

IN-FIELD SERVICES
GEIS Pipeline Integrity Team NDE

Pacific Gas & Electric Company

Hydrostatic Test Dig from November 19, 2011 to November 22, 2011

T30_L132_B West_MP-13.95

Documents Contained Within:

H-Form Report T30_L132_B West MP-13.95

NDE Reports of T30_L132_B West MP-13.95

Photo Report of T30_L132_B West MP-13.95

Authors: Redacted

Date: December 3, 2011



Form H: Direct Examination Data Sheet - Page 1 of 15

<u>DA/ILI</u>	<u>DA</u>	<u>ILI</u>
Route Number: T-30-L132-B (WEST)	N-Segment: N/A	ILI Log Distance: N/A
Date of Excavation: 9/17/2011	IMA Number: N/A	RMP-11 Ref. Section: Table 5.6.2
Mile Point: 13.95	Region Number: N/A	Reference Girth Weld: N/A
Examination Performed By: [Redacted]	Subregion # (ICDA): N/A	Distance From Girth Weld: N/A
PG&E Project Manager: [Redacted]	Stationing: N/A	
Approved By: N/A		
Order Number: N/A		

<u>Excavation Priority:</u>		<u>Excavation Reason</u>		
<input type="checkbox"/> Immediate	<input type="checkbox"/> Scheduled (For ILI - <input type="checkbox"/> 1 Year <input type="checkbox"/> Other)	<input type="checkbox"/> ECDA	<input type="checkbox"/> ILI	<input type="checkbox"/> Recoat
<input type="checkbox"/> Monitor	<input type="checkbox"/> Effectiveness <input type="checkbox"/> ICDA	<input type="checkbox"/> ICDA	<input checked="" type="checkbox"/> Other	HYDRO

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

Excavation Details: Centerline on GPS Coordinates (Based on GIS): _____

Northing: [Redacted] Planned Excavation Length (Ft.): N/A

Easting: [Redacted] Actual Excavation Length (Ft.): 40 Ft

Centerline on GPS Coordinates (Uncorrected Field Measurement): _____ GPS File Name: _____ N/A

Northing: N/A

Easting: N/A

Centerline on GPS Coordinates (Corrected Field Measurement): _____

Northing: N/A

Easting: N/A

1.0 Data Before Coating Removal

1.1 Native Soil Type: Clay Rock Sand Loam Wet Other N/A

Depth of Cover (Ft.): 7'

Comments: N/A

1.2 Coating Type: HAA Coal Tar Plastic Tape Wax Tape FBE Powercrete

Bare/None Paint Other: N/A Comments: N/A

Coating Thickness (Inches): 0.218" Number of Layers: 2

1.3 Holiday Testing Performed?: Yes No Voltage Used: N/A Map Location of Holidays Below.

Device Used: Coil Wet Sponge Comments: N/A

1.4 Pipe-to-Soil Potentials in Ditch (-mV): US: 12:00 -853 3:00 -860 6:00 -850 9:00 -855

DS: 12:00 -848 3:00 -848 6:00 -839 9:00 854

1.5 Soil Resistivity in Ditch (Ω -cm): Method: 4-Pin 1880 Ω -cm Soil Box N/A

1.6 Soil Sample Location Comments UKN

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

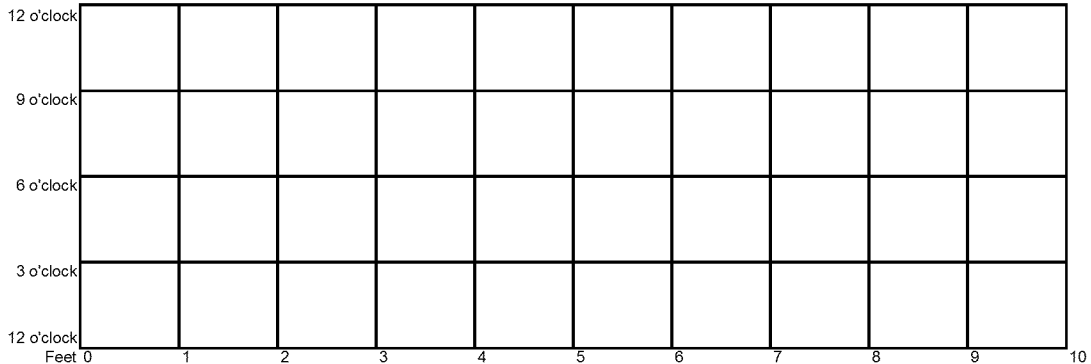
Poor - Coating Significantly Disbonded or Missing

Comments: N/A

1.9 Map of Coating Degradation*: CaCO₃ 1 Zero Reference Point: _____

*Note any calcareous deposit locations

FeO 2 FeCO₃ 3 Flow \rightarrow



- 1 CaCo3 - Calcareous deposits containing calcium
- 2 FeO - Calcareous deposits containing iron
- 3 FeCO3 - General iron oxide with scale

Form H: Direct Examination Data Sheet - Page 2 of 15

<p><u>DA/ILI</u></p> <p>Route Number: <u>T-30-L132-B (west)</u></p> <p>Date of Excavation: <u>9/17/2011</u></p> <p>Mile Point: <u>13.95</u></p> <p>Examination Performed By: <u>Redacted</u></p> <p>PG&E Project Manager: <u>Redacted</u></p> <p>Approved By: <u>N/A</u></p> <p>Order Number: <u>N/A</u></p>	<p><u>DA</u></p> <p>N-Segment: <u>N/A</u></p> <p>IMA Number: <u>N/A</u></p> <p>Region Number: <u>N/A</u></p> <p>Subregion # (ICDA): <u>N/A</u></p> <p>Stationing: <u>N/A</u></p>	<p><u>ILI</u></p> <p>ILI Log Distance: <u>N/A</u></p> <p>RMP-11 Ref. Section: <u>Table 5.6.2</u></p> <p>Reference Girth Weld: <u>N/A</u></p> <p>Distance From Girth Weld: <u>N/A</u></p>
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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: N/A

1.13 Corrosion Product Present?: Yes No If Yes, Was Sample Taken?: Yes No
 Comments: N/A

1.14 Soil pH (Sb Electrode): Upstream: 6.5 Downstream: 6 Pipe 6

2.0 Data After Coating Removal

2.1 Pipe Temperature (°F): 73 Measured Pipe Diameter (In.): 24

2.2 Weld Seam Type: DSAW SSAW ERW SMLS
 Spiral Lap Flash AO Smith Can't Determine

2.3 Girth Weld Coordinates:
 Northing: N/A
 Easting: N/A
 Elevation: N/A

2.4 Other Damage: Extensive localized pitting throughout parent material, deepest pit was DS VOL-02 @ 0.244" with UT verified RWT of 0.033" or 12% of NW
 See attached pitting grids, UT/MT, photo report and the recoat page in the comments section for additional information.

2.5 UT Wall Thickness Measurements: TDC: U/S .293 3 O'clock: 0.294 6 O'clock: 0.289 9 O'clock: 0.29
 TDC: D/S .289 3 O'clock: 0.296 6 O'clock: 0.286 9 O'clock: 0.294
 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: Linear indications found, remediated by light grinding and cut-out. See attached reports.
 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
 *Note any calcareous deposits.

	VOL
	DENT
	GOUGE

Zero Reference Point: _____
 Flow →

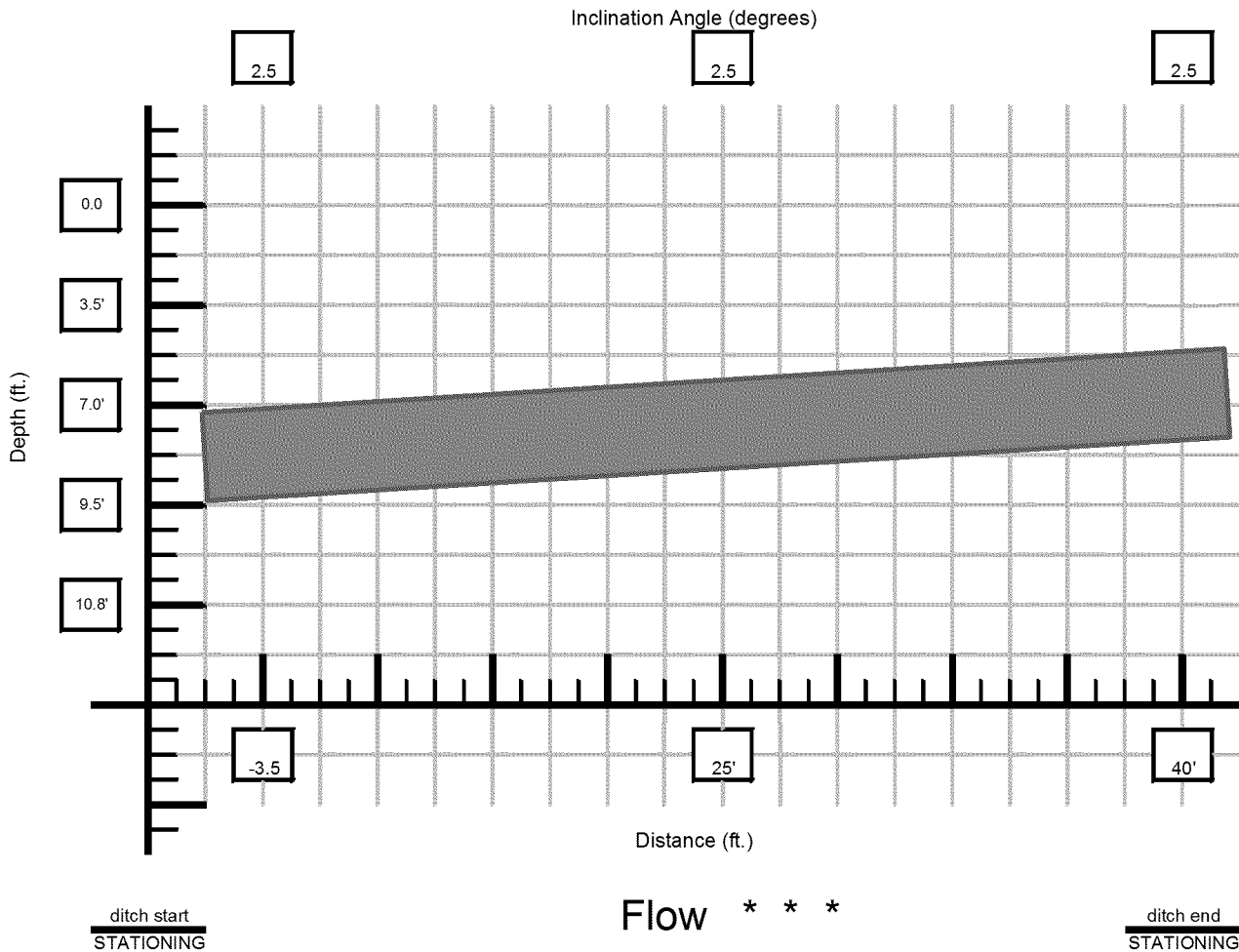
	12 o'clock	1	7	13	19	25	31	37	43	49	55	
		2	8	14	20	26	32	38	44	50	56	
	9 o'clock	3	9	15	21	27	33	39	45	51	57	
		4	10	16	22	28	34	40	46	52	58	
	6 o'clock	5	11	17	23	29	35	41	47	53	59	
		6	12	18	24	30	36	42	48	54	60	
	3 o'clock											
	12 o'clock											
Feet		0	1	2	3	4	5	6	7	8	9	10

Form H: Direct Examination Data Sheet - Page 3 of 15

<u>DA/ILI</u>		<u>DA</u>		<u>ILI</u>	
Route Number:	T-30-L132-B (west)	N-Segment:	N/A	ILI Log Distance:	N/A
Date of Excavation:	9/17/2011	IMA Number:	N/A	RMP-11 Ref. Section:	Table 5.6.2
Mile Point:	13.95		N/A	Reference Girth Weld:	N/A
Examination Performed By:	Redacted	Region Number:	N/A	Distance From Girth Weld:	N/A
PG&E Project Manager:		Subregion # (ICDA):	N/A		
Approved By:	N/A	Stationing:	N/A		
Order Number:	N/A				

Excavation Drawing:

At minimum draw pipe elevation profile and indicate stationing of 1) low point and 2) critical inclination angle. Place an arrow on the drawing indicating direction of gas flow in the region(s). Other labels may also be added (e.g. "to Station").



NOTES: (Record stationing and names of nearby landmarks such as creeks and roads. Provide any additional information that may help in spatially positioning pipe):

See Redact screen shot attached.

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: T-30-L132 - B (west)
 Date of Excavation: 9/17/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager:
 Approved By: N/A
 Order Number: N/A

DA
 N-Segment: N/A
 IMA Number: N/A
 Region Number: N/A
 Subregion # (ICDA): N/A
 Stationing: N/A

ILI
 ILI Log Distance: N/A
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: N/A
 Distance From Girth Weld: N/A

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = .5 Inch x .5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # up stream Voi # 1 Grid # N/A

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A	0.005	0.004	0.005	0.004	0.010					AxD - 9.28												
B	0.004	0.003	0.004	0.009	0.003					TDC - 31"												
C	0.011	0.003	0.004	0.005	0.005					L - .19"												
D	0.007	0.017	0.004	0.004	0.007					W - .30"												
E	0.046	0.058	0.004	0.005	0.005					D - 0.058"												
F	0.005	0.013	0.005	0.005	0.004																	
G	0.005	0.017	0.005	0.004	0.005																	
H																						
I																						
J																						
K																						
L																						
M																						
N																						
O																						
P																						
Q																						
R																						
S																						
T																						
U																						
V																						
W																						
X																						

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: T-30-L132-B (west)
 Date of Excavation: 9/17/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager: Redacted
 Approved By: N/A
 Order Number: N/A

DA
 N-Segment: N/A
 IMA Number: N/A
 Region Number: N/A
 Subregion # (ICDA): N/A
 Stationing: N/A

ILI
 ILI Log Distance: N/A
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: N/A
 Distance From Girth Weld: N/A

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = .5 Inch x .5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # up stream Vol #2 Grid # N/A

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
A	0.001	0.001	0.001			AxD - 9.75 TDC - 7.0" L - .5" W - .4" D - .084"																		
B	0.001	0.084	0.001																					
C	0.001	0.001	0.001																					
D																								
E																								
F																								
G																								
H																								
I																								
J																								
K																								
L																								
M																								
N																								
O																								
P																								
Q																								
R																								
S																								
T																								
U																								
V																								
W																								
X																								

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: T-30-L132-B (west)
 Date of Excavation: 9/17/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager: Redacted
 Approved By: N/A
 Order Number: N/A

DA
 N-Segment: N/A
 IMA Number: N/A
 Region Number: N/A
 Subregion # (ICDA): N/A
 Stationing: N/A

ILI
 ILI Log Distance: N/A
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: N/A
 Distance From Girth Weld: N/A

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = .5 Inch x .5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # up steam Vol #3 Grid # N/A

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
A	0.001	0.002	0.002	0.001	0.002	0.002	0.001	0.001	0.044			AxD - 9.45 TDC - 30.0" L - 9.0" W - 10.0" D - .098"												
B	0.002	0.001	0.001	0.002	0.002	0.001	0.001	0.028	0.001															
C	0.001	0.002	0.001	0.002	0.047	0.001	0.003	0.001	0.002															
D	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001															
E	0.001	0.006	0.002	0.098	0.039	0.001	0.001	0.001	0.001															
F	0.001	0.001	0.001	0.001	0.002	0.021	0.001	0.001	0.001															
G	0.001	0.001	0.001	0.001	0.002	0.026	0.003	0.001	0.001															
H	0.002	0.002	0.001	0.002	0.001	0.039	0.001	0.001	0.001															
I	0.062	0.001	0.001	0.001	0.001	0.023	0.001	0.001	0.001															
J	0.032	0.001	0.001	0.001	0.082	0.060	0.001	0.001	0.001															
K																								
L																								
M																								
N																								
O																								
P																								
Q																								
R																								
S																								
T																								
U																								
V																								
W																								
X																								

PIT DEPTH GRID 1 OF 2

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: T-30-L132 B (west)
 Date of Excavation: 9/17/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager:
 Approved By: N/A
 Order Number: N/A

DA
 N-Segment: N/A
 IMA Number: N/A
 Region Number: N/A
 Subregion # (ICDA): N/A
 Stationing: N/A

ILI
 ILI Log Distance: N/A
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: N/A
 Distance From Girth Weld: N/A

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = .5 Inch x .5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # up stream Vol #4 Grid # N/A

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
A	0.002	0.001	0.001					AxD - 10.7' TDC - 39.0" L - .08" W - .09" D - .055"																
B	0.010	0.055	0.002																					
C	0.001	0.001	0.001																					
D																								
E																								
F																								
G																								
H																								
I																								
J																								
K																								
L																								
M																								
N																								
O																								
P																								
Q																								
R																								
S																								
T																								
U																								
V																								
W																								
X																								

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: T-30-L132-B (west)
 Date of Excavation: 9/17/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager: Redacted
 Approved By: N/A
 Order Number: N/A

DA
 N-Segment: N/A
 IMA Number: N/A
 Region Number: N/A
 Subregion # (ICDA): N/A
 Stationing: N/A

ILI
 ILI Log Distance: N/A
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: N/A
 Distance From Girth Weld: N/A

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = .5 Inch x .5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # up stream Vol # 5 Grid # N/A

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
A	0.001	0.001	0.001				AxD - 10.3' TDC - 39" L - .06" W - .05" D - .060																	
B	0.001	0.060	0.001																					
C	0.001	0.003	0.001																					
D																								
E																								
F																								
G																								
H																								
I																								
J																								
K																								
L																								
M																								
N																								
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S																								
T																								
U																								
V																								
W																								
X																								

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: T-30-L132-B (west)
 Date of Excavation: 9/17/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager:
 Approved By: N/A
 Order Number: N/A

DA
 N-Segment: N/A
 IMA Number: N/A
 Region Number: N/A
 Subregion # (ICDA): N/A
 Stationing: N/A

ILI
 ILI Log Distance: N/A
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: N/A
 Distance From Girth Weld: N/A

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = .5 Inch x .5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # down stream Vol #1 Grid # N/A

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
A	0.005	0.005	0.003			AxD - 31.40' TDC - rev 1.7 L - .7" W - .7" D - .119"																		
B	0.005	0.119	0.003																					
C	0.005	0.005	0.004																					
D																								
E																								
F																								
G																								
H																								
I																								
J																								
K																								
L																								
M																								
N																								
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T																								
U																								
V																								
W																								
X																								

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: T-30-L132-B (west)
 Date of Excavation: 9/23/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager: Redacted
 Approved By: N/A
 Order Number: N/A

DA
 N-Segment: N/A
 IMA Number: N/A
 Region Number: N/A
 Subregion # (ICDA): N/A
 Stationing: N/A

ILI
 ILI Log Distance: N/A
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: N/A
 Distance From Girth Weld: N/A

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = .5 Inch x .5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # down stream Vol #2 Grid # N/A

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
A	0.007	0.004	0.019	0.002	0.003	0.004	0.002						AxD - 33.35ft TDC - 6.5"											
B	0.002	0.015	0.016	0.006	0.009	0.003	0.005						AL - 2.2" CW - 3.0" D - .244"											
C	0.007	0.097	0.244	0.098	0.015	0.007	0.004						UT verified RWT: 0.033"											
D	0.007	0.002	0.015	0.161	0.059	0.004	0.004																	
E	0.009	0.007	0.007	0.028	0.017	0.007	0.004																	
F	0.009	0.005	0.003	0.005	0.025	0.004	0.001																	
G	0.008	0.006	0.004	0.002	0.002	0.003	0.002																	
H																								
I																								
J																								
K																								
L																								
M																								
N																								
O																								
P																								
Q																								
R																								
S																								
T																								
U																								
V																								
W																								
X																								

SECOND EXTERNAL CORROSION LOG AFTER COATING REMOVAL PRIOR TO RECOAT

<u>DA/ILI</u>		<u>DA</u>		<u>ILI</u>	
Route Number:	L-132	Site Designation	T30_B West	ILI Log Distance:	NA
Date of Excavation:	11/19/2011	N-Segment:	NA	RMP-11 Ref. Section:	Table 5.6.2
Mile Point:	13.95	IMA Number:	NA	Reference Girth Weld:	NA
Examination Performed By:	Redacted		NA	Distance From Girth Weld:	NA
PG&E Project Manager:		Region Number:	NA		
Approved By:	NA	Subregion # (ICDA):	NA		
Order Number:	0	Stationing:	NA		

TYPE	FEET FROM REFERENCE	O'CLOCK	MAX PIT DEPTH (INCHES)	MAX LENGTH (IN.)	MAX CIRC EXTENT (IN.)
VOL-01	9.10ft	5:09	0.089"	1.000"	1.800"
VOL-02	9.43ft	6:05	0.071"	0.600"	0.500"
VOL-03	9.71ft	5:22	0.062"	0.700"	1.000"
VOL-04	9.73ft	5:01	0.062"	1.000"	0.800"
VOL-05	9.70ft	1:07	0.082"	0.300"	0.300"
VOL-06	9.80ft	6:12	0.084"	0.400"	0.300"
VOL-07	10.13ft	6:45	0.059"	0.600"	0.600"
VOL-08	10.13ft	5:15	0.056"	0.300"	0.400"
VOL-09	10.33ft	6:05	0.063"	0.400"	0.300"
VOL-10	33.80ft	10:10	0.056"	1.500"	1.800"
VOL-11	33.93ft	11:50	0.115"	1.500"	0.800"
VOL-12	34.13ft	11:37	0.071"	1.100"	0.900"
VOL-13	34.33ft	12:23	0.059"	0.600"	0.500"
VOL-14	34.86ft	12:14	0.079"	0.400"	0.500"
VOL-15	34.92ft	10:42	0.109"	0.600"	0.800"

Summary:

VOL-01 through VOL-09 were collected using a tighter interaction criteria than the original inspection and should correspond to the original grids.

