

Inspection Report

Created on 3/31/2011 7:18 AM

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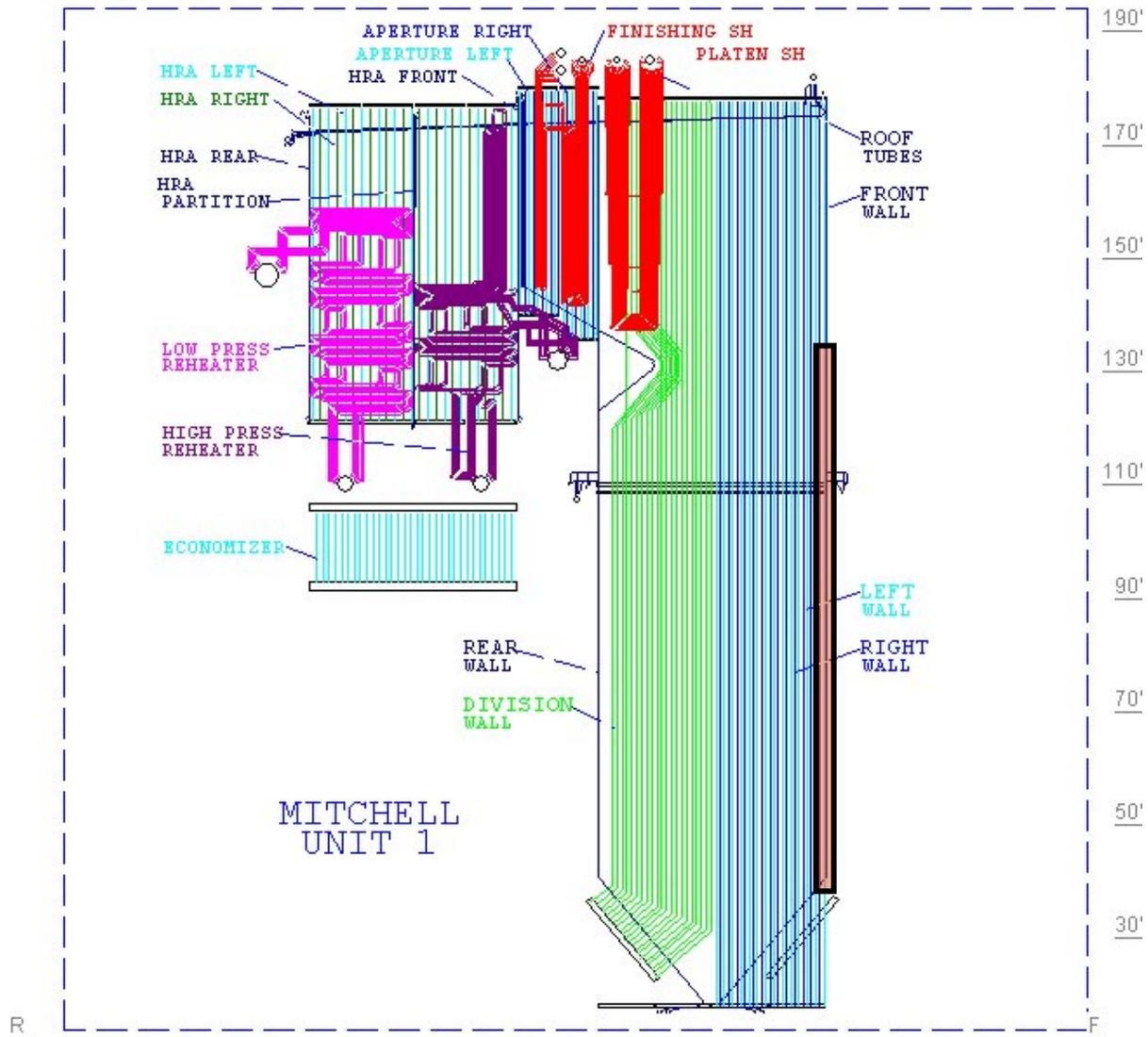
Station: Mitchell Unit: 1 Report Name: 1-WATER WALL FRONT

AREA: Water Wall Front

The area was numbered from boiler left side to boiler right side. Tubes were counted from front to rear or top to bottom unless otherwise specified.

Items were marked with white grease stick.

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See the Following Pages for Repairs
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Gtrack v 3.5.3

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Station: Mitchell Unit: 1 Report Name: 1-WATER WALL FRONT

=====

P R I O R I T Y # 1 R E P A I R S

=====

Area: Water Wall Front

Record:# 15

Action: **TUBE REPLACEMENT-P1**

Priority #: 1

Inspector: Meador K.

General location is Water Wall Front, Front Wall, Center.

Specific location: Tube #:243

Elevation: 49'



Cause: Erosion (Soot Blower)

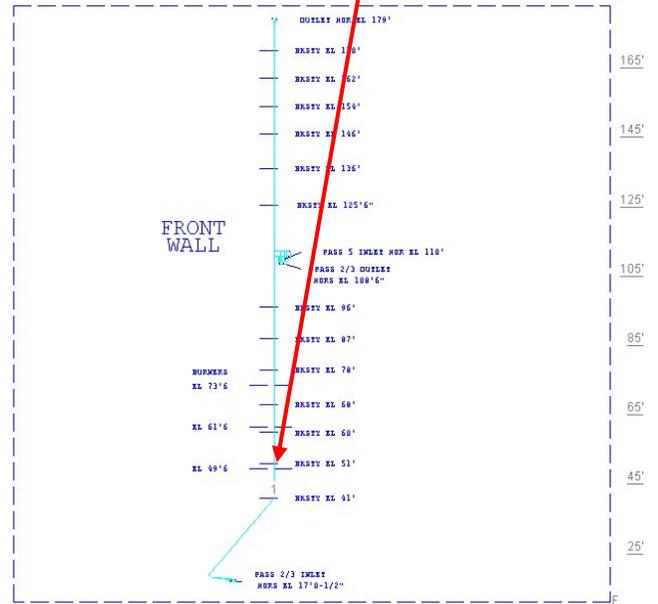
Appearance: Eroded

Material: 1.50" OD x 0.250" MWT x SA-213T2

The UT Data is 0.103

Replace 1' section of **Tube 243** adjacent to Burner 13C due to Soot Blower erosion and a RWT of 0.103. The area is marked with white paint stick.

If the tube is load bearing (hanger tube), temporarily support the tube before replacement is made. Verify replacement material before removing old tube section.



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Station: Mitchell Unit: 1 Report Name: 1-WATER WALL FRONT

Record:# 18

Action: **TUBE REPLACEMENT-P1**

Priority #: 1.

General location is Water Wall Front, Lower Slope, Center.

Elevation: 29'

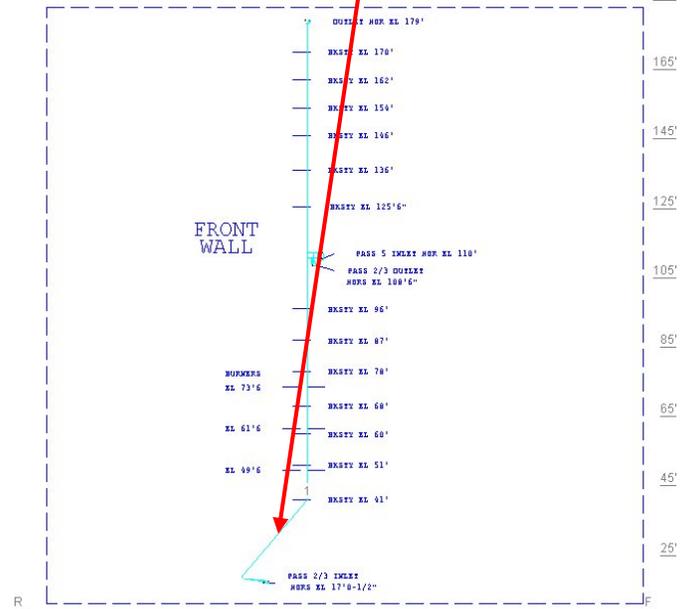
Cause: Erosion (Fly Ash)

Appearance: Eroded

Material: 1.50" OD x 0.250" MWT x SA-213T2

The UT Data is 0.141

Install 6' Dutchman on **Tube 279** due to fly ash erosion and a RWT of 0.141. The tube is located on the left side of the Division Wall and the cut lines are marked with white paint stick.



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Station: Mitchell Unit: 1 Report Name: 1-WATER WALL FRONT

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P R I O R I T Y # 2 R E P A I R S
=====

Area: Water Wall Front

Record:# 6

Action: TUBE RESTORATION WELD-P2

Priority #: 2

Inspector: Brown M.

General location is Water Wall Front.

Specific location: Tube #:1

Elevation: 85'

Cause: Erosion (Soot Blower)

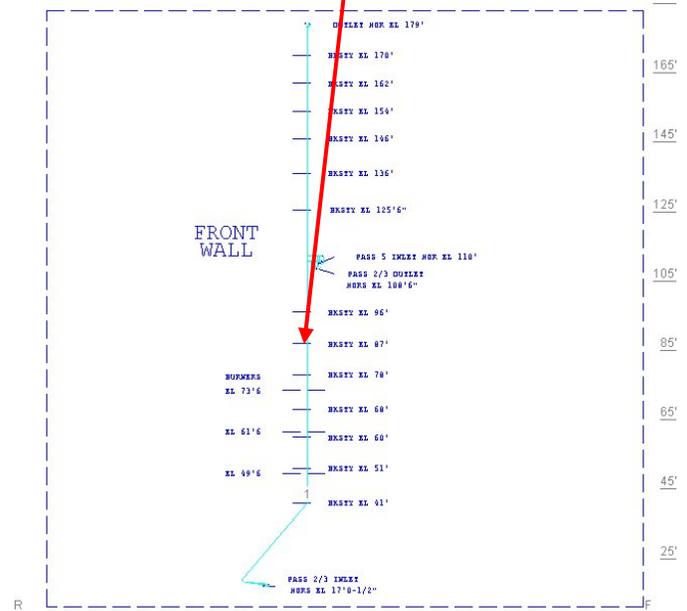
Appearance: Erosion Flat

Material: 1.50" OD x .250" MWT x SA-213T2

The UT Data is .171

Apply one 1"x4" pad weld to **Tube 1** due to previous soot blower erosion from the left side wall IR#1.

The eroded area on the tube is just above a previously installed 1' dutchman.



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Station: Mitchell Unit: 1 Report Name: 1-WATER WALL FRONT

Record:# 22

Action: TUBE RESTORATION WELD-P2

Priority #: 2

Inspector: Brown M.

General location is Water Wall Front.

Specific location: Tube #:517

Elevation: 73.5'

Cause: Erosion (Soot Blower)

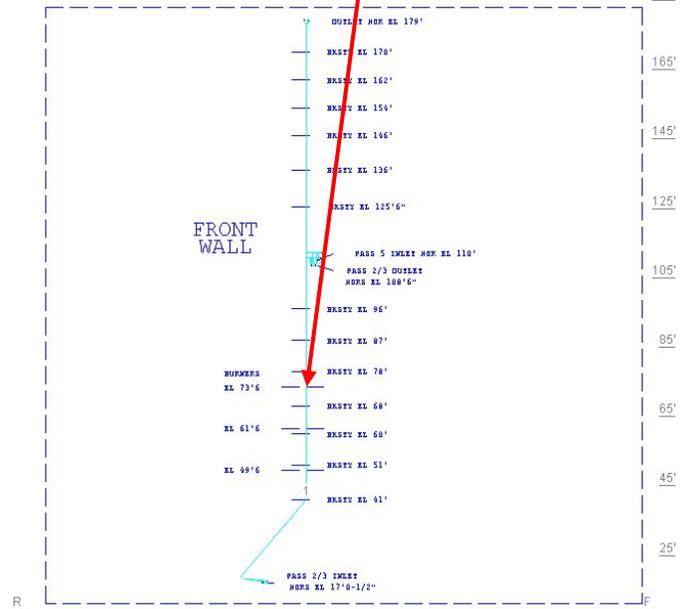
Appearance: Eroded

Material: 1.50" OD x .250" MWT x SA-213T2

The UT Data is .180

Apply one 1"x2" pad weld to restore **Tube 517** due to erosion from a previously in-service IR. The RWT was measured at 180".

This elevation is equal to the centerline of the upper burner band.



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Station: Mitchell Unit: 1 Report Name: 1-WATER WALL FRONT

Record:# 49

Action: TUBE RESTORATION WELD-P2

Priority #: 2

Inspector: Brown M.

General location is Water Wall Front.

Specific location: Tube #:517

Elevation: 84

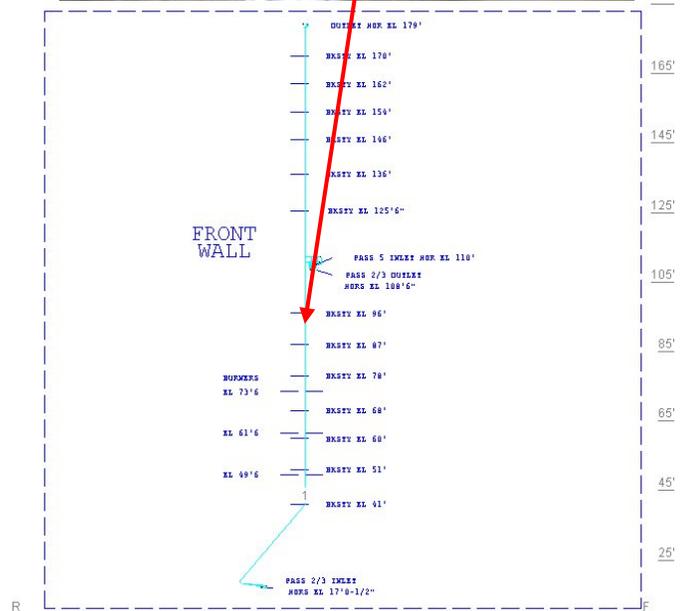
Cause: Maintenance Damage

Appearance: Cut Tube

Material: 1.50" OD x .250" MWT x SA-213T2

The UT Data is N/A

Grind out and weld restore T3 at the front wall due to a wafer wheel cut of a depth estimated >1/16".



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Station: Mitchell Unit: 1 Report Name: 1-WATER WALL FRONT

Area: Water Wall Front

Record:# 11

Action: REFRACTORY INSTALLATION-P2

Priority #: 2

Inspector: Meador K.

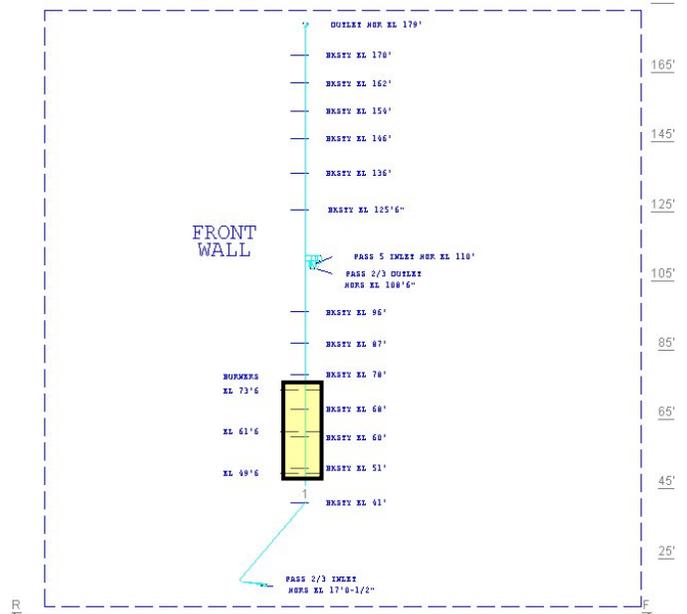
General location is Water Wall Front, Front Wall, At Burners.

Cause: Fatigue (Thermal/ Vibration)

Appearance: Missing

The outer edge of refractory is missing and broken back on the majority of front wall burners throat tubes.

Repair/Replace the missing Refractory.



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Station: Mitchell Unit: 1 Report Name: 1-WATER WALL FRONT

Record:# 14

Action: REFRACTORY INSTALLATION-P2

Priority #: 2

Inspector: Brown M.

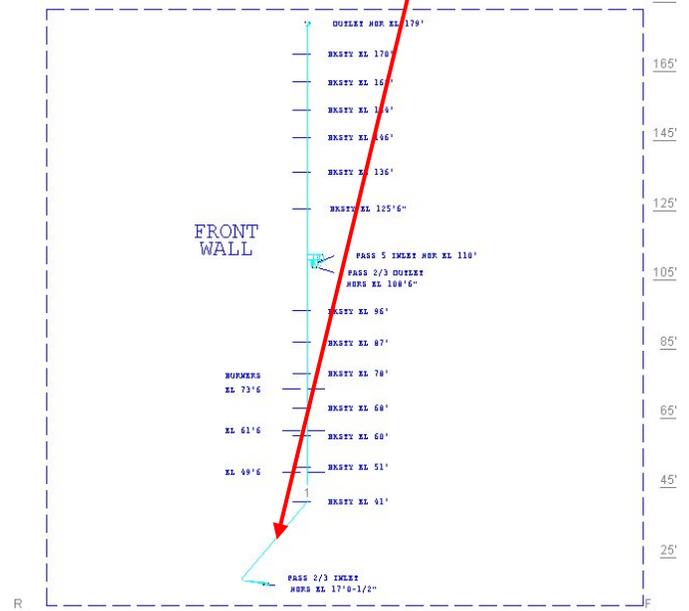
General location is Water Wall Front, Lower Slope, Left.

Elevation: 25'

Appearance: Excessive Gap

Material: 1.50" OD x .250" MWT x SA-250T2

Seal excessive gap at the front lower slope and left side wall junction along the entire length to prevent ash accumulations in the dead air space and to prevent air in/out leakage.



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Station: Mitchell Unit: 1 Report Name: 1-WATER WALL FRONT

Record:# 24

Action: REFRACTORY INSTALLATION-P2

Priority #: 2

Inspector: Brown M.

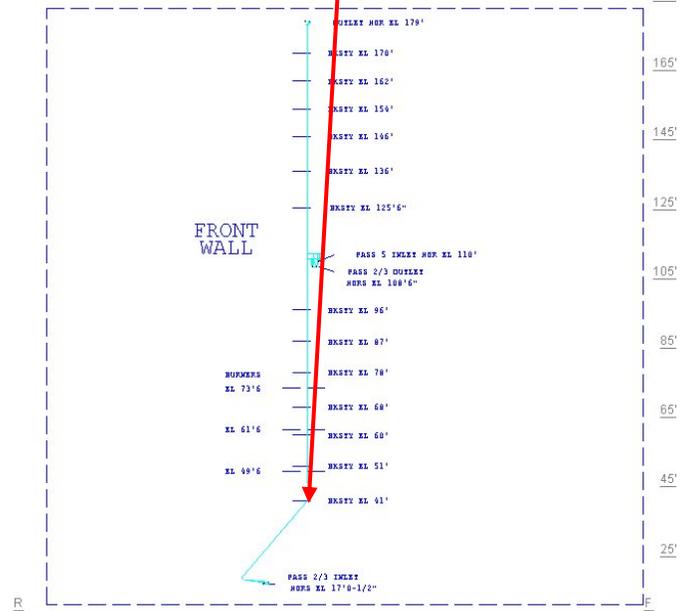
General location is Water Wall Front, Lower, Right.

Elevation: 41'

Appearance: Excessive Gap in Wall Corner

Material: 1.50" OD x .250" MWT x SA-213T2

Replace burnt outer casing and install refractory at the junction of the front and right walls to fill the excessive gap caused by the deflection of the lower right wall. This is at the transition to the lower slope.



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Station: Mitchell Unit: 1 Report Name: 1-WATER WALL FRONT

Area: Water Wall Front

Record:# 28

Action: FURTHER RESEARCH REQUIRED-P2

Priority #: 2

Inspector: Meador K.

General location is Water Wall Front, Lower Slope, Center.

Elevation: 30'

Cause: Fatigue (Thermal)

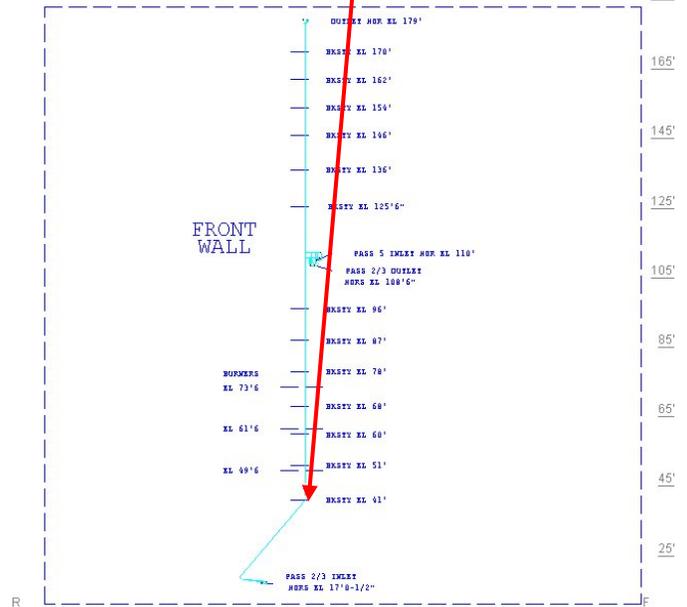
Appearance: Pitted Tube

Material: 1.50" OD x 0.250" MWT x SA-213T2

Further research is recommended at **Tube 282** on the right side of the Division Wall.

Verify that the missing material and fatigue cracking is in the overlay and not the tube.

Replace tube if defects are in the actual tube material. Length will be approximately 6'.



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P R I O R I T Y # 3 R E P A I R S

=====

Area: Water Wall Front

Record:# 20

Action: WELD REPAIR-P3

Priority #: 3

Inspector: Meador K.

General location is Water Wall Front, Lower Slope, Center.

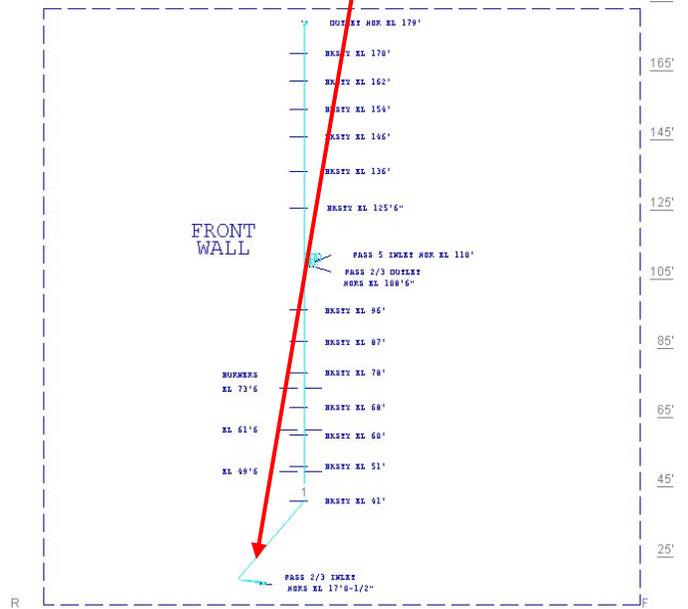
Elevation: 30'

Cause: Fatigue (Thermal)

Appearance: Cracked

Material: 1.50" OD x 0.250" MWT x SA-213T2

Re-Weld the cracked membrane in between tubes 299 & 300, 303 & 305 due to thermal fatigue. The cracks range from 1' to 5' in length.



