



GE Nuclear Energy

GERIS 2000 Examination Summary Sheet

Project: TVA, Browns Ferry Nuclear Plant, Unit 3

System: Reactor Pressure Vessel

Weld ID: C-5-FLG

ASME Code Category: B-A

Calibration Sheets: C-001, C-104, C-107, C-108 and C-109

Supporting Data: Examination Data Sheets E-20-00 and E-20-12, Indication Data Sheets 20-001 thru 20-110, G-115 and G-116, Indication Evaluation Sheets, Screen Prints, Exam Patch Location Map, Exam Coverage Plots, GERIS 2000 Setup Records and Manual Examination Data Sheets D-001, D-002, D-007, D-008, D-009 and D-010.

Examination Summary

The ultrasonic examination of weld C-5-FLG resulted in five (5) recorded indications that exceed the allowable standards of IWB-3500, ASME Section XI, 1986 Edition, No Addenda.

The ASME Section XI required examination volume was examined with the GERIS 2000 System from the RPV inside surface utilizing Procedure No. GE-UT-700, Rev. 2. This examination was limited due to a clad patch at 30°, the Guide Rods at 0° and 180° and four (4) Main Steam plug lines at 74°, 110°, 250°, and 286°. Areas that could not be examined using the GERIS 2000 and accessible from the outside were examined with the manual technique utilizing Procedure No. GE-UT-300 Rev. 6, FRR-004. The total examination coverage was calculated to be 82%.

The GERIS 2000 utilizes an array of search units arranged to effectively examine the weld and adjacent base material parallel and perpendicular to the weld axis in two directions. The transducer package consisted of 0° longitudinal, 45° and 60° shear wave, and 70° refracted longitudinal (RL) wave search units.

The five (5) unacceptable indications were recorded and sized in accordance with GE-UT-700, Rev. 2 and GE-UT-701, Rev. 2 with the results tabulated below:

Ind. No.	Oriented	Type	X Pos	Y Pos	Z Pos	"S"	T wall	Length	T Meas	a/l	% a/t Calculated	% a/t Allowed
20-007	circ.	subsurface	83.90"	706.42"	1.01"	.82"	.40"	3.25"	6.54"	.061	3.05	2.27
20-008	circ.	subsurface	88.40"	706.44"	1.02"	.83"	.39"	1.50"	6.55"	.130	2.98	2.74
20-009	circ.	subsurface	95.90"	706.44"	1.03"	.84"	.38"	2.25"	6.59"	.085	2.91	2.41
20-011	circ.	subsurface	100.90"	706.37"	1.23"	1.04"	.39"	1.75"	6.62"	.111	2.92	2.58
20-012	circ.	subsurface	116.90"	706.40"	1.14"	.95"	.48"	1.50"	6.87"	.159	3.47	2.97

Indication 20-007 was sized with the 70°RL channel 3 utilizing the PATT technique. This indication was also recorded with 70°RL channel 5 as 20-016.

Indication 20-008 was sized with the 70°RL channel 3 utilizing the PATT technique. This indication was also recorded with 45° shear wave channel 7 as 20-022.

Indication 20-009 was sized with the 70°RL channel 3 utilizing the PATT technique. This indication was also recorded with 70°RL channel 5 as 20-017, 45° shear wave channels 7 as 20-023 and 9 as 20-027.

Indication 20-011 was sized with the 70°RL channel 3 utilizing the PATT technique. This indication was also recorded with 70°RL channel 5 as 20-018

GERIS Analyst: *Jessie Kimball*

GE Reviewer: *Cl M...*

LEVEL: *III* DATE: *12-21-93*

LEVEL: *III* DATE: *12/21/93*

UTILITY Review: *J. Wood*

ANII Review:

TITLE: *III* DATE: *1/26/94*

TITLE: *Albert Ladd* DATE: *8/25/94*

GERIS 2000 Examination Summary (Continuation)

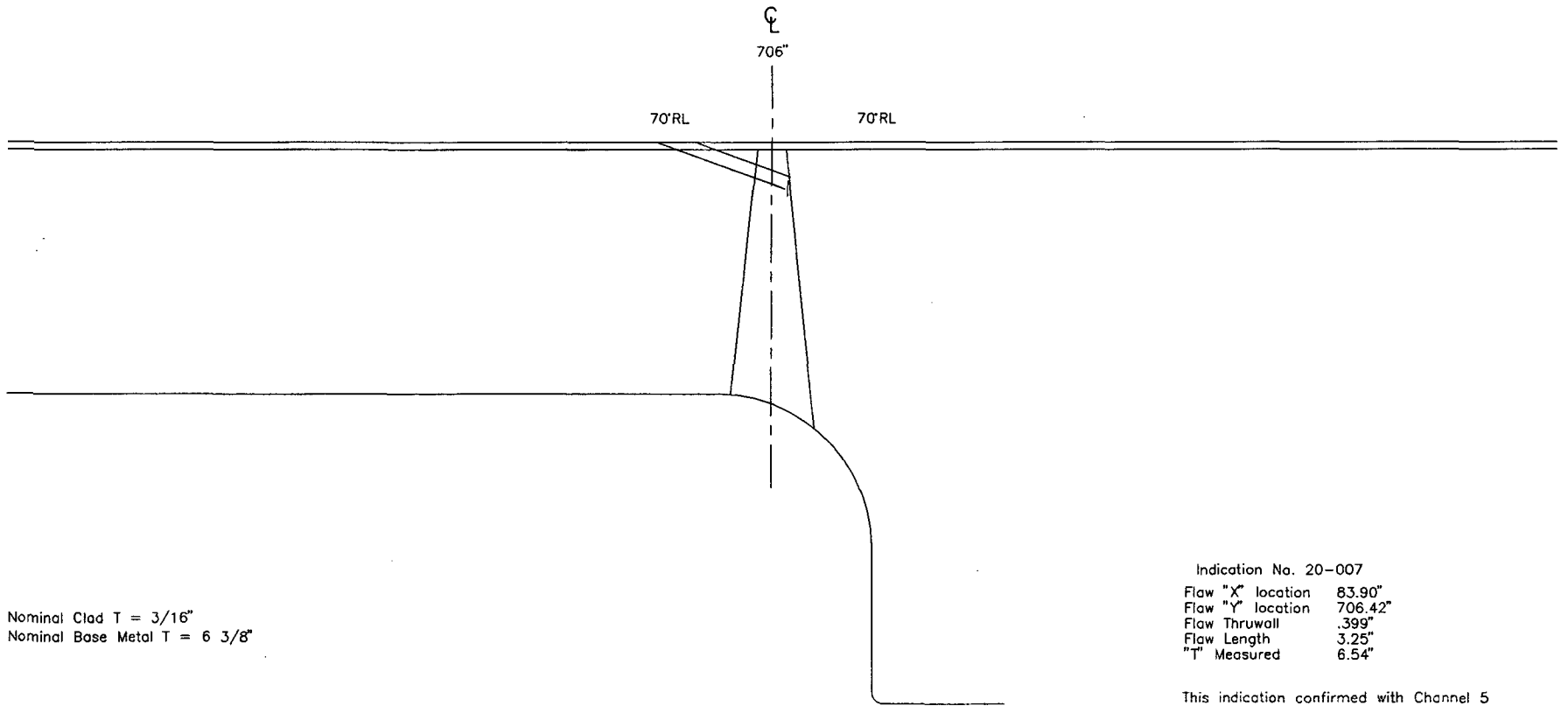
Indication 20-012 was sized with the 70°RL channel 3 utilizing the PATT technique. This indication was also recorded with 45° shear wave channel 7 as 20-024.

The GERIS 2000 also recorded indications with the 0° weld metal scans, 70°RL, 45° and 60° shear wave scans that were evaluated and found to be acceptable per the referencing Code section. Geometric indications from the flange radius were recorded with the 45° and 60° shear wave scans.

The manual technique utilized 0° longitudinal, 45° and 60° shear wave search units both parallel and perpendicular to the weld axis in two directions to effectively examine the weld and adjacent base materials.

No indications were recorded with the manual technique.

Fabrication records and previous examination results were reviewed prior to the completion of this examination summary.



Nominal Clad T = 3/16"
 Nominal Base Metal T = 6 3/8"

Indication No. 20-007
 Flaw "X" location 83.90"
 Flaw "Y" location 706.42"
 Flaw Thruwall .399"
 Flaw Length 3.25"
 "T" Measured 6.54"

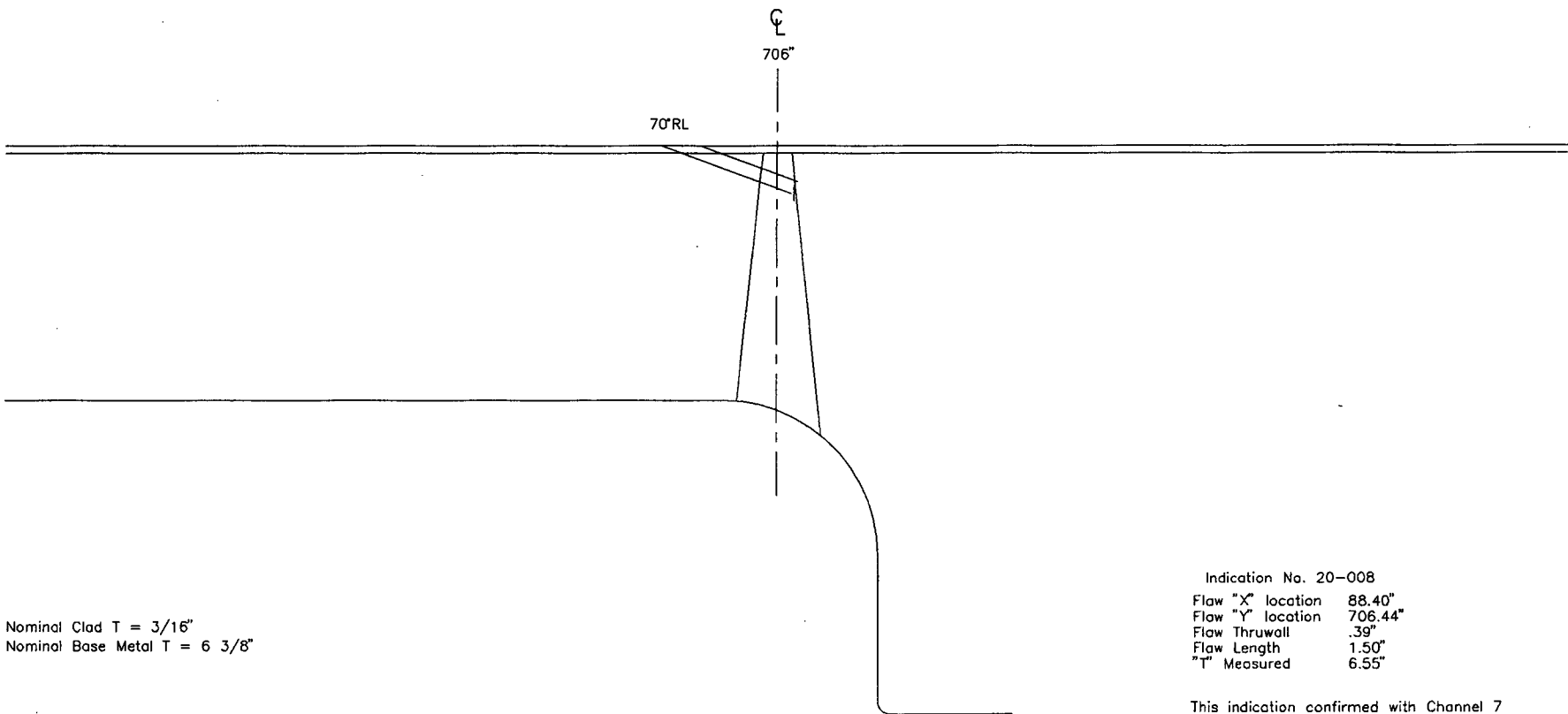
This indication confirmed with Channel 5

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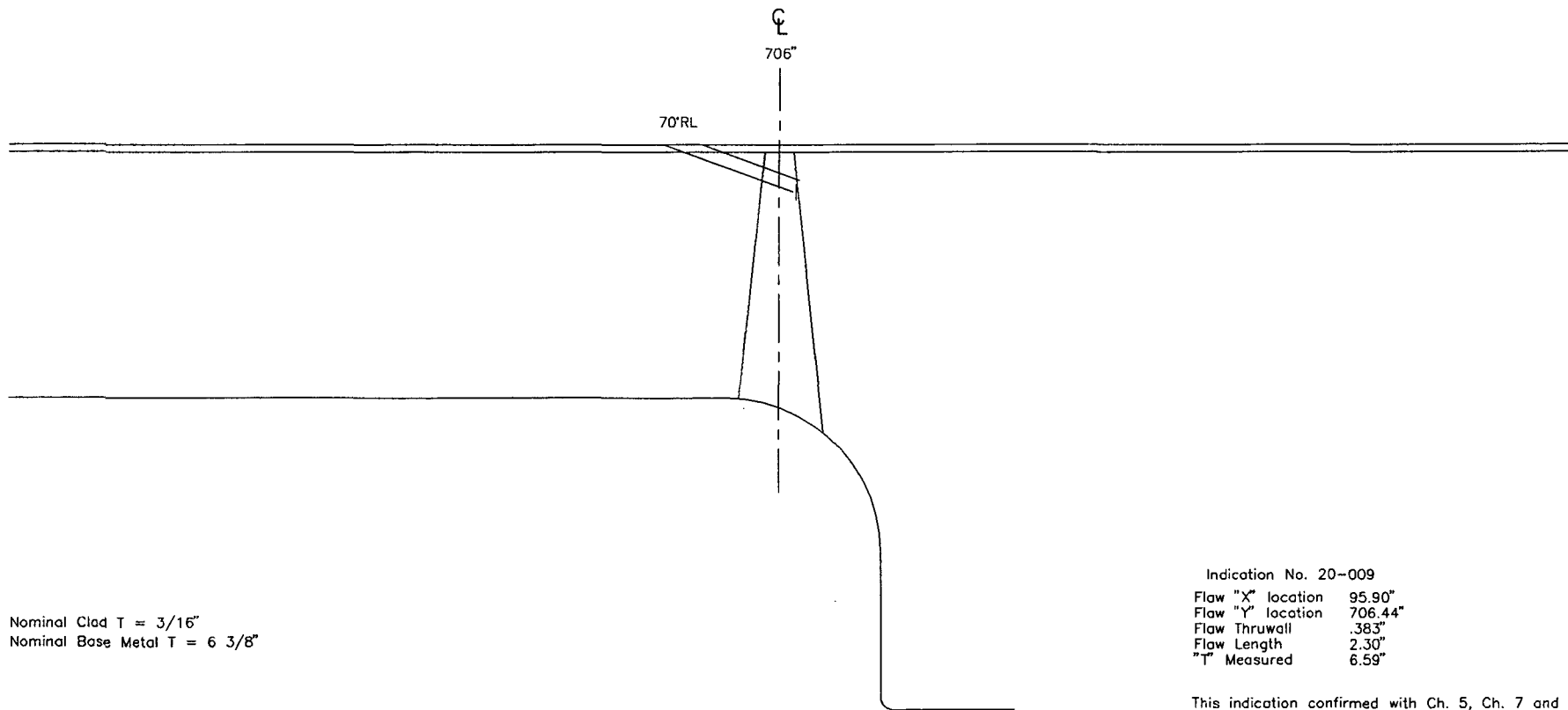
Nominal Clad T = 3/16"
Nominal Base Metal T = 6 3/8"



Indication No. 20-008
 Flaw "X" location 88.40"
 Flaw "Y" location 706.44"
 Flaw Thruwall .39"
 Flaw Length 1.50"
 "T" Measured 6.55"

This indication confirmed with Channel 7

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Nominal Clad T = 3/16"
 Nominal Base Metal T = 6 3/8"

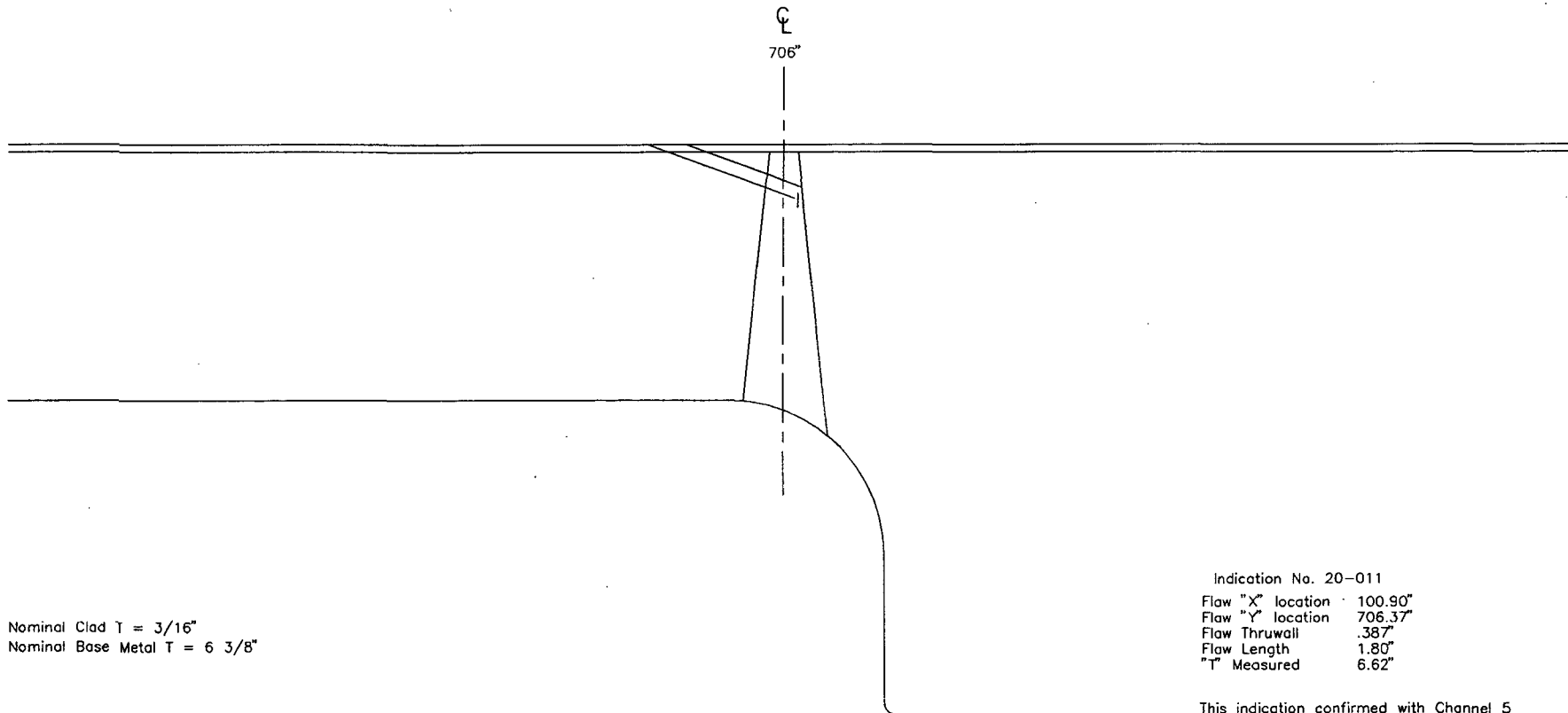
Indication No. 20-009
 Flaw "X" location 95.90"
 Flaw "Y" location 706.44"
 Flaw Thruwall .383"
 Flaw Length 2.30"
 "T" Measured 6.59"

This indication confirmed with Ch. 5, Ch. 7 and Ch. 9

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GE NUCLEAR ENERGY	BROWNS FERRY UNIT 3	WELD C-5-FLG INDICATION 20-009	SCALE: NONE	DWG. BF3C5FI	REV. 0
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Nominal Clad T = 3/16"
 Nominal Base Metal T = 6 3/8"

Indication No. 20-011
 Flaw "X" location 100.90"
 Flaw "Y" location 706.37"
 Flaw Thruwall .387"
 Flaw Length 1.80"
 "T" Measured 6.62"