VOL-10 through VOL-15 were uncovered during additional coating removal during recoat.

Form H: Direct Examination Data Sheet - Supplemental Pages

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: L-132
 Date of Excavation: 11/19/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager: Redacted
 Approved By: NA
 Order Number: 0

DA
 Site Designation: T30_B West
 N-Segment: NA
 IMA Number: NA
 Region Number: NA
 Subregion # (ICDA): NA
 Stationing: NA

ILI
 ILI Log Distance: NA
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: NA
 Distance From Girth Weld: NA

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = 0.5 Inch x 0.5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # VOL-01 Grid # NA






	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A	.063"	.089"					AXD:	9.10'														
B							TDC:	32.4"														
C							CLK:	5:09														
D							AL:	1.0"														
E							CW:	1.8"														
F							Deepest:	0.089"														
G							Nom. WT:	0.281"														
H																						
I																						
J																						
K																						
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V																						
W																						
X																						

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: L-132
 Date of Excavation: 11/19/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager: Redacted
 Approved By: NA
 Order Number: 0

DA
 Site Designation: T30_B West
 N-Segment: NA
 IMA Number: NA
 Region Number: NA
 Subregion # (ICDA): NA
 Stationing: NA

ILI
 ILI Log Distance: NA
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: NA
 Distance From Girth Weld: NA

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = 0.5 Inch x 0.5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # VOL-02 Grid # NA

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A	.071"					AXD:		9.43'														
B						TDC:		38.2"														
C						CLK:		6:30														
D						AL:		0.6"														
E						CW:		0.5"														
F						Deepest:		0.071"														
G						Nom. WT:		0.281"														
H																						
I																						
J																						
K																						
L																						
M																						
N																						
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U																						
V																						
W																						
X																						

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: L-132
 Date of Excavation: 11/19/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager: Redacted
 Approved By: NA
 Order Number: 0

DA
 Site Designation: T30_B West
 N-Segment: NA
 IMA Number: NA
 Region Number: NA
 Subregion # (ICDA): NA
 Stationing: NA

ILI
 ILI Log Distance: NA
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: NA
 Distance From Girth Weld: NA

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = 0.5 Inch x 0.5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # VOL-03 Grid # _____






	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A	.062"	.044"					AXD:	9.71'														
B							TDC:	33.7"														
C							CLK:	5:22														
D							AL:	0.7"														
E							CW:	1.0"														
F							Deepest:	0.062"														
G							Nom. WT:	0.281"														
H																						
I																						
J																						
K																						
L																						
M																						
N																						
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Q																						
R																						
S																						
T																						
U																						
V																						
W																						
X																						

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: L-132
 Date of Excavation: 11/19/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager: Redacted
 Approved By: NA
 Order Number: 0

DA
 Site Designation: T30_B West
 N-Segment: NA
 IMA Number: NA
 Region Number: NA
 Subregion # (ICDA): NA
 Stationing: NA

ILI
 ILI Log Distance: NA
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: NA
 Distance From Girth Weld: NA

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = 0.5 Inch x 0.5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # VOL-04 Grid # NA






	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A	0.59"	0.62"					AXD:	9.73'														
B							TDC:	31.5"														
C							CLK:	0."														
D							AL:	1.0"														
E							CW:	0.8"														
F							Deepest:	0.062"														
G							Nom. WT:	0.281"														
H																						
I																						
J																						
K																						
L																						
M																						
N																						
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U																						
V																						
W																						
X																						

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: L-132
 Date of Excavation: 11/19/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager: Redacted
 Approved By: NA
 Order Number: 0

DA
 Site Designation: T30_B West
 N-Segment: NA
 IMA Number: NA
 Region Number: NA
 Subregion # (ICDA): NA
 Stationing: NA

ILI
 ILI Log Distance: NA
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: NA
 Distance From Girth Weld: NA

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = 0.5 Inch x 0.5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # VOL-05 Grid # NA






	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A	.082"						AXD:	9.70'														
B							TDC:	7.0"														
C							CLK:	1:06														
D							AL:	0.3"														
E							CW:	0.3"														
F							Deepest:	0.082"														
G							Nom. WT:	0.281"														
H																						
I																						
J																						
K																						
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M																						
N																						
O																						
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W																						
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EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: L-132
 Date of Excavation: 11/19/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager: Redacted
 Approved By: NA
 Order Number: 0

DA
 Site Designation: T30_B West
 N-Segment: NA
 IMA Number: NA
 Region Number: NA
 Subregion # (ICDA): NA
 Stationing: NA

ILI
 ILI Log Distance: NA
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: NA
 Distance From Girth Weld: NA

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = 0.5 Inch x 0.5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # VOL-06 Grid # _____

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
A	.084"					AXD:		9.80'															
B						TDC:		39.0"															
C						CLK:		6:12															
D						AL:		0.4"															
E						CW:		0.3"															
F						Deepest:		0.084"															
G						Nom. WT:		0.281"															
H																							
I																							
J																							
K																							
L																							
M																							
N																							
O																							
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Q																							
R																							
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T																							
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V																							
W																							
X																							

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: L-132
 Date of Excavation: 11/19/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager: Redacted
 Approved By: NA
 Order Number: 0

DA
 Site Designation: T30_B West
 N-Segment: NA
 IMA Number: NA
 Region Number: NA
 Subregion # (ICDA): NA
 Stationing: NA

ILI
 ILI Log Distance: NA
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: NA
 Distance From Girth Weld: NA

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = 0.5 Inch x 0.5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # VOL-07 Grid # NA






	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A	.032"	.059"					AXD:	10.13'														
B							TDC:	42.5"														
C							CLK:	6:45														
D							AL:	0.6"														
E							CW:	0.6"														
F							Deepest:	0.059"														
G							Nom. WT:	0.281"														
H																						
I																						
J																						
K																						
L																						
M																						
N																						
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Q																						
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V																						
W																						
X																						

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: L-132
 Date of Excavation: 11/19/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager: Redacted
 Approved By: NA
 Order Number: 0

DA
 Site Designation: T30_B West
 N-Segment: NA
 IMA Number: NA
 Region Number: NA
 Subregion # (ICDA): NA
 Stationing: NA

ILI
 ILI Log Distance: NA
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: NA
 Distance From Girth Weld: NA

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = 0.5 Inch x 0.5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # VOL-08 Grid # NA

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A	.056"					AXD:		10.13'														
B						TDC:		30.0"														
C						CLK:		5:15														
D						AL:		0.3"														
E						CW:		0.4"														
F						Deepest:		0.056"														
G						Nom. WT:		0.281"														
H																						
I																						
J																						
K																						
L																						
M																						
N																						
O																						
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W																						
X																						

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: L-132
 Date of Excavation: 11/19/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager: Redacted
 Approved By: NA
 Order Number: 0

DA
 Site Designation: T30_B West
 N-Segment: NA
 IMA Number: NA
 Region Number: NA
 Subregion # (ICDA): NA
 Stationing: NA

ILI
 ILI Log Distance: NA
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: NA
 Distance From Girth Weld: NA

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = 0.5 Inch x 0.5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # VOL-09 Grid # NA






	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
A	.063"					AXD:		10.33'															
B						TDC:		38.3"															
C						CLK:		6:05															
D						AL:		0.4"															
E						CW:		0.3"															
F						Deepest:		0.063"															
G						Nom. WT:		0.281"															
H																							
I																							
J																							
K																							
L																							
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V																							
W																							
X																							

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: L-132
 Date of Excavation: 11/19/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager: Redacted
 Approved By: NA
 Order Number: 0

DA
 Site Designation: T30_B West
 N-Segment: NA
 IMA Number: NA
 Region Number: NA
 Subregion # (ICDA): NA
 Stationing: NA

ILI
 ILI Log Distance: NA
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: NA
 Distance From Girth Weld: NA

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = 0.5 Inch x 0.5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # VOL-10 Grid # NA






	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A	.000"	.000"	.000"	.038"		AXD:		33.8'														
B	.000"	.018"	.021"	.055"		TDC:		11.5"														
C	.011"	.043"	.036"	.016"		CLK:		10:10														
D	.016"	.056"	.026"	.029"		AL:		1.5"														
E						CW:		1.8"														
F						Deepest:		0.056"														
G						Nom. WT:		0.281"														
H																						
I																						
J																						
K																						
L																						
M																						
N																						
O																						
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R																						
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T																						
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V																						
W																						
X																						

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: L-132
 Date of Excavation: 11/19/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager: Redacted
 Approved By: NA
 Order Number: 0

DA
 Site Designation: T30_B West
 N-Segment: NA
 IMA Number: NA
 Region Number: NA
 Subregion # (ICDA): NA
 Stationing: NA

ILI
 ILI Log Distance: NA
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: NA
 Distance From Girth Weld: NA

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = 0.5 Inch x 0.5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # VOL-11 Grid # NA

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A	.115"	.085"	.095"				AXD:	33.93'														
B	.107"	.061"	.046"				RTDC:	1.0"														
C							CLK:	11:50														
D							AL:	1.5"														
E							CW:	0.8"														
F							Deepest:	0.115"														
G							Nom. WT:	0.281"														
H																						
I																						
J																						
K																						
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T																						
U																						
V																						
W																						
X																						

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: L-132
 Date of Excavation: 11/19/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager: Redacted
 Approved By: NA
 Order Number: 0

DA
 Site Designation: T30_B West
 N-Segment: NA
 IMA Number: NA
 Region Number: NA
 Subregion # (ICDA): NA
 Stationing: NA

ILI
 ILI Log Distance: NA
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: NA
 Distance From Girth Weld: NA

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = 0.5 Inch x 0.5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # VOL-12 Grid # NA

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
A	.018"	.057"	.016"			AXD:		34.13'															
B	.015"	.071"	.036"			RTDC:		2.4"															
C						CLK:		11:37															
D						AL:		1.1"															
E						CW:		0.9"															
F						Deepest:		0.071"															
G						Nom. WT:		0.281"															
H																							
I																							
J																							
K																							
L																							
M																							
N																							
O																							
P																							
Q																							
R																							
S																							
T																							
U																							
V																							
W																							
X																							

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: L-132
 Date of Excavation: 11/19/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager: Redacted
 Approved By: NA
 Order Number: 0

DA
 Site Designation: T30_B West
 N-Segment: NA
 IMA Number: NA
 Region Number: NA
 Subregion # (ICDA): NA
 Stationing: NA

ILI
 ILI Log Distance: NA
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: NA
 Distance From Girth Weld: NA

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = 0.5 Inch x 0.5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # VOL-13 Grid # NA

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A	.024"	.059"	.000"			AXD:		34.33'														
B						TDC:		2.5"														
C						CLK:		12:23														
D						AL:		0.6"														
E						CW:		0.5"														
F						Deepest:		0.059"														
G						Nom. WT:		0.281"														
H																						
I																						
J																						
K																						
L																						
M																						
N																						
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P																						
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U																						
V																						
W																						
X																						

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: L-132
 Date of Excavation: 11/19/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager: Redacted
 Approved By: NA
 Order Number: 0

DA
 Site Designation: T30_B West
 N-Segment: NA
 IMA Number: NA
 Region Number: NA
 Subregion # (ICDA): NA
 Stationing: NA

ILI
 ILI Log Distance: NA
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: NA
 Distance From Girth Weld: NA

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = 0.5 Inch x 0.5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # VOL-14 Grid # NA

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A	.079"					AXD:		34.86'														
B						TDC:		1.5"														
C						CLK:		12:14														
D						AL:		0.4"														
E						CW:		0.5"														
F						Deepest:		0.079"														
G						Nom. WT:		0.281"														
H																						
I																						
J																						
K																						
L																						
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U																						
V																						
W																						
X																						

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI
 Route Number: L-132
 Date of Excavation: 11/19/2011
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager: Redacted
 Approved By: NA
 Order Number: 0

DA
 Site Designation: T30_B West
 N-Segment: NA
 IMA Number: NA
 Region Number: NA
 Subregion # (ICDA): NA
 Stationing: NA

ILI
 ILI Log Distance: NA
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: NA
 Distance From Girth Weld: NA

	.001 - .009
	.010 - .099
	.100 - .199
	.200 - .299
	Highest pit reading

Grid Size = 0.5 Inch x 0.5 Inch (specify grid size)
 Clock Position (specify below)

Anomaly # VOL-15 Grid # NA

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A	.023"	.109"					AXD:	34.92'														
B	.034"	.101"					RTDC:	8.1"														
C							CLK:	10:42														
D							AL:	0.6"														
E							CW:	0.8"														
F							Deepest:	0.109"														
G							Nom. WT:	0.281"														
H																						
I																						
J																						
K																						
L																						
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N																						
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INTERNAL CORROSION WALL LOSS GRID

<u>DA/ILI</u>		<u>DA</u>		<u>ILI</u>	
Route Number:	T30_L132L_B (west)	N-Segment:	N/A	ILI Log Distance:	N/A
Date of Excavation:	9/17/2011	IMA Number:	N/A	RMP-11 Ref. Section:	Table 5.6.2
Mile Point:	13.95		N/A	Reference Girth Weld:	N/A
Examination Performed By:	Redacted	Region Number:	N/A	Distance From Girth Weld:	N/A
PG&E Project Manager:		Subregion # (ICDA):	N/A		
Approved By:	N/A	Stationing:	N/A		
Order Number:	N/A				

Grid Size = 1 Inch x 1 Inch
 Clock Position (specify below)

	1	2	3	4	5	6	7	8	9	10	11	12
A	0.298	0.296	0.291	0.289	0.290	0.292	0.296	0.297	0.297	0.299	0.290	0.295
B	0.291	0.292	0.293	0.298	0.290	0.293	0.294	0.293	0.298	0.291	0.290	0.295
C	0.293	0.293	0.286	0.287	0.290	0.294	0.290	0.293	0.293	0.297	0.300	0.295
D	0.297	0.295	0.292	0.291	0.295	0.293	0.292	0.293	0.293	0.294	0.292	0.296
E	0.297	0.295	291.000	0.291	0.293	0.293	0.291	0.293	0.295	0.296	0.291	0.295
F	0.296	0.293	0.293	0.293	0.293	0.293	0.286	0.291	0.293	0.296	0.293	0.294
G	0.299	0.300	0.293	0.293	0.294	0.292	0.284	0.292	0.294	0.295	0.294	0.296
H	0.298	0.298	0.294	0.294	0.292	0.294	0.285	0.297	0.296	0.295	0.293	0.297
I	0.297	0.287	0.290	0.296	0.297	0.293	0.297	0.292	0.291	0.296	0.291	0.295
J	0.295	0.293	0.301	0.295	0.291	0.296	0.296	0.295	0.297	0.290	0.290	0.293
K	0.293	0.294	0.293	0.293	0.297	0.301	0.298	0.296	0.293	0.292	0.287	0.284
L	0.291	0.288	0.291	0.299	0.298	0.302	0.300	0.297	0.295	0.294	0.287	0.291

INTERNAL CORROSION GRID

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

DA/ILI
 Route Number: L-132
 Date of Recoat: 40869
 Mile Point: 13.95
 Examination Performed By: Redacted
 PG&E Project Manager:
 Approved By: NA
 Order Number: NA

DA
 Site Designation: T30_B West
 N-Segment: NA
 IMA Number: NA
 Region Number: NA
 Subregion # (ICDA): NA
 Stationing: NA

ILI
 ILI Log Distance: NA
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: NA
 Distance From Girth Weld: NA

3.0 RECOAT DATA

3.1 Sandblast Media: Kleen Blast 16/20 Anchor Profile Measurement: Average: 3.5 mils

3.2 Pipe Recoated With:
 Powercrete J Wax Tape Bar-Rust 235 Dev Grip 238 Dev Tar 247 Protal 7200 PE Tape

3.3 For Epoxy Coating Systems, Record Environmental Condition:
 Air Temperature: 55.0°F Dew Point: 47.6°F
 Pipe Temperature: 62.0°F Relative Humidity: 65.7%
 Time of Day: 9:45 am

3.4 Repair Coating Hardness (If ARC Coating):

US	3:00 -	<u>79</u>	6:00 -	<u>78</u>	9:00 -	<u>81</u>	12:00 -	<u>80</u>
DS	3:00 -	<u>81</u>	6:00 -	<u>82</u>	9:00 -	<u>79</u>	12:00 -	<u>78</u>

3.5 Measured Coating Thickness:

US	3:00 -	<u>34.5</u>	6:00 -	<u>28.7</u>	9:00 -	<u>34.5</u>	12:00 -	<u>29.0</u>
DS	3:00 -	<u>53.7</u>	6:00 -	<u>48.7</u>	9:00 -	<u>33.7</u>	12:00 -	<u>29.7</u>

Holiday Tested?: Yes No
 Device Used: Coil Wet Sponge Voltage Used: 2500 V Repair All Holidays: Yes

3.6 Coupon Test Station Installed?: Yes No ETS Installed?: Yes No

If Yes, Date Installed: N/A
 Surface Configuration: Fink G-5 Box Carsonite Other: NA

3.7 Backfill Material: Native Imported Sand Other: NA

Coating Protections?: Yes No
 If Yes, Check One: Rockguard Tuf-E-Nuf Conwed Other: NA

3.8 Pipe-to-Soil Readings Over Bell Hole After Backfill: UKN
 *If specified, a CIS should be done for approximately 100' on either side of the bell hole. Attach data.
 Comments: NA

3.9 Attach site sketch of excavation site.

4.0 REPAIR DATA

4.1 Repair Made: Yes No 4.2 Number of Repair Made: 1 (B-sleeve on corrosion over 80% NWT)
 4.3 Repair Type: Metallic Sleeve Non Metallic Sleeve Replace Can Filler Metal Other
 4.4 Damage Repaired: Corrosion Mechanical Other

Misc. Comments/Information: On 11-19-2011 abrasive blasting was started for the recoat process. US blast area had corrosion/pitting areas. These areas were evaluated during the initial H-Form inspections. DS area inspection revealed localized pitting that was over 80% NWT. This information was relayed to PG&E Engineering and it was determined that a B-Sleeve was required as a repair. This installation was performed prior to hydrotest and no further repairs were required.

After the test, more coating was removed DS of the repair sleeve and blasted. This revealed more pitting areas requiring evaluation that were not exposed during the initial inspection. This pitting was measured using visual and pit gauge techniques and relayed to PG&E Engineering. No remediation was determined necessary and instructions to proceed with recoating were received.

Please see attached corrosion grids and photo reports for additional information.



GE Energy
INSPECTION SERVICE

Redacted Overview

To: Pacific Gas & Electric Company Nuclear Non-Nuclear

Project: **Hydrostatic Test Dig**

GEIS Job Number: Purchase Order Number:

Location **T30 B-West L132** Redacted

Redacted

Pacific Gas & Electric Company
GE Inspection Services (Los Angeles)

Customer Specification: Accept:
Information Only: Reject: NDT Supervisor: 0

Report Processor: Signature: Date:

Reviewer: Signature: Level: Date:

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 SERVICES DOES NOT GUARANTEE ANY CONDITION OF THE TESTED SPECIMEN.