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Station: Mitchell Unit: 1 Report Name: 1-WATER WALL FRONT

Area: Water Wall Front

Record:# 3

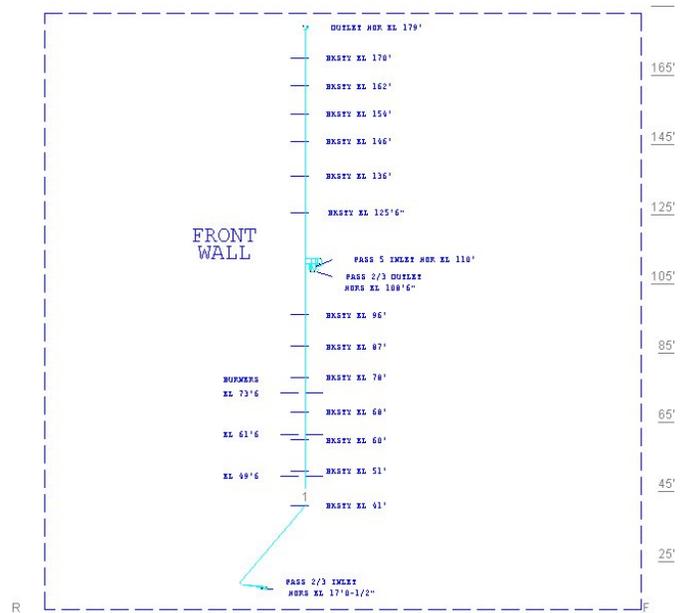
Action: INFORMATION ONLY-P3

Priority #: 3

Inspector: Brown M.

General location is Water Wall Front.

Inspections of the front wall (left and right sides of the division wall) were limited due to the position of the sky climber as it was consistently 2'-3' from the wall.



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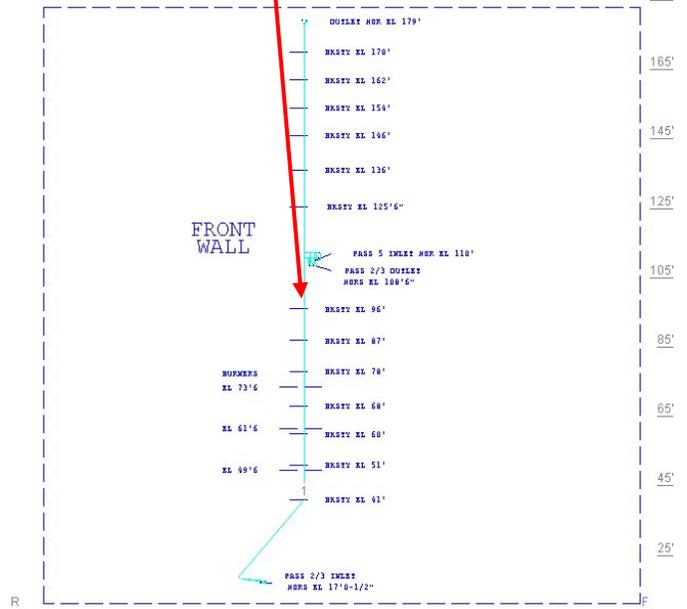
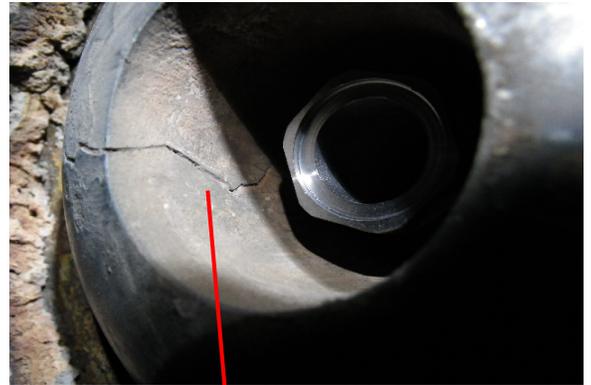
Station: Mitchell Unit: 1 Report Name: 1-WATER WALL FRONT

Record:# 8
Action: INFORMATION ONLY-P3
Priority #: 3
Inspector: Meador K.

General location is Water Wall Front, Front Wall, Left.

Cause: Fatigue (Thermal)
Appearance: Cracked

The Water Cannon on the left Front Wall is cracked; however, no action is needed at this time.



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Station: Mitchell Unit: 1 Report Name: 1-WATER WALL FRONT

Area: Water Wall Front

Record:# 26

Action: REPLACE MISSING TILES-P3

Priority #: 3

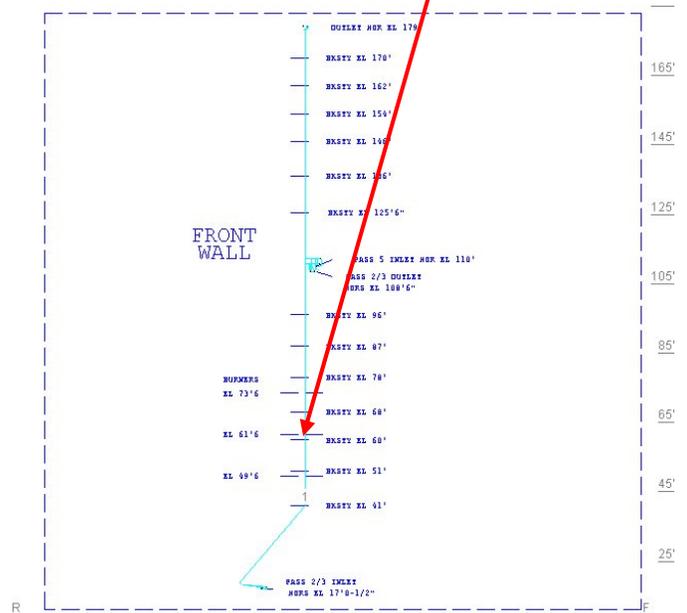
Inspector: Brown M.

General location is Water Wall Front, Burner Coal Nozzle, 12F.

Elevation: 61.5'

Appearance: Missing

Replace the missing ceramic liner tiles at **Burner #12F** in the 11:00-12:00 o'clock positions.



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Station: Mitchell Unit: 1 Report Name: 1-WATER WALL FRONT

Area: Water Wall Front

Record:# 7

Action: REPLACE COAL NOZZLE TIP

Priority #: 3

Inspector: Meador K.

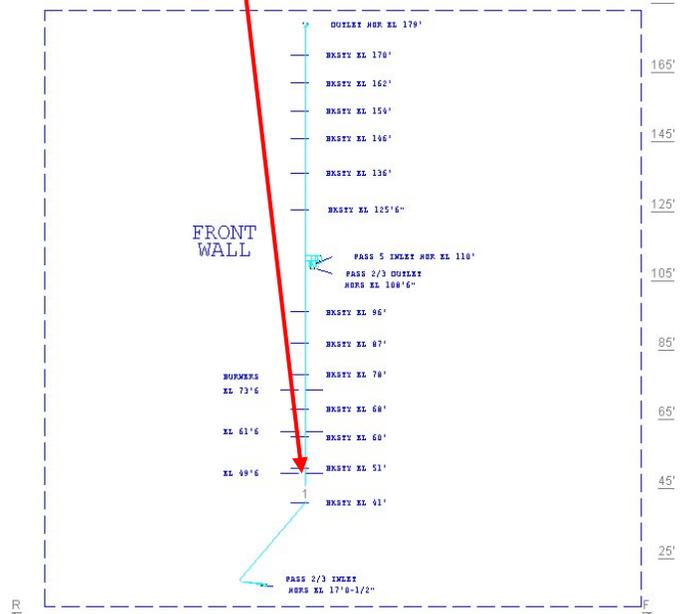
General location is Water Wall Front, Front Wall, At Burners.

Elevation: 49'

Cause: Fatigue (Thermal)

Appearance: Distorted

Replace Coal Nozzle Tip due to thermal fatigue. The Coal Nozzle Tip on Burner 13C is distorted at the 7:00 position.



Work Order: _____

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Station: Mitchell Unit: 1 Report Name: 1-WATER WALL FRONT

Area: Water Wall Front

Record:# 7

Action: REPLACE COAL NOZZLE CONICAL DIFFUSER

Priority #: 3

Inspector: Meador K.

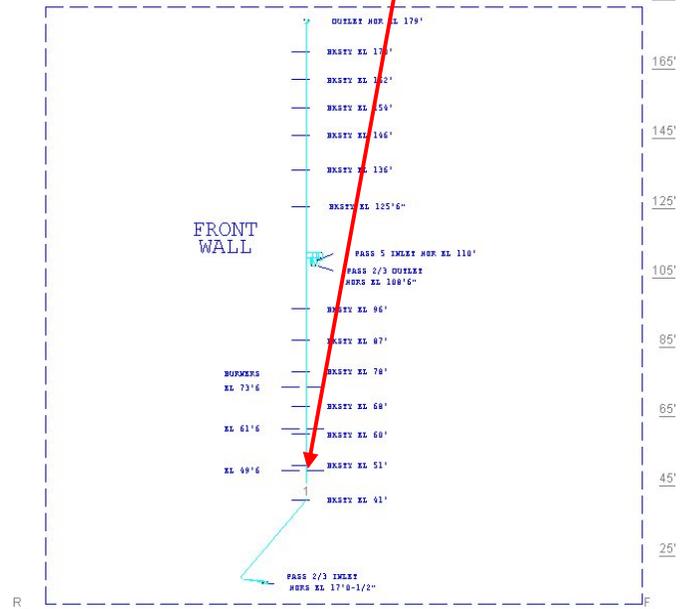
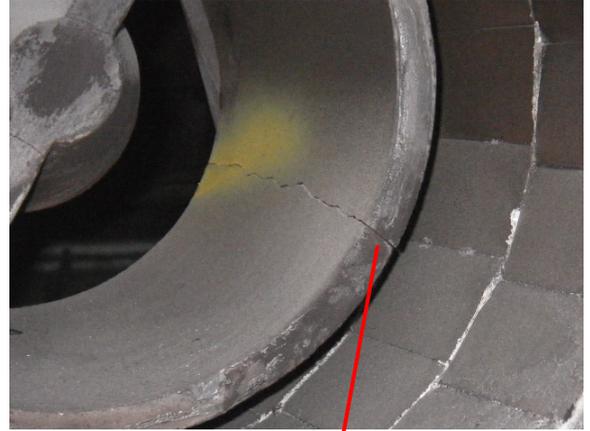
General location is Water Wall Front, Front Wall, At Burners.

Elevation: 49'

Cause: Fatigue (Thermal)

Appearance: Distorted

Replace the conical diffuser at **Burner 13C** due to thermal fatigue cracking in several locations.



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Station: Mitchell Unit: 1 Report Name: 2-WATER WALL REAR

AREA: Water Wall Rear

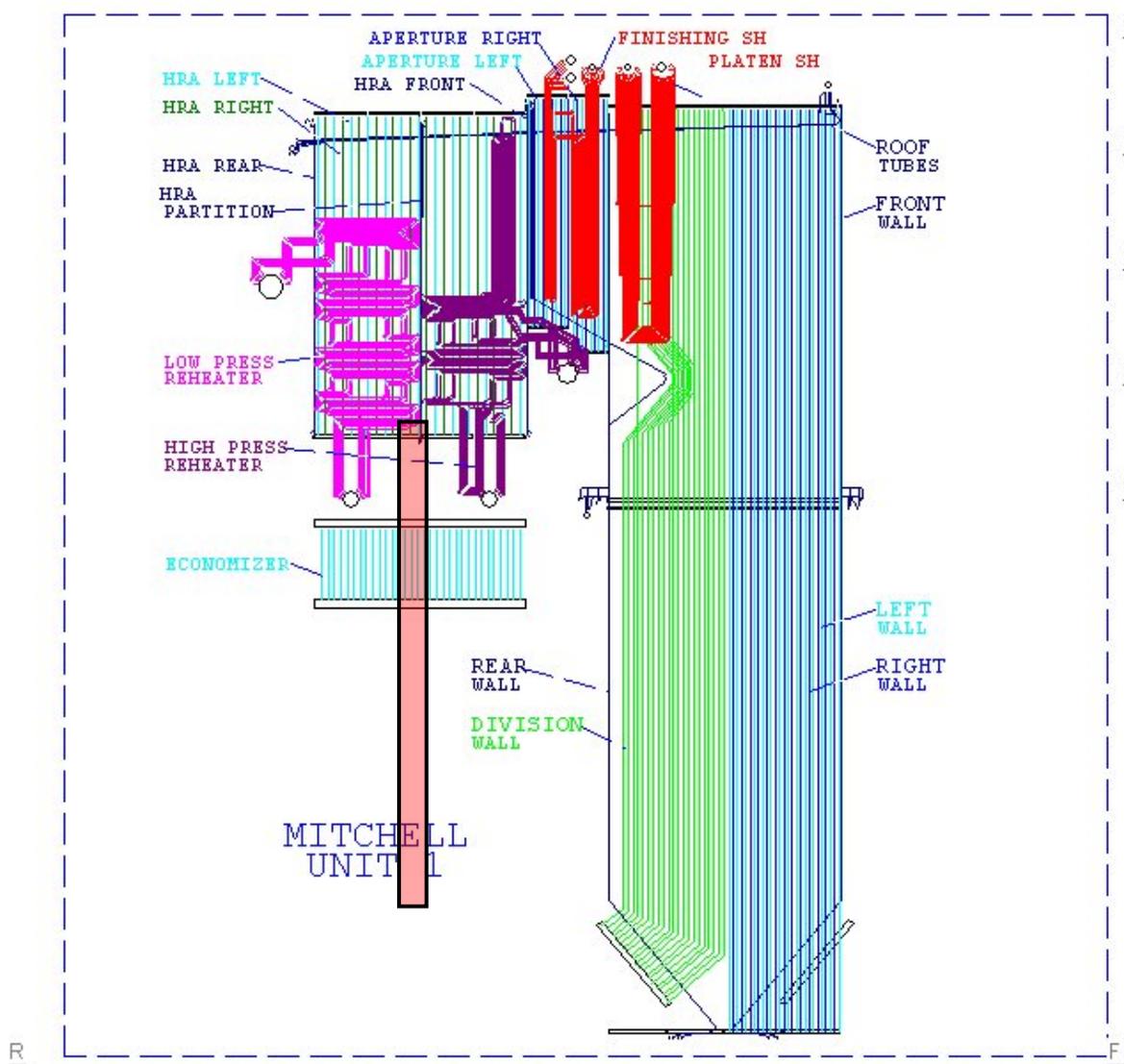
The area was numbered from boiler left side to boiler right side. Tubes were counted from front to rear or top to bottom unless otherwise specified.

Items were marked with white grease stick.

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SEE NEXT PAGE FOR REPAIRS

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Station: Mitchell Unit: 1 Report Name: 2-WATER WALL REAR

P R I O R I T Y # 1 R E P A I R S

Area: Water Wall Rear

Record:# 17

Action: **TUBE REPLACEMENT-P1**

Priority #: 1

Inspector: Bellucci E.

General location is Water Wall Rear, Lower Slope, Left.

Elevation: 20'

Length: 2'

Cause: Erosion (Fly Ash)

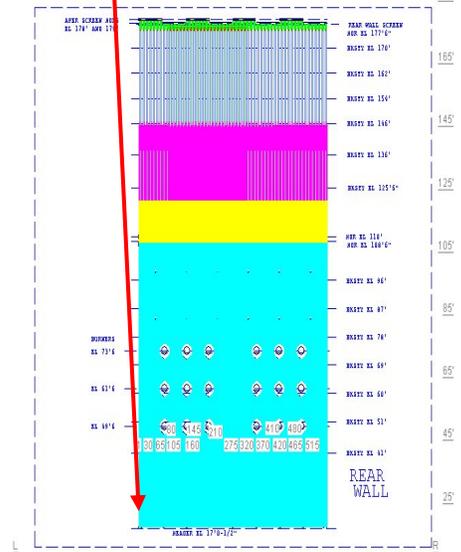
Appearance: Erosion Flat



Material: 1.50" OD x .250" MWT x SA-213T2

Install approximately 2' dutchman to the eroded area on tube 1. The eroded area is located 12" above the throat of the coutant slope. The gap needs to be filled from the rear wall to the left wall the help seal up the boiler and to stop the fly ash being channeled through this area. There was no UT reading obtained due to the location of the eroded area.

If the tube is load bearing (hanger tube), temporarily support the tube before replacement is made. Verify replacement material before removing old tube section.



Work Order: _____

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Station: Mitchell Unit: 1 Report Name: 2-WATER WALL REAR

Record:# 27

Action: TUBE REPLACEMENT-P1

Priority #: 1

Inspector: Bellucci E.

General location is Water Wall Rear, Rear Wall, At Burners.

Specific location: Tube #:520

Elevation: 74'

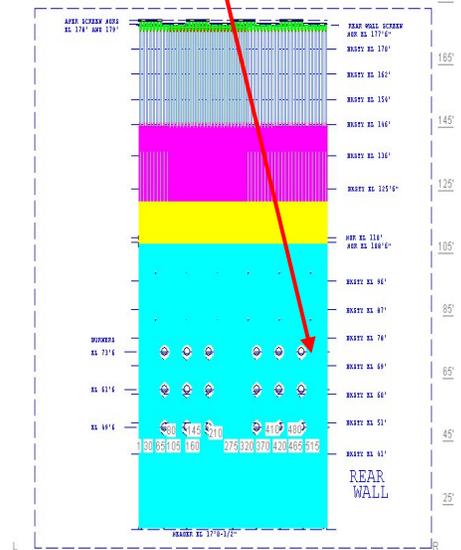
Length: 2'

Appearance: Bulged Tube

Material: 1.50" OD x .250" MWT x SA-213T2

The UT Data is .183

Install 2' dutchman on tube 520 due to bulge and UT readings of 0.183". This tube is located at the top row of burners adjacent to old IR port. Bottom cutline should be approximately 10" down from IR and up 24" to remove bulge and existing pad weld.



Work Order: _____

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Station: Mitchell Unit: 1 Report Name: 2-WATER WALL REAR

Area: Water Wall Rear

Record:# 43

Action: GRIND FOR INSPECTION-P1

Priority #: 1

Inspector: Bellucci E.

General location is Water Wall Rear, Rear Wall, Left.

Specific location: Tube #:1

Elevation: 87'



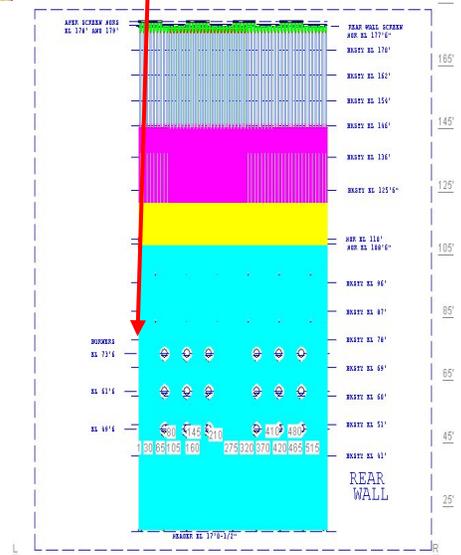
Appearance: Quench Cracked Tube

Material: 1.50" OD x .250" MWT x SA-213T2

Grind surface indications to termination and then verify that the indications are limited to the overlay material only and not the actual tube surfaces. Should indications continue beyond the overlay, determine the RWT of the underlying tube material and repair as needed.

This tube appears to have been quenched from the IR that has been taken out of commission. This tube is located approximately 5' above the top row of burners.

Grind until visible defect reaches termination and call for re-inspection.



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Station: Mitchell Unit: 1 Report Name: 2-WATER WALL REAR

Area: Water Wall Rear

Record:# 25

Action: **FURTHER RESEARCH REQUIRED-P1**

Priority #: 1

Inspector: Bellucci E.

General location is Water Wall Rear, Rear Wall.

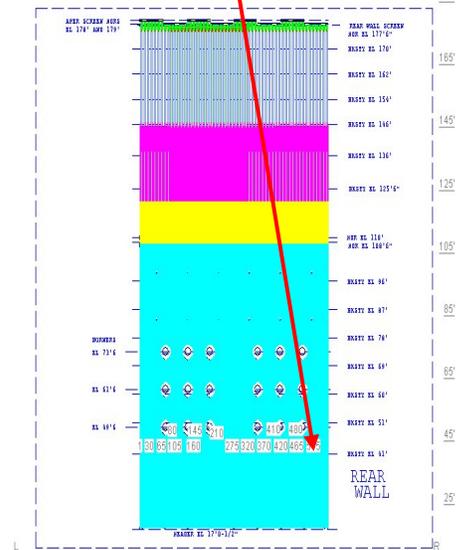
Specific location: Tube #:557 through 559
Elevation: 30'



Appearance: Stress Fatigue Cracks

Material: 1.50" OD x .250" MWT x SA-213T2

Further research required for tubes 557-559. These tubes appear to have stress fatigue cracks located at the rear wall right below where the rear wall transitions to the lower slope.



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Station: Mitchell Unit: 1 Report Name: 2-WATER WALL REAR

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P R I O R I T Y # 2 R E P A I R S

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Area: Water Wall Rear

Record:# 9

Action: TUBE RESTORATION WELD-P2

Priority #: 2

Inspector: Bellucci E.

General location is Water Wall Rear, Rear Wall, At Burners.

Elevation: 62'

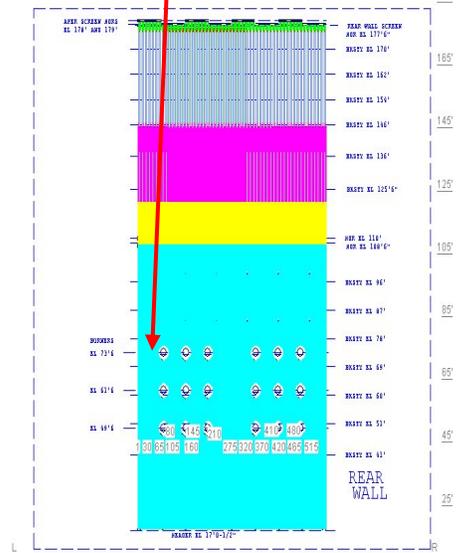
Cause: Erosion (Soot Blower)

Appearance: Eroded

Material: 1.50" OD x .250" MWT x SA-213T2

The UT Data is .182

Apply 1" x 2" pad weld to the eroded area on tube 41 on the left side of the tube. This area appears to be at an old IR that has been taken out of commission. This eroded area is located level with the second row of burners.



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Station: Mitchell Unit: 1 Report Name: 2-WATER WALL REAR

Area: Water Wall Rear

Record:# 31

Action: WELD REPAIR-P2

Priority #: 2

Inspector: Bellucci E.

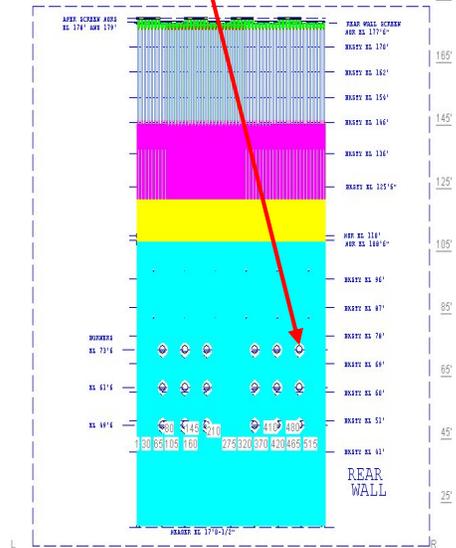
General location is Water Wall Rear, Rear Wall, At Burners.

