

Georgia Power Company
333 Piedmont Avenue
Atlanta, Georgia 30308
Telephone 404 526-3195

Mailing Address
40 Riverchase Center Parkway
Post Office Box 1295
Birmingham, Alabama 35201
Telephone 205 868-5581

W. G. Hairston, III
Senior Vice President
Nuclear Operations

The Southern Electric System

HL-1056
000444

April 30, 1990

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

PLANT HATCH - UNIT 1
NRC DOCKET 50-321
OPERATING LICENSE DPR-57
STATUS OF IGSCC WELD EXAMINATIONS AND
PROPOSED WELD OVERLAY DESIGN

Gentlemen:

During the current Unit 1 condenser retube/refueling outage, Georgia Power Company (GPC) has been inspecting intergranular stress corrosion cracking (IGSCC) susceptible welds per our commitments to Generic Letter (GL) 88-01 and NUREG-0313, Revision 2. On April 3, 1990, GPC met with members of Nuclear Reactor Regulation (NRR) and Region II to discuss our inspection results-to-date, particularly the discovery of crack-like indications in 28" recirculation system piping welds. We have since had phone conversations with NRR on April 11, 13, and 16, 1990, on GPC's proposed examinations of additional welds. These conversations resulted in an agreement allowing GPC to expand its examinations to a limited number of IGSCC-susceptible welds. Enclosure 1 documents the results of these conversations and provides the additional information/justification requested by NRR personnel. Enclosure 2 transmits our proposed weld overlay designs for the 28" welds which will require repair.

As of April 23, 1990, GPC has completed the IGSCC examinations for Unit 1, including additional inspections discussed in the phone conversations and Enclosure 1. No new indications have been detected. Also, GPC has completed examinations on seven non-safety related reactor water clean-up (RWCU) welds outside primary containment. These welds were examined per a commitment made by GPC in letter HL-517, dated June 16, 1989. No IGSCC indications were detected. Pursuant to GL 88-01, GPC hereby requests NRC permission to restart Unit 1.

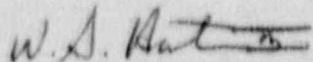
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U.S. Nuclear Regulatory Commission
April 30, 1990
Page Two

Please contact this office if you have questions.

Sincerely,


W. G. Hairston, III

GKM/eb

Enclosures:

1. Limited Scope Expansion of IGSCC Weld Examinations
2. Proposed Weld Overlay Design

c: Georgia Power Company

Mr. H. C. Nix, General Manager - Nuclear Plant
Mr. J. D. Heidt, Manager Engineering and Licensing - Hatch
GO-NORMS

U.S. Nuclear Regulatory Commission, Washington, D.C.
Mr. L. P. Crocker, Licensing Project Manager - Hatch

U.S. Nuclear Regulatory Commission, Region II
Mr. S. D. Ebnetter, Regional Administrator
Senior Resident Inspector - Hatch

ENCLOSURE 1

PLANT HATCH - UNIT 1
NRC DOCKET 50-321
OPERATING LICENSE DPR-57
LIMITED SCOPE EXPANSION OF
IGSCC WELD EXAMINATIONS

NUREG-0313, Revision 2, characterizes different welds in different categories and stipulates percentages of welds which must be examined each outage. It also prescribes what additional welds are to be examined if crack-like indications are detected in the initial group or population of welds. If indications are detected in this second sample, the NUREG directs that the remaining welds in that category be examined.

During the IGSCC inspections, GPC detected crack-like indications in two 28" Category C welds. Category C welds are welds with no previously detected IGSCC indications, and which have undergone stress improvement (i.e., induction heating stress improvement-IHSI). Georgia Power Company met with the NRC to discuss the Category C findings on April 3, 1990. We also presented inspection results which showed new or larger crack indications in Category F 28" welds. Category F welds are those which had previously shallow crack indications and had been treated with IHSI. Scope expansion in Category F welds was not an issue because all welds in this category were already examined this outage.

The initial inspection plan called for an examination of 21 Category C welds, including ten 28" welds. Georgia Power expanded scope, per the NUREG, and examined an additional 21 Category C welds, including the remaining fifteen 28" welds. New indications were detected in five of the fifteen 28" welds.

Georgia Power Company contacted the NRC with a proposed limited Category C scope expansion. Discussions were held on April 11, 13, and 16, 1990, and agreement was reached regarding scope expansion. The expansion will be limited to fourteen (14) additional Category C welds instead of all remaining Category C welds as called for by NUREG-0313, Rev. 2. Table 1 shows the distribution of Category C welds examined in the original and first scope expansion. The 14 Category C welds GPC agreed to examine as a limited second scope expansion per the April 16, 1990 phone call are also delineated in Table 1. With the completion of these 14 weld exams, all Category C circumferential welds have been examined either last outage or this outage. Our additional scope expansion includes:

- Four additional 12" riser welds
- Two 4" branch connection to cap welds not examined last outage and one 4" branch connection weld
- Four 22" manifold to sweepolet welds
- Two 22" pipe to cross welds
- One 24" weld to complete unisolatable RHR system

ENCLOSURE 1 (Continued)

LIMITED SCOPE EXPANSION OF
IGSCC WELD EXAMINATIONS

During the April 16, 1990 phone call, questions were posed by NRC concerning UT techniques employed during the previous Unit 1 outage and how they compare with present techniques. NRC also requested GPC review past data on welds 28A-14 and 28B-9.

The ultrasonic examinations for IGSCC susceptible welds during the 1988 and 1990 outages were conducted using a combination of shear and refracted longitudinal wave techniques, with the 45° shear wave used as the primary detection method in both outages. Manual examinations were performed in 1988, and a combination of manual and mechanized data recording was used during the 1990 outage. The mechanized exams were used for initial examination (due to ALARA considerations) with results being verified by manual examination. The only appreciable difference between the two methods is that mechanized exams provided a more detailed characterization of flaws, especially those oriented in the axial direction. Otherwise, there is not a real difference between the primary detection methods employed during either outage.

Changes were made, however, to the supplemental techniques used during the 1990 outage as a result of the continuing experience gained by inspection personnel. In this case, a 60° refracted longitudinal wave examination was performed in lieu of the previously required 60° shear wave examination to provide better penetration and coverage through the weld. This supplemental technique is required for examinations with limited coverage, such as a valve to pipe weld, but was used on other welds additionally as appropriate.

As requested during the April 16 phone call, GPC has reviewed the 1988 inspection data for welds 28A-14 and 28B-9 and compared the results and techniques with the 1990 outage. These welds are of particular interest, since they represent the only 28" diameter Category C welds inspected last outage which show new IGSCC indications, after being inspected last outage, with no reportable indications.

Weld 28A-14 (Elbow to Pipe) was inspected in 1990 with nine new axial indications being detected. Six axial indications (15-37% through-wall) were detected using the 45° shear wave. Three axial indications (26-34% through-wall) were detected with the 60° refracted longitudinal wave, but were not seen with the 45° shear wave. Comparison of the 1988 and 1990 45° shear wave data shows that there were no recordable indications during the 1988 examinations in the area of interest.

ENCLOSURE 1 (Continued)

LIMITED SCOPE EXPANSION OF
IGSCC WELD EXAMINATIONS

Weld 28B-9 (Valve to Pipe) was inspected in 1990 with three new circumferential indications being detected with the 45° shear wave and confirmed with the 60° refracted longitudinal. These indications are 4" long by 37% through-wall, 2" long by 13% through-wall, and 6" long by 25% through-wall. Through-wall measurements given are maximum for the indication and not for the entire length. Comparison of the 1988 and 1990 45° shear wave data shows that there were heavy root geometry type signals present during the 1988 examinations.

