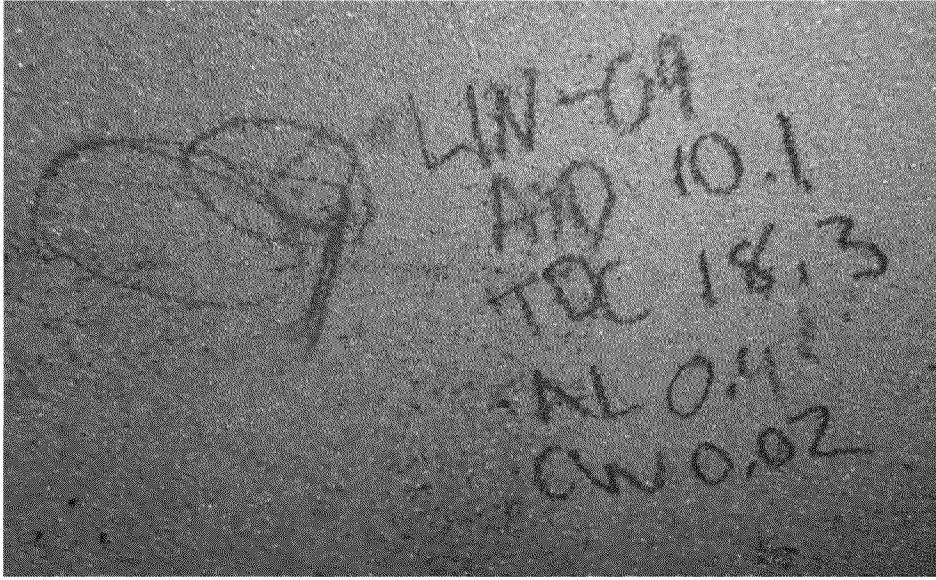
Overview post grind (MPIOK) of LIN-08



Close up post grind (RWT) of LIN-08



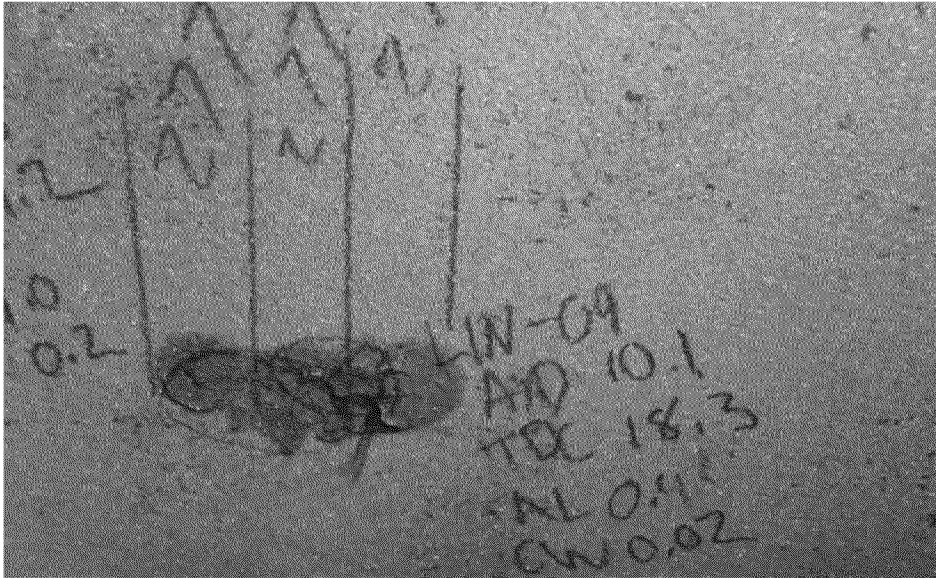




Overview of MT Indications of LIN-09



Close up of MT Indications of LIN-09

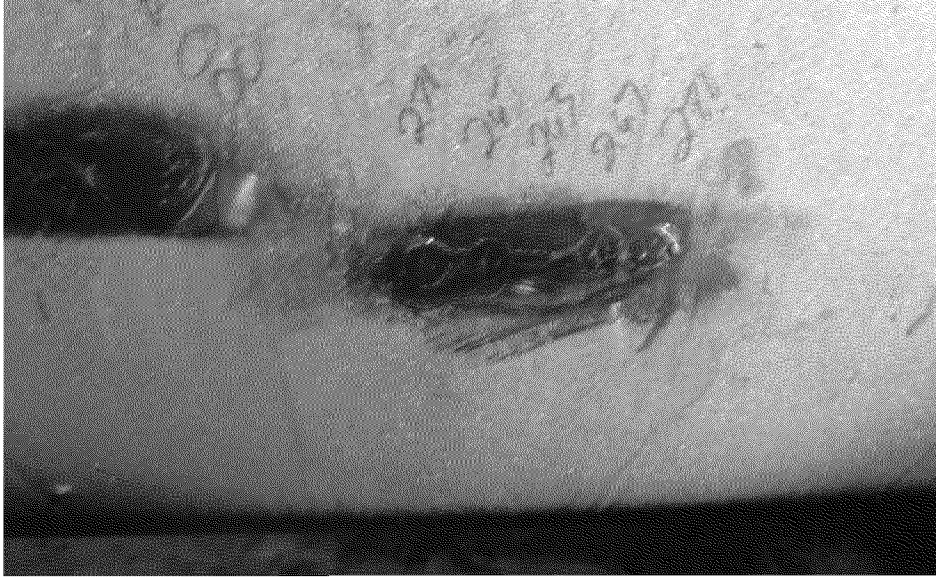


Overview of pre buff area (RWT) LIN-09

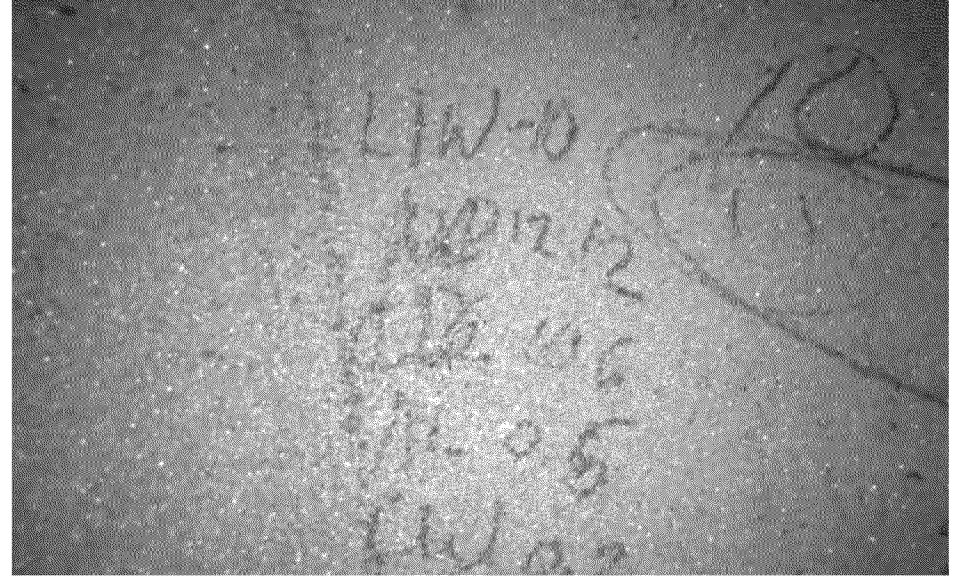


Overview post grind (MPIOK) of LIN-09





Close up post grind (RWT) of LIN-01



Overview of MT Indications of LIN-10



Close up of MT Indications of LIN-10



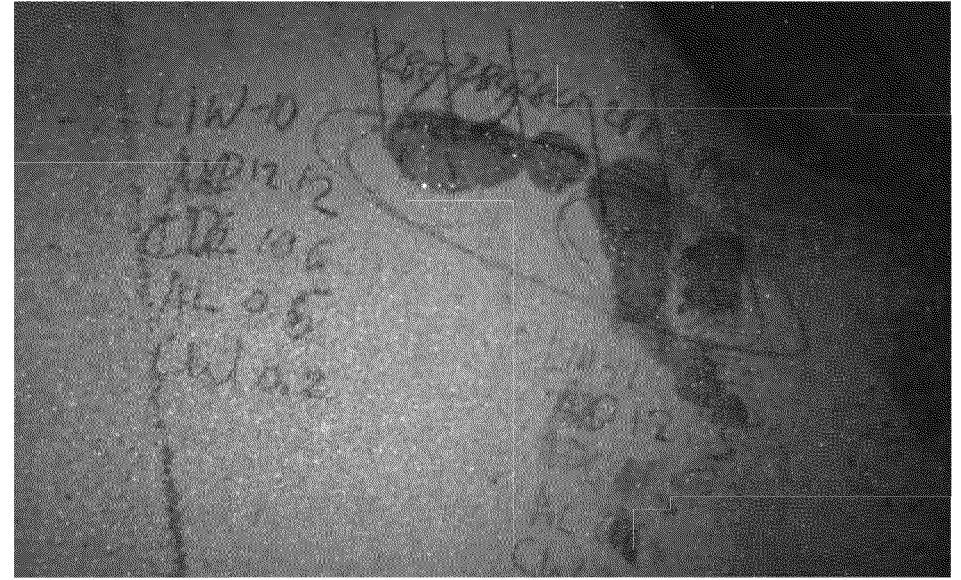
Overview of MT Indications of LIN-11







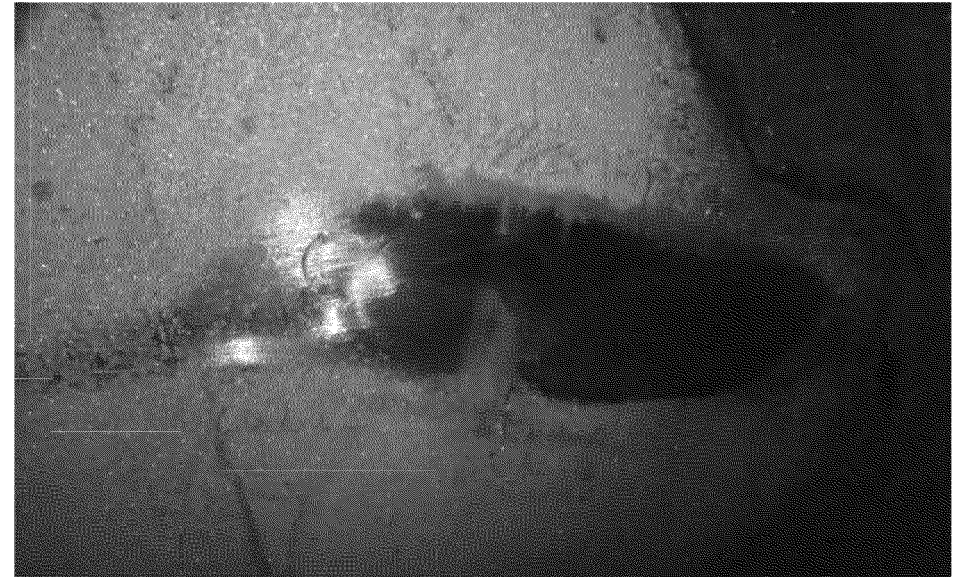
Close up of MT Indications of LIN-11



Overview of pre buff area (RWT) LIN-10 & 11

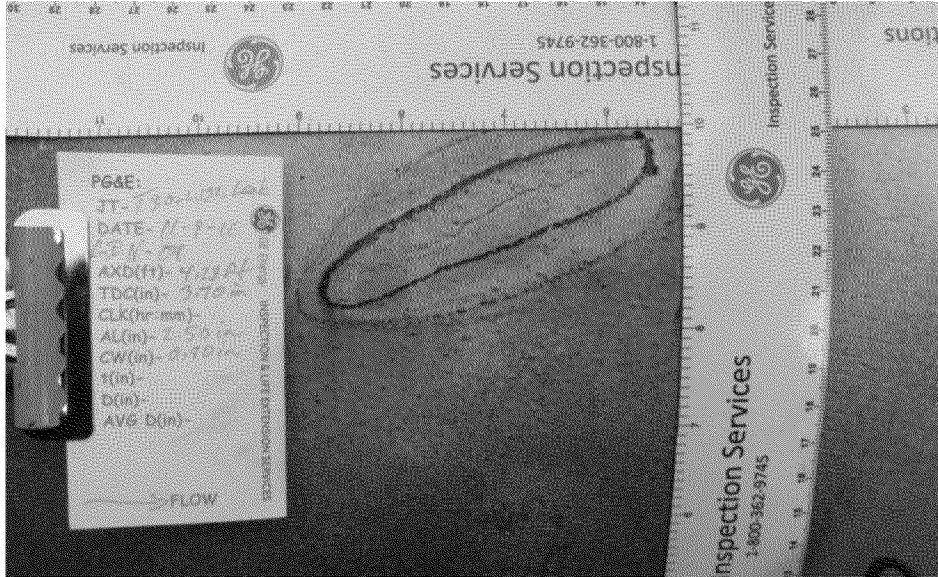


Overview post grind (MPIOK) of LIN-10 & 11

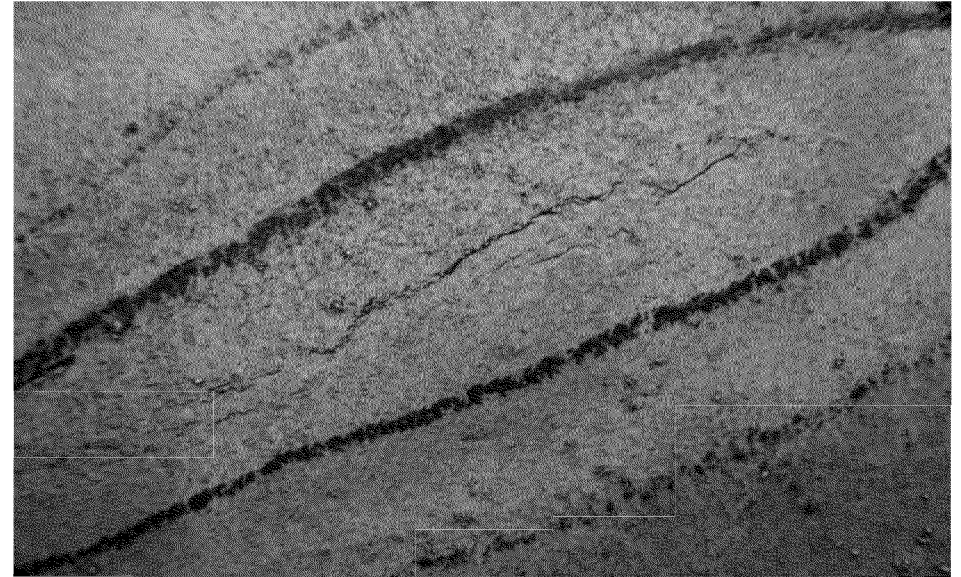


Close up post grind (RWT) of LIN-10 & 11

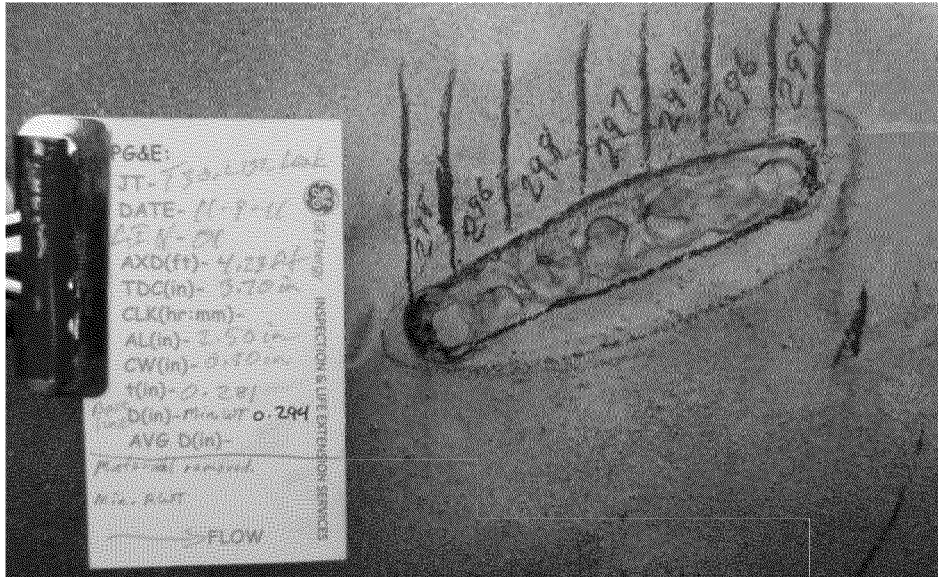




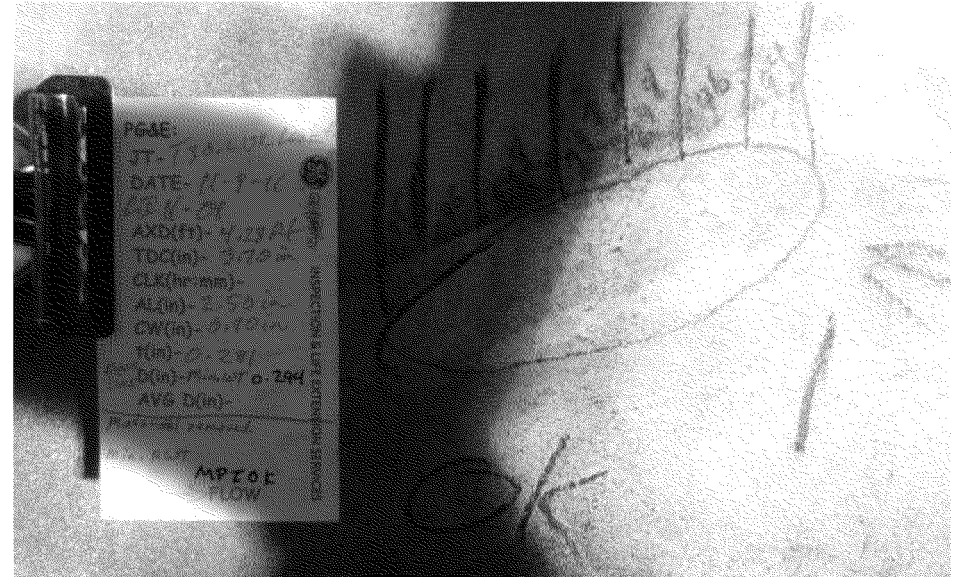
Overview of second inspection MT Indications of LIN-01



Close up of second inspection MT Indications of LIN-01



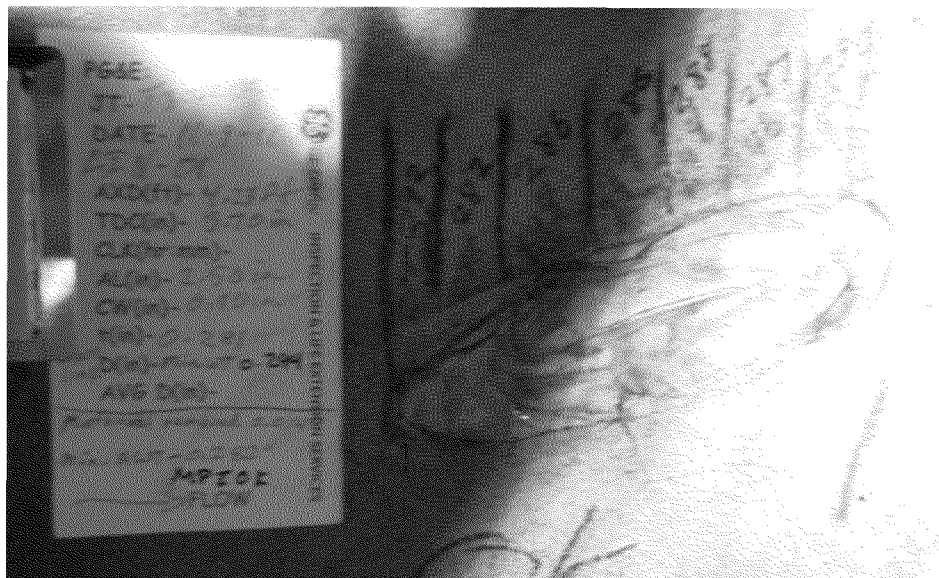
Overview of second inspection pre buff area (RWT) LIN-01



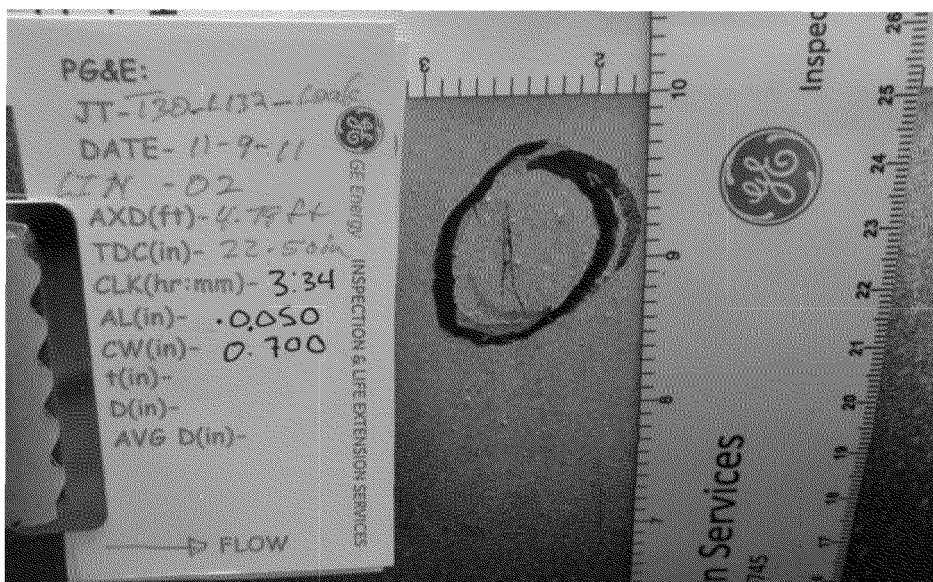
Overview of second inspection post grind (MPIOK) of LIN-01