Elevation: 74'

Cause: Fatigue (Thermal)

Appearance: Deteriorated

Weld repair igniter approximately 6" back from the tip at 14F.



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Station: Mitchell Unit: 1 Report Name: 2-WATER WALL REAR

Area: Water Wall Rear

Record:# 32

Action: REFRACTORY INSTALLATION-P2

Priority #: 2

Inspector: Bellucci E.

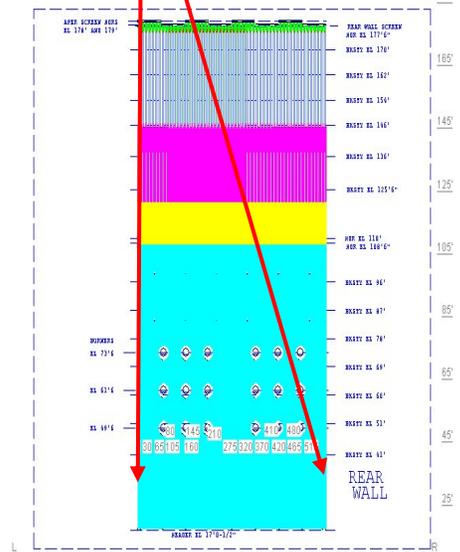
General location is Water Wall Rear, Lower Slope.

Elevation: 41'

Appearance: Excessive Gap in Wall Corner

Material: 1.50" OD x .250" MWT x SA-213T2

Replace burnt outer casing and install refractory at the junction of the rear and right and left side walls to fill the excessive gap caused by the deflection of the lower right and left walls. This is at the transition to the lower slope.



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Station: Mitchell Unit: 1 Report Name: 2-WATER WALL REAR

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P R I O R I T Y # 3 R E P A I R S

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Area: Water Wall Rear

Record:# 21
Action: PEG FIN REPLACEMENT-P3
 Priority #: 3
 Inspector: Bellucci E.

General location is Water Wall Rear, Rear Wall, Mixing Header.

Elevation: 109'

Cause: Fatigue (Thermal)

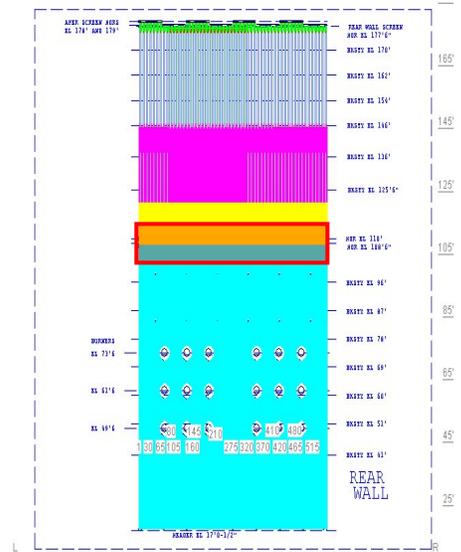
Appearance: Overheated



Material: 1.50" OD x .250" MWT x SA-213T2

Replace pad fin located along the rear wall from left to right side of the furnace at the mixing header. The peg fin is being overheated and is starting to propagate into the tubes. Once the refractory is replaced in this area it will help to prevent the peg fin to propagate any further.

Remove existing peg fin remnants and replace with new like material. Install fins with non-continuous side against tube and apply >80% penetration welds not extending past each fin break. Start and stop welds on fin. Do not weld around ends of fins.



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Area: Water Wall Rear

Record:# 19

Action: REFRACTORY INSTALLATION-P3

Priority #: 3

Inspector: Bellucci E.

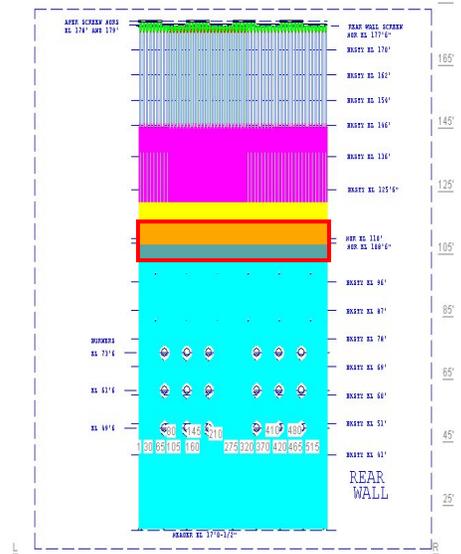
General location is Water Wall Rear, Rear Wall, Mixing Header.

Elevation: 109'

Cause: Fatigue (Thermal/ Vibration)

Appearance: Missing

Install refractory at the mixing header on the rear wall from the left to the right side of the boiler.



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Station: Mitchell Unit: 1 Report Name: 2-WATER WALL REAR

Area: Water Wall Rear

Record:# 12

Action: **MONITOR CLOSELY-P3**

Priority #: 3

Inspector: Arms R.

General location is Water Wall Rear, Rear Wall.

Elevation: 40'

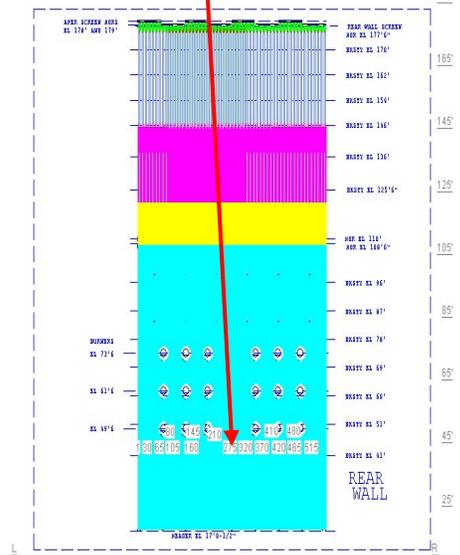
Cause: Erosion (Fly Ash)

Appearance: Eroded

Material: 1.50" OD x .250" MWT x SA-213T2

The UT Data is .218

Monitor tube 279 during future outages. The RWT is 0.218".



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Station: Mitchell Unit: 1 Report Name: 2-WATER WALL REAR

Record:# 13

Action: MONITOR CLOSELY-P3

Priority #: 3

Inspector: Bellucci E.

General location is Water Wall Rear, Rear Wall, At Water Cannon.

Appearance: Erosion Flat

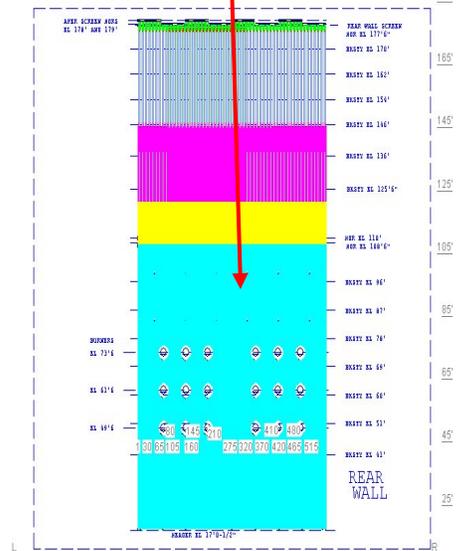
Material: 1.50" OD x .250" MWT x SA-213T2

The UT Data is .200



Monitor tubes 147-160 during future outages. These tubes appear to have been eroded from an old IR at the water cannon elevation. The lowest UT reading came from tube 152 and had a RWT of 0.200".

The other UT readings obtained were on tube 150 UT of 0.213" and 153 UT of 0.220". These eroded areas are located adjacent to the water cannon at the 2 o'clock position.



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Area: Water Wall Rear

Record:# 4

Action: REPLACE MISSING TILES-P3

Priority #: 3

Inspector: Arms R.

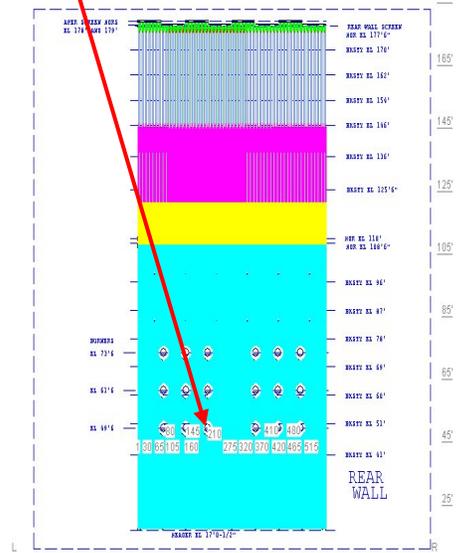
General location is Water Wall Rear, Rear Wall, At Burners.

Elevation: 50'

Appearance: Missing

The ceramic tiles are missing or damaged at rear wall burner 16C. The tiles to be repaired or replaced are located at the following positions:

- 11 o'clock 2' back
- 3 o'clock 2' back and 1" back
- 12 o'clock 6" back



Work Order: _____

Status: Inspected

Inspection Report

Created on 3/31/2011 12:52 PM

Page 14 of 16

Station: Mitchell Unit: 1 Report Name: 2-WATER WALL REAR

Record:# 5

Action: REPLACE MISSING TILES-P3

Priority #: 3

Inspector: Bellucci E.

General location is Water Wall Rear, Rear Wall, Burner 14 A.

Elevation: 74'

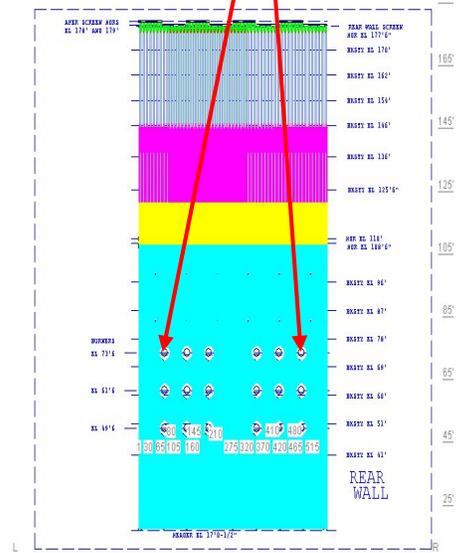
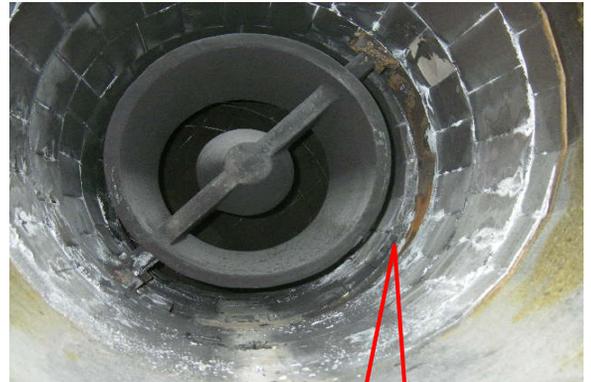
Cause: Fatigue (Thermal/ Vibration)

Appearance: Missing

Replace missing tiles located at the following burners/ location of missing tiles:

14 A located approximately 2.5' back at the 7 o'clock position

14 F/ located 3' back at the 10 to 12 o'clock position



Work Order: _____

Status: Inspected

Gtrack v 3.5.3

Inspection Report

Created on 3/31/2011 12:52 PM

Page 15 of 16

Station: Mitchell Unit: 1 Report Name: 2-WATER WALL REAR

Record:# 10

Action: REPLACE MISSING TILES-P3

Priority #: 3

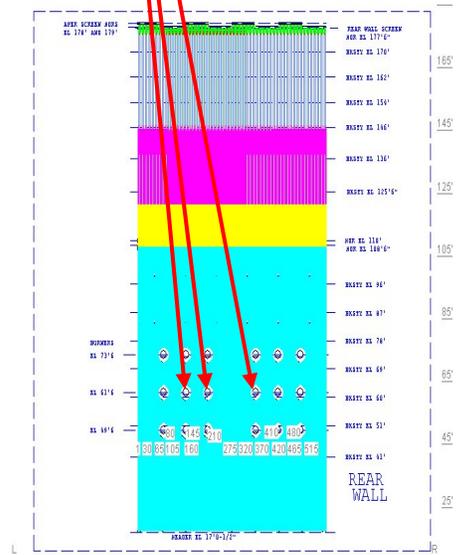
Inspector: Arms R.

General location is Water Wall Rear, Rear Wall, At Burners.

Elevation: 60'

Appearance: Missing

Replace missing tiles located at burners 15B, 15C, and 15D. The tiles missing from 15B are located at the 11 o'clock position 3' back, tiles missing from 15C are located at the 12 o'clock position 2" back, and 15D at the 12 o'clock position 2.5' back.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/1/2011 10:55 AM

Page 1 of 5

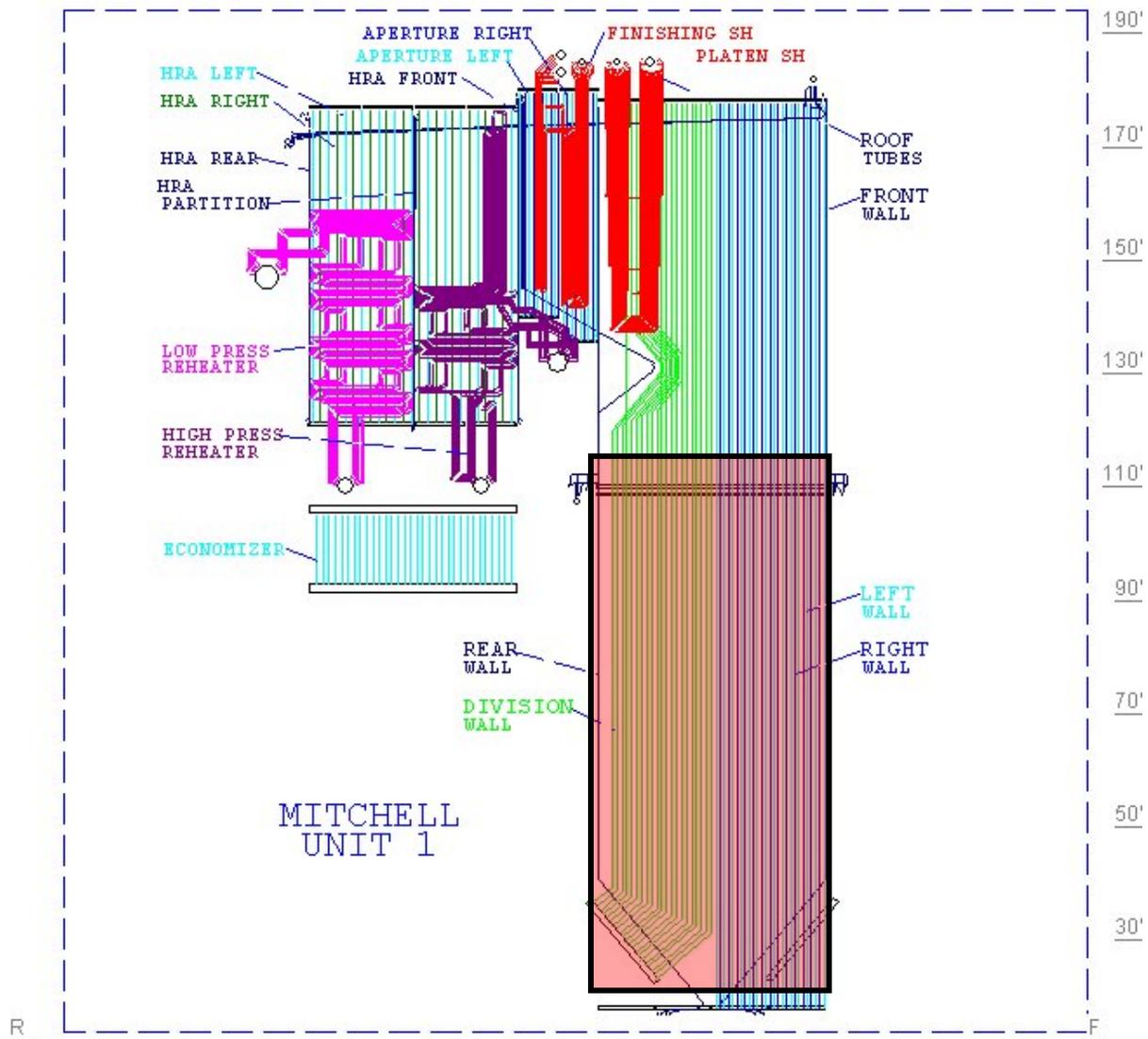
Station: Mitchell Unit: 1 Report Name: 3-WATER WALL LEFT

AREA: Water Wall Left

The area was numbered from boiler left side to boiler right side. Tubes were counted from front to rear or top to bottom unless otherwise specified.

Items were marked with white grease stick.

=====
See the Following Pages for Repairs
=====



Inspection Report

Created on 4/1/2011 10:55 AM

Page 2 of 5

Station: Mitchell Unit: 1 Report Name: 3-WATER WALL LEFT

=====

P R I O R I T Y # 1 R E P A I R S

=====

Area: Water Wall Left

Record:# 42

Action: GRIND FOR INSPECTION-P1

Priority #: 1

Inspector: Meador K.

General location is Water Wall Left, Rear.

Elevation: 85'

Cause: Fatigue (Thermal)

Appearance: Quench Cracked Tube

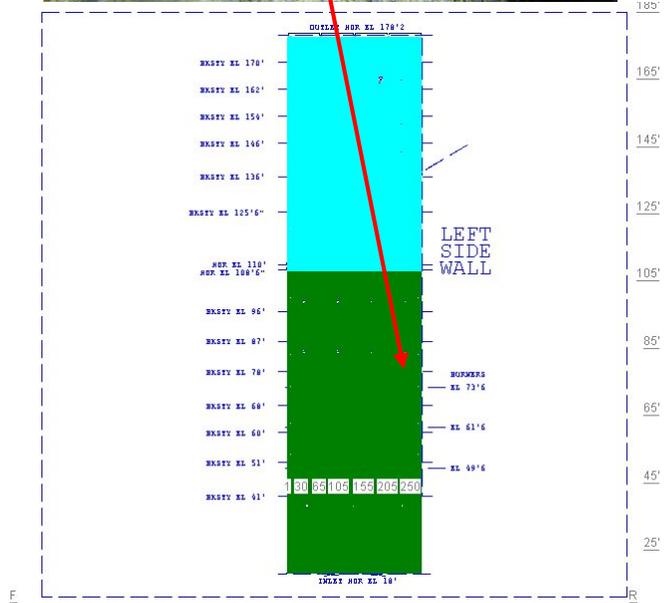
Material: 1.50" OD x 0.250" MWT x SA-213T2

Grind surface indications to termination and then verify that the indications are limited to the overlay material only and not the actual tube surfaces.

Should indications continue beyond the overlay, determine the RWT of the underlying tube material and repair as needed.

The area where the damage was located was between tubes 209 and 245 and started at the IR and extended vertically approximately 5'-6' above the IR path. The worst of the damage is located around the IR.

Grind until visible defect reaches termination and call for re-inspection.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/1/2011 10:55 AM

Page 3 of 5

Station: Mitchell Unit: 1 Report Name: 3-WATER WALL LEFT

=====

P R I O R I T Y # 2 R E P A I R S

=====

Area: Water Wall Left

Record:# 48

Action: TUBE RESTORATION WELD-P2

Priority #:

Inspector: Brown M.

General location is Water Wall Left, Lower, Front.

Specific location: Tube #:35

Elevation: 84'



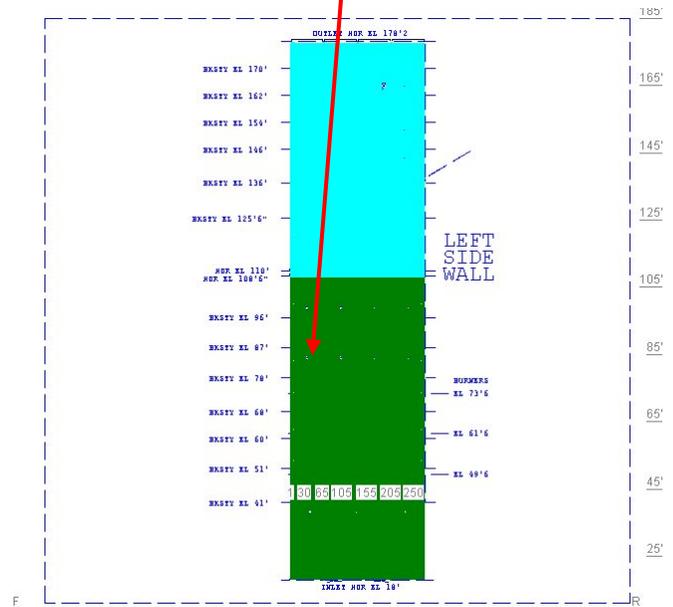
Cause: Erosion (Soot Blower)

Appearance: Eroded

Material: 1.50" OD x .250" MWT x SA-213T2

The IK/IR is 1

Apply two (2) 1"x1" pad welds to offset Tube #35 above and below the IR#1 due to old blower erosion and a RWT of .176".



Work Order: _____

Status: Inspected

Gtrack v 3.5.3

Inspection Report

Created on 4/1/2011 10:55 AM

Page 4 of 5

Station: Mitchell Unit: 1 Report Name: 3-WATER WALL LEFT

Area: Water Wall Left

Record:# 45

Action: FURTHER RESEARCH REQUIRED-P2

Priority #: 2

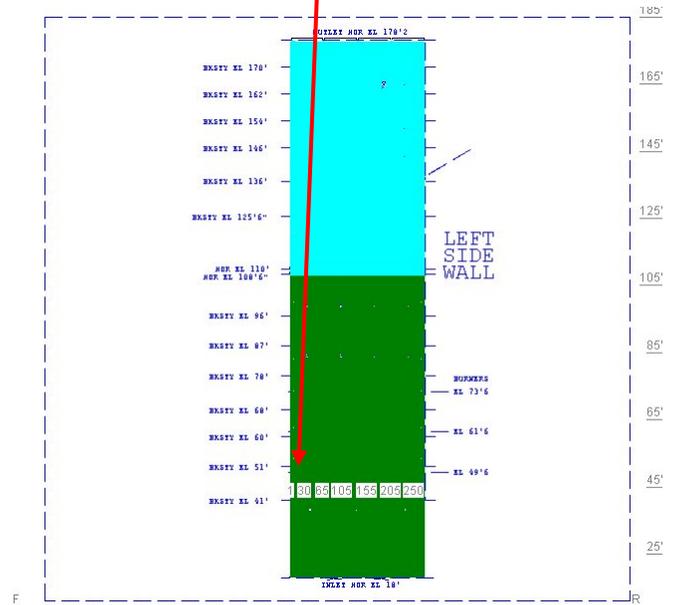
Inspector: Brown M.

General location is Water Wall Left, Lower, Front.

Appearance: Detached

Material: 1.50" OD x .250" MWT x SA-213T2

It is recommended that the left side wall at the front corner be inspected for damaged or sheared tubes from the cold side at buckstay attachments due to the substantial deflection present from an approximate elevation of 41'-65'.



Work Order: _____

Status: Inspected

Gtrack v 3.5.3

Inspection Report

Created on 4/1/2011 10:55 AM

Page 5 of 5

Station: Mitchell Unit: 1 Report Name: 3-WATER WALL LEFT

=====
P R I O R I T Y # 3 R E P A I R S
=====

Area: Water Wall Left

Record:# 46

Action: REFRACTORY INSTALLATION-P3

Priority #: 3.