Table 2 presents the flaw characterizations for the seven 28" Category C welds which will be overlayed. Note that weld 28B-15 shows considerably more cracking than the other welds in the table. This weld was not examined last outage but was examined two outages ago in 1987. Weld 28B-15 had indications of heavy root geometry when inspected in 1984, 1985/86 (pre- and post- IHSI) and in 1987. As part of the process to evaluate the IGSCC indications found this outage, the previous 1987 data was again reviewed. This detailed review of the 1987 data indicated a possible change in indications as compared to previous (1984, 1985) exams. It appears that these indications could have been evaluated as "IGSCC-like" indications during the 1987 inspections but were not because of the pre-existing heavy root conditions. In light of this information, the examination histories for all Category C welds not examined this outage were reviewed. The results of this evaluation showed no other suspicious indications that warrant further examination.

TABLE 1
PROPOSED ADDITIONAL CATEGORY C SCOPE EXPANSION

<u>SYSTEM</u>	<u>SIZE</u>	<u>TOTAL CIRC WELDS</u>	<u>TOTAL EXAMINED BY 4/11/90⁽¹⁾</u>	<u>WELDS WITH NEW IGSCC INDICATIONS</u>	<u>PROPOSED ADDITIONAL SCOPE EXPANSION</u>	<u>COMMENTS</u>
B31	4"	8	0	N/A	3	Note (4)
	12"	27	11	0	4	
	22"	12	0	N/A	6	Note (2)
	28"	25	25	7	N/A	All Done Already.
E11	20"	4	4	0	N/A	All Done Already.
	24"	3	2	0	1	Completes 24"
G31	6"	1	0	N/A	0	Note (3)
A11	A11	80	42	7	14	

(1) Includes original sample of 21 welds, plus 21 welds in first scope expansion.

(2) Includes eight 22" solution annealed sweepolet welds.

(3) Resistant material which has been welded on and classified as Category C for conservatism.

(4) Includes four solution annealed branch connections.

TABLE 2
NUREG-0313 CATEGORY C WELDS
FLAW CHARACTERIZATION

<u>Weld</u>	<u>Orientation</u>	<u>Length</u>	<u>Depth(1)</u> <u>Thru-Wall</u>
1B31-1RC-28A-7	Circ	4.9"	51%
	Axial	.25"	29%
1B31-1RC-28A-8	Circ	13"	38%
	3 Axials	.7"-1.0"	8-15%
1B31-1RC-28A-14	9 Axials	.28"-.98"	15-37%
1B31-1RC-28B-9	Circ	4"	37%
	Circ	2"	13%
	Circ	6"	25%
1B31-1RC-28B-13	Circ	6.2"	47%
1B31-1RC-28B-14	Circ	15"	24%
	Circ	5"	28%
	3 Axials	.3"-.6"	24-26%
1B31-1RC-28B-15	Circ	.7"	61%
	Circ	1.7"	55%
	Circ	18.5"	55%
	Circ	12.4"	66%
	Circ	11.6"	61%
	Circ	1.1"	62%
	Circ	28.0"	64%
	Circ	1.7"	55%
	Circ	4.0"	61%
	Circ	65.2"	68%
	Circ	8.9"	66%

(1) Represents peak thru-wall depth for each indication.

ENCLOSURE 2

PLANT HATCH - UNIT 1
NRC DOCKET 50-321
OPERATING LICENSE DPR-57
PROPOSED WELD OVERLAY DESIGNS

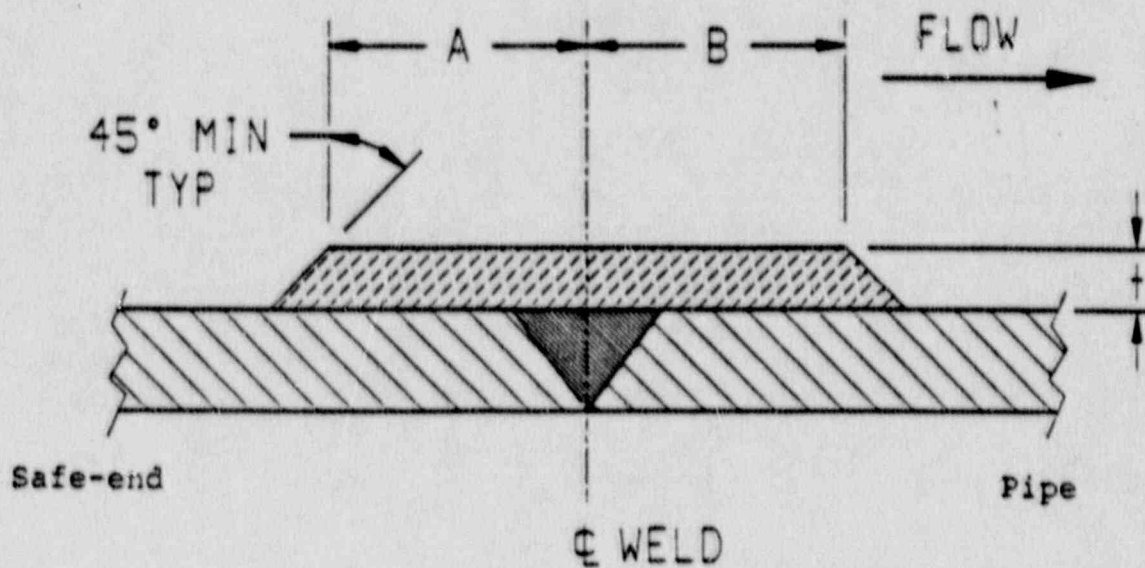
Georgia Power Company is proposing to overlay a total of twelve 28" recirculation system welds in Unit 1. Five of these welds were previously Category F welds, and seven were previously Category C welds. Per the requirements of GL 88-01, GPC is submitting details of the weld overlay repair on each of the twelve welds for NRC approval prior to Unit 1 startup. All proposed repairs are full structural overlays.

The Category F welds which require repair are:

Weld No. 1B31-1RC-28A-2
Weld No. 1B31-1RC-28A-4
Weld No. 1B31-1RC-28A-6
Weld No. 1B31-1RC-28B-8
Weld No. 1B31-1RC-28B-10

The Category C welds which require repair are:

Weld No. 1B31-1RC-28A-7
Weld No. 1B31-1RC-28A-8
Weld No. 1B31-1RC-28A-14
Weld No. 1B31-1RC-28B-9
Weld No. 1B31-1RC-28B-13
Weld No. 1B31-1RC-28B-14
Weld No. 1B31-1RC-28B-15