GE Energy
INSPECTION & LIFE EXTENSION SERVICES

MAGNETIC PARTICLE EXAMINATION REPORT							<input type="checkbox"/> Nuclear	<input checked="" type="checkbox"/> Non-Nuclear	
To: Pacific Gas & Electric Company				From: Redacted		Date: 9/17/2011			
Project: T30_L132_B West_MP-13.95									
PG&E Purchase Order No:				GEIS Job No: LAPI0015					
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: N/A	
	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: N/A	
Material	Size 24"	Material Thickness 0.281"	Type of Base Material Carbon Steel		Type of Filler Material C/S Smooth		Weld <input type="checkbox"/> Smooth <input type="checkbox"/> As Welded	N/A <input checked="" type="checkbox"/> As Welded	
Location	Redacted				System L-132				
Acceptance Standards	Customer Specifications				Procedure GEIS QCP # 500 Rev 15				
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 checked="" 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. Magnaflux Y-6 - S# 2101 / Spectroline BIP - S# 1597288					Surface Preparation Method Abrasive Blasting - NACE 2 Finish				
Inspection Medium / Color / Batch No. Magnaglo 14A / Fluorescent Green / 11F30K					Demagnetization Method / Equipment N/A				
Reference: Summary				See Attachment				Results of Inspection	
<p>The following areas were requested to be inspected: Bare pipe: 9.15' to 14.48' from original U/S ditch start. Bare pipe : 26.3' to 31.55' from original U/S ditch start.</p>									
<p>Summary:</p>								- 2 linear indications found. - 5 linear indications found. US LIN 01, 02 removed DS LIN 03, 04, 05 removed DS LIN 01, 02 are on the removed pipe section	
<p>Indications were remediated by PG&E by. Please see attached photo report for additional information.</p>									
Copy To: <i>Pacific Gas & Electric Company</i> <i>GE Inspection Services (Los Angeles)</i>				Requested By: Redacted		Reported By (Technician): Redacted			
				<input checked="" type="checkbox"/> Customer Specifications <input type="checkbox"/> Accept <input type="checkbox"/> Reject		NDT supervisor: Redacted			

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GE Energy
INSPECTION SERVICES

MT Results (Measurements)		<input type="checkbox"/> Nuclear	<input checked="" type="checkbox"/> Non-Nuclear
To: Pacific Gas & Electric Company		From: <input type="text" value="Redacted"/>	Date: 9/17/2011
Project: T30_L132_B West_MP-13.95			
PG&E Purchase Order No:		GEIS Job No: LAPI0015	
Location	<input type="text" value="Redacted"/>	System	L-132
Acceptance Standards	Customer Specifications	Procedure	GEIS QCP # 500 Rev 15
US LIN-01 AXD: 9.7ft, Clock 12:33, Axial Length: 2.200 in, Circ. W: 0.020 in			
US LIN-02 AXD: 9.10 ft, Clock 2:49, Axial Length: 4.500 in, Circ. W: 0.020 in			
DS LIN-01 AXD: 26.3 ft, Clock 8:37, Axial Length: 54.700 in, Circ. W: 0.500 in			
DS LIN-02 AXD: 26.6 ft, Clock 1:54, Axial Length: 2.500 in, Circ. W: 5.500 in			
DS LIN-03 AXD: 30.5 ft, Clock 1:08, Axial Length: 4.000 in, Circ. W: 0.020 in			
DS LIN-04 AXD: 30.65 ft, Clock 1:06, Axial Length: 2.000 in, Circ. W: 1.020 in			
DS LIN-05 AXD: 30.7 ft, Clock 1:54, Axial Length: 3.700 in, Circ. W: 0.020 in			
NOTE:			
US LIN-01, 02, DS LIN-03, 04, 05, were remediated by PG&E by buffing. LIN-01 and 02 were left on the pipe section that was removed from service.			
**Please see attached UT and photo report for additional information.			
Copy To: <i>Pacific Gas & Electric Company</i> <i>GE Inspection Services (Los Angeles)</i>		Requested By: <input type="text" value="Redacted"/>	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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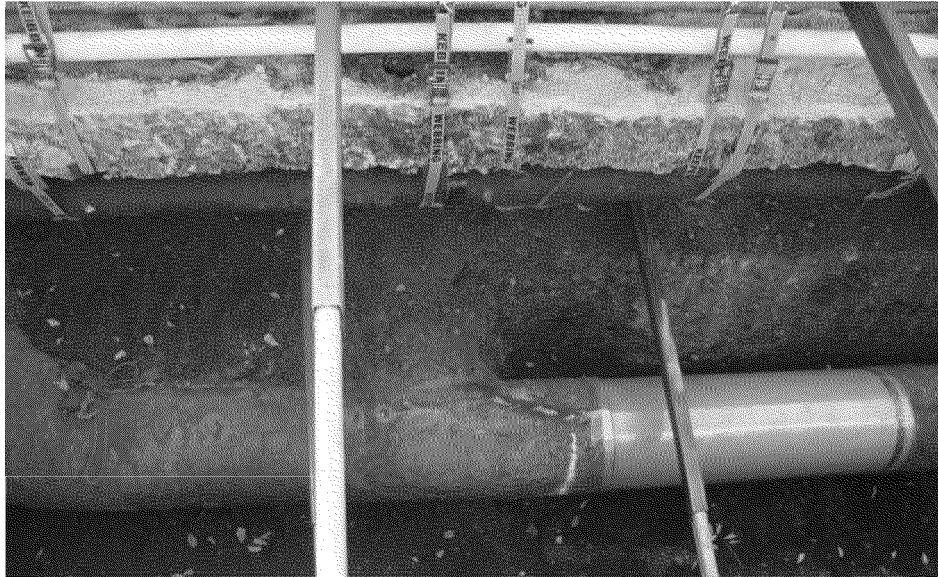
GE Energy
Inspection & Life Extension Services

ULTRASONIC EXAMINATION REPORT						<input type="checkbox"/> Nuclear	<input checked="" type="checkbox"/> Non-Nuclear	
To: Pacific Gas & Electric Company			From: Redacted		Date: 9/17/2011			
Project: T30_L132_B West_MP-13.95								
PG&E Purchase Order No:				GEIS Job No: LAPI0015				
Item	Weld <input checked="" type="checkbox"/>	Structural <input type="checkbox"/>	Casting <input type="checkbox"/>	Machinery <input type="checkbox"/>	Mach. Parts <input type="checkbox"/>	Pipe <input 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
Material	Size: 24"		No. of Pieces: 1	Type of Base Metal: Carbon Steel		Type of Filler Material: C/S	Weld: <input checked="" type="checkbox"/> N/A	<input checked="" type="checkbox"/> As Welded
Location	Redacted				System: L-132			
Acceptance Standards	Customer Specifications				Procedure: QCP-601			
Type of Inspection	Soundness <input checked="" type="checkbox"/>	Thickness <input checked="" type="checkbox"/>	Bond <input type="checkbox"/>		Transducer			Transducer Serial No.:
	Pulse Echo <input checked="" type="checkbox"/>	Angle-Beam <input type="checkbox"/>	Other <input type="checkbox"/>		<input checked="" type="checkbox"/> Single Crystal	<input checked="" type="checkbox"/> Dual Crystal		020HFC/021J79
				Frequency		Size	Angle	Couplant / Batch #
				5 MHz		0.375" & 0.250"	0°	Sonatest Ultragel II / 25-901 11325E
				Flat <input checked="" type="checkbox"/>	Concave <input type="checkbox"/>	Convex <input type="checkbox"/>		
			Standard	Material	Notch Depth	Serial No.:		
			Step Wedge <input checked="" type="checkbox"/>	Material	Thickness Range	Serial No.:		
			Tube Wedge <input type="checkbox"/>	C/S	0.100" - 0.500"	V34693		
Reference: Summary				<input checked="" type="checkbox"/> See Attachment		Results of Inspection:		
<p>The following areas were requested to be inspected:</p> <p>12" x 12" (1"x1" grid) at a random 6:00 position on the pipe.</p> <p>UT Thickness readings</p> <p>12" lamination scans at cut-line locations.</p> <p>Baseline readings & final grinding pass readings for US LIN-01, 02</p> <p>Baseline readings & final grinding pass readings for DS LIN-03, 04, 05.</p> <p>** Please see attached reports for additional information.</p>				- No relevant indications at time of inspection.				
				- No relevant indications @ time of inspection.				
				- No relevant indications @ time of inspection.				
Copy To:				Requested By: Redacted		Reported By (Technician): Redacted		
Pacific Gas & Electric Company				<input checked="" type="checkbox"/> Customer Specifications		NDT Supervisor:		
GE Inspection Services (Los Angeles)				<input type="checkbox"/> Accept <input type="checkbox"/> Reject		Redacted		

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Overview of Dig Site



Overview of Dig Site



Overview of coating condition 0 ft to 5 ft, 3:00 position



Overview of coating condition 5 ft to 10 ft, 3:00 position

g



Overview of coating condition 10 ft to 15 ft, 3:00 position



Overview of coating condition 15 ft to 20 ft, 3:00 position



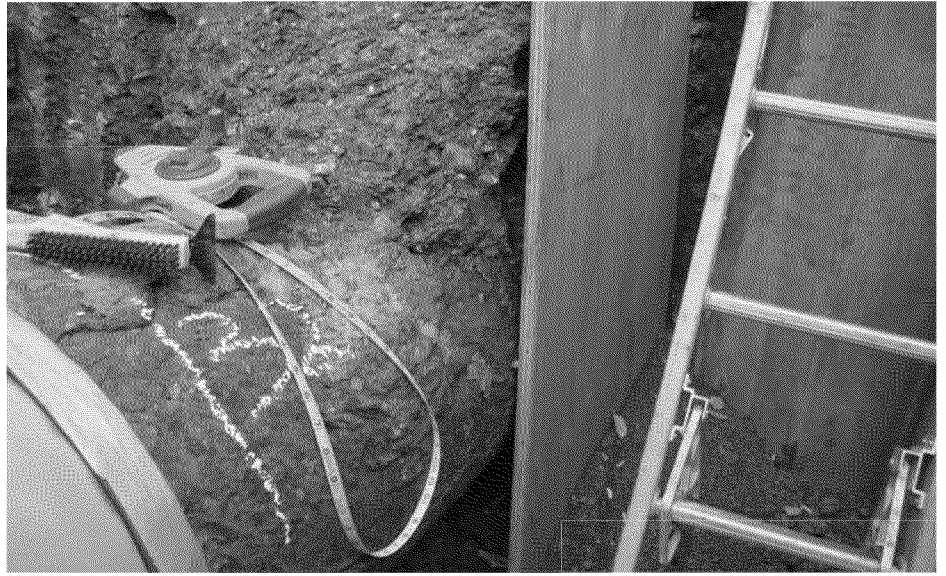
Overview of coating condition 20 ft to 25 ft, 3:00 position



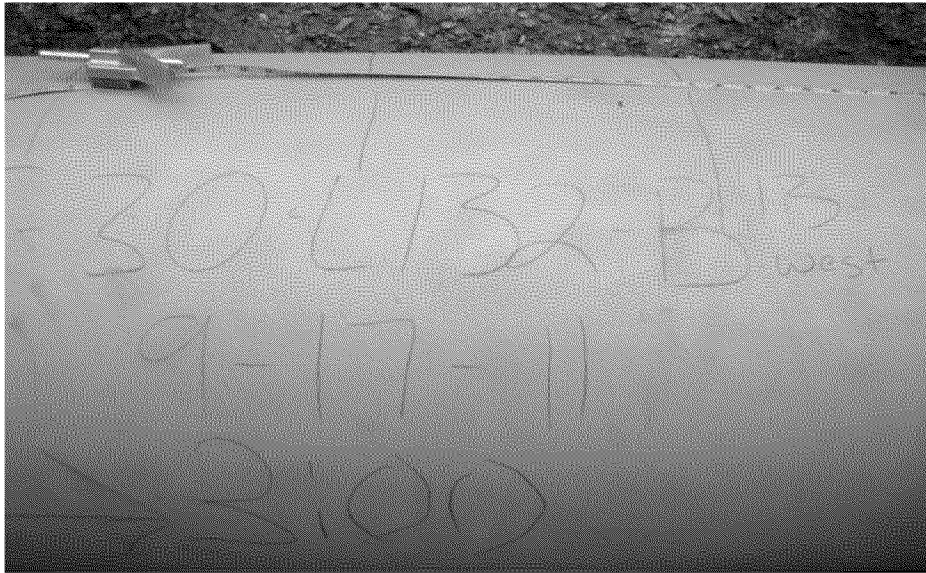
Overview of coating condition 25 ft to 30 ft, 3:00 position



Overview of coating condition 30 ft to 33 ft, 3:00 position



Overview of coating condition 30 ft to 33 ft, 3:00 position



Overview of MPI layout 3:00 position

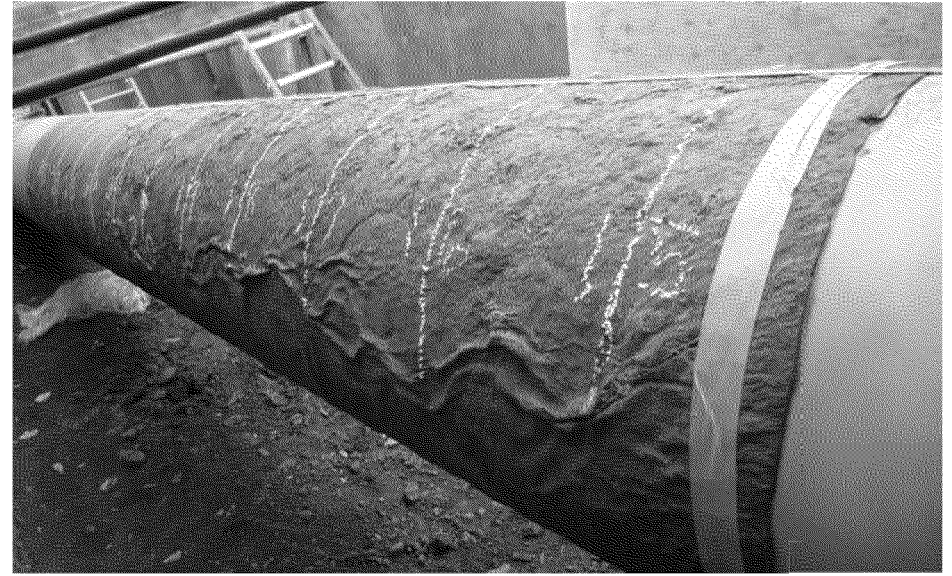


Overview of MPI layout 8 ft to 10 ft, 9:00 position

g



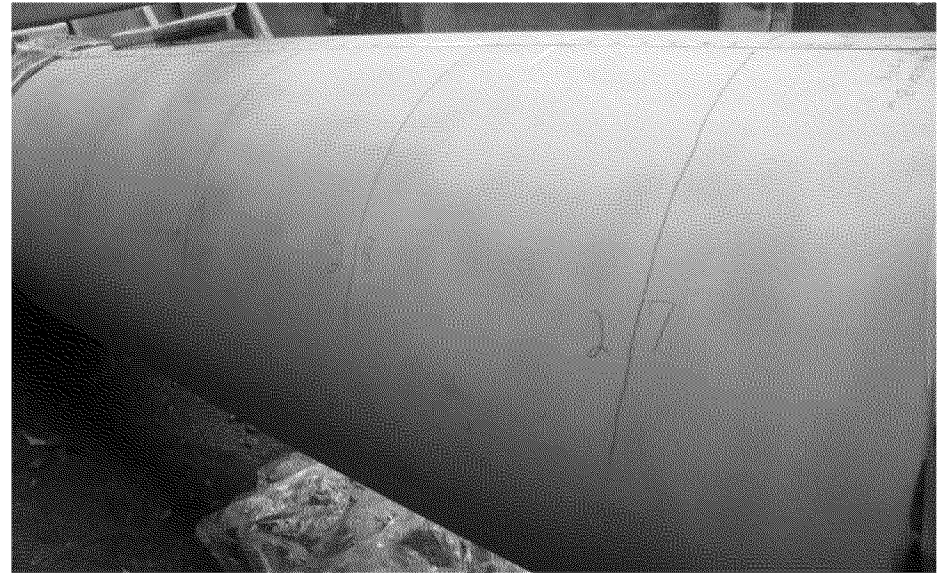
Overview of MPI layout 10 ft to 15 ft, 9:00 position



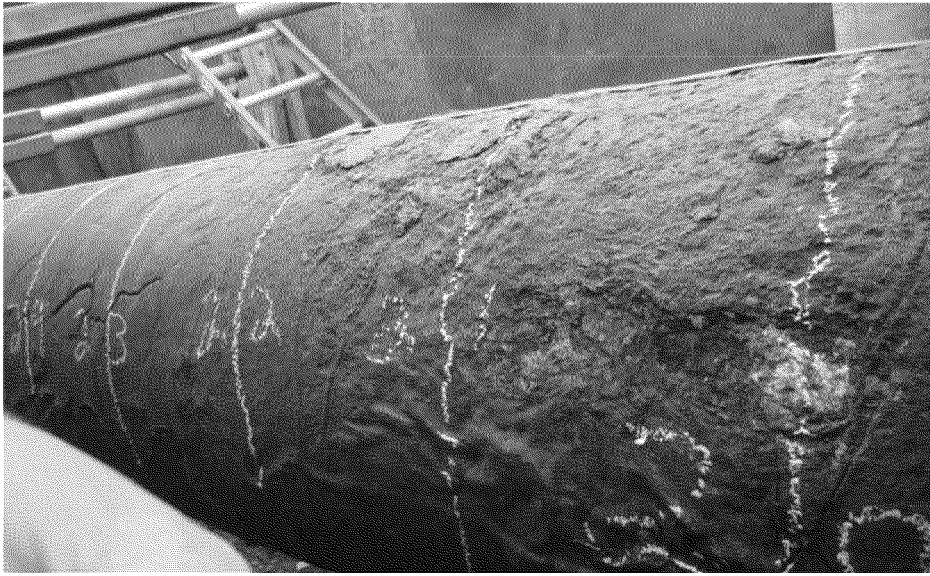
Overview of coating condition 15 ft to 20 ft, 9:00 position



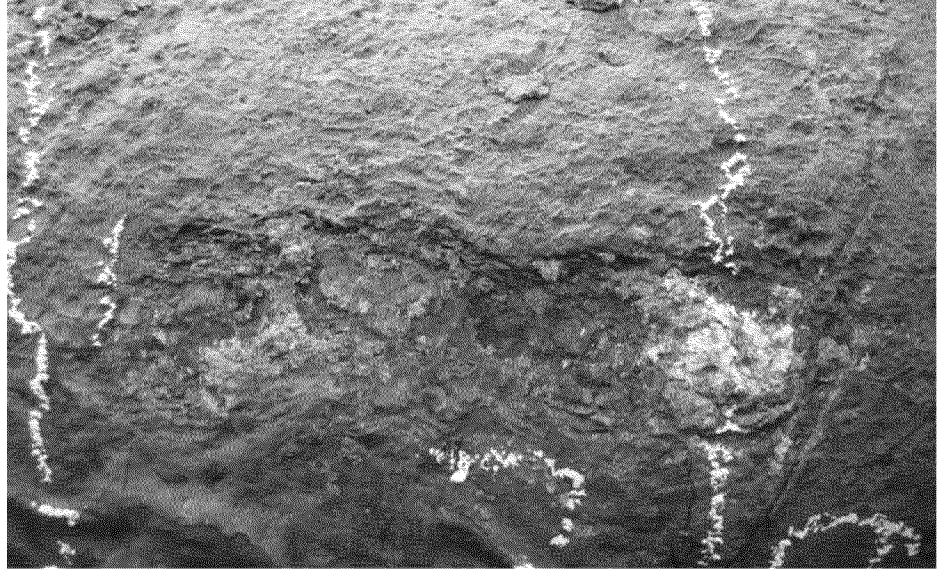
Overview of coating condition 20 ft to 25 ft, 9:00 position



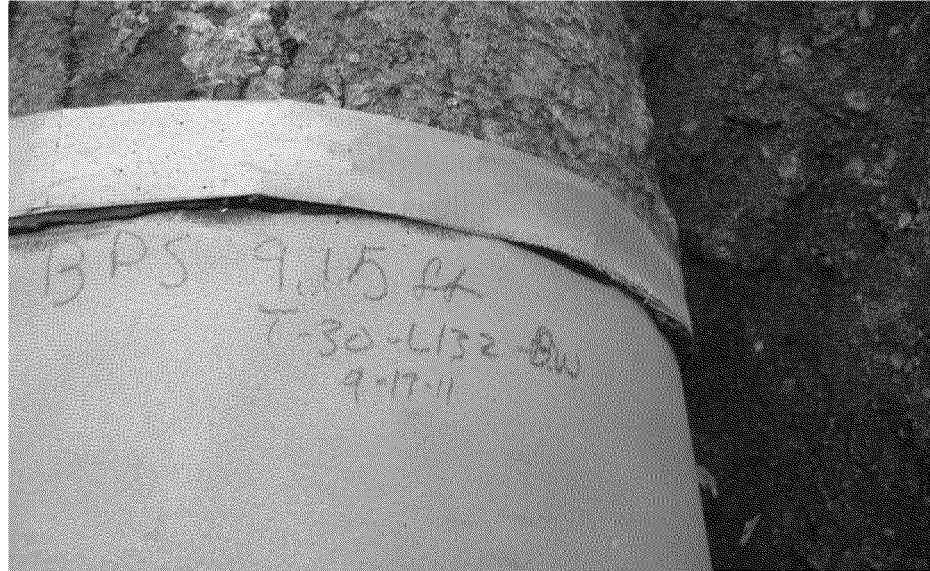
Overview of MPI layout 25 ft to 30 ft, 9:00 position



