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**Subject:** Red Hill Document Production - EPA/DOH Requests 2.a.i.-ii / Navy Questions #13-17 (Pre-APR 653 Repairs) Tank #15 Part 1 of 2  
**Attachments:** Tank 15 Repair As Built Jun05

Rebekah/Wade -

Attached is Part 1 of 2 repair reports prepared by Dunkin & Bush for work done on Red Hill Tank #15 in 2005, that is before Navy and DLA adopted the use of API 653 for tank inspection and repair. This document is provided in response to EPA/DOH Requests 2.a.i.-ii and Navy Questions #13-17.

Although the attached is provided pursuant to and in the course of negotiations, the sender poses no restrictions on further distribution.

R,  
JMW

**Consolidated Construction Projects For FISC, Pearl Harbor, Hawaii  
Contract No. N62742-C-02-1402  
Clean And Repair Tanks 1 And 15, 6 And 16  
Weld Repair As Built Record**

**Tank 15**

**Quadrant A, B, D, Tank Floor, and Lower Dome  
Weld Repairs Completed June 2005  
Reference TESTEX Report Dated 2-18-2005  
And Government Provided Repair Procedure Spreadsheet**

**Contents:**

**Tank 15 As Built Repair Summary**




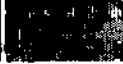



**Tank 15 As Built Sketches For Repairs 15-001 to 15-073**

**Tank 15 Maps (By Testex)**

**Tank 15 Flaw Locations (By Testex)**

**Repair Procedure Spreadsheet (Government Provided)**

Tank 15 As Built Repair Summary

D&B Repair No.	Repair Location	Plate Number	Testex Flaw Number	E&I Repair Flaw Number	As Built Repair
15001	Upper Dome Quadrant A	4	1	A1	One 4"x14"x1/4" patch plate to cover A1 & A2
		4	2	A2	
15002		4	3	A3	5"x1/4" round patch plate
15003		4	4	A4	One 10"x12"x1/4" patch plate to cover A4 & A5
		4	5	A5	
15004		5	1	A6	5"x1/4" round patch plate
15005		5C	1	A7	5"x1/4" round patch plate
15006		5C	2	A8	5"x1/4" round patch plate
15007		5C	3	A9	5"x1/4" round patch plate
15008		6C	10	A10	One 4"x10"x1/4" patch plate to cover A10 & A11
		6C	11	A11	
15009		6C	12	A12	5"x1/4" round patch plate
15010		6C	13	A13	One 6"x10"x1/4" patch plate to cover A13 & A14
		6C	14	A14	
15011		6C	15	A15	5"x1/4" round patch plate
15012		6C	16	A16	One 5"x11"x1/4" patch plate to cover A16 & A17
		6C	17	A17	
15013		6C	18	A18	5"x11"x1/4" patch plate
15014		6C	19	A19	
15015		6C	20	A20	
15016		6C	21	A21	
15017		6C	22	A22	
		6C	23	A23	
15018		6C	24	A24	5"x1/4" round patch plate
15019		8C	25	A25	5"x1/4" round patch plate
15020		9C	26	A26	5"x1/4" round patch plate
15021		9C	27	A27	5"x1/4" round patch plate
15022		8B	28	A28	5"x1/4" round patch plate
15023	Quadrant B	22	1	B1	12"x12"x1/4" patch plate
15024		22	2	B2	10"x12"x1/4" patch plate
15025		22	3	B3	5"x1/4" round patch plate
15026		22	4	B4	
15027		10C	1	B5	5"x1/4" round patch plate
15028		10C	2	B6	
15029		10C	3	B7	5"x1/4" round patch plate
15030		11C	1	B8	5"x1/4" round patch plate
15031		12C	1	B9	5"x1/4" round patch plate
15032		14C	1	B10	5"x1/4" round patch plate
15033		14C	2	B11	5"x1/4" round patch plate
15034		14C	3	B12	5"x1/4" round patch plate
15035		14C	4	B13	5"x1/4" round patch plate
15036		17C	1	B14	5"x1/4" round patch plate
15037		17C	2	B15	One 5"x11"x1/4" patch plate to cover B15 & B16
		17C	3	B16	
15038		18C	1	B17	

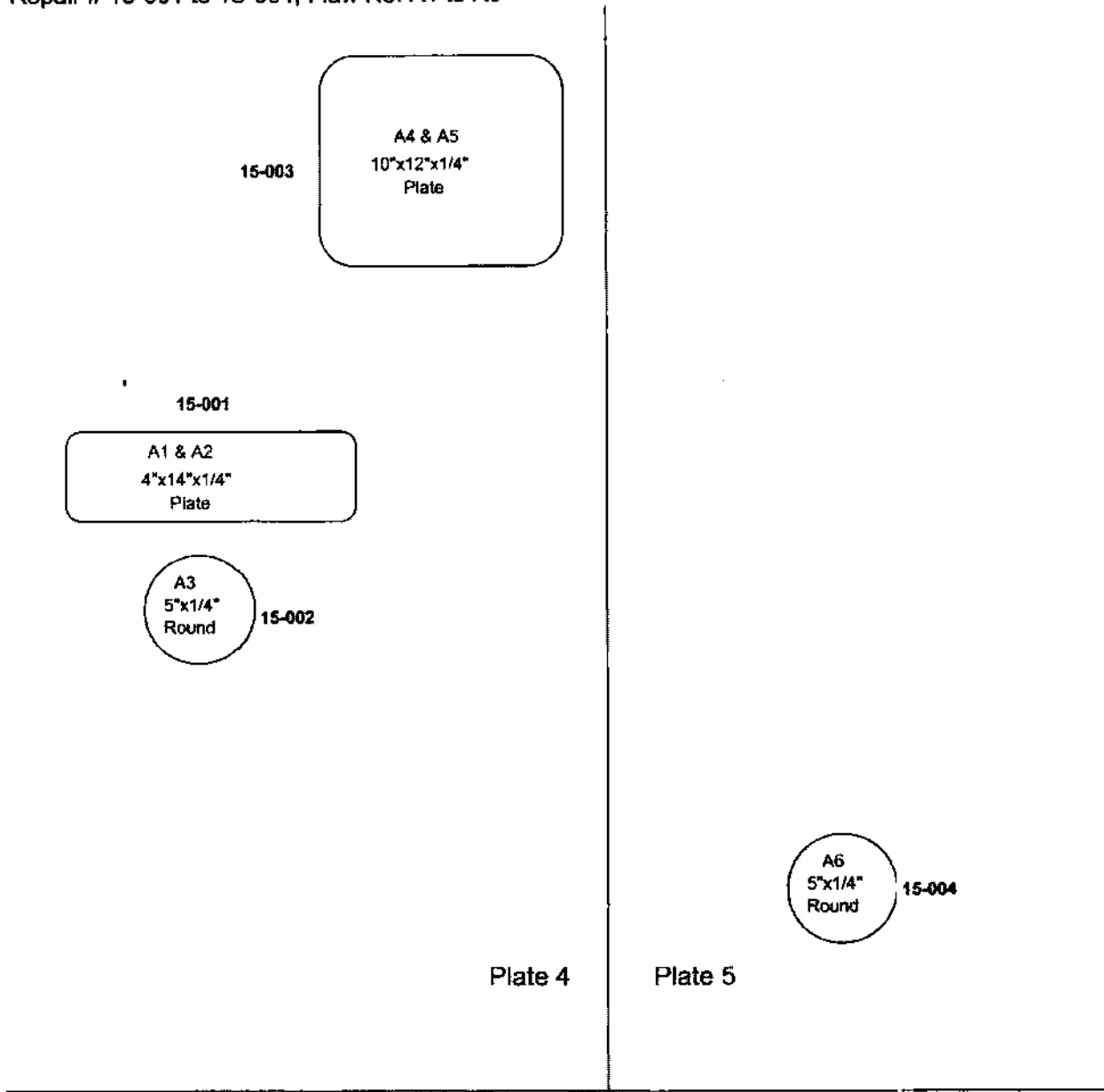
**Consolidated Construction Projects at Red Hill Tanks 1, 15, 6, 16**  
**Fleet Industrial Supply Center**  
**Pearl Harbor, Hawaii**

Contract No. N62742-03-C-1402

Tank 15 As Built Repair Summary			Testex	E&I	
D&B Repair No.	Repair Location	Plate Number	Flaw Number	Repair Flaw Number	As Built Repair
15039		18C	2	B18	One 9"x11"x1/4" patch plate to cover B18 & B19
		18C	3	B19	
15040		19C	1	B20	One 10"x13"x1/4" patch plate to cover B20, B21, & B22
		19C	2	B21	
		19C	3	B22	
15041		19C	4	B23	One 10"x10"x1/4" patch plate to cover B23, B24, & B25
		19C	5	B24	
		19C	6	B25	
15042		5	1	B26	One 6"x12"x1/4" patch plate to cover B26 & B27
		5	2	B27	
15043		5	3	B28	
		5	4	B29	
15044		5	5	B30	One 6"x12"x1/4" patch plate to cover B30 & B31
		5	6	B31	
15045		5	7	B32	
15046		5	8	B33	
15047		8	1	B34	6"x12"x1/4" patch plate to cover B34 & B35
		8	2	B35	
15048		8	3	B36	
15049		8	4	B37	
15050		Vert Scan 3	1	B38	5"x1/4" round patch plate
15051	Quadrant D	Vert Scan 5	1	D1	
15052		6	2	D2	5"x1/4" round patch plate
15053	Floor Plates	2	1	1	5"x1/4" round patch plate
15054		3	1	1	Remove defect and reweld - approximately 5"
15055		3	2	2	Remove defect and reweld - approximately 6"
15056		4	3	3	Remove defect and reweld - approximately 4"
15057	Lower Dome	2	1	1	Remove defect and reweld - approximately 5"
15058	Course 1	6	2	2	Remove defect and reweld - approximately 4"
15059		7	3	3	Remove defect and reweld - approximately 4"
15060		7	4	4	Remove defect and reweld - approximately 6"
15061		14	5	5	Remove defect and reweld - approximately 5"
15062		20	6	6	Remove defect and reweld - approximately 7"
15063		23	7	7	Remove defect and reweld - approximately 6"
15064		23	8	8	Remove defect and reweld - approximately 2"
15065		24	9	9	Remove defect and reweld - approximately 5"
15066		24	10	10	Remove defect and reweld - approximately 6"
15067		25	11	11	Remove defect and reweld - approximately 4"
15068		26	12	12	Remove defect and reweld - approximately 3"
15069		28/29	13	13	Remove defect and reweld - approximately 4"
15070		32	14	14	Remove defect and reweld - approximately 5"
15071		35	15	15	Remove defect and reweld - approximately 6"
15072		43/44	16	16	Remove defect and reweld - approximately 6"
15073		44	17	17	Remove defect and reweld - approximately 4"

Consolidated Construction Projects For FISC, Pearl Harbor, Hawaii  
Contract No. N62742-C-02-1402  
Clean And Repair Tanks 1 And 15, 6 And 16  
Weld Repair As Built Record

Tank 15  
Quadrant A  
Upper Dome Course A  
Plates 4 & 5  
Reference TESTEX Report 2-18-2005 Page 9 Figures 6 and 7  
Repair # 15-001 to 15-004, Flaw No. A1 to A6



Consolidated Construction Projects For FISC, Pearl Harbor, Hawaii  
Contract No. N62742-C-02-1402  
Clean And Repair Tanks 1 And 15, 6 And 16  
Weld Repair As Built Record

Tank 15  
Quadrant A  
Upper Dome Extension Course Row 2  
Plate 5C  
Reference TESTEX Report 2-18-2005 Page 11 Figure 9  
Repair # 15-005 to 15-007, Flaw No. A7 - A9