General location is Water Wall Left, Left Side Wall, Left.

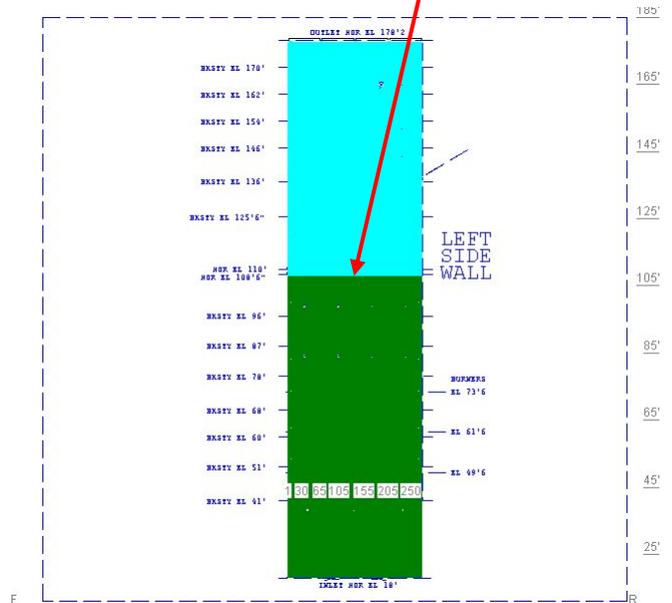
Elevation: 110'

Cause: Fatigue (Thermal/ Vibration)

Appearance: Missing

Material: 1.50" OD x 0.250" MWT x SA-213T2

Re-Install missing/broken Refractory along the tube penetrations on the Mixing Header.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/1/2011 12:10 PM

Page 1 of 5

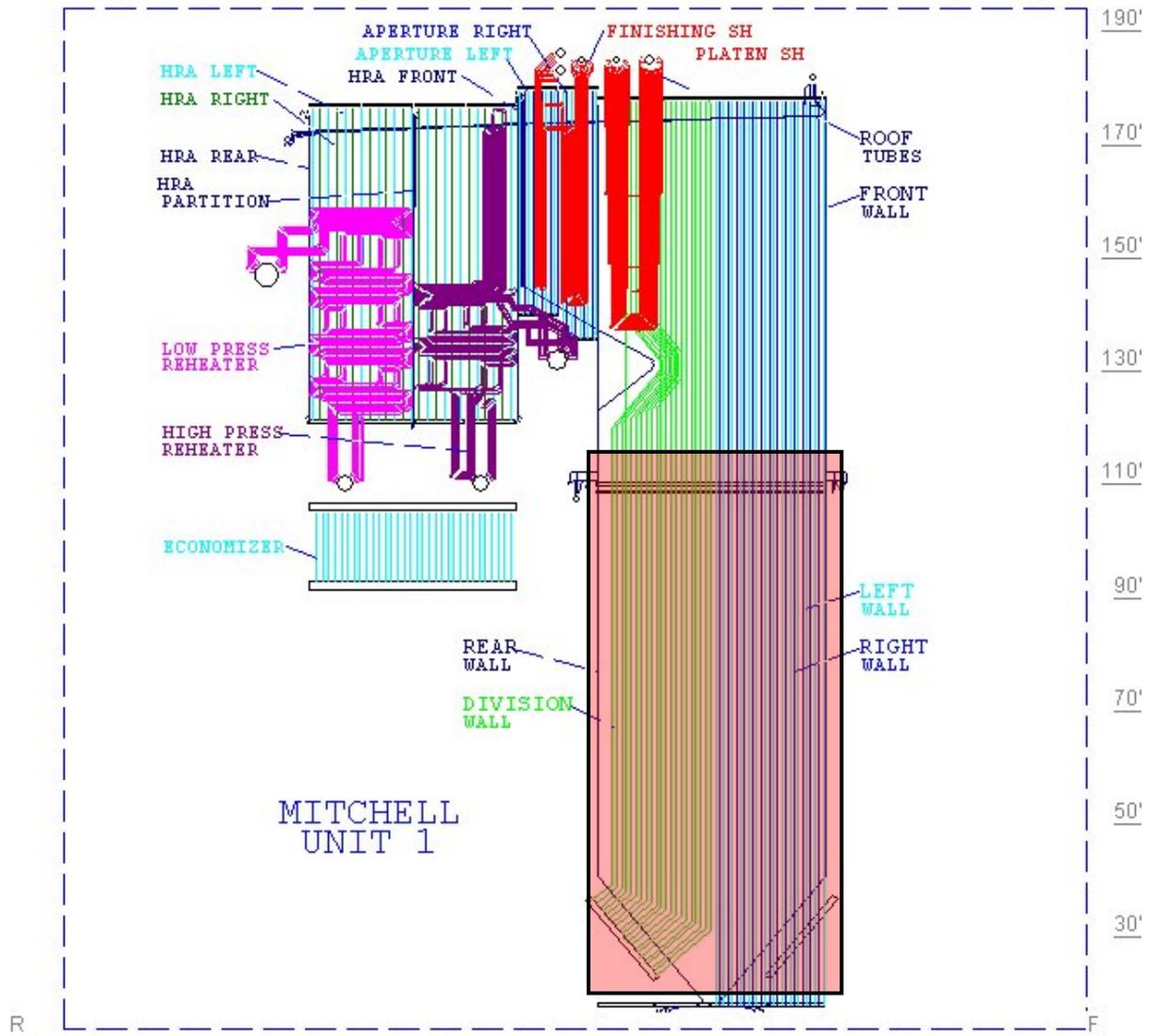
Station: Mitchell Unit: 1 Report Name: 4-WATER WALL RIGHT

AREA: Water Wall Right

The area was numbered from boiler left side to boiler right side. Tubes were counted from front to rear or top to bottom unless otherwise specified.

Items were marked with white grease stick.

=====
See the Following Pages for Repairs
=====



Inspection Report

Created on 4/1/2011 12:10 PM

Page 2 of 5

Station: Mitchell Unit: 1 Report Name: 4-WATER WALL RIGHT

P R I O R I T Y # 1 R E P A I R S

Area: Water Wall Right

Record:# 47

Action: GRIND FOR INSPECTION-P1

Priority #: 1

Inspector: Bellucci E.

General location is Water Wall Right, Right Side Wall, Above Burners.

Elevation: 80'

Appearance: Quench Cracked Tube

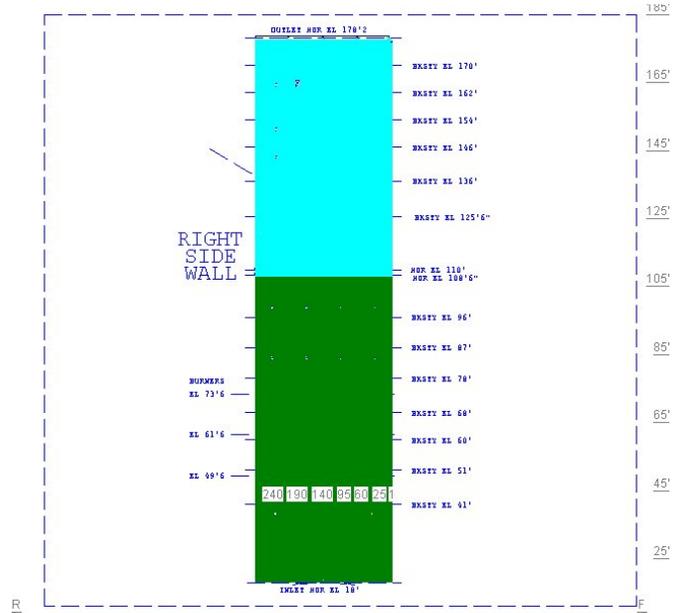
Material: 1.50" OD x .250" MWT x SA-213T2

Grind surface indications to termination and then verify that the indications are limited to the overlay material only and not the actual tube surfaces.

Should indications continue beyond the overlay, determine the RWT of the underlying tube material and repair as needed at the following tubes:

- 19-32
- 531-543

These tubes appear to have been quenched from the IR that has been taken out of commission and are located approximately 6' above the top row of burners.



Grind until visible defect reaches termination and call for re-inspection.

Work Order: _____

Status: Inspected

Inspection Report

Created on 4/1/2011 12:10 PM

Page 3 of 5

Station: Mitchell Unit: 1 Report Name: 4-WATER WALL RIGHT

Record:# 50
Action: GRIND FOR INSPECTION-P1
 Priority #: 1
 Inspector: Bellucci E.

General location is Water Wall Right, Right Side Wall.

Elevation: 95'

Appearance: Quench Cracked Tube

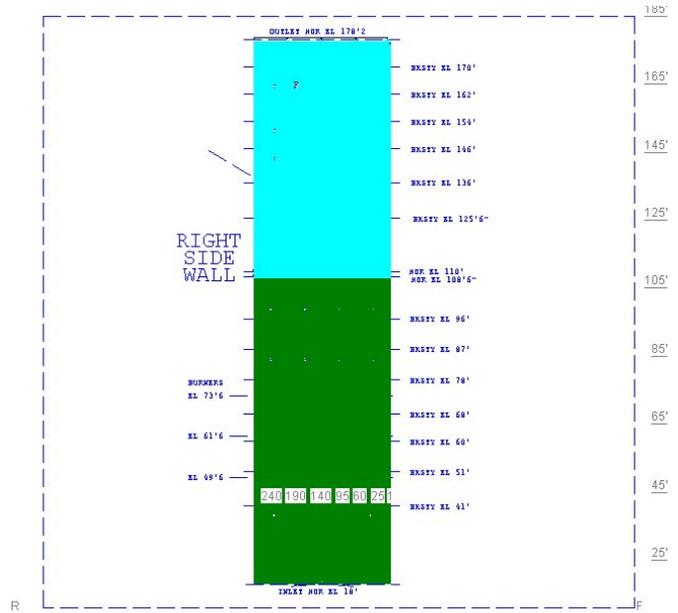
Material: 1.50" OD x .250" MWT x SA-213T2

Grind surface indications to termination and then verify that the indications are limited to the overlay material only and not the actual tube surfaces.

Should indications continue beyond the overlay, determine the RWT of the underlying tube material and repair as needed at the following tubes:

- 27-32
- 519-533

These tubes appear to have been quenched from the IR that has been taken out of commission and are located approximately 15' down from the mixing header.



Work Order: _____

Status: Inspected

Gtrack v 3.5.3

Inspection Report

Created on 4/1/2011 12:10 PM

Page 4 of 5

Station: Mitchell Unit: 1 Report Name: 4-WATER WALL RIGHT

=====

P R I O R I T Y # 2 R E P A I R S

=====

Area: Water Wall Right



Record:# 23

Action: FURTHER RESEARCH REQUIRED-P2

Priority #: 2

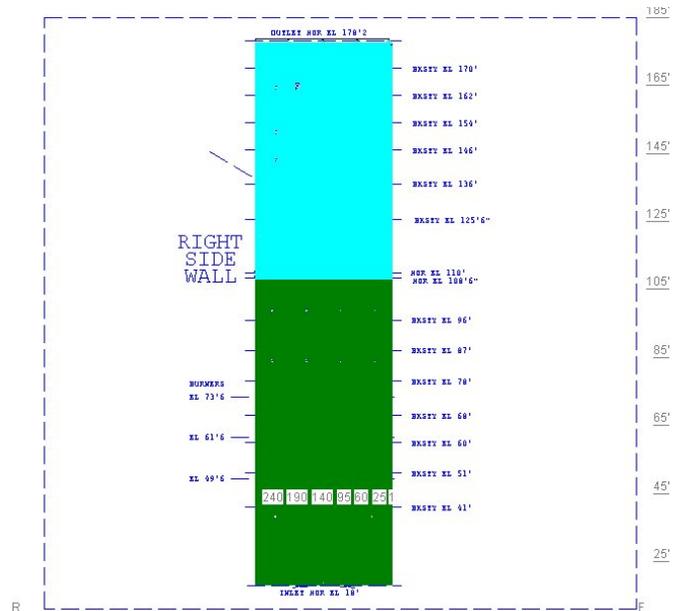
Inspector: Brown M.

General location is Water Wall Right, Lower, Front.

Appearance: Deflected

Material: 1.50" OD x .250" MWT x SA-213T2

It is recommended that the right side wall at the front corner be inspected for damaged or sheared tubes from the cold side at buckstay attachments due to the substantial deflection present from an approximate elevation of 41'-65'.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/1/2011 12:10 PM

Page 5 of 5

Station: Mitchell Unit: 1 Report Name: 4-WATER WALL RIGHT

=====

P R I O R I T Y # 3 R E P A I R S

=====

Area: Water Wall Right

Record:# 51
Action: GRIND TO TUBE CONTOUR
 Priority #: 3
 Inspector: Bellucci E.

General location is Water Wall Right, Right Side Wall, Above Burners.

Elevation: 79'

Length: 1'

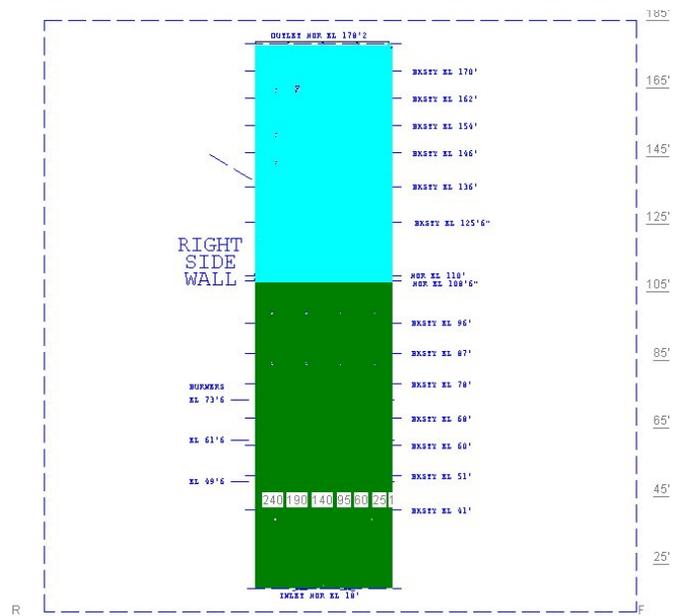


Appearance: Excessive Weld Attachment

Material: 1.50" OD x .250" MWT x SA-213T2

Grind excessive weld attachment to the contour of the tube on tubes 554 and 556.

These tubes are located approximately 5' above the top row of burners.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 8:50 AM

Page 1 of 9

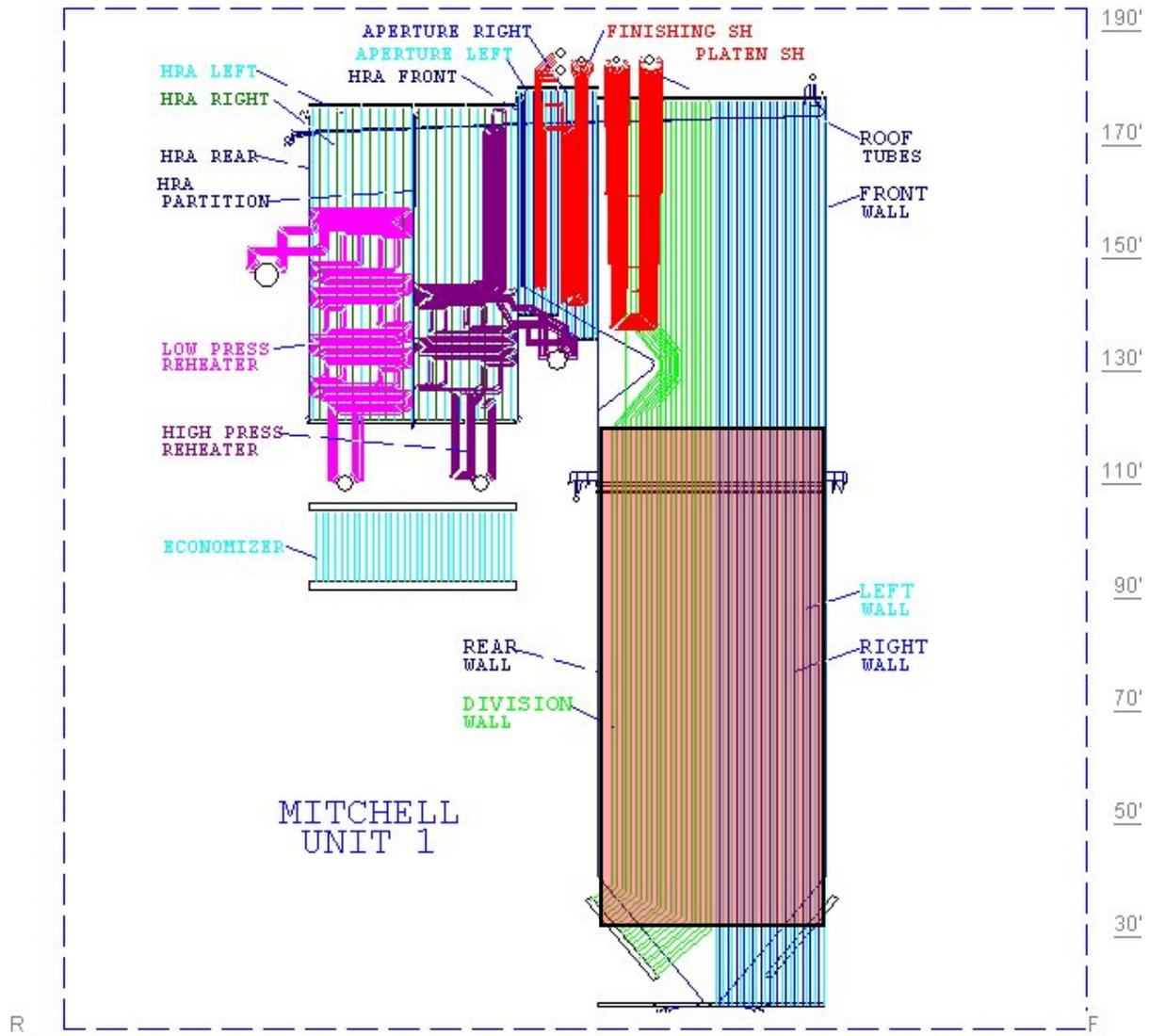
Station: Mitchell Unit: 1 Report Name: 5-WATER WALL DIVISION

AREA: Water Wall Division

The area was numbered from boiler left side to boiler right side. Tubes were counted from front to rear or top to bottom unless otherwise specified.

Items were marked with white grease stick.

=====
See the Following Pages for Repairs
=====



Gtrack v 3.5.3

Inspection Report

Created on 4/2/2011 8:50 AM

Page 2 of 9

Station: Mitchell Unit: 1 Report Name: 5-WATER WALL DIVISION

=====

P R I O R I T Y # 1 R E P A I R S

=====

Area: Water Wall Division

Record:# 52

Action: **TUBE REPLACEMENT-P1**

Priority #: 1

Inspector: Brown M.

General location is Water Wall Division,
Right Side, Lower.

Specific location: Tube #:42

Elevation: 40'



Cause: Fretting or Rubbing (Abrasion)

Appearance: Abraded

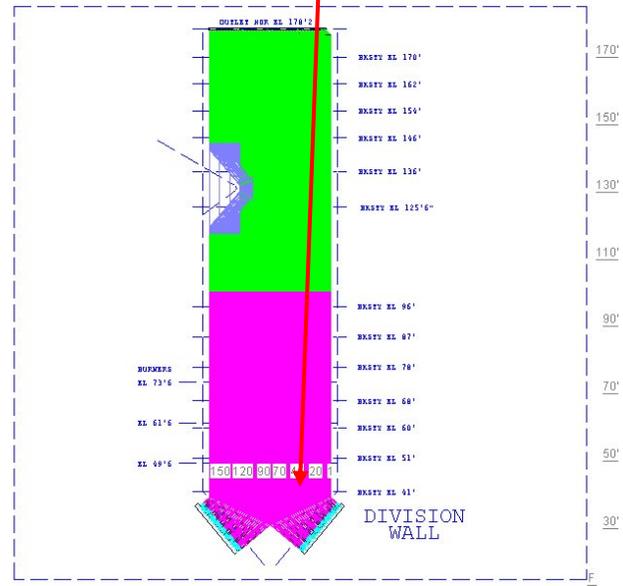
Material: 2.375" OD x .360" MWT x SA-213T2

The UT Data is .212

Replace an approximate 15'-20' section of material at **Tube 42** due to abrasion and a RWT of .212".

Broken tube to tube tangent welds have broken and allow rubbing in the lower wall at this location. Upper cut line is around Elevation 40' and lower should be taken down to include the 45 degree bend back towards the slope.

Area with the least thickness is marked on tube should replacement not be an option.



If the tube is load bearing (hanger tube), temporarily support the tube before replacement is made. Verify replacement material before removing old tube section.

Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 8:50 AM

Page 3 of 9

Station: Mitchell Unit: 1 Report Name: 5-WATER WALL DIVISION

Area: Water Wall Division

Record:# 62

Action: PROVIDE ACCESS TO INSPECT-P1

Priority #: 1

Inspector: Bellucci E.

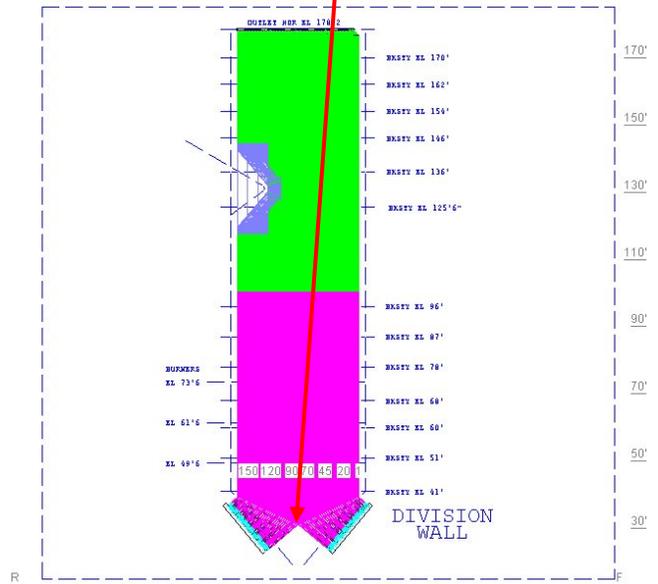
General location is Water Wall Division,
Bottom.

Specific location: Tube #:84 through 85

Cause: Fretting or Rubbing (Abrasion)
Appearance: Abraded

Material: 2.375" OD x .360" MWT x SA-213T2

Provide access to the bottom side of the
division wall in the middle at **tubes 84
and 85**. The two tubes appear to be
abrading on each other during operation.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 8:50 AM

Page 4 of 9

Station: Mitchell Unit: 1 Report Name: 5-WATER WALL DIVISION

Area: Water Wall Division

Record:# 54

Action: **FURTHER RESEARCH REQUIRED-PI**

Priority #: 1

Inspector: Brown M.

General location is Water Wall Division,
Right Side.

Cause: Possible Fireside Corrosion

Appearance: Tube Wastage

Material: 2.375" OD x .360" MWT x SA-213T2

The UT Data is .125 (Possible in some
locations.)