This indication confirmed with Channel 5

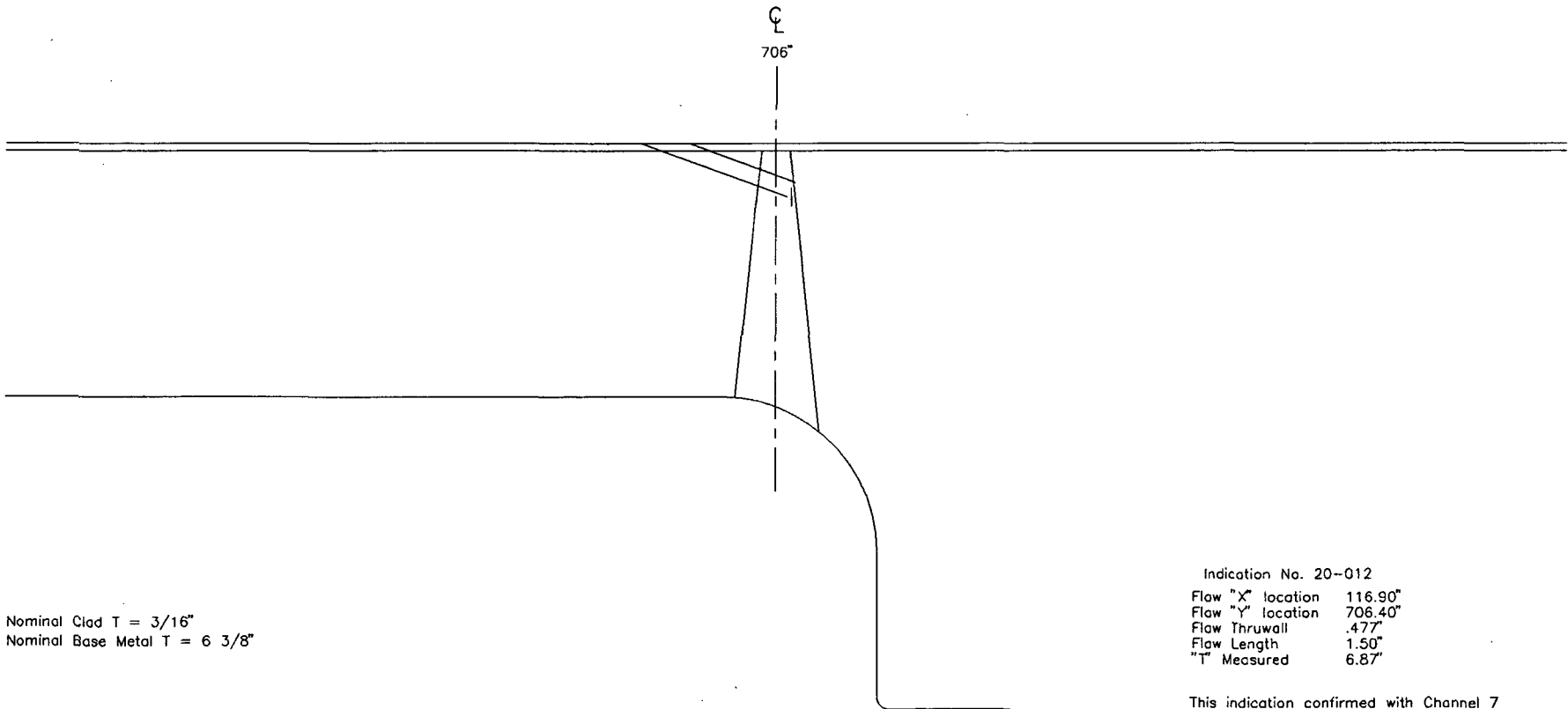
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GE NUCLEAR ENERGY	BROWNS FERRY UNIT 3	WELD C-5-FLG INDICATION 20-011	SCALE: NONE	DWG. BF3C5FI	REV. 0
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Nominal Clad T = 3/16"
 Nominal Base Metal T = 6 3/8"

Indication No. 20-012
 Flaw "X" location 116.90"
 Flaw "Y" location 706.40"
 Flaw Thruwall .477"
 Flaw Length 1.50"
 "T" Measured 6.87"

This indication confirmed with Channel 7

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GERIS 2000 Examination Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Exam Data Sheet: E-20-00

Procedure No.: GE-UT-700
Revision No.: 2
FRR No.: N/A

Patch	Data Sh.	Date	Start	Stop	Min X	Max X	Min Y	Max Y	Disk No.	Examiner
BF-001	E-20-01	10/3/93	0559	0710	13.00	51.50	692.50	726.25	21A	JCG
BF-002	E-20-02	10/3/93	0834	1027	80.00	144.00	692.50	726.25	20B	ROF
BF-003	E-20-03	10/3/93	1127	1303	169.50	224.00	692.50	726.25	22A	ROF
BF-004	E-20-04	10/3/93	1320	1349	249.00	260.00	692.50	726.25	22A	ROF
BF-005	E-20-05	10/3/93	1356	1541	260.00	320.00	692.50	726.25	22B	ROF
BF-006	E-20-06	10/3/93	1556	1758	320.00	381.00	692.50	726.25	23A	ROF
BF-007	E-20-07	10/3/93	1823	2004	407.25	466.50	692.50	726.25	24B	ROF/JCG
BF-008	E-20-08	10/3/93	2133	2316	466.75	526.50	692.50	726.25	24A	JCG
BF-009	E-20-09	10/3-4/93	2340	0011	526.75	538.00	692.50	726.25	25A	JCG
BF-010	E-20-10	10/7/93	1113	1252	565.00	616.00	692.50	726.25	30B	ROF
BF-011	E-20-11	10/7/93	0847	1029	649.00	706.50	692.50	726.25	29B	ROF
BF-012	E-20-12	10/7/93	0438	0637	706.75	775.50	692.50	726.25	29A/30A	JCG
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Comments:

Limitations: BF-001 and BF-002 due to clad patch at 30°.

BF-001, BF-006, BF-007 and BF-012 due to guide rods at 0° and 180°.

BF-002, BF-003, BF-004, BF-009, BF-010 and BF-011 due to main steam plug lines at 74°, 110°, 250° and 286°.

Analyst: C. Deusa Kimball

Reviewed By: R.O. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93



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GERIS 2000 Examination Data Sheet

Project: TVA, Browns Ferry, Unit 3

Weld ID: C-5-FLG

Cal. ID: C-001

Exam Data Sheet No.: E-20-01

Patch ID: BF-001

Ind. Data Sheet Series: 20-XXX

Channel	Angle	Direction	Ind.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sheet
1	0 WM	N/A	NRI	~	~	~	~	~
2	0 WM	N/A	NRI	~	~	~	~	~
3	70 RL	0 UP	1	20-001 *	20-002 *	~	~	~
4	70 RL	90 CW	NRI	~	~	~	~	~
5	70 RL	180 DN	NRI	~	~	~	~	~
6	70 RL	270 CCW	NRI	~	~	~	~	~
7	45 RS	0 UP	NRI	~	~	~	~	~
8	45 RS	90 CW	NRI	~	~	~	~	~
9	45 RS	180 DN	1, 2	20-003	20-004	G-115	~	~
10	45 RS	270 CCW	1	20-005	~	~	~	~
11	60 RS	0 UP	NRI	~	~	~	~	~
12	60 RS	90 CW	NRI	~	~	~	~	~
13	60 RS	180 DN	1, 2	20-006	G-116	~	~	~
14	60 RS	270 CCW	NRI	~	~	~	~	~
15	0 BM	N/A	NRI	~	~	~	~	~
16	0 BM	N/A	NRI	~	~	~	~	~
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Comments: * Indications 20-001 and 20-002 are shown on the same print.

Data Sheet Codes: G-XXX; "G" = Geometry (may be typical), 6-XXX; "6" = Weld Sequence, XXX = Sheet Number

Indication Codes: 1 = Flaw, 2 = OD Surface, 3 = OD Attachment, 4 = Nozzle, 5 = Other

Analyst: Jessie Kimball

Reviewed By: R.O. Foman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

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GERIS 2000 Examination Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-02
 Patch ID: BF-002
 Ind. Data Sheet Series: 20-XXX

Channel	Angle	Direction	Ind.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sheet
1	0 WM	N/A	NRI	~	~	~	~	~
2	0 WM	N/A	NRI	~	~	~	~	~
3	70 RL	0 UP	1	20-007	20-008	20-009	20-010	20-011
				20-012	20-013	20-014	20-015	~
4	70 RL	90 CW	NRI	~	~	~	~	~
5	70 RL	180 DN	1	20-016	20-017	20-018	20-019	20-020
				20-021	~	~	~	~
6	70 RL	270 CCW	NRI	~	~	~	~	~
7	45 RS	0 UP	1	20-022	20-023	20-024	20-025	20-026
8	45 RS	90 CW	NRI	~	~	~	~	~
9	45 RS	180 DN	1, 2	20-027	20-028	~	~	~
10	45 RS	270 CCW	NRI	~	~	~	~	~
11	60 RS	0 UP	1	20-029	~	~	~	~
12	60 RS	90 CW	NRI	~	~	~	~	~
13	60 RS	180 DN	2, *	~	~	~	~	~
14	60 RS	270 CCW	NRI*	~	~	~	~	~
15	0 BM	N/A	NRI*	~	~	~	~	~
16	0 BM	N/A	NRI*	~	~	~	~	~
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Comments: * Lift-off

2 = Geometry: flange radius (see G-115 and G-116).

Data Sheet Codes: G-XXX; "G" = Geometry (may be typical), 6-XXX; "6" = Weld Sequence, XXX = Sheet Number

Indication Codes: 1 = Flaw, 2 = OD Surface, 3 = OD Attachment, 4 = Nozzle, 5 = Other

Analyst: Jessal Kimball

Reviewed By: R.O. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

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GERIS 2000 Examination Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-03
 Patch ID: BF-003
 Ind. Data Sheet Series: 20-XXX

Channel	Angle	Direction	Ind.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sheet
1	0 WM	N/A	1	20-030	~	~	~	~
2	0 WM	N/A	NRI	~	~	~	~	~
3	70 RL	0 UP	1	20-031	20-032	~	~	~
4	70 RL	90 CW	NRI	~	~	~	~	~
5	70 RL	180 DN	NRI	~	~	~	~	~
6	70 RL	270 CCW	NRI	~	~	~	~	~
7	45 RS	0 UP	1	20-033	~	~	~	~
8	45 RS	90 CW	NRI	~	~	~	~	~
9	45 RS	180 DN	1, 2	20-034	~	~	~	~
10	45 RS	270 CCW	NRI	~	~	~	~	~
11	60 RS	0 UP	NRI	~	~	~	~	~
12	60 RS	90 CW	NRI	~	~	~	~	~
13	60 RS	180 DN	2	~	~	~	~	~
14	60 RS	270 CCW	NRI	~	~	~	~	~
15	0 BM	N/A	NRI	~	~	~	~	~
16	0 BM	N/A	NRI	~	~	~	~	~
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Comments: 2 = Geometry: flange radius (see G-115 and G-116).
 Intermittant lift-off throughout this patch.

Data Sheet Codes: G-XXX; "G" = Geometry (may be typical), 6-XXX; "6" = Weld Sequence, XXX = Sheet Number
 Indication Codes: 1 = Flaw, 2 = OD Surface, 3 = OD Attachment, 4 = Nozzle, 5 = Other

Analyst: Luella Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

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GERIS 2000 Examination Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-04
Patch ID: BF-004
Ind. Data Sheet Series: 20-XXX

Channel	Angle	Direction	Ind.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sheet
1	0 WM	N/A	NRI	~	~	~	~	~
2	0 WM	N/A	1	20-035	20-036	~	~	~
3	70 RL	0 UP	NRI	~	~	~	~	~
4	70 RL	90 CW	NRI	~	~	~	~	~
5	70 RL	180 DN	NRI	~	~	~	~	~
6	70 RL	270 CCW	NRI	~	~	~	~	~
7	45 RS	0 UP	1	20-037	~	~	~	~
8	45 RS	90 CW	NRI	~	~	~	~	~
9	45 RS	180 DN	1, 2	20-038	~	~	~	~
10	45 RS	270 CCW	NRI	~	~	~	~	~
11	60 RS	0 UP	1	20-039	~	~	~	~
12	60 RS	90 CW	NRI	~	~	~	~	~
13	60 RS	180 DN	2	~	~	~	~	~
14	60 RS	270 CCW	NRI	~	~	~	~	~
15	0 BM	N/A	NRI	~	~	~	~	~
16	0 BM	N/A	NRI	~	~	~	~	~
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Comments: 2 = Geometry: flange radius (see G-115 and G-116).

Data Sheet Codes: G-XXX; "G" = Geometry (may be typical), 6-XXX; "6" = Weld Sequence, XXX = Sheet Number
Indication Codes: 1 = Flaw, 2 = OD Surface, 3 = OD Attachment, 4 = Nozzle, 5 = Other

Analyst: QuesaKimball
Level: III **Date:** 12-20-93

Reviewed By: R.D. Forman
Level: II **Date:** 12-20-93

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GERIS 2000 Examination Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-05
Patch ID: BF-005
Ind. Data Sheet Series: 20-XXX

Channel	Angle	Direction	Ind.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sheet
1	0 WM	N/A	NRI	~	~	~	~	~
2	0 WM	N/A	NRI	~	~	~	~	~
3	70 RL	0 UP	1	20-040	20-041	20-042	20-043	20-044
				20-045	20-046	20-047	20-048	20-049
				20-050	~	~	~	~
4	70 RL	90 CW	NRI	~	~	~	~	
5	70 RL	180 DN	NRI	~	~	~	~	
6	70 RL	270 CCW	NRI	~	~	~	~	
7	45 RS	0 UP	1	20-051	~	~	~	~
8	45 RS	90 CW	NRI	~	~	~	~	~
9	45 RS	180 DN	1, 2	20-052	~	~	~	~
10	45 RS	270 CCW	1	20-053	~	~	~	~
11	60 RS	0 UP	NRI	~	~	~	~	~
12	60 RS	90 CW	NRI	~	~	~	~	~
13	60 RS	180 DN	1, 2	20-056	~	~	~	~
14	60 RS	270 CCW	NRI	~	~	~	~	~
15	0 BM	N/A	NRI	~	~	~	~	~
16	0 BM	N/A	NRI	~	~	~	~	~
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Comments: 2 = Geometry: flange radius (see G-115 and G-116).
Indication Data Sheet 20-053 documents indications 20-053 thru 20-055.

Data Sheet Codes: G-XXX; "G" = Geometry (may be typical), 6-XXX; "6" = Weld Sequence, XXX = Sheet Number
Indication Codes: 1 = Flaw, 2 = OD Surface, 3 = OD Attachment, 4 = Nozzle, 5 = Other

Analyst: Quessa Kimball

Reviewed By: R.O. Fournier

Level: III Date: 12-20-93

Level: II Date: 12-20-93

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GE Nuclear Energy

GERIS 2000 Examination Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-06
Patch ID: BF-006
Ind. Data Sheet Series: 20-XXX

Channel	Angle	Direction	Ind.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sheet
1	0 WM	N/A	NRI	~	~	~	~	~
2	0 WM	N/A	1	20-057	~	~	~	~
3	70 RL	0 UP	1	20-058	~	~	~	~
4	70 RL	90 CW	NRI	~	~	~	~	~
5	70 RL	180 DN	1	20-059	~	~	~	~
6	70 RL	270 CCW	NRI	~	~	~	~	~
7	45 RS	0 UP	1	20-060	~	~	~	~
8	45 RS	90 CW	1	20-061	~	~	~	~
9	45 RS	180 DN	2	~	~	~	~	~
10	45 RS	270 CCW	NRI	~	~	~	~	~
11	60 RS	0 UP	1	20-062	~	~	~	~
12	60 RS	90 CW	NRI	~	~	~	~	~
13	60 RS	180 DN	1, 2	20-063	~	~	~	~
14	60 RS	270 CCW	NRI	~	~	~	~	~
15	0 BM	N/A	NRI	~	~	~	~	~
16	0 BM	N/A	NRI	~	~	~	~	~
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Comments: 2 = Geometry: flange radius (see G-115 and G-116).

Data Sheet Codes: G-XXX; "G" = Geometry (may be typical), 6-XXX; "6" = Weld Sequence, XXX = Sheet Number
Indication Codes: 1 = Flaw, 2 = OD Surface, 3 = OD Attachment, 4 = Nozzle, 5 = Other

Analyst: Charles Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Fournier
Level: II Date: 12-20-93

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GE Nuclear Energy

GERIS 2000 Examination Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-07
Patch ID: BF-007
Ind. Data Sheet Series: 20-XXX

Channel	Angle	Direction	Ind.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sheet
1	0 WM	N/A	NRI	~	~	~	~	~
2	0 WM	N/A	NRI	~	~	~	~	~
3	70 RL	0 UP	1	20-064	20-065	~	~	~
4	70 RL	90 CW	NRI	~	~	~	~	~
5	70 RL	180 DN	1	20-066	20-067	20-068	20-069	~
6	70 RL	270 CCW	NRI	~	~	~	~	~
7	45 RS	0 UP	NRI	~	~	~	~	~
8	45 RS	90 CW	NRI	~	~	~	~	~
9	45 RS	180 DN	1, 2	20-070	~	~	~	~
10	45 RS	270 CCW	NRI	~	~	~	~	~
11	60 RS	0 UP	NRI	~	~	~	~	~
12	60 RS	90 CW	NRI	~	~	~	~	~
13	60 RS	180 DN	1, 2	20-071	~	~	~	~
14	60 RS	270 CCW	NRI	~	~	~	~	~
15	0 BM	N/A	NRI	~	~	~	~	~
16	0 BM	N/A	NRI	~	~	~	~	~
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Comments: 2 = Geometry: flange radius (see G-115 and G-116).

Data Sheet Codes: G-XXX; "G" = Geometry (may be typical), 6-XXX; "6" = Weld Sequence, XXX = Sheet Number

Indication Codes: 1 = Flaw, 2 = OD Surface, 3 = OD Attachment, 4 = Nozzle, 5 = Other

Analyst: Quera Kimball

Reviewed By: R.O. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

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GE Nuclear Energy

GERIS 2000 Examination Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-08
Patch ID: BF-008
Ind. Data Sheet Series: 20-XXX

Channel	Angle	Direction	Ind.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sheet
1	0 WM	N/A	NRI	~	~	~	~	~
2	0 WM	N/A	1	20-072	~	~	~	~
3	70 RL	0 UP	1	20-075	20-076	20-077	20-078	20-079
				20-080	~	~	~	~
4	70 RL	90 CW	NRI	~	~	~	~	~
5	70 RL	180 DN	1	20-081	20-082	20-083	20-084	20-085
				20-086	20-087	20-088	~	~
6	70 RL	270 CCW	NRI	~	~	~	~	~
7	45 RS	0 UP	1	20-089	~	~	~	~
8	45 RS	90 CW	NRI	~	~	~	~	~
9	45 RS	180 DN	1, 2	20-090	20-091	20-093	~	~
10	45 RS	270 CCW	NRI	~	~	~	~	~
11	60 RS	0 UP	1	20-092	~	~	~	~
12	60 RS	90 CW	NRI	~	~	~	~	~
13	60 RS	180 DN	1, 2	20-094	20-095	~	~	~
14	60 RS	270 CCW	NRI	~	~	~	~	~
15	0 BM	N/A	NRI	~	~	~	~	~
16	0 BM	N/A	NRI	~	~	~	~	~
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Comments: 2 = Geometry: flange radius (see G-115 and G-116).

Indication Data Sheet 20-072 documents indications 20-072, 20-073 and 20-074.

Data Sheet Codes: G-XXX; "G" = Geometry (may be typical), 6-XXX; "6" = Weld Sequence, XXX = Sheet Number
Indication Codes: 1 = Flaw, 2 = OD Surface, 3 = OD Attachment, 4 = Nozzle, 5 = Other

Analyst: Debra Kimball

Reviewed By: R.O. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

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GE Nuclear Energy

GERIS 2000 Examination Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-09
Patch ID: BF-009
Ind. Data Sheet Series: 20-XXX

Channel	Angle	Direction	Ind.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sheet
1	0 WM	N/A	NRI	~	~	~	~	~
2	0 WM	N/A	NRI	~	~	~	~	~
3	70 RL	0 UP	NRI	~	~	~	~	~
4	70 RL	90 CW	NRI	~	~	~	~	~
5	70 RL	180 DN	1	20-096	~	~	~	~
6	70 RL	270 CCW	NRI	~	~	~	~	~
7	45 RS	0 UP	NRI	~	~	~	~	~
8	45 RS	90 CW	NRI	~	~	~	~	~
9	45 RS	180 DN	2*	~	~	~	~	~
10	45 RS	270 CCW	NRI	~	~	~	~	~
11	60 RS	0 UP	2	20-097	~	~	~	~
12	60 RS	90 CW	NRI	~	~	~	~	~
13	60 RS	180 DN	2*	~	~	~	~	~
14	60 RS	270 CCW	NRI	~	~	~	~	~
15	0 BM	N/A	NRI	~	~	~	~	~
16	0 BM	N/A	NRI	~	~	~	~	~
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Comments: 2* = Geometry: flange radius (see G-115 and G-116).