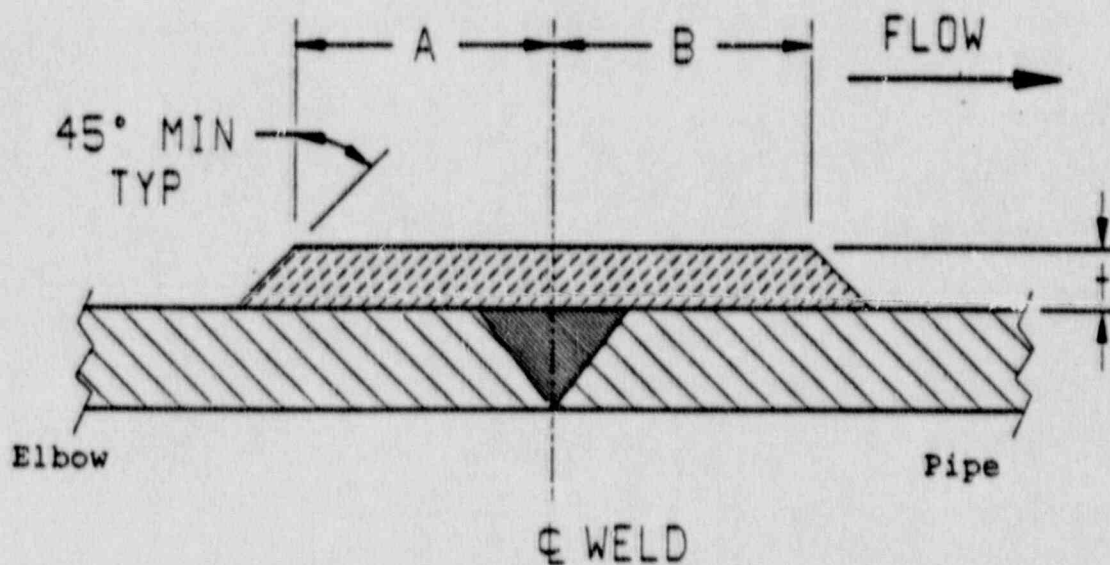
WELD OVERLAY
REPAIR DETAILS

WELD NUMBER	FLAW CHARACTERIZATION	DESIGN DIMENSIONS			COMMENTS
		+	A	B	
1B31-1RC-28A-2	1) Circ 0.8" Long x 25% a/t 2) Circ 5.5" Long x 37% a/t 3) Circ 4" Long x 15% a/t 4) Circ 1 1/4" Long x 19% a/t	0.46"	3.20"	3.20"	

PREPARED BY: <u><i>Laurel</i></u>		DATE: <u>3/30/90</u>	DESCRIPTION: Standard Weld Overlay Repair Design for Weld 1B31-1RC-28A-2 (per NUREG-0313, Revision 2)	
CHECKED BY: <u><i>Mike May</i></u>		DATE: <u>3/30/90</u>		
JOB NO: GPCO-18Q	PLANT / UNIT: Georgia Power Plant Hatch Unit 1		STRUCTURAL INTEGRITY ASSOCIATES INC.	
FILE NO: GPCO-18Q-301	DWG NO: GPCO-18Q-001			
			REV <u>1</u>	SHT 1 OF 2

NOTES


1. Weld overlay material is to be type 308L or equivalent, with as-deposited delta ferrite content greater than 7.5 FN.
2. Component surface is to be examined by dye penetrant method and accepted as clean prior to overlay application in order to include the entire deposited overlay thickness in meeting the design thickness requirement, per NUREG-0313, Revision 2.
3. In the event that the original component surface does not pass the note 2 requirements, the first deposited weld layer is to be examined by dye penetrant method and accepted as clean before proceeding with subsequent layers.
4. First weld layer is to have a measured delta ferrite content greater than 7.5 FN.
5. Design thickness includes no allowance for surface conditioning operations to facilitate UT inspections.
6. Design length is that required for structural reinforcement; greater length may be required for effective UT inspection. This is to be determined in the field.



WELD OVERLAY
REPAIR DETAILS

WELD NUMBER	FLAW CHARACTERIZATION	DESIGN DIMENSIONS			COMMENTS
		t	A	B	
1B31-1RC-28A-4	8 Axial Flaws Plus 1) Circ 6.85" Long x 19% a/t 2) Circ 5" Long x 17% a/t 3) Circ 6" Long x 23% a/t 4) Circ 3 1/4" Long x 54% a/t	0.45"	3.20"	3.20"	

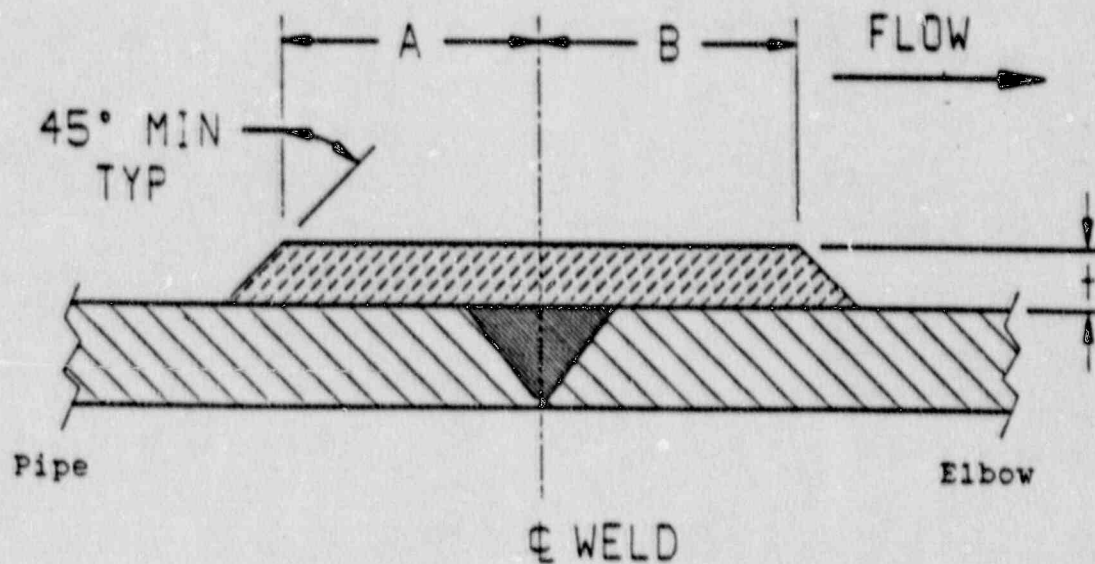
PREPARED BY: <i>[Signature]</i>	DATE 3/30/90	DESCRIPTION: Standard Weld Overlay Repair Design for Weld 1B31-1RC-28A-4 (per NUREG-0313, Revision 2)
CHECKED BY: <i>[Signature]</i>	DATE 3/30/90	

JOB NO: GPCO-18Q	PLANT / UNIT: Georgia Power Plant Hatch Unit 1	 STRUCTURAL INTEGRITY ASSOCIATES INC.	REV 1
FILE NO: GPCO-18Q-301	DWG NO: GPCO-18Q-002		SHT 1 OF 2

NOTES

1. Weld overlay material is to be type 308L or equivalent, with as-deposited delta ferrite content greater than 7.5 FN.
2. Component surface is to be examined by dye penetrant method and accepted as clean prior to overlay application in order to include the entire deposited overlay thickness in meeting the design thickness requirement, per NUREG-0313, Revision 2.
3. In the event that the original component surface does not pass the note 2 requirements, the first deposited weld layer is to be examined by dye penetrant method and accepted as clean before proceeding with subsequent layers.
4. First weld layer is to have a measured delta ferrite content greater than 7.5 FN.
5. Design thickness includes no allowance for surface conditioning operations to facilitate UT inspections.
6. Design length is that required for structural reinforcement; greater length may be required for effective UT inspection. This is to be determined in the field.