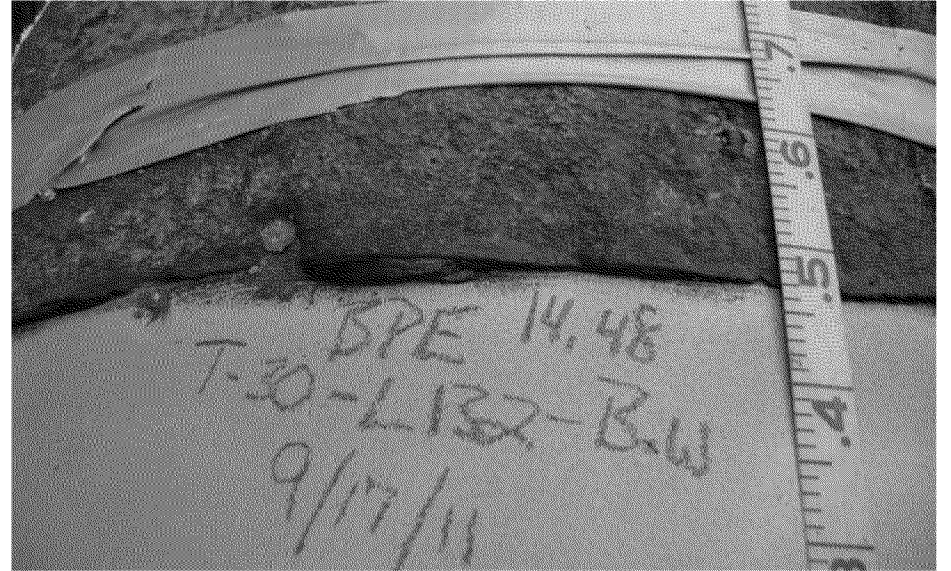
Overview of HOL- 01



Close up of HOL- 01

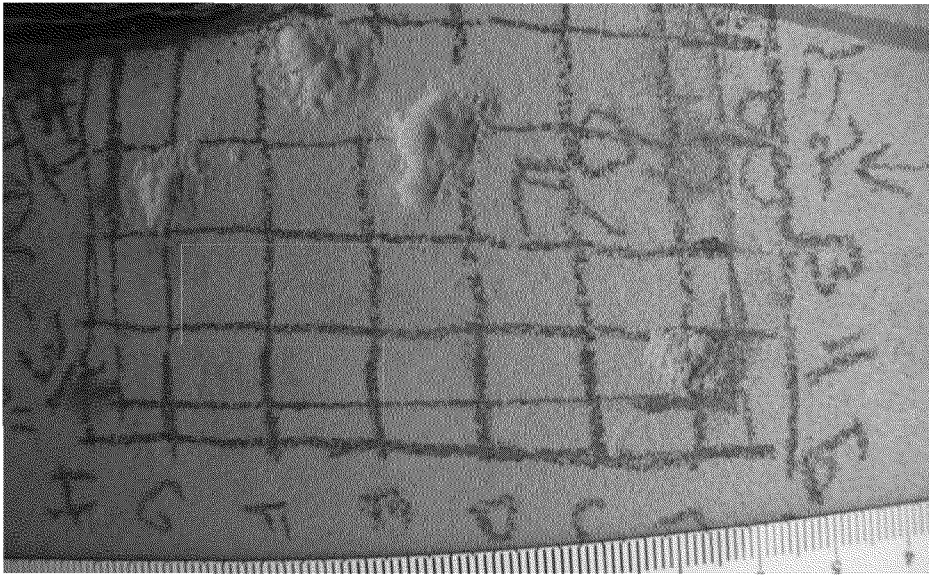


Overview of bare pipe start

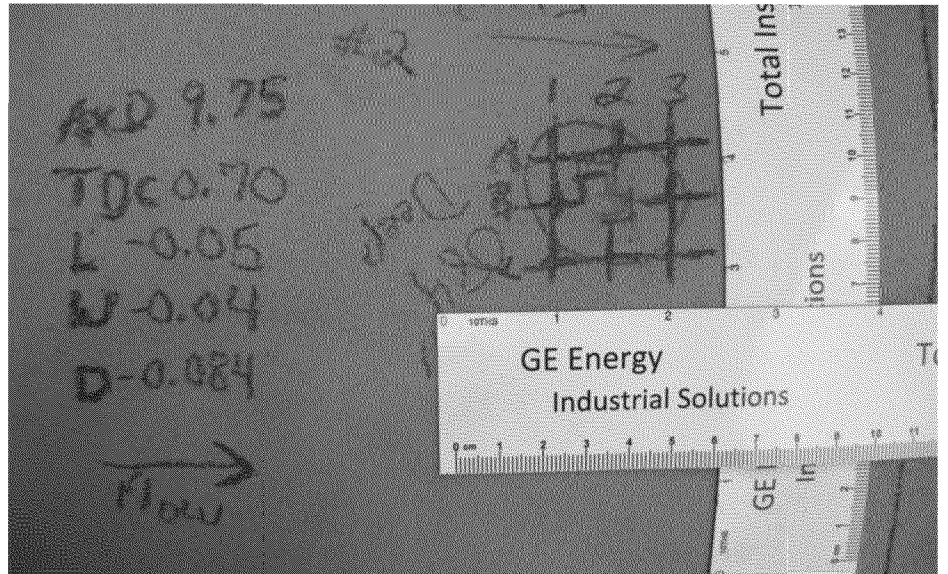


Overview of bare pipe end

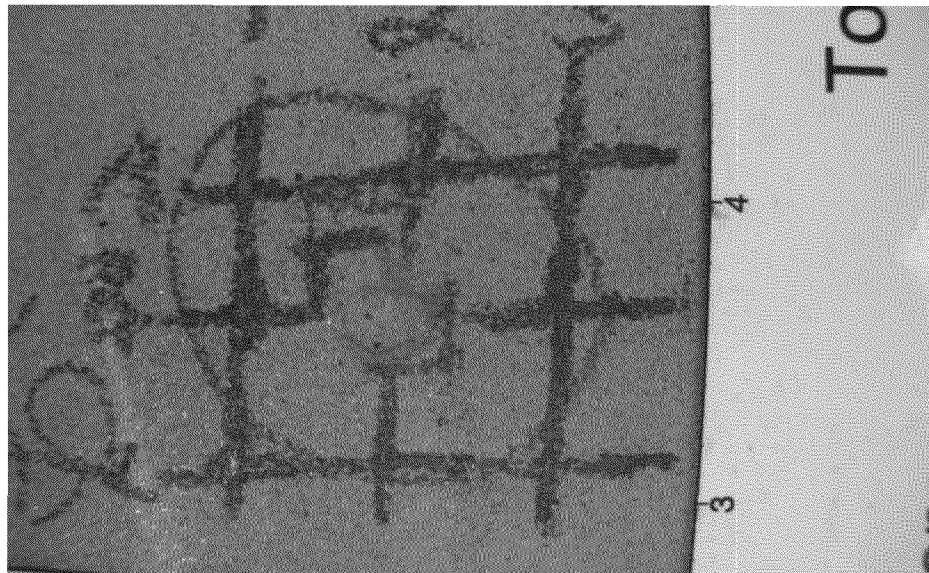
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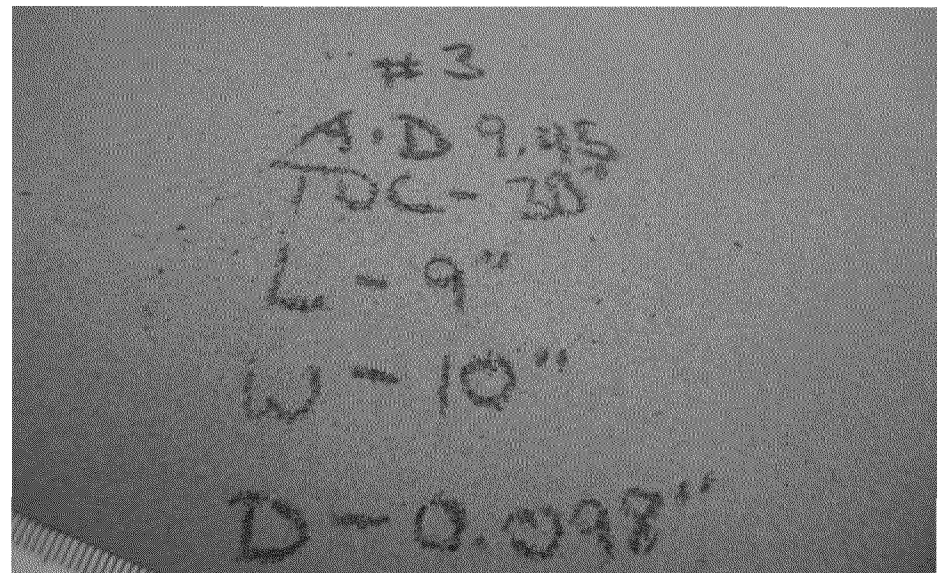
Close up (deepest area) of VOL- US 01