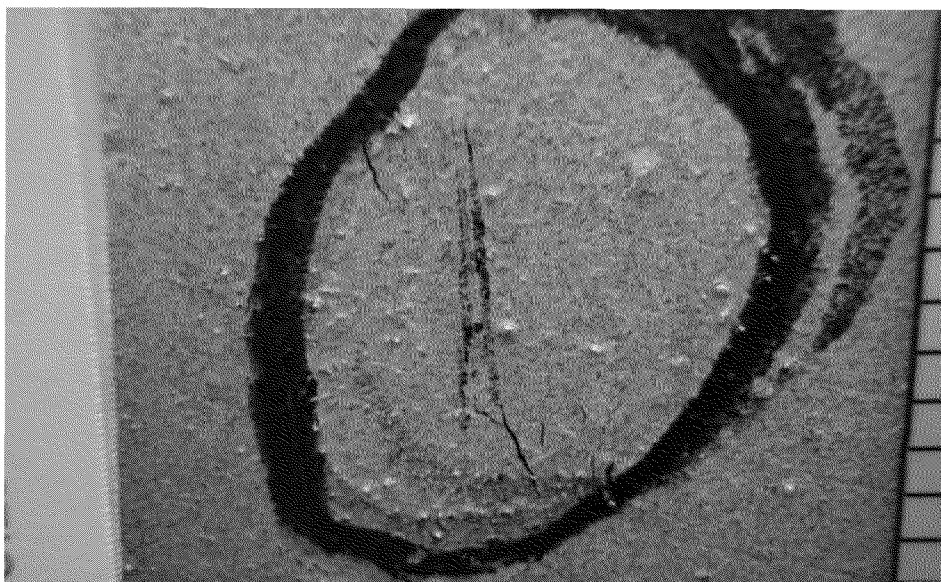




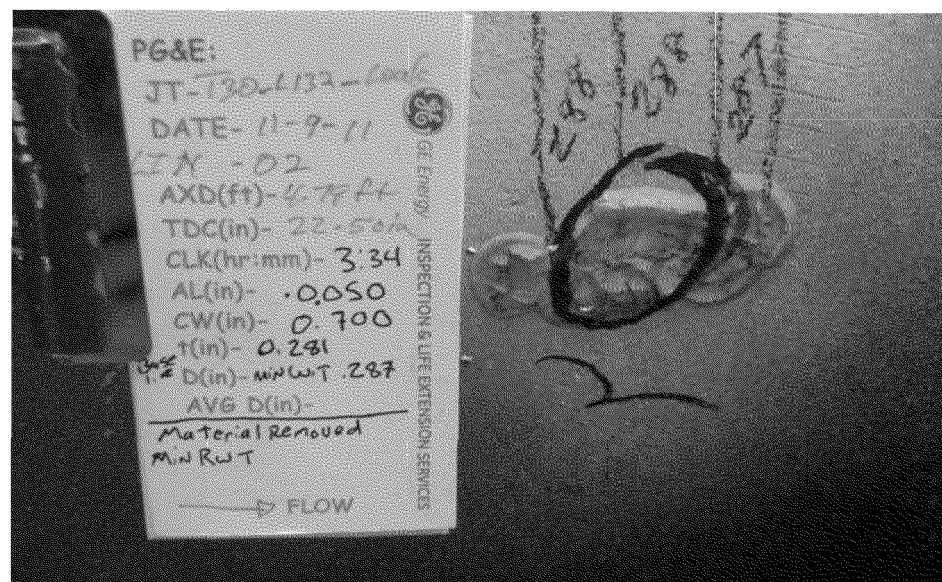
Overview of second inspection post grind (RWT) of LIN-01



Overview of second inspection MT Indications of LIN-02

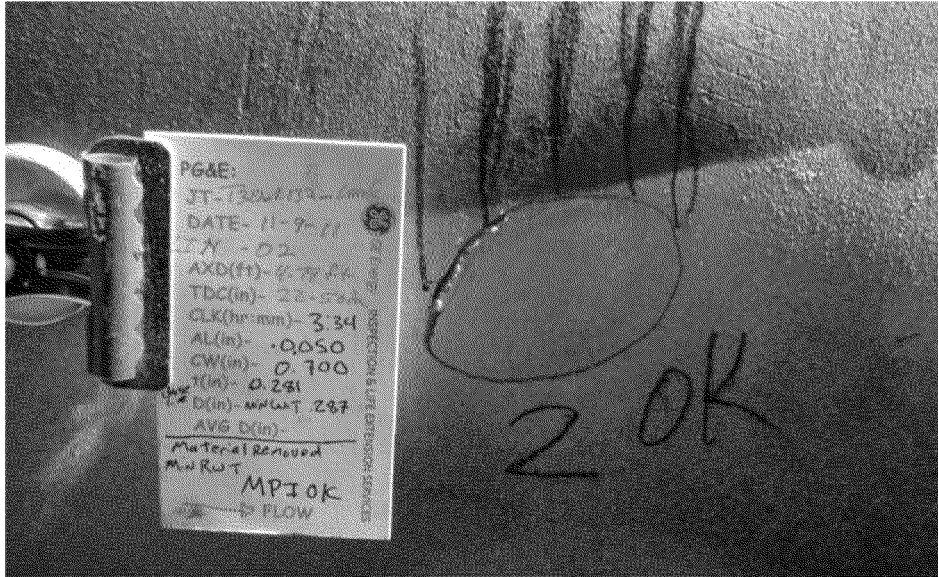


Close up of second inspection MT Indications of LIN-02

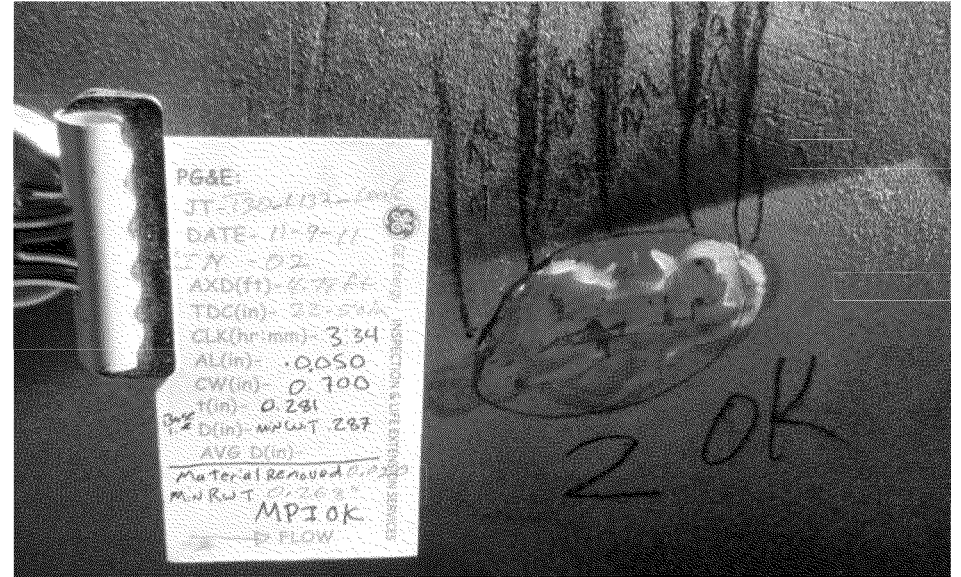


Overview of second inspection pre buff area (RWT) LIN-02

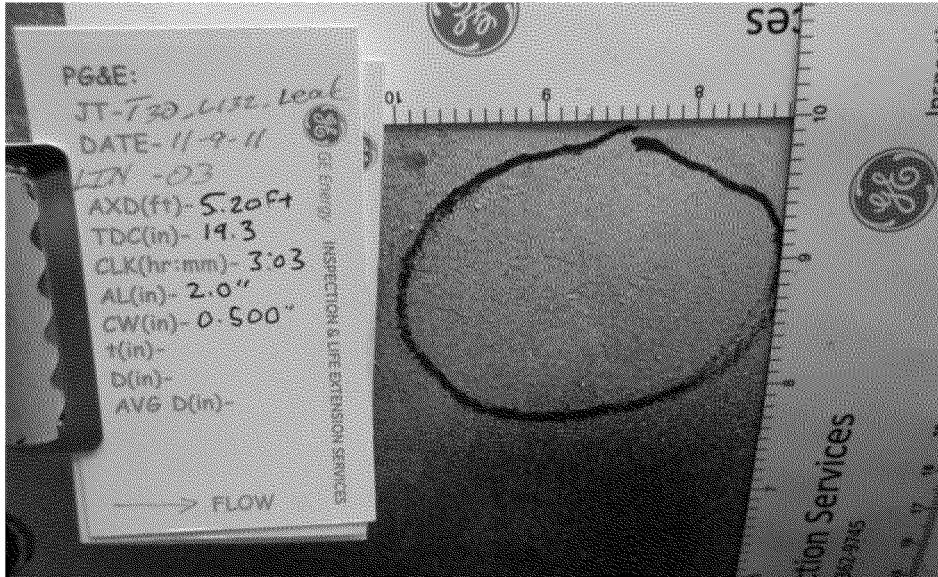




Overview of second inspection post grind (MPIOK) of LIN-02



Overview of second inspection post grind (RWT) of LIN-02



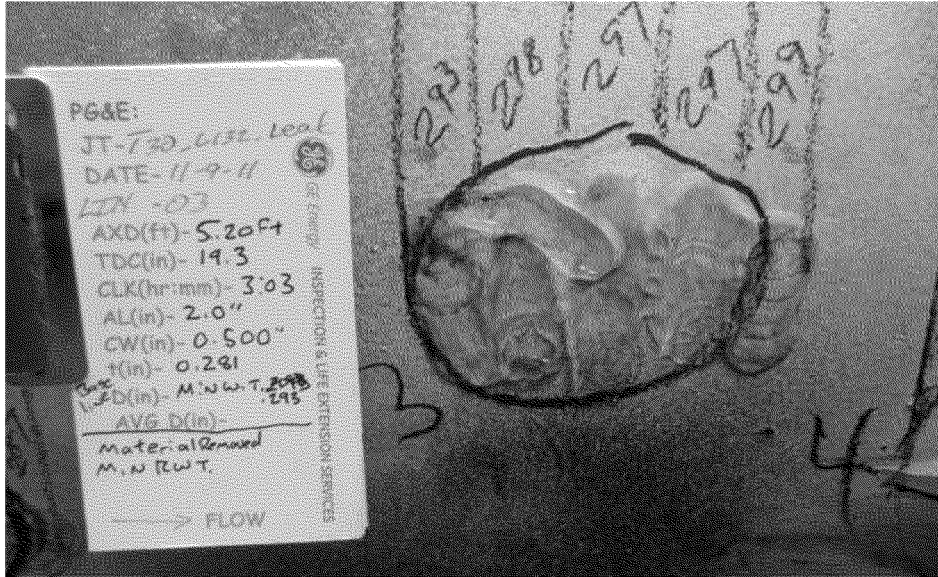
Overview of second inspection MT Indications of LIN-03



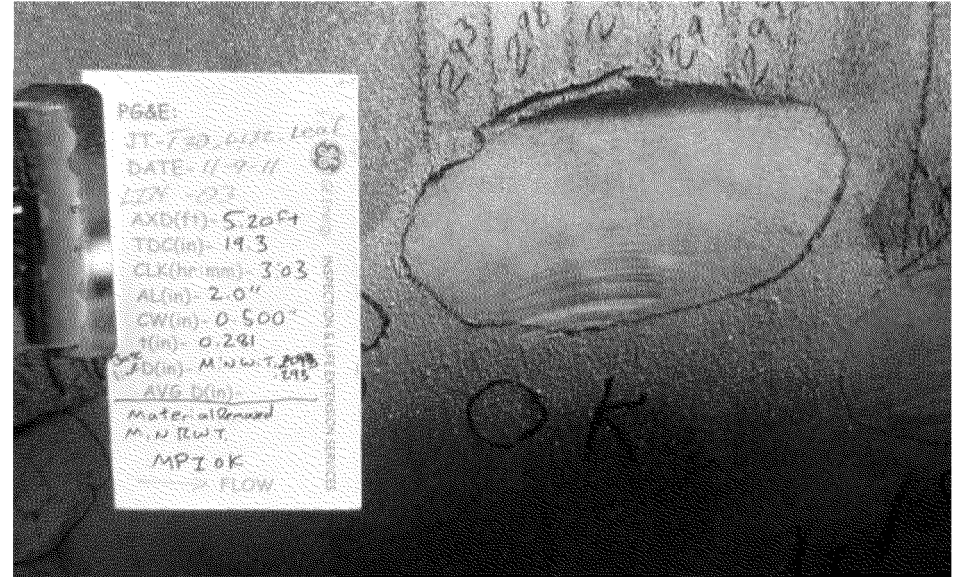
Close up of second inspection MT Indications of LIN-03



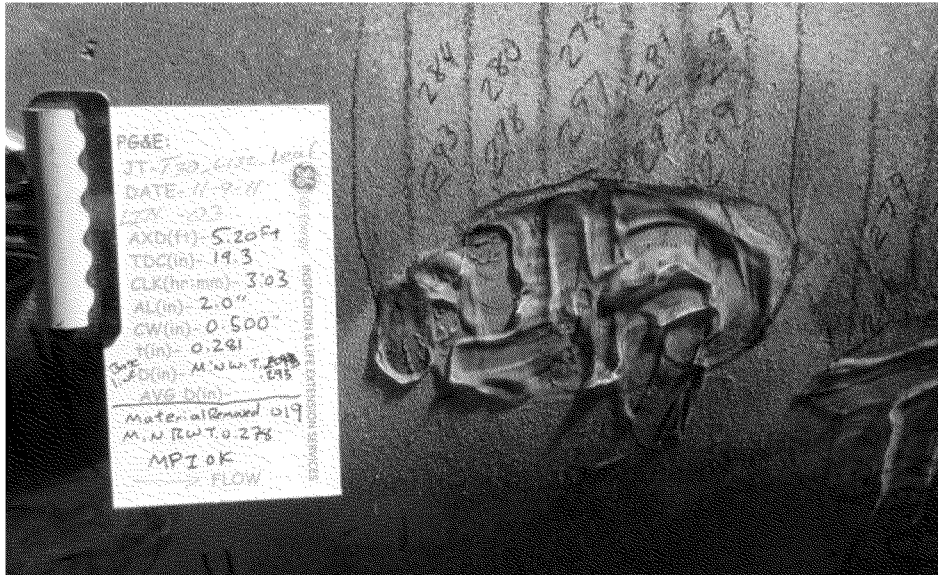




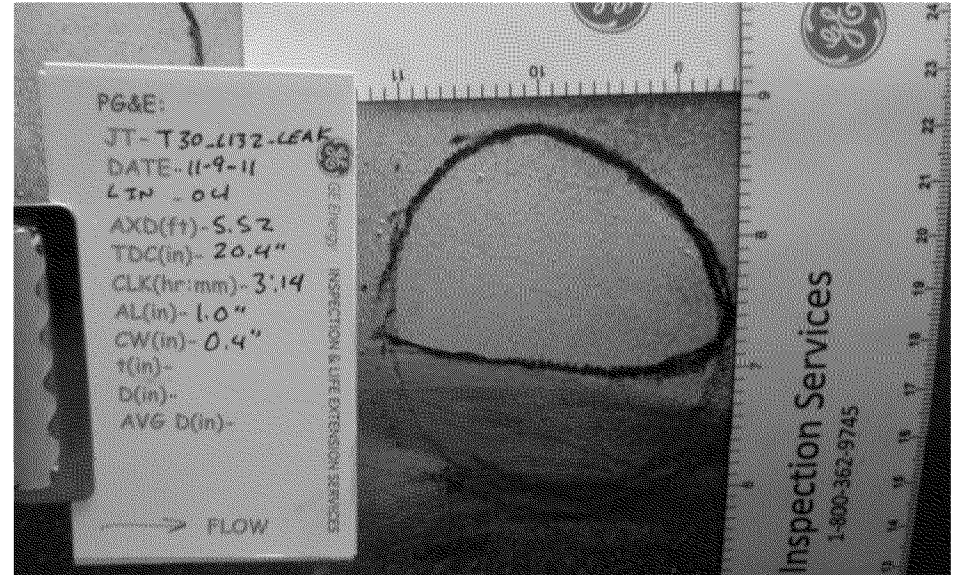
Overview of second inspection pre buff area (RWT) LIN-03



Overview of second inspection post grind (MPIOK) of LIN-03

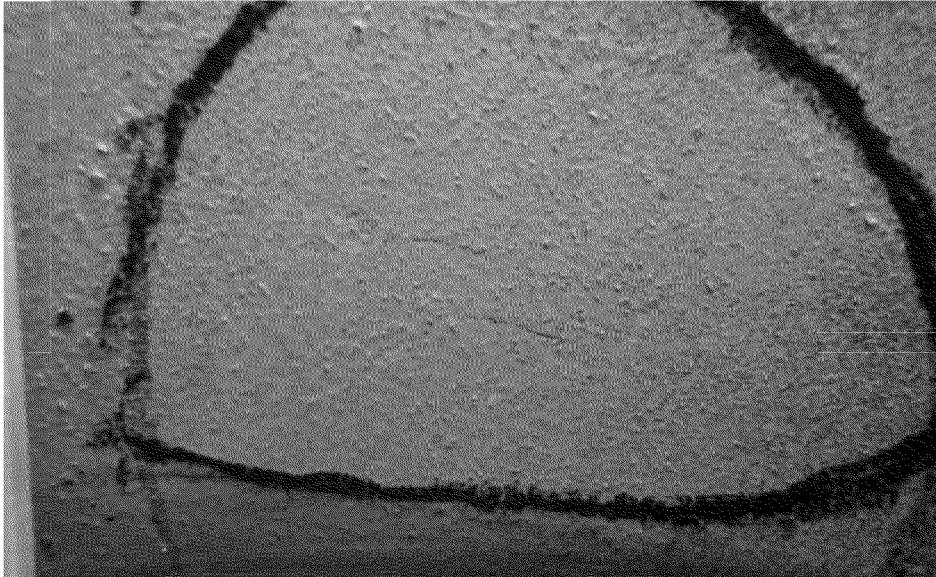


Overview of second inspection post grind (RWT) of LIN-03

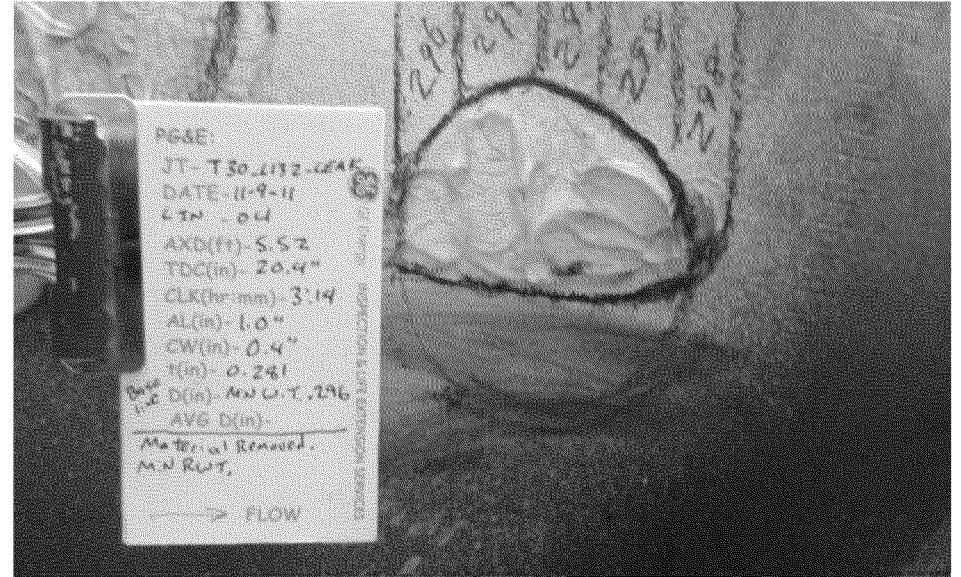


Overview of second inspection MT Indications of LIN-04

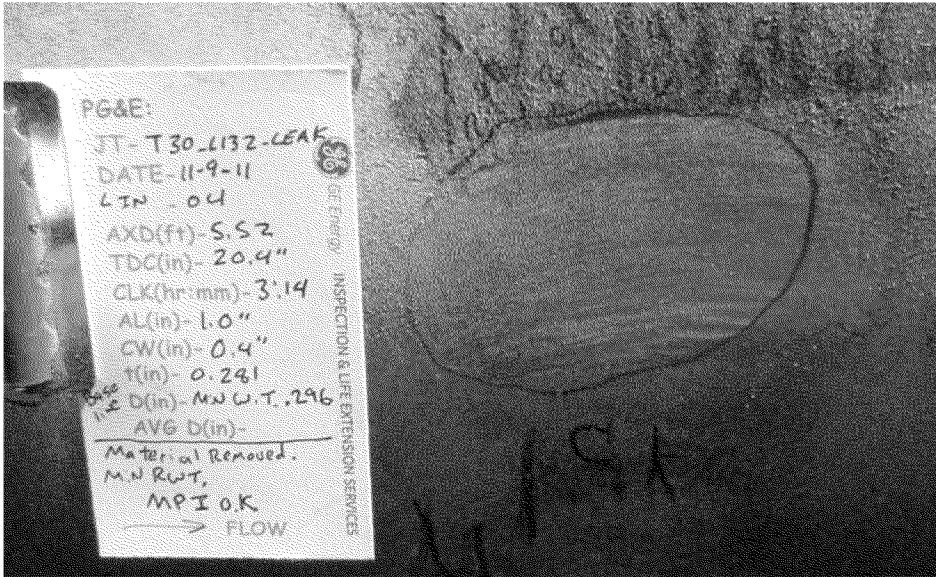




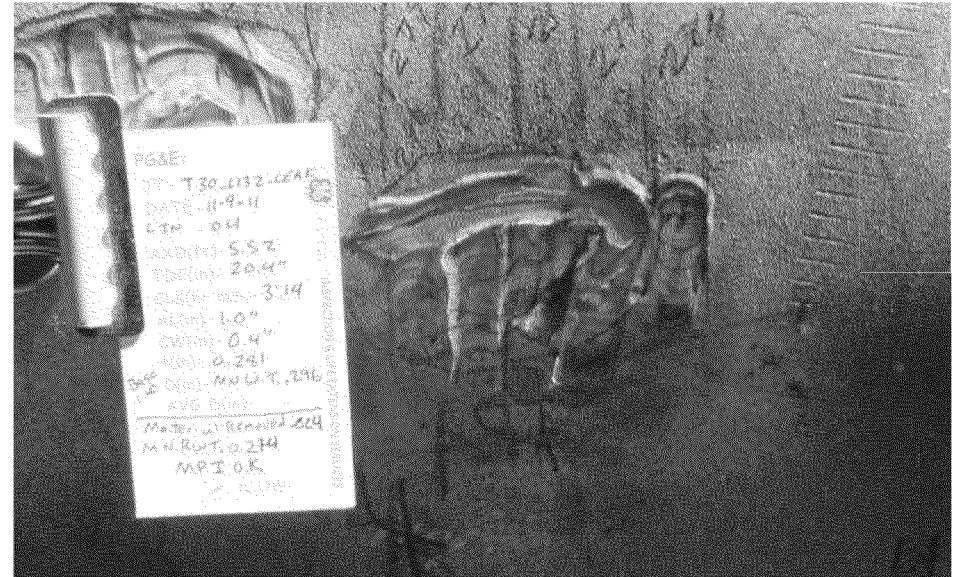
Close up of second inspection MT Indications of LIN-04



Overview of second inspection pre buff area (RWT) LIN-04



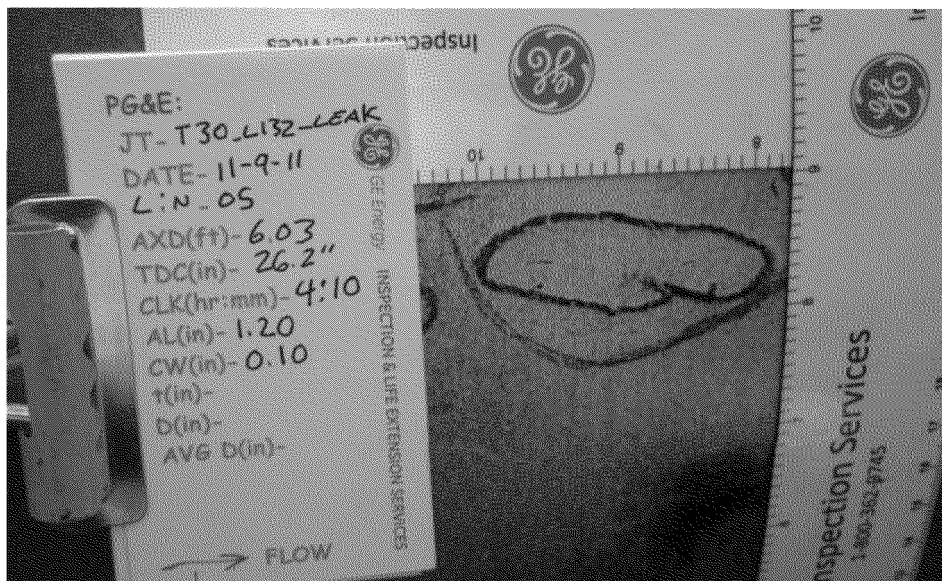
Overview of second inspection post grind (MPIOK) of LIN-04