Data Sheet Codes: G-XXX; "G" = Geometry (may be typical), 6-XXX; "6" = Weld Sequence, XXX = Sheet Number
 Indication Codes: 1 = Flaw, 2 = OD Surface, 3 = OD Attachment, 4 = Nozzle, 5 = Other

Analyst: Debra Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Examination Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-10
Patch ID: BF-010
Ind. Data Sheet Series: 20-XXX

Channel	Angle	Direction	Ind.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sheet
1	0 WM	N/A	NRI	~	~	~	~	~
2	0 WM	N/A	NRI	~	~	~	~	~
3	70 RL	0 UP	1	20-098	~	~	~	~
4	70 RL	90 CW	NRI	~	~	~	~	~
5	70 RL	180 DN	1	20-099	~	~	~	~
6	70 RL	270 CCW	NRI, *	~	~	~	~	~
7	45 RS	0 UP	NRI	~	~	~	~	~
8	45 RS	90 CW	NRI	~	~	~	~	~
9	45 RS	180 DN	1, 2	20-100	20-101	~	~	~
10	45 RS	270 CCW	NRI	~	~	~	~	~
11	60 RS	0 UP	NRI, *	~	~	~	~	~
12	60 RS	90 CW	NRI	~	~	~	~	~
13	60 RS	180 DN	1, 2	20-102	~	~	~	~
14	60 RS	270 CCW	NRI	~	~	~	~	~
15	0 BM	N/A	NRI	~	~	~	~	~
16	0 BM	N/A	NRI	~	~	~	~	~
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Comments: 2 = Geometry: flange radius (see G-115 and G-116).

* Lift-off

Data Sheet Codes: G-XXX; "G" = Geometry (may be typical), 6-XXX; "6" = Weld Sequence, XXX = Sheet Number

Indication Codes: 1 = Flaw, 2 = OD Surface, 3 = OD Attachment, 4 = Nozzle, 5 = Other

Analyst: Jessie Kimball

Reviewed By: R.D. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

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GE Nuclear Energy

GERIS 2000 Examination Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-11
Patch ID: BF-011
Ind. Data Sheet Series: 20-XXX

Channel	Angle	Direction	Ind.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sheet
1	0 WM	N/A	NRI	~	~	~	~	~
2	0 WM	N/A	1	20-103	~	~	~	~
3	70 RL	0 UP	NRI	~	~	~	~	~
4	70 RL	90 CW	NRI	~	~	~	~	~
5	70 RL	180 DN	1	20-104	20-105	~	~	~
6	70 RL	270 CCW	NRI	~	~	~	~	~
7	45 RS	0 UP	NRI	~	~	~	~	~
8	45 RS	90 CW	NRI	~	~	~	~	~
9	45 RS	180 DN	1, 2	20-106	20-107	~	~	~
10	45 RS	270 CCW	NRI	~	~	~	~	~
11	60 RS	0 UP	NRI	~	~	~	~	~
12	60 RS	90 CW	NRI	~	~	~	~	~
13	60 RS	180 DN	1, 2	20-108	~	~	~	~
14	60 RS	270 CCW	NRI	~	~	~	~	~
15	0 BM	N/A	NRI	~	~	~	~	~
16	0 BM	N/A	NRI	~	~	~	~	~
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Comments: 2 = Geometry: flange radius (see G-115 and G-116).
Lift off throughout patch.

Data Sheet Codes: G-XXX; "G" = Geometry (may be typical), 6-XXX; "6" = Weld Sequence, XXX = Sheet Number
Indication Codes: 1 = Flaw, 2 = OD Surface, 3 = OD Attachment, 4 = Nozzle, 5 = Other

Analyst: Deusa Kimball

Reviewed By: R.O. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

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GE Nuclear Energy

GERIS 2000 Examination Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-12
 Patch ID: BF-012
 Ind. Data Sheet Series: 20-XXX

Channel	Angle	Direction	Ind.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sh.	Ind. Data Sheet
1	0 WM	N/A	NRI	~	~	~	~	~
2	0 WM	N/A	NRI	~	~	~	~	~
3	70 RL	0 UP	NRI	~	~	~	~	~
4	70 RL	90 CW	NRI	~	~	~	~	~
5	70 RL	180 DN	1	20-109	~	~	~	~
6	70 RL	270 CCW	NRI	~	~	~	~	~
7	45 RS	0 UP	NRI	~	~	~	~	~
8	45 RS	90 CW	NRI	~	~	~	~	~
9	45 RS	180 DN	1, 2	20-110	~	~	~	~
10	45 RS	270 CCW	NRI	~	~	~	~	~
11	60 RS	0 UP	NRI	~	~	~	~	~
12	60 RS	90 CW	NRI	~	~	~	~	~
13	60 RS	180 DN	1, 2	20-111	~	~	~	~
14	60 RS	270 CCW	NRI	~	~	~	~	~
15	0 BM	N/A	NRI	~	~	~	~	~
16	0 BM	N/A	NRI	~	~	~	~	~
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Comments: 2 = Geometry: flange radius (see G-115 and G-116).

Data Sheet Codes: G-XXX; "G" = Geometry (may be typical), 6-XXX; "6" = Weld Sequence, XXX = Sheet Number
 Indication Codes: 1 = Flaw, 2 = OD Surface, 3 = OD Attachment, 4 = Nozzle, 5 = Other

Analyst: Deusa Kimball

Reviewed By: R.O. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

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GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-01
Patch ID: BF-001
Ind. Data Sheet No.: 20-001

Indication: 20-001 & 20-002 Channel: 3 Angle: 70 Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
26.5%	48.40	~	~	~	~	705.25	33.44	~	~	~	~	20-001
12.0%	48.65	~	~	~	~	705.50	31.36	~	~	~	~	20-001
~	~	~	~	~	~	~	~	~	~	~	~	~
34.6%	49.15	~	~	~	~	705.25	34.64	~	~	~	~	20-002
34.6%	49.40	~	~	~	~	705.50	32.56	~	~	~	~	20-002
18.6%	46.65	~	~	~	~	705.50	32.64	~	~	~	~	20-002
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Comments: No apparent tip signals for either indication.
Both indications shown on the same print.
Indications 20-001 and 20-002 have no determinable thruwall and are acceptable to IWB-3510-1.

Analyst: C. Dees Kimball
Level: III Date: 12-19-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-01
Patch ID: BF-001
Ind. Data Sheet No.: 20-003

Indication: 20-003 **Channel:** 9 **Angle:** 45 **Direction:** 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
16.6%	6.65	~	~	~	~	708.25	3.21	~	~	~	~	~
58.8%	6.90	708.00	3.04	~	~	708.25	3.21	~	~	708.75	3.69	~
91.5%	7.15	707.75	2.63	707.75	2.87	708.25	3.21	708.50	3.45	708.75	3.69	~
76.7%	7.40	~	~	707.75	2.83	708.00	3.04	708.50	3.43	708.75	3.69	~
53.8%	7.65	~	~	~	~	708.00	3.01	708.50	3.43	~	~	~
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Comments: Thruwall size was determined by the SPOT technique.

TW = 0.23 L = 1.00 S = 2.16 w/clad

Analyst: Debra Kimball
Level: III **Date:** 12-19-93

Reviewed By: R.O. Forman
Level: II **Date:** 12-20-93

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GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-001

Exam Data Sheet No.: E-20-01
Ind. Data Sheet No.: 20-003
Indication: 20-003

Flaw Thruwall Dimension = 0.23
Flaw Length "l" = 1.00
Separation with clad "S" = 2.16
Surface Separation "S" = 1.97

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	2.28	2.60 Y
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.28	Allowed 2.60

a = 0.113
 a/l value = 0.113
 Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.60%
 a/t = 1.77%

Comments:

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GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-01
Patch ID: BF-001
Ind. Data Sheet No.: 20-004

Indication: 20-004

Channel: 9

Angle: 45

Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
70.2%	13.15	~	~	708.50	3.41	708.75	3.59	709.25	3.94	~	~	~
53.8%	13.40	~	~	708.50	3.41	709.00	3.76	709.50	4.12	~	~	~
~	~	~	~	~	~	~	~	~	~	~	~	~
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Comments: Same indication recorded with Ch. 13 (20-006).
 Thruwall size was determined by the SPOT technique.

TW = 0.20 L = 0.25 S = 2.44 w/clad

Analyst: *Jeresa Kimball*
 Level: III Date: 12-19-93

Reviewed By: *R.O. Forman*
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
 Weld ID: C-5-FLG
 Patch: BF-001

Exam Data Sheet No.: E-20-01
 Ind. Data Sheet No.: 20-004
 Indication: 20-004

Flaw Thruwall Dimension = 0.20
 Flaw Length "I" = 0.25
 Separation with clad "S" = 2.44
 Surface Separation "S" = 2.25

T nominal = 6.38
 Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition
 TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	4.95	5.74 Y
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed	Allowed
			4.95	5.74

a = 0.099
 a/l value = 0.396
 Y = 1.000

Flaw is Subsurface

Allowed a/t = 5.74%
 a/t = 1.55%

Comments:



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

R1151

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-01
Patch ID: BF-001
Ind. Data Sheet No.: G-115

Indication: G-115 Channel: 9 Angle: 45 Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
449.8%	24.40	~	~	~	~	714.75	10.88	~	~	~	~	~
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Comments: OD surface geometry due to flange radius.

Analyst: Aeresa Kimball
Level: III Date: 12-19-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

R1151

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-01
Patch ID: BF-001
Ind. Data Sheet No.: 20-005

Indication: 20-005

Channel: 10

Angle: 45

Direction: 270

Amp.	Y	20% Min X	MP	50% Min X	MP	@ Max X	MP	50% Max X	MP	20% Max X	MP	Remarks
24.3%	708.50	52.96	2.36	~	~	53.21	2.52	~	~	~	~	~
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Comments: No apparent tip signals.
Thruwall size was determined by the Reg. Guide 20% beam spread correction method.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.

TW = 0.00 L = 0.25 S = 1.78 w/clad

Analyst: Guesal Kimball
Level: III Date: 12-19-93

Reviewed By: R.O. Formax
Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-01
Patch ID: BF-001
Ind. Data Sheet No.: 20-006

Indication: 20-006

Channel: 13

Angle: 60

Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
24.3%	13.04	~	~	~	~	709.95	4.62	710.95	5.47	~	~	~
31.7%	13.29	~	~	709.45	4.28	709.95	4.59	710.95	5.43	~	~	~
34.6%	13.54	~	~	709.95	4.59	710.20	4.76	710.70	5.24	~	~	~
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Comments: Same indication recorded with Ch. 9 (20-004).
Thruwall size was determined by the SPOT technique.

TW = 0.30 L = 0.50 S = 2.23 w/clad

Analyst: Ceresa Kimball

Reviewed By: R.O. Forman

Level: III Date: 12-19-93

Level: II Date: 12-20-93

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GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-001

Exam Data Sheet No.: E-20-01
Ind. Data Sheet No.: 20-006
Indication: 20-006

Flaw Thruwall Dimension = 0.30
Flaw Length "l" = 0.50
Separation with clad "S" = 2.23
Surface Separation "S" = 2.04

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition
TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	3.80	4.40 Y
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed	Allowed
			3.80	4.40

a = 0.150
a/l value = 0.300
Y = 1.000

Flaw is Subsurface

Allowed a/t = 4.40%
a/t = 2.35%

Comments:

Blank lines for comments.

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3

Weld ID: C-5-FLG

Cal. ID: C-001

Exam Data Sheet No.: E-20-01

Patch ID: BF-001

Ind. Data Sheet No.: G-116

Indication: G-116

Channel: 13

Angle: 60

Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
699.8%	22.79	~	~	~	~	717.95	13.30	~	~	~	~	~
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Comments: OD surface geometry due to flange radius.

Analyst: AUSA Kimball
Level: III Date: 12-19-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

R1151

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-02
Patch ID: BF-002
Ind. Data Sheet No.: 20-007

Indication: 20-007 Channel: 3 Angle: 70 Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
13.1%	83.40	~	~	~	~	703.75	24.56	~	~	~	~	~
34.6%	83.65	~	~	~	~	703.75	24.40	~	~	~	~	~
45.1%	83.90	~	~	~	~	704.00	22.48	~	~	~	~	~
37.8%	84.15	~	~	~	~	704.00	22.48	~	~	~	~	~
18.6%	84.40	~	~	~	~	704.00	22.56	~	~	~	~	~
18.6%	84.65	~	~	~	~	704.25	20.56	~	~	~	~	~
34.6%	84.90	~	~	~	~	704.00	22.32	~	~	~	~	~
22.2%	85.15	~	~	~	~	704.00	22.24	~	~	~	~	~
13.1%	85.40	~	~	~	~	703.75	24.56	~	~	~	~	~
17.1%	85.65	~	~	~	~	704.00	22.48	~	~	~	~	~
26.5%	85.90	~	~	~	~	703.75	24.56	~	~	~	~	~
24.3%	86.15	~	~	~	~	704.00	22.56	~	~	~	~	~
12.0%	86.40	~	~	~	~	704.00	22.64	~	~	~	~	~
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Comments: This indication is the same as recorded with Ch. 5 (see 20-016).
Thruwall size was determined by the PATT technique.

TW = 0.40 L = 3.25 S = 1.01 w/clad

Analyst: Deusa Kimball

Reviewed By: R.O. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

R 1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-002

Exam Data Sheet No.: E-20-02
Ind. Data Sheet No.: 20-007
Indication: 20-007

Flaw Thruwall Dimension = 0.40
Flaw Length "l" = 3.25
Separation with clad "S" = 1.01
Surface Separation "S" = 0.82

T measured = 6.54
Clad T nominal = 0.19

Flaw is unacceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	2.05	2.27 Y
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.05	Allowed 2.27

a = 0.200
a/l value = 0.061
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.27%
a/t = 3.05%

Comments:

R 1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-02
Patch ID: BF-002
Ind. Data Sheet No.: 20-008

Indication: 20-008 Channel: 3 Angle: 70 Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
11.0%	87.40	~	~	~	~	703.75	24.40	~	~	~	~	~
15.3%	87.65	~	~	~	~	703.75	24.64	~	~	~	~	~
41.3%	87.90	~	~	~	~	703.75	24.72	~	~	~	~	~
64.3%	88.15	~	~	~	~	703.75	24.72	~	~	~	~	~
41.3%	88.40	~	~	~	~	704.00	22.64	~	~	~	~	~
20.4%	88.65	~	~	~	~	704.00	22.80	~	~	~	~	~
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Comments: Thruwall size was determined by the PATT technique.

TW = 0.39 L = 1.50 S = 1.02 w/clad

Analyst: Chester Kimball

Level: III Date: 12-19-93

Reviewed By: R.O. Forman

Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-002

Exam Data Sheet No.: E-20-02
Ind. Data Sheet No.: 20-008
Indication: 20-008

Flaw Thruwall Dimension = 0.39
Flaw Length "l" = 1.50
Separation with clad "S" = 1.02
Surface Separation "S" = 0.83

T measured = 6.55
Clad T nominal = 0.19

Flaw is unacceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	2.38	2.74 Y
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.38	Allowed 2.74

a = 0.196
a/l value = 0.130
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.74%
a/t = 2.98%

Comments:

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R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3

Weld ID: C-5-FLG

Cal. ID: C-001

Exam Data Sheet No.: E-20-02

Patch ID: BF-002

Ind. Data Sheet No.: 20-009

Indication: 20-009

Channel: 3

Angle: 70

Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
14.3%	94.40	~	~	703.75	24.80	~	~	~	~	~	~	~
24.3%	94.65	~	~	703.50	26.72	~	~	~	~	~	~	~
12.0%	94.90	~	~	704.00	22.48	~	~	~	~	~	~	~
14.3%	95.15	~	~	704.25	19.20	~	~	~	~	~	~	~
17.1%	95.40	~	~	704.25	19.20	~	~	~	~	~	~	~
24.3%	95.65	~	~	703.75	24.80	~	~	~	~	~	~	~
34.6%	95.90	~	~	704.00	22.88	~	~	~	~	~	~	~
37.8%	96.15	~	~	703.00	30.48	~	~	~	~	~	~	~
13.1%	96.40	~	~	704.00	22.48	~	~	~	~	~	~	~
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Comments: This indication is the same as recorded with Ch. 5 (see 20-017), Ch. 7 (see 20-023) and Ch. 9 (see 20-027).
Thruwall size was determined by the PATT technique.

TW = 0.38 L = 2.25 S = 1.03 w/clad

Analyst: Jessie Kimball

Reviewed By: R.O. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-002

Exam Data Sheet No.: E-20-02
Ind. Data Sheet No.: 20-009
Indication: 20-009

Flaw Thruwall Dimension = 0.38
Flaw Length "l" = 2.25
Separation with clad "S" = 1.03
Surface Separation "S" = 0.84

T measured = 6.59
Clad T nominal = 0.19

Flaw is unacceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	2.14	2.41 Y
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.14	Allowed 2.41

a = 0.192
a/l value = 0.085
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.41%
a/t = 2.91%

Comments:



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

R1151

Project: TVA, Browns Ferry, Unit 3

Exam Data Sheet No.: E-20-02

Weld ID: C-5-FLG

Patch ID: BF-002

Cal. ID: C-001

Ind. Data Sheet No.: 20-010

Indication: 20-010

Channel: 3

Angle: 70

Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
17.1%	97.40	~	~	~	~	703.75	24.80	~	~	~	~	~
41.3%	97.65	~	~	~	~	703.25	28.64	~	~	~	~	~
22.2%	97.90	~	~	~	~	704.00	22.72	~	~	~	~	~
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Comments: Thruwall size was determined by the PATT technique.

TW = 0.29 L = 0.75 S = 1.03 w/clad

Analyst: G. Kimball

Reviewed By: R.O. Forman

Level: III Date: 12-19-93

Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-002

Exam Data Sheet No.: E-20-02
Ind. Data Sheet No.: 20-010
Indication: 20-010

Flaw Thruwall Dimension = 0.29
Flaw Length "l" = 0.75
Separation with clad "S" = 1.03
Surface Separation "S" = 0.84

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	~	~
0.15	2.50	2.9	2.75	3.23 Y
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.75	Allowed 3.23

a = 0.144
 a/l value = 0.191
 Y = 1.000

Flaw is Subsurface

Allowed a/t = 3.23%
 a/t = 2.25%

Comments:

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3

Weld ID: C-5-FLG

Cal. ID: C-001

Exam Data Sheet No.: E-20-02

Patch ID: BF-002

Ind. Data Sheet No.: 20-011

Indication: 20-011

Channel: 3

Angle: 70

Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
17.1%	100.15	~	~	~	~	703.75	24.48	~	~	~	~	~
27.5%	100.40	~	~	~	~	703.75	24.88	~	~	~	~	~
31.7%	100.65	~	~	~	~	703.75	24.80	~	~	~	~	~
31.7%	100.90	~	~	~	~	703.50	26.56	~	~	~	~	~
26.5%	101.15	~	~	~	~	703.50	26.72	~	~	~	~	~
18.6%	101.40	~	~	~	~	703.50	26.96	~	~	~	~	~
12.0%	101.65	~	~	~	~	703.50	26.88	~	~	~	~	~
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Comments: This indication is the same as recorded with Ch. 5 (see 20-018).
Thruwall size was determined by the PATT technique.

TW = 0.39 L = 1.75 S = 1.23 w/clad

Analyst: Jessica Kimball

Reviewed By: R.O. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-002

Exam Data Sheet No.: E-20-02
Ind. Data Sheet No.: 20-011
Indication: 20-011

Flaw Thruwall Dimension = 0.39
Flaw Length "l" = 1.75
Separation with clad "S" = 1.23
Surface Separation "S" = 1.04

T measured = 6.62
Clad T nominal = 0.19

Flaw is unacceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	2.26	2.58 Y
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.26	Allowed 2.58

a = 0.194
a/l value = 0.111
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.58%
a/t = 2.92%

Comments:

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GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-02
Patch ID: BF-002
Ind. Data Sheet No.: 20-012

Indication: 20-012 **Channel:** 3 **Angle:** 70 **Direction:** 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
31.7%	116.40	~	~	~	~	703.75	24.64	~	~	~	~	~
45.1%	116.65	~	~	~	~	703.50	26.48	~	~	~	~	~
41.3%	116.90	~	~	~	~	704.25	21.28	~	~	~	~	~
29.0%	117.15	~	~	~	~	704.00	23.20	~	~	~	~	~
24.3%	117.40	~	~	~	~	704.00	23.20	~	~	~	~	~
15.6%	117.65	~	~	~	~	704.50	18.96	~	~	~	~	~
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Comments: Thruwall size was determined by the PATT technique.
 This indication is the same as recorded with Ch. 7 (see 20-024).