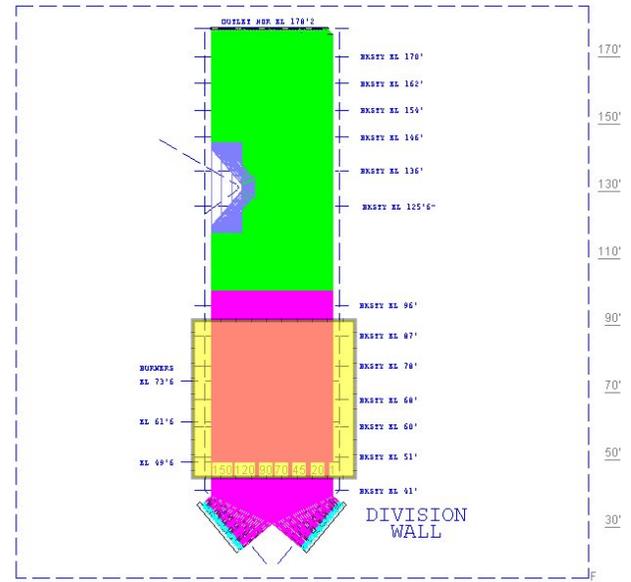
Tube surfaces on the right side of the wall
display a general form of corrosion wastage
consistent with Fire Side Corrosion. The
total affected area begins at or about tube
50 through tubes 110 and extends up the
wall for a height of about 30-40 ft.

The worst area seems to be more
concentrated from about tubes 70-95 within
the burner zones (elev.49'-73') where
attempts at random UT readings revealed
possible RWT's of .125" or less. Confidence
of the UT readings was medium to low due to
tube surfaces and it is therefore recommended that an action plan be established
to address the need and extent of repairs by tube sampling and/or UT scanning.

If UT method is chosen, it is recommended that careful surface preparation be
done in bands with-in the burner zone beginning at tube 70-95 at 3'-5'
elevations. Use a flapper wheel (tiger paw) to prep surfaces just to the point to
where the UT transducer will firmly couple to the surface. Avoid grinding wheels
as excessive material loss may occur.

Replacement would be recommended for tubes (sections) who's RWT is \leq .234" or
65% and less of the required thickness value.

Note: The left side of the wall also displays the same type of conditions;
however, it is more limited to the upper most burner elevation and up.



Work Order: _____ Status: Re-Inspect

Gtrack v 3.5.3

Inspection Report

Created on 4/2/2011 8:50 AM

Page 5 of 9

Station: Mitchell Unit: 1 Report Name: 5-WATER WALL DIVISION

P R I O R I T Y # 2 R E P A I R S

Area: Water Wall Division

Record:# 16

Action: TUBE RESTORATION WELD-P2

Priority #: 2

Inspector: Meador K.

General location is Water Wall Division,
 Front Wall, Left.

Elevation: 35'

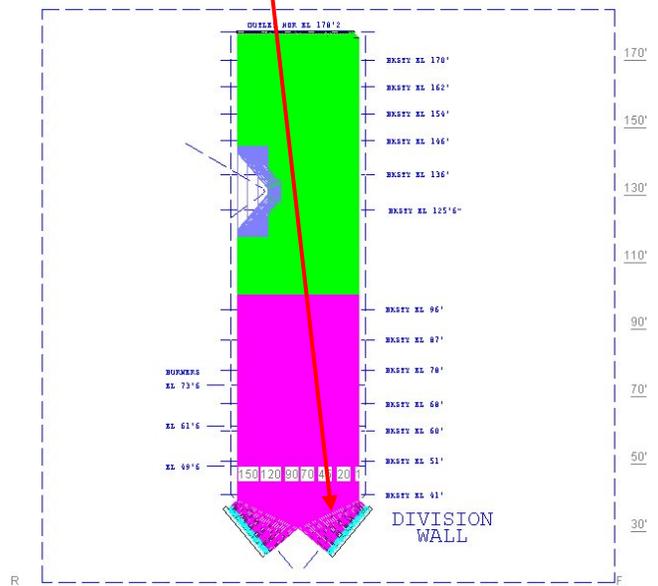
Cause: Fretting or Rubbing (Abrasion)
 Appearance: Eroded

0.360" MWT x

The UT Data is 0.259

Pad-Weld approximately 12"x3" on the left
 and approximately an 8"x3" on the right of
 the 45 deg. elbow bend on **Tube 41** due to a
 RWT of 0.259. When in service it appears
 that Tube 40 and 41 are rubbing/fretting
 against each other.

Location is on the left/right front
 Division Wall.



Work Order: _____

Status: Inspected

Gtrack v 3.5.3

Inspection Report

Created on 4/2/2011 8:50 AM

Page 6 of 9

Station: Mitchell Unit: 1 Report Name: 5-WATER WALL DIVISION

Record:# 30

Action: **TUBE RESTORATION WELD-P2**

Priority #: 2

Inspector: Arms R.

General location is Water Wall Division,
 Lower Slope, Center.

Elevation: 35'

Length: 1'

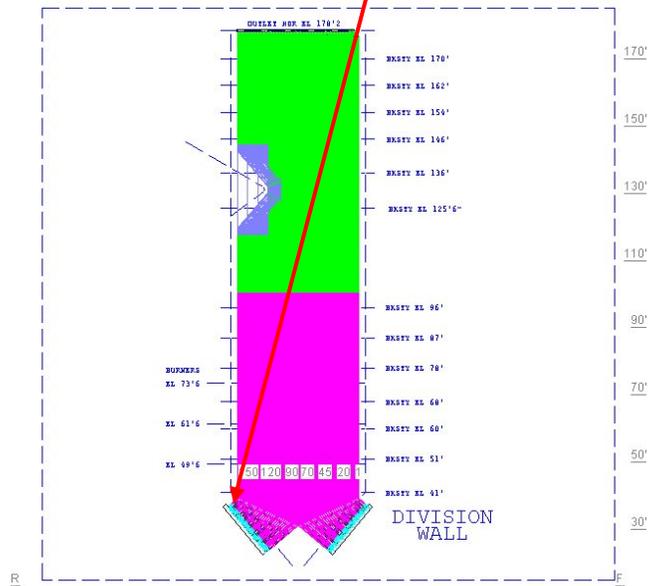
Cause: Erosion (Fly Ash)

Appearance: Eroded

Material: 2.375" OD x .360" MWT x SA-213T2

The UT Data is .265

Pad-Weld approximately 12"x3" on the top center of the tube, approximately 5" below the 45 deg. elbow bend on **Tube 164** of the division wall due to a RWT of 0.265.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 8:50 AM

Page 7 of 9

Station: Mitchell Unit: 1 Report Name: 5-WATER WALL DIVISION

Record:# 44

Action: TUBE RESTORATION WELD-P2

Priority #: 2

Inspector: Meador K.

General location is Water Wall Division,
Rear Wall, Right.

Elevation: 50'

Length: 1'

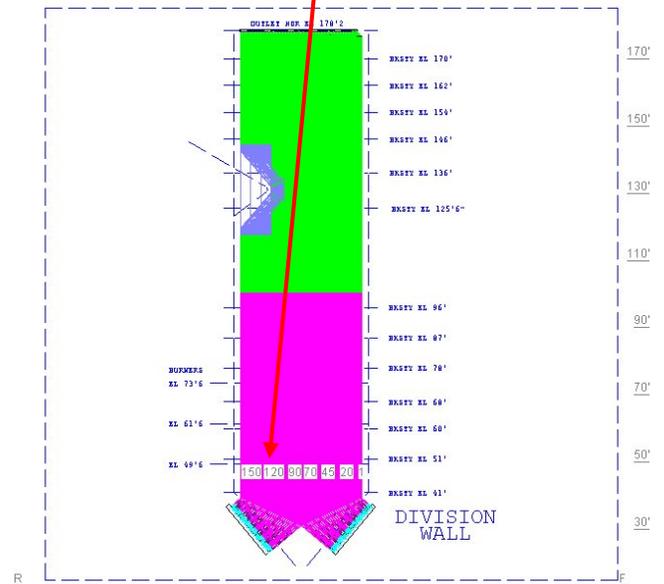
Cause: Fretting or Rubbing (Abrasion)

Appearance: Abraded

Material: 2.375" OD x 0.360" MWT x SA-213T2

The UT Data is 0.266

Apply a 12"x3" Pad-Weld to **Tube 124** due to the tube to tube welds being broke causing the tubes to be abrading one another.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 8:50 AM

Page 8 of 9

Station: Mitchell Unit: 1 Report Name: 5-WATER WALL DIVISION

Area: Water Wall Division

Record:# 53

Action: **WELD REPAIR-P2**

Priority #: 2

Inspector: Brown M.

General location is Water Wall Division,
Right Side.

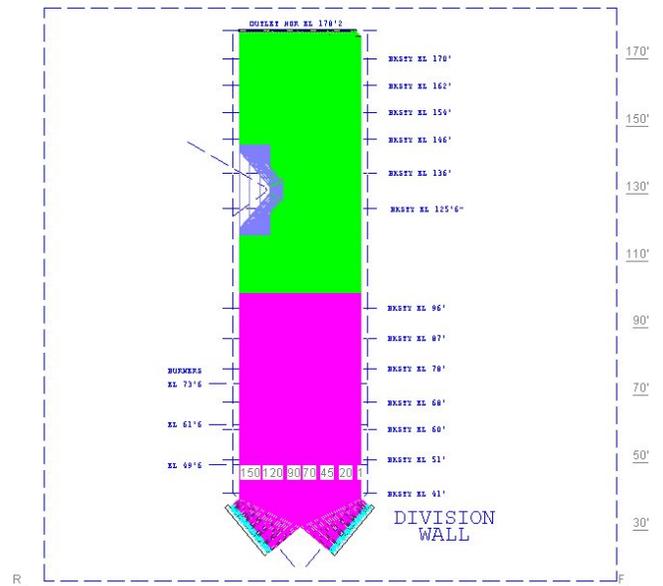
Cause: Fatigue (Thermal/ Vibration)

Appearance: Detached

Material: 2.375" OD x .360" MWT x SA-213T2

Realign and panels and install tube to
tube tangent welds along the walls height
to restore wall sections to their intended
positions.

At present, the wall sections where
separated, allow for abrasion in the lower
sections.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 8:50 AM

Page 9 of 9

Station: Mitchell Unit: 1 Report Name: 5-WATER WALL DIVISION

=====

P R I O R I T Y # 3 R E P A I R S

=====

Area: Water Wall Division

Record:# 2

Action: **MONITOR CLOSELY-P3**

Priority #: 3

Inspector: Brown M.

General location is Water Wall Division,
Lower Slope Penetration, Front.

Specific location: Tube #:1

Elevation: 39'



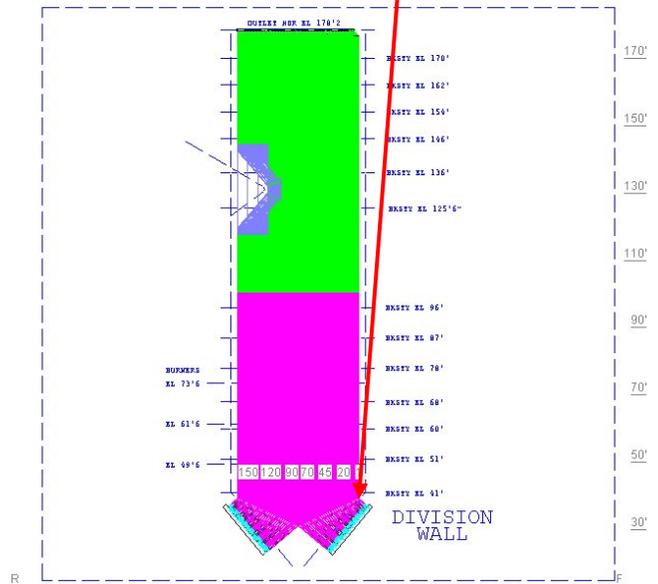
Cause: Erosion (Falling Slag)

Appearance: Eroded

Material: 2.375" OD x .360" MWT x SA-213T2

The UT Data is .303

Monitor tube 1 of the division wall just
above the front lower slope penetration
where fallen ash erosion is impacting the
tube. The RWT was measured is .303".



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 9:25 AM

Page 1 of 8

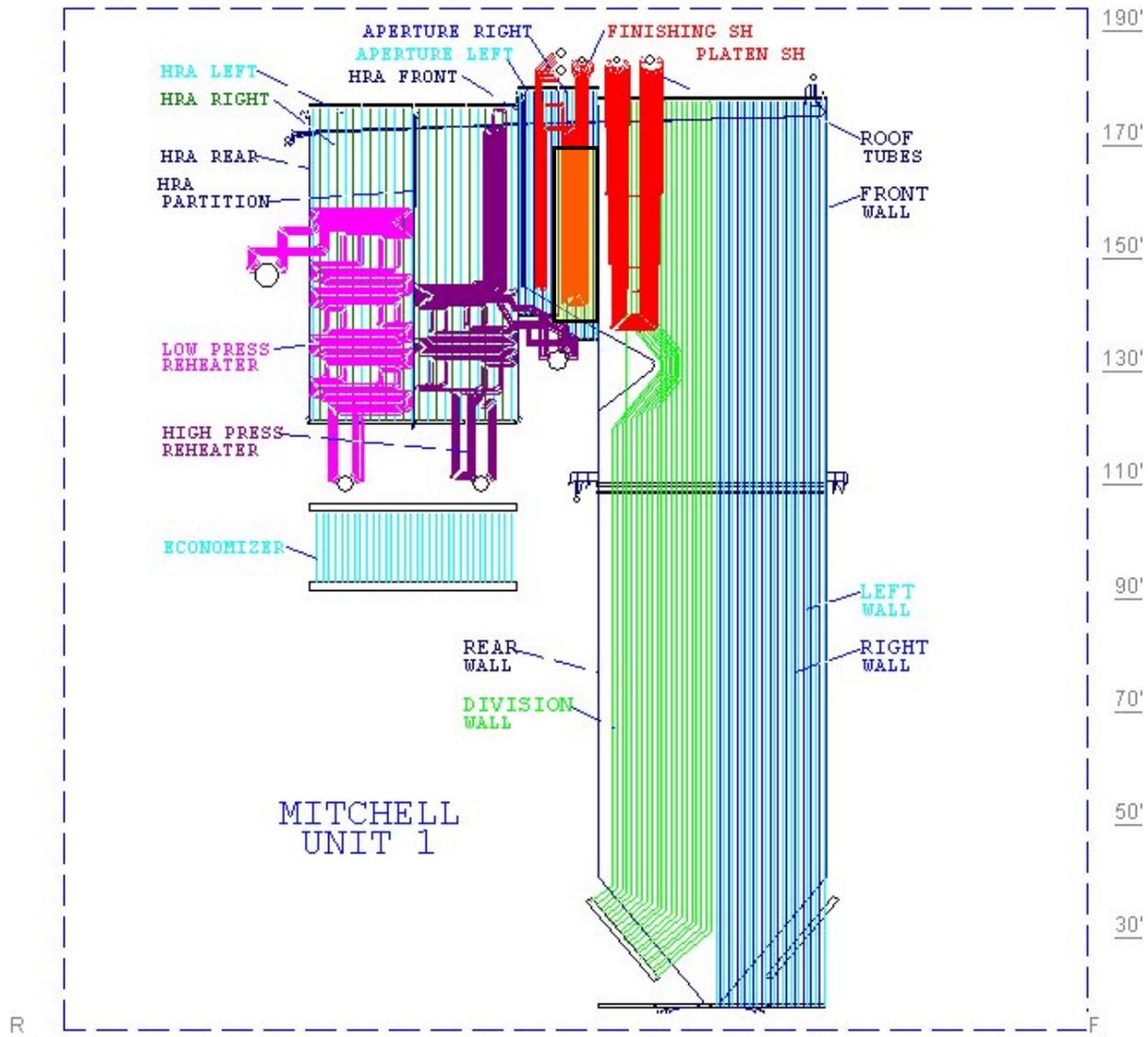
Station: Mitchell Unit: 1 Report Name: 6-FINISHING SUPERHEAT INLET

AREA: Finishing Superheat Inlet

The area was numbered from boiler left side to boiler right side. Tubes were counted from front to rear or top to bottom unless otherwise specified.

Items were marked with white grease stick.

=====
See the Following Pages for Repairs
=====



Inspection Report

Created on 4/2/2011 9:25 AM Page 2 of 8

Station: Mitchell Unit: 1 Report Name: 6-FINISHING SUPERHEAT INLET

=====

P R I O R I T Y # 1 R E P A I R S

=====

Area: Finishing Superheat Inlet

Record:# 41

Action: **TUBE REPLACEMENT-P1**

Priority #: 1

Inspector: Meador K.

General location is Finishing Superheat Inlet, Lower Front.

Elevation: 141'

Length: 6'

Cause: Erosion (Soot Blower)

Appearance: Eroded

Material: " OD x 0.611" MWT x SA-213T22

The IK/IR is 7/8

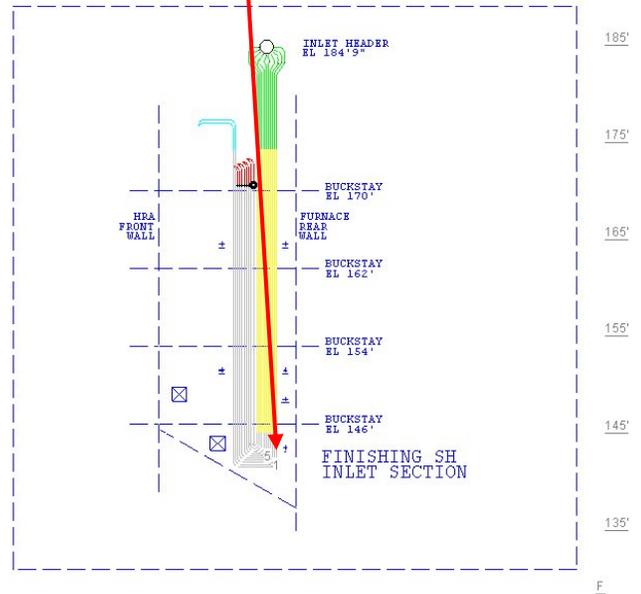
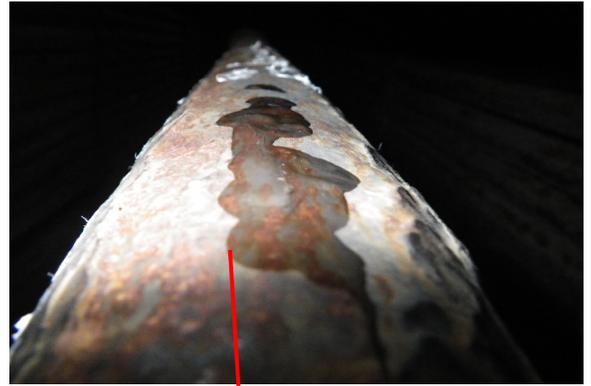
Replace tube sections due to soot Blower erosion. The replacements should start at the vertical field weld approximately 3' above the 90 degree bend and extend 1' pass the horizontal bend on the following:

(Assembly/Tube/UT)

31/1/.232"

31/2/.348"

33/2/.356"



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 9:25 AM

Page 3 of 8

Station: Mitchell Unit: 1 Report Name: 6-FINISHING SUPERHEAT INLET

Record:# 59
Action: TUBE REPLACEMENT-P1
Priority #: 1
Inspector: Meador K.

General location is Finishing Superheat Inlet, Lower Front.

Elevation: 141'
Length: 6'

Cause: Erosion (Soot Blower)
Appearance: Eroded

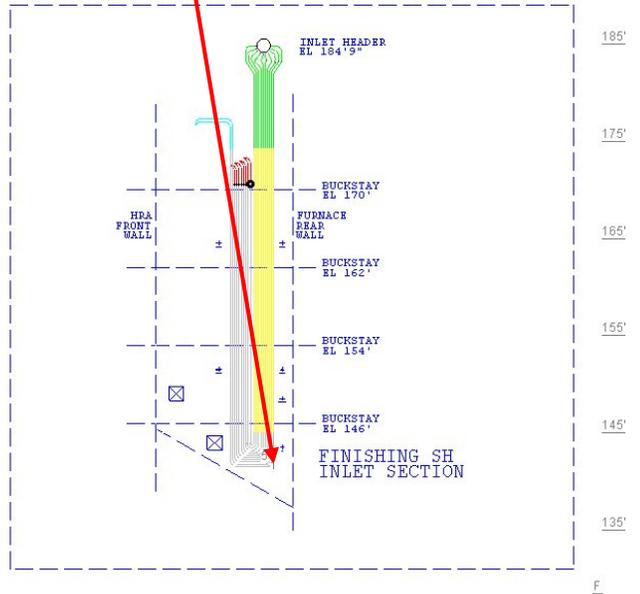
Material: 1.028" OD x 0.611" MWT x SA-213T22

The IK/IR is 7/8

Replace 6' section of the following tubes due to Soot Blower erosion. The replacements should start 1' off the 90 degree bend on the horizontal section and extend to the field weld on the vertical section on the following:

(Assembly/Tube/UT)

- 25/1/.394"
- 26/1/.344"
- 27/2/.303"
- 31/1/.232"
- 31/2/.348"
- 33/2/.356"



The eroded areas are located at the front lower loops.

Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 9:25 AM

Page 4 of 8

Station: Mitchell Unit: 1 Report Name: 6-FINISHING SUPERHEAT INLET

P R I O R I T Y # 2 R E P A I R S

Area: Finishing Superheat Inlet

Record:# 55

Action: TUBE RESTORATION WELD-P2

Priority #: 2

Inspector: Bellucci E.

General location is Finishing Superheat Inlet, Inlet, Front.

Elevation: 141'

Cause: Erosion (Soot Blower)

Appearance: Eroded

Material: 1.028" OD x .611" MWT x SA-213T22

The IK/IR is 7/8

Apply pad welds to the following pendants/ tubes/ UT readings/ length of pad weld:

23/1/0.456"/24"x2.5"

23/3/0.458"/18"x2"

24/1/0.450"/24"x2"

24/2/0.452"/18"x2"

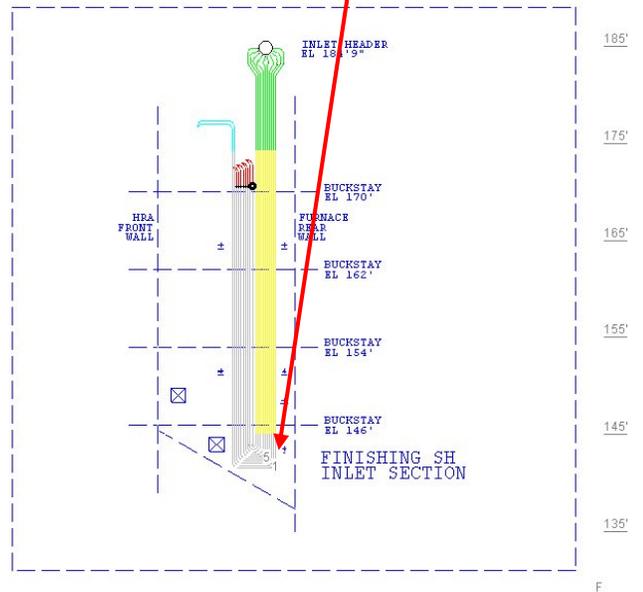
25/4/0.453"/10"x2"

27/5/0.458"/24"x2"

34/1/0.436"/18"x3"

33/1/0.417"/18"x3"

These eroded areas are located at or right above the front 90 degree bend at the front lower loops.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 9:25 AM Page 5 of 8

Station: Mitchell Unit: 1 Report Name: 6-FINISHING SUPERHEAT INLET

Area: Finishing Superheat Inlet

Record:# 58

Action: **ALIGN AND ATTACH-P2**

Priority #: 2

Inspector: Arms R.