WELD OVERLAY
REPAIR DETAILS

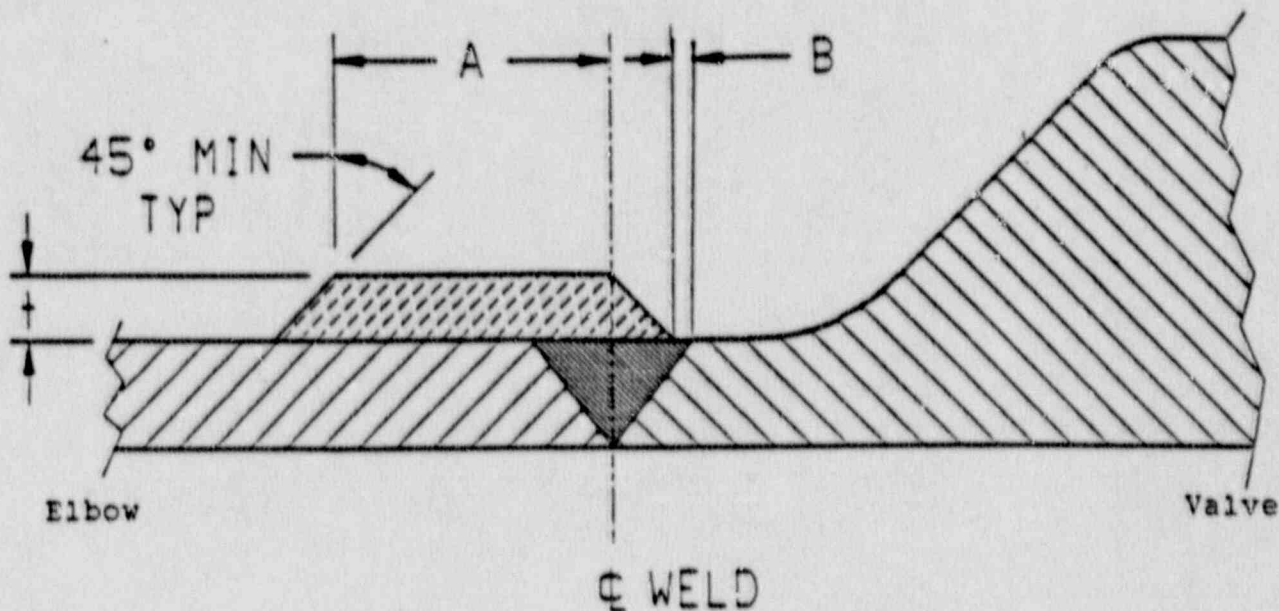
WELD NUMBER	FLAW CHARACTERIZATION	DESIGN DIMENSIONS			COMMENTS
		+	A	B	
1B31-1RC-28A-6	3 Axial Flaws plus 1) Circ. 1.75" long x 10% a/t 2) Circ. 2.2" long x 17% a/t 3) Circ. 1.2" long x 9% a/t 4) Circ. 4.7" long x 12% a/t	0.44"	3.10"	3.10"	

PREPARED BY: 	DATE: 3/30/90	DESCRIPTION: Standard Weld Overlay Repair Design for Weld 1B31-1RC-28A-6 (per NUREG-0313, Revision 2)
CHECKED BY: 	DATE: 3/30/90	

JOB NO: GPCO-18Q	PLANT / UNIT: Georgia Power Plant Hatch Unit 1	STRUCTURAL INTEGRITY ASSOCIATES INC.	REV 1
FILE NO: GPCO-18Q-302	DWG NO: GPCO-18Q-003		SHT 1 OF 2

NOTES


1. Weld overlay material is to be type 308L or equivalent, with as-deposited delta ferrite content greater than 7.5 FN.
2. Component surface is to be examined by dye penetrant method and accepted as clean prior to overlay application in order to include the entire deposited overlay thickness in meeting the design thickness requirement, per NUREG-0313, Revision 2.
3. In the event that the original component surface does not pass the note 2 requirements, the first deposited weld layer is to be examined by dye penetrant method and accepted as clean before proceeding with subsequent layers.
4. First weld layer is to have a measured delta ferrite content greater than 7.5 FN.
5. Design thickness includes no allowance for surface conditioning operations to facilitate UT inspections.
6. Design length is that required for structural reinforcement; greater length may be required for effective UT inspection. This is to be determined in the field.



WELD OVERLAY.
REPAIR DETAILS

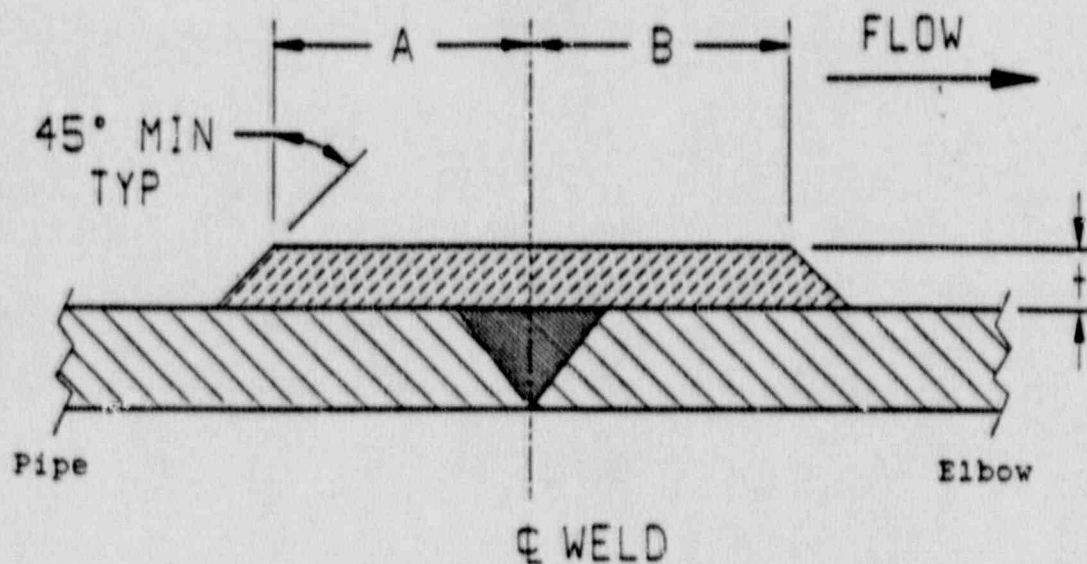
WELD NUMBER	FLAW CHARACTERIZATION	DESIGN DIMENSIONS			COMMENTS
		t	A	B	
1B31-1RC-28B-8	7 Axial Flaws plus 1) Circ. 0.6" long x 25% a/t	0.44"	3.50"	≥0.125"	

PREPARED BY: <i>L. H. Hsieh</i>	DATE 3/30/90	DESCRIPTION: Standard Weld Overlay Repair Design for Weld 1B31-1RC-28B-8 (per NUREG-0313, Revision 2)
CHECKED BY: <i>Mike Hsieh</i>	DATE 3/30/90	

JOB NO: GPCO-18Q	PLANT / UNIT: Georgia Power Plant Hatch Unit 1	 STRUCTURAL INTEGRITY ASSOCIATES INC.	REV 1
FILE NO: GPCO-18Q-303	DWG NO: GPCO-18Q-004		SHT 1 OF 2


NOTES

1. Weld overlay material is to be type 308L or equivalent, with as-deposited delta ferrite content greater than 7.5 FN.
2. Component surface is to be examined by dye penetrant method and accepted as clean prior to overlay application in order to include the entire deposited overlay thickness in meeting the design thickness requirement, per NUREG-0313, Revision 2.
3. In the event that the original component surface does not pass the note 2 requirements, the first deposited weld layer is to be examined by dye penetrant method and accepted as clean before proceeding with subsequent layers.
4. First weld layer is to have a measured delta ferrite content greater than 7.5 FN.
5. Design thickness includes no allowance for surface conditioning operations to facilitate UT inspections.
6. Design length is that required for structural reinforcement; greater length may be required for effective UT inspection. This is to be determined in the field.