TW = 0.48 L = 1.50 S = 1.14 w/clad

Analyst: Jessie Kimball
Level: III **Date:** 12-20-93

Reviewed By: P.O. Foman
Level: II **Date:** 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-002

Exam Data Sheet No.: E-20-02
Ind. Data Sheet No.: 20-012
Indication: 20-012

Flaw Thruwall Dimension = 0.48
Flaw Length "I" = 1.50
Separation with clad "S" = 1.14
Surface Separation "S" = 0.95

T measured = 6.87
Clad T nominal = 0.19

Flaw is unacceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	~	~
0.15	2.50	2.9	2.55	2.97 Y
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.55	Allowed 2.97

a = 0.239
a/l value = 0.159
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.97%
a/t = 3.47%

Comments:



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-02
Patch ID: BF-002
Ind. Data Sheet No.: 20-013

Indication: 20-013 **Channel:** 3 **Angle:** 70 **Direction:** 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
17.1%	128.90	~	~	~	~	703.75	24.24	~	~	~	~	~
31.7%	129.15	~	~	~	~	703.50	26.08	~	~	~	~	~
34.6%	129.40	~	~	~	~	703.50	26.24	~	~	~	~	~
29.0%	129.65	~	~	~	~	703.50	26.24	~	~	~	~	~
11.0%	129.90	~	~	~	~	703.50	26.16	~	~	~	~	~
13.1%	130.15	~	~	~	~	703.25	28.64	~	~	~	~	~
29.0%	130.40	~	~	~	~	702.75	32.65	~	~	~	~	~
20.4%	130.65	~	~	~	~	703.00	30.32	~	~	~	~	~
13.1%	130.90	~	~	~	~	704.00	22.48	~	~	~	~	~
18.6%	131.15	~	~	~	~	703.50	26.24	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.
This indication is the same as recorded with Ch. 5 (see 20-020) and Ch. 7 (see 20-025).

Analyst: Jessie Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3

Weld ID: C-5-FLG

Cal. ID: C-001

Exam Data Sheet No.: E-20-02

Patch ID: BF-002

Ind. Data Sheet No.: 20-014

Indication: 20-014

Channel: 3

Angle: 70

Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
22.2%	137.15	~	~	~	~	704.50	24.08	~	~	~	~	~
34.6%	137.40	~	~	~	~	704.50	24.16	~	~	~	~	~
41.3%	137.65	~	~	~	~	704.50	24.32	~	~	~	~	~
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Comments: No apparent tip signals.

Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Jessie Kimball

Level: III Date: 12-19-93

Reviewed By: R.O. Forman

Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-02
Patch ID: BF-002
Ind. Data Sheet No.: 20-015

Indication: 20-015

Channel: 3

Angle: 70

Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
20.9%	145.65	~	~	~	~	703.25	28.96	~	~	~	~	~
31.7%	145.90	~	~	~	~	704.00	22.64	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Quessa Kimball
Level: III Date: 12-19-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93



GE Nuclear Energy

**GERIS 2000 Indication
Data Sheet**

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-02
Patch ID: BF-002
Ind. Data Sheet No.: 20-016

Indication: 20-016 **Channel:** 5 **Angle:** 70 **Direction:** 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
17.1%	83.35	~	~	~	~	707.95	20.32	~	~	~	~	~
20.4%	83.60	~	~	~	~	708.20	22.32	~	~	~	~	~
15.6%	83.85	~	~	~	~	708.20	22.32	~	~	~	~	~
11.0%	84.10	~	~	~	~	708.20	22.16	~	~	~	~	~
12.0%	84.35	~	~	~	~	707.95	20.40	~	~	~	~	~
17.1%	84.60	~	~	~	~	707.95	20.08	~	~	~	~	~
22.2%	84.85	~	~	~	~	708.20	22.08	~	~	~	~	~
13.1%	85.10	~	~	~	~	708.20	22.00	~	~	~	~	~
15.6%	85.35	~	~	~	~	707.95	20.48	~	~	~	~	~
29.0%	85.60	~	~	~	~	707.95	20.56	~	~	~	~	~
37.8%	85.85	~	~	~	~	707.95	20.56	~	~	~	~	~
15.6%	86.10	~	~	~	~	707.70	18.32	~	~	~	~	~
10.0%	86.35	~	~	~	~	708.20	22.24	~	~	~	~	~
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Comments: This indication is the same as recorded with Ch. 3 (see 20-007).
Thruwall size was determined by the PATT technique.

TW = 0.43 L = 3.25 S = 0.99 w/clad

Analyst: Jessica Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-002

Exam Data Sheet No.: E-20-02
Ind. Data Sheet No.: 20-016
Indication: 20-016

Flaw Thruwall Dimension = 0.43
Flaw Length "l" = 3.25
Separation with clad "S" = 0.99
Surface Separation "S" = 0.80

T measured = 6.54
Clad T nominal = 0.19

Flaw is unacceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	2.06	2.30 Y
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.06	Allowed 2.30

a = 0.215
 a/l value = 0.066
 Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.30%
 a/t = 3.29%

Comments:



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-02
Patch ID: BF-002
Ind. Data Sheet No.: 20-017

Indication: 20-017 **Channel:** 5 **Angle:** 70 **Direction:** 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
13.1%	94.60	~	~	~	~	707.45	15.60	~	~	~	~	~
17.1%	94.85	~	~	~	~	707.70	17.68	~	~	~	~	~
20.4%	95.10	~	~	~	~	707.70	17.60	~	~	~	~	~
15.6%	95.35	~	~	~	~	707.70	17.84	~	~	~	~	~
11.0%	95.60	~	~	~	~	707.95	19.44	~	~	~	~	~
37.8%	95.85	~	~	~	~	707.45	15.60	~	~	~	~	~
64.3%	96.10	~	~	~	~	707.70	17.68	~	~	~	~	~
17.1%	96.35	~	~	~	~	707.70	18.00	~	~	~	~	~
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Comments: This indication is the same as recorded with Ch. 3 (see 20-009), Ch. 7 (see 20-023) and Ch. 9 (see 20-027).
Thruwall size was determined by the PATT technique.

TW = 0.22 L = 2.00 S = 0.59 w/clad

Analyst: Chessa Kimball
Level: III **Date:** 12-20-93

Reviewed By: R.O. Forman
Level: II **Date:** 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-002

Exam Data Sheet No.: E-20-02
Ind. Data Sheet No.: 20-017
Indication: 20-017

Flaw Thruwall Dimension = 0.22
Flaw Length "l" = 2.00
Separation with clad "S" = 0.59
Surface Separation "S" = 0.40

T measured = 6.59
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	2.02	2.22 Y
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed	Allowed
			2.02	2.22

a = 0.108
 a/l value = 0.054
 Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.22%
 a/t = 1.63%

Comments:

Pg 49 of 291

00122

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-02
 Patch ID: BF-002
 Ind. Data Sheet No.: 20-018

Indication: 20-018 Channel: 5 Angle: 70 Direction: 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
20.4%	100.10	~	~	~	~	708.45	26.16	~	~	~	~	~
31.7%	100.35	~	~	~	~	708.45	26.08	~	~	~	~	~
22.2%	100.60	~	~	~	~	708.20	23.84	~	~	~	~	~
13.1%	100.85	~	~	~	~	708.20	23.92	~	~	~	~	~
18.6%	101.10	~	~	~	~	708.45	26.08	~	~	~	~	~
13.1%	101.35	~	~	~	~	708.20	24.00	~	~	~	~	~
15.6%	101.60	~	~	~	~	708.20	23.28	~	~	~	~	~
11.0%	101.85	~	~	~	~	708.20	23.28	~	~	~	~	~
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Comments: No apparent tip signals.
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.
 This indication is the same as recorded with Ch. 3 (20-011).

Analyst: Geresa Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-02
Patch ID: BF-002
Ind. Data Sheet No.: 20-019

Indication: 20-019 **Channel:** 5 **Angle:** 70 **Direction:** 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
26.5%	126.60	~	~	~	~	709.20	27.52	~	~	~	~	~
29.0%	126.85	~	~	~	~	709.20	27.28	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Debra Kimball
Level: III **Date:** 12-19-93

Reviewed By: R.O. Forman
Level: II **Date:** 12-20-93



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-02
Patch ID: BF-002
Ind. Data Sheet No.: 20-020

Indication: 20-020

Channel: 5

Angle: 70

Direction: 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
20.4%	130.35	~	~	~	~	709.95	32.24	~	~	~	~	~
31.7%	130.60	~	~	~	~	709.95	32.08	~	~	~	~	~
22.2%	130.85	~	~	~	~	709.95	30.24	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.
This indication is the same as recorded with Ch. 3 (see 20-013).

Analyst: Deusa Kimball

Reviewed By: R.O. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-02
 Patch ID: BF-002
 Ind. Data Sheet No.: 20-021

Indication: 20-021 Channel: 5 Angle: 70 Direction: 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
11.0%	136.60	~	~	~	~	709.95	32.40	~	~	~	~	~
24.3%	136.85	~	~	~	~	709.95	32.32	~	~	~	~	~
29.0%	137.10	~	~	~	~	709.95	32.40	~	~	~	~	~
31.7%	137.35	~	~	~	~	709.95	32.40	~	~	~	~	~
15.6%	137.60	~	~	~	~	709.70	30.48	~	~	~	~	~
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Comments: No apparent tip signals.
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Debra Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-02
Patch ID: BF-002
Ind. Data Sheet No.: 20-022

Indication: 20-022 **Channel:** 7 **Angle:** 45 **Direction:** 0

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
34.6%	88.21	704.55	2.07	~	~	705.05	1.67	~	~	~	~	~
41.3%	88.46	~	~	~	~	704.80	1.86	~	~	705.05	1.65	~
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Comments: No apparent tip signals.
 Thruwall size was determined by the Reg. Guide 20% beam spread correction method.
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.

TW = 0.00 L = 0.25 S = 1.32 w/clad

Analyst: Jessica Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

R 1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-02
 Patch ID: BF-002
 Ind. Data Sheet No.: 20-023

Indication: 20-023 Channel: 7 Angle: 45 Direction: 0

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
18.6%	95.46	~	~	~	~	704.55	2.14	~	~	~	~	~
34.6%	95.71	~	~	~	~	704.55	2.11	~	~	704.80	1.96	~
37.8%	95.98	74.55	2.10	~	~	704.80	1.92	~	~	~	~	~
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Comments: No apparent tip signals.
 Thruwall size was determined by the Reg. Guide 20% beam spread correction method.
 This indication is the same as recorded with Ch. 3 (see 20-009), Ch. 5 (see 20-017) and Ch. 9 (see 20-027).
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.

TW = 0.00 L = 0.50 S = 1.36 w/clad

Analyst: Jerusa Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-02
Patch ID: BF-002
Ind. Data Sheet No.: 20-024

Indication: 20-024 **Channel:** 7 **Angle:** 45 **Direction:** 0

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
22.2%	116.71	~	~	~	~	704.05	2.77	~	~	~	~	~
29.0%	116.96	703.60	2.98	~	~	704.05	2.80	~	~	704.55	2.40	~
41.3%	117.21	~	~	~	~	704.30	2.56	~	~	~	~	~
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Comments: No apparent tip signals.
 Thruwall size was determined by the Reg. Guide 20% beam spread correction method.
 This indication is the same as recorded with Ch. 3 (see 20-012).
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.

TW = 0.00 L = 0.50 S = 1.81 w/clad

Analyst: Jessie Kimball

Reviewed By: R.D. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-02
Patch ID: BF-002
Ind. Data Sheet No.: 20-025

Indication: 20-025 **Channel:** 7 **Angle:** 45 **Direction:** 0

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
41.3%	128.96	704.55	2.05	~	~	705.05	1.68	~	~	~	~	~
58.8%	129.21	704.55	2.07	~	~	704.80	1.83	~	~	705.05	1.67	~
34.6%	129.46	704.55	2.07	~	~	704.80	1.84	~	~	705.05	1.68	~
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Comments: No apparent tip signals.
 Thruwall size was determined by the Reg. Guide 20% beam spread correction method.
 This indication is the same as recorded with Ch. 3 (see 20-013).
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.
 TW = 0.00 L = 0.50 S = 1.29 w/clad

Analyst: Jessica Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Fournan
 Level: II Date: 12-20-93



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-02
Patch ID: BF-002
Ind. Data Sheet No.: 20-026

Indication: 20-026 Channel: 7 Angle: 45 Direction: 0

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
22.2%	145.71	~	~	~	~	702.05	5.32	~	~	~	~	~
49.3%	145.96	~	~	~	~	701.55	5.86	~	~	~	~	~
53.8%	146.21	~	~	~	~	702.30	5.38	~	~	~	~	~
45.1%	146.46	~	~	~	~	702.30	5.08	~	~	~	~	~
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Comments: Thruwall size was determined by the SPOT technique.
Same indication recorded with Ch. 11 (see 20-029).

TW = 0.25 L = 0.75 S = 2.67

Analyst: Jones Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-002

Exam Data Sheet No.: E-20-02
Ind. Data Sheet No.: 20-26
Indication: 20-26

Flaw Thruwall Dimension = 0.25
Flaw Length "l" = 0.75
Separation with clad "S" = N/A
Surface Separation "S" = 2.67

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	~	~
0.15	2.50	2.9	2.60	3.03 Y
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.60	Allowed 3.03

a = 0.125
a/l value = 0.167
Y = 1.000

Flaw is Subsurface

Allowed a/t = 3.03%
a/t = 1.96%

Comments:

Blank lines for comments.

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-02
Patch ID: BF-002
Ind. Data Sheet No.: 20-027

Indication: 20-027

Channel: 9

Angle: 45

Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
20.4%	95.40	~	~	~	~	707.50	2.08	~	~	~	~	~
29.0%	95.65	707.00	1.58	~	~	707.25	1.85	~	~	707.75	2.23	~
34.6%	95.90	707.25	1.85	~	~	707.50	2.08	~	~	707.75	2.08	~
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Comments: No apparent tip signals.
 Thruwall size was determined by the Reg. Guide 20% beam spread correction method.
 This indication is the same as recorded with Ch. 3 (see 20-009), Ch. 5 (see 20-017) and Ch. 7 (see 20-023).
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.

TW = 0.00 L = 0.50 S = 1.46 w/clad

Analyst: Debra Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-02
Patch ID: BF-002
Ind. Data Sheet No.: 20-028

Indication: 20-028 Channel: 9 Angle: 45 Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
20.4%	128.15	~	~	~	~	709.25	5.01	~	~	170.25	5.80	~
24.3%	128.40	708.75	4.67	~	~	709.50	5.21	~	~	710.25	5.78	~
15.6%	128.65	709.00	4.85	~	~	709.50	5.19	~	~	710.00	5.58	~
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Comments: Thruwall size was determined by the SPOT technique.

TW = 0.23 L = 0.50 S = 2.80

Analyst: Jessica Kimball
Level: III Date: 12-19-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93

B1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-002

Exam Data Sheet No.: E-20-02
Ind. Data Sheet No.: 20-28
Indication: 20-28

Flaw Thruwall Dimension = 0.23
Flaw Length "l" = 0.50
Separation with clad "S" = N/A
Surface Separation "S" = 2.80

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition
TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	3.10	3.60 Y
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed	Allowed
			3.10	3.60

a = 0.115
a/l value = 0.230
Y = 1.000

Flaw is Subsurface

Allowed a/t = 3.60%
a/t = 1.80%

Comments:



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-02
 Patch ID: BF-002
 Ind. Data Sheet No.: 20-029

Indication: 20-029 Channel: 11 Angle: 60 Direction: 0

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
45.1%	145.85	~	~	699.30	7.65	699.80	7.16	701.80	5.48	~	~	~
53.8%	146.10	~	~	699.55	7.46	699.80	7.18	702.30	4.99	~	~	~
45.1%	146.35	~	~	699.80	7.18	701.80	5.48	~	~	~	~	~
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Comments: No apparent tip signals.
 This indication located in a lift-off area.
 Same indication recorded with Ch. 7, (20-026).
 Thruwall determined by the SPOT technique from Ch. 7 (20-026).
 Dimensions below assigned from Indication Data Sheet 20-026.
 TW = 0.25 L = 0.75 S = 2.67

Analyst: Jessie Kimball
 Level: III Date: 12-20-93

Reviewed By: P.O. Foman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-002

Exam Data Sheet No.: E-20-02
Ind. Data Sheet No.: 20-29
Indication: 20-29

Flaw Thruwall Dimension = 0.25
Flaw Length "l" = 0.75
Separation with clad "S" = N/A
Surface Separation "S" = 2.67

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition
TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	~	~
0.15	2.50	2.9	2.60	3.03 Y
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed	Allowed
			2.60	3.03

a = 0.125
a/l value = 0.167
Y = 1.000

Flaw is Subsurface

Allowed a/t = 3.03%
a/t = 1.96%

Comments: Flaw dimensions assigned from Indication Data Sheet 20-026.

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GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-03
Patch ID: BF-003
Ind. Data Sheet No.: 20-030

Indication: 20-030 Channel: 1 Angle: 0 Direction: 0

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
64.3%	206.21	~	~	~	~	706.20	3.76	~	~	~	~	~
119.4%	206.46	~	~	~	~	706.20	3.72	~	~	~	~	~
142.4%	206.71	~	~	~	~	706.20	3.70	~	~	~	~	~
53.8%	206.96	~	~	~	~	706.20	3.70	~	~	~	~	~
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Comments: This indication evaluated as a laminar reflector and is acceptable in accordance with IWB-3510-2, ASME Section XI, 1986 Edition, No Addenda.

Analyst: Debra Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-03
 Patch ID: BF-003
 Ind. Data Sheet No.: 20-031

Indication: 20-031 Channel: 3 Angle: 70 Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
22.2%	180.90	~	~	~	~	703.75	24.08	~	~	~	~	~
26.5%	181.15	~	~	~	~	704.00	22.24	~	~	~	~	~
83.8%	181.40	~	~	~	~	704.00	22.00	~	~	~	~	~
29.0%	181.65	~	~	~	~	704.00	22.24	~	~	~	~	~
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Comments: No apparent tip signals.
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Debra Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-03
Patch ID: BF-003
Ind. Data Sheet No.: 20-032

Indication: 20-032 Channel: 3 Angle: 70 Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
29.0%	209.40	~	~	~	~	704.25	19.88	~	~	~	~	~
29.0%	209.65	~	~	~	~	704.25	19.52	~	~	~	~	~
20.4%	209.90	~	~	~	~	704.00	21.44	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Jesus Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93

B1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-03
Patch ID: BF-003
Ind. Data Sheet No.: 20-033

Indication: 20-033 **Channel:** 7 **Angle:** 45 **Direction:** 0

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
10.0%	210.21	~	~	~	~	702.55	7.32	~	~	~	~	~
17.1%	210.46	~	~	~	~	702.55	7.30	~	~	~	~	~
24.3%	210.71	~	~	702.30	7.50	702.55	7.28	~	~	~	~	~
29.0%	210.96	~	~	701.55	8.04	702.55	7.28	702.80	7.07	~	~	~
18.6%	211.21	~	~	~	~	702.30	7.46	~	~	~	~	~
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Comments: Thruwall size was determined by the SPOT technique.
 Recorded at less than ASME required levels due to apparent tip diffracted signals.

TW = 0.21 L = 1.00 S = 1.35

Analyst: Debra Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Foman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-003

Exam Data Sheet No.: E-20-03
Ind. Data Sheet No.: 20-33
Indication: 20-33

Flaw Thruwall Dimension = 0.21
Flaw Length "l" = 1.00
Separation with clad "S" = N/A
Surface Separation "S" = 1.35

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	2.23	2.54 Y
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.23	Allowed 2.54

a = 0.105
 a/l value = 0.105
 Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.54%
 a/t = 1.65%

Comments:



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-03
Patch ID: BF-003
Ind. Data Sheet No.: 20-034

Indication: 20-034

Channel: 9

Angle: 45

Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
11.0%	170.90	~	~	~	~	710.75	5.71	711.25	6.09	~	~	~
15.6%	171.15	~	~	710.25	5.40	710.75	5.74	712.75	7.24	~	~	~
20.4%	171.40	~	~	710.75	5.73	711.50	6.27	712.75	7.25	~	~	~
13.1%	171.65	~	~	711.00	5.92	711.50	6.25	712.50	7.04	~	~	~
7.0%	171.90	~	~	~	~	711.50	6.25	~	~	~	~	~
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Comments: Thruwall size was determined by the SPOT technique.
Recorded at less than ASME required levels due to apparent tip diffracted signals.