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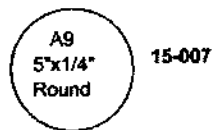
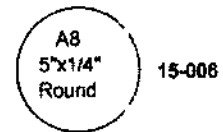
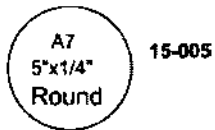
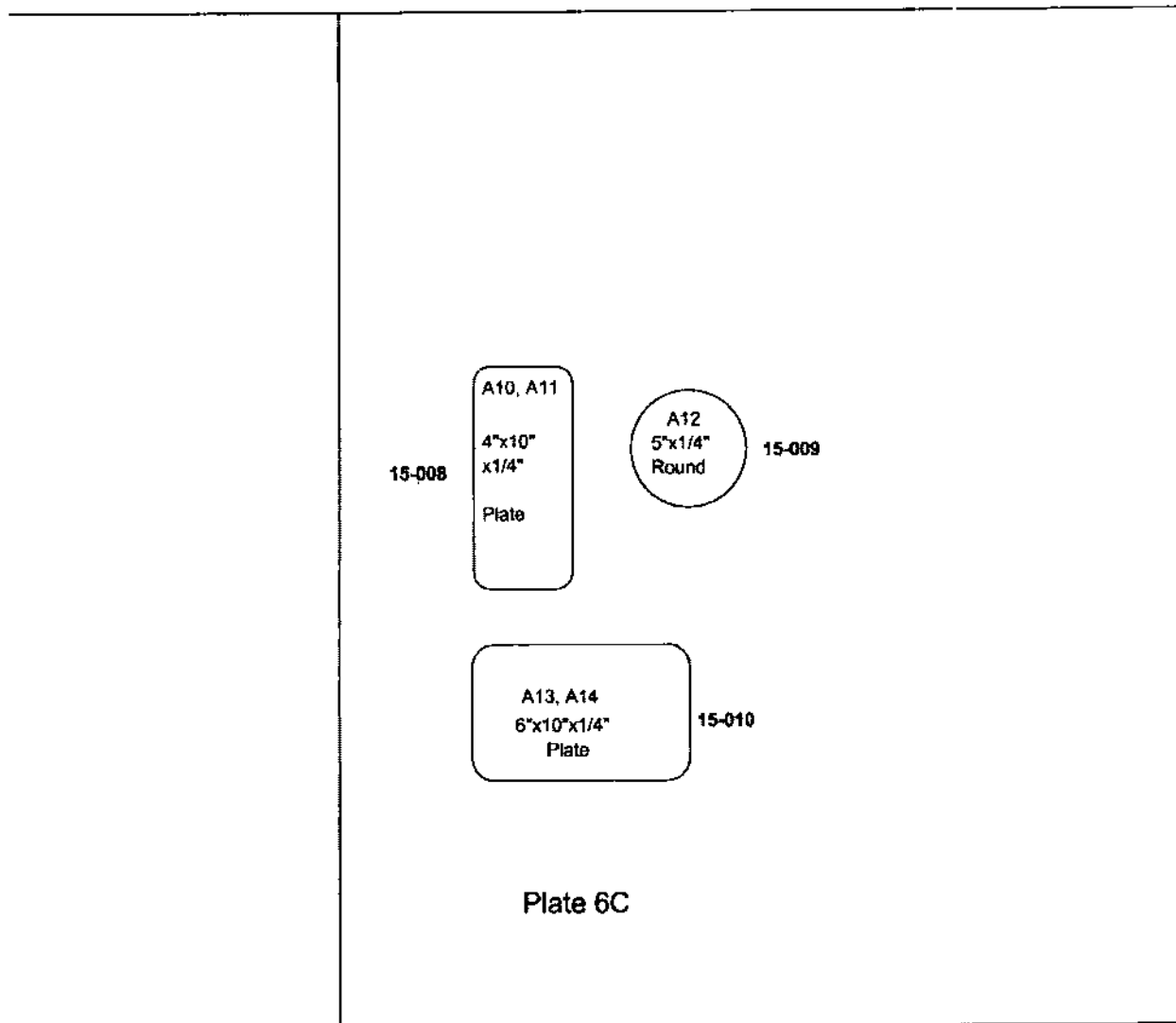


Plate 5C

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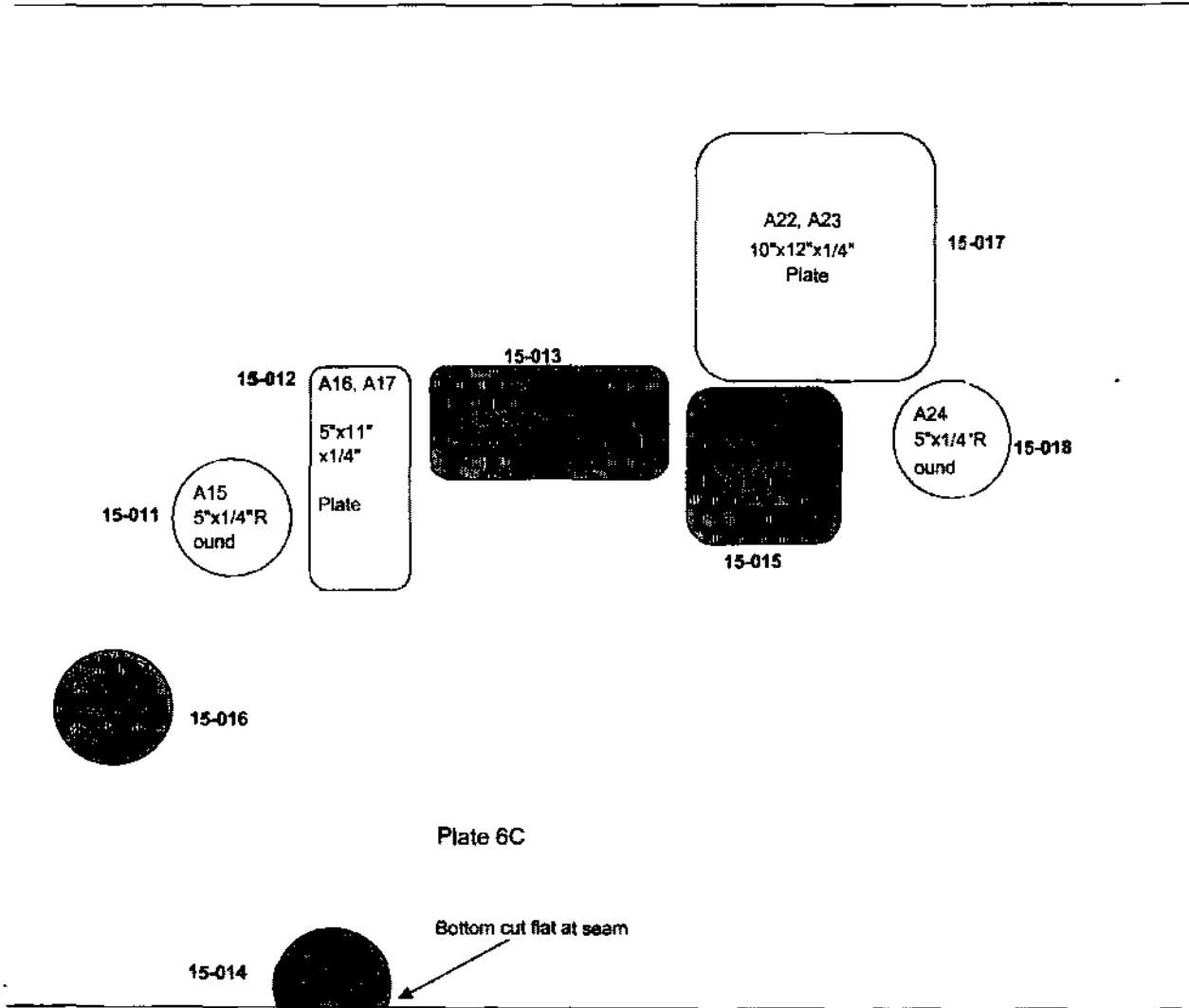
Consolidated Construction Projects For FISC, Pearl Harbor, Hawaii  
Contract No. N62742-C-02-1402  
Clean And Repair Tanks 1 And 15, 6 And 16  
Weld Repair As Built Record

Tank 15  
Quadrant A  
Upper Dome Extension Course Row 2  
Plate 6C  
Reference TESTEX Report 2-18-2005 Page 10 Figure 8  
Repair # 15-008 to 15-010, Flaw No. A10 - A14



Consolidated Construction Projects For FISC, Pearl Harbor, Hawaii  
Contract No. N62742-C-02-1402  
Clean And Repair Tanks 1 And 15, 6 And 16  
Weld Repair As Built Record

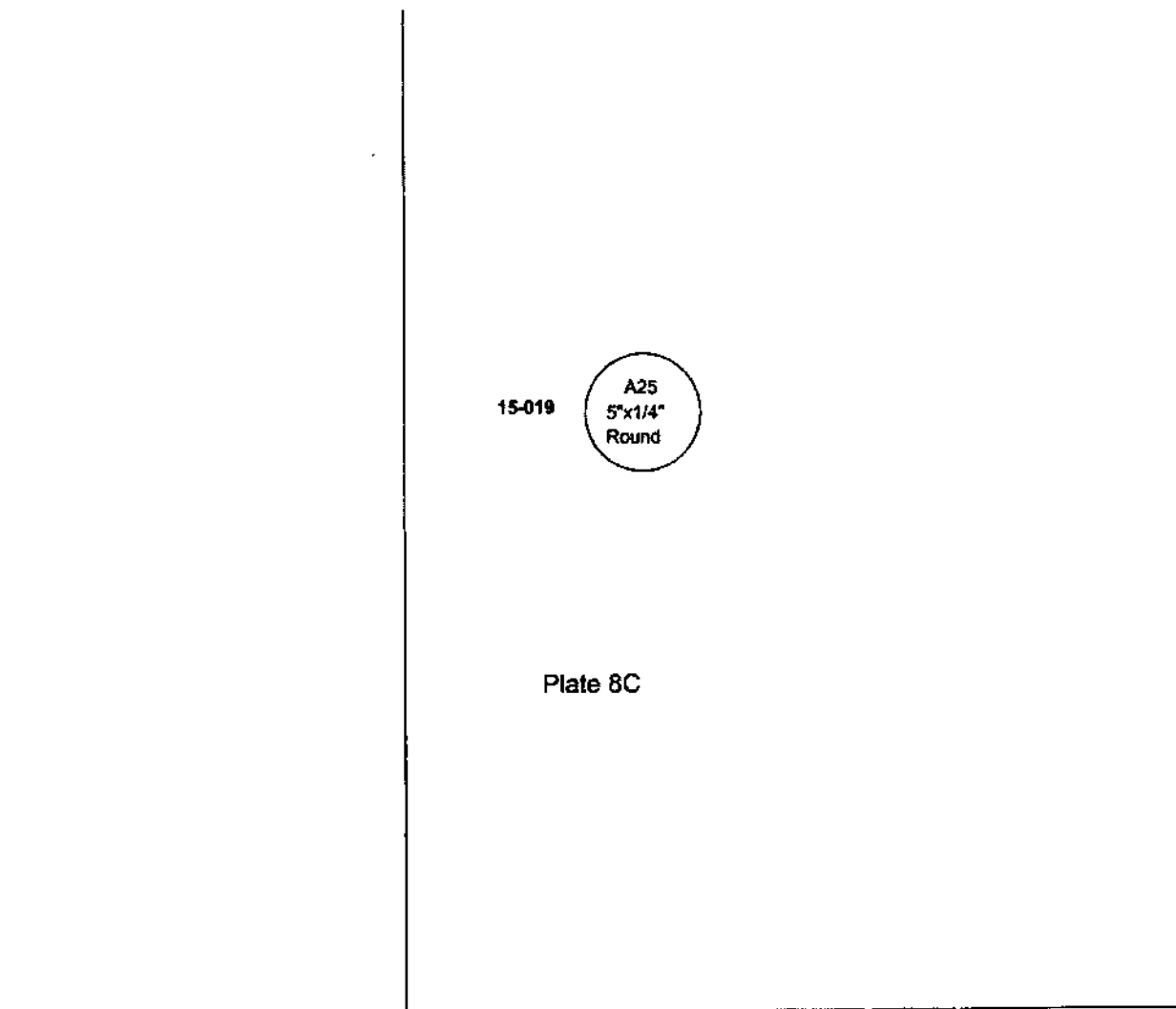
Tank 15  
Quadrant A  
Upper Dome Extension Course Row 2  
Plate 6C  
Reference TESTEX Report 2-18-2005 Page 10 Figure 8  
Repair # 15-011 to 15-018, Flaw No. A15 - A24





Consolidated Construction Projects For FISC, Pearl Harbor, Hawaii  
Contract No. N62742-C-02-1402  
Clean And Repair Tanks 1 And 15, 6 And 16  
Weld Repair As Built Record

Tank 15  
Quadrant A  
Upper Dome Extension Course Row 2  
Plate 8C  
Reference TESTEX Report 2-18-2005 Page 11 Figure 10  
Repair # 15-019, Flaw No. A25



Consolidated Construction Projects For FISC, Pearl Harbor, Hawaii  
Contract No. N62742-C-02-1402  
Clean And Repair Tanks 1 And 15, 6 And 16  
Weld Repair As Built Record