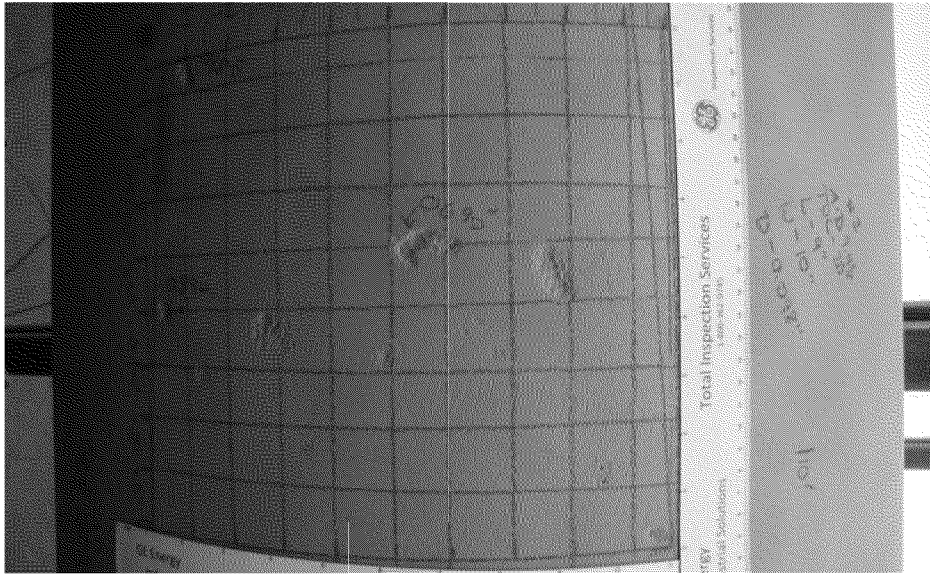
Overview of VOL- US 02



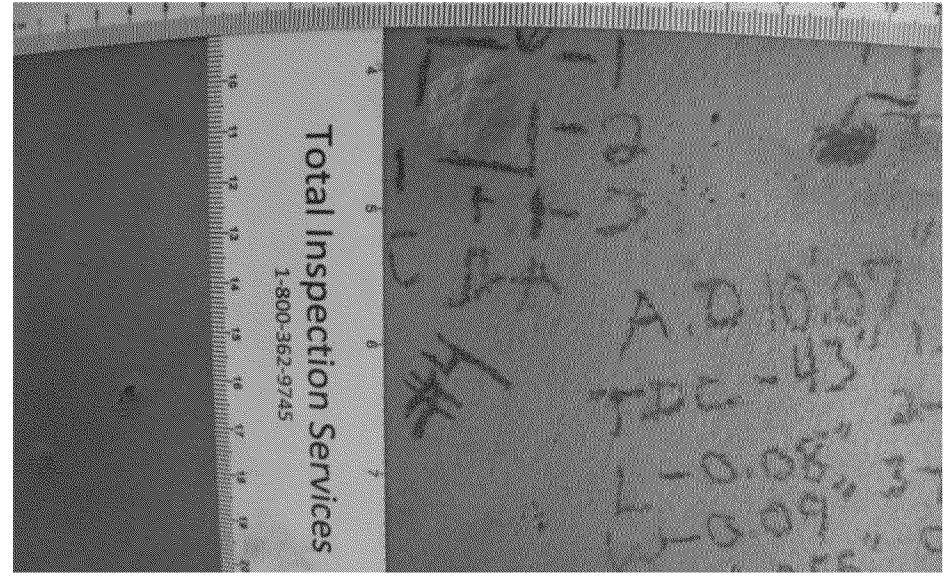
Close up (deepest area) of VOL- US 02



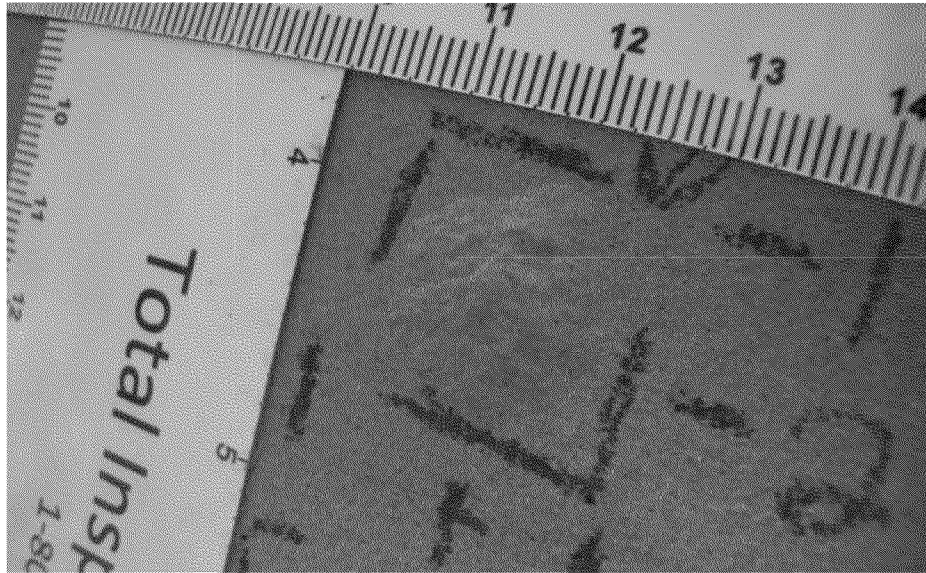
Overview of VOL- US 03 info



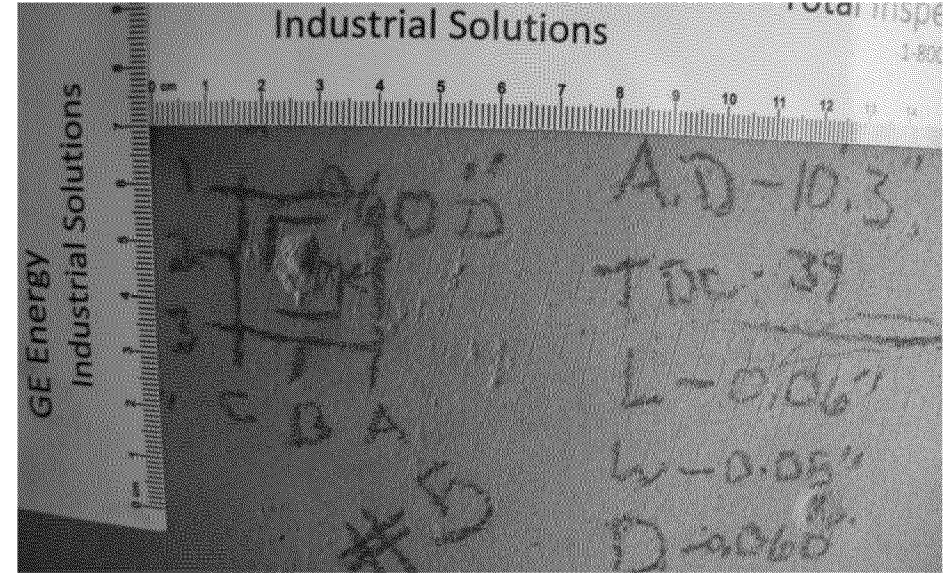
Overview of VOL- US 03



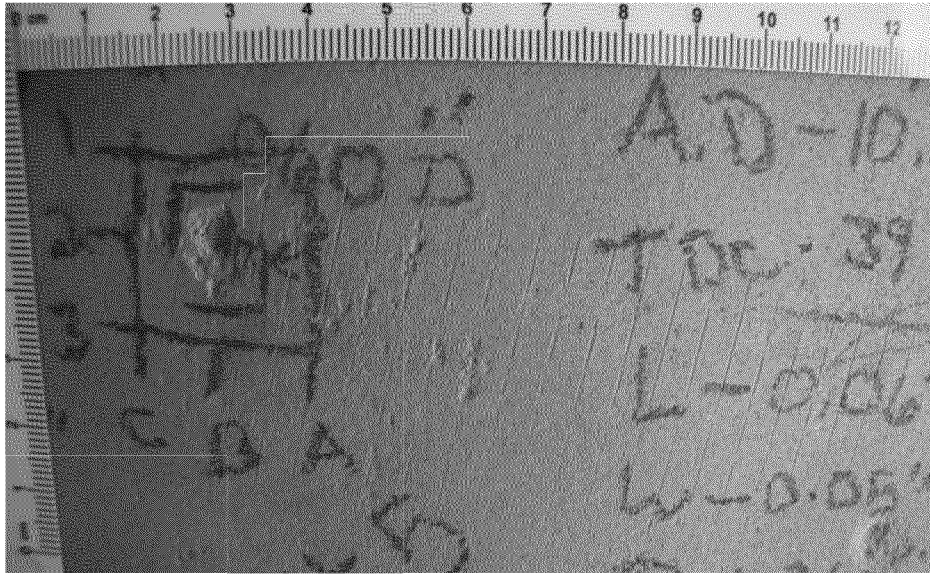
Overview of VOL- US 04



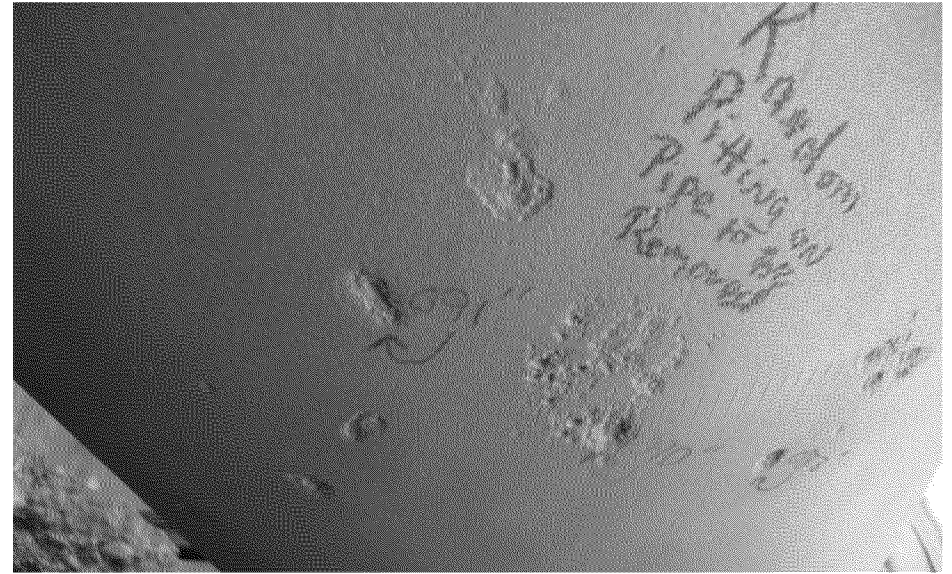
Close up (deepest area) of VOL-US 04



Overview of VOL- US 05



Close up (deepest area) of VOL- US 05



Overview of VOL- US RANDOM

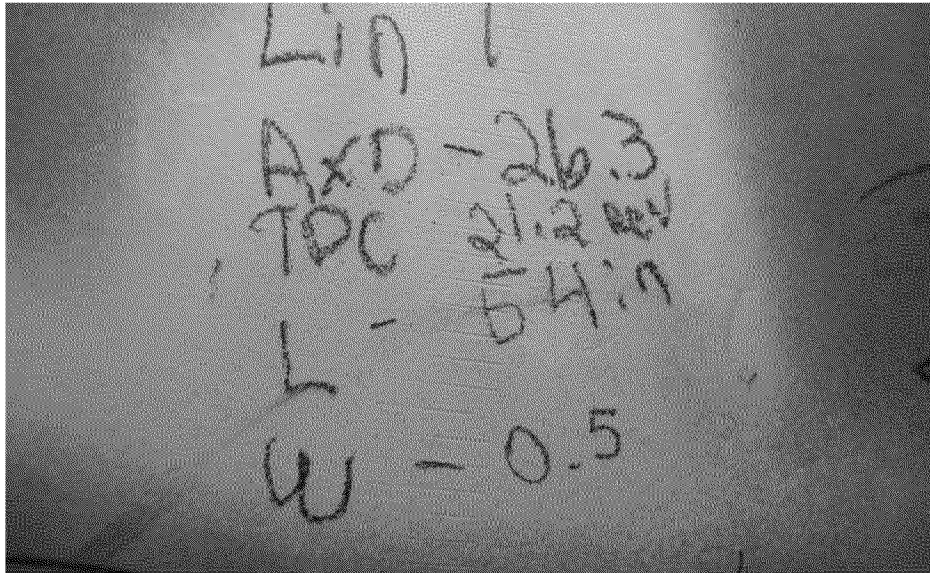


Close up (deepest area) of VOL- US RANDOM

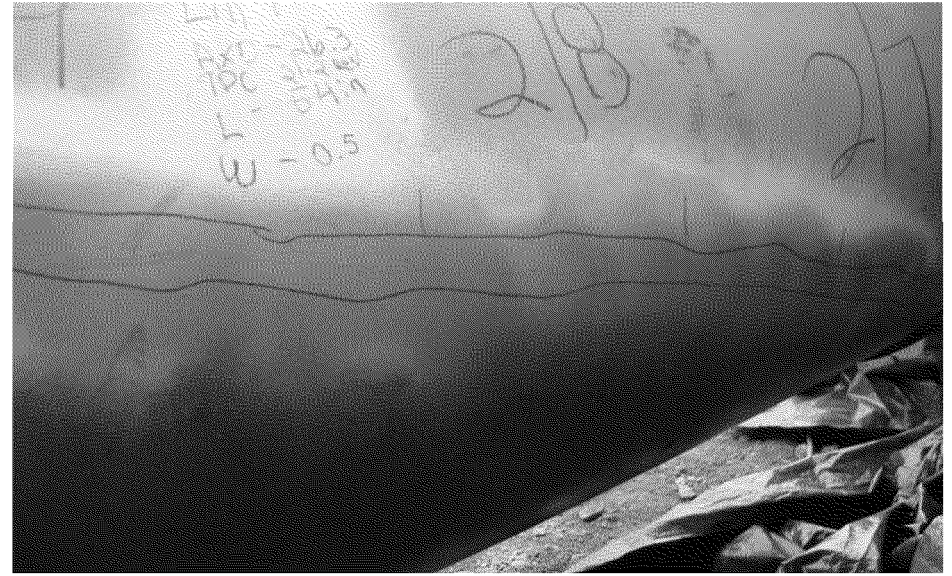


Close up (deepest area) of VOL- US RANDOM

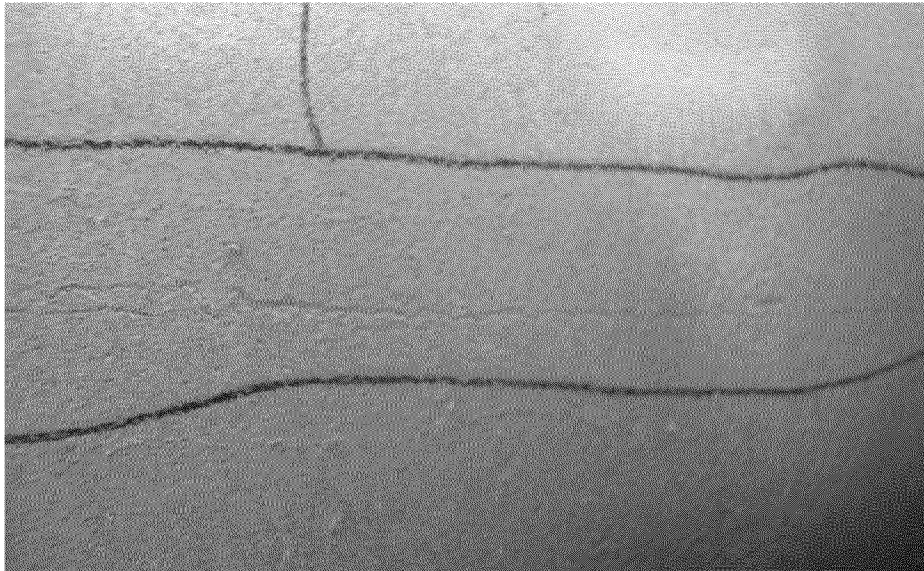
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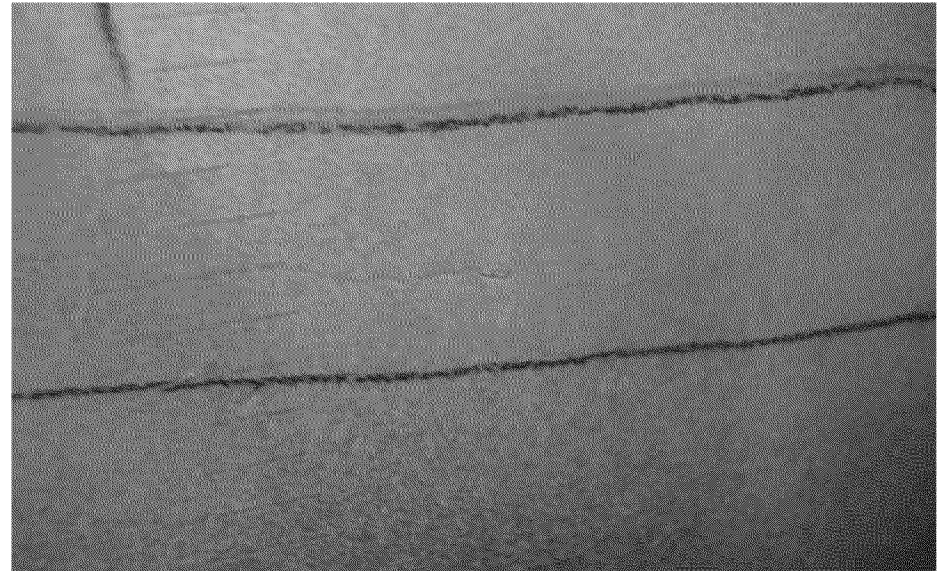
Overview of MT Indications of LIN- ds 01info



Overview of MT Indications of LIN- ds 01

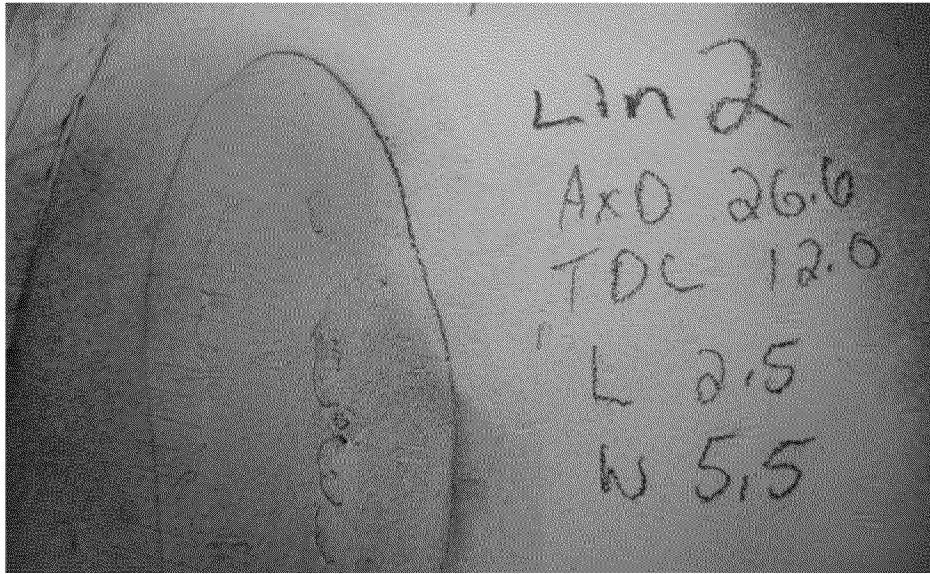


Close up of MT Indications of LIN- ds 01

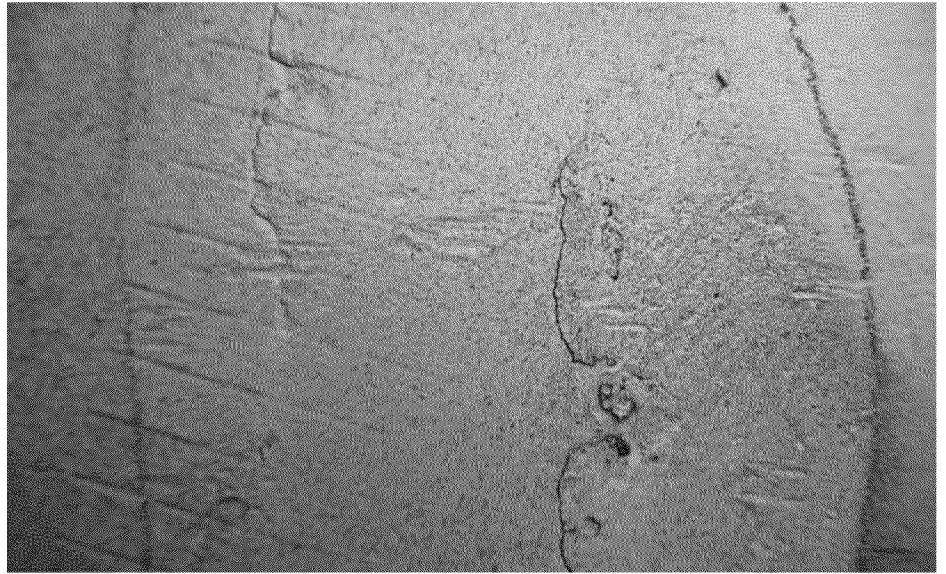


Close up of MT Indications of LIN- ds 01

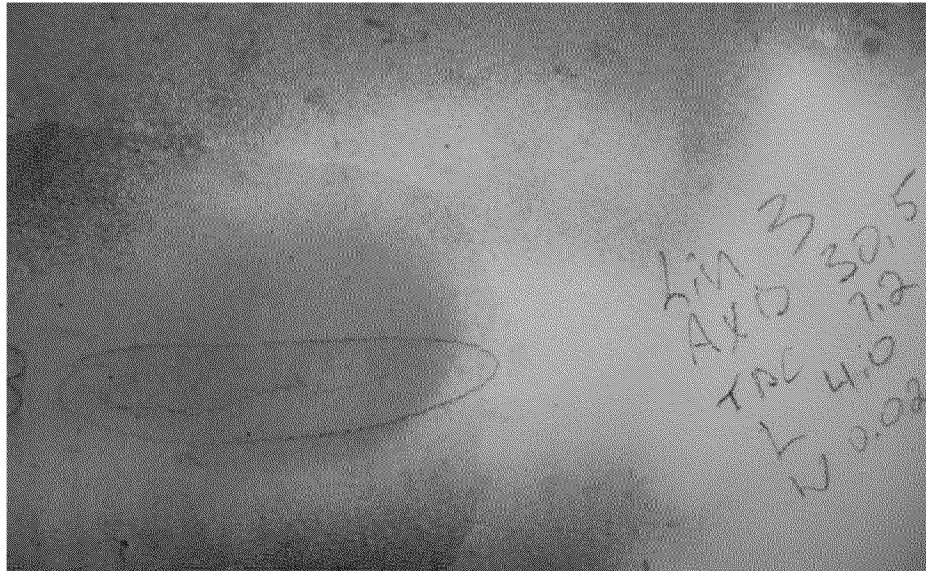
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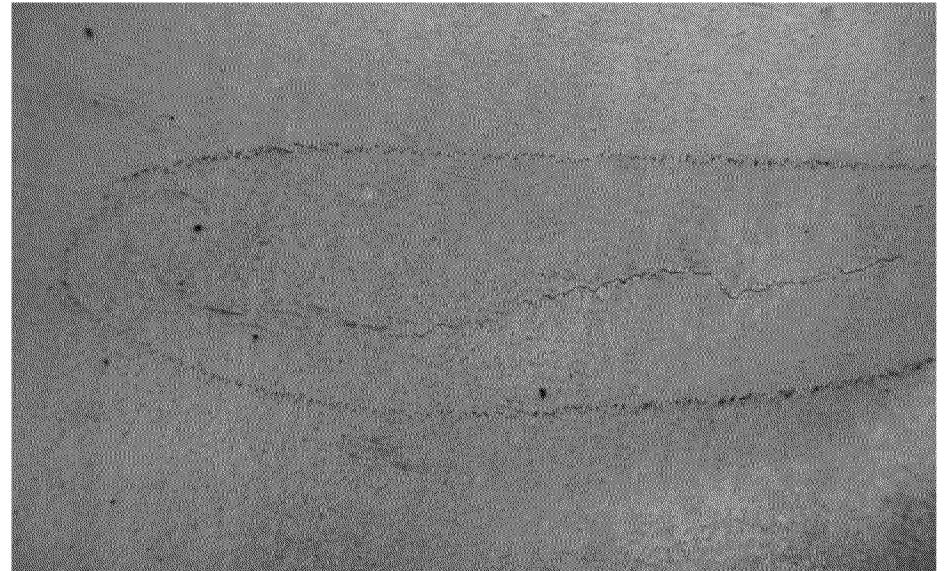
Overview of MT Indications of LIN- ds 02



Close up of MT Indications of LIN- ds 02

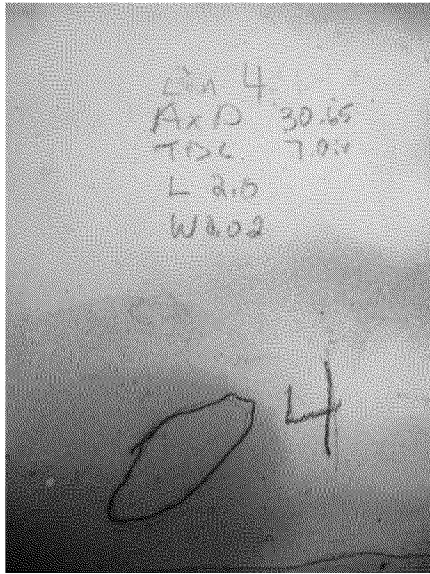


Overview of MT Indications of LIN- ds 03

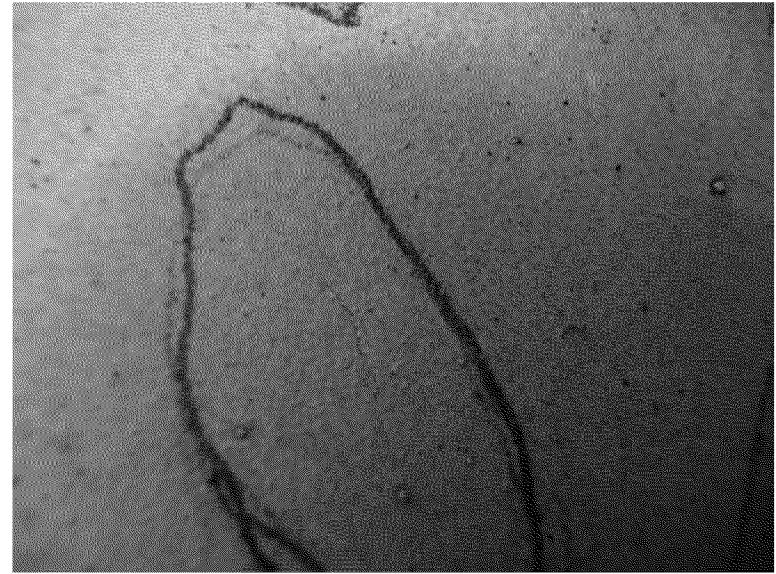


Close up of MT Indications of LIN- ds 03

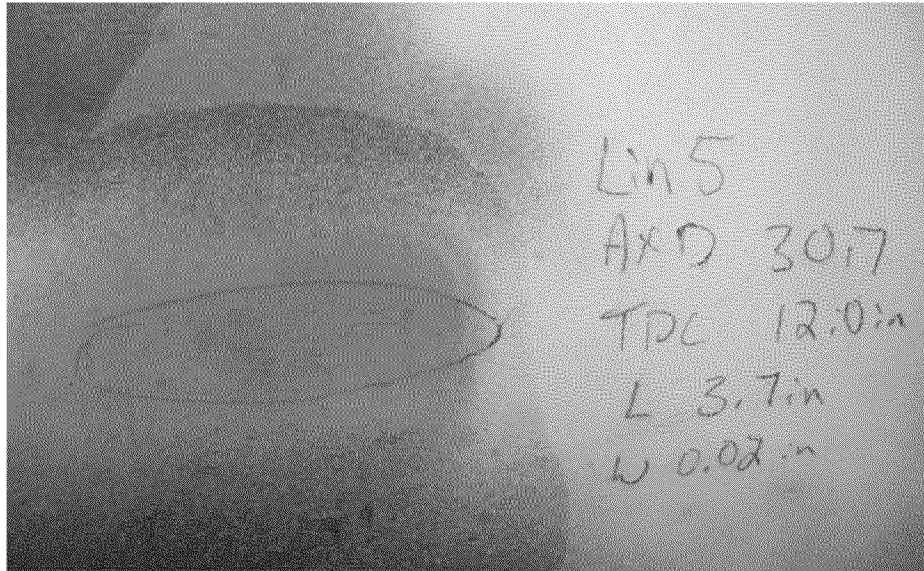
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Overview of MT Indications of LIN- ds 04



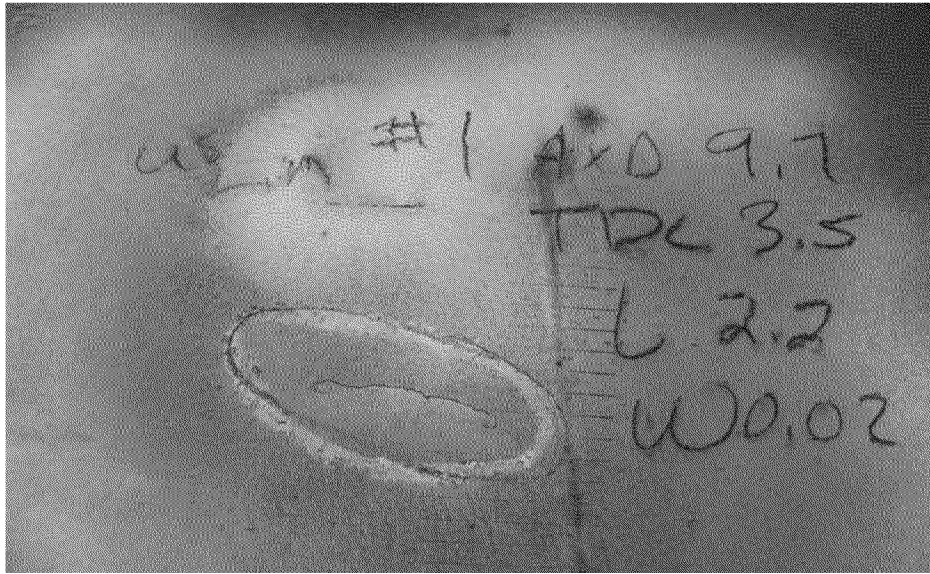
Close up of MT Indications of LIN- ds 04



Overview of MT Indications of LIN- ds 05



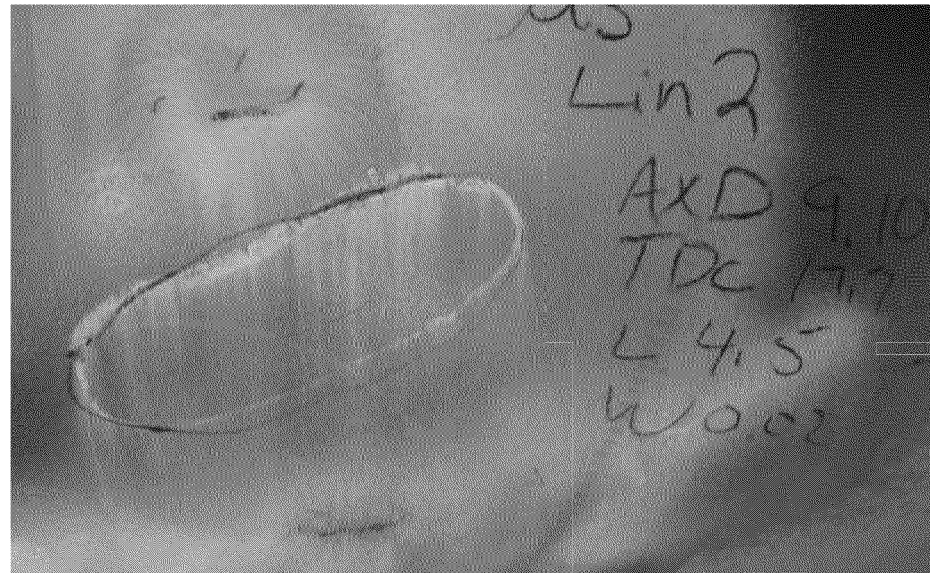
Close up of MT Indications of LIN- ds 05