WELD OVERLAY
REPAIR DETAILS

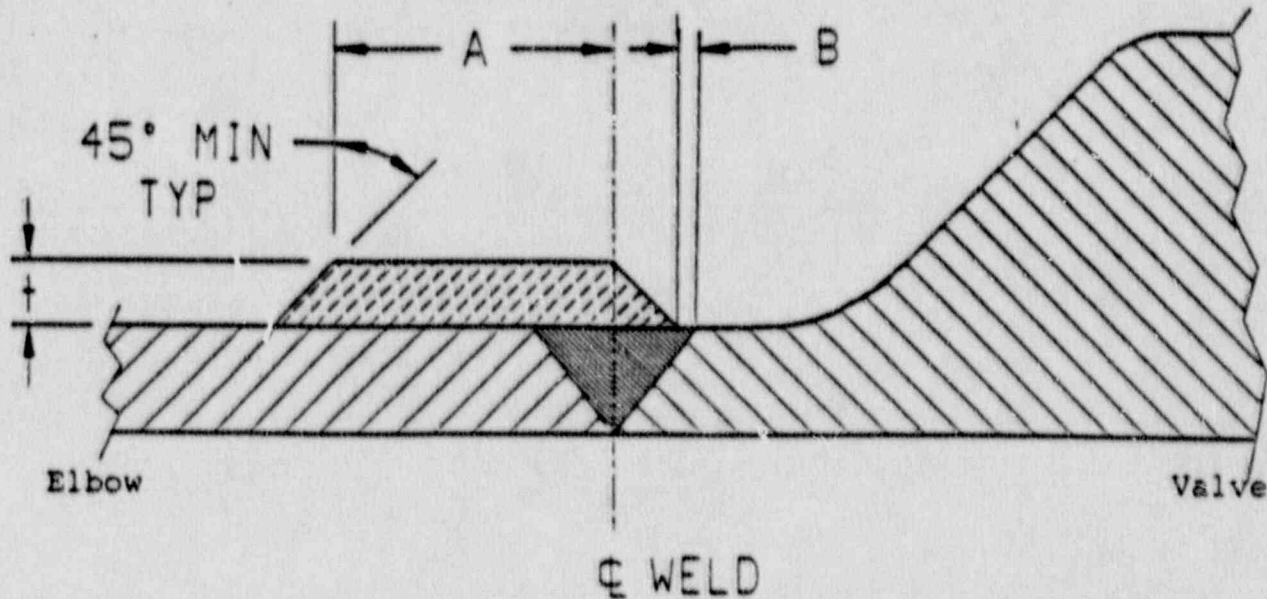
WELD NUMBER	FLAW CHARACTERIZATION	DESIGN DIMENSIONS			COMMENTS
		t	A	B	
1B31-1RC-28B-10	2 Axial Flaws plus 1) Circ 2.5" long x 33% a/t 2) Circ 1" long x 33% a/t 3) Circ 17" long x 21% a/t	0.44"	3.10"	3.10"	

PREPARED BY: <u><i>Jackie</i></u> DATE: <u>3/30/90</u>		DESCRIPTION: Standard Weld Overlay Repair Design for Weld 1B31-1RC-28B-10 (per NUREG-0313, Revision 2)	
CHECKED BY: <u><i>Phil King</i></u> DATE: <u>3/30/90</u>			
JOB NO: GPCO-18Q	PLANT / UNIT: Georgia Power Plant Hatch Unit 1	 STRUCTURAL INTEGRITY ASSOCIATES INC.	REV <div style="text-align: center;">1</div>
FILE NO: GPCO-18Q-303	DWG NO: GPCO-18Q-005	SHT <div style="text-align: center;">1 OF 2</div>	

NOTES

1. Weld overlay material is to be type 308L or equivalent, with as-deposited delta ferrite content greater than 7.5 FN.
2. Component surface is to be examined by dye penetrant method and accepted as clean prior to overlay application in order to include the entire deposited overlay thickness in meeting the design thickness requirement, per NUREG-0313, Revision 2.
3. In the event that the original component surface does not pass the note 2 requirements, the first deposited weld layer is to be examined by dye penetrant method and accepted as clean before proceeding with subsequent layers.
4. First weld layer is to have a measured delta ferrite content greater than 7.5 FN.
5. Design thickness includes no allowance for surface conditioning operations to facilitate UT inspections.
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WELD OVERLAY.
REPAIR DETAILS

WELD NUMBER	FLAW CHARACTERIZATION	DESIGN DIMENSIONS			COMMENTS
		t	A	B	
1B31-1RC-28A-7		0.49"	3.50"	≥0.125"	

PREPARED BY:

DATE

DESCRIPTION:

Standard Weld Overlay Repair Design
for Weld 1B31-1RC-28A-7
(per NUREG-0313, Revision 2)

CHECKED BY:

DATE

JOB NO:

PLANT / UNIT:

GPCO-18Q

Georgia Power Plant
Hatch Unit 1



**STRUCTURAL
INTEGRITY
ASSOCIATES INC.**

REV

1

FILE NO:

DWG NO:

GPCC-18Q-308

GPCO-18Q-010

SHT

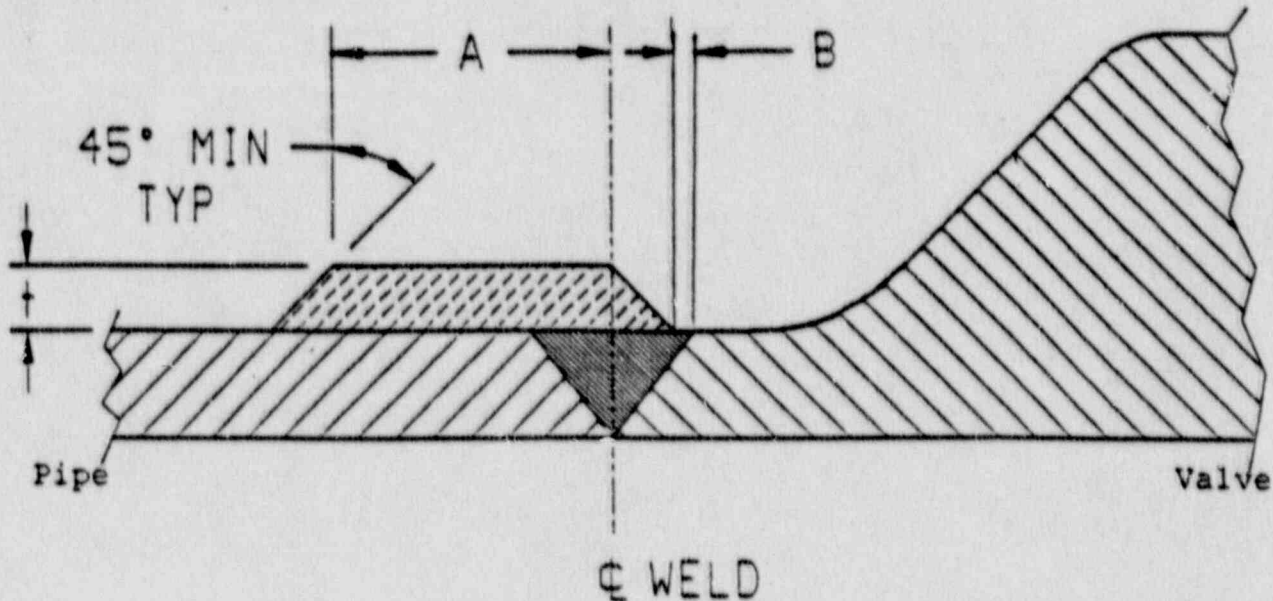
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OF