Tank 15  
Quadrant A  
Upper Dome Extension Course Row 2  
Plate 9C  
Reference TESTEX Report 2-18-2005 Page 12 Figure 11  
Repair # 15-020 to 15-021 Flaw No. A26, A27



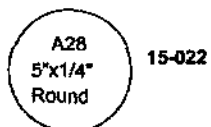
Plate 9C

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Consolidated Construction Projects For FISC, Pearl Harbor, Hawaii  
Contract No. N62742-C-02-1402  
Clean And Repair Tanks 1 And 15, 6 And 16  
Weld Repair As Built Record

Tank 15  
Quadrant A  
Upper Dome Extension Course Row 3  
Plate 8B  
Reference TESTEX Report 2-18-2005 Page 13 Figure 12  
Repair # 15-022, Flaw No. A28

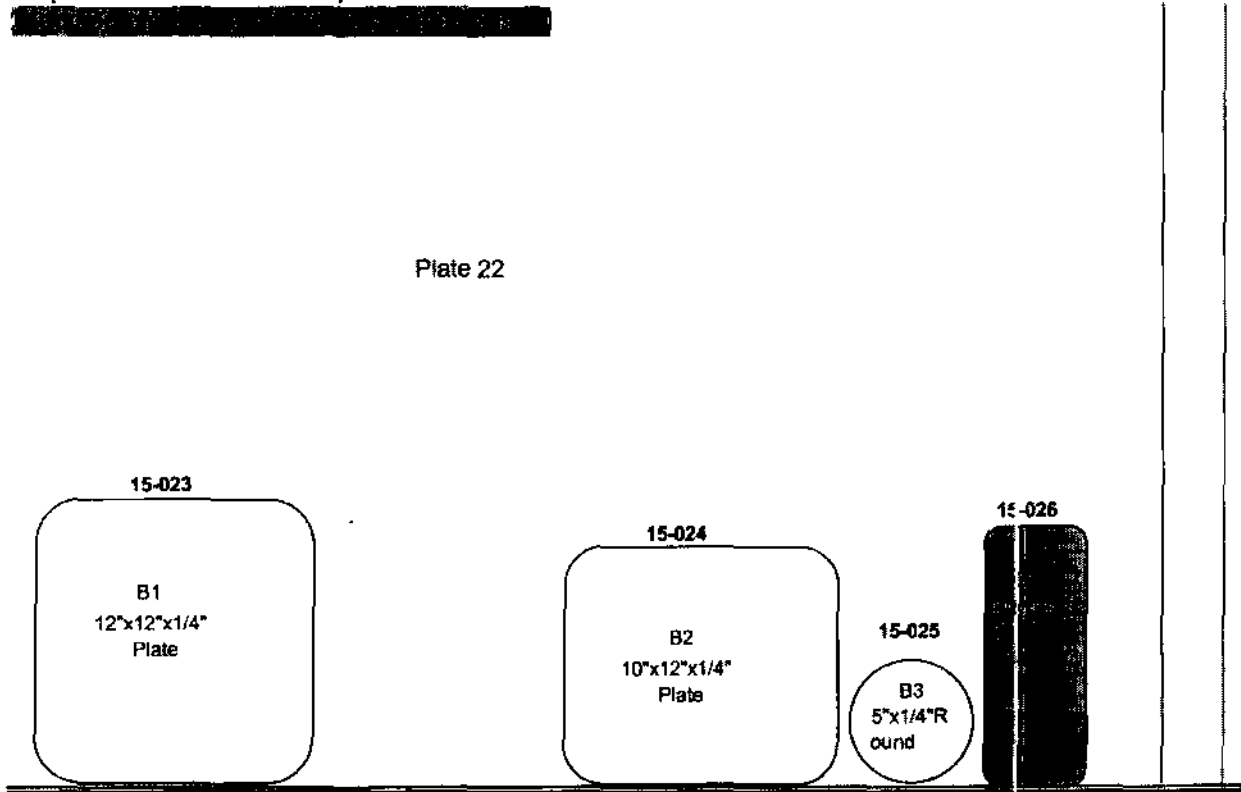
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Consolidated Construction Projects For FISC, Pearl Harbor, Hawaii  
Contract No. N62742-C-02-1402  
Clean And Repair Tanks 1 And 15, 6 And 16  
Weld Repair As Built Record

Tank 15  
Quadrant B  
Upper Dome Course A  
Plate 22

Reference TESTEX Report 2-18-2005 Page 15 Figure 14  
Repair # 15-023 to 15-026, Flaw No. B1-B4



Consolidated Construction Projects For FISC, Pearl Harbor, Hawaii  
Contract No. N62742-C-02-1402  
Clean And Repair Tanks 1 And 15, 6 And 16  
Weld Repair As Built Record

Tank 15  
Quadrant B  
Extension Course Row 2  
Plates 10C and 11C  
Reference TESTEX Report 2-18-2005 Page 16 Figures 15 & 16  
Repair # 15-027 to 15-030, Flaw No. B5-B8

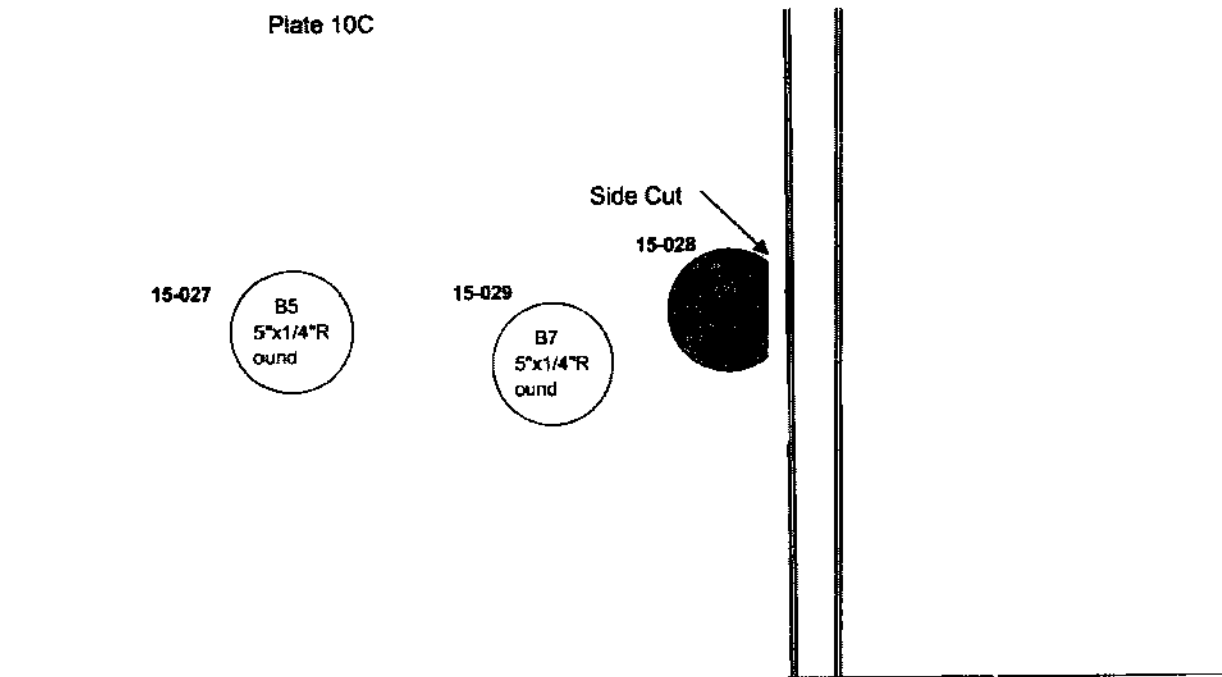
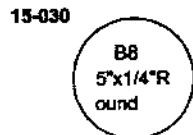


Plate 11C



Consolidated Construction Projects For FISC, Pearl Harbor, Hawaii  
Contract No. N62742-C-02-1402  
Clean And Repair Tanks 1 And 15, 6 And 16  
Weld Repair As Built Record

Tank 15  
Quadrant B  
Extension Course Row 2  
Plates 12C and 14C  
Reference TESTEX Report 2-18-2005 Page 17 Figures 17 & 18  
Repair # 15-031 to 15-035, Flaw No. B9-B13

Plate 12C

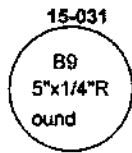
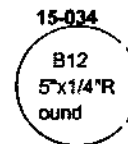


Plate 14C



Consolidated Construction Projects For FISC, Pearl Harbor, Hawaii  
Contract No. N62742-C-02-1402  
Clean And Repair Tanks 1 And 15, 6 And 16  
Weld Repair As Built Record

Tank 15  
Quadrant B  
Extension Course Row 2  
Plates 17C and 19C  
Reference TESTEX Report 2-18-2005 Page 18 Figures 19 & 20  
Repair # 15-036 to 15-039, Flaw No. B14-B19

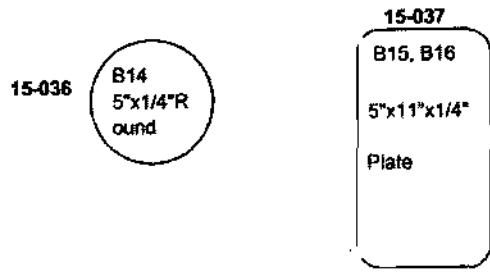
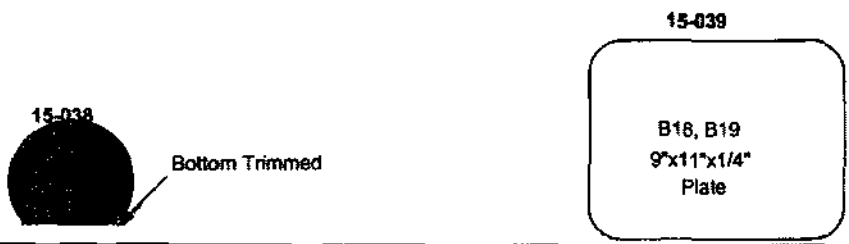


Plate 17C



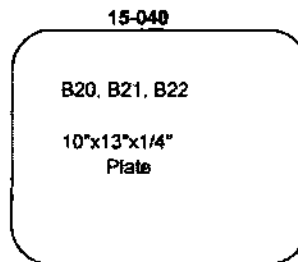
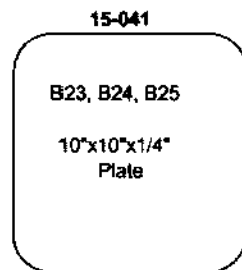
Plate 18C



Consolidated Construction Projects For FISC, Pearl Harbor, Hawaii  
Contract No. N62742-C-02-1402  
Clean And Repair Tanks 1 And 15, 6 And 16  
Weld Repair As Built Record

Tank 15  
Quadrant B  
Extension Course Row 2  
Plate 19C  
Reference TESTEX Report 2-18-2005 Page 19 Figure 21  
Repair # 15-040 to 15-041, Flaw No. B20-B25

Plate 19C





Consolidated Construction Projects For FISC, Pearl Harbor, Hawaii  
Contract No. N62742-C-02-1402  
Clean And Repair Tanks 1 And 15, 6 And 16  
Weld Repair As Built Record

Tank 15  
Quadrant B  
Extension Course Row 3  
Plate 5  
Reference TESTEX Report 2-18-2005 Page 20 Figure 22  
Repair # 15-042 to 15-046, Flaw No. B26-B33