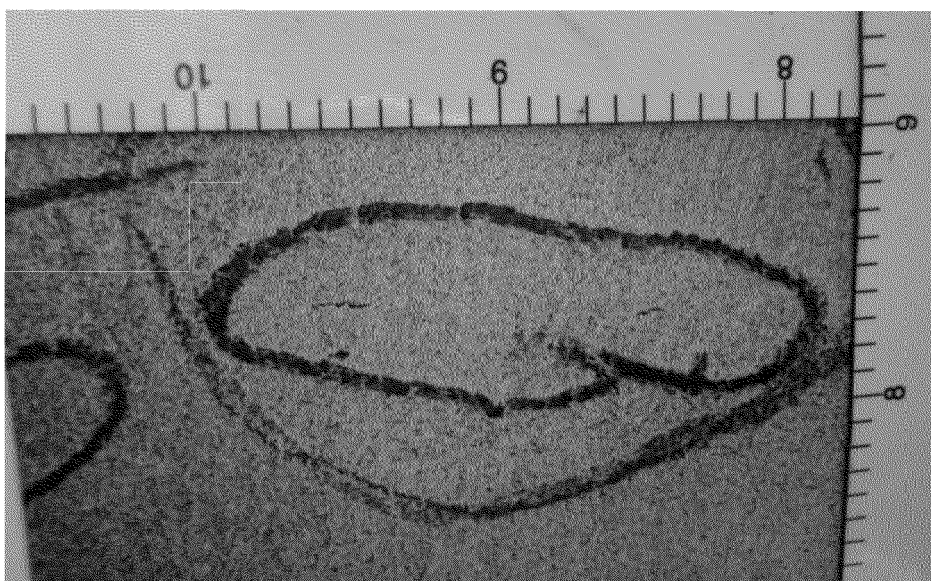
Overview of second inspection post grind (RWT) of LIN-04



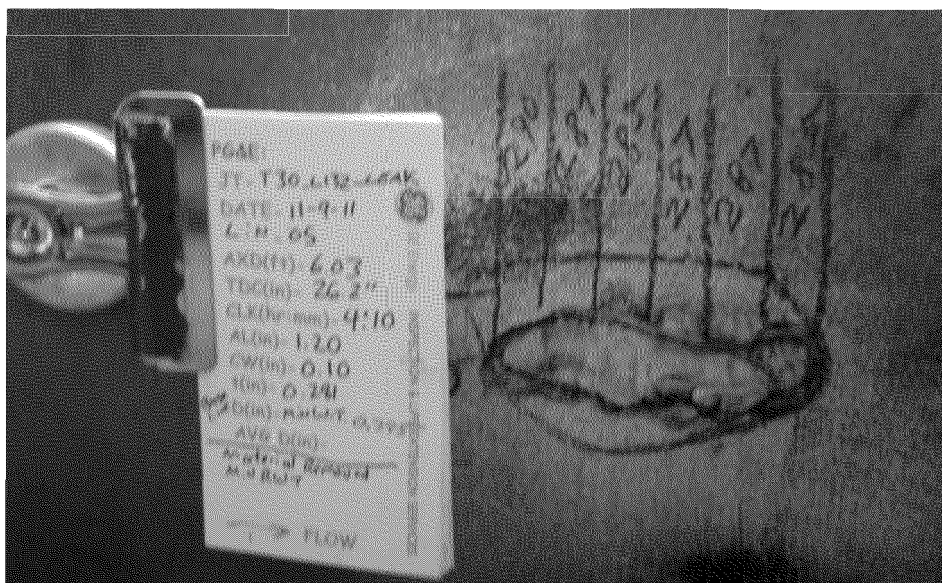




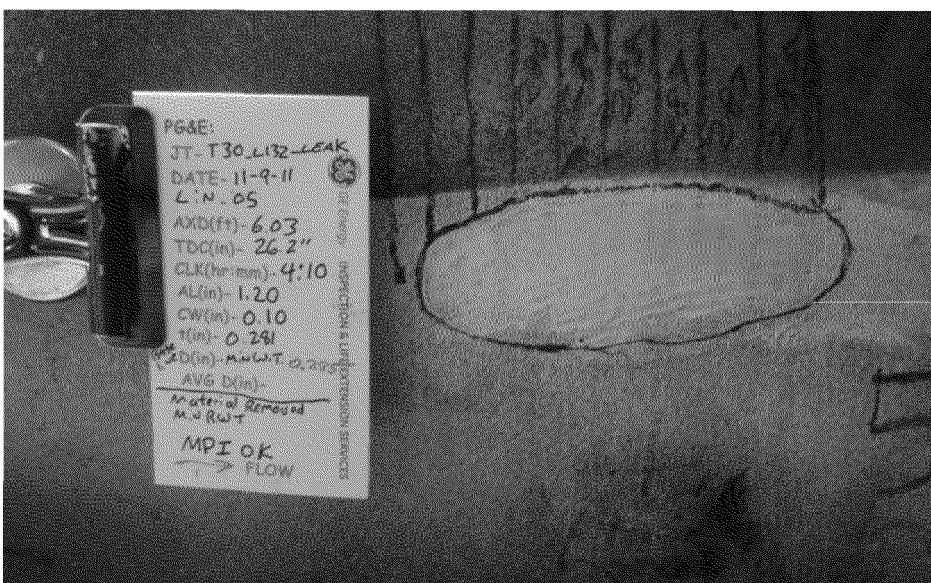
Overview of second inspection MT Indications of LIN-05



Close up of second inspection MT Indications of LIN-05



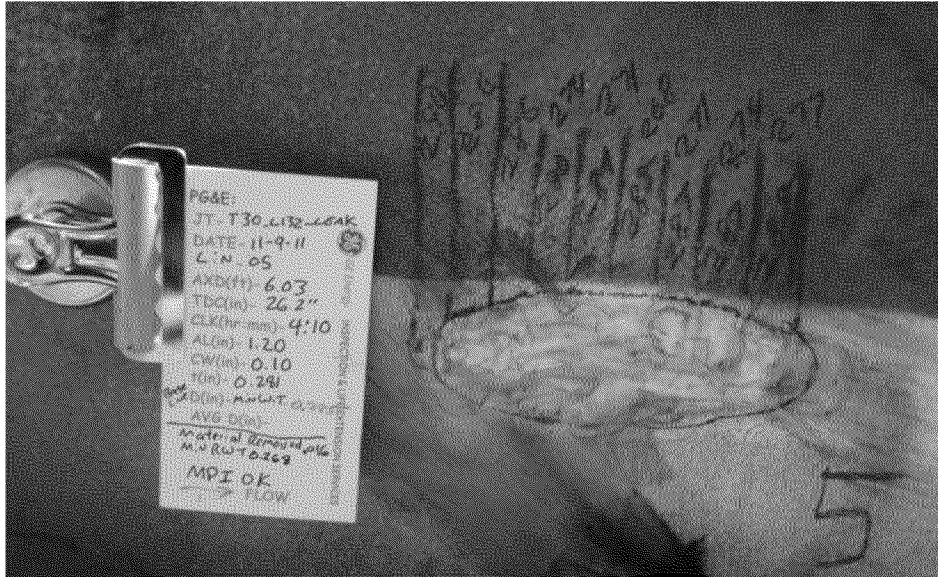
Overview of second inspection pre buff area (RWT) LIN-05



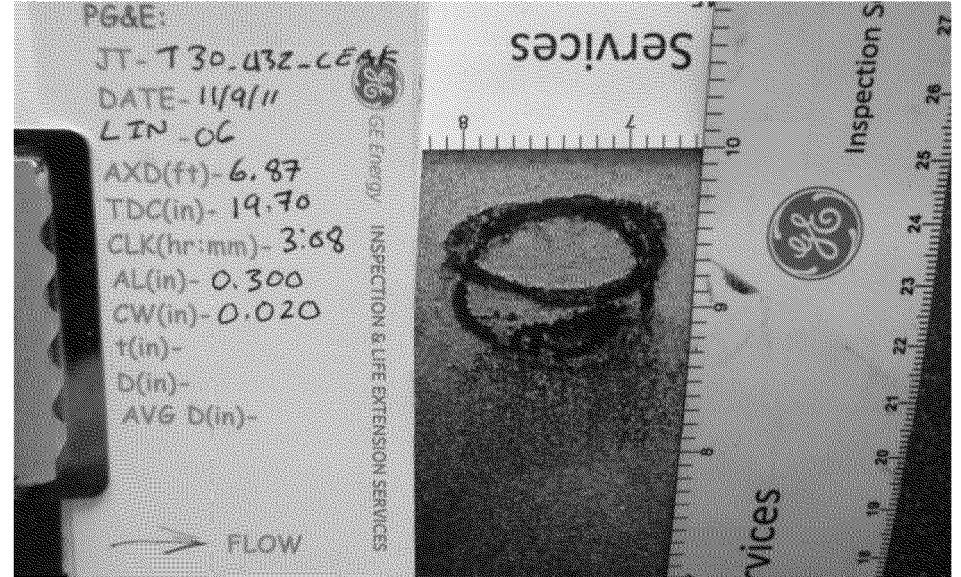
Overview of second inspection post grind (MPIOK) of LIN-05







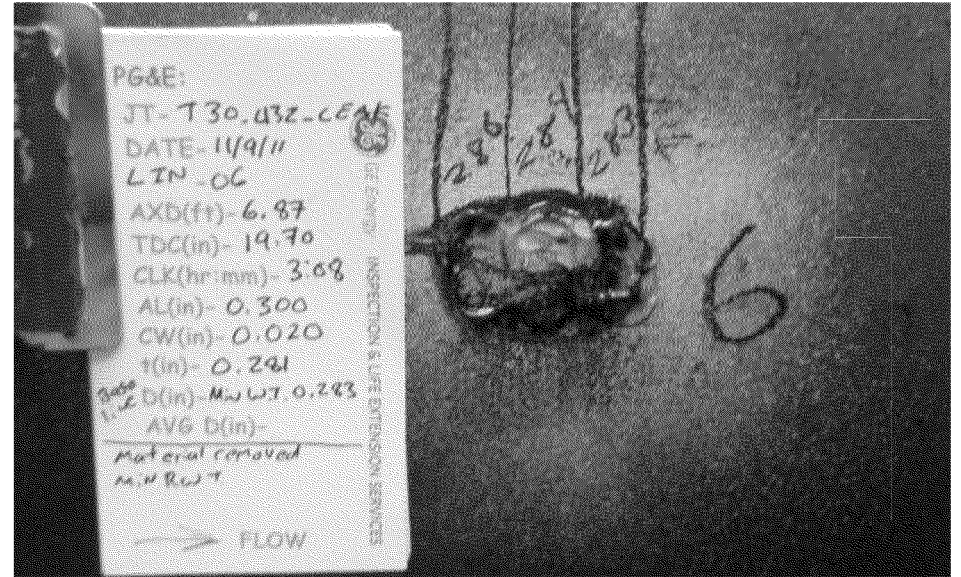
Overview of second inspection post grind (RWT) of LIN-05



Overview of second inspection MT Indications of LIN-06

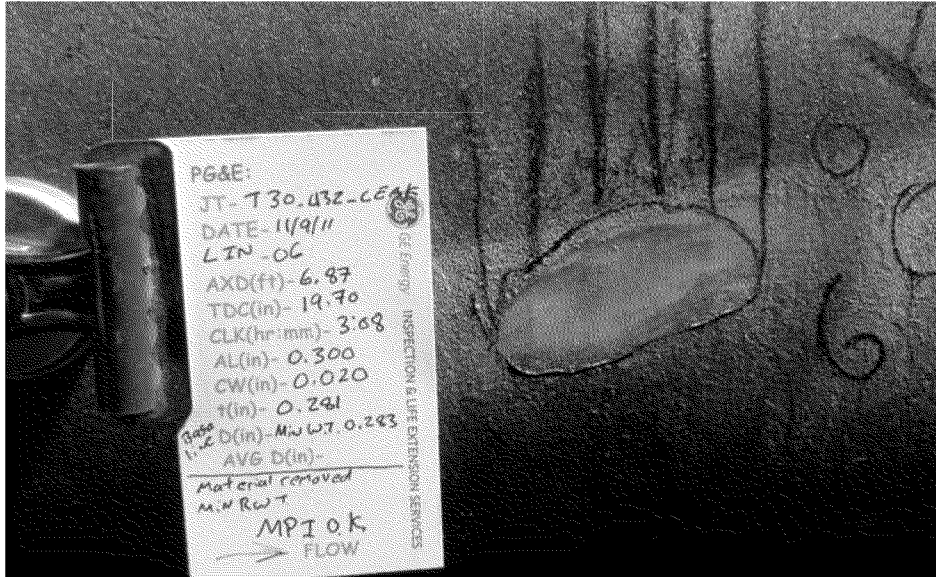


Close up of second inspection MT Indications of LIN-06

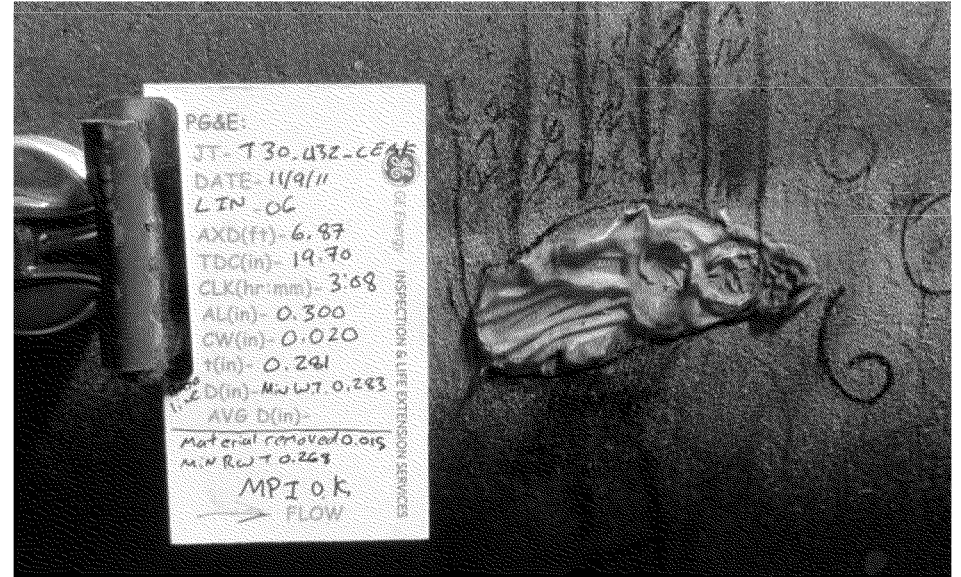


Overview of second inspection pre buff area (RWT) LIN-06

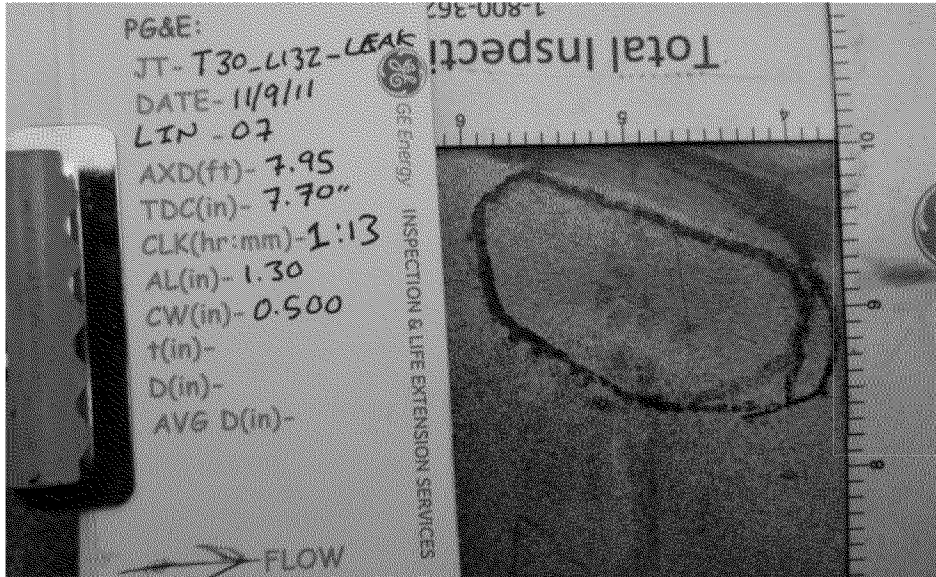




Overview of second inspection post grind (MPIOK) of LIN-06



Overview of second inspection post grind (RWT) of LIN-06



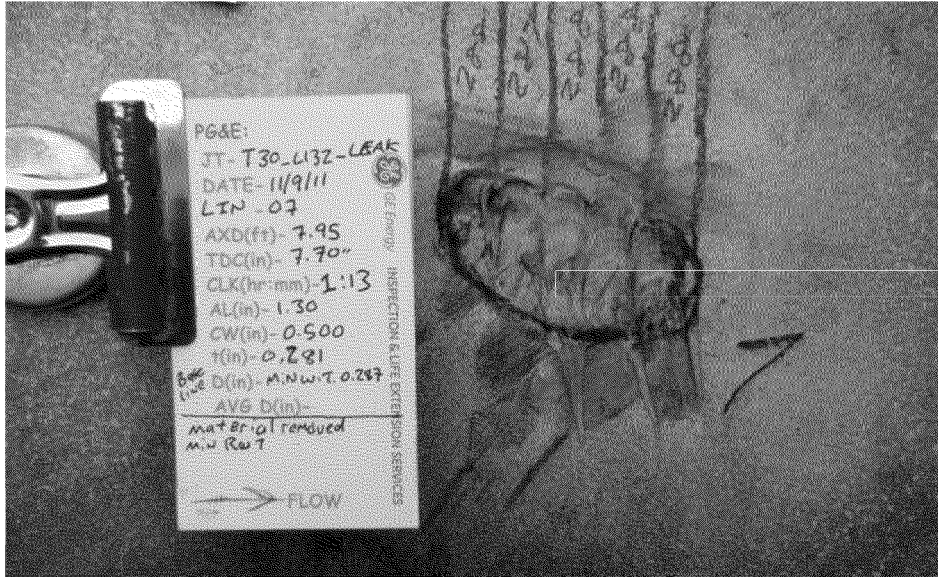
Overview of second inspection MT Indications of LIN-07



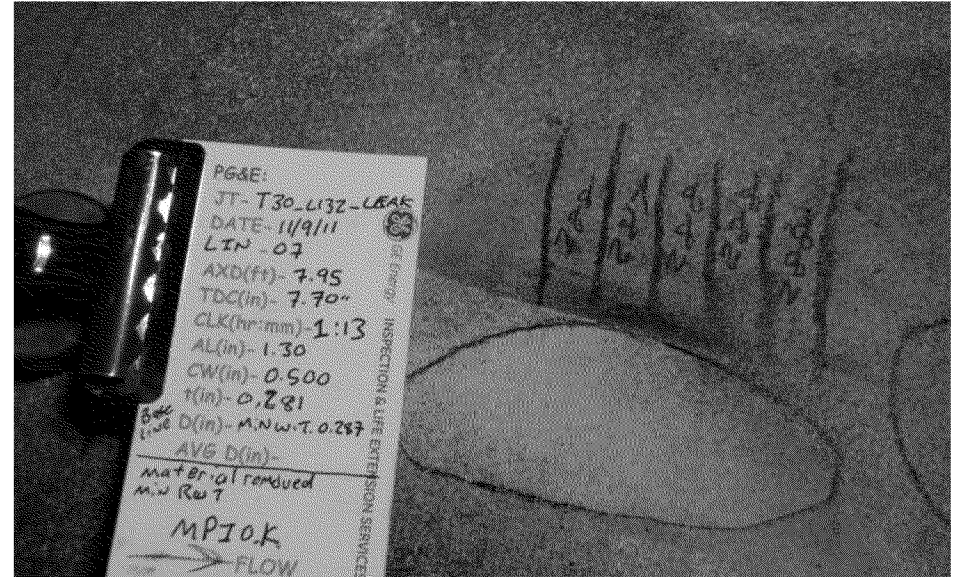
Close up of second inspection MT Indications of LIN-07



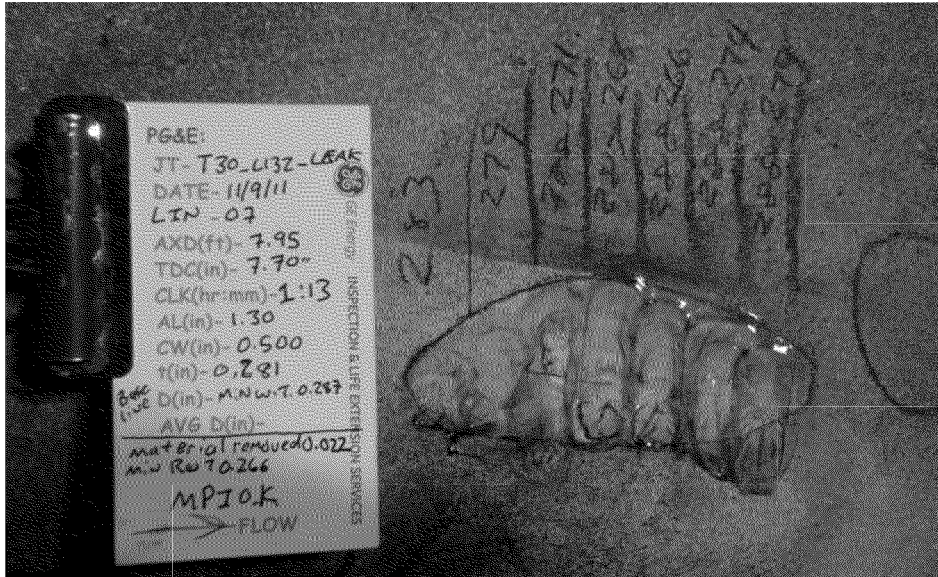




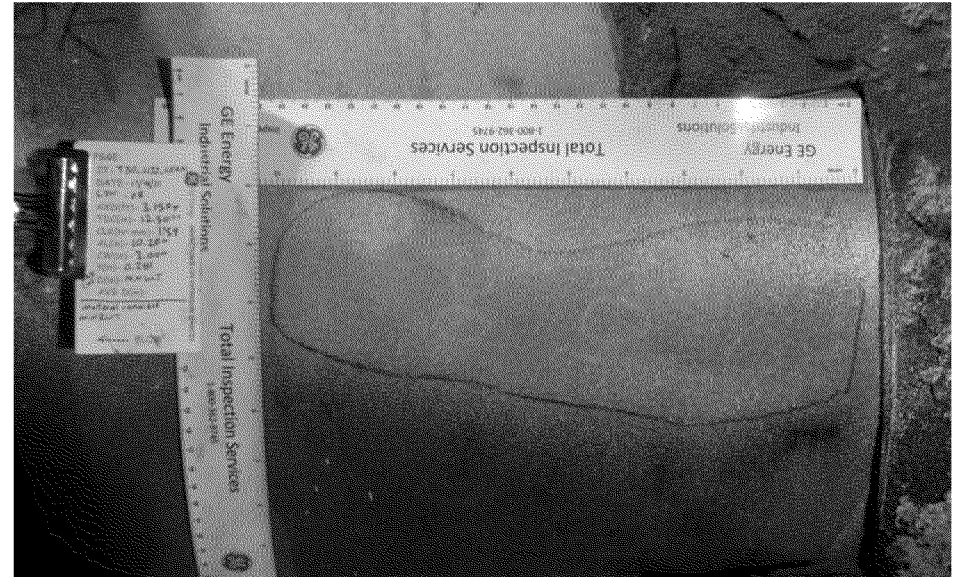
Overview of second inspection pre buff area (RWT) LIN-07