NOTES

1. Weld overlay material is to be type 308L or equivalent, with as-deposited delta ferrite content greater than 7.5 FN.
2. Component surface is to be examined by dye penetrant method and accepted as clean prior to overlay application in order to include the entire deposited overlay thickness in meeting the design thickness requirement, per NUREG-0313, Revision 2.
3. In the event that the original component surface does not pass the note 2 requirements, the first deposited weld layer is to be examined by dye penetrant method and accepted as clean before proceeding with subsequent layers.
4. First weld layer is to have a measured delta ferrite content greater than 7.5 FN.
5. Design thickness includes no allowance for surface conditioning operations to facilitate UT inspections.
6. Design length is that required for structural reinforcement; greater length may be required for effective UT inspection. This is to be determined in the field.



WELD OVERLAY.
REPAIR DETAILS

WELD NUMBER	FLAW CHARACTERIZATION	DESIGN DIMENSIONS			COMMENTS
		t	A	E	
1B31-1RC-28A-8		0.43"	3.50"	≥0.125"	

PREPARED BY:

DATE

DESCRIPTION:

L. S. S. S.

3/30/90

Standard Weld Overlay Repair Design
for Weld 1B31-1RC-28A-8
(per NUREG-0313, Revision 2)

CHECKED BY:

DATE

[Signature]

8/30/90

JOB NO:

GPCO-18Q

PLANT / UNIT:

Georgia Power Plant
Hatch Unit 1



**STRUCTURAL
INTEGRITY
ASSOCIATES INC**

REV

1

FILE NO:

GPCO-18Q-309

DWG NO:

GPCO-18Q-011

SHT

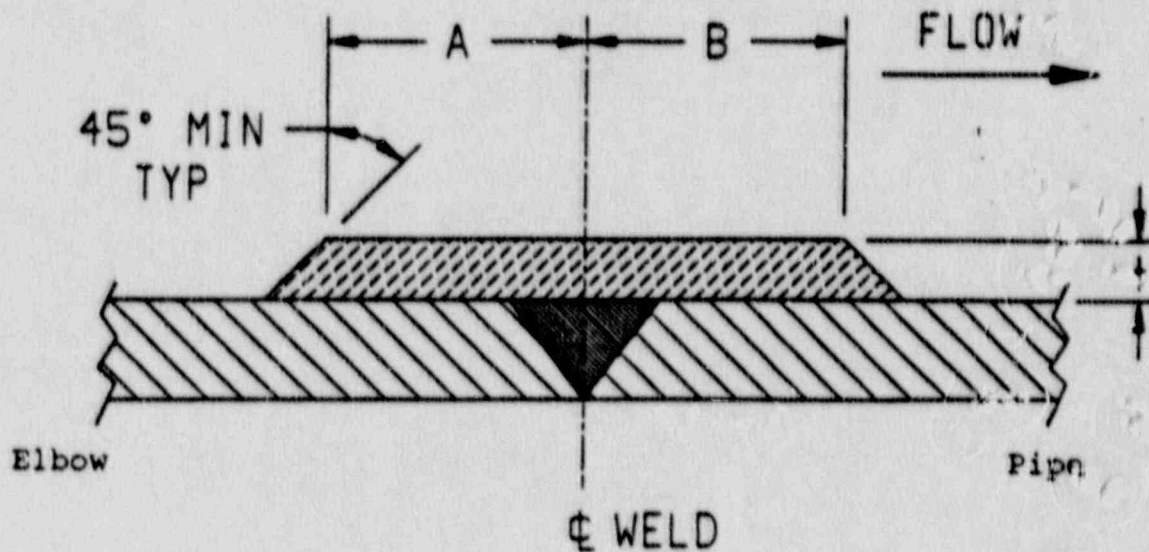
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OF


NOTES

1. Weld overlay material is to be type 308L or equivalent, with as-deposited delta ferrite content greater than 7.5 FN.
2. Component surface is to be examined by dye penetrant method and accepted as clean prior to overlay application in order to include the entire deposited overlay thickness in meeting the design thickness requirement, per NUREG-0313, Revision 2.
3. In the event that the original component surface does not pass the note 2 requirements, the first deposited weld layer is to be examined by dye penetrant method and accepted as clean before proceeding with subsequent layers.
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WELD OVERLAY
REPAIR DETAILS

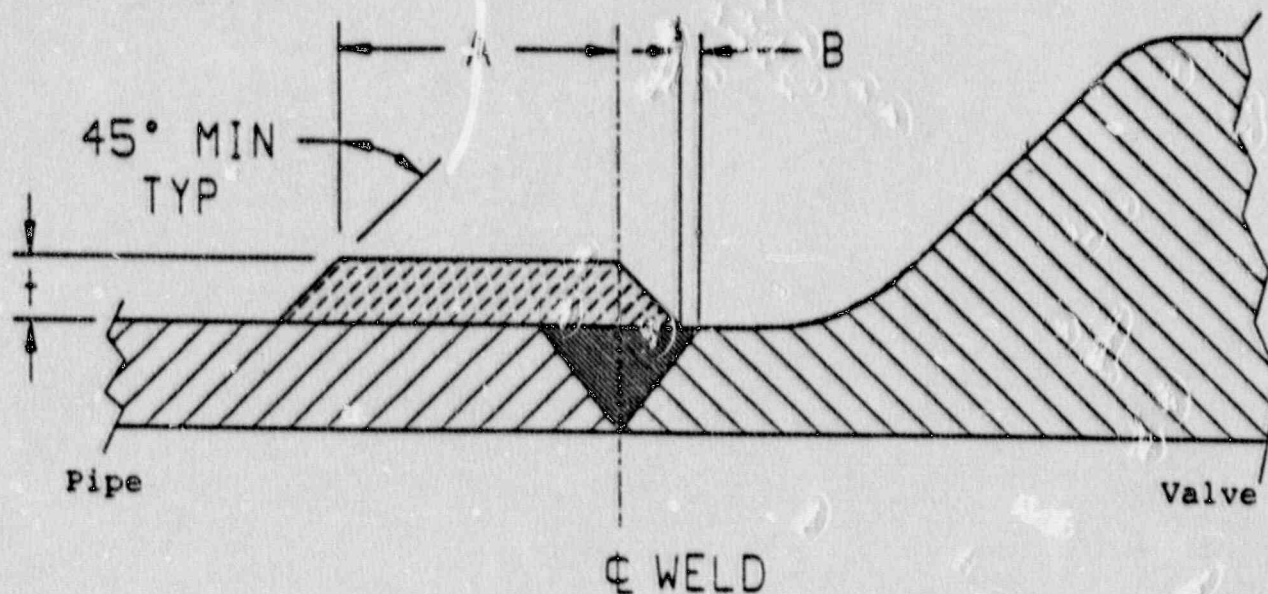
WELD NUMBER	FLAW CHARACTERIZATION	DESIGN DIMENSIONS			COMMENTS
		t	A	B	
1B31-1RC-28A-14		0.52"	3.35"	3.35"	