TW = 0.24 L = 1.00 S = 2.05

Analyst: *Jessie Kimball*
Level: *III* Date: *12-20-93*

Reviewed By: *R.O. Forman*
Level: *II* Date: *12-20-93*

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-003

Exam Data Sheet No.: E-20-03
Ind. Data Sheet No.: 20-34
Indication: 20-34

Flaw Thruwall Dimension = 0.24
Flaw Length "l" = 1.00
Separation with clad "S" = N/A
Surface Separation "S" = 2.05

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition
TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	2.32	2.66 Y
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed	Allowed
			2.32	2.66

a = 0.120
a/l value = 0.120
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.66%
a/t = 1.88%

Comments:



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-04
Patch ID: BF-004
Ind. Data Sheet No.: 20-035

Indication: 20-035 Channel: 2 Angle: 0 Direction: 90

Amp.	Y	20% Min X	MP	50% Min X	MP	@ Max X	MP	50% Max X	MP	20% Max X	MP	Remarks
170.0%	708.30	~	~	248.15	5.88	248.40	5.88	248.90	5.88	~	~	~
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Comments: This indication evaluated as a laminar reflector and is acceptable
in accordance with IWB-3510-2, ASME Section XI, 1986 Edition, No Addenda.

Analyst: Debra Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Finnan
Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3

Weld ID: C-5-FLG

Cal. ID: C-001

Exam Data Sheet No.: E-20-04

Patch ID: BF-004

Ind. Data Sheet No.: 20-036

Indication: 20-036

Channel: 2

Angle: 0

Direction: 90

Amp.	Y	20%		50%		@ Max		50%		20%		Remarks
		Min X	MP	Min X	MP	X	MP	Max X	MP	Max X	MP	
64.3%	709.30	~	~	248.15	6.21	248.40	6.21	248.90	6.21	~	~	~
58.8%	709.55	~	~	248.15	6.25	248.40	6.25	~	~	~	~	~
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Comments: This indication evaluated as a laminar reflector and is acceptable
in accordance with IWB-3510-2, ASME Section XI, 1986 Edition, No Addenda.

Analyst: J. Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-04
Patch ID: BF-004
Ind. Data Sheet No.: 20-037

Indication: 20-037 **Channel:** 7 **Angle:** 45 **Direction:** 0

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
9.2%	254.46	~	~	~	~	703.05	4.38	~	~	~	~	~
13.1%	254.71	~	~	702.55	4.79	703.05	4.33	703.30	4.18	~	~	~
10.0%	254.96	~	~	702.80	4.53	703.30	4.17	~	~	~	~	~
7.0%	255.21	~	~	~	~	702.80	4.53	~	~	~	~	~
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Comments: Thruwall size was determined by the SPOT technique.
 Recorded at less than ASME required levels due to apparent tip diffracted signals.

TW = 0.23 L = 0.75 S = 2.95 w/clad

Analyst: *Deusa Kimball*
 Level: III Date: 12-20-93

Reviewed By: *R.O. Forman*
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-004

Exam Data Sheet No.: E-20-04
Ind. Data Sheet No.: 20-037
Indication: 20-037

Flaw Thruwall Dimension = 0.23
Flaw Length "I" = 0.75
Separation with clad "S" = 2.95
Surface Separation "S" = 2.76

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	~	~
0.15	2.50	2.9	2.52	2.93 Y
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed	Allowed
			2.52	2.93

a = 0.115
a/l value = 0.153
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.93%
a/t = 1.80%

Comments:

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-04
 Patch ID: BF-004
 Ind. Data Sheet No.: 20-038

Indication: 20-038 Channel: 9 Angle: 45 Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
17.1%	241.65	~	~	709.25	4.90	709.75	5.27	~	~	~	~	~
22.2%	241.90	~	~	709.00	4.70	709.75	5.25	710.00	5.45	~	~	~
15.6%	242.15	~	~	709.00	4.70	709.50	5.05	709.75	5.25	~	~	~
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Comments: Thruwall size was determined by the SPOT technique.
 Recorded at less than ASME required levels due to apparent tip diffracted signals.

TW = 0.21 L = 0.50 S = 2.78

Analyst: Deusa Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

**GERIS 2000 Indication
Evaluation Sheet**

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-004

Exam Data Sheet No.: E-20-04
Ind. Data Sheet No.: 20-38
Indication: 20-38

Flaw Thruwall Dimension = 0.21
Flaw Length "l" = 0.50
Separation with clad "S" = N/A
Surface Separation "S" = 2.78

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

**ASME Section XI, 1986 Edition
TABLE IWB-3510-1 for 4" to 12"**

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	2.90	3.40 Y
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.90	Allowed 3.40

a = 0.105
a/l value = 0.210
Y = 1.000

Flaw is Subsurface

Allowed a/t = 3.40%
a/t = 1.65%

Comments:

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-04
 Patch ID: BF-004
 Ind. Data Sheet No.: 20-039

Indication: 20-039

Channel: 11

Angle: 60

Direction: 0

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
29.0%	265.35	703.55	4.00	~	~	704.05	3.55	~	~	~	~	~
26.5%	265.60	704.05	3.53	~	~	704.30	3.31	~	~	~	~	~
58.8%	265.85	703.80	3.76	704.05	3.53	704.30	3.26	704.55	3.09	704.80	2.56	~
83.8%	266.10	703.80	3.76	~	~	704.30	3.28	704.55	3.09	704.80	2.88	~
29.0%	266.35	~	~	~	~	704.30	3.31	~	~	~	~	~
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Comments: No apparent tip signals.
 Thruwall size was determined by the ASME 50% method.

TW = 0.22 L = 1.00 S = 1.53 w/clad

Analyst: Jessica Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Foman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-004

Exam Data Sheet No.: E-20-04
Ind. Data Sheet No.: 20-039
Indication: 20-039

Flaw Thruwall Dimension = 0.22
Flaw Length "l" = 1.00
Separation with clad "S" = 1.53
Surface Separation "S" = 1.34

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	2.26	2.58 Y
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.26	Allowed 2.58

a = 0.110
 a/l value = 0.110
 Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.58%
 a/t = 1.72%

Comments:

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-05
Patch ID: BF-005
Ind. Data Sheet No.: 20-040

Indication: 20-040 **Channel:** 3 **Angle:** 70 **Direction:** 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
26.5%	262.15	~	~	~	~	704.00	22.64	~	~	~	~	~
17.1%	262.40	~	~	~	~	704.25	20.48	~	~	~	~	~
20.4%	262.65	~	~	~	~	704.00	22.48	~	~	~	~	~
17.1%	262.90	~	~	~	~	704.00	22.48	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Jeana Kimball
Level: III **Date:** 12-20-93

Reviewed By: R.O. Forman
Level: II **Date:** 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-05
Patch ID: BF-005
Ind. Data Sheet No.: 20-041

Indication: 20-041 Channel: 3 Angle: 70 Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
11.0%	264.40	~	~	~	~	703.75	25.20	~	~	~	~	~
24.3%	264.65	~	~	~	~	703.75	25.20	~	~	~	~	~
22.2%	264.90	~	~	~	~	703.50	27.20	~	~	~	~	~
22.2%	265.15	~	~	~	~	703.50	27.20	~	~	~	~	~
18.6%	265.40	~	~	~	~	704.25	20.56	~	~	~	~	~
20.4%	265.65	~	~	~	~	704.00	22.64	~	~	~	~	~
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Comments: Thruwall size was determined by the PATT technique.

TW = 0.31 L = 1.50 S = 1.14 w/clad

Analyst: Deesa Kimball

Reviewed By: R.D. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-005

Exam Data Sheet No.: E-20-05
Ind. Data Sheet No.: 20-041
Indication: 20-041

Flaw Thruwall Dimension = 0.31
Flaw Length "l" = 1.50
Separation with clad "S" = 1.14
Surface Separation "S" = 0.95

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	2.21	2.52 Y
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.21	Allowed 2.52

a = 0.153
a/l value = 0.102
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.52%
a/t = 2.40%

Comments:

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-05
Patch ID: BF-005
Ind. Data Sheet No.: 20-042

Indication: 20-042 **Channel:** 3 **Angle:** 70 **Direction:** 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
26.5%	265.15	~	~	~	~	702.25	44.88	~	~	~	~	~
45.1%	265.40	~	~	~	~	702.00	46.80	~	~	~	~	~
58.8%	265.65	~	~	~	~	702.25	44.72	~	~	~	~	~
64.3%	265.90	~	~	~	~	702.00	46.96	~	~	~	~	~
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Comments: No apparent tip signals.

Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Cheresa Kimball
Level: III **Date:** 12-20-93

Reviewed By: R.O. Forman
Level: II **Date:** 12-20-93

01 06 93 11 00 00 3 27 86

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-05
Patch ID: BF-005
Ind. Data Sheet No.: 20-043

Indication: 20-043 **Channel:** 3 **Angle:** 70 **Direction:** 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
10.0%	265.15	~	~	~	~	703.75	33.76	~	~	~	~	~
20.4%	265.40	~	~	~	~	703.75	33.28	~	~	~	~	~
24.3%	265.65	~	~	~	~	703.75	32.88	~	~	~	~	~
29.0%	265.90	~	~	~	~	704.00	31.04	~	~	~	~	~
58.8%	266.15	~	~	~	~	704.00	31.04	~	~	~	~	~
37.8%	266.40	~	~	~	~	704.00	31.04	~	~	~	~	~
20.4%	266.65	~	~	~	~	704.00	31.36	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.
This indication is the same as recorded with Ch. 7 (see 20-051).

Analyst: Jelesa Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Fournier
Level: II Date: 12-20-93

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GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-05
Patch ID: BF-005
Ind. Data Sheet No.: 20-044

Indication: 20-044

Channel: 3

Angle: 70

Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
11.0%	266.15	~	~	~	~	703.75	25.28	~	~	~	~	~
49.3%	266.40	~	~	~	~	703.75	25.44	~	~	~	~	~
37.8%	266.65	~	~	~	~	704.25	20.48	~	~	~	~	~
31.7%	266.90	~	~	~	~	704.00	22.80	~	~	~	~	~
45.1%	267.15	~	~	~	~	704.00	22.88	~	~	~	~	~
26.5%	267.40	~	~	~	~	704.00	23.04	~	~	~	~	~
22.2%	267.65	~	~	~	~	704.25	20.80	~	~	~	~	~
22.2%	267.90	~	~	~	~	704.00	23.12	~	~	~	~	~
13.1%	268.15	~	~	~	~	704.00	23.44	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Geresa Kimball

Reviewed By: R.O. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-05
Patch ID: BF-005
Ind. Data Sheet No.: 20-045

Indication: 20-045 **Channel:** 3 **Angle:** 70 **Direction:** 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
18.6%	264.90	~	~	~	~	705.75	37.38	~	~	~	~	~
45.1%	265.15	~	~	~	~	705.75	36.96	~	~	~	~	~
49.3%	265.40	~	~	~	~	705.75	37.12	~	~	~	~	~
100.0%	265.65	~	~	~	~	705.50	39.12	~	~	~	~	~
130.3%	285.90	~	~	~	~	705.75	35.92	~	~	~	~	~
344.7%	266.15	~	~	~	~	705.50	38.40	~	~	~	~	~
70.2%	266.40	~	~	~	~	705.50	38.32	~	~	~	~	~
29.0%	266.65	~	~	~	~	705.50	39.52	~	~	~	~	~
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Comments: Thruwall size was determined by the PATT technique.
 This indication is the same as recorded with Ch. 7 (see 20-051).

TW = 0.27 L = 2.00 S = 1.69 w/clad

Analyst: Deena Kimball
 Level: III Date: 12-20-93

Reviewed By: R.D. Forman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-005

Exam Data Sheet No.: E-20-05
Ind. Data Sheet No.: 20-045
Indication: 20-045

Flaw Thruwall Dimension = 0.27
Flaw Length "l" = 2.00
Separation with clad "S" = 1.69
Surface Separation "S" = 1.50

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	2.07	2.31 Y
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.07	Allowed 2.31

a = 0.136
a/l value = 0.068
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.31%
a/t = 2.13%

Comments:

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-05
Patch ID: BF-005
Ind. Data Sheet No.: 20-046

Indication: 20-046 Channel: 3 Angle: 70 Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
10.0%	268.65	~	~	~	~	704.25	20.80	~	~	~	~	~
29.0%	268.90	~	~	~	~	704.25	20.72	~	~	~	~	~
41.3%	269.15	~	~	~	~	704.25	20.72	~	~	~	~	~
18.6%	269.40	~	~	~	~	704.00	22.96	~	~	~	~	~
17.1%	269.65	~	~	~	~	704.00	22.96	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Jessica Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-05
 Patch ID: BF-005
 Ind. Data Sheet No.: 20-047

Indication: 20-047 Channel: 3 Angle: 70 Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
15.6%	292.40	~	~	~	~	704.25	21.12	~	~	~	~	~
34.6%	292.65	~	~	~	~	704.25	20.88	~	~	~	~	~
24.3%	292.90	~	~	~	~	704.50	18.80	~	~	~	~	~
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Comments: No apparent tip signals.
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Quesa Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-05
Patch ID: BF-005
Ind. Data Sheet No.: 20-048

Indication: 20-048 Channel: 3 Angle: 70 Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
34.6%	296.65	~	~	~	~	702.75	32.80	~	~	~	~	~
37.8%	296.90	~	~	~	~	703.50	26.88	~	~	~	~	~
53.8%	297.15	~	~	~	~	703.50	26.88	~	~	~	~	~
49.3%	297.40	~	~	~	~	703.50	26.80	~	~	~	~	~
24.3%	297.65	~	~	~	~	703.50	26.88	~	~	~	~	~
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Comments: Thruwall size was determined by the PATT technique.

TW = 0.33 L = 1.25 S = 0.89 w/clad

Analyst: Geresa Kimball

Reviewed By: R.O. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

B1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-005

Exam Data Sheet No.: E-20-05
Ind. Data Sheet No.: 20-048
Indication: 20-048

Flaw Thruwall Dimension = 0.33
Flaw Length "l" = 1.25
Separation with clad "S" = 0.89
Surface Separation "S" = 0.70

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	2.40	2.77 Y
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed	Allowed
			2.40	2.77

a = 0.167
a/l value = 0.134
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.77%
a/t = 2.62%

Comments:



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3

Weld ID: C-5-FLG

Cal. ID: C-001

Exam Data Sheet No.: E-20-05

Patch ID: BF-005

Ind. Data Sheet No.: 20-049

Indication: 20-049

Channel: 3

Angle: 70

Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
14.3%	303.65	~	~	~	~	704.75	23.60	~	~	~	~	~
29.0%	303.90	~	~	~	~	705.25	18.64	~	~	~	~	~
45.1%	304.15	~	~	~	~	705.00	21.04	~	~	~	~	~
24.3%	304.40	~	~	~	~	705.20	16.56	~	~	~	~	~
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Comments: Thruwall size was determined by the PATT technique.

TW = 0.17 L = 1.00 S = 0.76 w/clad

Analyst: Deusa Kimball

Reviewed By: R.O. Farnan

Level: III Date: 12-20-93

Level: II Date: 12-20-93



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-005

Exam Data Sheet No.: E-20-05
Ind. Data Sheet No.: 20-049
Indication: 20-049

Flaw Thruwall Dimension = 0.17
Flaw Length "l" = 1.00
Separation with clad "S" = 0.76
Surface Separation "S" = 0.57

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	2.13	2.40 Y
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.13	Allowed 2.40

a = 0.084
a/l value = 0.084
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.40%
a/t = 1.31%

Comments:

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-05
Patch ID: BF-005
Ind. Data Sheet No.: 20-050

Indication: 20-050 Channel: 3 Angle: 70 Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
31.7%	304.65	~	~	~	~	703.25	28.72	~	~	~	~	~
31.7%	304.90	~	~	~	~	703.25	28.72	~	~	~	~	~
29.0%	305.15	~	~	~	~	703.50	26.48	~	~	~	~	~
20.4%	305.40	~	~	~	~	704.00	22.88	~	~	~	~	~
18.6%	305.65	~	~	~	~	704.00	22.80	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IVB-3510-1.

Analyst: Quessa Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Foman
Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-05
Patch ID: BF-005
Ind. Data Sheet No.: 20-051

Indication: 20-051 Channel: 7 Angle: 45 Direction: 0

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
20.4%	265.21	~	~	~	~	705.05	2.69	~	~	~	~	~
41.3%	265.46	~	~	~	~	704.80	2.91	~	~	705.05	2.61	~
58.8%	265.71	704.55	3.05	704.80	2.81	705.05	2.61	~	~	~	~	~
91.5%	265.96	704.55	3.05	~	~	704.80	2.86	705.05	2.64	~	~	~
31.7%	266.21	~	~	~	~	704.80	2.83	705.05	2.64	~	~	~
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Comments: This indication is the same as recorded with Ch. 3 (see 20-042, 20-043, and 20-045).
This indication also seen with Ch. 10 at less than recordable ASME DAC level.
Thruwall size was determined by the ASME 50% method.

TW = 0.12 L = 1.00 S = 1.96 w/clad

Analyst: Rene Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Foman
Level: II Date: 12-20-93

B1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-005

Exam Data Sheet No.: E-20-05
Ind. Data Sheet No.: 20-051
Indication: 20-051

Flaw Thruwall Dimension = 0.12
Flaw Length "l" = 1.00
Separation with clad "S" = 1.96
Surface Separation "S" = 1.77

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	2.04	2.26 Y
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.04	Allowed 2.26

a = 0.060
a/l value = 0.060
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.26%
a/t = 0.94%

Comments:

Blank lines for comments.



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-05
Patch ID: BF-005
Ind. Data Sheet No.: 20-052

Indication: 20-052 **Channel:** 9 **Angle:** 45 **Direction:** 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
10.0%	297.90	~	~	~	~	711.25	6.12	~	~	~	~	~
18.6%	298.15	~	~	~	~	711.25	6.12	711.50	6.28	~	~	~
24.3%	298.40	~	~	710.75	5.71	711.25	6.06	711.50	6.30	~	~	~
22.2%	298.65	~	~	710.75	5.71	711.00	5.88	711.50	6.25	~	~	~
22.2%	298.90	~	~	~	~	711.00	5.90	~	~	~	~	~
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Comments: This indication is the same as recorded with Ch. 13 (see 20-056).
 Thruwall size was determined by the SPOT technique.
 Recorded at less than ASME required levels due to apparent tip diffracted signals.

TW = 0.20 L = 1.00 S = 2.22

Analyst: Jessica Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Fouman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-005

Exam Data Sheet No.: E-20-05
Ind. Data Sheet No.: 20-052
Indication: 20-052

Flaw Thruwall Dimension = 0.20
Flaw Length "I" = 1.00
Separation with clad "S" = N/A
Surface Separation "S" = 2.22

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	2.20	2.49 Y
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed	Allowed
			2.20	2.49

a = 0.099
a/l value = 0.099
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.49%
a/t = 1.55%

Comments:

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-05
Patch ID: BF-005
Ind. Data Sheet No.: 20-053

Indication: 20-053 thru 20-055 **Channel:** 10 **Angle:** 45 **Direction:** 270

Amp.	Y	20%		50%		@ Max		50%		20%		Remarks
		Min X	MP	Min X	MP	X	MP	Max X	MP	Max X	MP	
10.0%	705.75	~	~	~	~	286.46	4.32	~	~	~	~	20-053
~	~	~	~	~	~	~	~	~	~	~	~	~
~	~	~	~	~	~	~	~	~	~	~	~	~
5.9%	706.25	~	~	~	~	285.46	4.32	~	~	~	~	20-054
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7.7%	706.50	~	~	~	~	287.46	6.12	~	~	~	~	20-055
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Comments: Indications above were recorded at less than required ASME DAC level, at max point only due to their proximity to each other.
These indications also seen with Ch. 14 at less than recordable ASME DAC levels.
Recorded for information only.

Analyst: Quessa Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93



GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-05
Patch ID: BF-005
Ind. Data Sheet No.: 20-056

Indication: 20-056 Channel: 13 Angle: 60 Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
49.3%	298.04	~	~	~	~	714.95	9.27	~	~	~	~	~
58.8%	298.29	~	~	~	~	714.95	9.27	715.20	9.51	~	~	~
53.8%	298.54	~	~	~	~	714.20	8.60	715.20	9.51	~	~	~
41.3%	298.79	~	~	~	~	714.20	8.57	~	~	~	~	~
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Comments: No apparent tip signals.
This indication is the same as recorded with Ch. 9 (20-052).
Thruwall size was determined by the ASME 50% method.