Overview of second inspection post grind (MPIOK) of LIN-07



Overview of second inspection post grind (RWT) of LIN-08

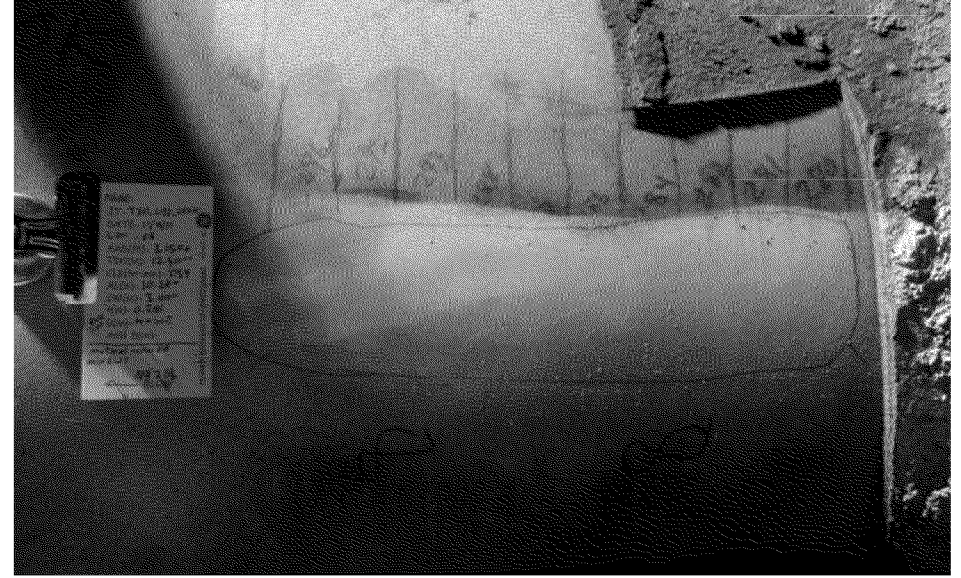


Overview of second inspection MT Indications of LIN-08

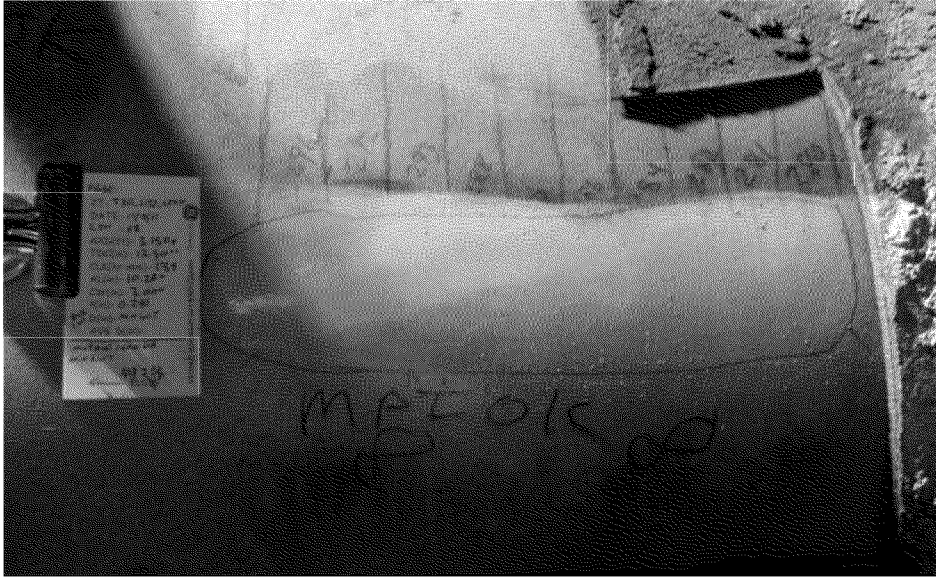




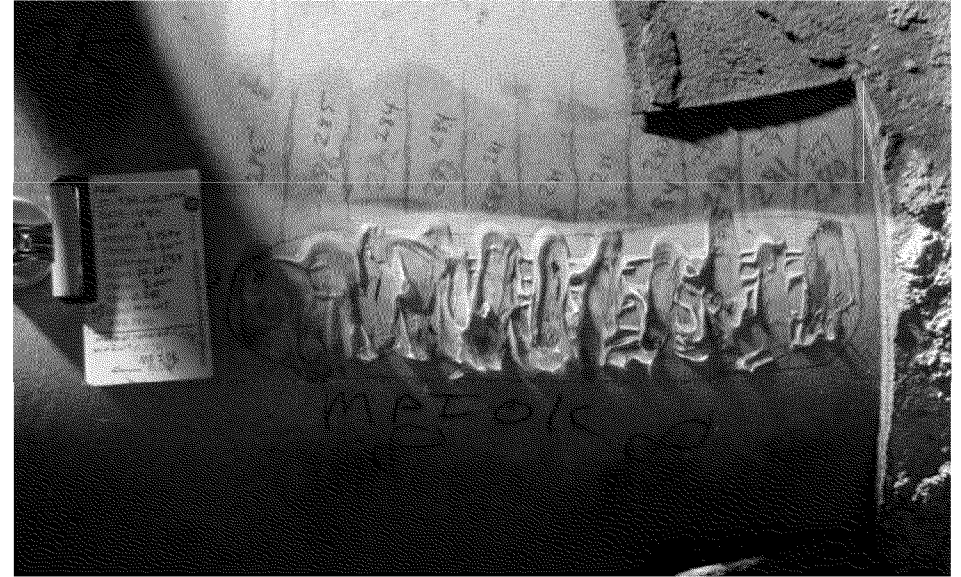
Close up of second inspection MT Indications of LIN-08



Overview of second inspection pre buff area (RWT) LIN-08



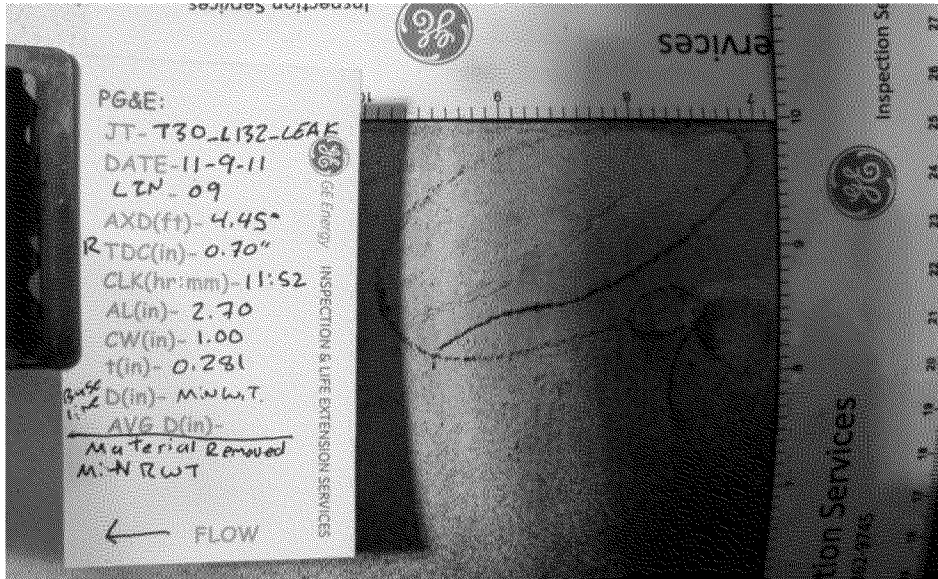
Overview of second inspection post grind (MPIOK) of LIN-08



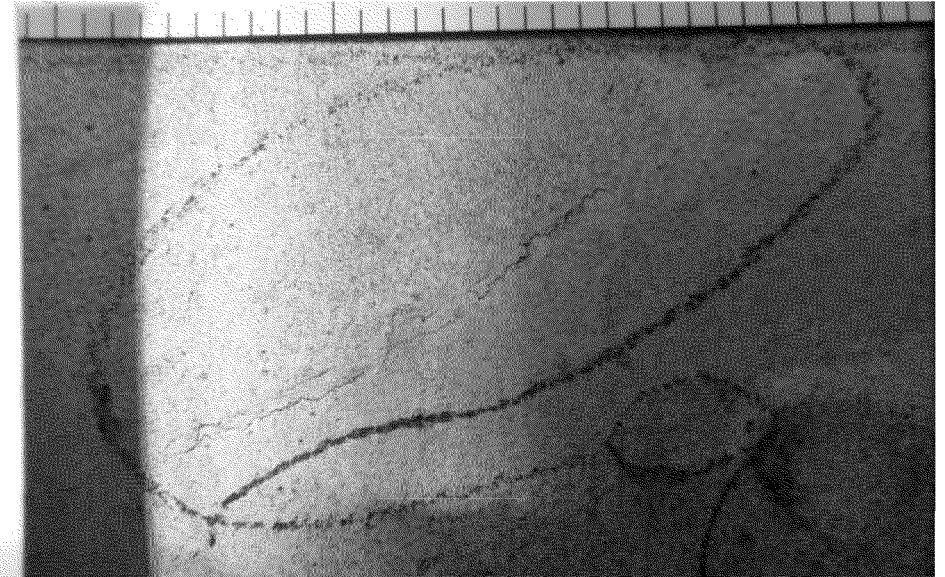
Overview of second inspection post grind (RWT) of LIN-09



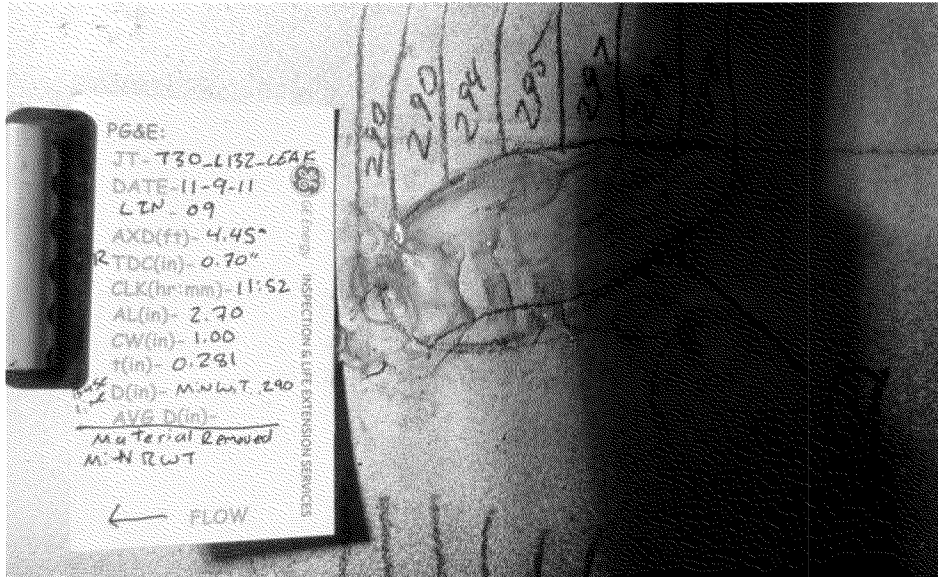




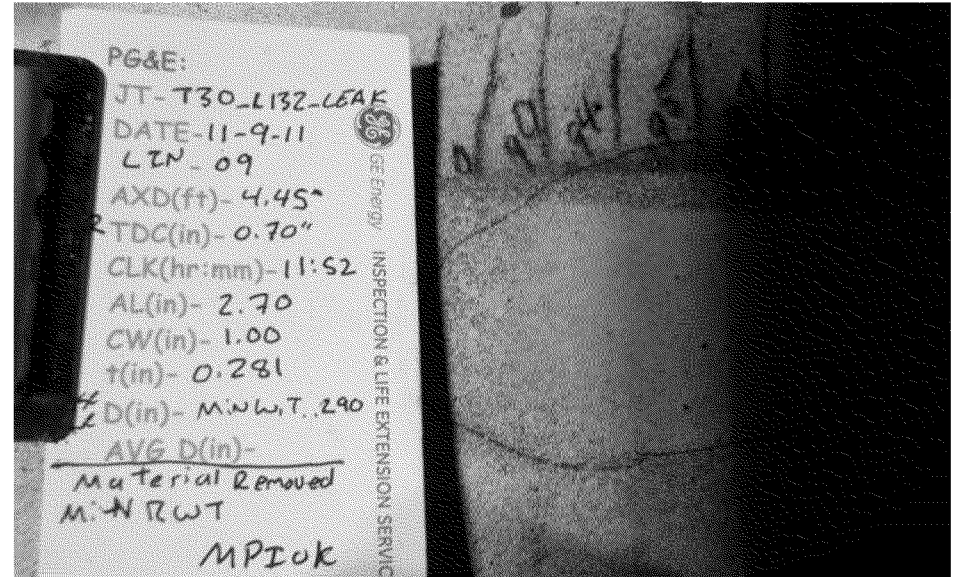
Overview of second inspection MT Indications of LIN-09



Close up of second inspection MT Indications of LIN-09



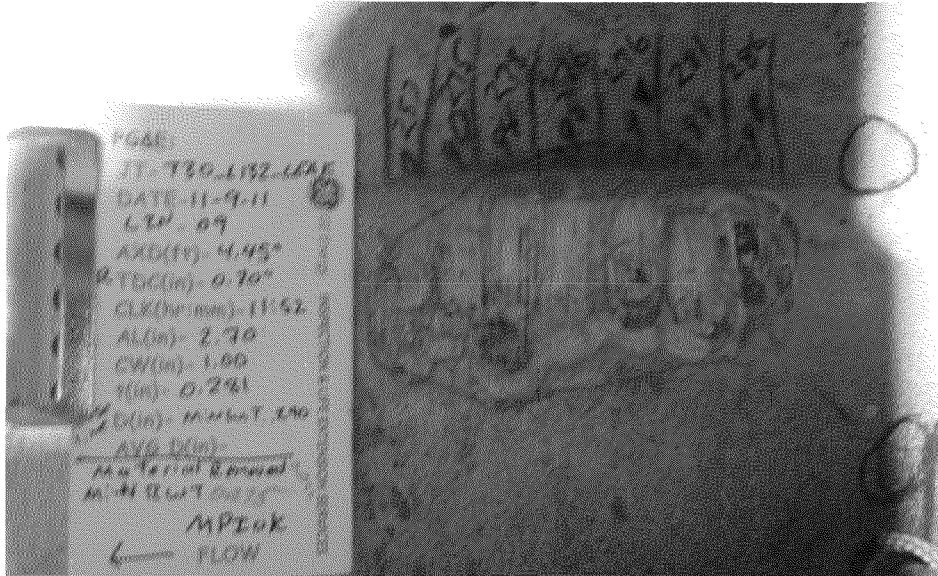
Overview of second inspection pre buff area (RWT) LIN-09



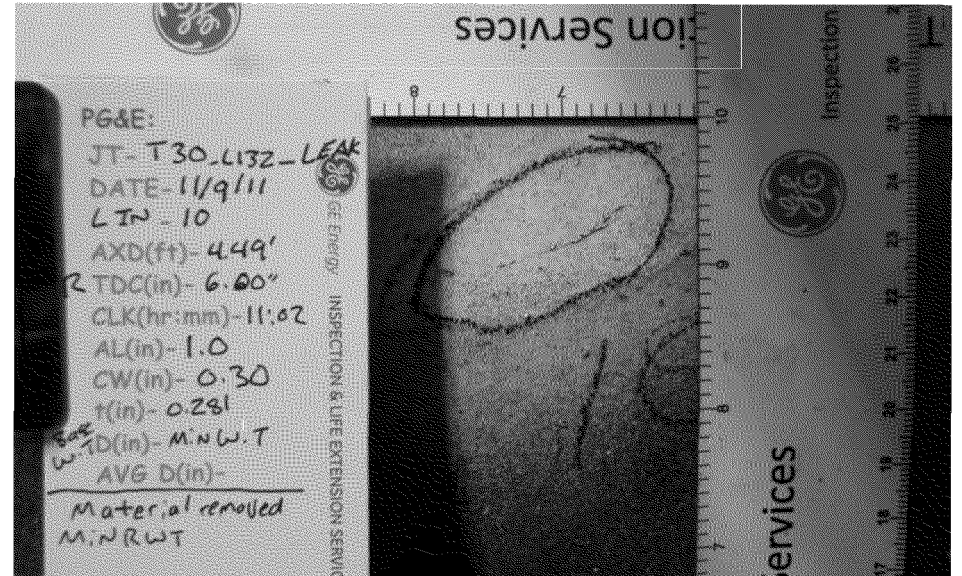
Overview of second inspection post grind (MPIOK) of LIN-09



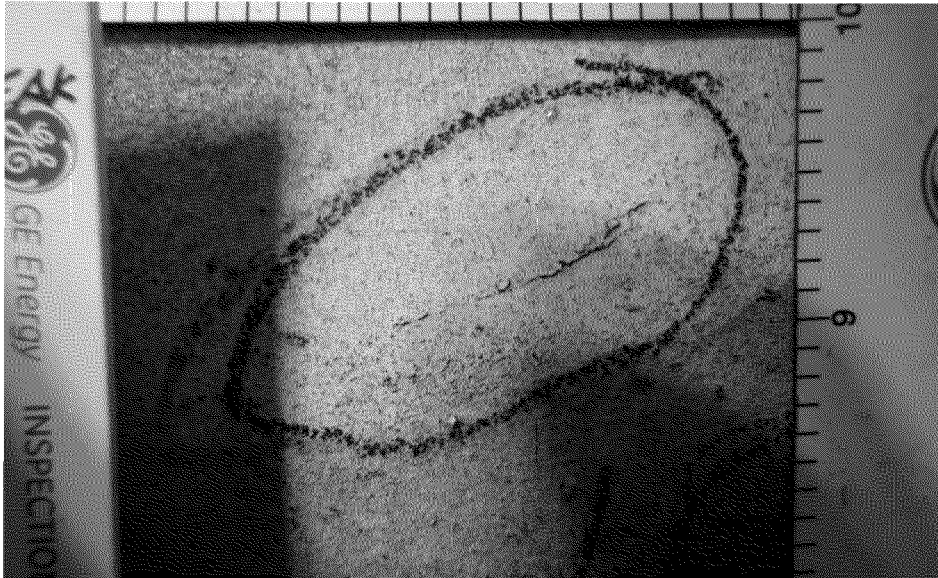




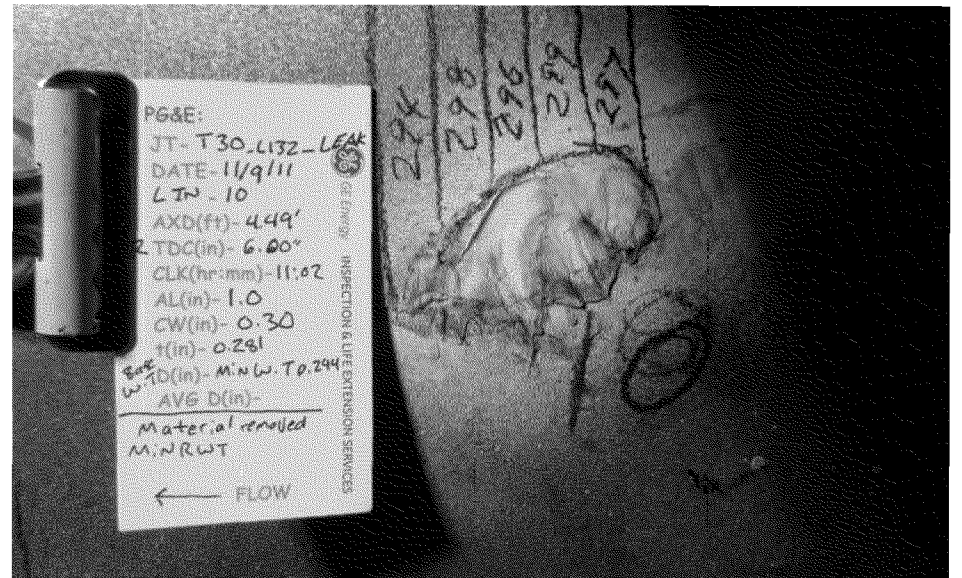
Overview of second inspection post grind (RWT) of LIN-10