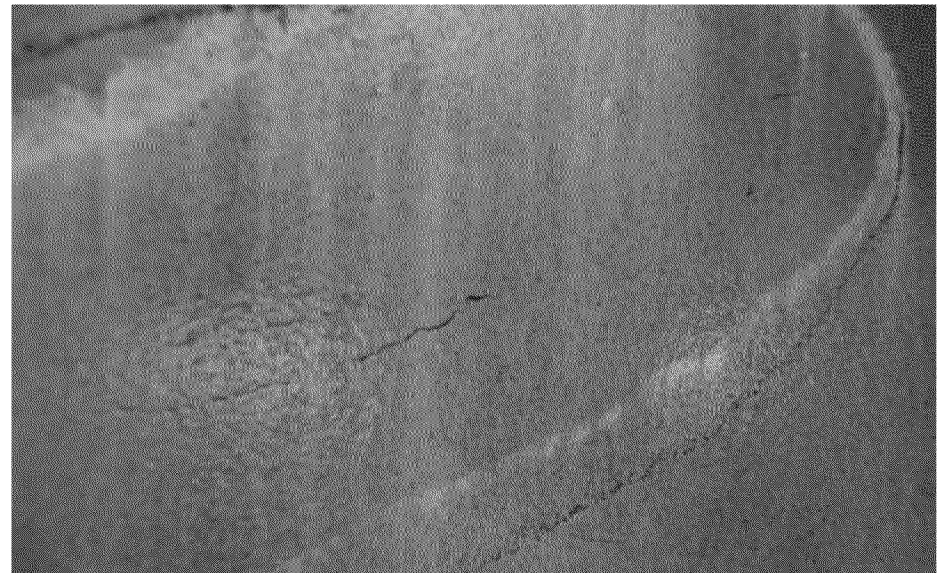
Overview of MT Indications of LIN- us 01



Close up of MT Indications of LIN- us 01



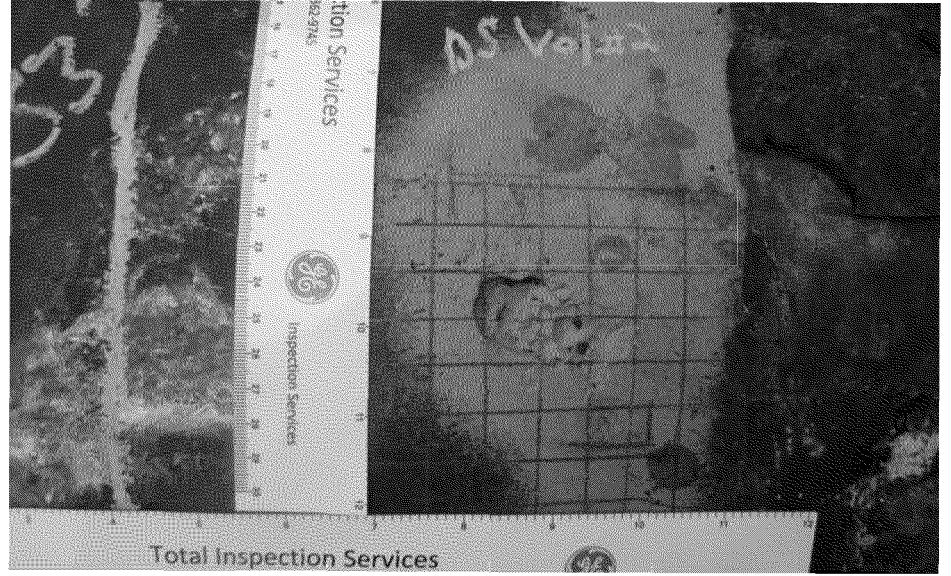
Overview of MT Indications of LIN- us 02



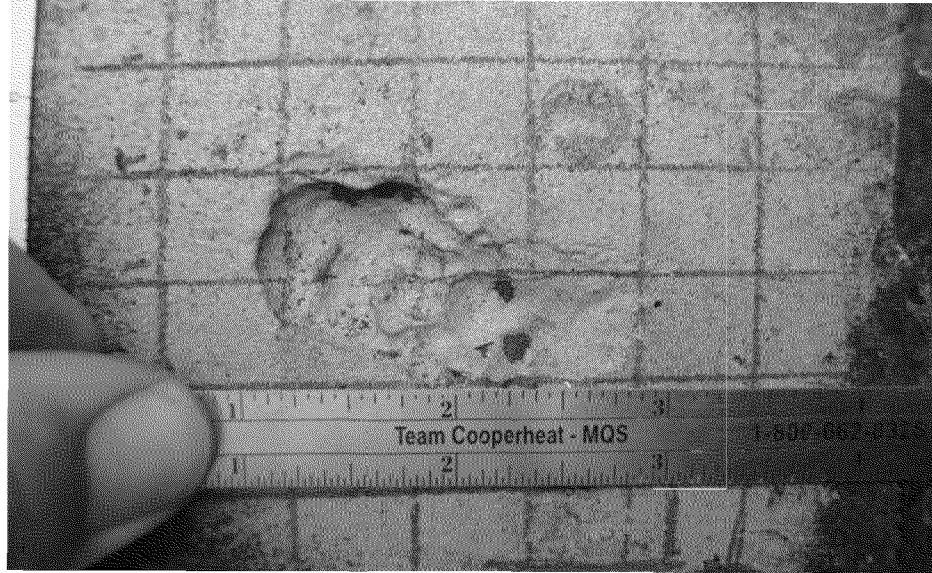
Close up of MT Indications of LIN- us 02



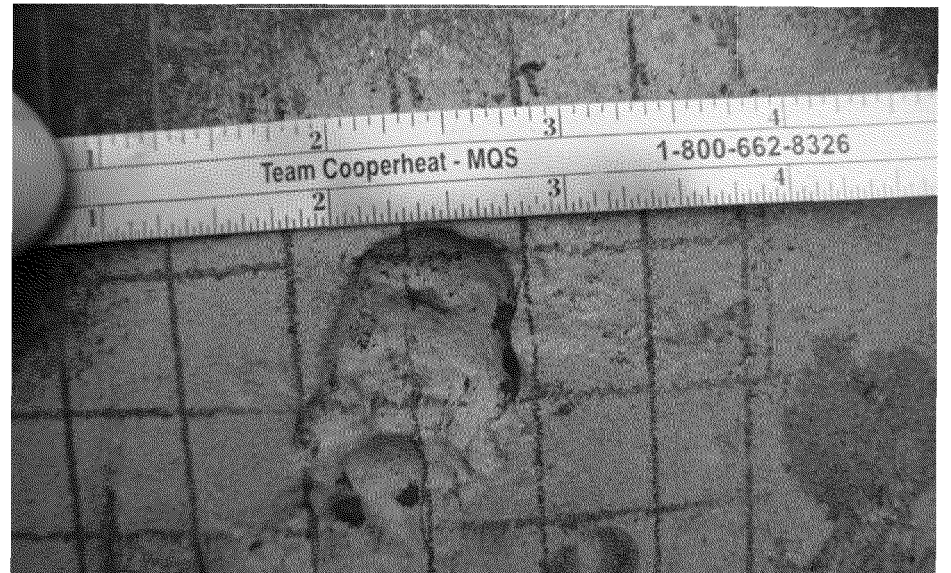
Overview of Dig Site DS after Additional coating removed



Overview of VOL- DS 02



Close up (deepest area) of VOL-DS 02



Close up (deepest area) of VOL- DS 02

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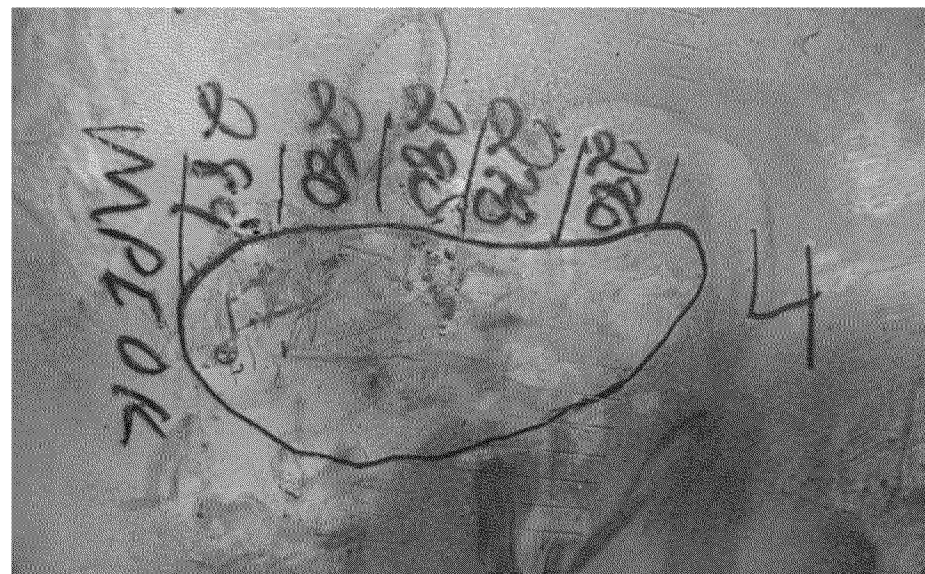
Ultrasonic thickness measurement LIN- us 01 with MPI OK



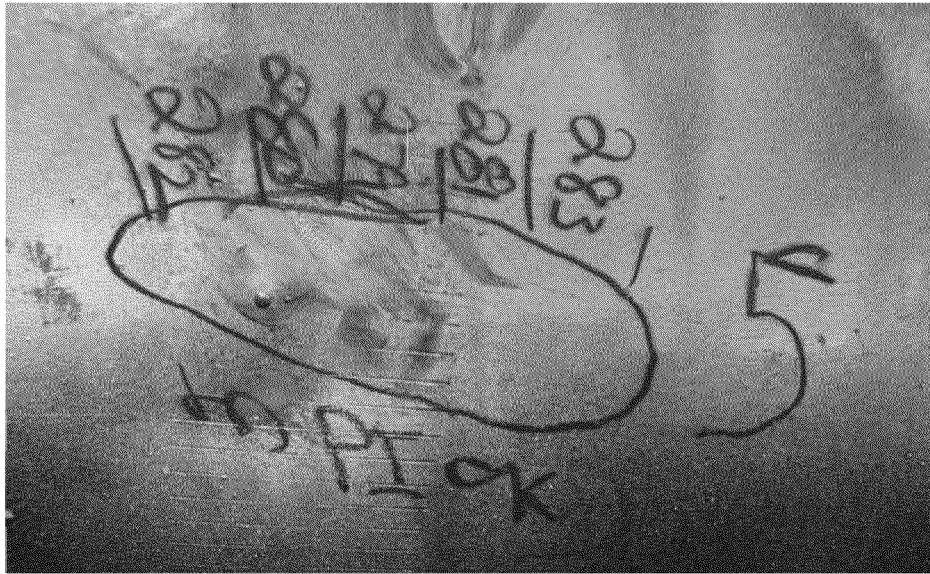
Ultrasonic thickness measurement LIN- us 02 with MPI OK



Ultrasonic thickness measurement LIN- ds 03 with MPI OK



Ultrasonic thickness measurement LIN- ds 04 with MPI OK



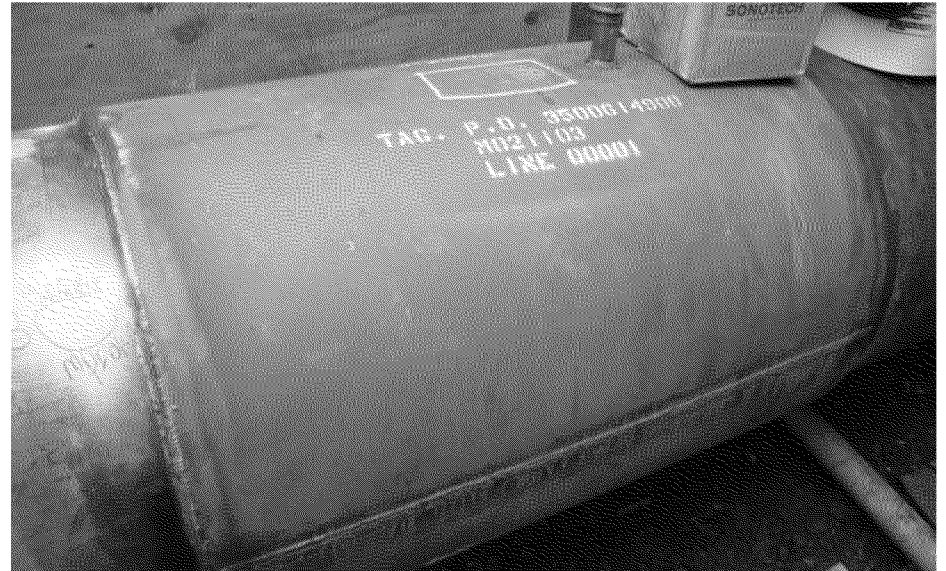
Ultrasonic thickness measurement LIN- ds 05 with MPI OK



Overview of pipe Ph



Overview of UT grid @ 6:00

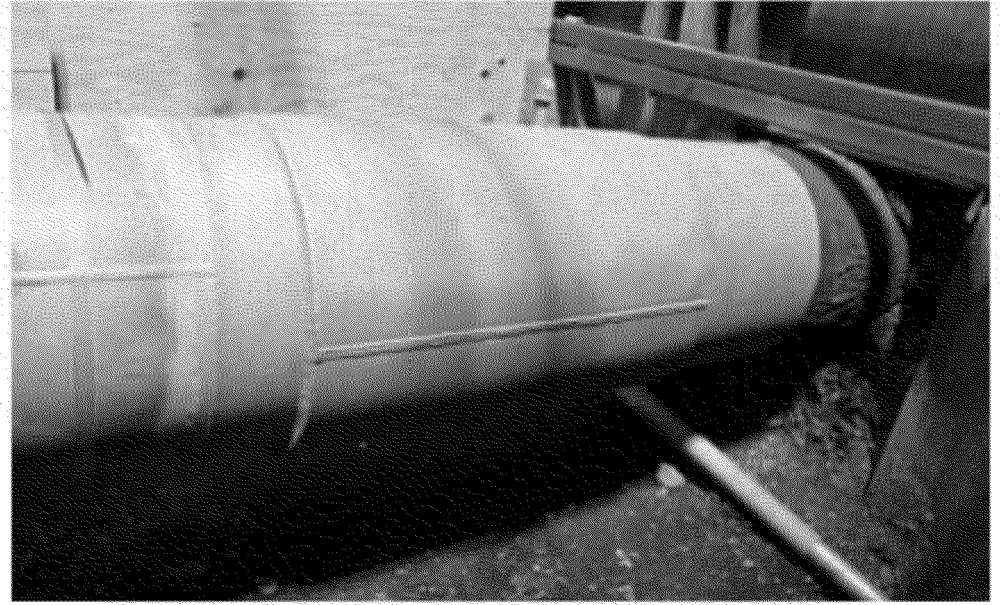


Overview of installed full encirclement sleeve type "B"

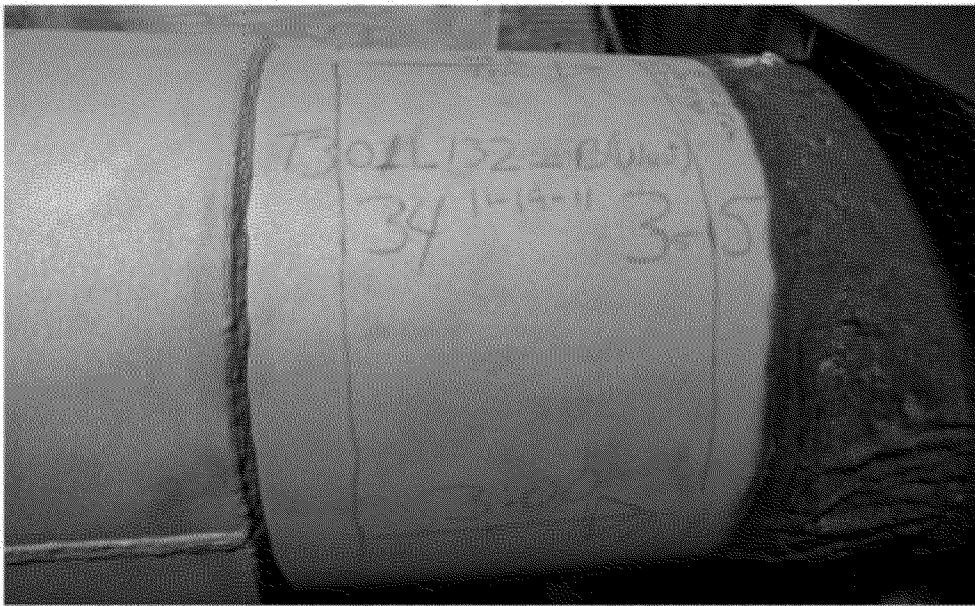
g



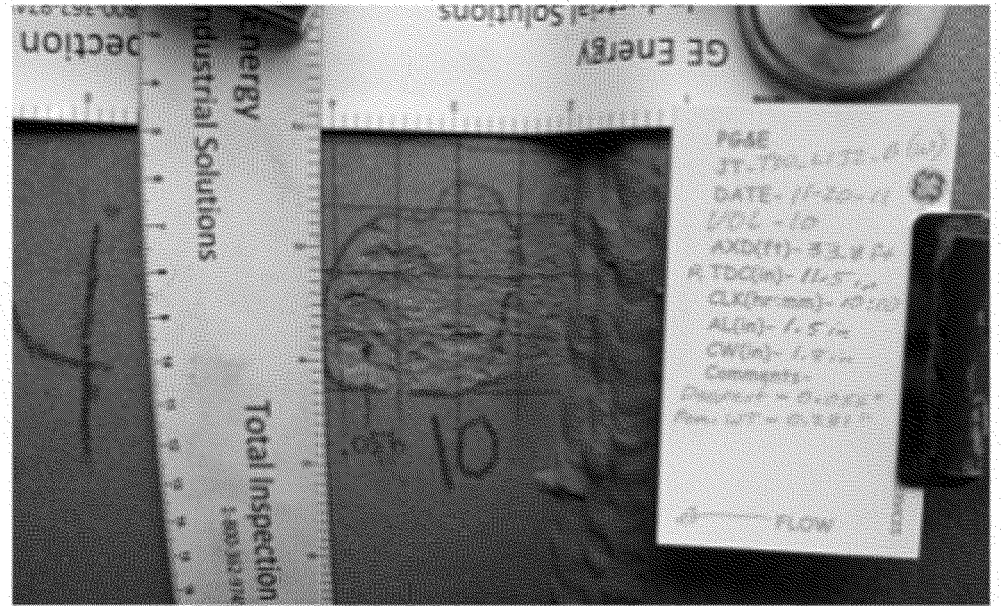
Overview of MPI layout 9.0ft to 11.0ft, 3:00 position