PREPARED BY: <u><i>L. R. R. R.</i></u>		DATE: <u>4/16/90</u>		DESCRIPTION: Standard Weld Overlay Repair Design for Weld 1B31-1RC-28A-14 (per NUREG-0313, Revision 2)	
CHECKED BY: <u><i>J. F. G. G.</i></u>		DATE: <u>4-16-90</u>			
JOB NO: GPCO-18Q		PLANT / UNIT: Georgia Power Plant Hatch Unit 1		 STRUCTURAL INTEGRITY ASSOCIATES INC.	
FILE NO: GPCO-18Q-310		DWG NO: GPCO-18Q-012			

NOTES

1. Weld overlay material is to be type 308L or equivalent, with as-deposited delta ferrite content greater than 7.5 FN.
2. Component surface is to be examined by dye penetrant method and accepted as clean prior to overlay application in order to include the entire deposited overlay thickness in meeting the design thickness requirement, per NUREG-0313, Revision 2.
3. In the event that the original component surface does not pass the note 2 requirements, the first deposited weld layer is to be examined by dye penetrant method and accepted as clean before proceeding with subsequent layers.
4. First weld layer is to have a measured delta ferrite content greater than 7.5 FN.
5. Design thickness includes no allowance for surface conditioning operations to facilitate UT inspections.
6. Design length is that required for structural reinforcement; greater length may be required for effective UT inspection. This is to be determined in the field.






WELD OVERLAY.

REPAIR DETAILS

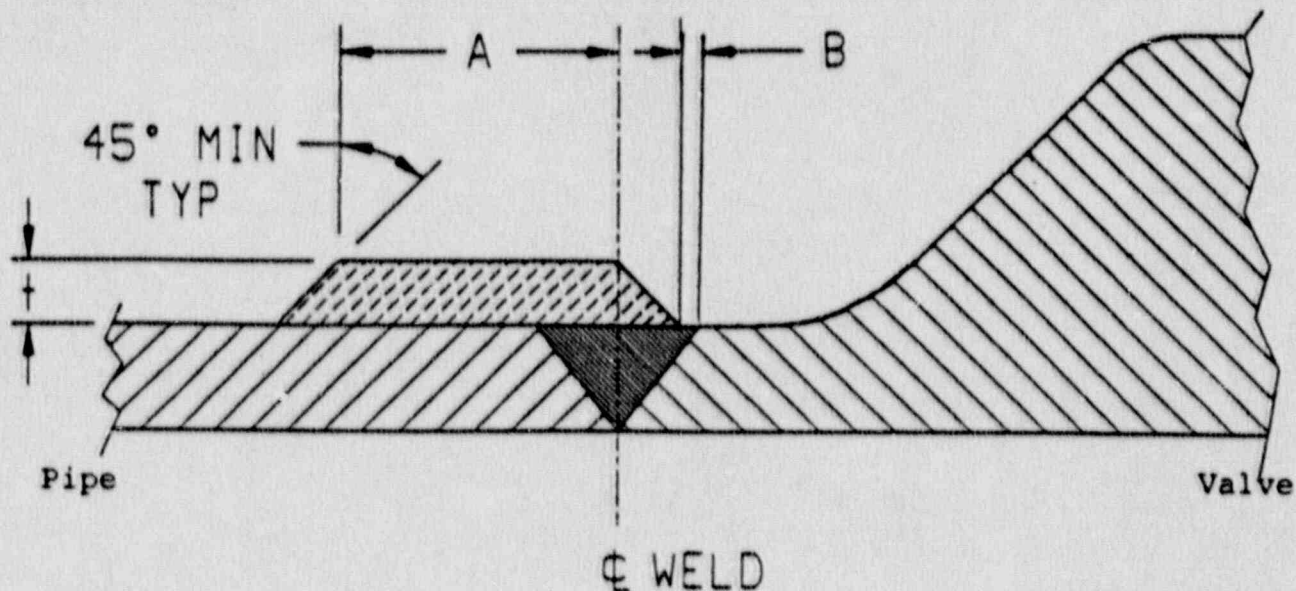
WELD NUMBER	FLAW CHARACTERIZATION	DESIGN DIMENSIONS			COMMENTS
		t	A	B	
1B31-1RC-28B-9		0.44"	3.5"	20.125"	

PREPARED BY: <i>h. h. h.</i>	DATE <i>4/16/90</i>	DESCRIPTION: Standard Weld Overlay Repair Design for Weld 1B31-1RC-28B-9 (per NUREG-0313, Revision 2)
CHECKED BY: <i>J. F. G. G.</i>	DATE <i>4-16-90</i>	

JOB NO: GPCO-18Q	PLANT / UNIT: Georgia Power Plant Hatch Unit 1	 STRUCTURAL INTEGRITY ASSOCIATES INC.	REV 1
FILE NO: GPCO-18Q-311	DWG NO: GPCO-18Q-013		SHT 1 OF 2


NOTES

1. Weld overlay material is to be type 308L or equivalent, with as-deposited delta ferrite content greater than 7.5 FN.
2. Component surface is to be examined by dye penetrant method and accepted as clean prior to overlay application in order to include the entire deposited overlay thickness in meeting the design thickness requirement, per NUREG-0313, Revision 2.
3. In the event that the original component surface does not pass the note 2 requirements, the first deposited weld layer is to be examined by dye penetrant method and accepted as clean before proceeding with subsequent layers.
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6. Design length is that required for structural reinforcement; greater length may be required for effective UT inspection. This is to be determined in the field.



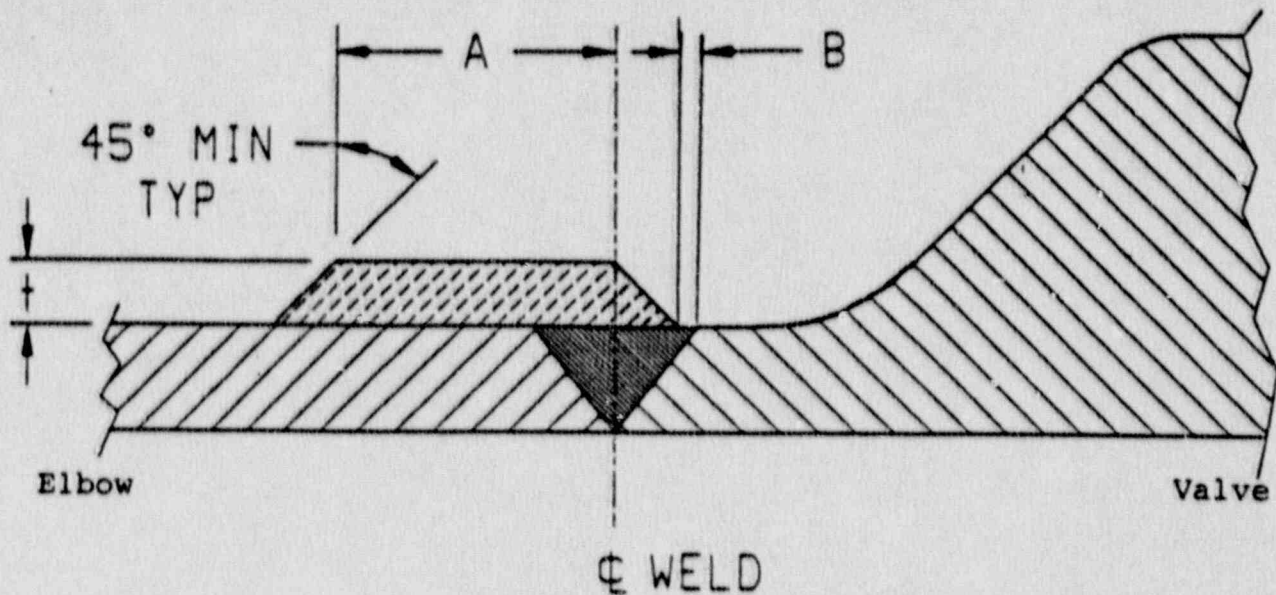
WELD OVERLAY.
REPAIR DETAILS

WELD NUMBER	FLAW CHARACTERIZATION	DESIGN DIMENSIONS			COMMENTS
		+	A	B	
1B31-1RC-28B-13		0.52"	3.5"	≥0.125"	