Overview of second inspection MT Indications of LIN-10

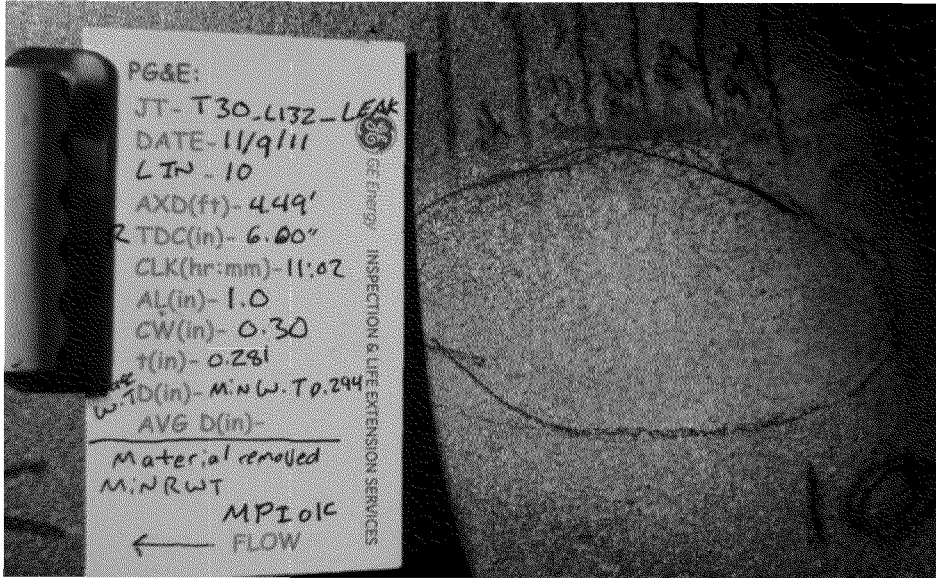


Close up of second inspection MT Indications of LIN-10

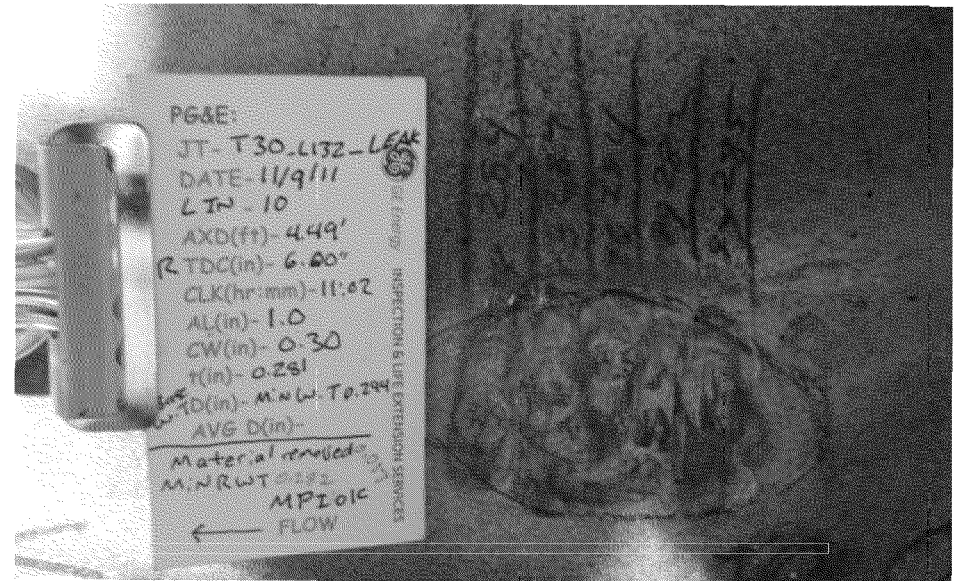


Overview of second inspection pre buff area (RWT) LIN-10

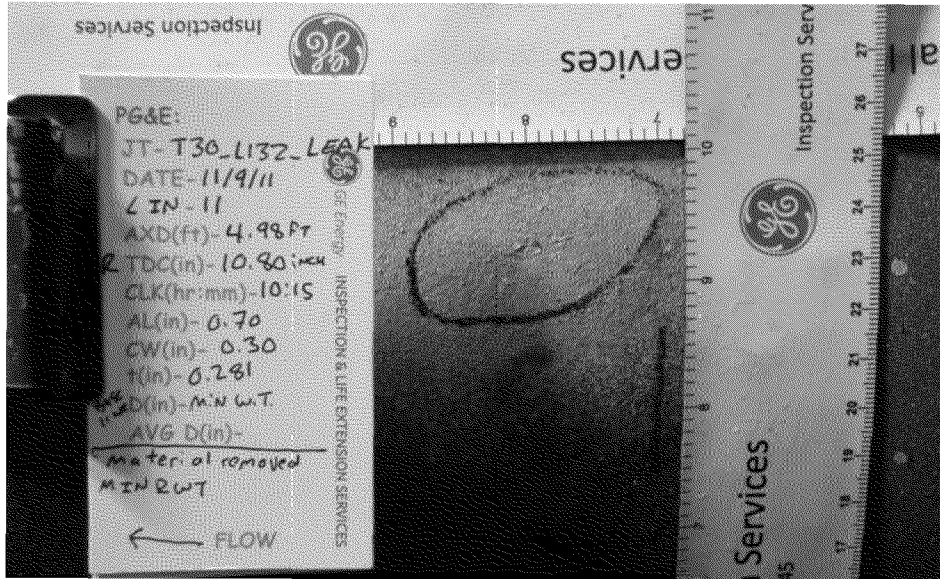




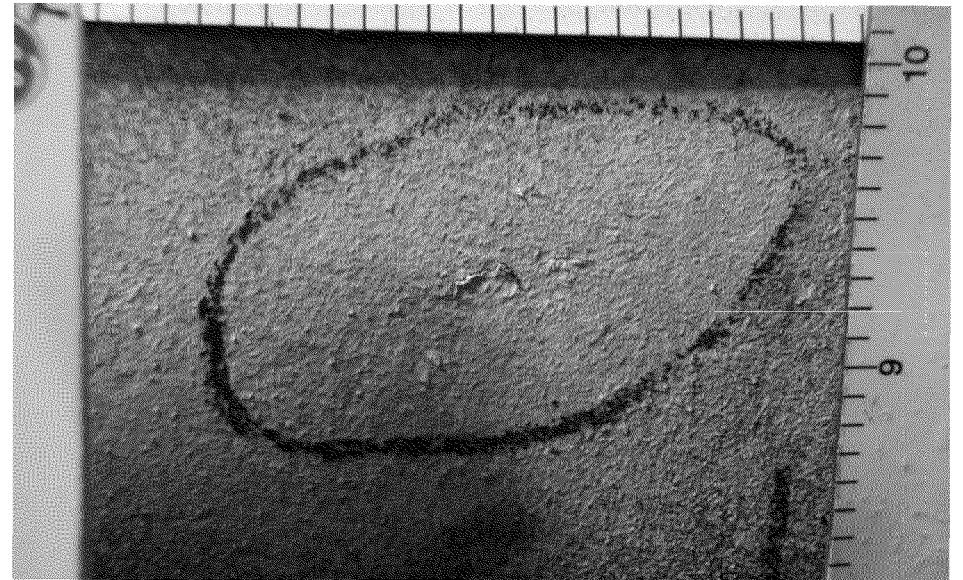
Overview of second inspection post grind (MPIOK) of LIN-10



Overview of second inspection post grind (RWT) of LIN-11



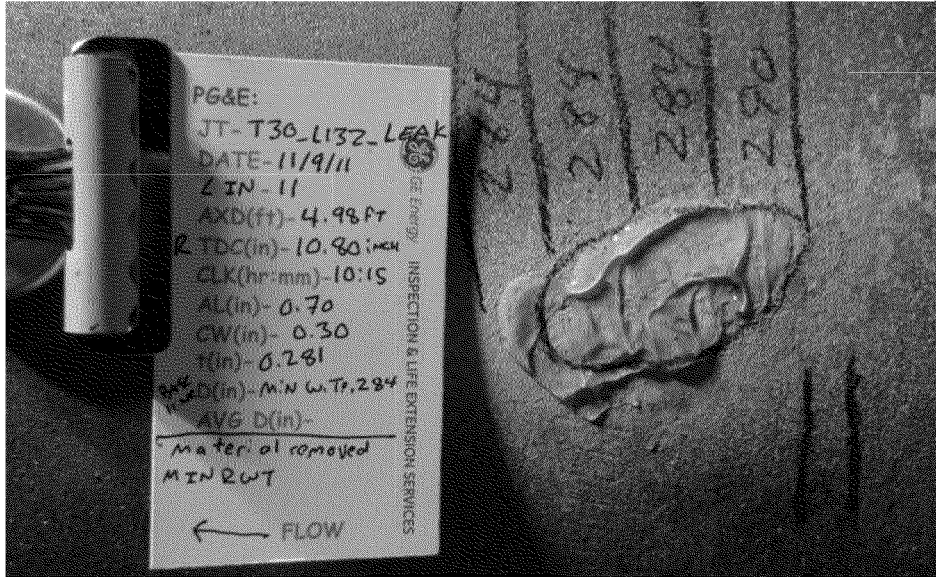
Overview of second inspection MT Indications of LIN-11



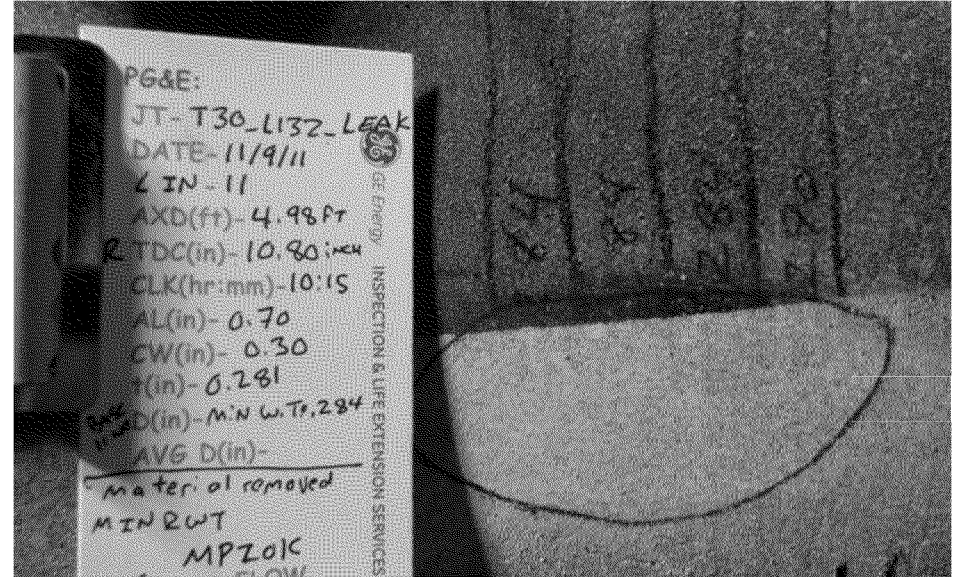
Close up of second inspection MT Indications of LIN-11



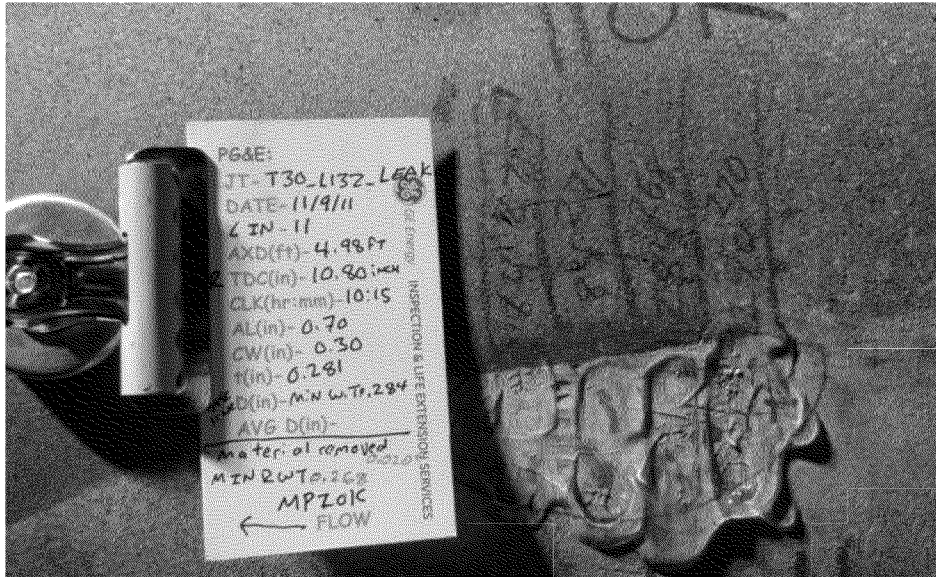




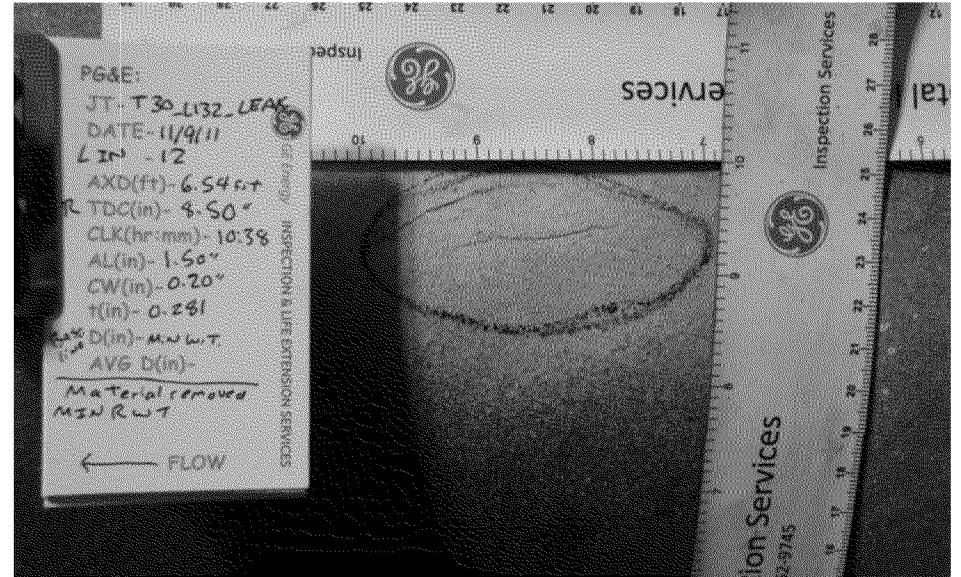
Overview of second inspection pre buff area (RWT) LIN-11



Overview of second inspection post grind (MPIOK) of LIN-11

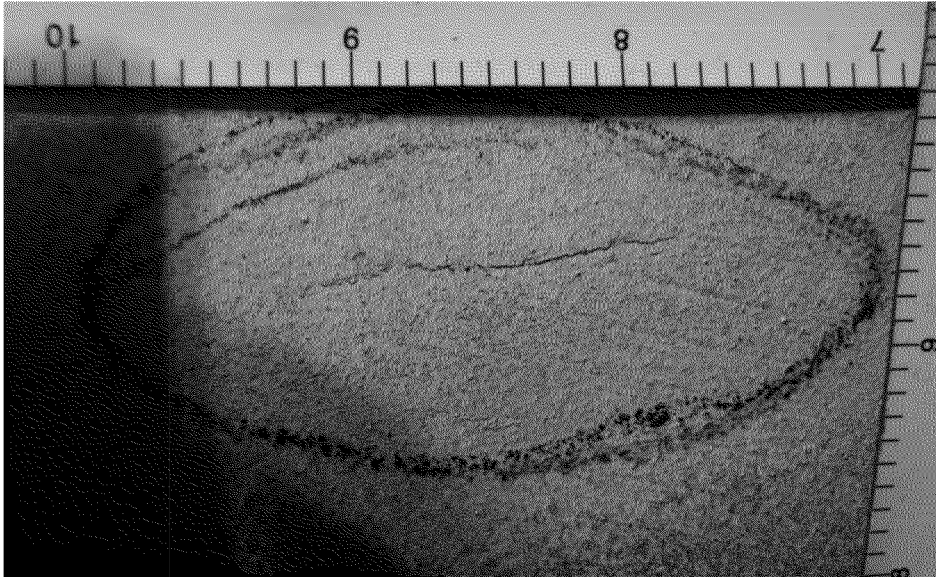


Overview of second inspection post grind (RWT) of LIN-12

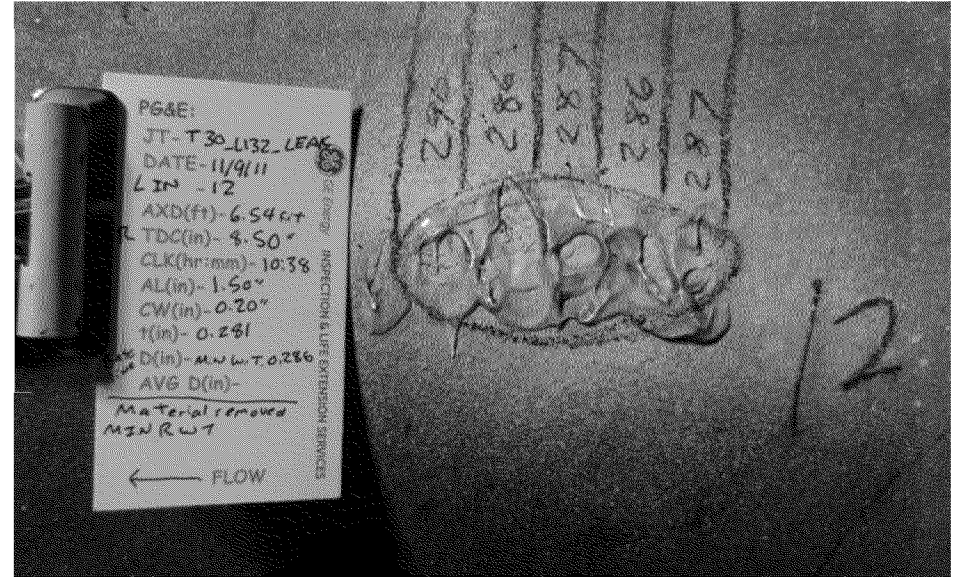


Overview of second inspection MT Indications of LIN-12

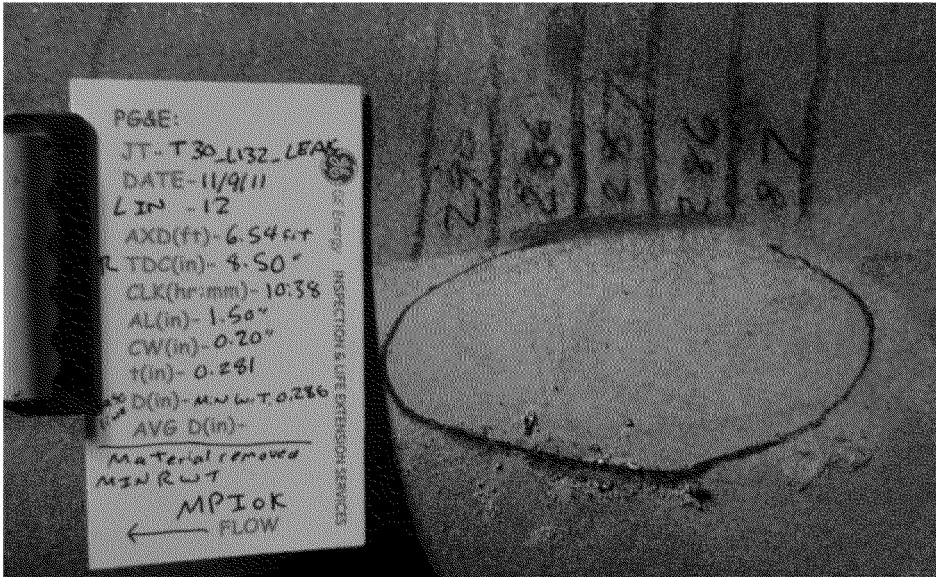




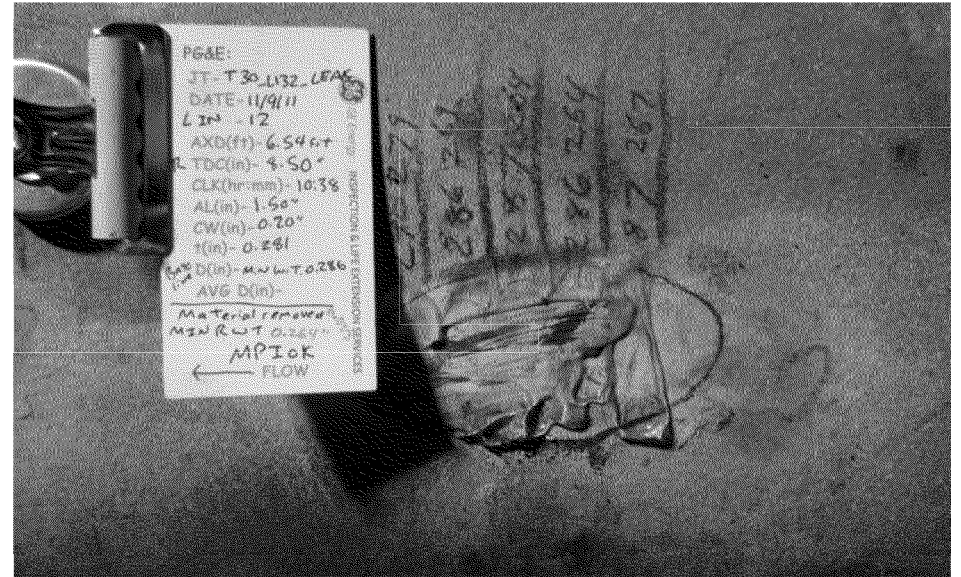
Close up of second inspection MT Indications of LIN-12



Overview of second inspection pre buff area (RWT) LIN-12



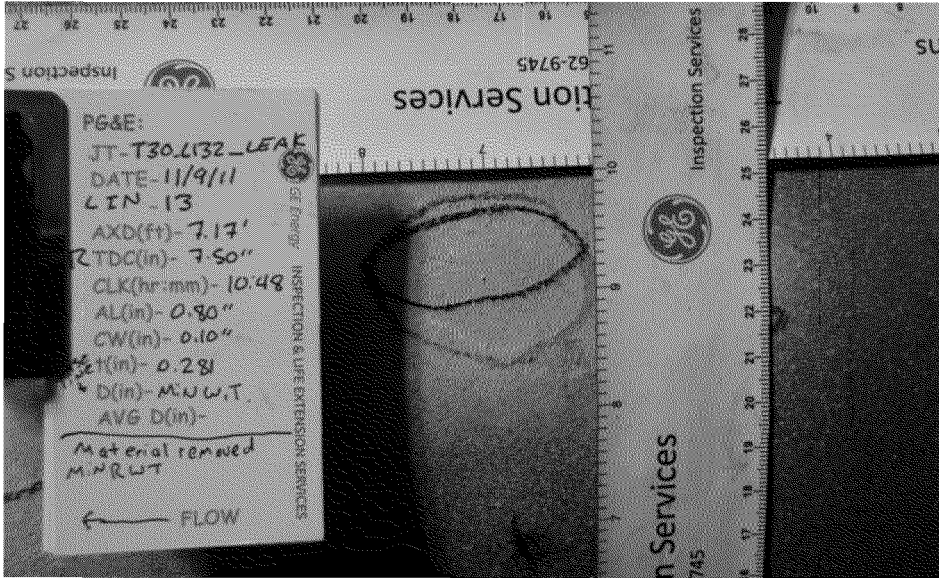
Overview of second inspection post grind (MPIOK) of LIN-12



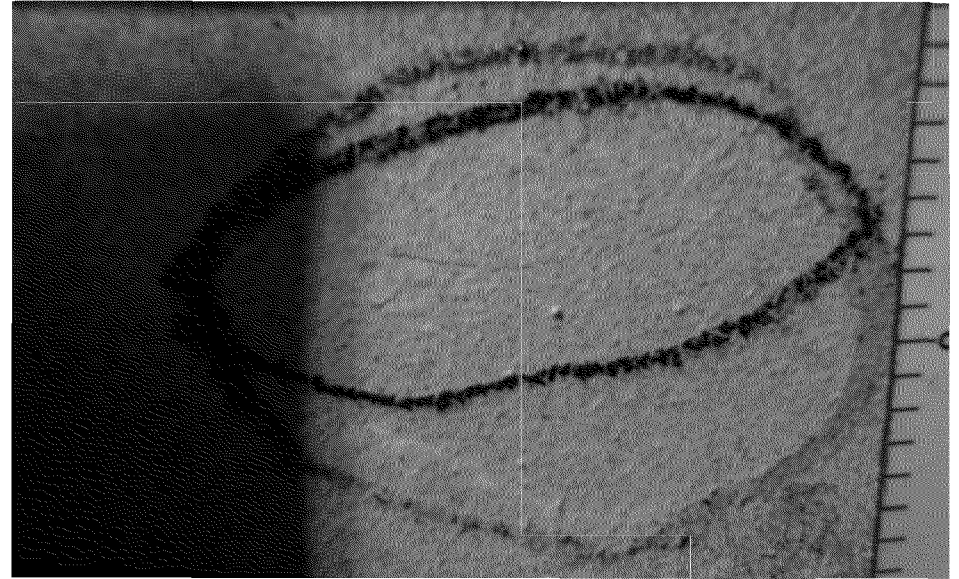
Overview of second inspection post grind (RWT) of LIN-12