Overview of MPI layout 30.0ft to 35.0ft, 3:00 position



Overview of MPI layout 34.0ft to 35.0ft, 3:00 position



Overview (with measurements) of VOL-10

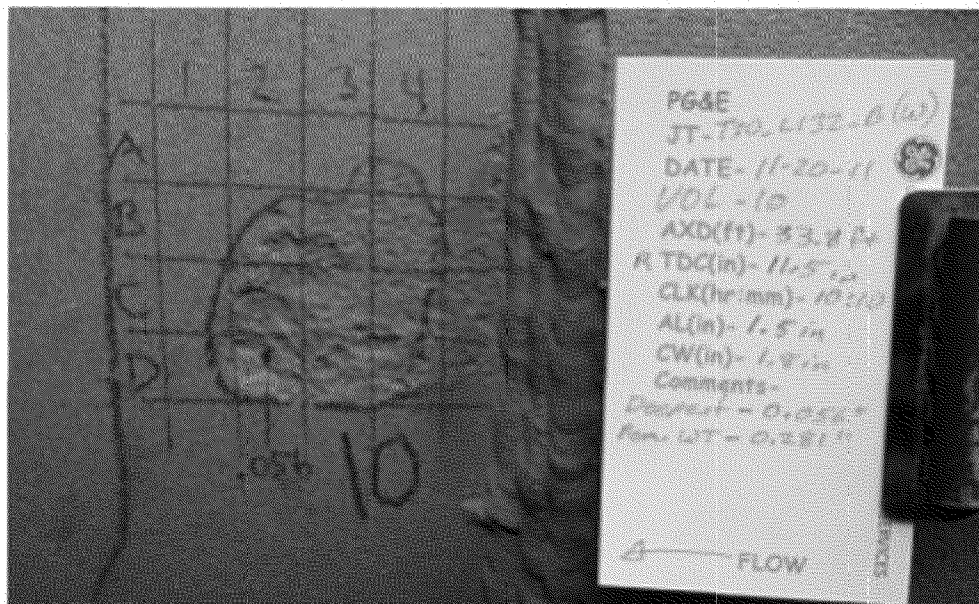




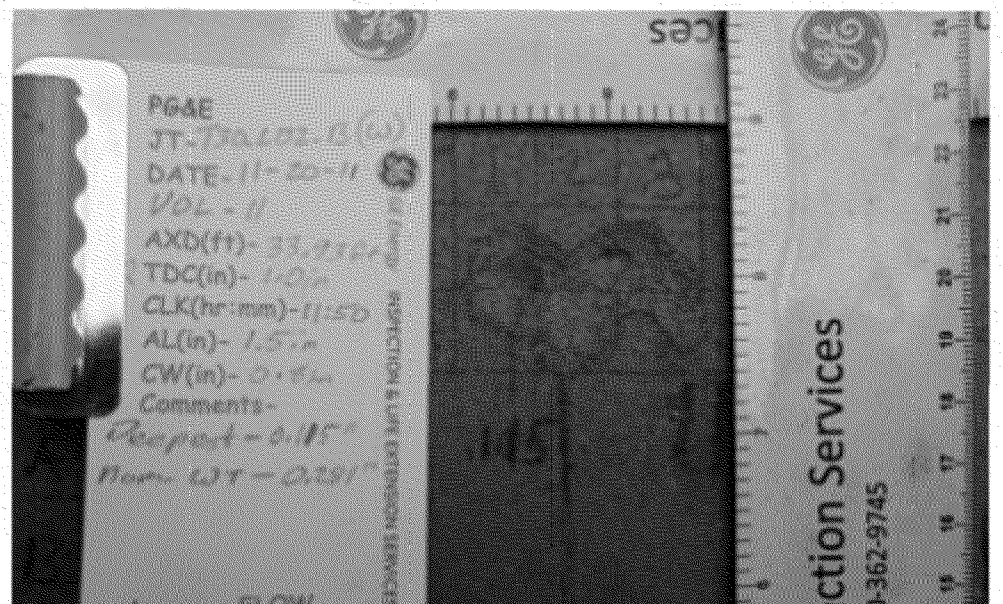
Pit gauge measurement VOL-10



Close up (deepest area) of VOL-10



Overview of RSTRENG grid VOL-10

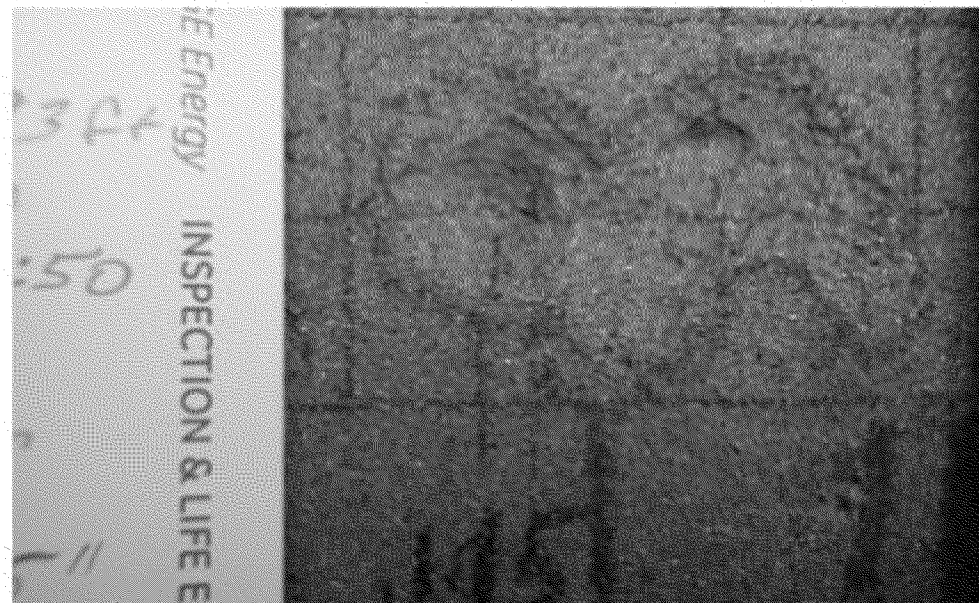


Overview (with measurements) of VOL-11

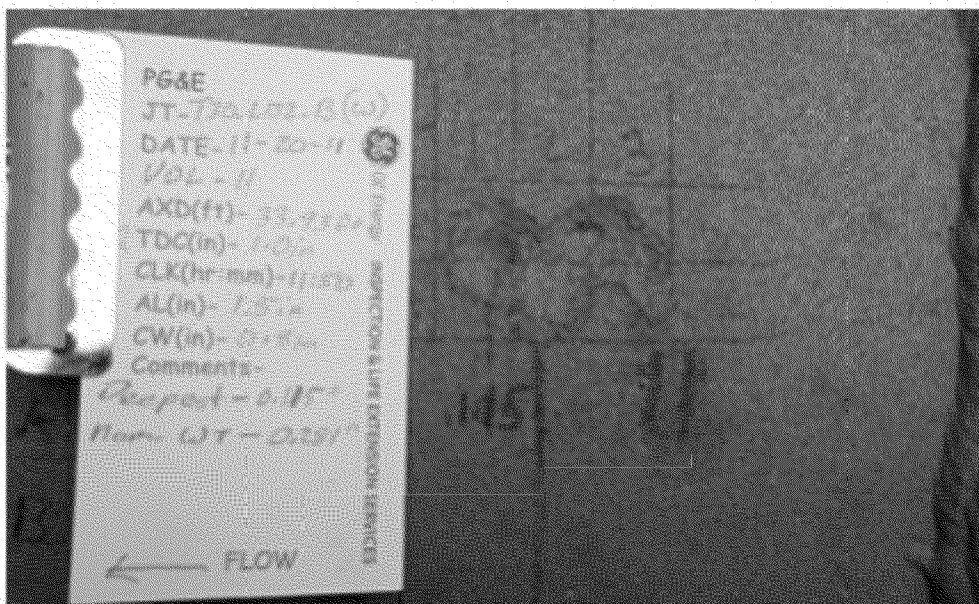




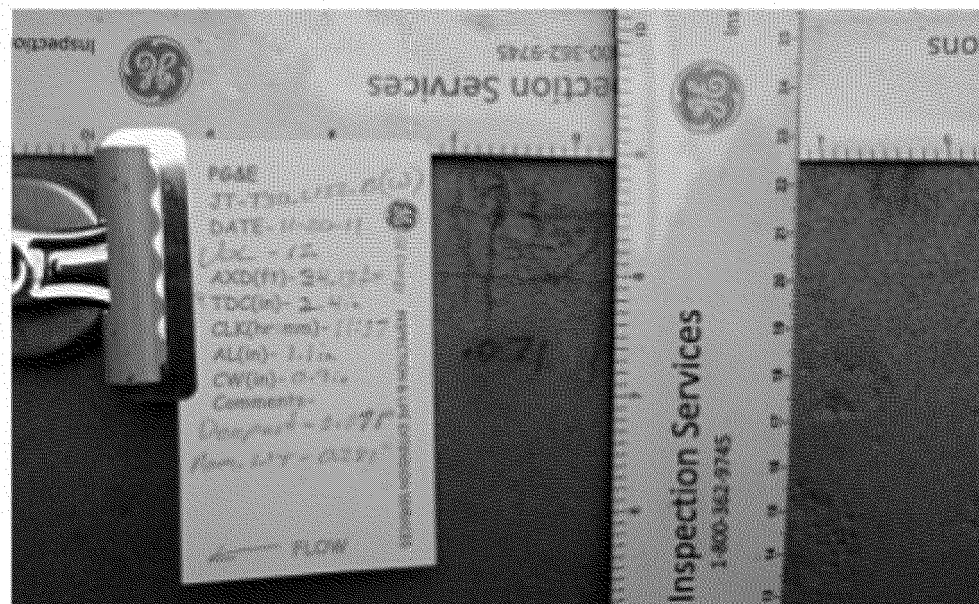
Pit gauge measurement VOL-11



Close up (deepest area) of VOL-11

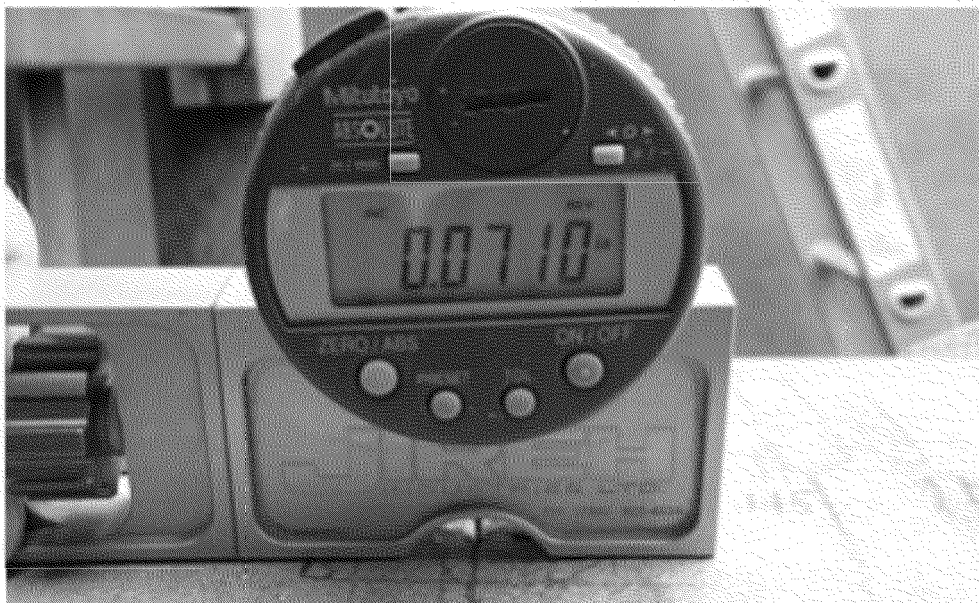


Overview of RSTRENG grid VOL-11

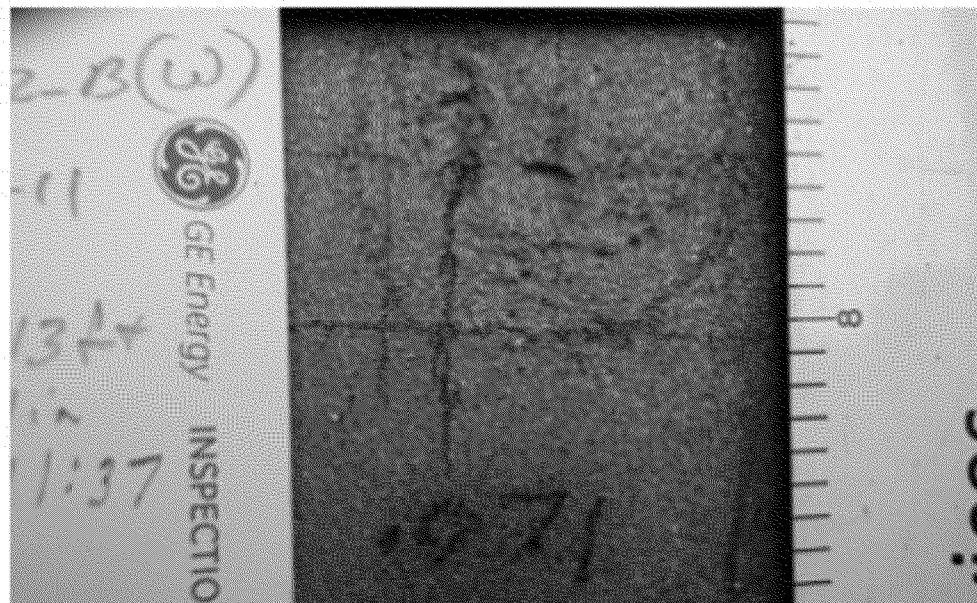


Overview (with measurements) of VOL-12

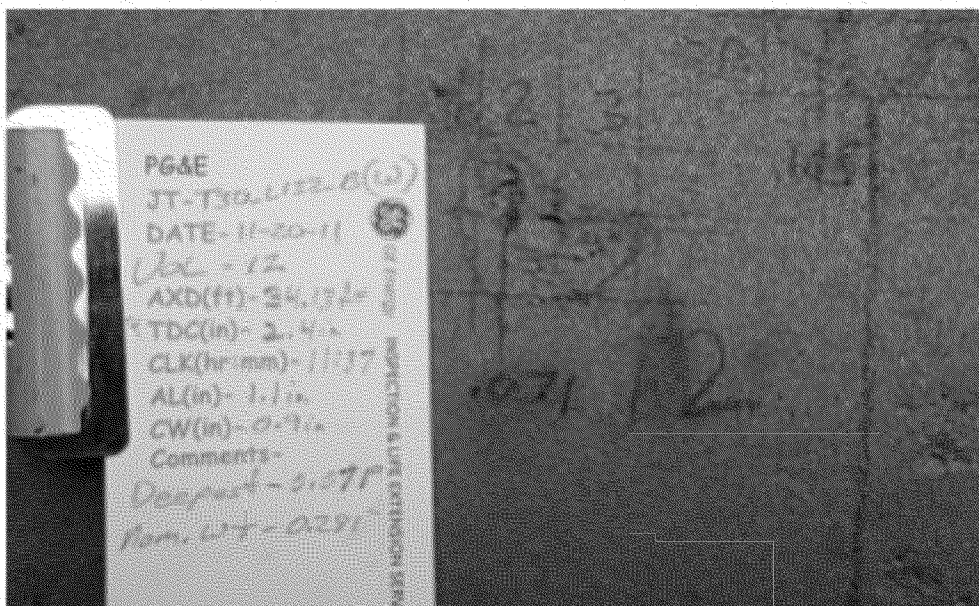




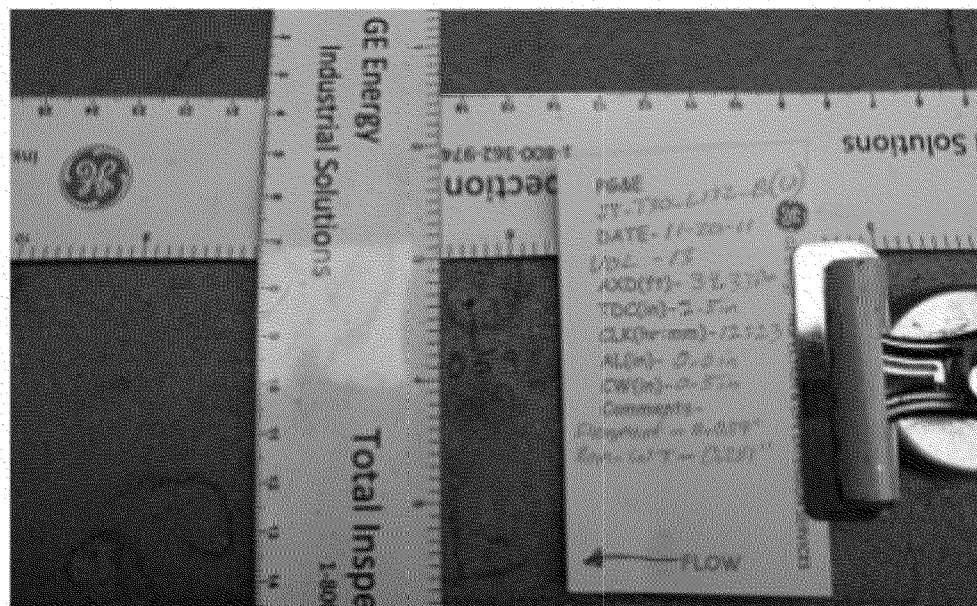
Pit gauge measurement VOL-12



Close up (deepest area) of VOL-12

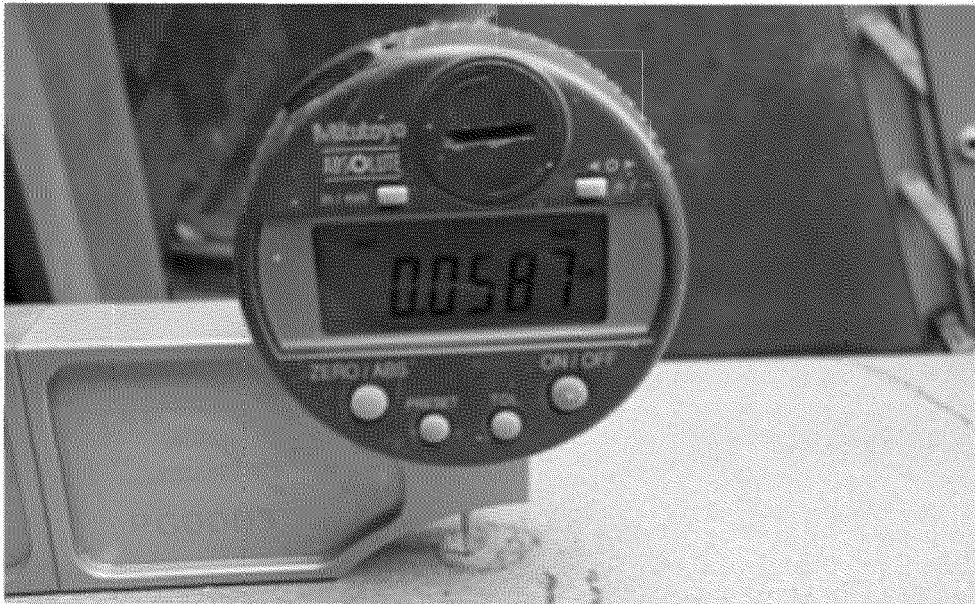


Overview of RSTRENG grid VOL-12

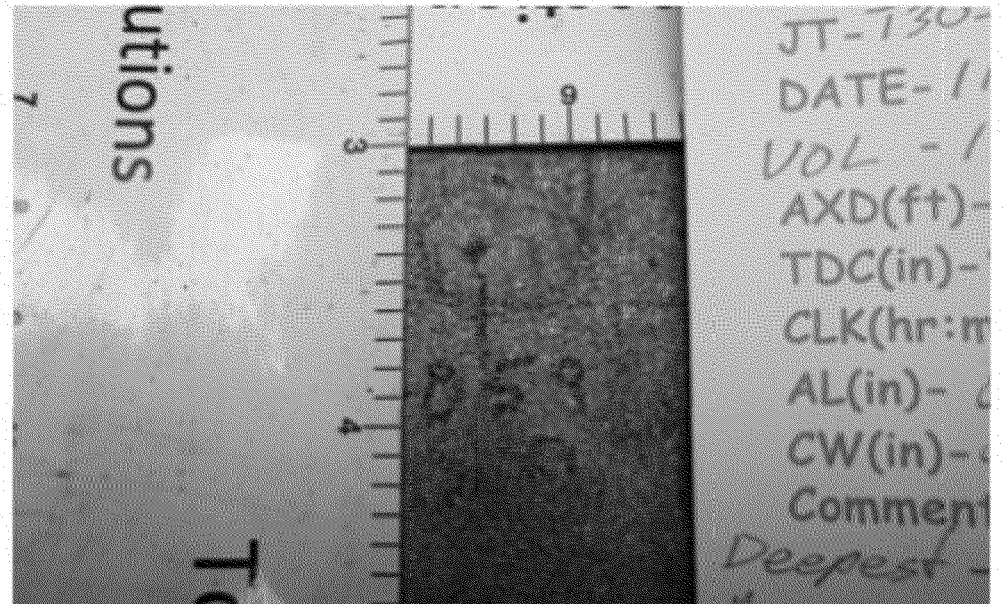


Overview (with measurements) of VOL-13

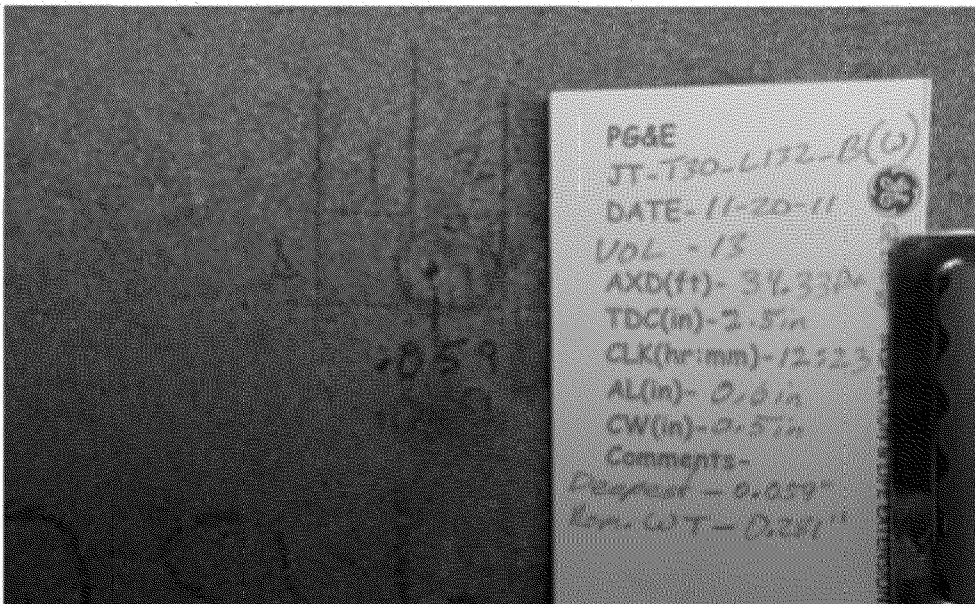




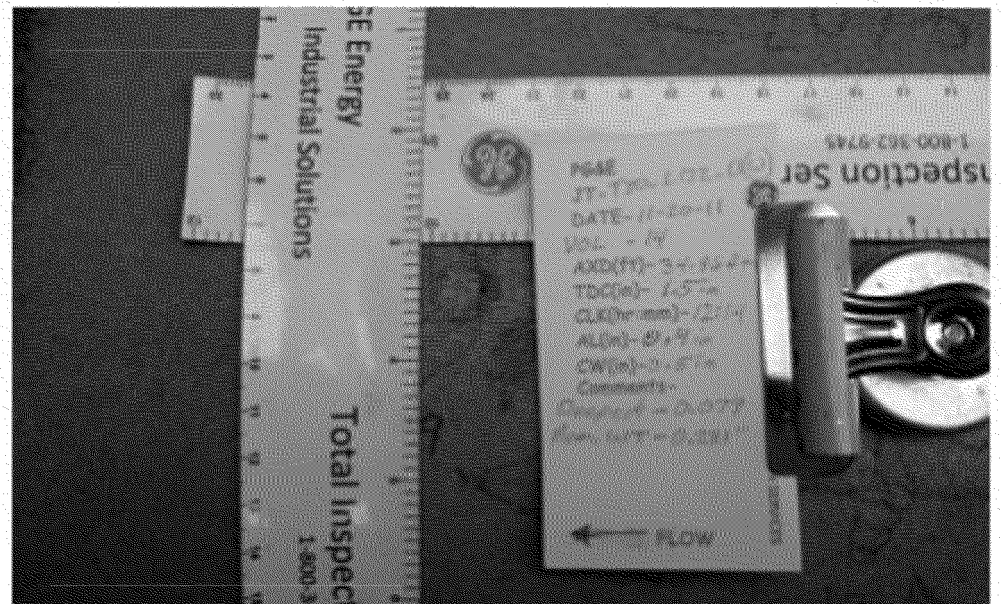
Pit gauge measurement VOL-13