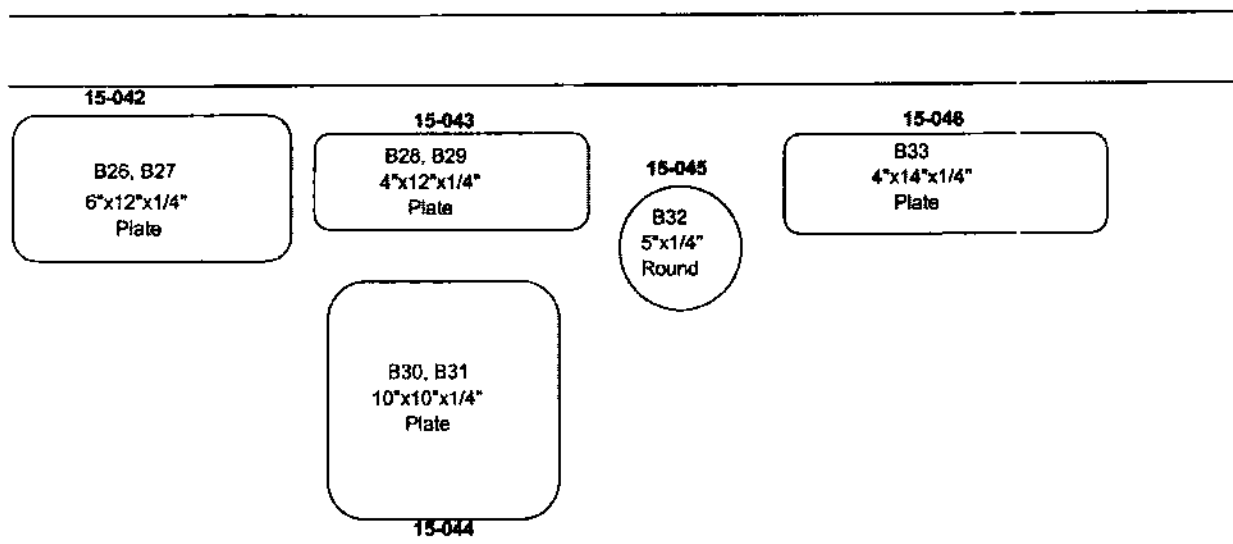
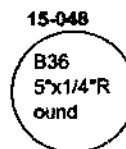
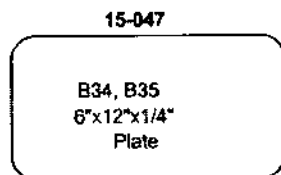
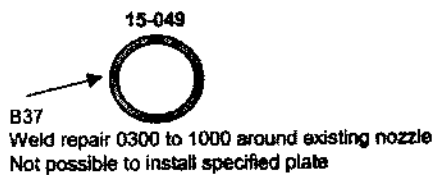


Plate 5

Consolidated Construction Projects For FISC, Pearl Harbor, Hawaii  
Contract No. N62742-C-02-1402  
Clean And Repair Tanks 1 And 15, 6 And 16  
Weld Repair As Built Record

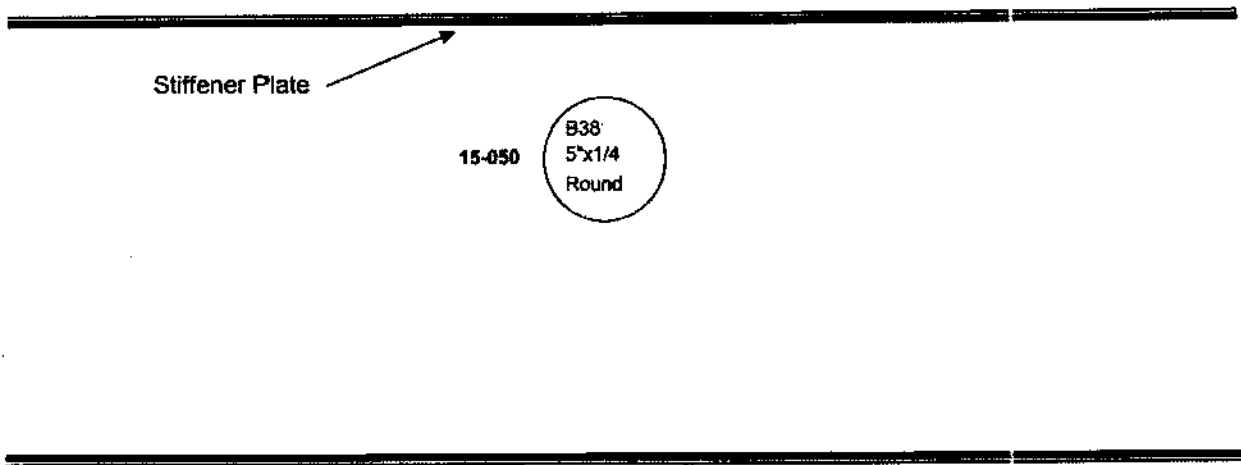
Tank 15  
Quadrant B  
Extension Course Row 3  
Plate 8  
Reference TESTEX Report 2-18-2005 Page 20 Figure 23  
Repair # 15-047 to 15-049, Flaw No. B34-B37

Plate 8



Consolidated Construction Projects For FISC, Pearl Harbor, Hawaii  
Contract No. N62742-C-02-1402  
Clean And Repair Tanks 1 And 15, 6 And 16  
Weld Repair As Built Record

Tank 15  
Quadrant B  
Extension Course Row 4 Stiffener Plate  
Above Vertical Scan 3  
Reference TESTEX Report 2-18-2005 Page 21 Figure 24  
Repair # 15-050, Flaw No. B38

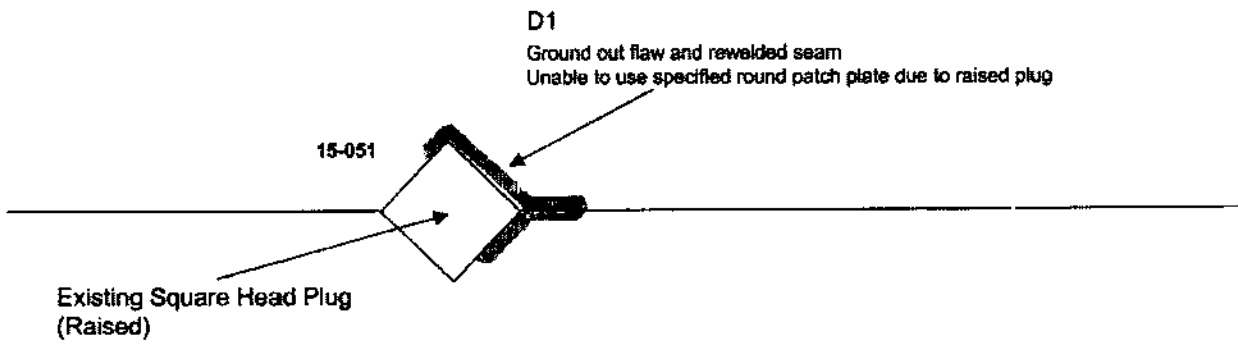


Consolidated Construction Projects For FISC, Pearl Harbor, Hawaii  
Contract No. N62742-C-02-1402  
Clean And Repair Tanks 1 And 15, 6 And 16  
Weld Repair As Built Record

Tank 15  
Quadrant D  
Barrel Row 23  
Vertical Scan 5  
Reference TESTEX Report 2-18-2005 Page 24 Figure 27  
Repair # 15-051, Flaw No. D1



Row 23

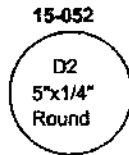


Row 24

Consolidated Construction Projects For FISC, Pearl Harbor, Hawaii  
Contract No. N62742-C-02-1402  
Clean And Repair Tanks 1 And 15, 6 And 16  
Weld Repair As Built Record

Tank 15  
Quadrant D  
Barrel Row 28  
Plate 6  
Reference TESTEX Report 2-18-2005 Page 25 Figure 28  
Repair # 15-052, Flaw No. D2

Plate 6



Consolidated Construction Projects For FISC, Pearl Harbor, Hawaii  
 Contract No. N62742-C-02-1402  
 Clean And Repair Tanks 1 And 15, 6 And 16  
 Weld Repair As Built Record

Tank 15  
 Quadrants A, B, C, & D  
 Lower Dome and Bottom

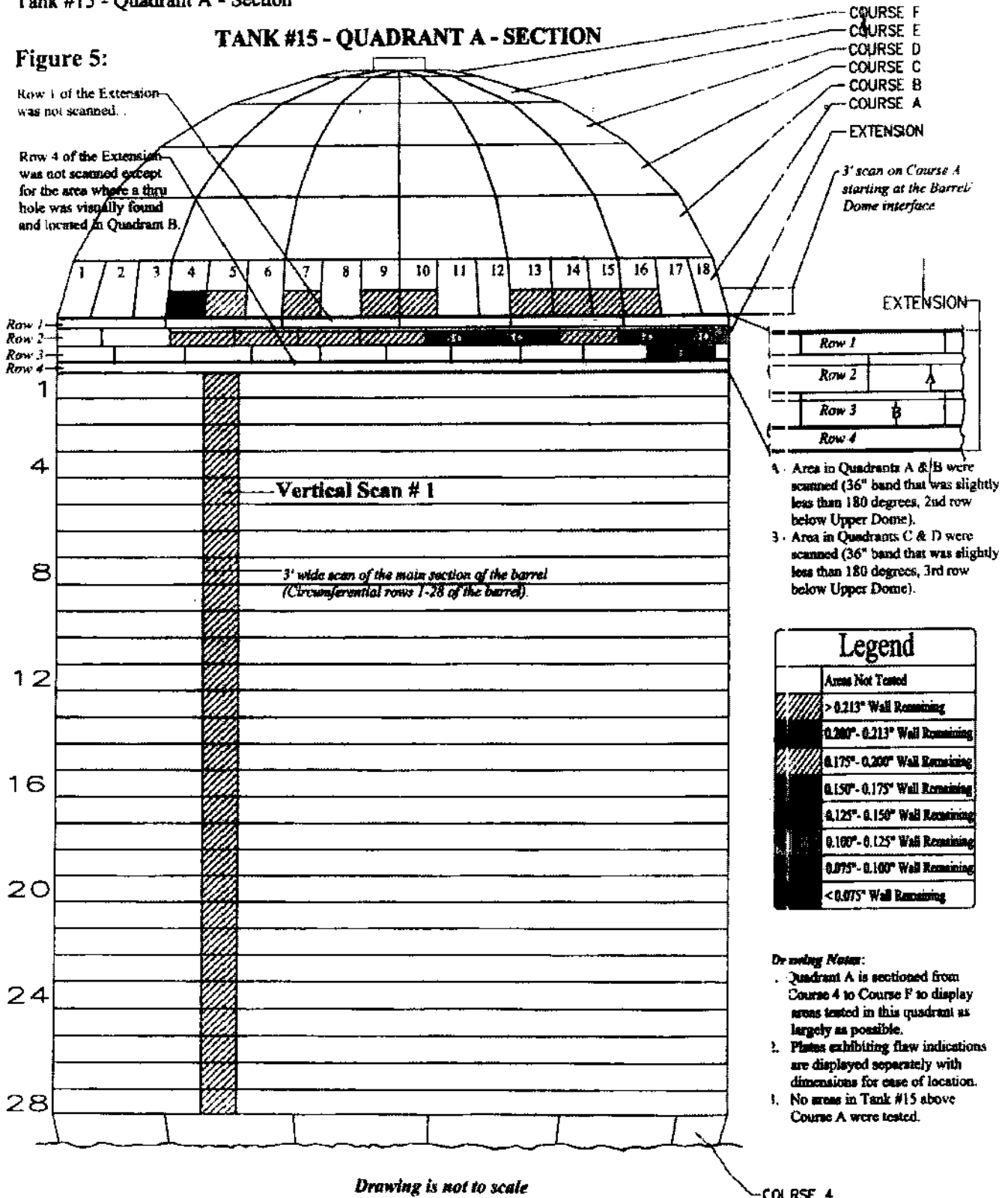
Reference TESTEX Report 2-18-2005 Page 7 Figure 4  
 Repair # 15-053 to 15-073, Flaw No. As Indicated

Location	Repair #	Repair Flaw No.	Description	Specified Repair	As Built Repair
Floor Plate 2	15-053	1	Plate Thinning	4"x1/4" round patch plate	5"x1/4" round patch plate
Floor Plate 3	15-054	1	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 5"
Floor Plate 3	15-055	2	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 6"
Floor Plate 4	15-056	3	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 4"
Lower Dome					
Course 1					
Plate 2	15-057	1	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 5"
Plate 6	15-058	2	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 4"
Plate 7	15-059	3	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 4"
Plate 7	15-060	4	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 6"
Plate 14	15-061	5	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 5"
Plate 20	15-062	6	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 7"
Plate 23	15-063	7	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 6"
Plate 23	15-064	8	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 2"
Plate 24	15-065	9	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 5"
Plate 24	15-066	10	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 6"
Plate 25	15-067	11	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 4"
Plate 26	15-068	12	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 3"
Plate 28/29	15-069	13	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 4"
Plate 32	15-070	14	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 5"
Plate 35	15-071	15	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 6"
Plate 43/44	15-072	16	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 8"
Plate 44	15-073	17	Weld Defect	Remove and reweld - defect < 2"	Reweld approximately 4"

Each repair includes 2 inert holes that were plugged, seal welded, and tested after repair work was completed. Repair 15-056 inert holes were repaired with 5" diameter round plates. Repairs 15-064 and 15-065 had common inert holes.