General location is Finishing Superheat Inlet, Front.

Elevation: 141'

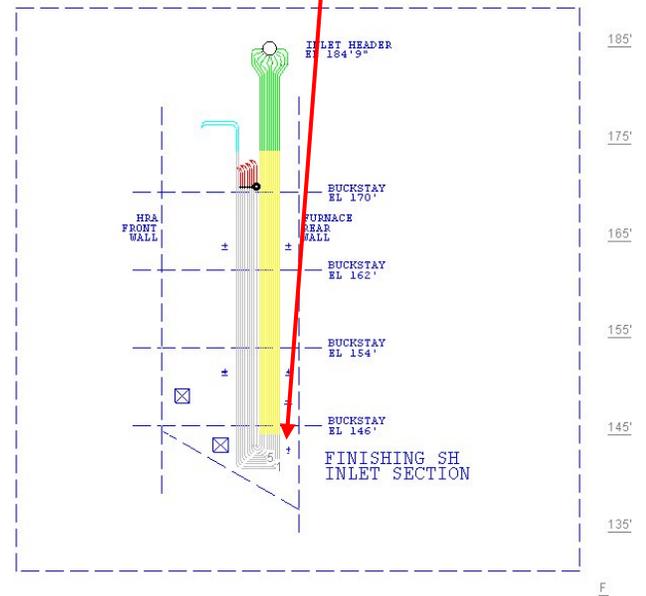
Appearance: Out of Alignment

Material: 1.028" OD x .611" MWT x SA-213T22

The IK/IR is 7/8

The hand cuffs are missing/broken on assembly 8, causing the tubes to be out of alignment.

Attach hand cuffs to tubes 1-20 for realignment and replace broken hand cuff on assembly 39.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 9:25 AM

Page 6 of 8

Station: Mitchell Unit: 1 Report Name: 6-FINISHING SUPERHEAT INLET

=====
P R I O R I T Y # 3 R E P A I R S
=====

Area: Finishing Superheat Inlet

Record:# 56

Action: SHIELD INSTALLATION-P3

Priority #: 3

Inspector: Arms R.

General location is Finishing Superheat Inlet.

Elevation: 141'

Cause: Erosion (Soot Blower)

Appearance: Eroded

Material: 1.028" OD x .611" MWT x SA-213T22

The UT Data is .490-.506

The IK/IR is 7/8

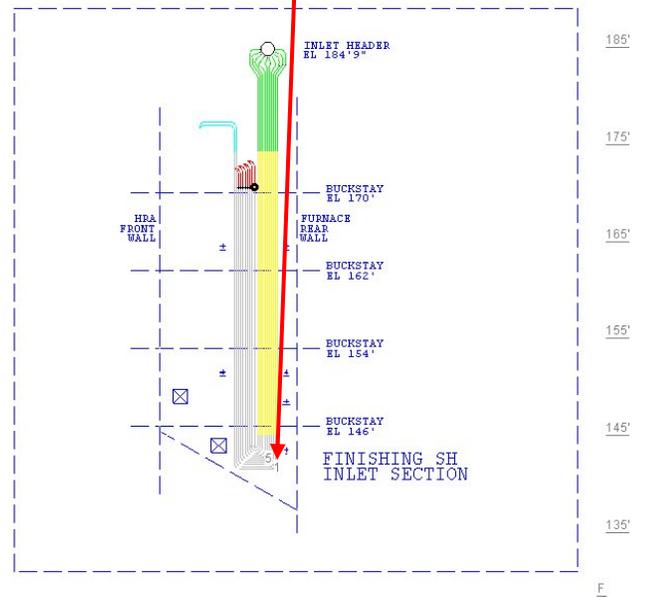
Apply shields to the following pendants/tubes/ UT readings, (all locations require 1' around 90 degree radius with 3' extension going up.

- 8/4/.490"
- 22/1/.504"
- 22/2/.500"
- 23/7/.510"
- 25/5/.479"
- 25/19/.498"

Install 12" inner radius bend at the following:

- 25/20/NA
- 26/6/.500"
- 30/1/.498"
- 30/2/.506"

The eroded areas are located at the bottom of the inlet at the lower loops



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 9:25 AM Page 7 of 8

Station: Mitchell Unit: 1 Report Name: 6-FINISHING SUPERHEAT INLET

Area: Finishing Superheat Inlet

Record:# 57

Action: BLOWER SLEEVE REPLACEMENT-P3

Priority #: 3

Inspector: Meador K.

General location is Finishing Superheat Inlet, Right Side Wall, Right.

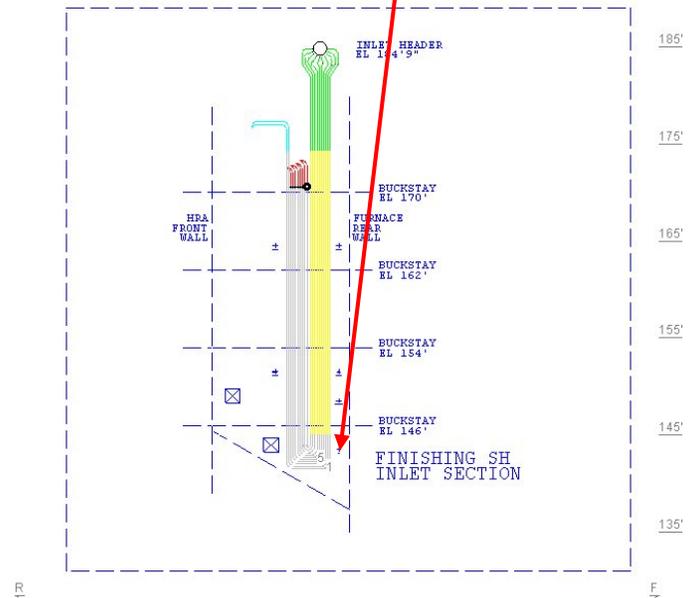
Elevation: 145'

Cause: Fatigue (Thermal)

Appearance: Deteriorated

The IK/IR is 7/8

Replace Soot Blower lance sleeve due to thermal fatigue.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 9:25 AM Page 8 of 8

Station: Mitchell Unit: 1 Report Name: 6-FINISHING SUPERHEAT INLET

Area: Finishing Superheat Inlet

Record:# 61

Action: REFRACTORY INSTALLATION-P3

Priority #: 3

Inspector: Arms R.

General location is Finishing Superheat Inlet, Right Side Wall, Right.

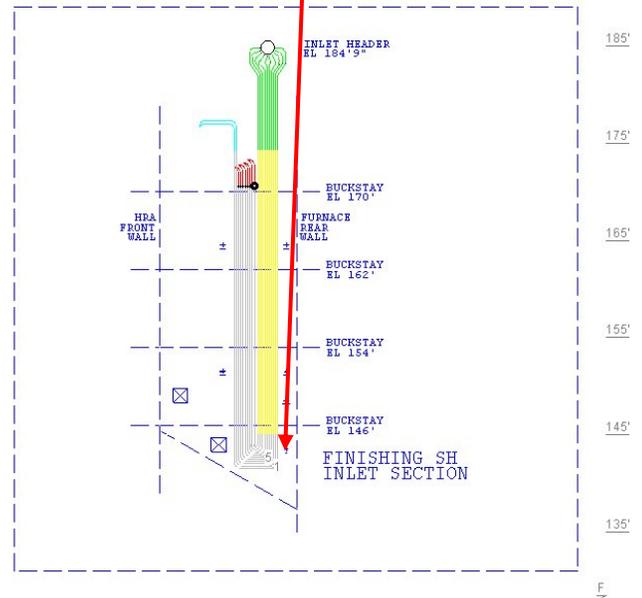
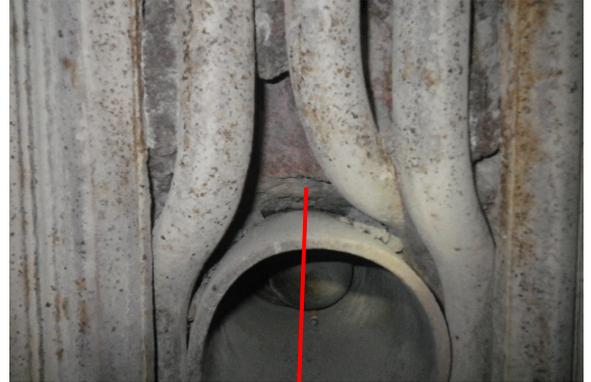
Elevation: 145'

Cause: Fatigue (Thermal)

Appearance: Missing

The IK/IR is 7/8

Replace missing Refractory around IK-7/8 due to thermal fatigue.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 9:51 AM

Page 1 of 8

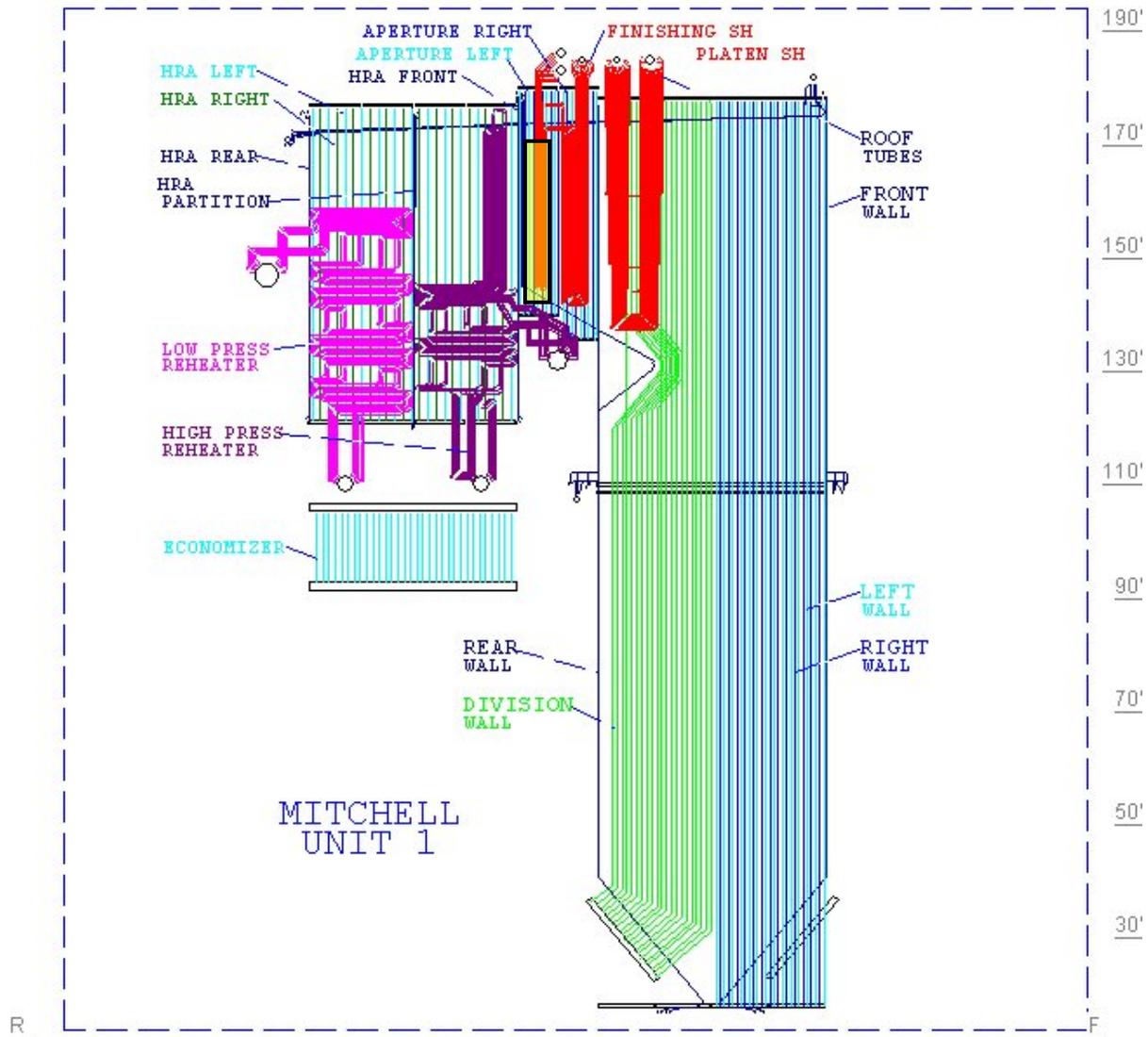
Station: Mitchell Unit: 1 Report Name: 7-FINISHING SUPERHEAT OUTLET

AREA: Finishing Superheat Outlet

The area was numbered from boiler left side to boiler right side. Tubes were counted from front to rear or top to bottom unless otherwise specified.

Items were marked with white grease stick.

=====
See the Following Pages for Repairs
=====



Inspection Report

Created on 4/2/2011 9:51 AM Page 2 of 8

Station: Mitchell Unit: 1 Report Name: 7-FINISHING SUPERHEAT OUTLET

=====

P R I O R I T Y # 2 R E P A I R S

=====

Area: Finishing Superheat Outlet

Record:# 34

Action: TUBE RESTORATION WELD-P2

Priority #: 2

Inspector: Meador K.

General location is Finishing Superheat Outlet, Outlet, Rear.

Elevation: 150'

Length: .2'

Cause: Fretting or Rubbing (Abrasion)
Appearance: Abraded

Material: 1.875" OD x 0.323" MWT x SA-213TP304H

Apply 2"x3" pad-weld to the abrasions caused by the slip spacers, and re-attach the broken/missing slip spacers on the following:

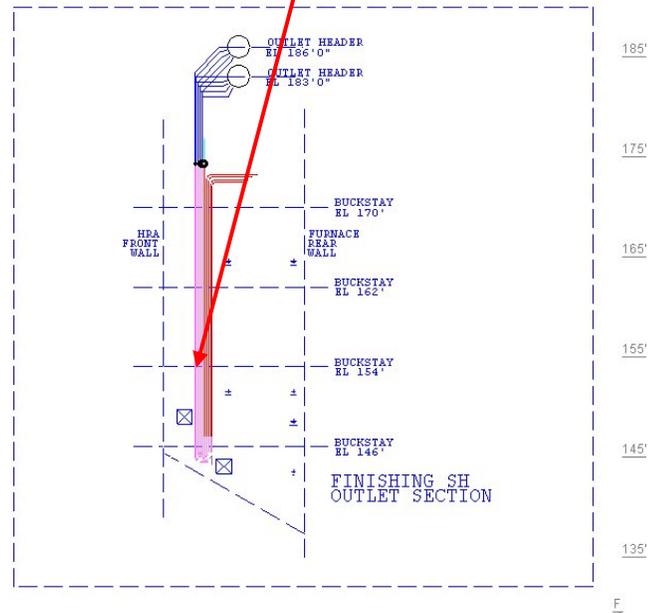
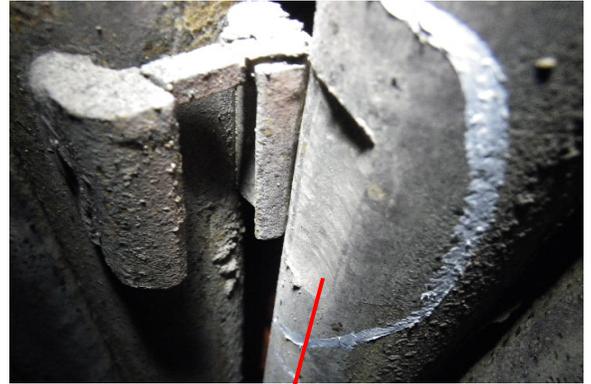
(Assembly/Tube)

25/8

51/8

84/6

100/7



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 9:51 AM Page 3 of 8

Station: Mitchell Unit: 1 Report Name: 7-FINISHING SUPERHEAT OUTLET

Record:# 35

Action: TUBE RESTORATION WELD-P2

Priority #: 2

Inspector: Bellucci E.

General location is Finishing Superheat Outlet, Outlet, Front.

Specific location: Tube #:6 Element #:33

Elevation: 162'

Length: .2'

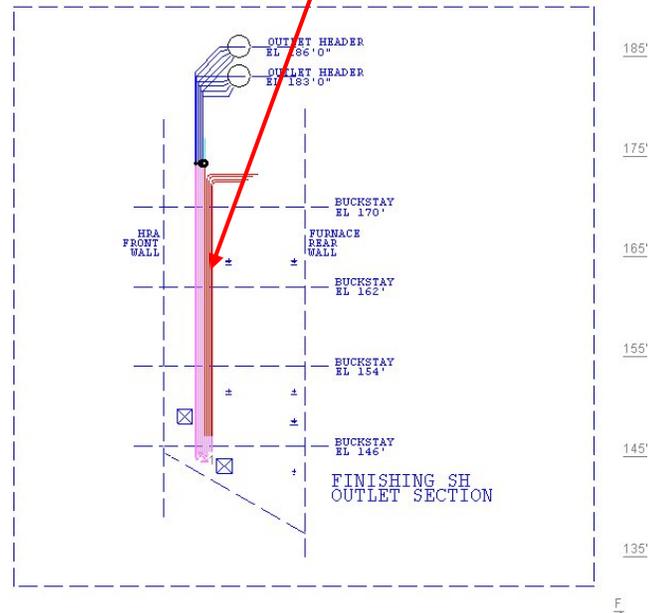
Cause: Fretting or Rubbing (Abrasion)

Appearance: Abraded

Material: 1.875" OD x .323" MWT x SA-213TP304H

Apply 2" x 2" pad weld to the abraded area due to the adjacent handcuff.

The abraded area is located approximately 2' down from the upper IK path at the front of the Finishing Superheat Outlet.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 9:51 AM Page 4 of 8

Station: Mitchell Unit: 1 Report Name: 7-FINISHING SUPERHEAT OUTLET

Area: Finishing Superheat Outlet

Record:# 33
Action: ALIGN AND ATTACH-P2
Priority #: 2
Inspector: Meador K.

General location is Finishing Superheat Outlet, Outlet, Outlet.

Elevation: 150'

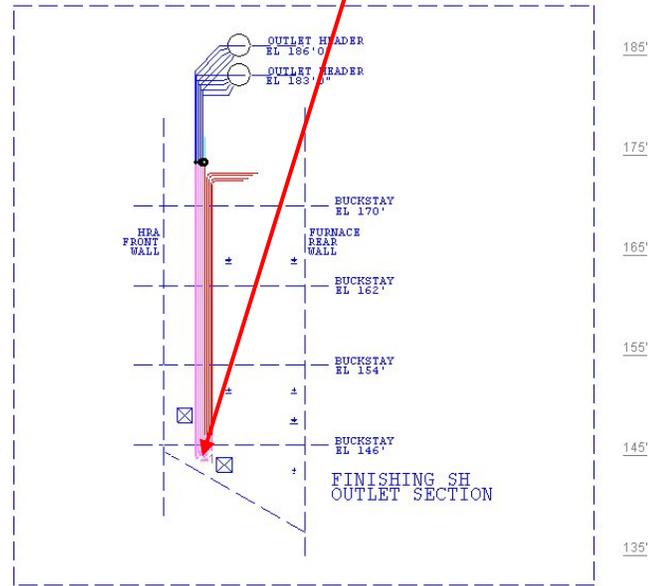
Cause: Fatigue (Thermal)
Appearance: Bowed Tubing

Material: 1.875" OD x 0.323" MWT x SA-213TP304H

The UT Data is

Refer to the February 2007 UDC Boiler Inspection Report. Report #3 Secondary Superheat Outlet, pages 6 through 8.

The same condition still exists and should be addressed in order to prevent the possibility of future boiler tube failures. The severity of the misalignment is causing the pendants to abrade one another; this abrasion appears to have caused failures in the past.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 9:51 AM Page 5 of 8

Station: Mitchell Unit: 1 Report Name: 7-FINISHING SUPERHEAT OUTLET

P R I O R I T Y # 3 R E P A I R S

Area: Finishing Superheat Outlet

Record:# 36

Action: PLAN FOR FUTURE REPLACEMENT-P

Priority #: 3

Inspector: Bellucci E.

General location is Finishing Superheat Outlet, Outlet, Hairpin Loop.

Specific location: Tube #:5 through 8
Element #:94

Elevation: 145'

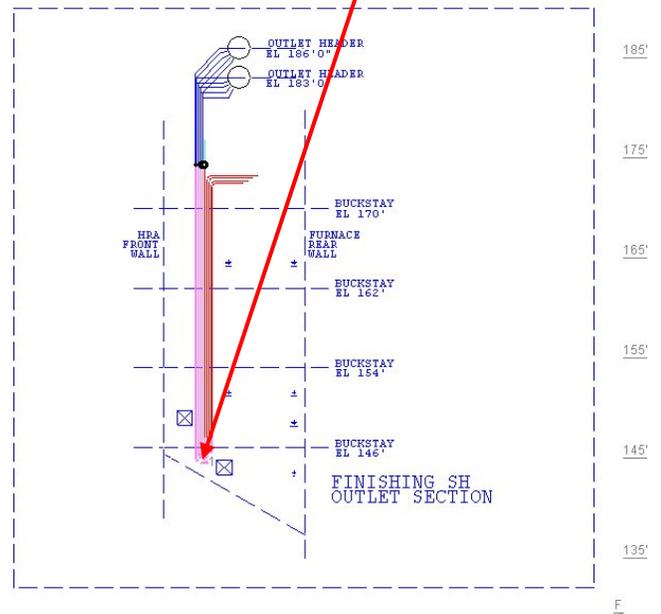
Length: 2'

Appearance: Excessive Horizontal Weaved Pad Weld

Material: 1.875" OD x .323" MWT x SA-213TP304H

Install approximately 2' dutchman due to excessive horizontal weaved pad welds.

These pad welds are located at the lower loops of pendant 94.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 9:51 AM Page 6 of 8

Station: Mitchell Unit: 1 Report Name: 7-FINISHING SUPERHEAT OUTLET

Area: Finishing Superheat Outlet

Record:# 37

Action: **ALIGN AND ATTACH-P3**

Priority #: 3

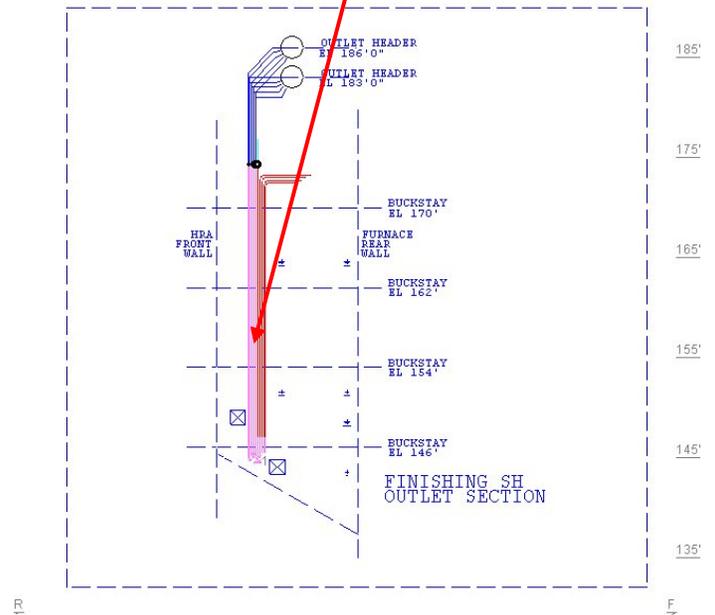
Inspector: Meador K.

General location is Finishing Superheat Outlet, Outlet.