Close up (deepest area) of VOL-13



Overview of RSTRENG grid VOL-13

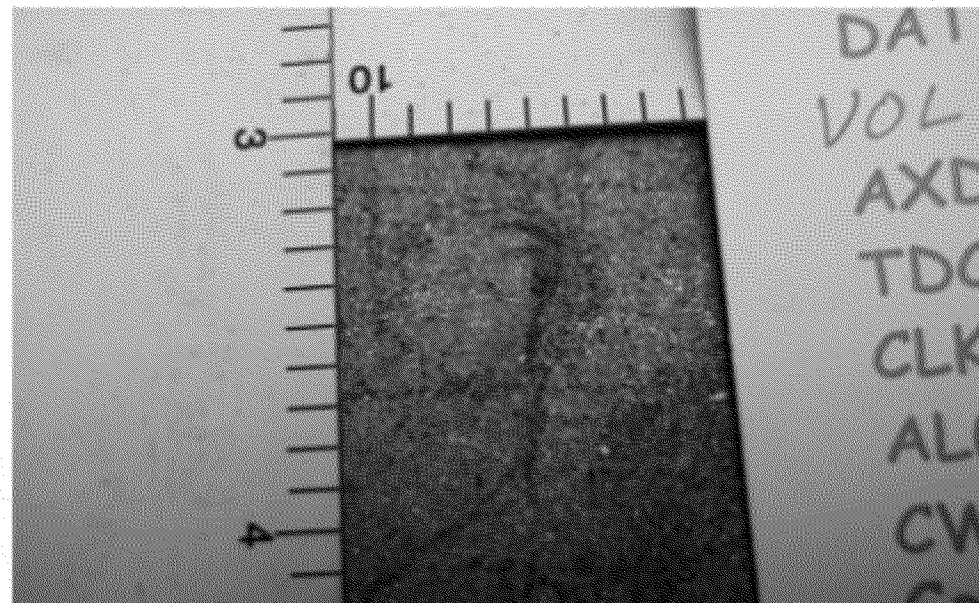


Overview (with measurements) of VOL-14

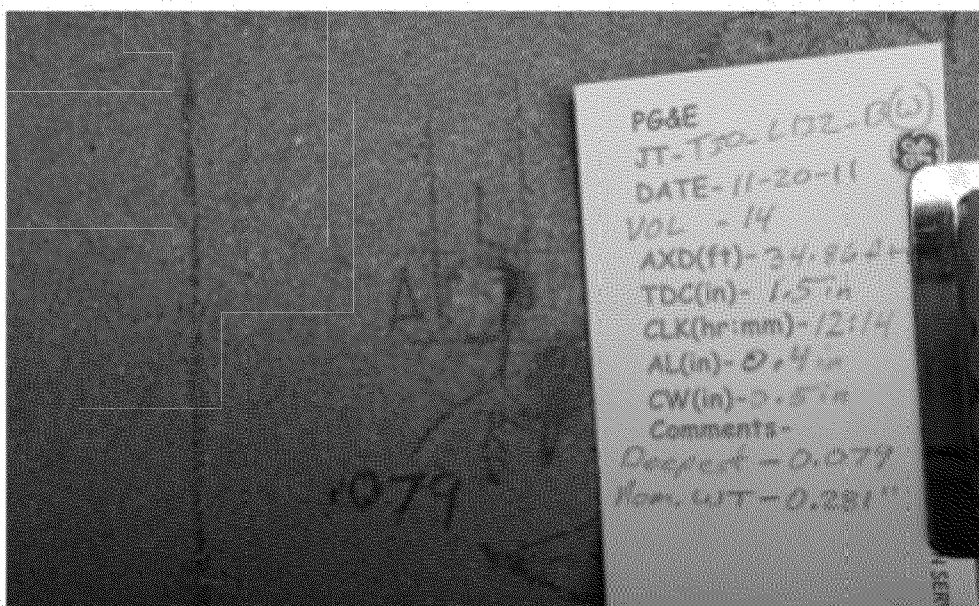




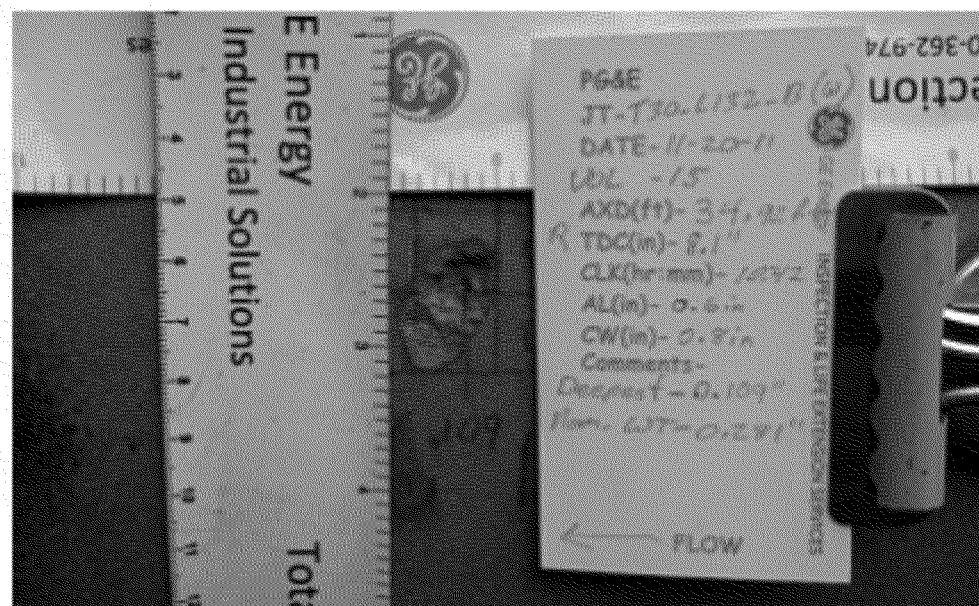
Pit gauge measurement VOL-14



Close up (deepest area) of VOL-14



Overview of RSTRENG grid VOL-14

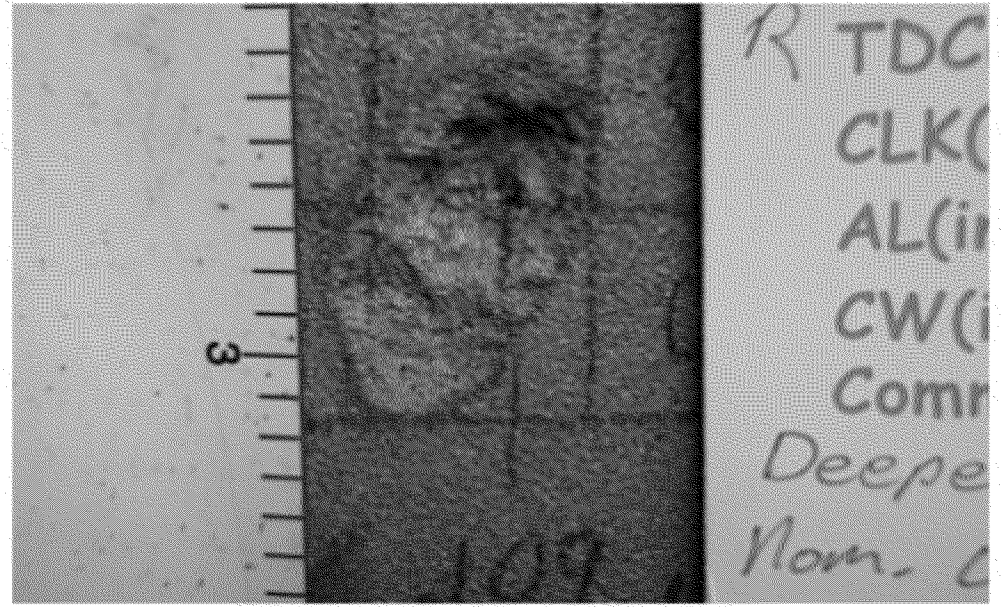


Overview (with measurements) of VOL-15

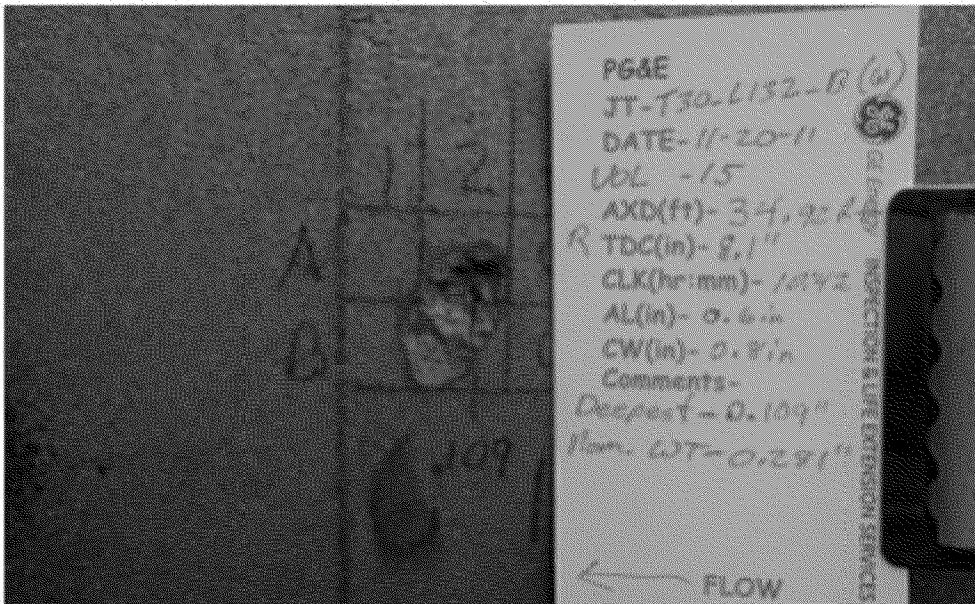




Pit gauge measurement VOL-15



Close up (deepest area) of VOL-15

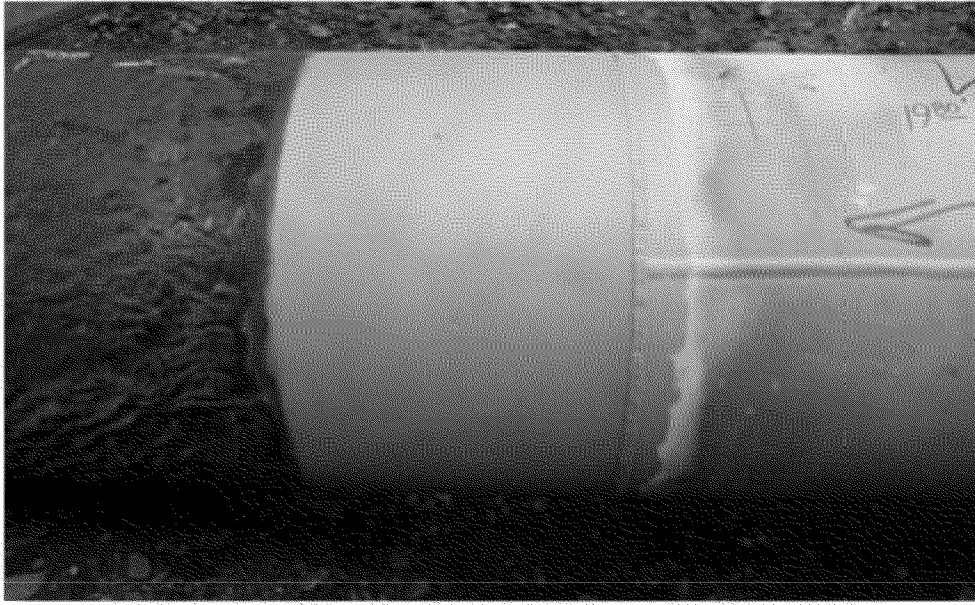


Overview of RSTRENG grid VOL-15

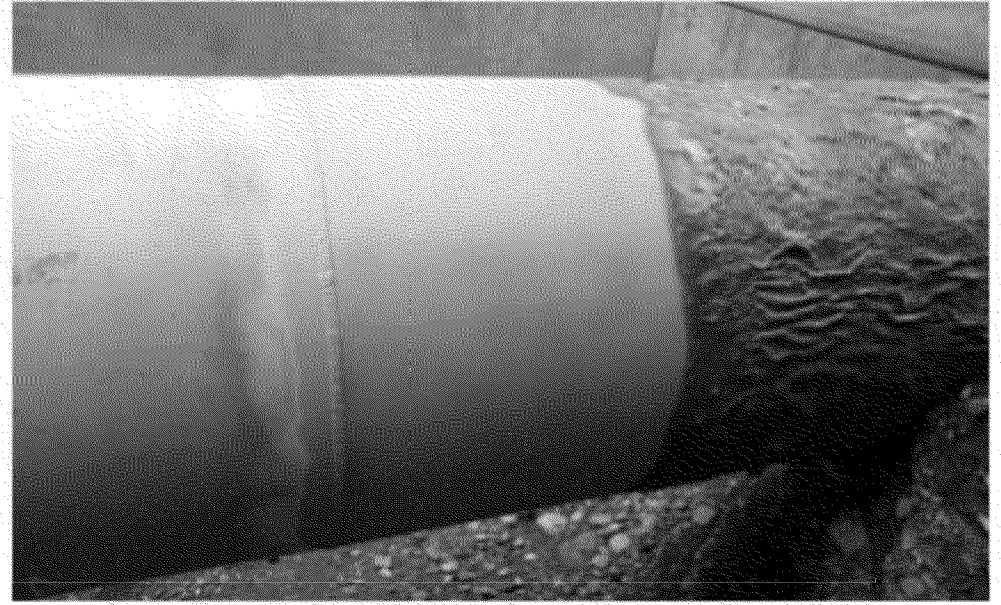


Overview of Ext. Metal Loss and Pitting

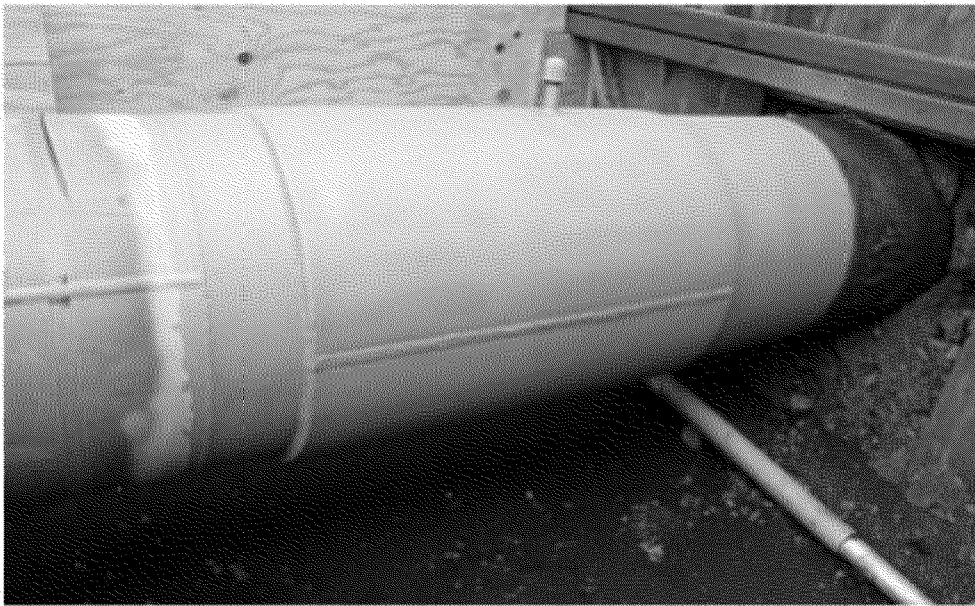




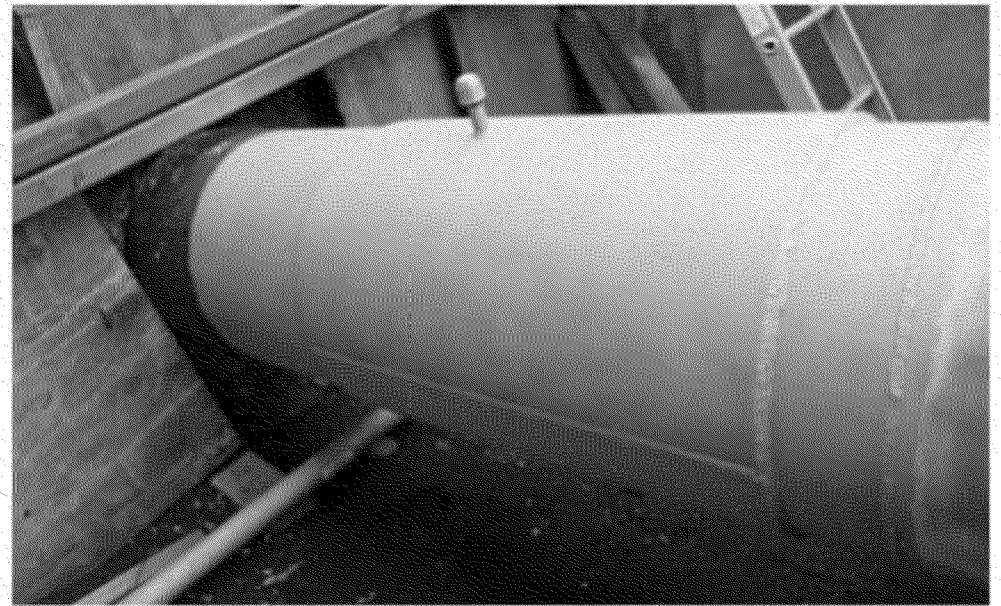
Overview of blasted inspection area US 3:00 position



Overview of blasted inspection area US 9:00 position



Overview of blasted inspection area DS 3:00 position



Overview of blasted inspection area DS 9:00 position





Overview of final coating condition



Overview of final coating condition US 9:00



Overview of final coating condition DS 9:00

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