TW = 0.47 L = 0.75 S = 1.73

Analyst: Ceresa Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Fournier
Level: II Date: 12-20-93

B1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-005

Exam Data Sheet No.: E-20-05
Ind. Data Sheet No.: 20-56
Indication: 20-56

Flaw Thruwall Dimension = 0.47
Flaw Length "I" = 0.75
Separation with clad "S" = N/A
Surface Separation "S" = 1.73

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	3.96	4.59 Y
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 3.96	Allowed 4.59

a = 0.235
a/l value = 0.313
Y = 1.000

Flaw is Subsurface

Allowed a/t = 4.59%
a/t = 3.68%

Comments:

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-06
Patch ID: BF-006
Ind. Data Sheet No.: 20-057

Indication: 20-057 **Channel:** 2 **Angle:** 0 **Direction:** 90

Amp.	Y	20% Min X	MP	50% Min X	MP	@ Max X	MP	50% Max X	MP	20% Max X	MP	Remarks
100.00	708.80	~	~	359.15	4.66	359.40	4.66	359.90	4.60	~	~	~
53.80	709.05	~	~	~	~	359.15	4.69	359.40	4.64	~	~	~
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Comments: Indication evaluated as a laminar reflector and is acceptable in accordance with IWB-3510-2, ASME Section XI, 1986 Edition, no Addenda.

Analyst: C. Quersakimball

Level: III Date: 12-20-93

Reviewed By: R.O. Forman

Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-06
Patch ID: BF-006
Ind. Data Sheet No.: 20-058

Indication: 20-058

Channel: 3

Angle: 70

Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
11.0%	362.90	~	~	~	~	704.50	22.64	~	~	~	~	~
24.3%	363.15	~	~	~	~	704.25	24.88	~	~	~	~	~
29.0%	363.40	~	~	~	~	704.50	22.32	~	~	~	~	~
17.1%	363.65	~	~	~	~	704.50	22.56	~	~	~	~	~
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Comments: No apparent tip signals.

This indication is the same as recorded with Ch. 5 (see 20-059), Ch. 11 (see 20-062) and Ch. 13 (see 20-063).
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Jouisa Kimball

Reviewed By: R.D. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-06
 Patch ID: BF-006
 Ind. Data Sheet No.: 20-059

Indication: 20-059 Channel: 5 Angle: 70 Direction: 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
29.0%	362.60	~	~	~	~	709.45	28.48	~	~	~	~	~
64.3%	362.85	~	~	~	~	709.45	28.24	~	~	~	~	~
78.7%	363.10	~	~	~	~	709.70	30.16	~	~	~	~	~
41.3%	363.35	~	~	~	~	709.70	30.32	~	~	~	~	~
18.8%	363.60	~	~	~	~	709.70	30.56	~	~	~	~	~
20.4%	363.85	~	~	~	~	709.70	30.24	~	~	~	~	~
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Comments: This indication is the same as seen with Ch. 3 (see 20-058), Ch. 11 (see 20-062) and Ch. (see 20-063).
 Thruwall size was determined by the PATT technique.

TW = 0.34 L = 1.25 S = 1.36 w/clad

Analyst: Jesus Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-006

Exam Data Sheet No.: E-20-06
Ind. Data Sheet No.: 20-059
Indication: 20-059

Flaw Thruwall Dimension = 0.34
Flaw Length "l" = 1.25
Separation with clad "S" = 1.36
Surface Separation "S" = 1.17

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	2.42	2.79 Y
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.42	Allowed 2.79

a = 0.170
a/l value = 0.136
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.79%
a/t = 2.66%

Comments:



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-06
 Patch ID: BF-006
 Ind. Data Sheet No.: 20-060

Indication: 20-060 Channel: 7 Angle: 45 Direction: 0

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
58.8%	363.71	~	~	~	~	696.05	9.11	~	~	~	~	~
58.8%	363.98	~	~	696.30	8.92	696.05	9.14	695.80	9.30	~	~	~
53.8%	364.21	~	~	~	~	696.30	8.92	695.80	9.30	~	~	~
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Comments: No apparent tip signals.
 Thruwall size was determined by the ASME 50% method.

TW = 0.27 L = 0.50 S = 0.00

Analyst: Jessica Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-006

Exam Data Sheet No.: E-20-06
Ind. Data Sheet No.: 20-60
Indication: 20-60

Flaw Thruwall Dimension = 0.27
Flaw Length "l" = 0.50
Separation with clad "S" = N/A
Surface Separation "S" = 0.00

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	5.20	7.60 Y
			Allowed	Allowed
			5.20	0.00

a = 0.270
a/l value = 0.500
Y = 0.000

Flaw is Surface

Allowed a/t = 5.20%
a/t = 4.23%

Comments:

Blank lines for comments.

31151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-06
Patch ID: BF-006
Ind. Data Sheet No.: 20-061

Indication: 20-061 Channel: 8 Angle: 45 Direction: 90

Amp.	Y	20% Min X	MP	50% Min X	MP	@ Max X	MP	50% Max X	MP	20% Max X	MP	Remarks
17.1%	705.80	~	~	365.54	3.65	365.79	3.47	366.04	3.28	~	~	~
24.3%	706.05	~	~	365.29	3.65	365.79	3.24	366.04	3.05	~	~	~
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Comments: Recorded at less than ASME required levels due to apparent tip diffracted signals.
Thruwall size was determined by the SPOT technique.

TW = 0.21 L = 0.25 S = 2.19 w/clad

Analyst: Jessica Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93

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GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-006

Exam Data Sheet No.: E-20-06
Ind. Data Sheet No.: 20-061
Indication: 20-061

Flaw Thruwall Dimension = 0.21
Flaw Length "I" = 0.25
Separation with clad "S" = 2.19
Surface Separation "S" = 2.00

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	5.05	6.23 Y
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 5.05	Allowed 6.23

a = 0.106
a/l value = 0.424
Y = 1.000

Flaw is Subsurface

Allowed a/t = 6.23%
a/t = 1.66%

Comments:

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-06
Patch ID: BF-006
Ind. Data Sheet No.: 20-062

Indication: 20-062 Channel: 11 Angle: 60 Direction: 0

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
20.4%	362.85	~	~	~	~	703.05	3.37	~	~	~	~	~
26.5%	363.10	702.55	3.88	~	~	703.30	3.18	~	~	704.05	2.59	~
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Comments: This indication is the same as recorded with Ch. 3 (see 20-058), Ch. 5 (see 20-059), and Ch. 13 (see 20-063).
No apparent tip signals.
Thruwall size was determined by the Reg. Guide 20% beam spread correction method.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.

TW = 0.00 L = 0.25 S = 1.59 w/clad

Analyst: Ceresakimball
Level: III Date: 12-20-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-06
 Patch ID: BF-006
 Ind. Data Sheet No.: 20-063

Indication: 20-063 Channel: 13 Angle: 60 Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
15.6%	362.54	~	~	~	~	709.45	3.31	~	~	~	~	~
41.3%	362.79	708.95	2.87	~	~	709.45	3.31	~	~	709.70	3.53	~
53.8%	363.04	708.45	2.39	709.45	3.35	709.70	3.55	~	~	710.20	4.00	~
49.3%	363.29	708.45	2.39	~	~	709.20	3.11	~	~	710.20	4.06	~
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Comments: No apparent tip signals.

This indication is the same as recorded with Ch. 3 (see 20-058), Ch. 5 (see 20-059) and Ch. 11 (see 20-062).
 Thruwall size was determined by the ASME 50% method.

TW = 0.10 L = 0.75 S = 1.73 w/clad

Analyst: Debra Kimball

Reviewed By: R.O. Foman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-006

Exam Data Sheet No.: E-20-06
Ind. Data Sheet No.: 20-063
Indication: 20-063

Flaw Thruwall Dimension = 0.10
Flaw Length "I" = 0.75
Separation with clad "S" = 1.73
Surface Separation "S" = 1.54

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	2.07	2.30 Y
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.07	Allowed 2.30

a = 0.050
 a/l value = 0.067
 Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.30%
 a/t = 0.78%

Comments:

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-07
Patch ID: BF-007
Ind. Data Sheet No.: 20-064

Indication: 20-064 Channel: 3 Angle: 70 Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
18.6%	412.40	~	~	~	~	704.50	22.00	~	~	~	~	~
12.0%	412.65	~	~	~	~	704.50	22.16	~	~	~	~	~
13.1%	412.90	~	~	~	~	704.50	22.24	~	~	~	~	~
41.3%	413.15	~	~	~	~	704.50	22.16	~	~	~	~	~
14.3%	413.40	~	~	~	~	704.50	22.24	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Jessica Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-07
Patch ID: BF-007
Ind. Data Sheet No.: 20-065

Indication: 20-065 Channel: 3 Angle: 70 Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
22.2%	428.40	~	~	~	~	703.75	24.00	~	~	~	~	~
49.3%	428.65	~	~	~	~	704.00	21.68	~	~	~	~	~
53.8%	428.90	~	~	~	~	704.00	21.44	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: C. Olesakimball
Level: III Date: 12-20-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-07
Patch ID: BF-007
Ind. Data Sheet No.: 20-066

Indication: 20-066 Channel: 5 Angle: 70 Direction: 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
18.6%	450.60	~	~	~	~	708.95	24.56	~	~	~	~	~
22.2%	450.85	~	~	~	~	709.70	29.92	~	~	~	~	~
20.4%	451.10	~	~	~	~	708.95	24.40	~	~	~	~	~
22.2%	451.35	~	~	~	~	708.70	22.32	~	~	~	~	~
24.3%	451.60	~	~	~	~	708.70	22.64	~	~	~	~	~
20.4%	451.85	~	~	~	~	708.70	22.88	~	~	~	~	~
22.2%	452.10	~	~	~	~	709.70	30.56	~	~	~	~	~
34.6%	452.35	~	~	~	~	709.95	32.88	~	~	~	~	~
26.5%	452.60	~	~	~	~	709.70	30.80	~	~	~	~	~
13.1%	452.85	~	~	~	~	709.70	30.72	~	~	~	~	~
13.1%	453.10	~	~	~	~	708.95	24.56	~	~	~	~	~
20.9%	453.35	~	~	~	~	708.95	24.64	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Jeresa Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-07
Patch ID: BF-007
Ind. Data Sheet No.: 20-067

Indication: 20-067 Channel: 5 Angle: 70 Direction: 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
34.6%	456.10	~	~	~	~	710.45	37.04	~	~	~	~	~
22.2%	456.35	~	~	~	~	710.20	35.05	~	~	~	~	~
22.2%	456.60	~	~	~	~	709.95	32.88	~	~	~	~	~
20.4%	456.85	~	~	~	~	709.95	32.64	~	~	~	~	~
15.6%	457.10	~	~	~	~	709.70	30.32	~	~	~	~	~
22.2%	457.35	~	~	~	~	709.95	32.80	~	~	~	~	~
34.6%	457.60	~	~	~	~	709.95	32.80	~	~	~	~	~
45.1%	457.85	~	~	~	~	710.45	36.80	~	~	~	~	~
41.3%	458.10	~	~	~	~	710.20	34.72	~	~	~	~	~
22.2%	458.35	~	~	~	~	710.20	34.40	~	~	~	~	~
37.8%	458.60	~	~	~	~	710.45	36.96	~	~	~	~	~
22.2%	458.85	~	~	~	~	709.70	31.20	~	~	~	~	~
26.5%	459.10	~	~	~	~	709.95	32.96	~	~	~	~	~
58.8%	459.35	~	~	~	~	709.95	32.88	~	~	~	~	~
76.7%	459.60	~	~	~	~	710.20	34.64	~	~	~	~	~
31.7%	459.85	~	~	~	~	710.20	34.56	~	~	~	~	~
10.0%	460.10	~	~	~	~	710.70	30.00	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.
This indication is the same as recorded with Ch. 13 (see 20-071).

Analyst: Jessie Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Fournier
Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-07
Patch ID: BF-007
Ind. Data Sheet No.: 20-068

Indication: 20-068 Channel: 5 Angle: 70 Direction: 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
10.0%	460.60	~	~	~	~	708.70	28.40	~	~	~	~	~
29.0%	460.85	~	~	~	~	708.95	31.04	~	~	~	~	~
24.3%	461.10	~	~	~	~	708.20	24.20	~	~	~	~	~
22.2%	461.35	~	~	~	~	709.70	36.08	~	~	~	~	~
26.5%	461.60	~	~	~	~	709.95	38.32	~	~	~	~	~
29.0%	461.85	~	~	~	~	709.95	38.24	~	~	~	~	~
18.6%	462.10	~	~	~	~	709.20	32.40	~	~	~	~	~
17.1%	462.35	~	~	~	~	709.45	34.48	~	~	~	~	~
24.3%	462.60	~	~	~	~	709.20	32.48	~	~	~	~	~
18.6%	462.85	~	~	~	~	709.20	32.40	~	~	~	~	~
24.3%	463.10	~	~	~	~	709.20	32.32	~	~	~	~	~
15.6%	463.35	~	~	~	~	709.45	34.48	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Debra Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Fournier
Level: II Date: 12-20-93



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-07
Patch ID: BF-007
Ind. Data Sheet No.: 20-069

Indication: 20-069

Channel: 5

Angle: 70

Direction: 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
15.6%	462.35	~	~	~	~	709.45	28.40	~	~	~	~	~
22.2%	462.60	~	~	~	~	709.45	28.08	~	~	~	~	~
20.4%	462.85	~	~	~	~	709.20	26.16	~	~	~	~	~
22.2%	463.10	~	~	~	~	709.20	30.64	~	~	~	~	~
49.3%	463.35	~	~	~	~	709.95	32.56	~	~	~	~	~
45.1%	463.60	~	~	~	~	709.95	32.72	~	~	~	~	~
29.0%	463.85	~	~	~	~	710.20	34.56	~	~	~	~	~
18.6%	464.10	~	~	~	~	709.45	28.08	~	~	~	~	~
22.2%	464.35	~	~	~	~	709.20	26.40	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Debra Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-07
Patch ID: BF-007
Ind. Data Sheet No.: 20-070

Indication: 20-070

Channel: 9

Angle: 45

Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
10.0%	445.90	~	~	~	~	712.75	8.53	~	~	~	~	~
13.1%	446.15	~	~	~	~	712.75	8.53	~	~	~	~	~
24.3%	446.40	~	~	712.25	8.15	712.75	8.49	713.25	8.82	~	~	~
17.1%	446.65	~	~	712.25	8.15	712.75	8.49	713.50	9.02	~	~	~
15.6%	446.90	~	~	712.50	8.31	713.00	8.66	713.50	9.02	~	~	~
11.0%	447.15	~	~	~	~	713.00	8.66	~	~	~	~	~
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Comments: Recorded at less than ASME required levels due to apparent tip diffracted signals.
Thruwall size was determined by the SPOT technique.

TW = 0.23 L = 1.25 S = 0.48

Analyst: Drewa Kimball

Reviewed By: R.O. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-007

Exam Data Sheet No.: E-20-07
Ind. Data Sheet No.: 20-070
Indication: 20-070

Flaw Thruwall Dimension = 0.23
Flaw Length "l" = 1.25
Separation with clad "S" = N/A
Surface Separation "S" = 0.48

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	2.16	2.44 Y
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.16	Allowed 2.44

a = 0.113
a/l value = 0.090
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.44%
a/t = 1.77%

Comments:



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-07
 Patch ID: BF-007
 Ind. Data Sheet No.: 20-071

Indication: 20-071 Channel: 13 Angle: 60 Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
70.2%	459.29	~	~	~	~	708.45	2.54	708.95	3.12	709.95	4.01	~
76.7%	459.54	708.20	2.31	708.45	2.57	708.70	2.87	708.95	3.12	710.70	4.54	~
49.3%	459.79	78.20	2.36	~	~	708.45	2.59	~	~	710.00	4.11	~
18.6%	460.04	~	~	~	~	709.20	3.28	~	~	~	~	~
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Comments: No apparent tip signals.
 Thruwall size was determined by the ASME 50% method.
 This indication is the same as recorded with Ch. 5 (see 20-067).

TW = 0.28 L = 0.75 S = 1.30 w/clad

Analyst: Debra Kimball

Reviewed By: R.O. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-007

Exam Data Sheet No.: E-20-07
Ind. Data Sheet No.: 20-071
Indication: 20-071

Flaw Thruwall Dimension = 0.28
Flaw Length "l" = 0.75
Separation with clad "S" = 1.30
Surface Separation "S" = 1.11

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	~	~
0.15	2.50	2.9	2.70	3.17 Y
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.70	Allowed 3.17

a = 0.138
a/l value = 0.183
Y = 1.000

Flaw is Subsurface

Allowed a/t = 3.17%
a/t = 2.16%

Comments:

Blank lines for comments.

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-08
Patch ID: BF-008
Ind. Data Sheet No.: 20-072

Indication: 20-072, 20-073
and 20-074

Channel: 2

Angle: 0

Direction: 90

Amp.	Y	20%		50%		@ Max		50%		20%		Remarks
		Min X	MP	Min X	MP	X	MP	Max X	MP	Max X	MP	
70.2%	706.30	~	~	491.90	4.58	492.15	4.58	492.40	4.56	~	~	20-072
45.1%	706.55	~	~	~	~	491.90	4.58	~	~	~	~	20-072
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109.3%	706.30	~	~	469.15	1.68	496.40	1.67	469.65	1.67	~	~	20-073
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83.8%	706.30	~	~	511.40	5.12	513.65	5.15	514.40	5.19	~	~	20-074
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Comments: These indications evaluated as laminar reflectors and are acceptable in accordance with IWB-3510-2, ASME Section XI, 1986 Edition, No Addenda.

Analyst: Jesse Kimball

Reviewed By: R.O. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-08
Patch ID: BF-008
Ind. Data Sheet No.: 20-075

Indication: 20-075 Channel: 3 Angle: 70 Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
17.1%	470.90	~	~	~	~	703.75	23.52	~	~	~	~	~
29.0%	471.15	~	~	~	~	703.75	23.76	~	~	~	~	~
17.1%	471.40	~	~	~	~	704.00	22.16	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Jessie Kimball

Reviewed By: R.O. Fournier

Level: III Date: 12-20-93

Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-08
Patch ID: BF-008
Ind. Data Sheet No.: 20-076

Indication: 20-076 **Channel:** 3 **Angle:** 70 **Direction:** 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
11.0%	473.40	~	~	~	~	703.75	24.32	~	~	~	~	~
49.3%	473.65	~	~	~	~	703.75	24.08	~	~	~	~	~
64.3%	473.90	~	~	~	~	703.75	24.32	~	~	~	~	~
41.3%	474.15	~	~	~	~	703.75	24.32	~	~	~	~	~
83.8%	474.40	~	~	~	~	703.75	24.32	~	~	~	~	~
58.8%	474.65	~	~	~	~	704.00	22.32	~	~	~	~	~
41.3%	474.90	~	~	~	~	704.00	22.64	~	~	~	~	~
20.4%	475.15	~	~	~	~	703.75	24.64	~	~	~	~	~
45.1%	475.40	~	~	~	~	704.00	23.04	~	~	~	~	~
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Comments: No apparent tip signals.
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.
 This indication is the same as recorded with Ch. 5 (see 20-083) and Ch. 9 (see 20-090).

Analyst: Quera Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-08
 Patch ID: BF-008
 Ind. Data Sheet No.: 20-077

Indication: 20-077 Channel: 3 Angle: 70 Direction: 0

Amp.	X	20%		50%		@ Max		50%		20%		Remarks
		Min Y	TOF	Min Y	TOF	Y	TOF	Max Y	TOF	Max Y	TOF	
24.3%	478.90	~	~	~	~	704.25	25.12	~	~	~	~	~
29.0%	479.15	~	~	~	~	705.25	18.48	~	~	~	~	~
81.8%	479.40	~	~	~	~	704.25	25.12	~	~	~	~	~
17.1%	479.65	~	~	~	~	705.25	18.64	~	~	~	~	~
13.1%	479.90	~	~	~	~	705.00	20.24	~	~	~	~	~
12.0%	480.15	~	~	~	~	705.00	20.40	~	~	~	~	~
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Comments: No apparent tip signals.
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.
 This indication is the same as recorded with Ch. 5 (see 20-084) and Ch. 13 (see 20-095).

Analyst: G. Quera Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3

Weld ID: C-5-FLG

Cal. ID: C-001

Exam Data Sheet No.: E-20-08

Patch ID: BF-008

Ind. Data Sheet No.: 20-078

Indication: 20-078

Channel: 3

Angle: 70

Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
11.0%	494.65	~	~	~	~	704.25	26.08	~	~	~	~	~
22.2%	494.90	~	~	~	~	704.25	25.76	~	~	~	~	~
22.2%	495.15	~	~	~	~	704.00	27.76	~	~	~	~	~
13.1%	495.40	~	~	~	~	704.00	28.08	~	~	~	~	~
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Comments: No apparent tip signals.
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.
 This indication is the same as recorded with Ch. 5 (see 20-086).