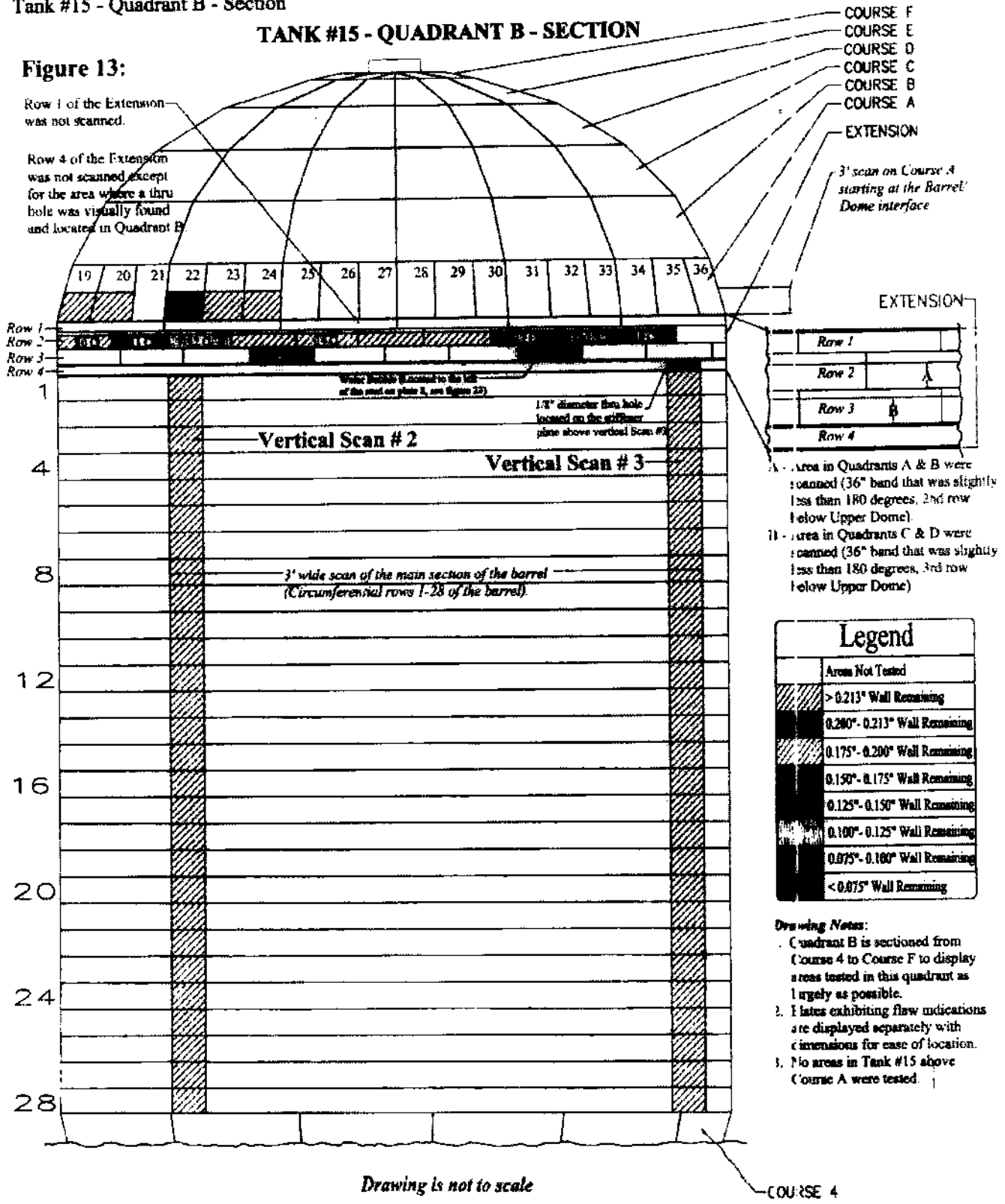
Figure 5:

TANK #15 - QUADRANT A - SECTION



**TANK #15 - QUADRANT B - SECTION**

**Figure 13:**

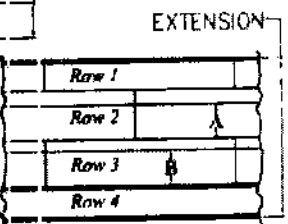


Row 1 of the Extension was not scanned.

Row 4 of the Extension was not scanned except for the area where a thru hole was visually found and located in Quadrant B.

COURSE F  
 COURSE E  
 COURSE D  
 COURSE C  
 COURSE B  
 COURSE A  
 EXTENSION

3' scan on Course A starting at the Barrel/Dome interface



- 1) - Area in Quadrants A & B were scanned (36" band that was slightly less than 180 degrees, 2nd row below Upper Dome).
- 2) - Area in Quadrants C & D were scanned (36" band that was slightly less than 180 degrees, 3rd row below Upper Dome).

Legend	
[White]	Area Not Tested
[Diagonal Hatching]	> 0.213" Wall Remaining
[Dark Grey]	0.200" - 0.213" Wall Remaining
[Medium Grey]	0.175" - 0.200" Wall Remaining
[Light Grey]	0.150" - 0.175" Wall Remaining
[Very Light Grey]	0.125" - 0.150" Wall Remaining
[White with Dotted]	0.100" - 0.125" Wall Remaining
[White with Horizontal Lines]	0.075" - 0.100" Wall Remaining
[White with Vertical Lines]	< 0.075" Wall Remaining

- Drawing Notes:**
- 1. Quadrant B is sectioned from Course 4 to Course F to display areas tested in this quadrant as largely as possible.
  - 2. Dates exhibiting flow indications are displayed separately with dimensions for ease of location.
  - 3. No areas in Tank #15 above Course A were tested.

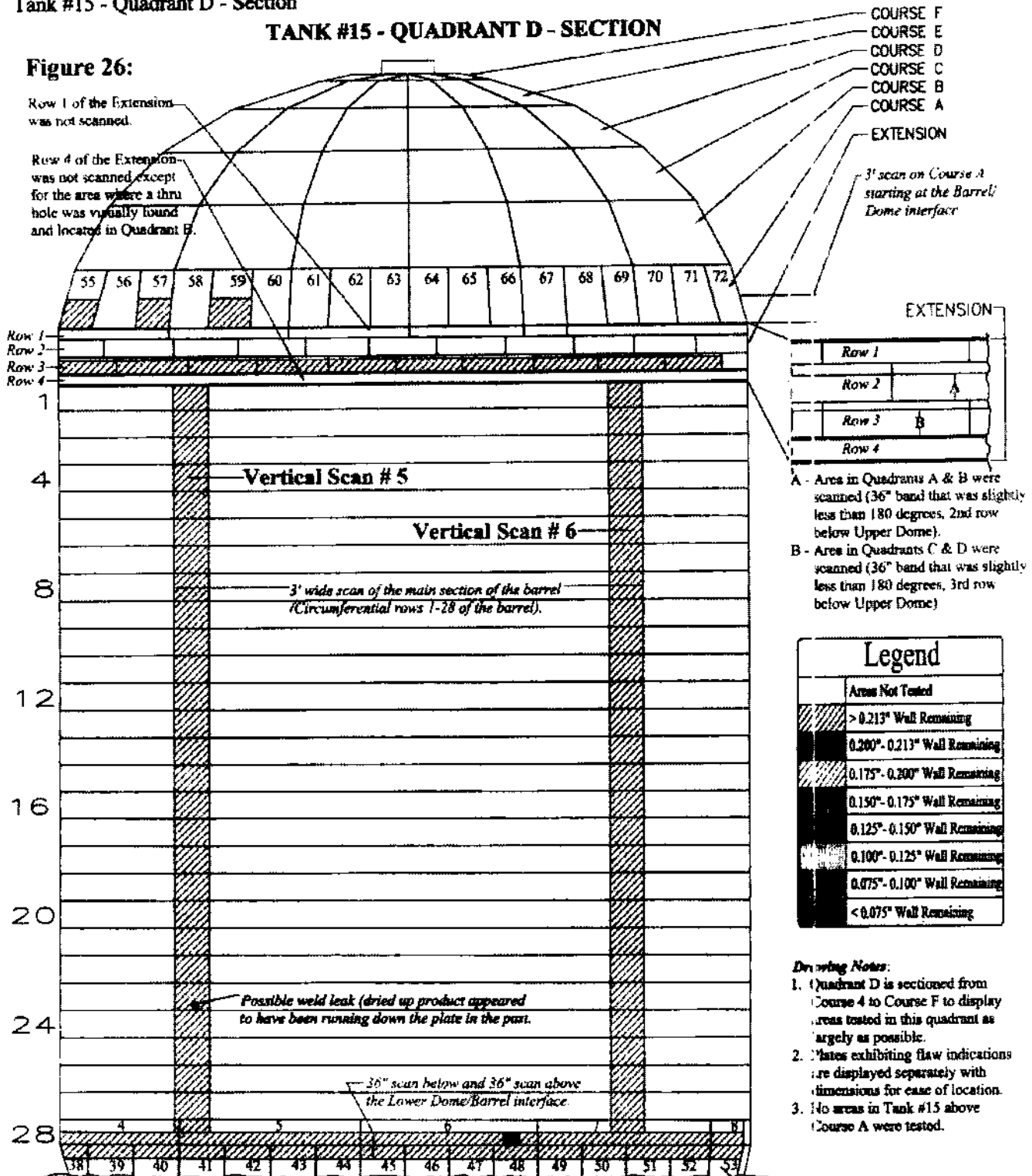
Drawing is not to scale

COURSE 4



**TANK #15 - QUADRANT D - SECTION**

**Figure 26:**



A - Area in Quadrants A & B were scanned (36° band that was slightly less than 180 degrees, 2nd row below Upper Dome).  
 B - Area in Quadrants C & D were scanned (36° band that was slightly less than 180 degrees, 3rd row below Upper Dome)

Legend	
[Hatched pattern]	Area Not Tested
[Dark grey pattern]	> 0.213" Wall Remaining
[Medium-dark grey pattern]	0.200" - 0.213" Wall Remaining
[Medium grey pattern]	0.175" - 0.200" Wall Remaining
[Light grey pattern]	0.150" - 0.175" Wall Remaining
[Lighter grey pattern]	0.125" - 0.150" Wall Remaining
[Very light grey pattern]	0.100" - 0.125" Wall Remaining
[Darkest grey pattern]	0.075" - 0.100" Wall Remaining
[White pattern]	< 0.075" Wall Remaining

- Drawing Notes:**
1. Quadrant D is sectioned from Course 4 to Course F to display areas tested in this quadrant as largely as possible.
  2. Plates exhibiting flaw indications are displayed separately with dimensions for ease of location.
  3. 140 areas in Tank #15 above Course A were tested.