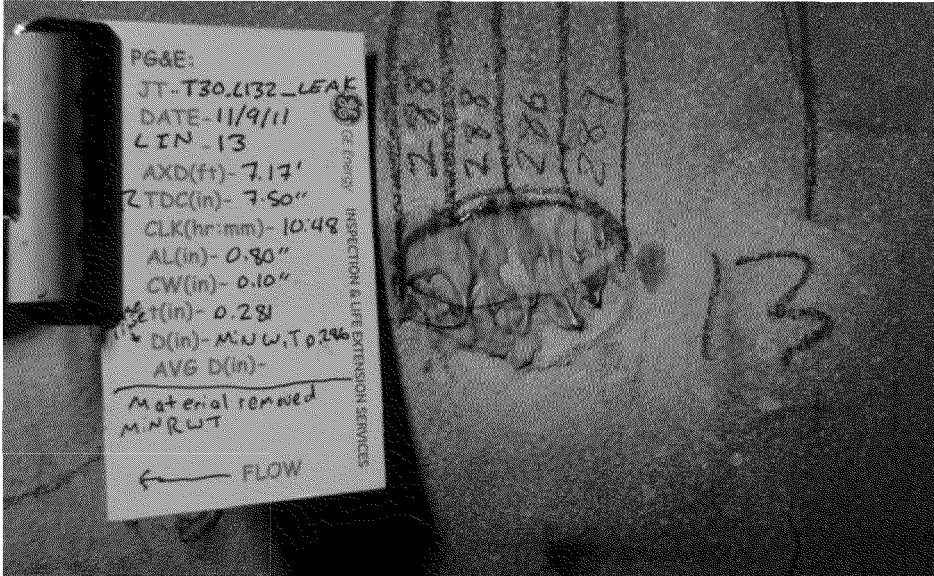




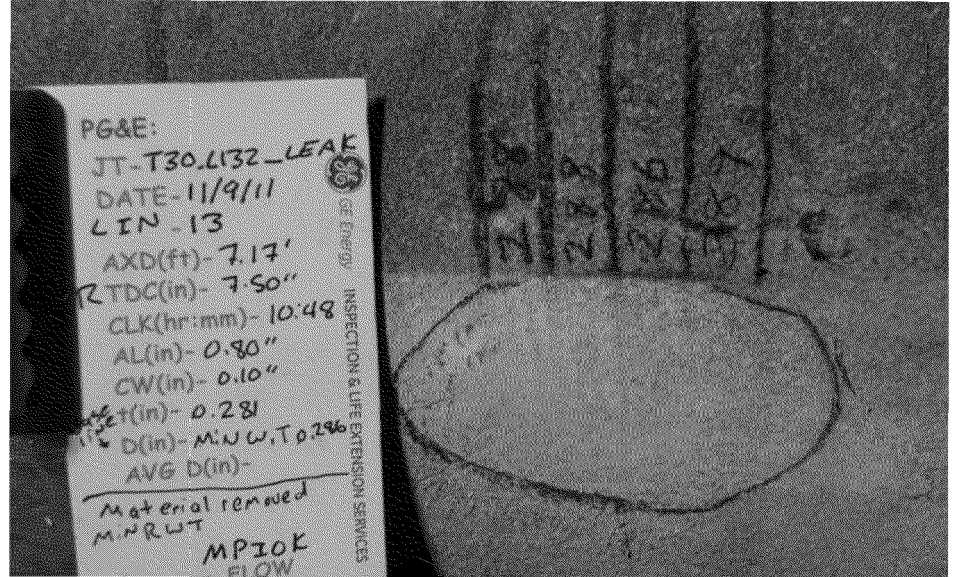
Overview of second inspection MT Indications of LIN-13



Close up of second inspection MT Indications of LIN-13

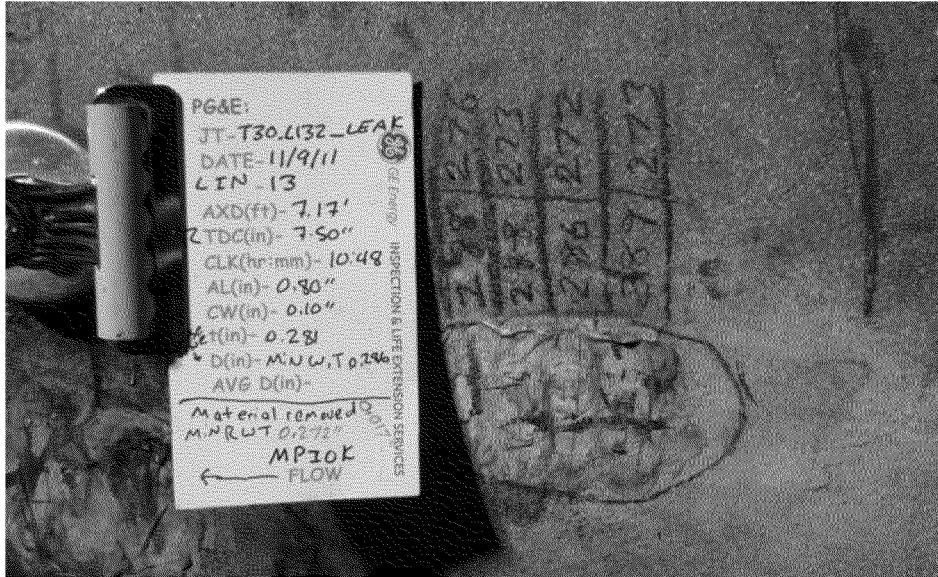


Overview of second inspection pre buff area (RWT) LIN-13

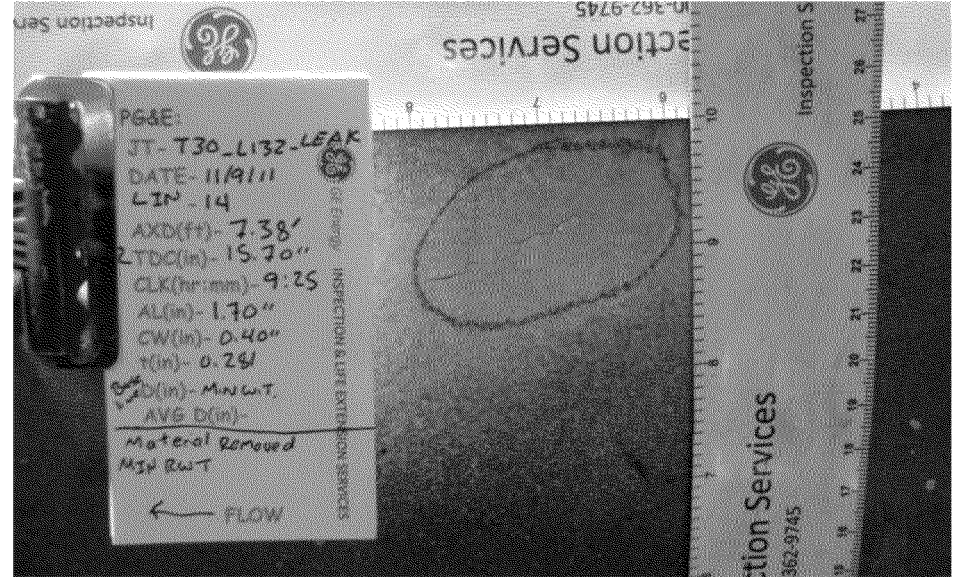


Overview of second inspection post grind (MPIOK) of LIN-13

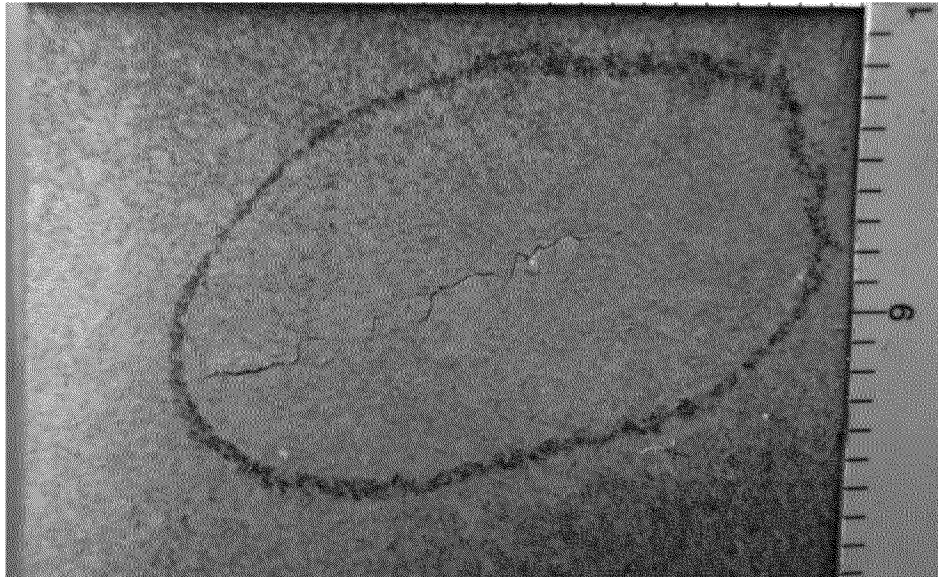




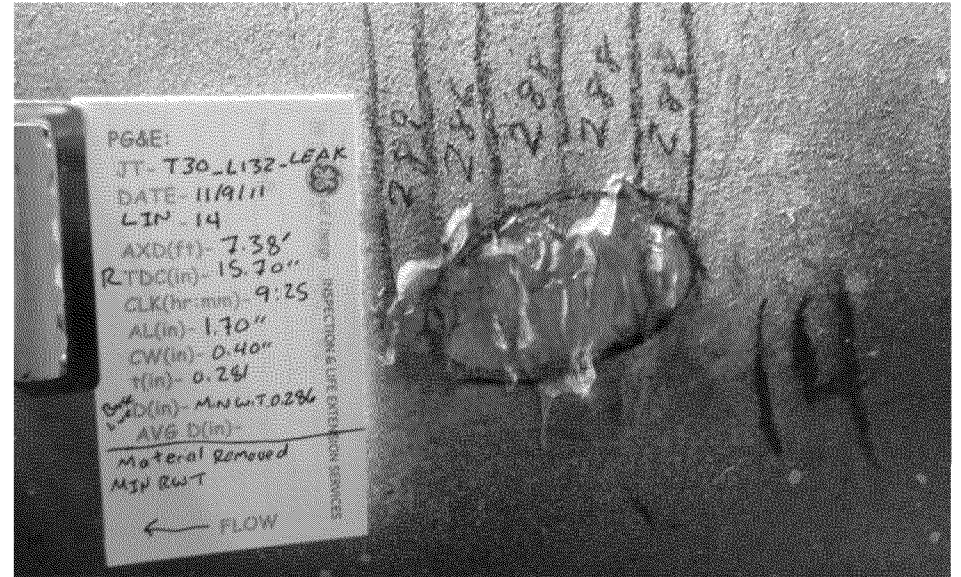
Overview of second inspection post grind (RWT) of LIN-13



Overview of second inspection MT Indications of LIN-14



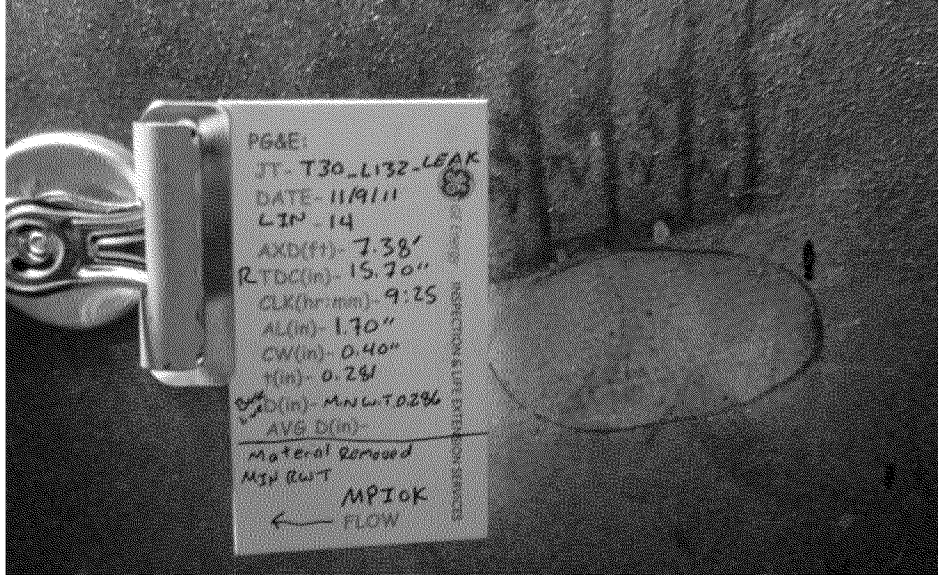
Close up of second inspection MT Indications of LIN-14



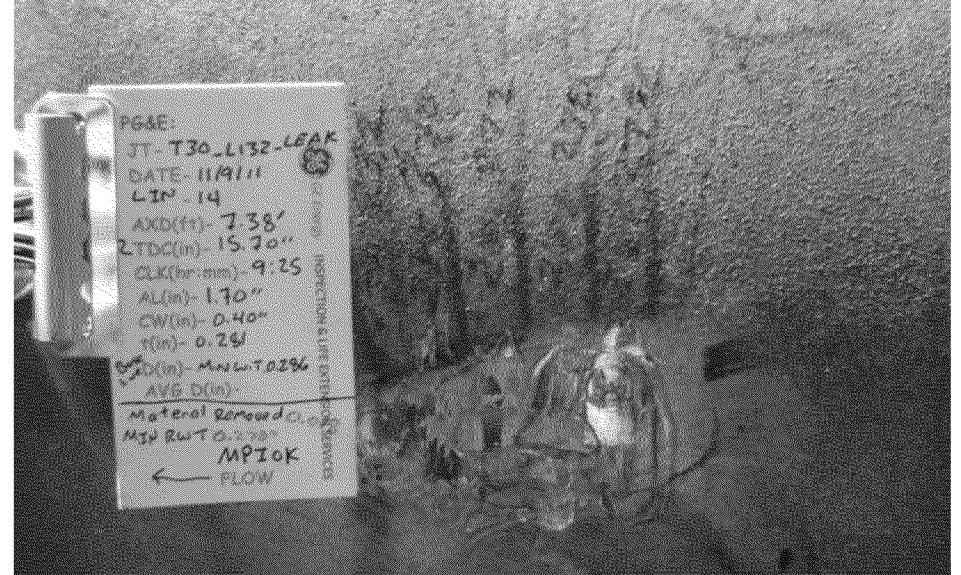
Overview of second inspection pre buff area (RWT) LIN-14



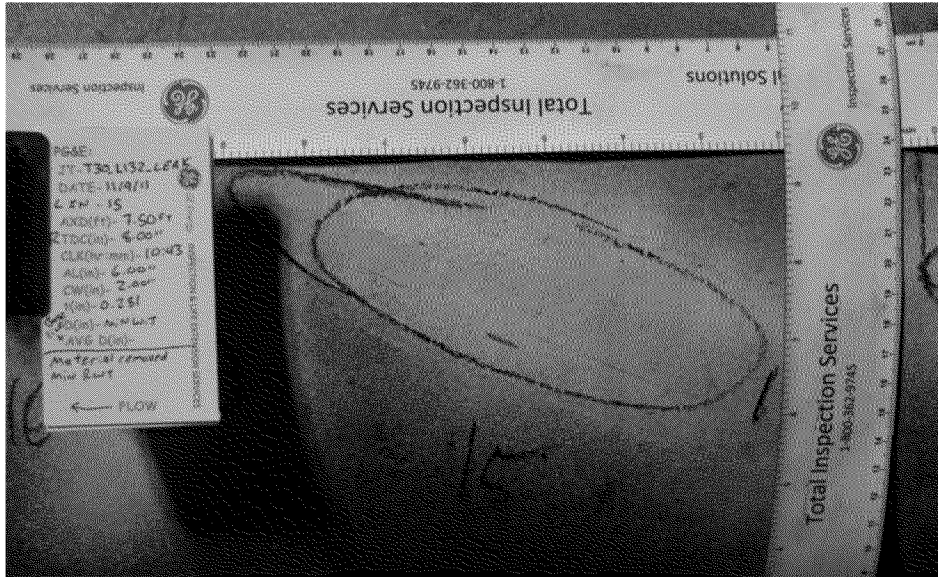




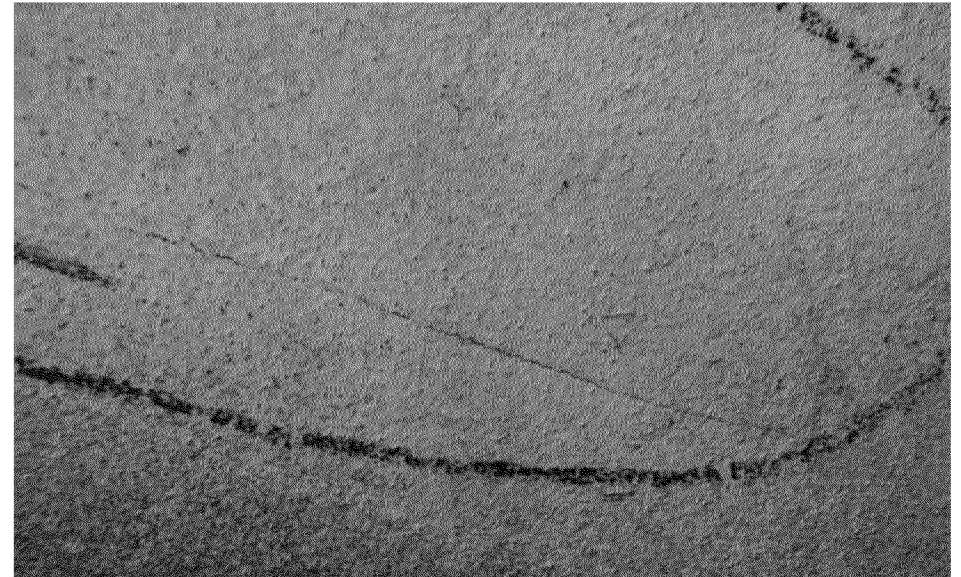
Overview of second inspection post grind (MPIOK) of LIN-14



Overview of second inspection post grind (RWT) of LIN-14



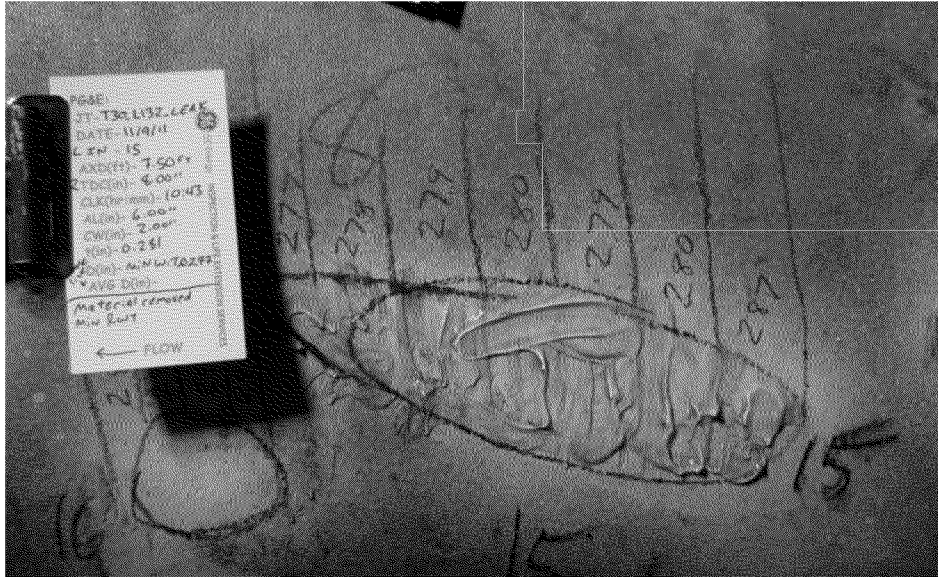
Overview of second inspection MT Indications of LIN-15



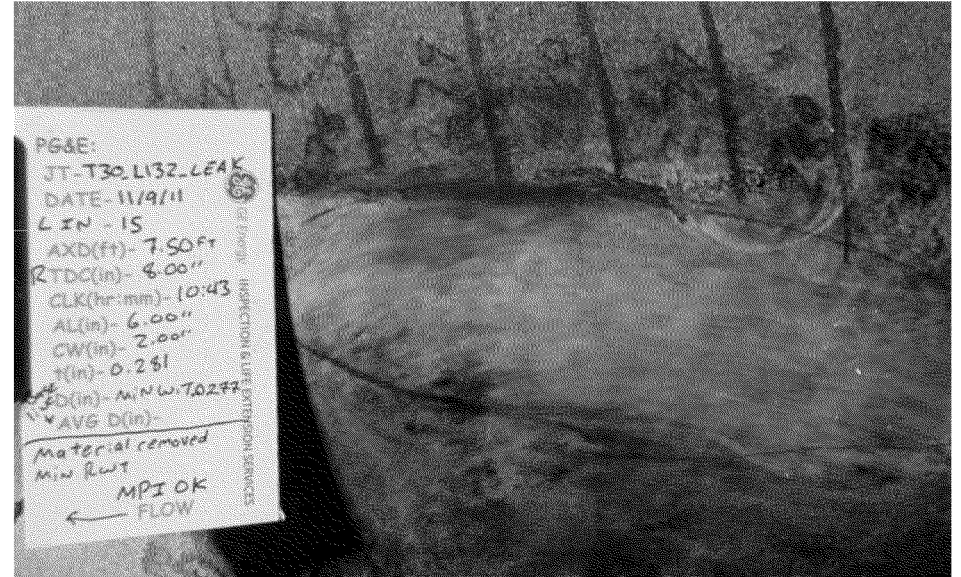
Close up of second inspection MT Indications of LIN-15



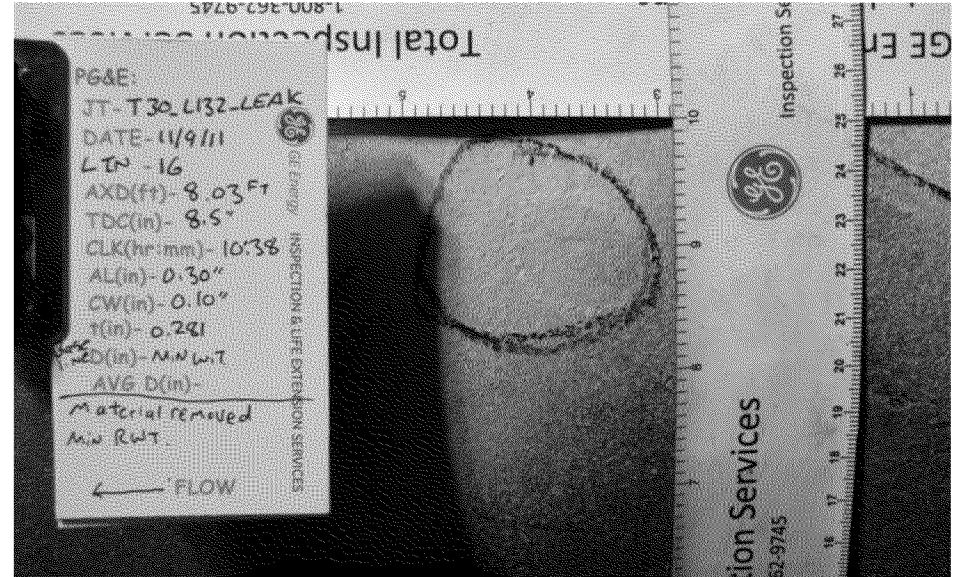
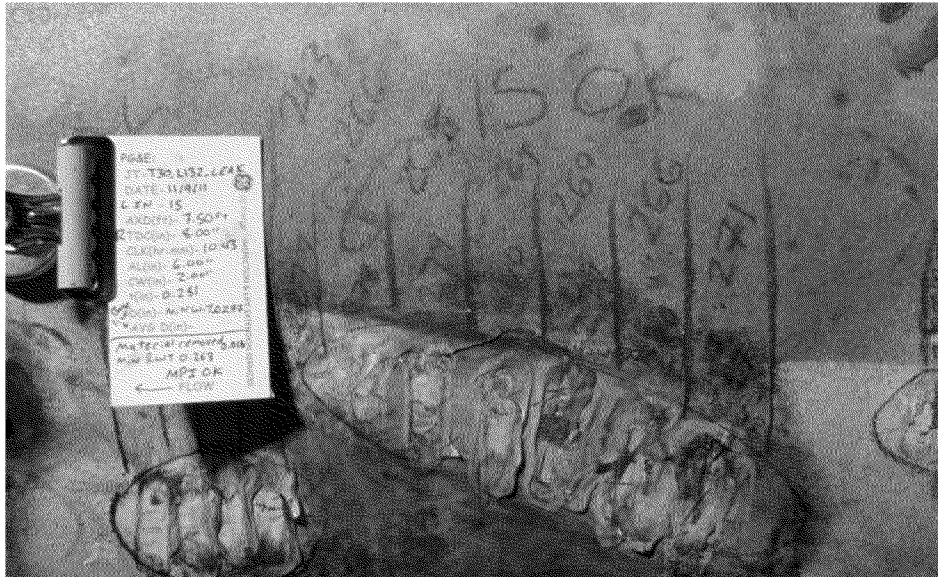