Analyst: Quinn Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-08
 Patch ID: BF-008
 Ind. Data Sheet No.: 20-079

Indication: 20-079 Channel: 3 Angle: 70 Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
15.6%	511.15	~	~	~	~	704.25	25.44	~	~	~	~	~
22.2%	511.40	~	~	~	~	704.25	25.20	~	~	~	~	~
24.3%	511.65	~	~	~	~	704.00	27.04	~	~	~	~	~
28.5%	511.90	~	~	~	~	704.00	27.28	~	~	~	~	~
10.0%	512.15	~	~	~	~	704.00	27.04	~	~	~	~	~
20.4%	512.40	~	~	~	~	704.25	26.00	~	~	~	~	~
22.2%	512.65	~	~	~	~	704.25	26.16	~	~	~	~	~
31.7%	512.90	~	~	~	~	704.00	28.24	~	~	~	~	~
20.4%	513.15	~	~	~	~	704.00	28.48	~	~	~	~	~
17.1%	513.40	~	~	~	~	704.00	28.24	~	~	~	~	~
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Comments: No apparent tip signals.
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Debra Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-08
Patch ID: BF-008
Ind. Data Sheet No.: 20-080

Indication: 20-080 Channel: 3 Angle: 70 Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
14.3%	516.90	~	~	~	~	703.75	24.40	~	~	~	~	~
45.1%	517.15	~	~	~	~	703.75	24.72	~	~	~	~	~
45.1%	517.40	~	~	~	~	703.00	30.48	~	~	~	~	~
24.3%	517.65	~	~	~	~	703.50	26.48	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: D. Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Fournier
Level: II Date: 12-20-93

B1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-08
Patch ID: BF-008
Ind. Data Sheet No.: 20-081

Indication: 20-081

Channel: 5

Angle: 70

Direction: 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
17.1%	464.85	~	~	~	~	709.95	32.00	~	~	~	~	~
41.3%	465.10	~	~	~	~	709.95	31.78	~	~	~	~	~
70.2%	465.35	~	~	~	~	709.95	31.76	~	~	~	~	~
45.1%	465.60	~	~	~	~	709.95	31.76	~	~	~	~	~
34.6%	465.85	~	~	~	~	709.70	29.68	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Quinn Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Foman
Level: II Date: 12-20-95



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-08
Patch ID: BF-008
Ind. Data Sheet No.: 20-082

Indication: 20-082 **Channel:** 5 **Angle:** 70 **Direction:** 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
20.4%	467.85	~	~	~	~	709.95	31.76	~	~	~	~	~
41.3%	468.10	~	~	~	~	709.95	32.56	~	~	~	~	~
31.7%	468.35	~	~	~	~	709.95	32.64	~	~	~	~	~
20.4%	468.60	~	~	~	~	709.70	30.72	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.

<p>Analyst: <u> C. Lewis Kimball </u></p> <p>Level: <u> III </u> Date: <u> 12-20-93 </u></p>	<p>Reviewed By: <u> R.O. Foman </u></p> <p>Level: <u> II </u> Date: <u> 12-20-93 </u></p>
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R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-08
Patch ID: BF-008
Ind. Data Sheet No.: 20-083

Indication: 20-083 Channel: 5 Angle: 70 Direction: 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
18.6%	473.60	~	~	~	~	709.45	33.84	~	~	~	~	~
22.2%	473.85	~	~	~	~	709.45	33.68	~	~	~	~	~
17.1%	474.10	~	~	~	~	709.20	31.60	~	~	~	~	~
24.3%	474.35	~	~	~	~	709.45	33.92	~	~	~	~	~
41.3%	474.60	~	~	~	~	709.95	37.68	~	~	~	~	~
53.8%	474.85	~	~	~	~	709.95	37.68	~	~	~	~	~
34.6%	475.10	~	~	~	~	709.70	35.68	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.
This indication is the same as recorded with Ch. 3 (see 20-076) and Ch. 9 (see 20-090).

Analyst: Quessa Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-08
Patch ID: BF-008
Ind. Data Sheet No.: 20-084

Indication: 20-084 **Channel:** 5 **Angle:** 70 **Direction:** 180

Amp.	X	20%		50%		@ Max		50%		20%		Remarks
		Min Y	TOF	Min Y	TOF	Y	TOF	Max Y	TOF	Max Y	TOF	
22.2%	478.85	~	~	~	~	709.95	31.68	~	~	~	~	~
130.3%	479.10	~	~	~	~	709.95	32.00	~	~	~	~	~
170.0%	479.35	~	~	~	~	709.70	29.84	~	~	~	~	~
91.5%	479.60	~	~	~	~	709.70	29.92	~	~	~	~	~
41.3%	479.85	~	~	~	~	709.70	29.92	~	~	~	~	~
16.6%	480.10	~	~	~	~	709.70	30.00	~	~	~	~	~
24.3%	480.35	~	~	~	~	708.95	24.56	~	~	~	~	~
31.7%	480.60	~	~	~	~	709.70	30.00	~	~	~	~	~
26.5%	480.85	~	~	~	~	709.70	29.92	~	~	~	~	~
18.6%	481.10	~	~	~	~	709.45	28.80	~	~	~	~	~
37.8%	481.35	~	~	~	~	709.95	32.40	~	~	~	~	~
49.3%	481.60	~	~	~	~	709.95	32.08	~	~	~	~	~
31.7%	481.85	~	~	~	~	709.70	30.08	~	~	~	~	~
12.0%	482.10	~	~	~	~	709.70	30.08	~	~	~	~	~
14.3%	482.35	~	~	~	~	709.70	30.24	~	~	~	~	~
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Comments: No apparent tip signals.
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.
 This indication is the same as recorded with Ch. 3 (see 20-077) and Ch. 13 (20-095).

Analyst: Doreen Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

R 1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-08
 Patch ID: BF-008
 Ind. Data Sheet No.: 20-085

Indication: 20-085 Channel: 5 Angle: 70 Direction: 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
13.1%	485.10	~	~	~	~	709.95	32.24	~	~	~	~	~
14.3%	485.35	~	~	~	~	708.45	21.52	~	~	~	~	~
24.3%	485.60	~	~	~	~	708.45	21.38	~	~	~	~	~
24.3%	485.85	~	~	~	~	708.20	19.12	~	~	~	~	~
13.1%	486.10	~	~	~	~	708.20	19.12	~	~	~	~	~
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Comments: No apparent tip signals.
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Jerrold Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-08
Patch ID: BF-008
Ind. Data Sheet No.: 20-086

Indication: 20-086

Channel: 5

Angle: 70

Direction: 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
22.2%	494.60	~	~	~	~	709.95	32.32	~	~	~	~	~
24.3%	494.85	~	~	~	~	709.70	30.16	~	~	~	~	~
26.5%	495.10	~	~	~	~	709.70	30.32	~	~	~	~	~
12.0%	495.35	~	~	~	~	709.70	30.08	~	~	~	~	~
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Comments: No apparent tip signals.

Indication has no determinable thruwall and is acceptable to IWB-3510-1.

This indication is the same as recorded with Ch. 3 (20-078).

Analyst: Jeresa Kimball

Reviewed By: R.O. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-08
Patch ID: BF-008
Ind. Data Sheet No.: 20-087

Indication: 20-087 Channel: 5 Angle: 70 Direction: 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
24.3%	506.85	~	~	~	~	709.95	32.00	~	~	~	~	~
24.3%	507.10	~	~	~	~	709.45	28.48	~	~	~	~	~
26.5%	507.35	~	~	~	~	709.70	30.32	~	~	~	~	~
20.4%	507.60	~	~	~	~	709.70	30.48	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Jessie Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Ferman
Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-08
Patch ID: BF-008
Ind. Data Sheet No.: 20-088

Indication: 20-088 Channel: 5 Angle: 70 Direction: 180

Amp.	X	20%		50%		@ Max		50%		20%		Remarks
		Min Y	TOF	Min Y	TOF	Y	TOF	Max Y	TOF	Max Y	TOF	
17.1%	512.35	~	~	~	~	708.20	20.08	~	~	~	~	~
18.6%	512.60	~	~	~	~	707.95	17.68	~	~	~	~	~
41.3%	512.85	~	~	~	~	708.20	20.08	~	~	~	~	~
17.1%	513.10	~	~	~	~	707.95	18.24	~	~	~	~	~
20.9%	513.35	~	~	~	~	708.20	20.56	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Debra Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93

B1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-08
Patch ID: BF-008
Ind. Data Sheet No.: 20-089

Indication: 20-089

Channel: 7

Angle: 45

Direction: 0

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
37.8%	491.71	~	~	~	~	701.55	6.28	~	~	~	~	~
58.8%	491.96	~	~	700.55	6.99	701.55	6.24	701.80	6.08	~	~	~
83.8%	492.21	~	~	700.55	7.00	701.55	6.24	702.05	5.88	~	~	~
91.5%	492.46	~	~	701.05	6.61	701.80	6.08	702.05	5.90	~	~	~
58.8%	492.71	~	~	~	~	701.30	6.44	701.80	6.06	~	~	~
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Comments: This indication is the same as seen with Ch. 9 (see 20-093), Ch. 11 (see 20-092) and Ch. 13 (see 20-094).
 Thruwall size was determined by the SPOT technique.

TW = 0.28 L = 1.00 S = 2.15

Analyst: Laura Kimball

Reviewed By: R.O. Forman

Level: III Date: 12-20-93

Level: II Date: 12-20-93



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-008

Exam Data Sheet No.: E-20-08
Ind. Data Sheet No.: 20-89
Indication: 20-89

Flaw Thruwall Dimension = 0.28
Flaw Length "l" = 1.00
Separation with clad "S" = N/A
Surface Separation "S" = 2.15

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	2.44	2.82 Y
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.44	Allowed 2.82

a = 0.140
a/l value = 0.140
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.82%
a/t = 2.19%

Comments:

B1151



GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-08
Patch ID: BF-008
Ind. Data Sheet No.: 20-090

Indication: 20-090 **Channel:** 9 **Angle:** 45 **Direction:** 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
26.5%	474.65	~	~	~	~	707.75	2.25	~	~	~	~	~
24.3%	474.90	~	~	~	~	708.00	2.41	~	~	~	~	~
41.3%	475.15	707.50	2.06	~	~	707.75	2.30	~	~	708.25	2.65	~
34.6%	475.40	707.50	2.09	~	~	708.00	2.43	~	~	708.25	2.62	~
24.3%	475.65	~	~	~	~	708.00	2.43	~	~	~	~	~
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Comments: No apparent tip signals.
 Thruwall size was determined by the Reg. Guide 20% beam spread correction method.
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.
 This indication is the same as recorded with Ch. 3 (see 20-076) and Ch. 5 (see 20-083).

TW = 0.00 L = 1.00 S = 1.63 w/clad

Analyst: Debra Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-08
 Patch ID: BF-008
 Ind. Data Sheet No.: 20-091

Indication: 20-091 Channel: 9 Angle: 45 Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
24.3%	485.40	~	~	~	~	708.25	2.19	~	~	~	~	~
26.5%	485.65	~	~	~	~	708.00	2.01	~	~	708.25	2.14	~
18.6%	485.90	~	~	~	~	708.00	1.92	~	~	~	~	~
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Comments: No apparent tip signals.
 Thruwall size was determined by the Reg.Guide 20% beam spread correction method.
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.

TW = 0.00 L = 0.50 S = 1.42 w/clad

Analyst: Deesa Kimball

Reviewed By: R.D. Fournier

Level: III Date: 12-20-93

Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-08
Patch ID: BF-008
Ind. Data Sheet No.: 20-092

Indication: 20-092 **Channel:** 11 **Angle:** 60 **Direction:** 0

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
49.3%	491.60	~	~	~	~	699.55	7.81	~	~	~	~	~
70.2%	491.85	~	~	696.55	10.46	699.55	7.83	699.80	7.59	~	~	~
76.7%	492.10	~	~	696.30	10.68	699.05	8.24	699.80	7.56	~	~	~
100.0%	492.35	~	~	696.30	10.68	698.80	8.46	700.05	7.64	~	~	~
91.5%	492.60	~	~	696.30	10.68	699.05	8.24	700.05	7.43	~	~	~
91.5%	492.85	~	~	696.30	10.68	698.80	8.48	699.80	7.59	~	~	~
58.8%	493.10	~	~	696.30	10.70	698.80	8.46	699.05	8.24	~	~	~
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Comments: This indication is the same as seen with Ch. 7 (see 20-089), Ch. 9 (see 20-093) and Ch. 13 (see 20-094).
 Thruwall size was determined by the PATT technique.

TW = 0.31 L = 1.50 S = 2.17

Analyst: Doreen Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-008

Exam Data Sheet No.: E-20-08
Ind. Data Sheet No.: 20-092
Indication: 20-092

Flaw Thruwall Dimension = 0.31
Flaw Length "l" = 1.50
Separation with clad "S" = N/A
Surface Separation "S" = 2.17

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	2.22	2.53 Y
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.22	Allowed 2.53

a = 0.155
 a/l value = 0.103
 Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.53%
 a/t = 2.43%

Comments:

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-08
Patch ID: BF-008
Ind. Data Sheet No.: 20-093

Indication: 20-093

Channel: 9

Angle: 45

Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
31.7%	491.15	~	~	~	~	710.25	6.65	710.75	6.98	~	~	~
26.5%	491.40	~	~	709.75	6.31	710.00	6.47	710.75	6.98	~	~	~
26.5%	491.65	~	~	710.00	6.48	710.75	6.93	~	~	~	~	~
37.8%	491.90	~	~	709.25	5.92	710.25	6.57	711.25	7.34	~	~	~
41.3%	492.15	~	~	709.00	5.76	710.00	6.42	711.25	7.33	~	~	~
26.5%	492.40	~	~	709.00	5.73	710.00	6.40	710.50	6.73	~	~	~
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Comments: This indication is the same as seen with Ch. 7 (see 20-089), Ch. 11 (see 20-092) and Ch. 13 (see 20-094).
 Recorded at less than ASME required levels due to apparent tip diffracted signals.
 Thruwall size was determined by the PATT technique.

TW = 0.29 L = 1.25 S = 1.69

Analyst: Jessica Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Fozman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-008

Exam Data Sheet No.: E-20-08
Ind. Data Sheet No.: 20-093
Indication: 20-093

Flaw Thruwall Dimension = 0.29
Flaw Length "l" = 1.25
Separation with clad "S" = N/A
Surface Separation "S" = 1.69

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	2.30	2.63 Y
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.30	Allowed 2.63

a = 0.145
a/l value = 0.116
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.63%
a/t = 2.27%

Comments:

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-08
 Patch ID: BF-008
 Ind. Data Sheet No.: 20-095

Indication: 20-095 Channel: 13 Angle: 60 Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
49.3%	479.04	708.45	2.35	~	~	708.95	2.86	~	~	710.45	4.27	~
53.8%	479.29	707.95	1.94	708.95	2.84	709.20	3.06	709.95	3.80	710.45	4.25	~
53.8%	479.54	708.70	2.62	708.95	2.82	709.20	3.06	709.95	3.76	710.45	4.21	~
45.1%	479.79	708.95	2.82	~	~	709.20	3.04	~	~	709.95	3.76	~
20.4%	480.04	~	~	~	~	708.95	3.04	~	~	~	~	~
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Comments: No apparent tip signals.
 Thruwall size was determined by the ASME 50% method.
 This indication is the same as recorded with Ch. 3 (see 20-077) and Ch. 5 (see 20-084).

TW = 0.49 L = 0.75 S = 1.29 w/clad

Analyst: Jeresa Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-008

Exam Data Sheet No.: E-20-08
Ind. Data Sheet No.: 20-095
Indication: 20-095

Flaw Thruwall Dimension = 0.49
Flaw Length "l" = 0.75
Separation with clad "S" = 1.29
Surface Separation "S" = 1.10

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	4.12	4.77 Y
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed	Allowed
			4.12	4.77

a = 0.245
a/l value = 0.327
Y = 1.000

Flaw is Subsurface

Allowed a/t = 4.77%
a/t = 3.84%

Comments:

Blank lines for comments.

81151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-08
Patch ID: BF-008
Ind. Data Sheet No.: 20-094

Indication: 20-094 **Channel:** 13 **Angle:** 60 **Direction:** 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
20.4%	491.54	~	~	~	~	713.45	9.34	~	~	~	~	~
34.6%	491.79	~	~	~	~	712.95	8.78	713.95	9.69	~	~	~
34.6%	492.04	~	~	~	~	711.70	7.77	714.70	10.35	~	~	~
34.6%	492.29	~	~	~	~	711.70	7.75	714.45	10.15	~	~	~
26.5%	492.54	~	~	711.70	7.73	712.95	8.84	~	~	~	~	~
22.2%	492.79	~	~	~	~	713.20	8.95	~	~	~	~	~
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Comments: This indication is the same as seen with Ch. 7 (see 20-089), Ch. 9 (see 20-093) and Ch. 11 (see 20-092).
 Recorded at less than ASME required levels due to apparent tip diffracted signals.
 Thruwall size was determined by the SPOT technique.

TW = 0.32 L = 1.25 S = 2.05

Analyst: Quesa Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Farnan
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-008

Exam Data Sheet No.: E-20-08
Ind. Data Sheet No.: 20-094
Indication: 20-094

Flaw Thruwall Dimension = 0.32
Flaw Length "I" = 1.25
Separation with clad "S" = N/A
Surface Separation "S" = 2.05

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	2.37	2.72 Y
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed	Allowed
			2.37	2.72

a = 0.160
 a/l value = 0.128
 Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.72%
 a/t = 2.51%

Comments:



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-09
 Patch ID: BF-009
 Ind. Data Sheet No.: 20-096

Indication: 20-096 Channel: 5 Angle: 70 Direction: 180

Amp.	X	20%		50%		@ Max		50%		20%		Remarks
		Min Y	TOF	Min Y	TOF	Y	TOF	Max Y	TOF	Max Y	TOF	
12.0%	534.35	~	~	~	~	709.70	31.20	~	~	~	~	~
34.6%	534.60	~	~	~	~	709.95	32.64	~	~	~	~	~
28.5%	534.85	~	~	~	~	709.70	30.56	~	~	~	~	~
15.6%	535.10	~	~	~	~	710.70	38.48	~	~	~	~	~
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Comments: No apparent tip signals.
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Delesa Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Foman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-09
Patch ID: BF-009
Ind. Data Sheet No.: 20-097

Indication: 20-097 **Channel:** 11 **Angle:** 60 **Direction:** 0

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
49.3%	537.60	~	~	~	~	696.55	12.73	~	~	~	~	~
49.3%	537.85	~	~	~	~	696.55	12.70	~	~	~	~	~
58.8%	538.10	~	~	696.55	12.73	696.80	12.49	697.05	12.31	~	~	~
58.8%	538.35	~	~	696.30	12.92	696.80	12.51	697.05	12.31	~	~	~
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Comments: OD surface indication.
3.84 dB below Notch sensitivity.
Thruwall size was determined by the ASME 50% method.

TW = 0.31 L = 0.75 S = 0.19

Analyst: Jeesea Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Forman
Level: II Date: 20-12-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-009

Exam Data Sheet No.: E-20-09
Ind. Data Sheet No.: 20-097
Indication: 20-097

Flaw Thruwall Dimension = 0.31
Flaw Length "I" = 0.75
Separation with clad "S" = N/A
Surface Separation "S" = 0.19

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	2.83	3.33 Y
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.83	Allowed 3.33

a = 0.153
a/l value = 0.203
Y = 1.000

Flaw is Subsurface

Allowed a/t = 3.33%
a/t = 2.39%

Comments:

B1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-10
Patch ID: BF-010
Ind. Data Sheet No.: 20-098

Indication: 20-098 Channel: 3 Angle: 70 Direction: 0

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
16.3%	581.40	~	~	~	~	704.25	25.20	~	~	~	~	~
25.2%	581.65	~	~	~	~	704.00	27.50	~	~	~	~	~
23.7%	581.90	~	~	~	~	704.00	26.88	~	~	~	~	~
18.5%	582.15	~	~	~	~	704.00	26.40	~	~	~	~	~
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Comments: No apparent tip signals.
Indication has no determinable thruwall and is acceptable to IWB-3510-1.
This indication is the same as recorded with Ch. 5 (see 20-099).