Drawing is not to scale

COURSE 4

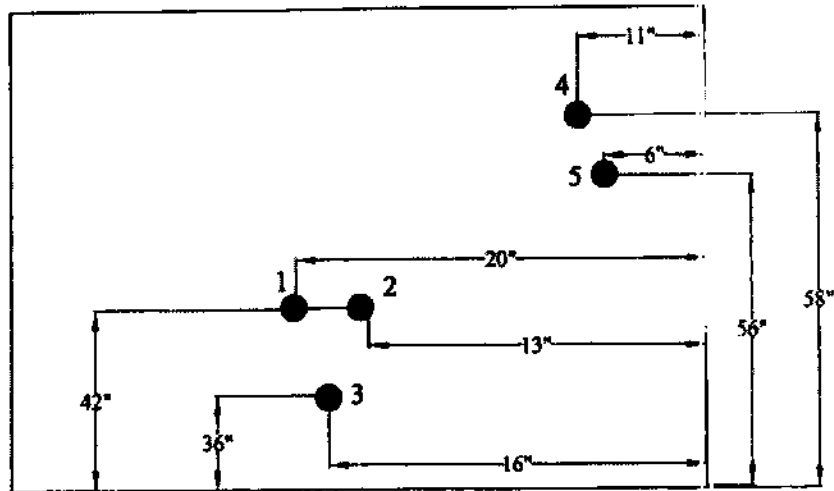


**TANK #15 - QUADRANT A FLAWS 1-6**  
**Course A - Upper Dome**

**Plate #4**

**Figure 6:**

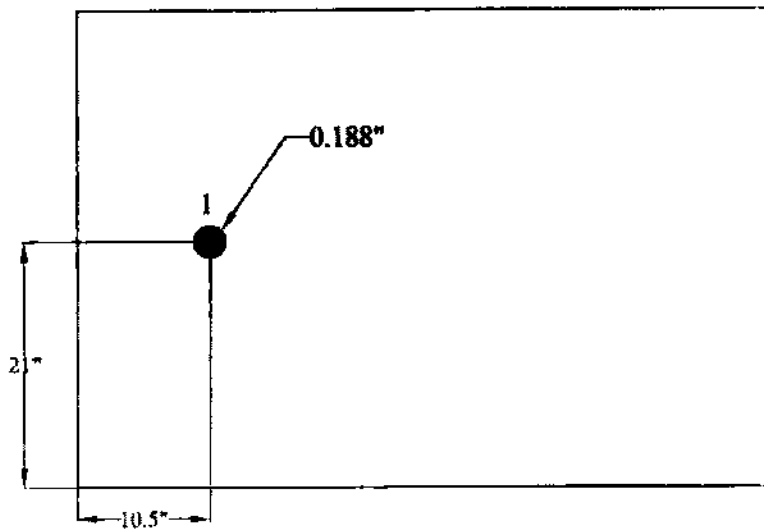
- Thickness:**  
1 - 0.156"  
2 - 0.098"  
3 - 0.146"  
4 - Thru-hole  
5 - 0.119"



**Plate #5**

**Figure 7:**

- Thickness:**  
1 - 0.188"



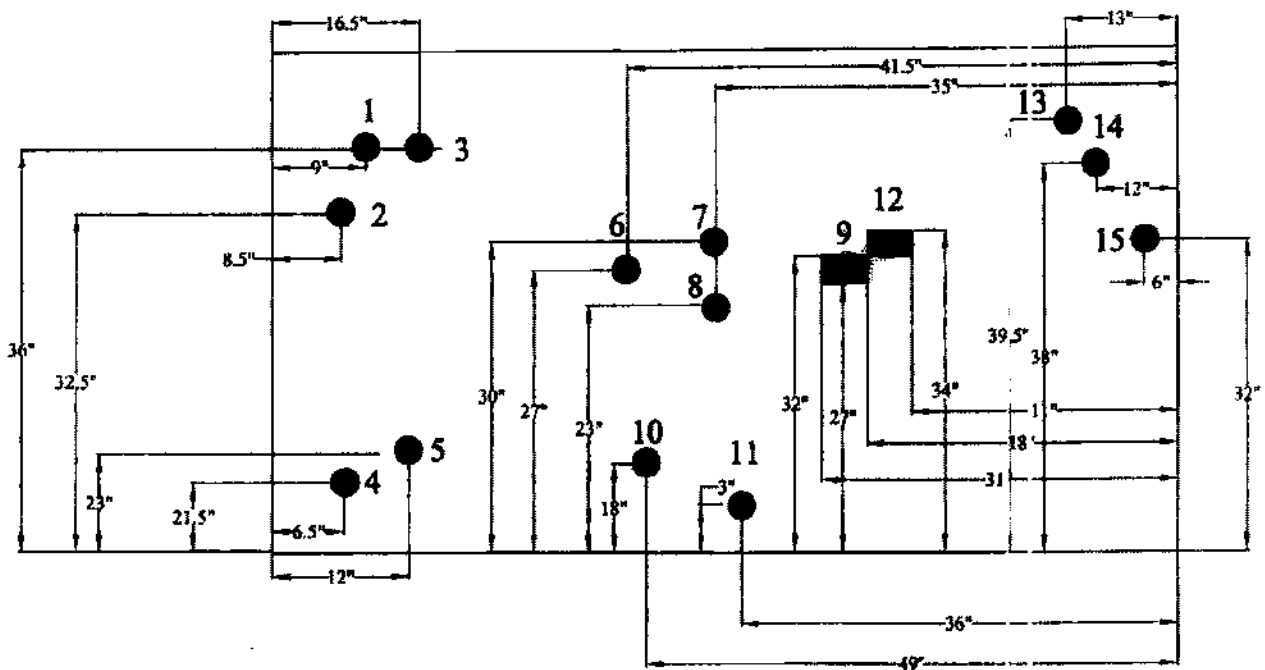
*Drawing is not to scale*

**TANK #15 - QUADRANT A FLAWS 7-21**

Upper Barrel between Dome & Stiffening Ring (Row 2 below Upper Dome on Barrel)

**Figure 8:**

**Plate # 6C**



**Thickness:**

1 - 0.178"	6 - 0.101"	11 - 0.175"
2 - 0.209"	7 - 0.154"	12 - 0.150"
3 - 0.177"	8 - 0.216"	13 - 0.191"
4 - 0.165"	9 - 0.140"	14 - 0.088"
5 - 0.155"	10 - 0.152"	15 - 0.188"

*Drawing is not to scale*

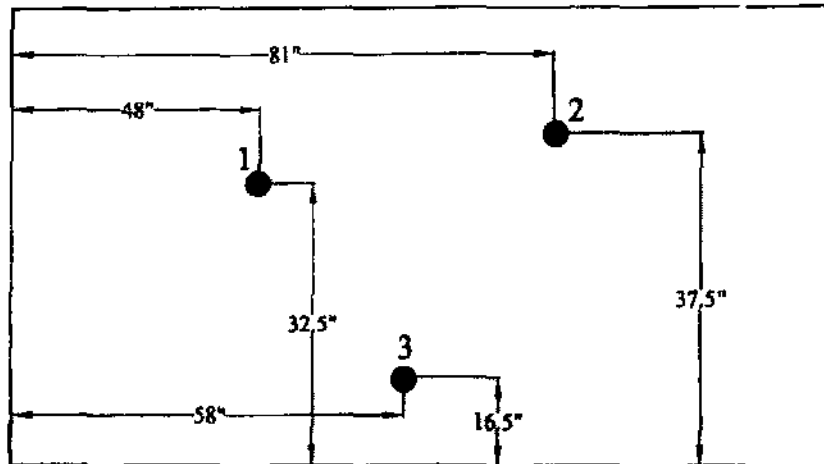
**TANK #15 - QUADRANT A FLAWS 22-25**

**Upper Barrel between Dome & Stiffening Ring (Row 2 below Upper Dome on Barrel)**

**Figure 9:**

**Plate # 5C**

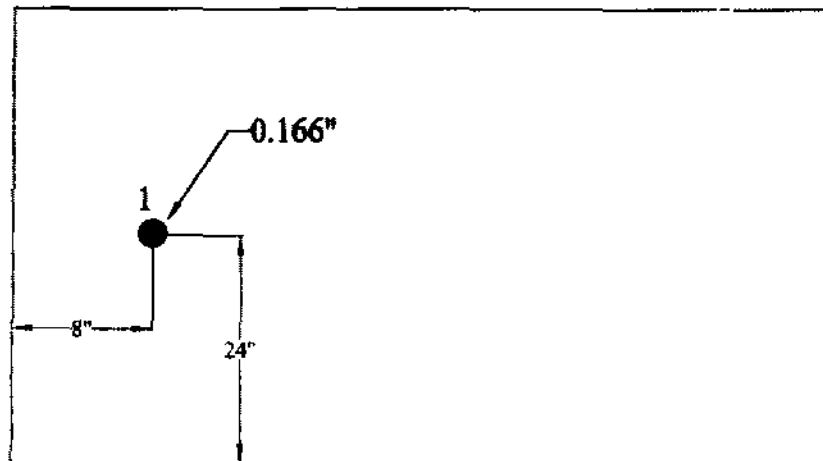
**Thickness:**  
1 - 0.159"  
2 - Gouge  
3 - Dent &  
Gouge



**Plate # 8C**

**Figure 10:**

**Thickness:**  
1 - 0.166"



*Drawing is not to scale*

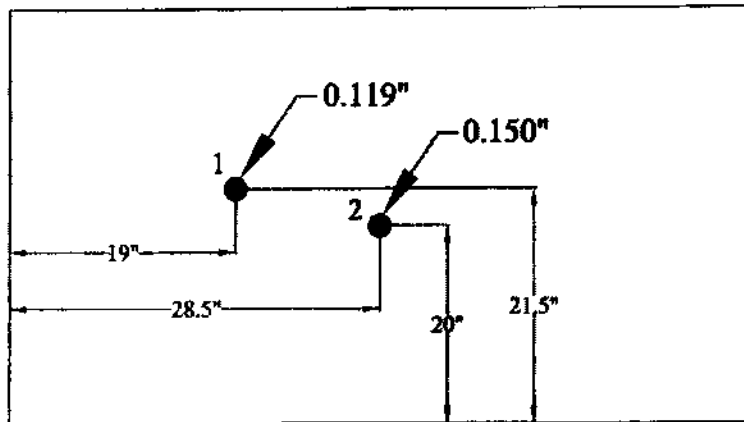
**TANK #15 - QUADRANT A FLAWS 26-27**

**Upper Barrel between Dome & Stiffening Ring (Row 2 below Upper Dome on Barrel)**

**Plate # 9C**

**Figure 11:**

**Thickness:**  
1 - 0.119"  
2 - 0.150"



*Drawing is not to scale*

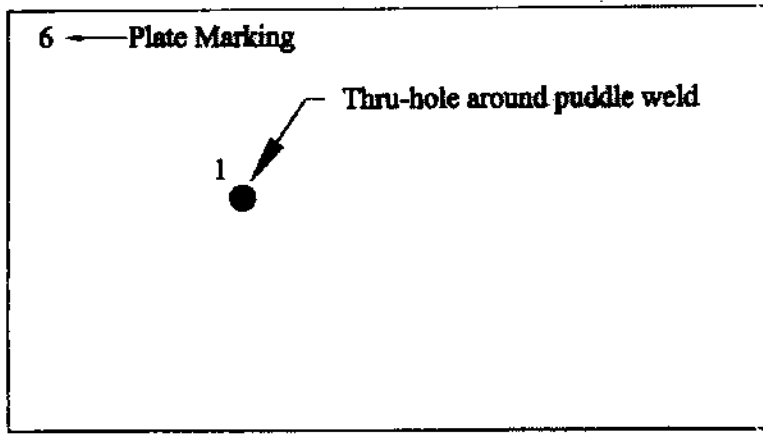
**TANK #15 - QUADRANT A FLAW 28**

**Upper Barrel between Dome & Stiffening Ring (Row 3 below Upper Dome on Barrel)**

**Plate # 8B**

**Figure 12:**

**Thickness:  
1 - Thru-hole**



*Drawing is not to scale*

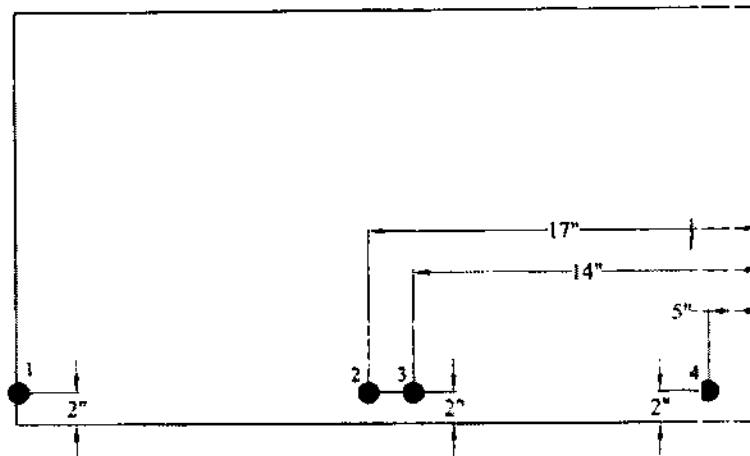
**TANK #15 - QUADRANT B FLAWS 1-4**

**Course A - Upper Dome**

**Plate # 22**

**Figure 14:**

**Thickness:**  
1 - 0.090"  
2 - Thru-hole  
3 - 0.196"  
4 - 0.183"



*Drawing is not to scale*



**TANK #15 - QUADRANT B FLAWS 5-8**

Upper Barrel between Dome & Stiffening Ring (Row 2 below Upper Dome on Barrel)