Elevation: 160'

Cause: Fatigue (Thermal/ Vibration)
Appearance: Broken

Replace missing/broken Ring Castings (handcuffs). Approximately 20% of the Handcuffs are missing/broken in this area and need to be replaced to prevent from any further alignment issues in this area.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 9:51 AM Page 7 of 8

Station: Mitchell Unit: 1 Report Name: 7-FINISHING SUPERHEAT OUTLET

Record:# 40

Action: **ALIGN AND ATTACH-P3**

Priority #: 3

Inspector: Brown M.

General location is Finishing Superheat Outlet, Roof Tubes.

Specific location: Tube #:447 through 448

Elevation: 175'

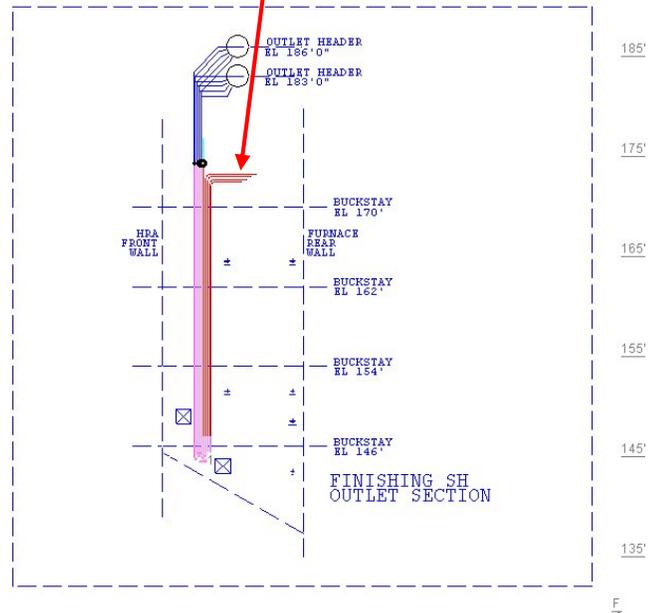
Cause: Fatigue (Thermal/ Vibration)

Appearance: Detached

Material: 2.063" OD x .295" MWT x SA-213T2

Raise and reattach roof **tubes 447-448** where detached between the FSH Inlet/Outlet pendants.

Tubes are dropped about 10" in this area.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 9:51 AM Page 8 of 8

Station: Mitchell Unit: 1 Report Name: 7-FINISHING SUPERHEAT OUTLET

Area: Finishing Superheat Outlet

Record:# 38

Action: MONITOR CLOSELY-P3

Priority #: 3

Inspector: Bellucci E.

General location is Finishing Superheat Outlet, Outlet, Hairpin Loop.

Specific location: Tube #:6 Element #:93
Elevation: 145'



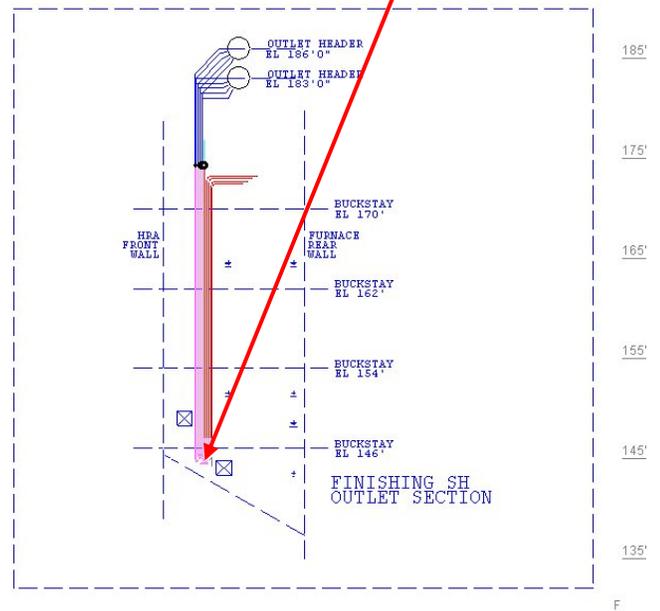
Cause: Fretting or Rubbing (Abrasion)
Appearance: Abraded

Material: 1.875" OD x .323" MWT x SA-213TP304H

Monitor the 1" x 1" abraded area on the left rear side of the hair pin loop on pendant 93.

These pendants appear to be swinging while the unit is online and are abrading the sides of the lower hair pin loops.

This abrasion is occurring randomly throughout the component. Monitor all during future outages.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 10:16 AM

Page 1 of 4

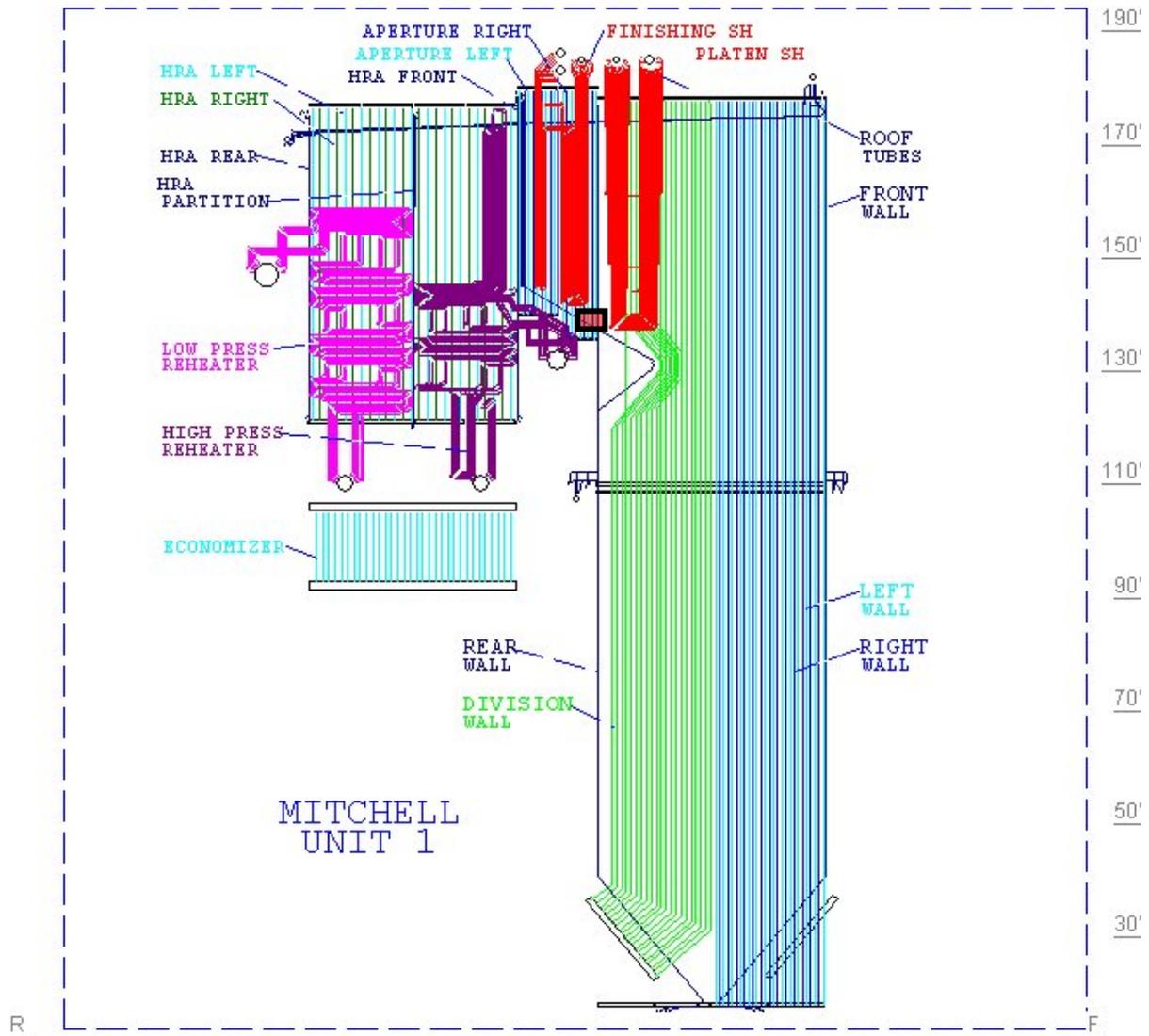
Station: Mitchell Unit: 1 Report Name: 8-IK 7_8 BLOWER PATH

AREA: IK 7/8 Blower Path

The area was numbered from boiler left side to boiler right side. Tubes were counted from front to rear or top to bottom unless otherwise specified.

Items were marked with white grease stick.

=====
See the Following Pages for Repairs
=====



Inspection Report

Created on 4/2/2011 10:16 AM

Page 2 of 4

Station: Mitchell Unit: 1 Report Name: 8-IK 7_8 BLOWER PATH

=====

P R I O R I T Y # 1 R E P A I R S

=====

Area: IK 7/8 Blower Path

Record:# 65

Action: **TUBE REPLACEMENT-P1**

Priority #: 1

Inspector: Bellucci E.

General location is IK 7_8 Blower Path,
Deflection Arch Tubes.

Elevation: 140'

Length: 3'



Cause: Erosion (Soot Blower)
Appearance: Eroded

Material: 1.50" OD x .320" MWT x SA-213T22

The UT Data is .143-.198

The IK/IR is 7/8

Install 3' dutchman to the eroded area on
the following tubes/UT reading:

201/0.195", 202/0.189", 203/0.193"

204/0.183", 205/0.173", 206/0.174"

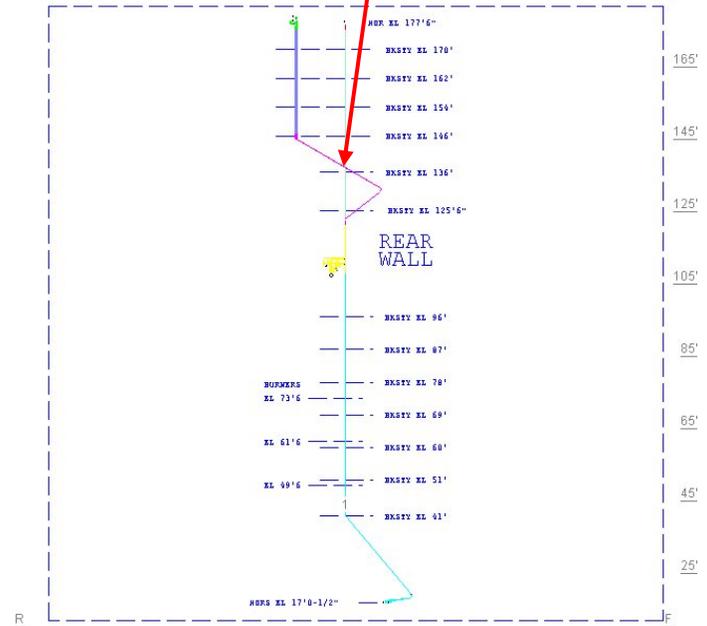
207/0.162", 208/0.143", 209/0.154"

210/0.169", 211/0.160", 212/0.166"

213/0.187", 241/0.177", 242/0.144"

243/0.166", 244/0.158", 245/0.157"

246/0.171, 247/0.176", 251/0.198"



The eroded areas are located approximately 3' up from the rear wall hanger tubes.

If the tube is load bearing (hanger tube), temporarily support the tube before replacement is made. Verify replacement material before removing old tube section.

Work Order: _____ Status: Inspected

Inspection Report

Created on 4/2/2011 10:16 AM

Page 3 of 4

Station: Mitchell Unit: 1 Report Name: 8-IK 7_8 BLOWER PATH

=====
P R I O R I T Y # 2 R E P A I R S
=====

Area: IK 7/8 Blower Path

Record:# 63

Action: TUBE RESTORATION WELD-P2

Priority #: 2

Inspector: Brown M.

General location is IK 7_8 Blower Path,
Deflection Arch Tubes.

Elevation: 140'

Length: 2'

Cause: Erosion (Soot Blower)

Appearance: Eroded

Material: 1.50" OD x .320" MWT x SA-213T22

The UT Data is .210-.228

The IK/IR is 7/8

Apply 24" pad welds to the following arch
tubes (UT) due to sootblower erosion:

196(.236), 197(.222), 198(.214)

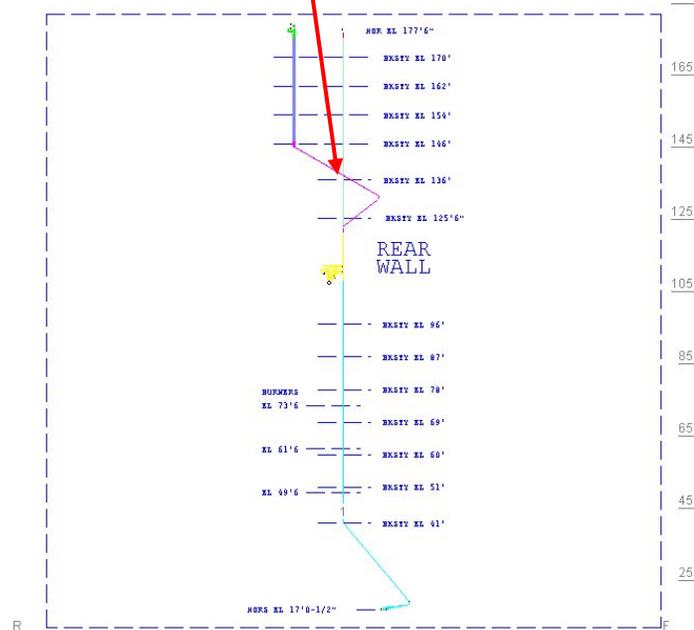
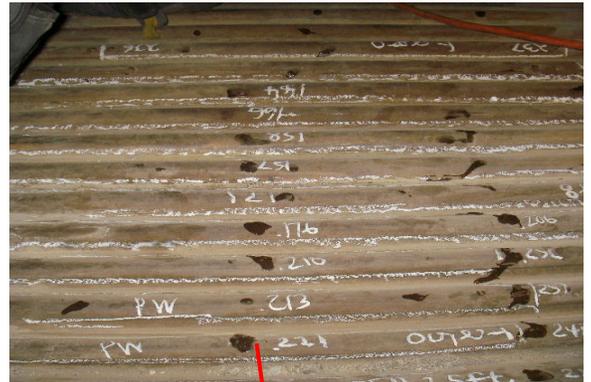
199(.209), 200(.215), 240(.238)

248(.210), 249(.213), 250(.221)

252(.225), 253(.212), 254(.216)

255(.228)

All areas for repair are boxed in with a
white paint stick.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 10:16 AM

Page 4 of 4

Station: Mitchell Unit: 1 Report Name: 8-IK 7_8 BLOWER PATH

P R I O R I T Y # 3 R E P A I R S

Area: IK 7/8 Blower Path

Record:# 66

Action: INFORMATION ONLY-P3

Priority #: 3

Inspector: Arms R.

General location is IK 7_8 Blower Path, Rear Water Wall Hanger Tubes, Trailing Side.

Elevation: 138'

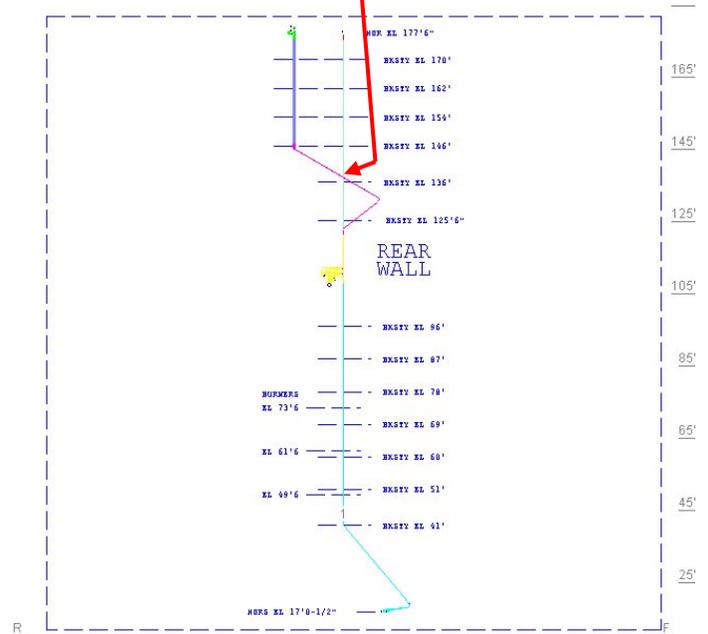
Cause: Erosion (Soot Blower and/or Falling Ash)

Appearance: Eroded

Material: 1.625" OD x .396" MWT x SA-213T22

Install refractory at the base of all support tubes above the arch penetration to provide erosion and fallen ash resistance.

The lowest recorded UT reading was .334".



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 12:35 PM

Page 1 of 15

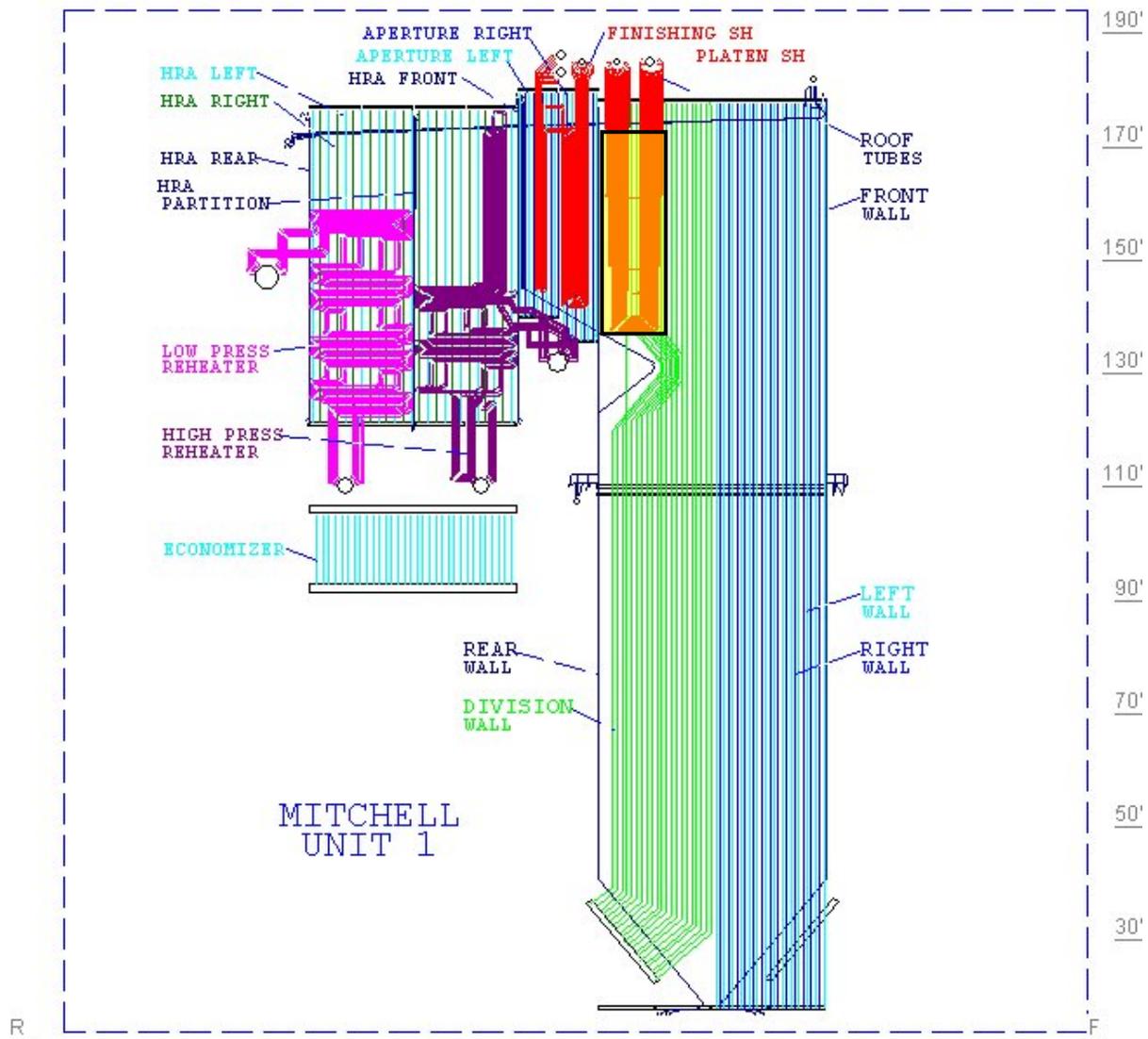
Station: Mitchell Unit: 1 Report Name: 9-PLATEN SUPERHEATER

AREA: Platen Superheater

The area was numbered from boiler left side to boiler right side. Tubes were counted from front to rear or top to bottom unless otherwise specified.

Items were marked with white grease stick.

=====
See the Following Pages for Repairs
=====



Inspection Report

Created on 4/2/2011 12:35 PM

Page 2 of 15

Station: Mitchell Unit: 1 Report Name: 9-PLATEN SUPERHEATER

P R I O R I T Y # 1 R E P A I R S

Area: Platen Superheater

Record:# 67

Action: TUBE REPLACEMENT-P1

Priority #: 1

Inspector: Bellucci E.

General location is Platen Superheater,
Bottom.

Specific location: Tube #:17 Element #:12
Elevation: 137'

Length: 10'



Cause: Erosion (Soot Blower)

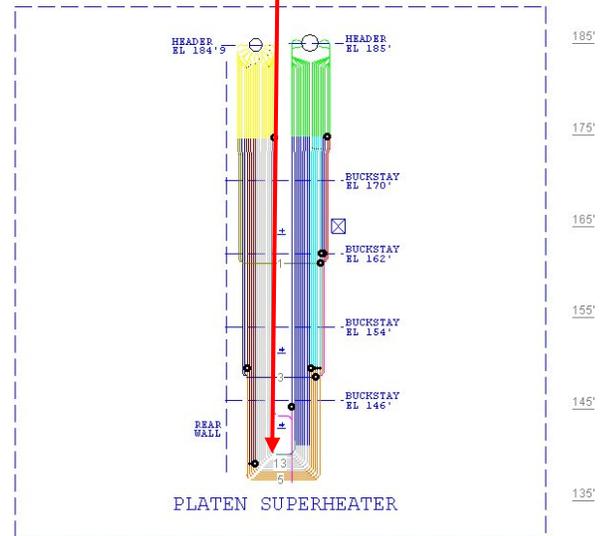
Appearance: Eroded

Material: 2.25" OD x .552" MWT x SA-213T22

The UT Data is .265

Install approximately 10' dutchman to the eroded area. The eroded area is at the front inner radius bend on **17F**. It is recommended to replace the entire lower loop of **tube 17** approximately 4' up on either side.

If the tube is load bearing (hanger tube), temporarily support the tube before replacement is made. Verify replacement material before removing old tube section.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 12:35 PM

Page 3 of 15

Station: Mitchell Unit: 1 Report Name: 9-PLATEN SUPERHEATER

Record:# 76

Action: TUBE REPLACEMENT-P1

Priority #: 1

Inspector: Bellucci E.

General location is Platen Superheater, 1st Wrapper Tube Elevation, Center.