PREPARED BY: <u>hastie</u> DATE: <u>4/16/90</u>		DESCRIPTION: Standard Weld Overlay Repair Design for Weld 1B31-1RC-28B-13 (per NUREG-0313, Revision 2)	
CHECKED BY: <u>J.F. Copeland</u> DATE: <u>4-16-90</u>			
JOB NO: GPCO-18Q	PLANT / UNIT: Georgia Power Plant Hatch Unit 1	 STRUCTURAL INTEGRITY ASSOCIATES INC.	REV 1
FILE NO: GPCO-18Q-312	DWG NO: GPCO-18Q-014		SHT 1 OF 2

NOTES

1. Weld overlay material is to be type 308L or equivalent, with as-deposited delta ferrite content greater than 7.5 FN.
2. Component surface is to be examined by dye penetrant method and accepted as clean prior to overlay application in order to include the entire deposited overlay thickness in meeting the design thickness requirement, per NUREG-0313, Revision 2.
3. In the event that the original component surface does not pass the note 2 requirements, the first deposited weld layer is to be examined by dye penetrant method and accepted as clean before proceeding with subsequent layers.
4. First weld layer is to have a measured delta ferrite content greater than 7.5 FN.
5. Design thickness includes no allowance for surface conditioning operations to facilitate UT inspections.
6. Design length is that required for structural reinforcement; greater length may be required for effective UT inspection. This is to be determined in the field.



WELD OVERLAY.
REPAIR DETAILS

WELD NUMBER	FLAW CHARACTERIZATION	DESIGN DIMENSIONS			COMMENTS
		+	A	B	
1B31-1RC-28B-14		0.52"	3.5"	≥0.125"	

PREPARED BY:

Amelie

DATE

4/16/90

DESCRIPTION:

Standard Weld Overlay Repair Design
for Weld 1B31-1RC-28B-14
(per NUREG-0313, Revision 2)

CHECKED BY:

J. F. Coxland

DATE

4-16-90

JOB NO:

GPCO-18Q

PLANT / UNIT:

Georgia Power Plant
Hatch Unit 1

FILE NO:

GPCO-18Q-313

DWG NO:

GPCO-18Q-015



**STRUCTURAL
INTEGRITY
ASSOCIATES, INC.**

REV

1

SHT

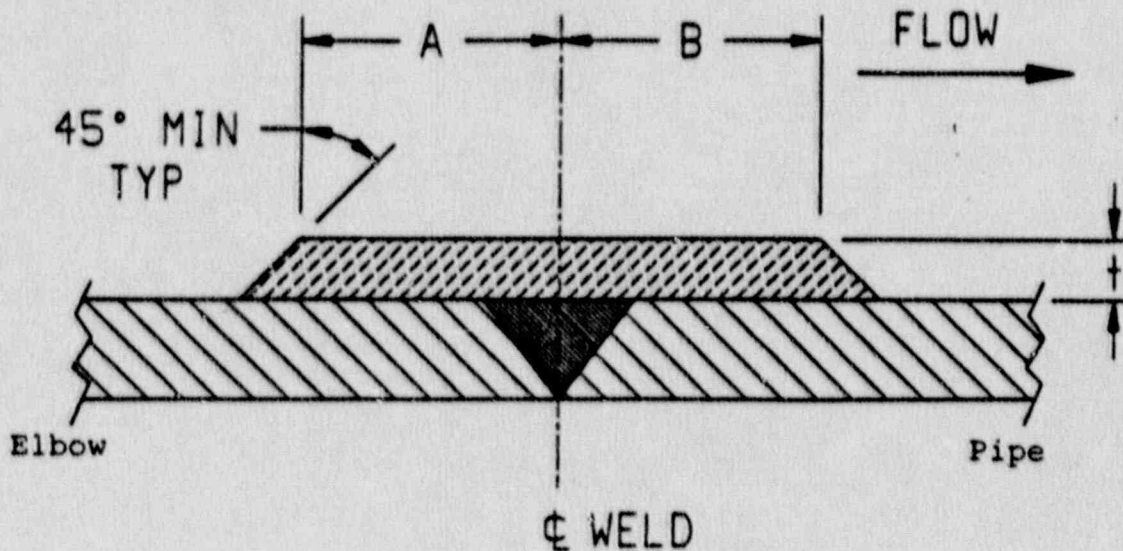
1

OF 2

NOTES


1. Weld overlay material is to be type 308L or equivalent, with as-deposited delta ferrite content greater than 7.5 FN.
2. Component surface is to be examined by dye penetrant method and accepted as clean prior to overlay application in order to include the entire deposited overlay thickness in meeting the design thickness requirement, per NUREG-0313, Revision 2.
3. In the event that the original component surface does not pass the note 2 requirements, the first deposited weld layer is to be examined by dye penetrant method and accepted as clean before proceeding with subsequent layers.
4. First weld layer is to have a measured delta ferrite content greater than 7.5 FN.
5. Design thickness includes no allowance for surface conditioning operations to facilitate UT inspections.
6. Design length is that required for structural reinforcement; greater length may be required for effective UT inspection. This is to be determined in the field.





WELD OVERLAY
REPAIR DETAILS

WELD NUMBER	FLAW CHARACTERIZATION	DESIGN DIMENSIONS			COMMENTS
		t	A	B	
1B31-1RC-28B-15		0.52"	3.35"	3.35"	

PREPARED BY: <u><i>Hardie</i></u>		DATE: <u>4/16/90</u>		DESCRIPTION: Standard Weld Overlay Repair Design for Weld 1B31-1RC-28B-15 (per NUREG-0313, Revision 2)	
CHECKED BY: <u><i>J.F. Copeland</i></u>		DATE: <u>4-16-90</u>			
JOB NO: GPCO-18Q		PLANT / UNIT: Georgia Power Plant Hatch Unit 1		 STRUCTURAL INTEGRITY ASSOCIATES INC.	
FILE NO: GPCO-18Q-314		DWG NO: GPCO-18Q-016			
				SHT 1 OF 2	

NOTES

1. Weld overlay material is to be type 308L or equivalent, with as-deposited delta ferrite content greater than 7.5 FN.
2. Component surface is to be examined by dye penetrant method and accepted as clean prior to overlay application in order to include the entire deposited overlay thickness in meeting the design thickness requirement, per NUREG-0313, Revision 2.
3. In the event that the original component surface does not pass the note 2 requirements, the first deposited weld layer is to be examined by dye penetrant method and accepted as clean before proceeding with subsequent layers.
4. First weld layer is to have a measured delta ferrite content greater than 7.5 FN.
5. Design thickness includes no allowance for surface conditioning operations to facilitate UT inspections.
6. Design length is that required for structural reinforcement; greater length may be required for effective UT inspection. This is to be determined in the field.