**Plate # 10C**

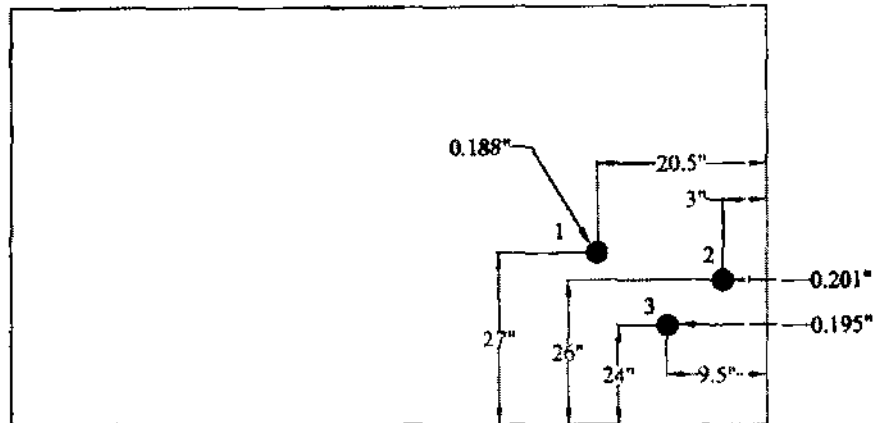
Figure 15:

Thickness:

1 - 0.188"

2 - 0.201"

3 - 0.195"

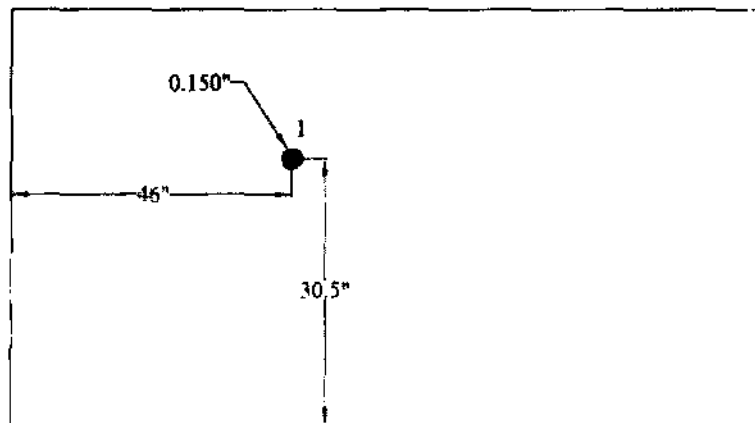


**Plate # 11C**

Figure 16:

Thickness:

1 - 0.150"



*Drawing is not to scale*

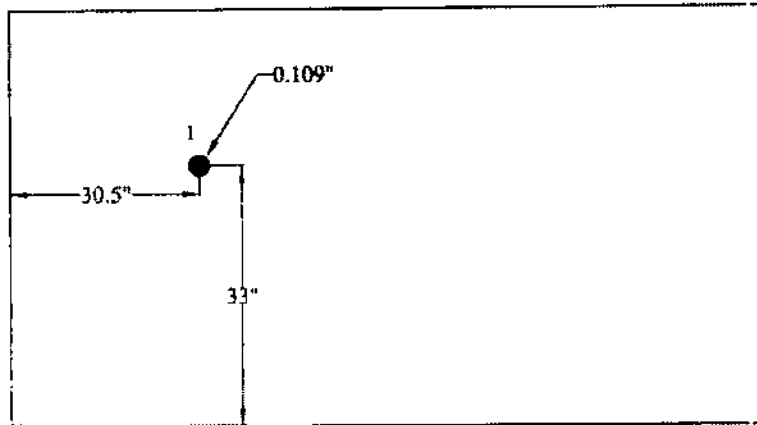
**TANK #15 - QUADRANT B FLAWS 9-13**

**Upper Barrel between Dome & Stiffening Ring (Row 2 below Upper dome on Barrel)**

**Plate # 12C**

**Figure 17:**

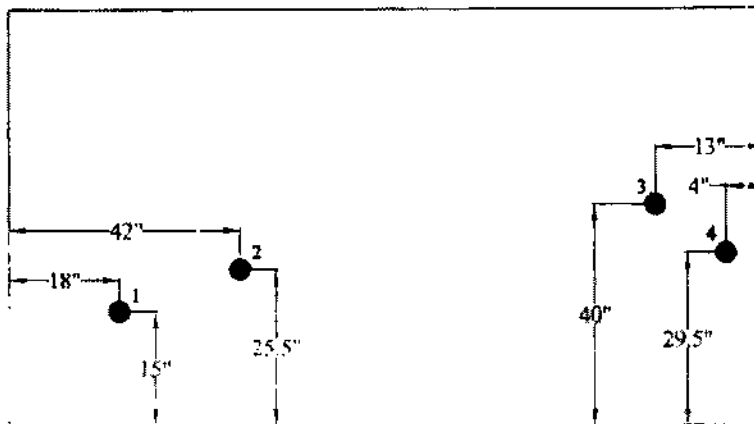
**Thickness:  
1 - 0.109"**



**Plate # 14C**

**Figure 18:**

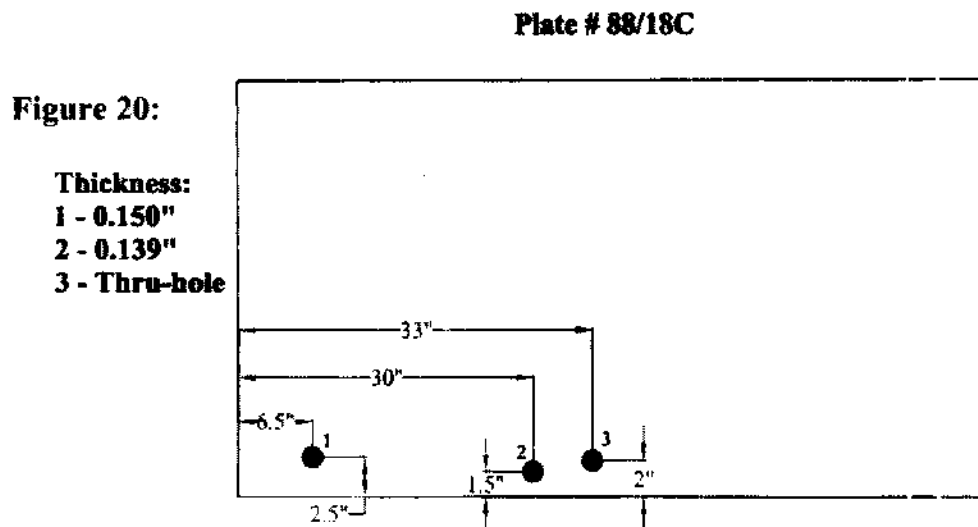
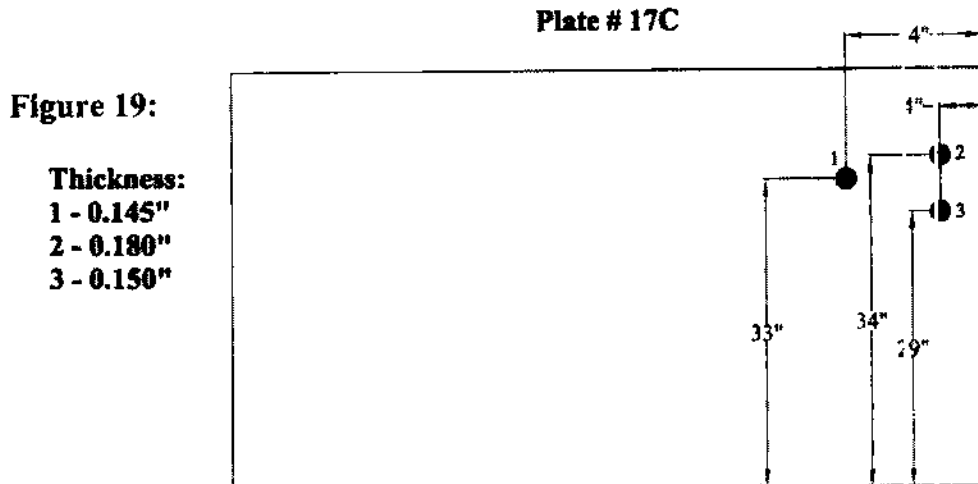
**Thickness:  
1 - 0.199"  
2 - 0.175"  
3 - 0.186"  
4 - 0.177"**



*Drawing is not to scale*

**TANK #15 - QUADRANT B FLAWS 14-19**

Upper Barrel between Dome & Stiffening Ring (Row 2 below Upper dome on Barrel)



*Drawing is not to scale*

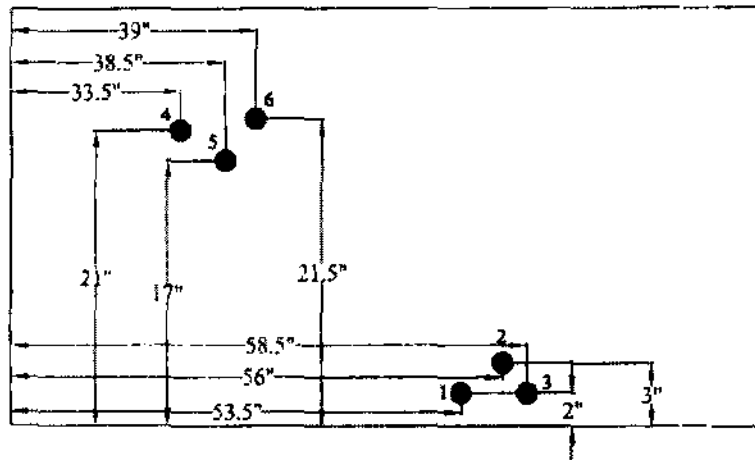
**TANK #15 - QUADRANT B FLAWS 20-25**

Upper Barrel between Dome & Stiffening Ring (Row 2 below Upper dome on Barrel)

**Plate # 19C**

**Figure 21:**

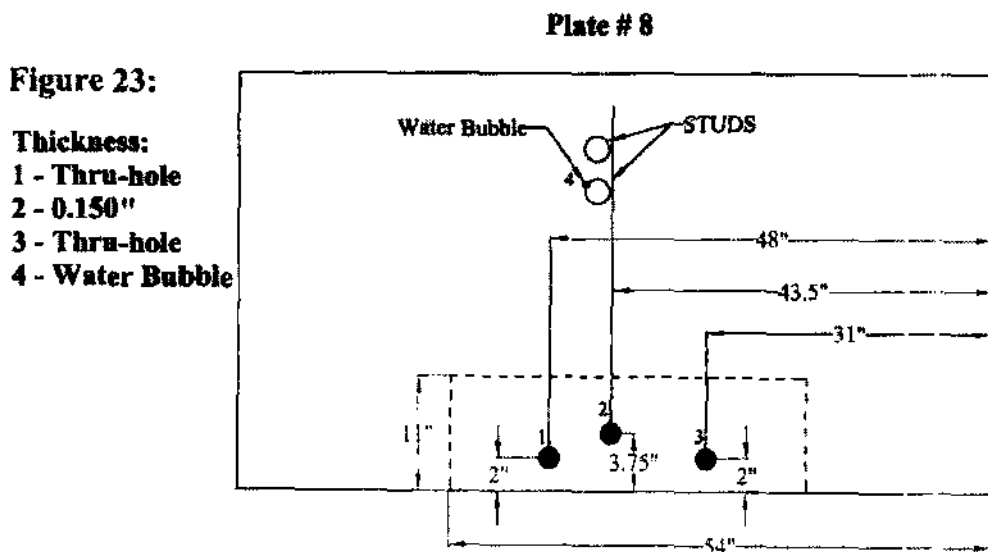
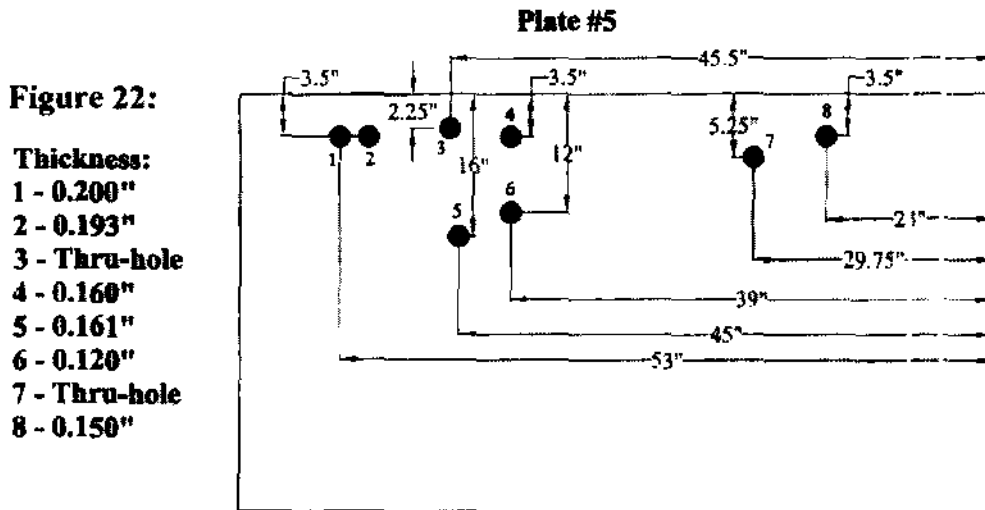
- Thickness:**  
1 - 0.220"  
2 - Thru-hole  
3 - 0.230"  
4 - 0.108"  
5 - 0.133"  
6 - 0.157"