Overview of second inspection pre buff area (RWT) LIN-15

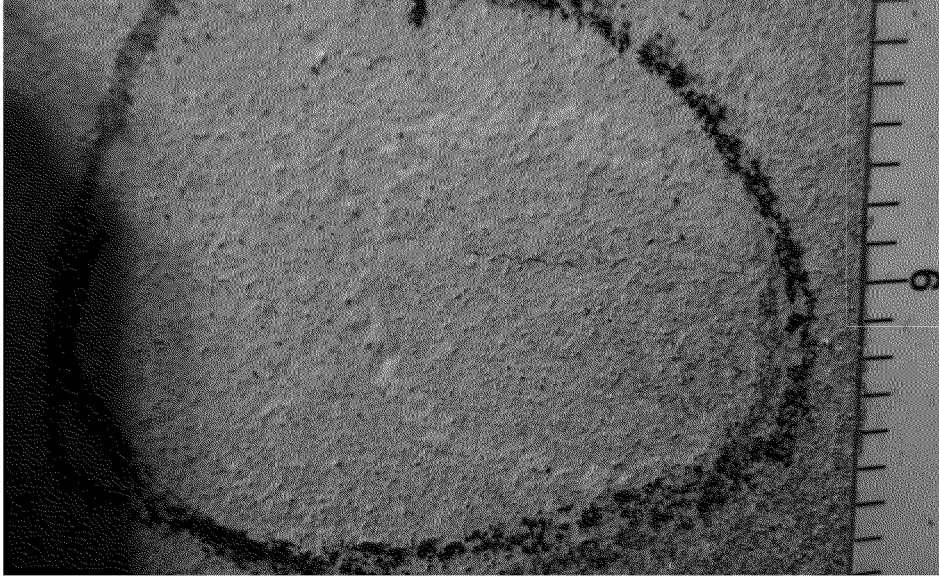


Overview of second inspection post grind (MPIOK) of LIN-15

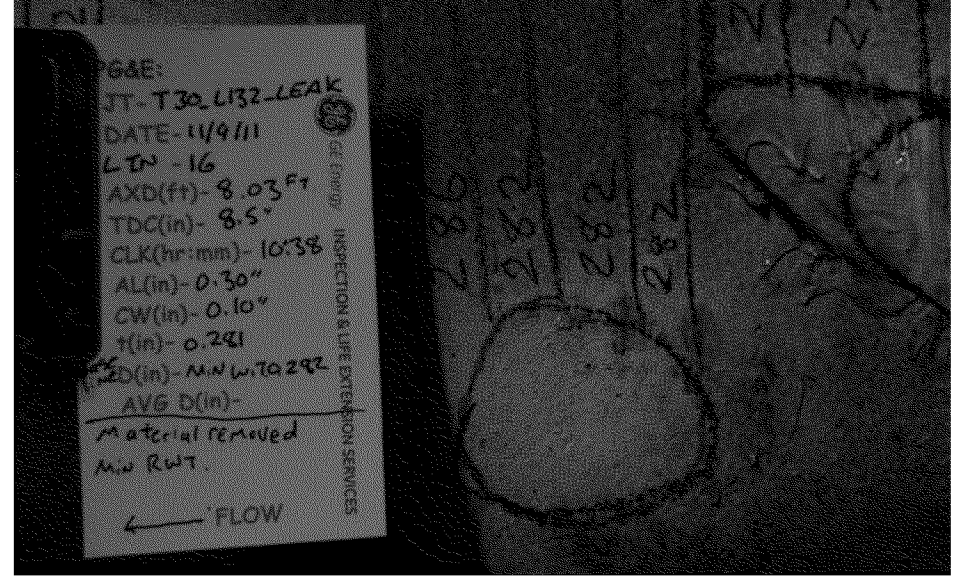


Overview of second inspection MT Indications of LIN-16

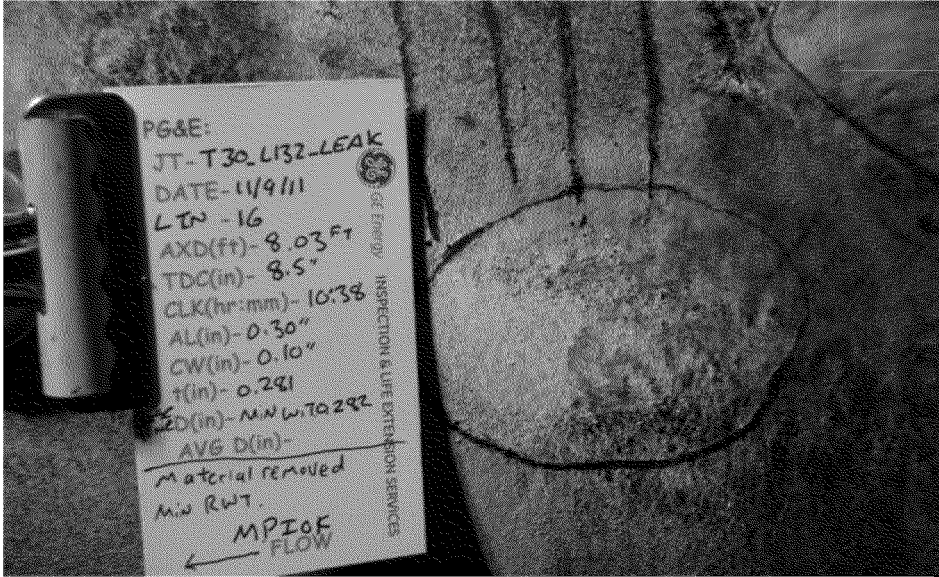




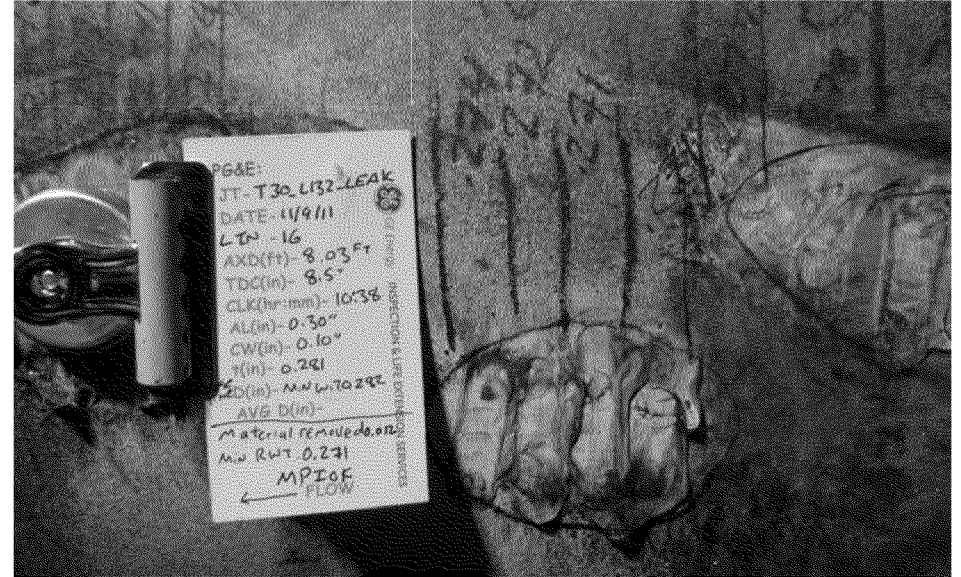
Close up of second inspection MT Indications of LIN-16



Overview of second inspection pre buff area (RWT) LIN-16



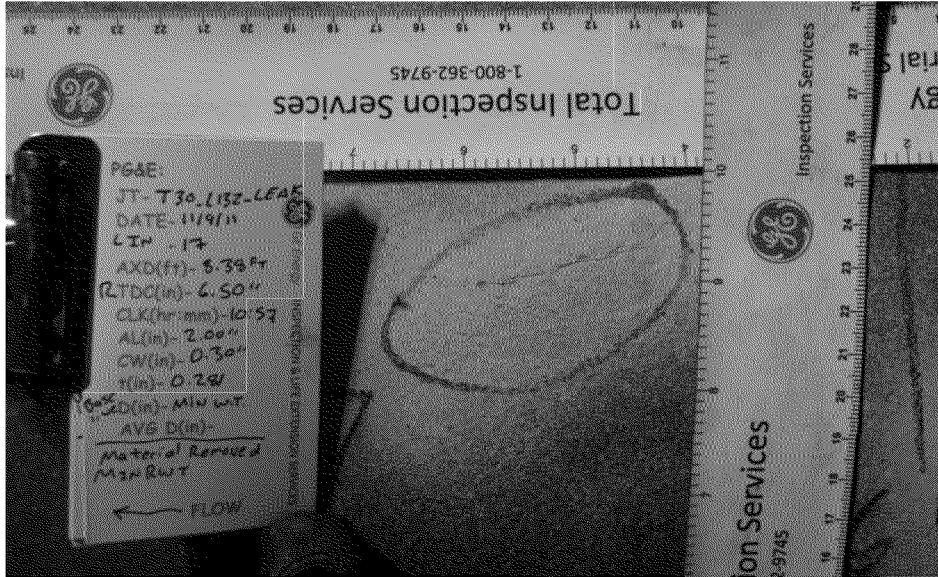
Overview of second inspection post grind (MPIOK) of LIN-16



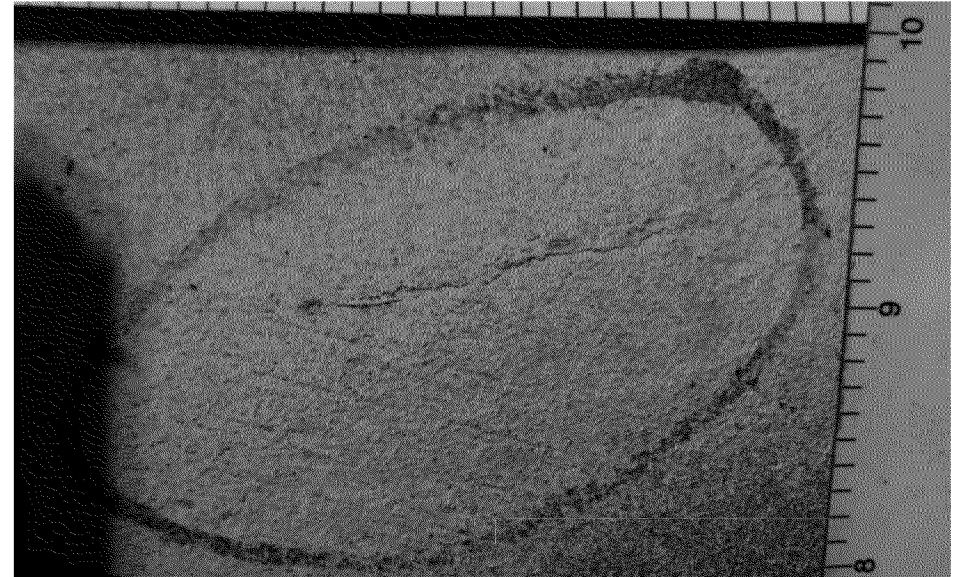
Overview of second inspection post grind (RWT) of LIN-16



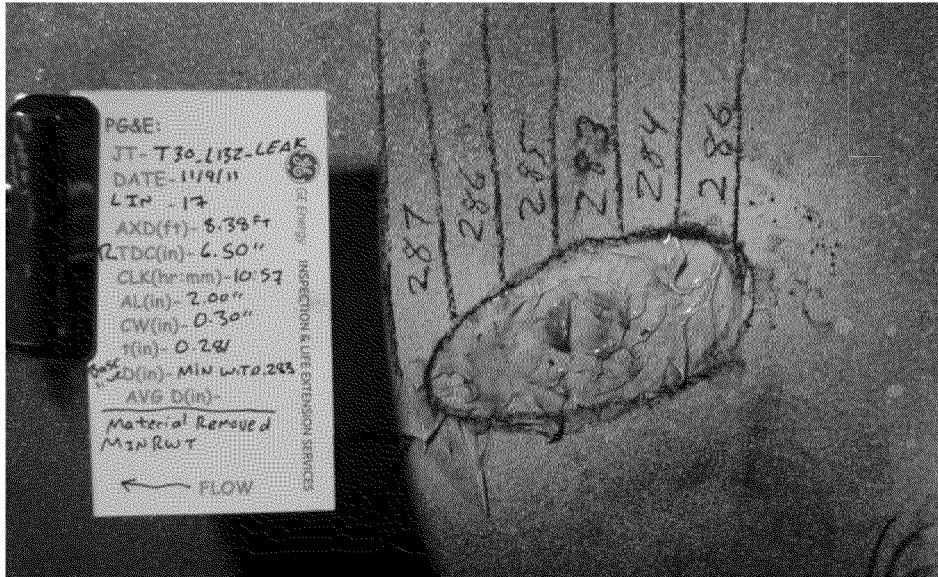




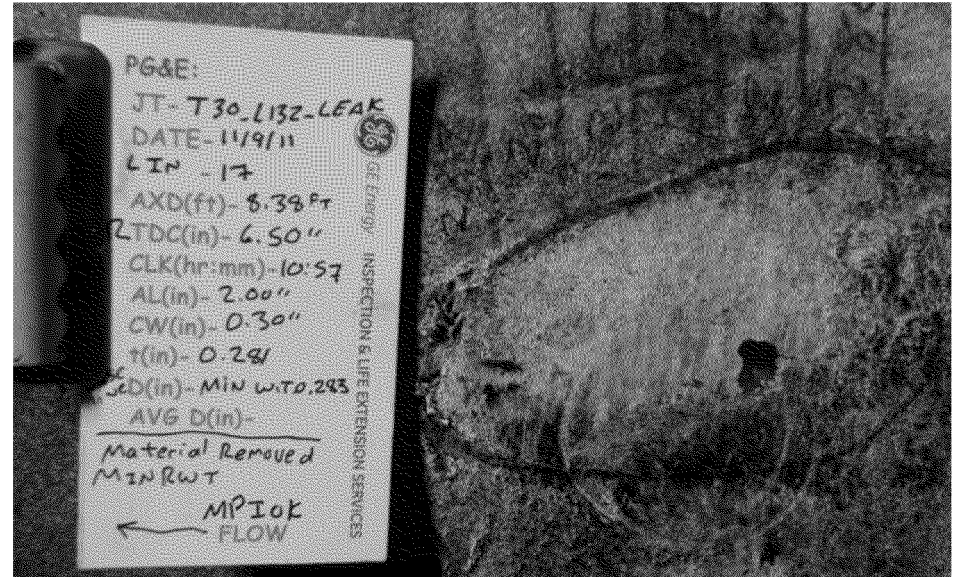
Overview of second inspection MT Indications of LIN-17



Close up of second inspection MT Indications of LIN-17

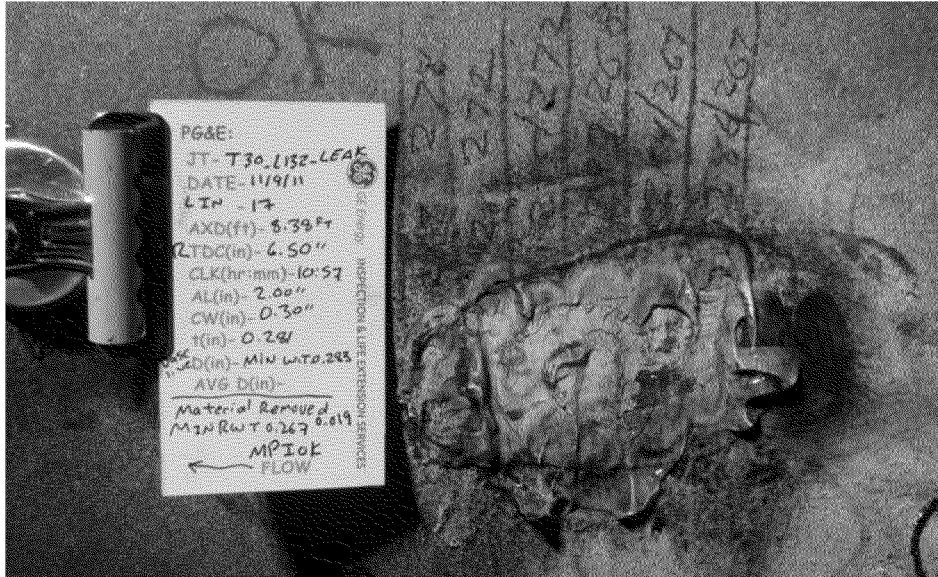


Overview of second inspection pre buff area (RWT) LIN-17

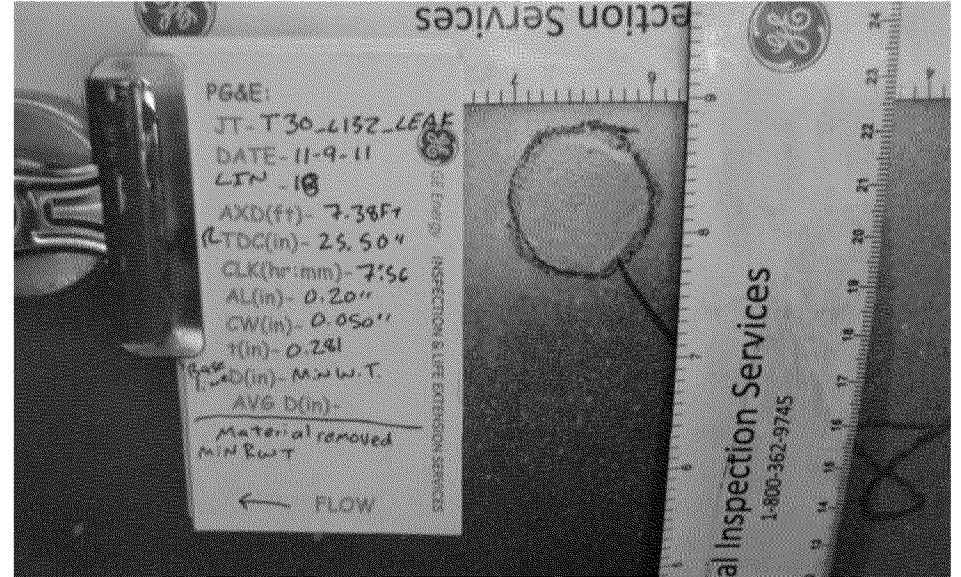


Overview of second inspection post grind (MPIOK) of LIN-17





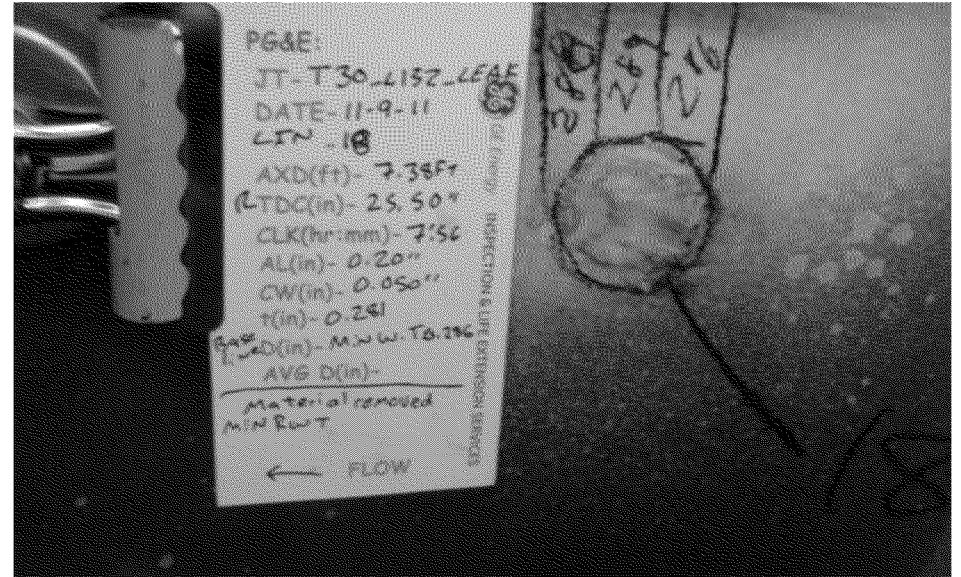
Overview of second inspection post grind (RWT) of LIN-17



Overview of second inspection MT Indications of LIN-18



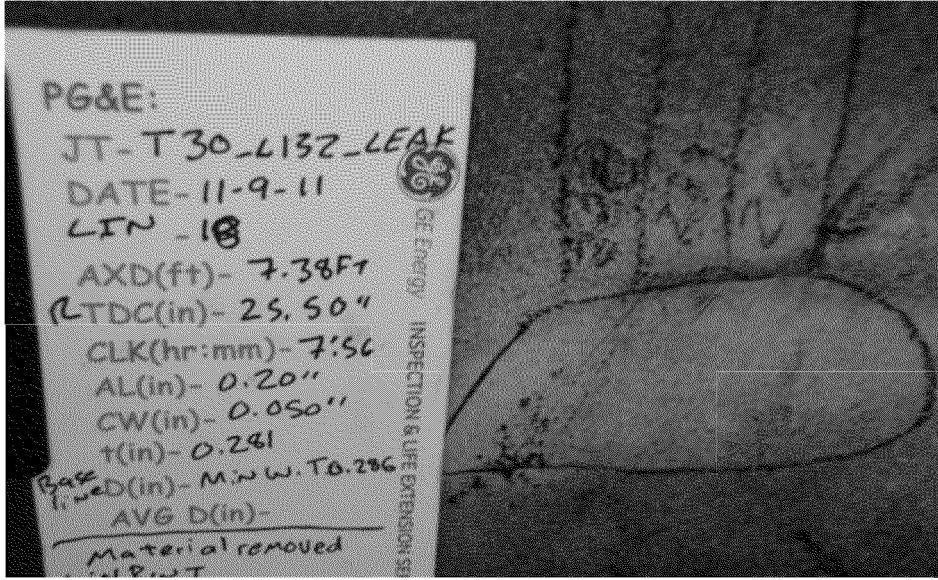
Close up of second inspection MT Indications of LIN-18