Elevation: 160'

Length: 8'

Cause: Erosion (Soot Blower)

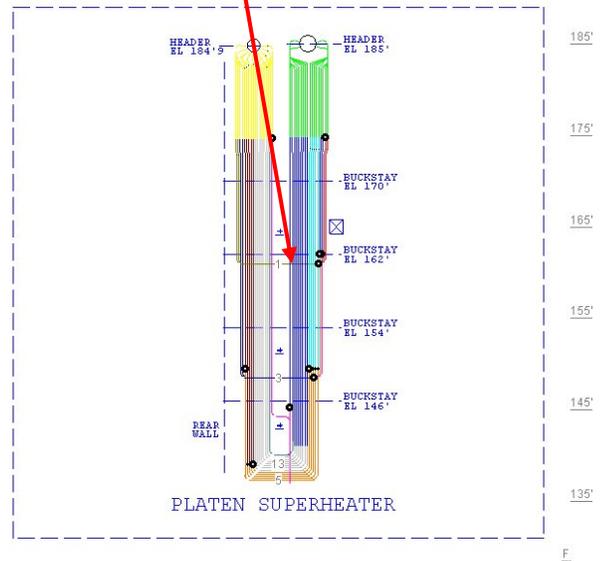
Appearance: Erosion Flat

Material: 2.0" OD x .495" MWT x SA-213T22

The UT Data is .315

Install approximately 8' dutchman to the eroded area on **platen 23 tube 2F**. The eroded area is located on the top side of the wrapper. The front cutline will be just inside of the front 90 degree bend and the rear cutline will be just to the front of the rear 90 degree bend.

This is at the top elevation of wrappers.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 12:35 PM

Page 4 of 15

Station: Mitchell Unit: 1 Report Name: 9-PLATEN SUPERHEATER

Area: Platen Superheater

Record:# 70

Action: TUBE RESTORATION WELD-P1

Priority #: 1

Inspector: Meador K.

General location is Platen Superheater,
Wrapper Tube.

Elevation: 162'

Cause: Erosion (Soot Blower)

Appearance: Eroded

Material: 2.125" OD x 0.320" MWT x SA-213TP321H

The UT Data is 0.345 0.349

The IK/IR is 5/6

Apply 18"x3" Pad-Weld to the top edge of the horizontal section of the wrapper tube #1 due to soot blower erosion:

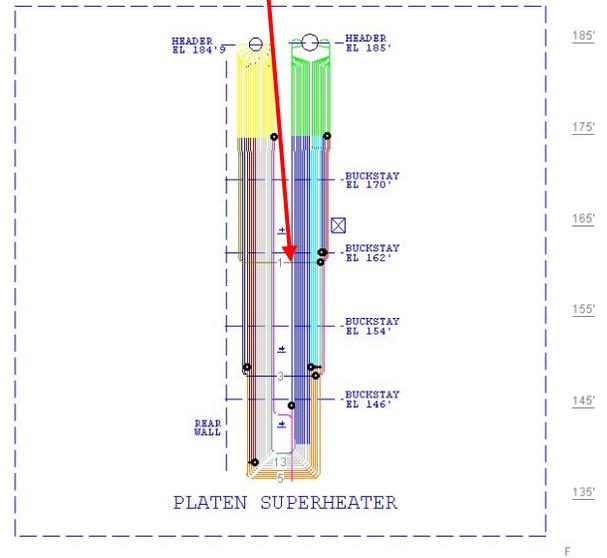
(Assembly/UT)

3/0.345"

4/0.349"

NOTE: Monitor all the wrapper tubes in this area.

Use vertical stringers and feather (taper) by grinding all four of the edges at top, bottom, right and left orientations. Do not horizontal weave pad weld. Down hand is suggested to keep the temperature as cool as practical. Do not weld if copper deposition is present on the internal surface of the tubing. Use TIG if the tube remaining wall is less than .125".



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 12:35 PM

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Station: Mitchell Unit: 1 Report Name: 9-PLATEN SUPERHEATER

Record:# 77

Action: TUBE RESTORATION WELD-P1

Priority #: 1

Inspector: Bellucci E.

General location is Platen Superheater, 1st Wrapper Tube Elevation, Center.

Elevation: 160'

Length: 2'

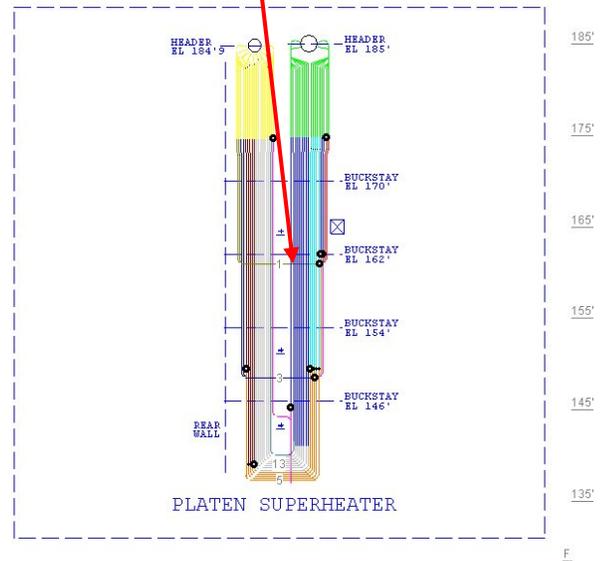
Cause: Erosion (Soot Blower)

Appearance: Eroded

Material: 2.0" OD x .495" MWT x SA-213T22

The UT Data is .370

Apply 24" x 2" pad weld to the eroded area on **platen 25F tube 2F**. The eroded area is located to the top side of the 1st set of wrappers counting from the top down. The pad weld will start approximately 3' to the rear of the front 90 degree bend.



Work Order: _____

Status: Inspected

Gtrack v 3.5.3

Inspection Report

Created on 4/2/2011 12:35 PM

Page 6 of 15

Station: Mitchell Unit: 1 Report Name: 9-PLATEN SUPERHEATER

=====
P R I O R I T Y # 2 R E P A I R S
=====

Area: Platen Superheater

Record:# 64

Action: TUBE RESTORATION WELD-P2

Priority #: 2

Inspector: Arms R.

General location is Platen Superheater.

Elevation: 137'

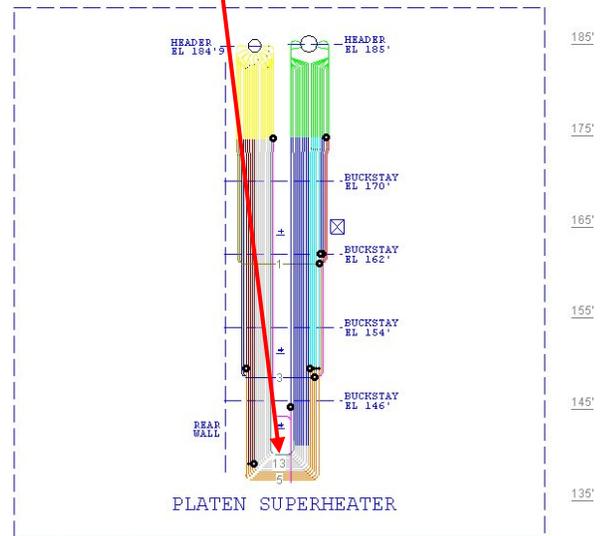
Cause: Erosion (Soot Blower)

Appearance: Eroded

Material: 2.25" OD x .552" MWT x SA-213T22

The UT Data is .408

Apply one 36"x3" pad weld to restore **tube 17 lower loop assembly 15** due to soot blower erosion. The RWT was measured at 408".



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 12:35 PM

Page 7 of 15

Station: Mitchell Unit: 1 Report Name: 9-PLATEN SUPERHEATER

Record:# 68

Action: TUBE RESTORATION WELD-P2

Priority #: 2

Inspector: Bellucci E.

General location is Platen Superheater,
Trailing Side, Rear.

Specific location: Tube #:6 Element #:12

Elevation: 137'

Length: 2'

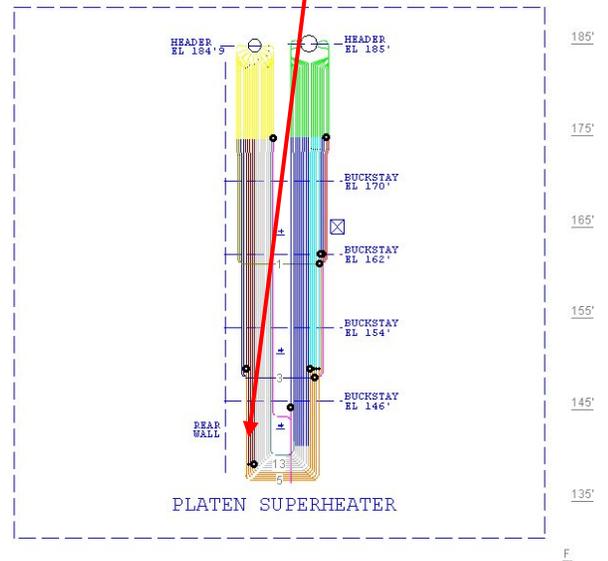
Cause: Erosion (Soot Blower)

Appearance: Eroded

Material: 2.5" OD x .593" MWT x SA-213T22

The UT Data is .423

Apply approximately 24" x 2" pad weld to
the eroded area on **platen 12 tube 6R** on
the trail edge of the tube. This eroded
area is 5' up from the bottom of the
platen.



Work Order: _____

Status: Inspected

Inspection Report

Created on 4/2/2011 12:35 PM

Page 8 of 15

Station: Mitchell Unit: 1 Report Name: 9-PLATEN SUPERHEATER

Record:# 73

Action: **TUBE RESTORATION WELD-P2**

Priority #: 2

Inspector: Bellucci E.

General location is Platen Superheater, 2nd Wrapper Tube Elevation, Center.

Elevation: 148'

Length: .3'

Cause: Erosion (Soot Blower)

Appearance: Eroded

Material: 2.25" OD x .540" MWT x SA-213T22

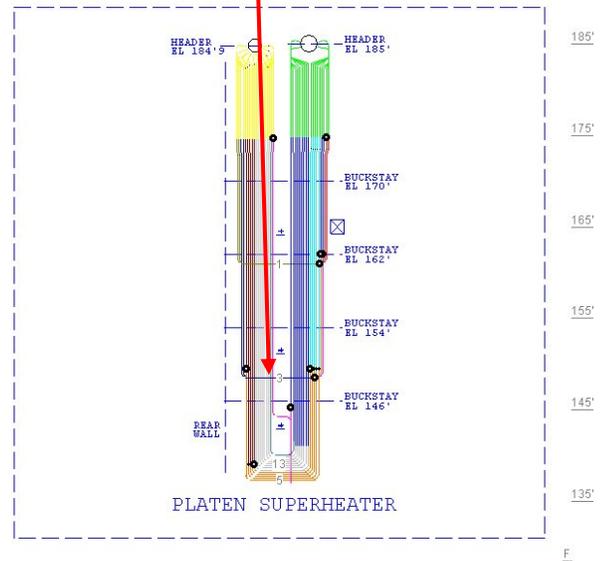
Apply approximately 3" x 2" pad welds to the following platens/ tubes/ UT readings:

23/ 3R/ 0.452"

25/ 4R/ 0.456"

26/ 4R/ 0.453"

The locations of the eroded areas are on the top side of the wrapper tube adjacent to **tube 17R**. Note: These tubes don't fall into pad weld criteria, but due to the sharp edge erosion UDC recommends pad welding.



Work Order: _____

Status: Inspected

Inspection Report

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Station: Mitchell Unit: 1 Report Name: 9-PLATEN SUPERHEATER

Record:# 79

Action: TUBE RESTORATION WELD-P2

Priority #: 2

Inspector: Bellucci E.

General location is Platen Superheater, 1st Wrapper Tube Elevation, Center.

Elevation: 160'

Length: 1'

Cause: Erosion (Soot Blower)

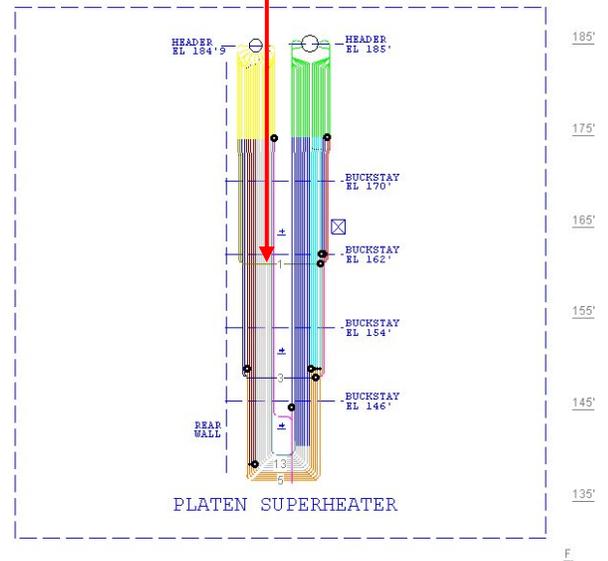
Appearance: Eroded

Material: 2.0" OD x .495" MWT x SA-213T22

The UT Data is .383

Apply approximately 12" x 2" pad welds to the eroded area on **platen 25 tube 2R**. The location of the eroded area is on the top side of the wrapper tube adjacent to tube 17R.

Note: This tube doesn't fall into pad weld criteria, but due to the sharp edge erosion UDC recommends pad welding.



Work Order: _____

Status: Inspected

Gtrack v 3.5.3

Inspection Report

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Station: Mitchell Unit: 1 Report Name: 9-PLATEN SUPERHEATER

P R I O R I T Y # 3 R E P A I R S

Area: Platen Superheater

Record:# 60

Action: SHIELD INSTALLATION-P3

Priority #: 3

Inspector: Meador K.

General location is Platen Superheater.

Elevation: 137'

Length: 2'

Cause: Erosion (Soot Blower)

Appearance: Eroded

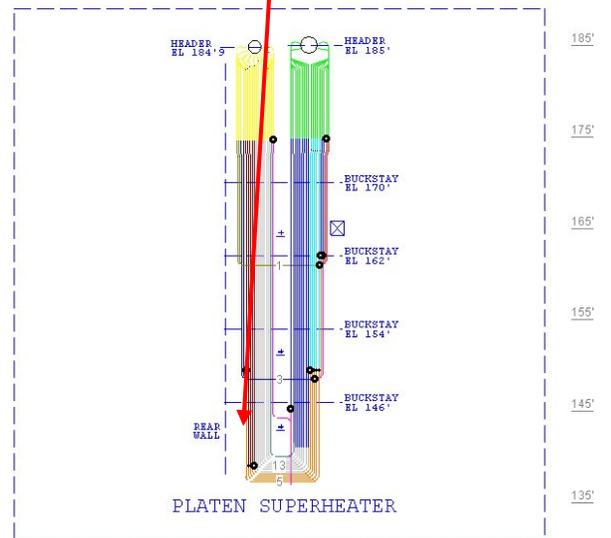
Material: 2.125" OD x 0.320" MWT x SA-213TP321H

The UT Data is 0.266

The IK/IR is 1/2

Tube 6R of Assembly 5 in IK path 1/2 is in shield criteria, due to the location of the repair applying a 2'x3"

Pad-Weld would be a more sufficient repair.



Work Order: _____

Status: Inspected

Inspection Report

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Station: Mitchell Unit: 1 Report Name: 9-PLATEN SUPERHEATER

Area: Platen Superheater

Record:# 72

Action: **PLAN FOR FUTURE REPLACEMENT-P**

Priority #: 3

Inspector: Brown M.

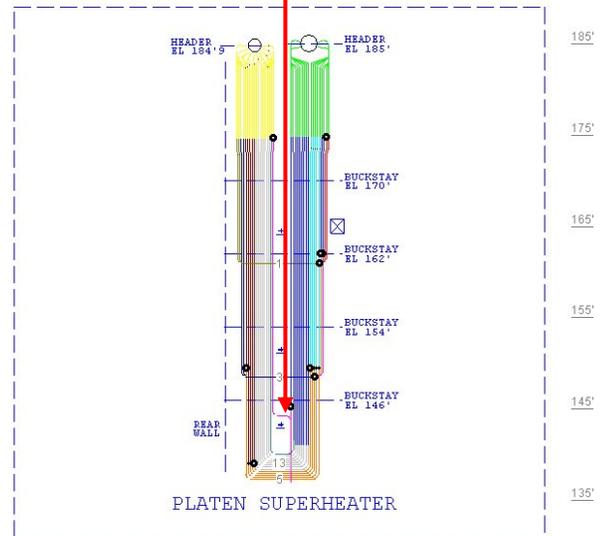
General location is Platen Superheater,
Lower, Rear.

Elevation: 149'

Appearance: Bowed Tubing

Material: 2.5" OD x .593" MWT x SA-213-
TP321H

Due to excessive bowing, plan for future
replacement Tube 18R at Assembly 23.



Work Order: _____

Status: Inspected

Inspection Report

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Station: Mitchell Unit: 1 Report Name: 9-PLATEN SUPERHEATER

Record:# 78

Action: **PLAN FOR FUTURE REPLACEMENT-P**

Priority #: 3

Inspector: Bellucci E.

General location is Platen Superheater,
Leading Edge, Top.

Elevation: 175'

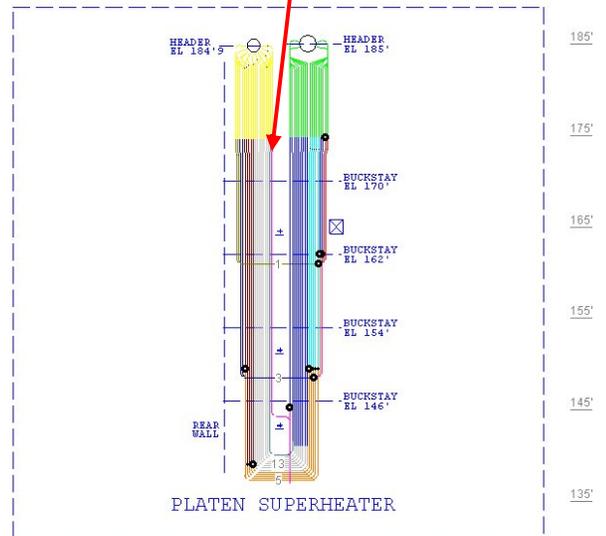
Length: 2'

Cause: Impact Damage (shot gun)

Appearance: Shot Gum Damage

Material: 2.0" OD x .296" MWT x SA-
213TP321H

Install 24" dutchman when time permits due
to shot gun dents approximately 12" down
from the roofline. The dents are located at
the leading edge of **platen 24 tube 18R**.



Work Order: _____

Status: Inspected

Inspection Report

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Station: Mitchell Unit: 1 Report Name: 9-PLATEN SUPERHEATER

Area: Platen Superheater

Record:# 69

Action: **ALIGN AND ATTACH-P3**

Priority #: 3

Inspector: Brown M.

General location is Platen Superheater,
Lower, Rear.

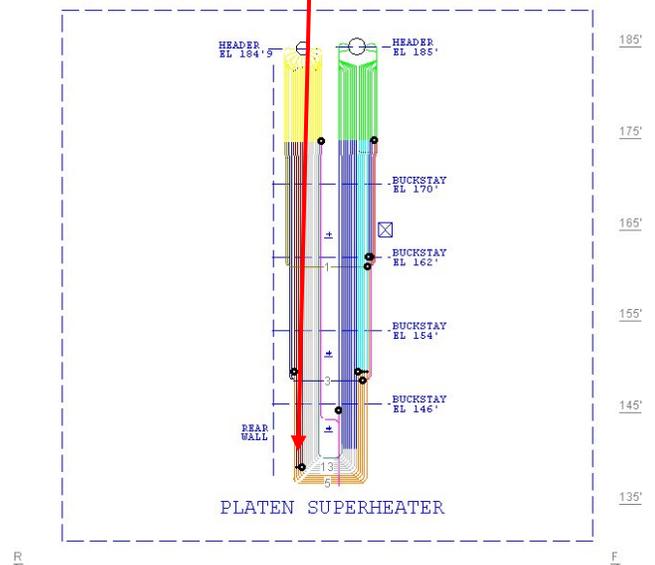
Elevation: 145'

Cause: Fatigue (Thermal/ Vibration)

Appearance: Misaligned

Material: 2.5" OD x .593" MWT x SA-250T22

Align and attach (AA) **tubes 5-7** at the lower side at most of the 26 total assemblies to prevent reduce channeled soot blower erosion at the rear of the pendants.



Work Order: _____

Status: Inspected

Inspection Report

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Station: Mitchell Unit: 1 Report Name: 9-PLATEN SUPERHEATER

Record:# 71

Action: **ALIGN AND ATTACH-P3**

Priority #: 3

Inspector: Bellucci E.

General location is Platen Superheater, 2nd Wrapper Tube Elevation, Front.

Elevation: 148'

Cause: Fatigue (Vibration)

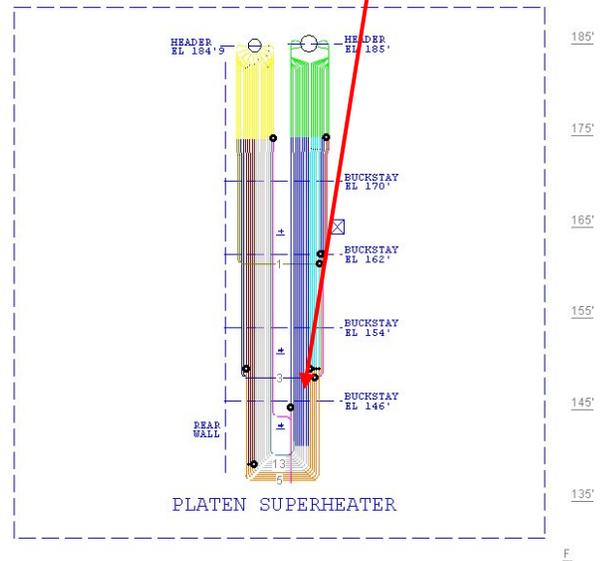
Appearance: Out of Alignment

Re-align the following platens/ tubes at the following locations:

14/ 14F

15/ 15F

These tubes are bowed out approximately 1 tube diameter at the 2nd wrapper elevation counting from the top down.



Work Order: _____

Status: Inspected

Inspection Report

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Station: Mitchell Unit: 1 Report Name: 9-PLATEN SUPERHEATER

Area: Platen Superheater

Record:# 74

Action: REFRACTORY INSTALLATION-P3

Priority #: 3

Inspector: Meador K.

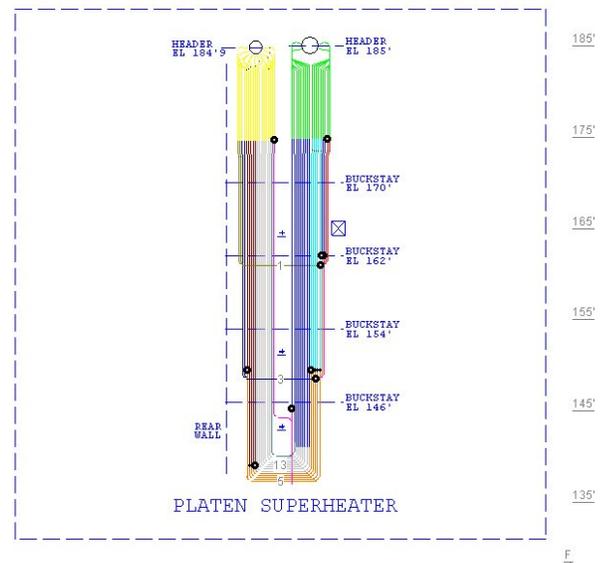
General location is Platen Superheater, IK.

Cause: Fatigue (Thermal)

Appearance: Missing

The IK/IR is 1/2 3/4 5/6

Replace Refractory on *IK's 1-6* due to missing/broken Refractory.



Work Order: _____

Status: Inspected