*Drawing is not to scale*

**TANK #15 - QUADRANT B FLAWS 26-37**

Upper Barrel between Dome & Stiffening Ring (Row 3 below Upper dome on Barrel)



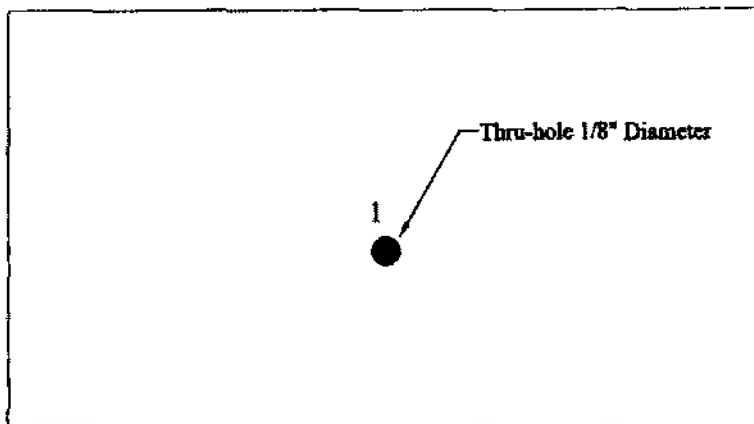
*Drawing is not to scale*

**TANK #15 - QUADRANT B FLAW 38**

**Stiffener Plate above Vertical Scan #3**

**Stiffener Plate**

**Figure 24:**  
**Thickness:**  
**1 - Thru-hole**



*Drawing is not to scale*

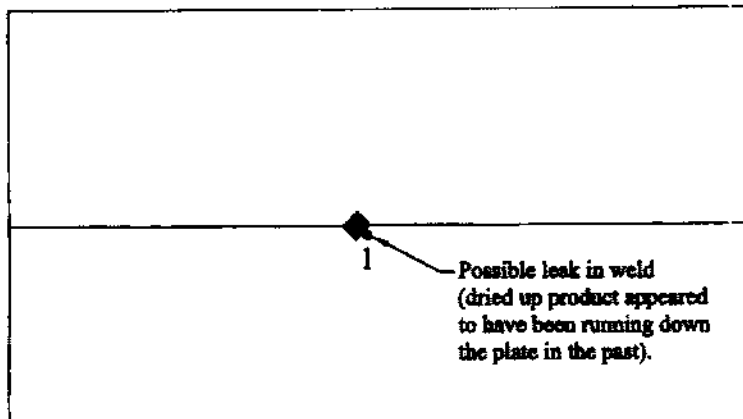
**TANK #15 - QUADRANT D FLAW 1**

**Vertical Scan #5**

Plate in Row 23 of the Barrel in Vertical Scan #5

**Figure 27:**

**Thickness:  
1 - Possible  
Leak**



*Drawing is not to scale*

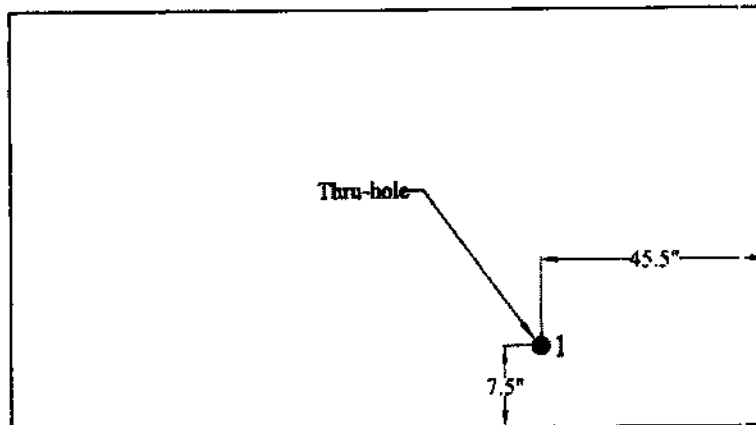
**TANK #15 - QUADRANT D FLAW 2**

**Row 28 of Barrel**

**Plate #6**

**Figure 28:**

**Thickness:  
1 - Thru-hole**



*Drawing is not to scale*



Quadrant A Upper Dome Repairs					
Plate No.	Testex Flaw No.	Repair Flaw No.	Wall / Plate Remaining	Approximate Corrosion Area (Total Affected Area)	Patch Plate Size/Thickness
4	1	A-1	0.158"	0.876" Diameter	Cover A1 and A2 using a 4" x 14" x 1/4" Rectangular Patch Plate
4	2	A-2	0.096"	1.750" Diameter	
4	3	A-3	0.146"	0.876" Diameter	
4	4	A-4	Thru-hole	1.750" Diameter	
4	5	A-5	0.118"	Undetermined	
5	1	A-6	0.188"	1.312" Diameter	4" x 1/4" Round Patch Plate
5C	1	A-7	Topside Gouge	-	4" x 1/4" Round Patch Plate
5C	2	A-8	.158"	1.312" Diameter	4" x 1/4" Round Patch Plate
5C	3	A-9	Topside dent & Gouge	-	4" x 1/4" Round Patch Plate
6C	1	A-10	.178"	0.438" Diameter	Cover A10 and A11 using a 4" x 10" x 1/4" Rectangular Patch Plate
6C	2	A-11	.209"	0.438" Diameter	
6C	3	A-12	.177"	0.856" Diameter	4" x 1/4" Round Patch Plate
6C	4	A-13	.165"	0.856" Diameter	Cover A13 and A14 using a 6" x 10" x 1/4" Rectangular Patch Plate
6C	5	A-14	.155"	1.312" Diameter	
6C	6	A-15	.161"	Undetermined	4" x 1/4" Round Patch Plate
6C	7	A-16	.164"	1.750" Diameter	Cover A16 and A17 using a 5" x 11" x 1/4" Rectangular Patch Plate
8C	8	A-17	.218"	0.876" Diameter	
8C	9	A-18	Average 0.140"	5" X 13" Area	Cover A18 and A21 using a 12" x 24" x 1/4" Rectangular Patch Plate
6C	10	A-21	Average 0.150"	2" X 7" Area	
6C	11	A-19	.152"	0.876" Diameter	4" x 1/4" Round Patch Plate
6C	12	A-20	.175"	Undetermined	4" x 1/4" Round Patch Plate
6C	13	A-22	.191"	0.488" Diameter	Cover A22 and A23 using a 7" x 7" x 1/4" Square Patch Plate
6C	14	A-23	.088"	0.856" Diameter	
6C	15	A-24	.188"	Undetermined	4" x 1/4" Round Patch Plate
8C	1	A-25	.168"	0.876" Diameter	4" x 1/4" Round Patch Plate
9C	1	A-26	.119"	0.876" Diameter	4" x 1/4" Round Patch Plate
9C	2	A-27	.150"	0.876" Diameter	4" x 1/4" Round Patch Plate
8B (6)	1	A-28	Thru-hole around puddle weld		4" x 1/4" Round Patch Plate

Quadrant B Upper Dome Repairs					
Plate No.	Testex Flaw No.	Repair Flaw No.	Wall / Plate Remaining	Approximate Corrosion Area (Total Affected Area)	Patch Plate Size/Thickness
22	1	B-1	0.090"	Flaw at weld	12" x 12" x 1/4" Square Patch Plate *
22	2	B-2	Thru-hole	1.750" Diameter	10" x 12" x 1/4" Rectangular Patch Plate *
22	3	B-3	0.196"	Undetermined	4" x 1/4" Round Patch Plate
22	4	B-4	0.183"	Undetermined	4" x 1/4" Round Patch Plate
10C	1	B-5	.188"	.876" Diameter	4" x 1/4" Round Patch Plate
10C	2	B-6	.195"	.876" Diameter	4" x 1/4" Round Patch Plate
10C	3	B-7	.201"	.438" Diameter	4" x 1/4" Round Patch Plate
11C	1	B-8	.150"	1.75" Diameter	4" x 1/4" Round Patch Plate
12C	1	B-9	.109"	.876" Diameter	4" x 1/4" Round Patch Plate
14C	1	B-10	.199"	.876" Diameter	4" x 1/4" Round Patch Plate
14C	2	B-11	.175"	1.312" Diameter	4" x 1/4" Round Patch Plate
14C	3	B-12	.186"	.876" Diameter	4" x 1/4" Round Patch Plate
14C	4	B-13	.177"		Field verify extent of corrosion
17C	1	B-14	.145"	.876" Diameter	4" x 1/4" Round Patch Plate
17C	2	B-15	.180"	.876" Diameter	Cover B15 and B16 using a 5" x 11" x 1/4" Rectangular Patch Plate
17C	3	B-16	.150"	1.312" Diameter	
18C	1	B-17	.150"	1.312" Diameter	4" x 1/4" Round Patch Plate
18C	2	B-18	.139"	.876" Diameter	Cover B18 and B19 using a 9" x 11" x 1/4" Rectangular Patch Plate *
18C	3	B-19	Thru-hole	1.312" Diameter	
19C	1	B-20	.220"	.876" Diameter	Cover B20, B21 and B22 using a 10" x 13" x 1/4" Rectangular Patch Plate *
19C	2	B-21	Thru-hole	1.750" Diameter	
19C	3	B-22	.230"	.438" Diameter	
19C	4	B-23	.108"	.656" Diameter	Cover B23, B24 and B25 using a 10" x 10" x 1/4" Square Patch Plate
19C	5	B-24	.133"	.876" Diameter	
19C	6	B-25	0.167	.438" Diameter	



Quadrant D Upper Dome Repairs					
Plate No.	Testex Flaw No.	Repair Flaw No.	Wall / Plate Remaining	Approximate Corrosion Area (Total Affected Area)	Patch Plate Size/Thickness
In Vertical Scan #5	1	D-1	Possible leak in weld (dried up product apparent on plate)		4" x 1/4" Round Patch Plate
6	1	D-2	Thru-hole	1.250" X 0.625" Elliptical Area	4" x 1/4" Round Patch Plate

Tank Floor Repairs					
Plate No.	Testex Flaw No.	Repair Flaw No.	Wall / Plate Remaining	Approximate Corrosion Area (Total Affected Area)	Patch Plate Size/Thickness
2	1	1	0.460" (Topside)	1.000" X 1.000" Area	4" x 1/4" Round Patch Plate
Tank Floor Weld Defects					
Plate No.	Testex Flaw No.	Repair Flaw No.	Weld (left/right of plate)	Characterization	Patch Plate Size/Thickness
3	1	1	Left	underside to internal	Remove defective weld and reweld
3	2	2	Right	underside to internal	Remove defective weld and reweld
4	3	3	Left	underside to internal	Remove defective weld and reweld
Course 1 - Lower Dome Weld Defects					
Plate No.	Testex Flaw No.	Repair Flaw No.	Weld (left/right of plate)	Characterization	Patch Plate Size/Thickness
2	1	1	Left	underside to internal	Remove defective weld and reweld
6	2	2	Left	underside to internal	Remove defective weld and reweld
7	3	3	Left	underside to internal	Remove defective weld and reweld
7	4	4	Right	underside to internal	Remove defective weld and reweld
14	5	5	Left	leak (found by Jurva)	Remove defective weld and reweld
20	6	6	Left	leak (found by Jurva)	Remove defective weld and reweld
23	7	7	Left	leak (found by Jurva)	Remove defective weld and reweld
23	8	8	Right	underside to internal	Remove defective weld and reweld
24	9	9	Left	leak (found by Jurva)	Remove defective weld and reweld
24	10	10	Right	underside to internal	Remove defective weld and reweld
25	11	11	Right	topside (grooving)	Remove defective weld and reweld
28	12	12	Right	topside (grooving)	Remove defective weld and reweld
29 / 22	12	12	-	topside (light corrosion)	Remove defective weld and reweld
32	14	14	Right	underside to internal	Remove defective weld and reweld
35	15	15	Right	underside to internal	Remove defective weld and reweld
43 / 44	16	16	-	topside (light corrosion)	Remove defective weld and reweld
44	17	17	Right	leak (found by Jurva)	Remove defective weld and reweld