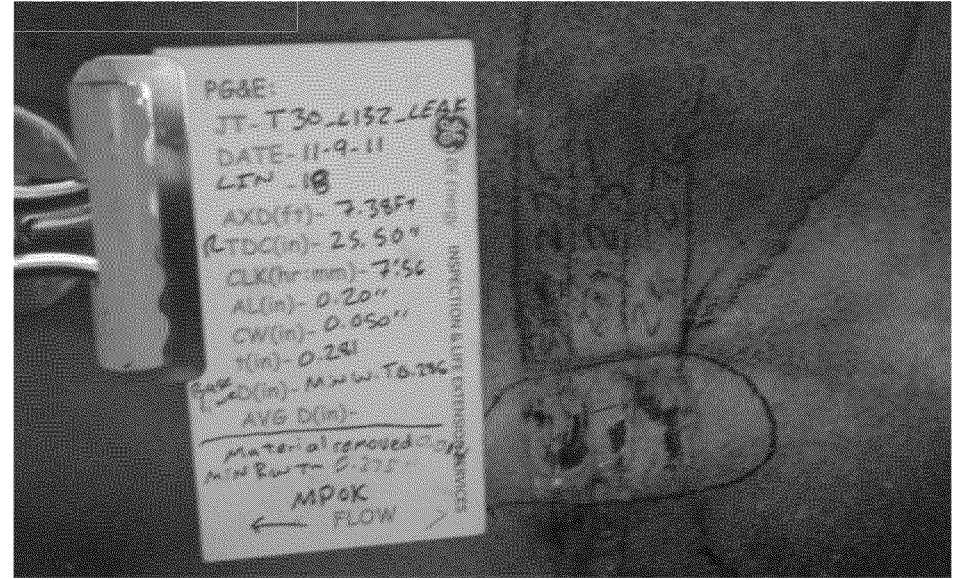
Overview of second inspection pre buff area (RWT) LIN-18



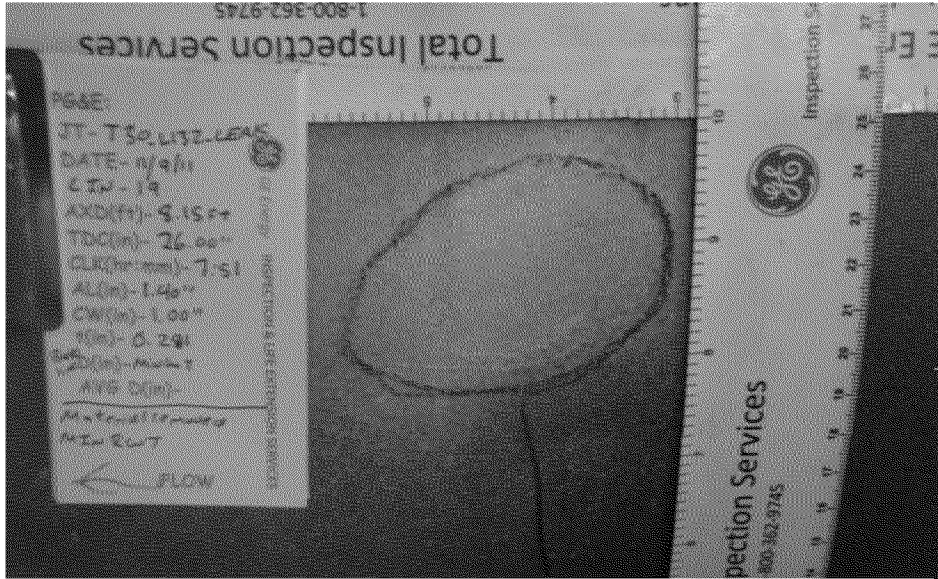




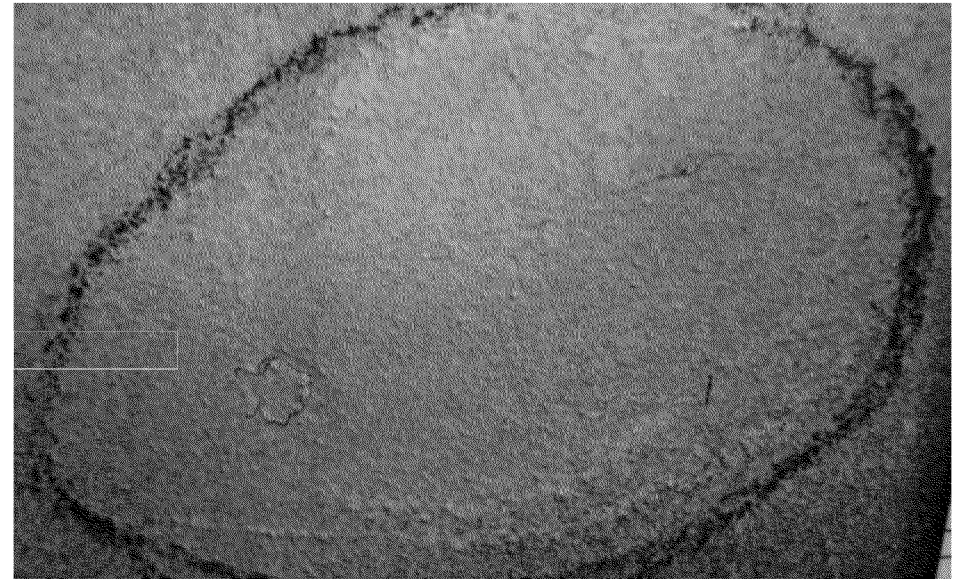
Overview of second inspection post grind (MPIOK) of LIN-18



Overview of second inspection post grind (RWT) of LIN-18

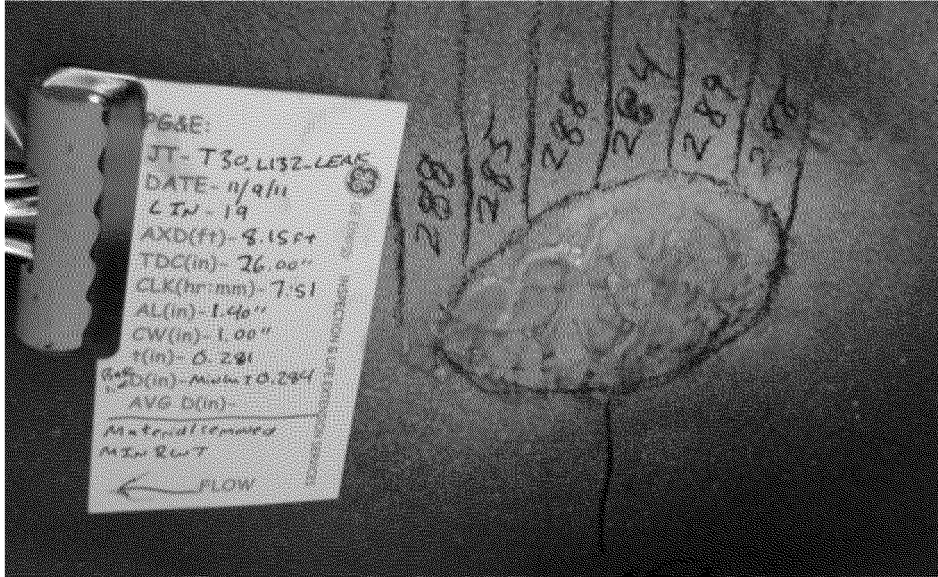


Overview of second inspection MT Indications of LIN-19

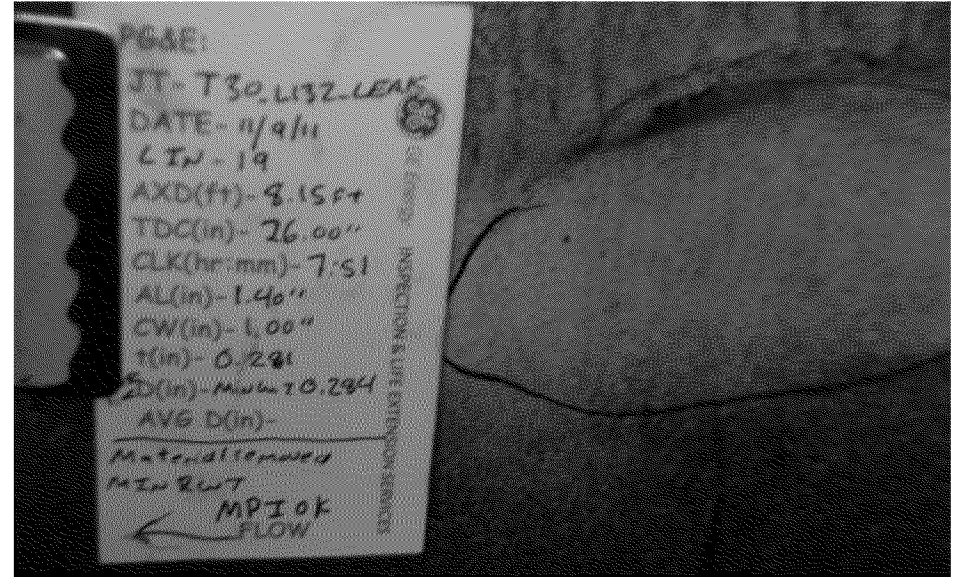


Close up of second inspection MT Indications of LIN-19

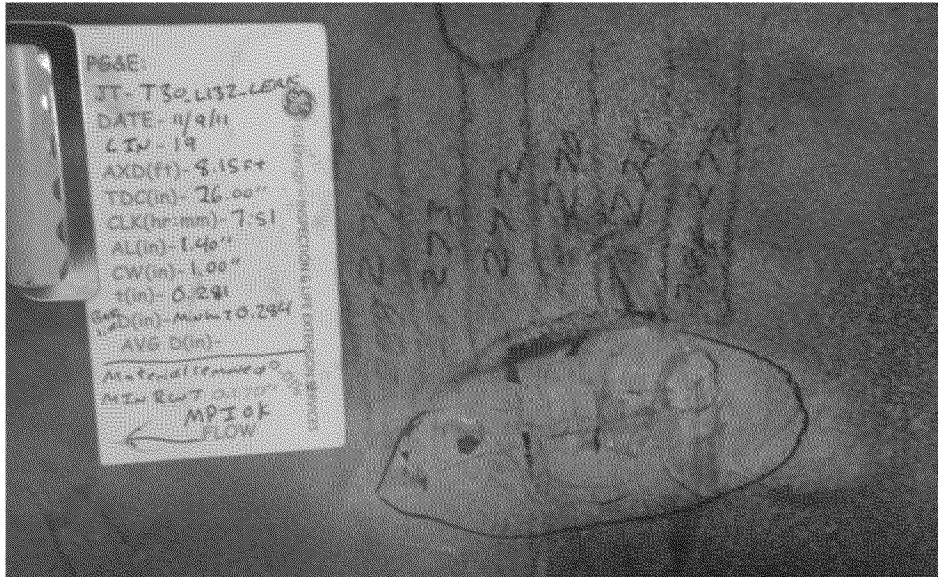




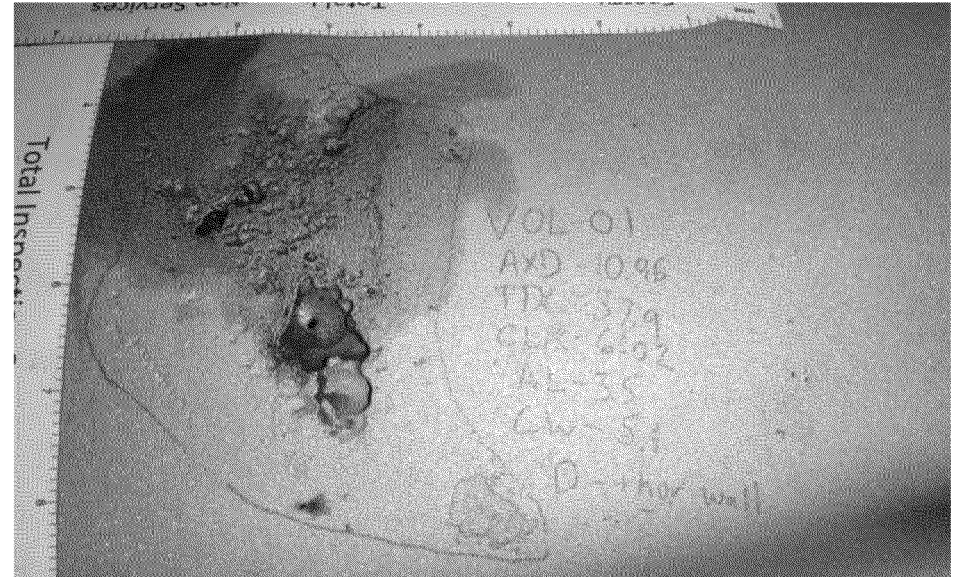
Overview of second inspection pre buff area (RWT) LIN-19



Overview of second inspection post grind (MPIOK) of LIN-19



Overview of second inspection post grind (RWT) of LIN-19



Overview (with measurements) of VOL-01







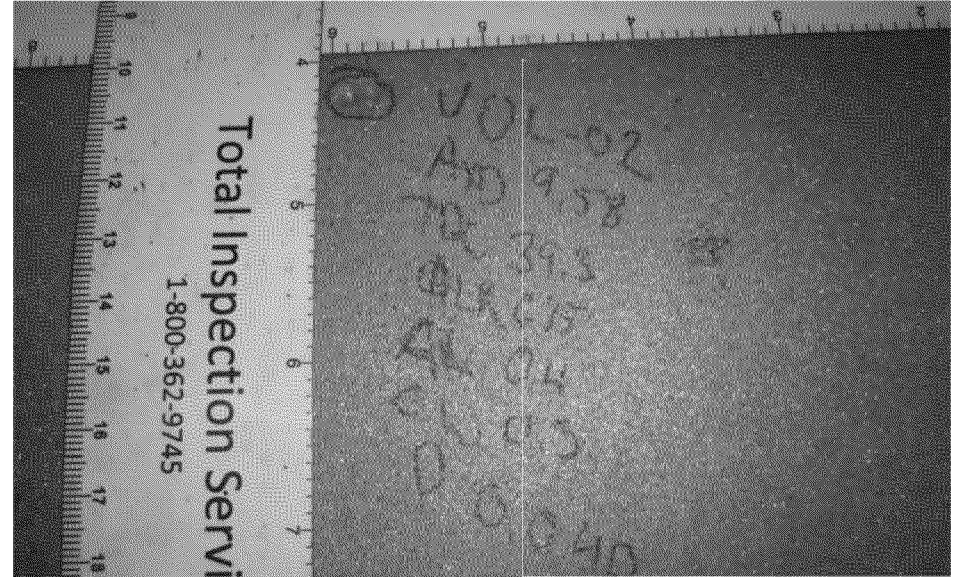
Close up (deepest area) of VOL-01



Pit gauge measurement VOL-01



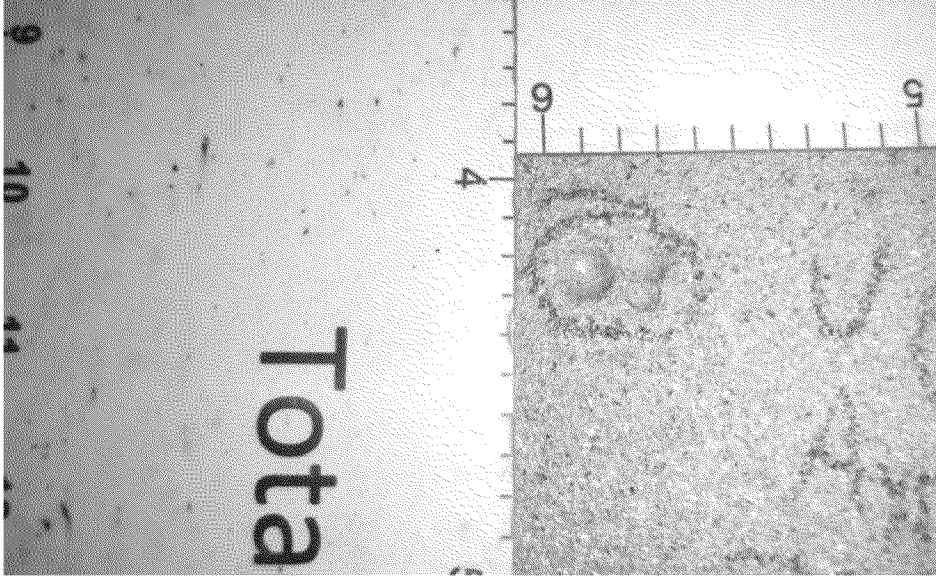
Overview of corrosion grid VOL-01



Overview (with measurements) of VOL-02



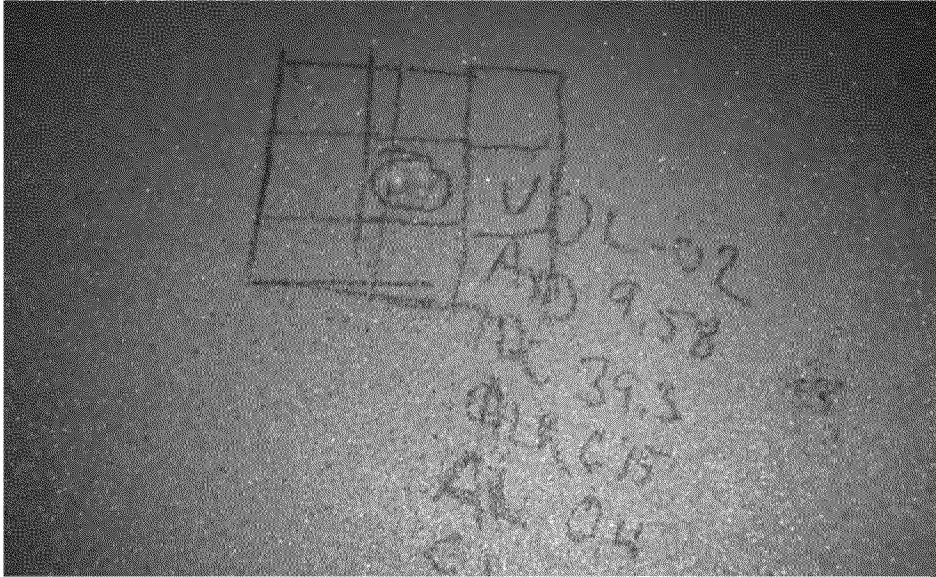




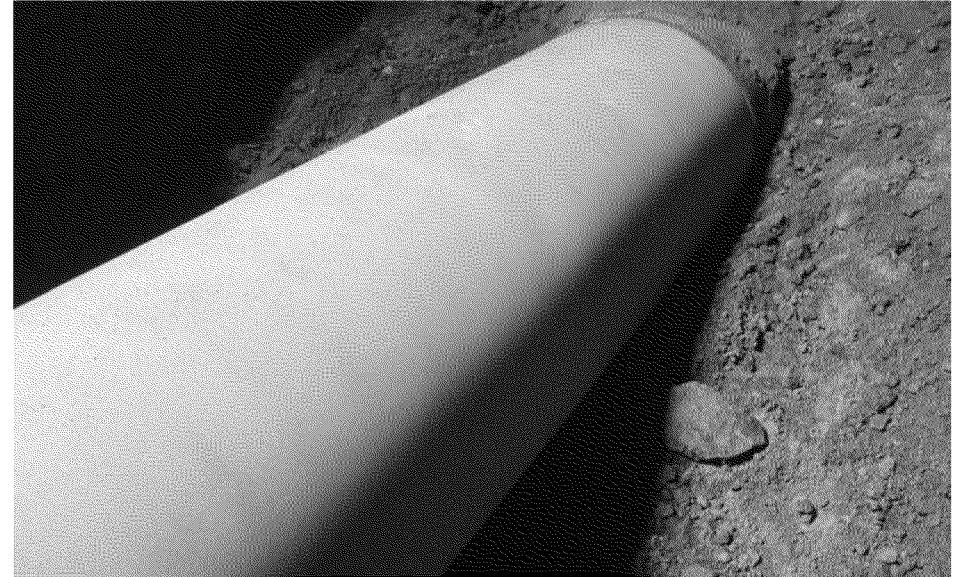
Close up (deepest area) of VOL-02



Pit gauge measurement VOL-02



Overview of corrosion grid VOL-02

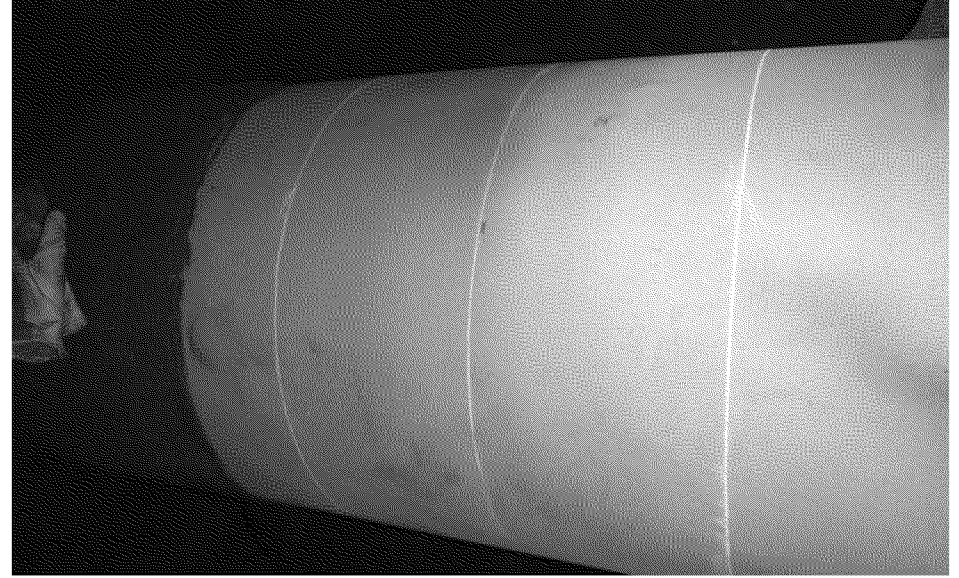


Overview of clean blasted inspection area prior to repair activities





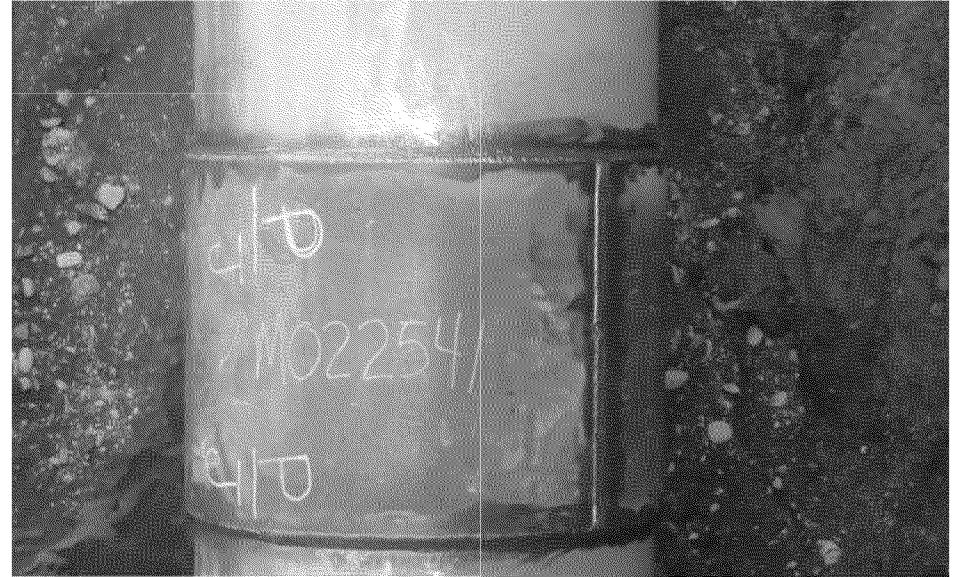
Overview of clean blasted inspection area prior to repair activities



Overview of full encirclement sleeve "B" location placement



Overview of full encirclement sleeve "B" placement



Overview of full encirclement sleeve "B" welded in to place