Analyst: Deesa Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Foman
Level: II Date: 12-20-93



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-10
Patch ID: BF-010
Ind. Data Sheet No.: 20-099

Indication: 20-099 **Channel:** 5 **Angle:** 70 **Direction:** 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
16.3%	581.35	~	~	~	~	709.45	25.20	28.24	~	~	~	~
25.2%	581.60	~	~	~	~	709.70	27.50	30.24	~	~	~	~
23.7%	581.85	~	~	~	~	709.70	26.88	30.32	~	~	~	~
18.5%	582.10	~	~	~	~	709.70	26.40	30.24	~	~	~	~
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Comments: No apparent tip signals.
 This indication is the same as recorded with Ch. 3 (see 20-098).
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: <u>Douglas Kimball</u>	Reviewed By: <u>R.O. Forman</u>
Level: <u>III</u> Date: <u>12-20-93</u>	Level: <u>II</u> Date: <u>12-20-93</u>



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-10
 Patch ID: BF-010
 Ind. Data Sheet No.: 20-100

Indication: 20-100 Channel: 9 Angle: 45 Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
25.2%	557.15	~	~	709.50	5.29	709.75	5.47	~	~	~	~	~
39.1%	557.40	~	~	709.00	4.98	709.75	5.51	710.50	6.04	~	~	~
36.7%	557.65	~	~	709.00	4.96	709.50	5.31	710.50	6.06	~	~	~
14.4%	557.90	~	~	~	~	709.50	5.31	~	~	~	~	~
10.5%	558.15	~	~	~	~	709.75	5.57	~	~	~	~	~
34.5%	558.40	~	~	709.25	5.18	709.75	5.55	710.75	5.91	~	~	~
39.1%	558.65	~	~	709.00	5.00	709.50	5.36	710.25	5.89	~	~	~
41.6%	558.90	~	~	709.00	5.00	709.50	5.36	710.00	5.71	~	~	~
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Comments: Thruwall size was determined by the SPOT technique.
 Recorded at less than ASME required levels due to apparent tip diffracted signals.

TW = 0.20 L = 1.75 S = 2.71

Analyst: Jessie Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

B1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-010

Exam Data Sheet No.: E-20-10
Ind. Data Sheet No.: 20-100
Indication: 20-100

Flaw Thruwall Dimension = 0.20
Flaw Length "l" = 1.75
Separation with clad "S" = N/A
Surface Separation "S" = 2.71

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	2.03	2.24 Y
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.03	Allowed 2.24

a = 0.100
a/l value = 0.057
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.24%
a/t = 1.57%

Comments:



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-10
Patch ID: BF-010
Ind. Data Sheet No.: 20-101

Indication: 20-101

Channel: 9

Angle: 45

Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
28.6%	600.90	~	~	711.25	7.40	712.25	7.08	712.50	7.25	~	~	~
44.3%	601.15	~	~	711.25	6.29	712.50	7.24	712.75	7.43	~	~	~
47.2%	601.40	~	~	711.50	6.47	712.50	7.25	712.75	7.40	~	~	~
23.7%	601.65	~	~	~	~	712.50	7.25	~	~	~	~	~
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Comments: Thruwall size was determined by the SPOT technique.
Recorded at less than ASME required levels due to apparent tip diffracted signals.
This indication is the same as recorded with Ch. 13 (see 20-102).

TW = 0.26 L = 0.75 S = 1.35

Analyst: Debra Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93

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GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-010

Exam Data Sheet No.: E-20-10
Ind. Data Sheet No.: 20-101
Indication: 20-101

Flaw Thruwall Dimension = 0.26
Flaw Length "l" = 0.75
Separation with clad "S" = N/A
Surface Separation "S" = 1.35

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	~	~
0.15	2.50	2.9	2.64	3.09 Y
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.64	Allowed 3.09

a = 0.130
a/l value = 0.173
Y = 1.000

Flaw is Subsurface

Allowed a/t = 3.09%
a/t = 2.04%

Comments:

Blank lines for comments.

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3

Weld ID: C-5-FLG

Cal. ID: C-001

Exam Data Sheet No.: E-20-10

Patch ID: BF-010

Ind. Data Sheet No.: 20-102

Indication: 20-102

Channel: 13

Angle: 60

Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
47.2%	601.04	~	~	~	~	715.45	9.86	~	~	~	~	~
47.2%	601.29	~	~	~	~	714.20	8.73	~	~	~	~	~
50.2%	601.54	~	~	~	~	714.20	8.76	~	~	~	~	~
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Comments: No apparent tip signals.
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.
 This indication is the same as recorded with Ch. 9 (see 20-101).

Analyst: Debra Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-11
 Patch ID: BF-011
 Ind. Data Sheet No.: 20-103

Indication: 20-103 Channel: 2 Angle: 0 Direction: 90

Amp.	Y	20% Min X	MP	50% Min X	MP	@ Max X	MP	50% Max X	MP	20% Max X	MP	Remarks
50.2%	706.55	~	~	~	~	6.97.9	5.04	~	~	~	~	~
145.5%	706.80	~	~	697.90	5.14	698.40	5.14	698.40	*	~	~	* Scan End
73.1%	707.05	~	~	697.90	5.14	698.15	5.17	698.40	5.17	~	~	~
94.0%	707.30	~	~	697.90	5.25	698.15	5.23	698.40	5.23	~	~	~
53.5%	707.55	~	~	~	~	697.90	5.34	698.15	5.32	~	~	~
100.0%	707.80	~	~	697.90	5.38	698.15	5.38	698.40	5.38	~	~	~
128.4%	708.05	~	~	697.65	5.47	698.15	5.45	698.40	5.43	~	~	~
44.3%	708.30	~	~	~	~	698.15	5.53	~	~	~	~	~
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Comments: This indication evaluated as a laminar reflector and is acceptable in accordance with IWB-3510-2, ASME Section XI, 1986 Edition, No Addenda.

Analyst: Debra Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

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GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-11
Patch ID: BF-011
Ind. Data Sheet No.: 20-104

Indication: 20-104 **Channel:** 5 **Angle:** 70 **Direction:** 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
16.3%	648.35	~	~	~	~	710.45	40.80	~	~	~	~	~
47.2%	648.60	~	~	~	~	710.45	40.64	~	~	~	~	~
53.5%	648.85	~	~	~	~	710.45	40.64	~	~	~	~	~
30.4%	649.10	~	~	~	~	710.45	40.56	~	~	~	~	~
17.3%	649.35	~	~	~	~	710.70	42.72	~	~	~	~	~
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Comments: No apparent tip signals.
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.
 This indication is the same as recorded with Ch. 9 (see 20-106).

Analyst: Ceresa Kimball
Level: III **Date:** 12-20-93

Reviewed By: R.O. Foman
Level: II **Date:** 12-20-93

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GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-11
Patch ID: BF-011
Ind. Data Sheet No.: 20-105

Indication: 20-105 Channel: 5 Angle: 70 Direction: 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
18.5%	675.10	~	~	~	~	708.95	36.40	~	~	~	~	~
23.7%	675.35	~	~	~	~	707.20	25.36	~	~	~	~	~
19.6%	675.60	~	~	~	~	707.70	28.80	~	~	~	~	~
14.4%	675.85	~	~	~	~	707.20	25.12	~	~	~	~	~
20.9%	676.10	~	~	~	~	708.45	33.20	~	~	~	~	~
28.6%	676.35	~	~	~	~	708.70	34.64	~	~	~	~	~
30.4%	676.60	~	~	~	~	708.70	34.64	~	~	~	~	~
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Comments: No apparent tip signals.
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.
 This indication is the same as recorded with Ch. 9 (see 20-107) and Ch. 13 (see 20-108).

Analyst: Chelsea Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Foman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
 Weld ID: C-5-FLG
 Cal. ID: C-001

Exam Data Sheet No.: E-20-11
 Patch ID: BF-011
 Ind. Data Sheet No.: 20-106

Indication: 20-106 Channel: 9 Angle: 45 Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
34.5%	648.40	~	~	709.25	3.73	709.75	4.11	710.00	4.30	~	~	~
53.5%	648.65	~	~	708.00	2.91	709.75	4.13	710.00	4.30	~	~	~
50.2%	648.90	~	~	708.00	2.91	709.50	3.93	710.00	4.30	~	~	~
30.4%	649.15	~	~	708.50	3.27	709.50	3.89	~	~	~	~	~
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Comments: This indication also seen with Ch. 13 at less than recordable levels with no apparent tip signals.
 Thruwall size was determined by the SPOT technique.
 This indication is the same as recorded with Ch. 5 (see 20-104).

TW = 0.23 L = 0.75 S = 2.81 w/clad

Analyst: Jessica Kimball
 Level: III Date: 12-20-93

Reviewed By: R.O. Foman
 Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-011

Exam Data Sheet No.: E-20-11
Ind. Data Sheet No.: 20-106
Indication: 20-106

Flaw Thruwall Dimension = 0.23
Flaw Length "l" = 0.75
Separation with clad "S" = 2.81
Surface Separation "S" = 2.62

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition
TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	~	~
0.15	2.50	2.9	2.50	2.91 Y
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed	Allowed
			2.50	2.91

a = 0.113
a/l value = 0.151
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.91%
a/t = 1.77%

Comments:



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-11
Patch ID: BF-011
Ind. Data Sheet No.: 20-107

Indication: 20-107 Channel: 9 Angle: 45 Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
14.4%	674.90	~	~	~	~	707.75	3.21	~	~	~	~	~
30.4%	675.15	~	~	707.50	3.08	707.75	3.23	708.00	3.38	~	~	~
34.5%	675.40	~	~	707.25	2.88	707.75	3.26	709.50	4.68	~	~	~
28.6%	675.65	~	~	707.50	3.08	707.75	3.23	709.25	4.45	~	~	~
25.2%	675.90	~	~	~	~	707.75	3.18	709.25	4.38	~	~	~
30.4%	676.15	~	~	707.00	2.76	707.75	3.18	709.25	4.36	~	~	~
32.4%	676.40	~	~	707.00	2.75	707.75	3.17	709.50	4.65	~	~	~
19.6%	676.65	~	~	707.25	2.82	707.50	3.03	709.00	4.17	~	~	~
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Comments: Recorded at less than ASME required levels due to apparent tip diffracted signals.
Thruwall size was determined by the PATT technique.
This indication is the same as recorded with Ch. 5 (see 20-105) and Ch. 13 (see 20-108).

TW = 0.25 L = 1.75 S = 2.25 w/clad

Analyst: Deeasa Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Forman
Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weid ID: C-5-FLG
Patch: BF-011

Exam Data Sheet No.: E-20-11
Ind. Data Sheet No.: 20-107
Indication: 20-107

Flaw Thruwall Dimension = 0.25
Flaw Length "l" = 1.75
Separation with clad "S" = 2.25
Surface Separation "S" = 2.06

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

**ASME Section XI, 1986 Edition
 TABLE IWB-3510-1 for 4" to 12"**

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	2.09	2.33 Y
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.09	Allowed 2.33

a = 0.125
 a/l value = 0.071
 Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.33%
 a/t = 1.96%

Comments:

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-11
Patch ID: BF-011
Ind. Data Sheet No.: 20-108

Indication: 20-108

Channel: 13

Angle: 60

Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
44.3%	675.29	~	~	~	~	708.95	4.43	~	~	~	~	~
60.6%	675.54	~	~	708.95	4.42	709.95	5.14	711.95	6.96	~	~	~
50.2%	675.79	~	~	~	~	708.45	3.93	~	~	~	~	~
57.0%	676.04	~	~	~	~	708.45	3.86	708.95	4.30	~	~	~
94.0%	676.29	~	~	~	~	708.45	3.86	709.95	5.06	~	~	~
73.1%	676.54	~	~	~	~	708.20	3.62	709.95	5.04	~	~	~
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Comments: No apparent tips
 This indication is the same as recorded with Ch. 5 (20-105) and Ch. 9 (20-107).
 Flaw dimensions assigned from Indication Data Sheet 20-107.
 Thruwall size was determined by the PATT technique.

TW = .25 L = 1.75 S = 2.25 w/clad

Analyst: Debra Kimball
Level: III **Date:** 12-20-93

Reviewed By: R.O. Foman
Level: II **Date:** 12-20-93

B1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-011

Exam Data Sheet No.: E-20-11
Ind. Data Sheet No.: 20-108
Indication: 20-108

Flaw Thruwall Dimension = 0.25
Flaw Length "l" = 1.75
Separation with clad "S" = 2.25
Surface Separation "S" = 2.06

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	2.09	2.33 Y
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed 2.09	Allowed 2.33

a = 0.125
a/l value = 0.071
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.33%
a/t = 1.96%

Comments: Flaw dimensions assigned from Indication Data Sheet 20-107.

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-12
Patch ID: BF-012
Ind. Data Sheet No.: 20-109

Indication: 20-109 Channel: 5 Angle: 70 Direction: 180

Amp.	X	20% Min Y	TOF	50% Min Y	TOF	@ Max Y	TOF	50% Max Y	TOF	20% Max Y	TOF	Remarks
11.9%	750.80	~	~	~	~	709.95	33.44	~	~	~	~	~
32.4%	750.85	~	~	~	~	709.95	32.96	~	~	~	~	~
57.0%	751.10	~	~	~	~	710.20	34.72	~	~	~	~	~
64.5%	751.35	~	~	~	~	710.20	34.72	~	~	~	~	~
36.7%	751.60	~	~	~	~	710.20	34.72	~	~	~	~	~
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Comments: Thruwall size was determined by the PATT technique.
This indication is the same as recorded with Ch. 13 (see 20-111).

TW = 0.19 L = 1.25 S = 1.43 w/clad

Analyst: Jeres Kimball
Level: III Date: 12-20-93

Reviewed By: R.O. Foman
Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-012

Exam Data Sheet No.: E-20-12
Ind. Data Sheet No.: 20-109
Indication: 20-109

Flaw Thruwall Dimension = 0.19
Flaw Length "l" = 1.25
Separation with clad "S" = 1.43
Surface Separation "S" = 1.24

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	2.11	2.36 Y
0.10	2.20	2.5	~	~
0.15	2.50	2.9	~	~
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed	Allowed
			2.11	2.36

a = 0.096
a/l value = 0.077
Y = 1.000

Flaw is Subsurface

Allowed a/t = 2.36%
a/t = 1.50%

Comments:

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-12
Patch ID: BF-012
Ind. Data Sheet No.: 20-110

Indication: 20-110 Channel: 9 Angle: 45 Direction: 180

Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
10.5%	734.15	~	~	~	~	712.25	6.80	~	~	~	~	~
25.2%	734.40	~	~	711.00	5.89	712.25	6.76	712.50	6.96	~	~	~
19.6%	734.65	~	~	711.00	5.80	711.50	6.16	712.50	6.96	~	~	~
11.2%	734.90	~	~	~	~	711.50	6.18	~	~	~	~	~
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Comments: Thruwall size was determined by the SPOT technique.

TW = 0.28 L = 0.75 S = 1.68

Analyst: Deesa Kimball
Level: III Date: 12-20-93

Reviewed By: R.D. Forman
Level: II Date: 12-20-93

R1151



GE Nuclear Energy

GERIS 2000 Indication Evaluation Sheet

Project: TVA, Browns Ferry Unit 3
Weld ID: C-5-FLG
Patch: BF-012

Exam Data Sheet No.: E-20-12
Ind. Data Sheet No.: 20-110
Indication: 20-110

Flaw Thruwall Dimension = 0.28
Flaw Length "l" = 0.75
Separation with clad "S" = N/A
Surface Separation "S" = 1.68

T nominal = 6.38
Clad T nominal = 0.19

Flaw is acceptable by Table IWB-3510-1

ASME Section XI, 1986 Edition TABLE IWB-3510-1 for 4" to 12"

a/l	Surface %	Subsurface %	Surface %	Subsurface %
0.00	1.90	2	~	~
0.05	2.00	2.2	~	~
0.10	2.20	2.5	~	~
0.15	2.50	2.9	2.72	3.19 Y
0.20	2.80	3.3	~	~
0.25	3.30	3.8	~	~
0.30	3.80	4.4	~	~
0.35	4.40	5.1	~	~
0.40	5.00	5.8	~	~
0.45	5.10	6.7	~	~
0.50	5.20	7.6	~	~
			Allowed	Allowed
			2.72	3.19

a = 0.140
 a/l value = 0.187
 Y = 1.000

Flaw is Subsurface

Allowed a/t = 3.19%
 a/t = 2.19%

Comments:

R1151



GE Nuclear Energy

GERIS 2000 Indication Data Sheet

Project: TVA, Browns Ferry, Unit 3
Weld ID: C-5-FLG
Cal. ID: C-001

Exam Data Sheet No.: E-20-12
Patch ID: BF-012
Ind. Data Sheet No.: 20-111

Indication: 20-111 Channel: 13 Angle: 60 Direction: 180

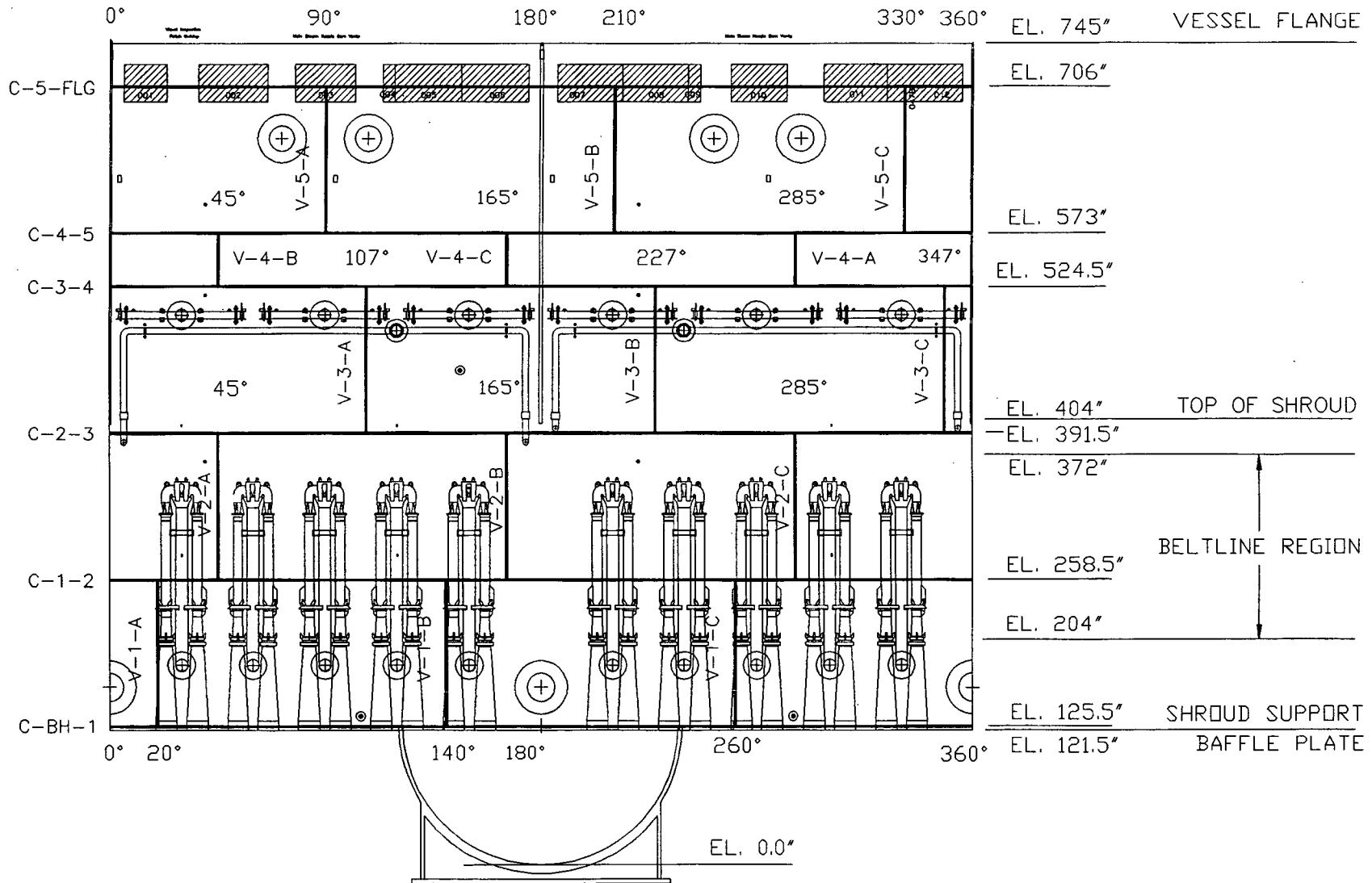
Amp.	X	20% Min Y	MP	50% Min Y	MP	@ Max Y	MP	50% Max Y	MP	20% Max Y	MP	Remarks
50.2%	751.29	~	~	~	~	709.70	3.62	~	~	~	~	~
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Comments: This indication is the same as seen with Ch. 5 (see 20-109).
 No apparent tip signals.
 Indication has no determinable thruwall and is acceptable to IWB-3510-1.

Analyst: Quessa Kimbell
 Level: III Date: 12-20-93

Reviewed By: R.O. Forman
 Level: II Date: 12-20-93

BROWNS FERRY UNIT-3 WELD LOCATIONS



Pg 174 of 291

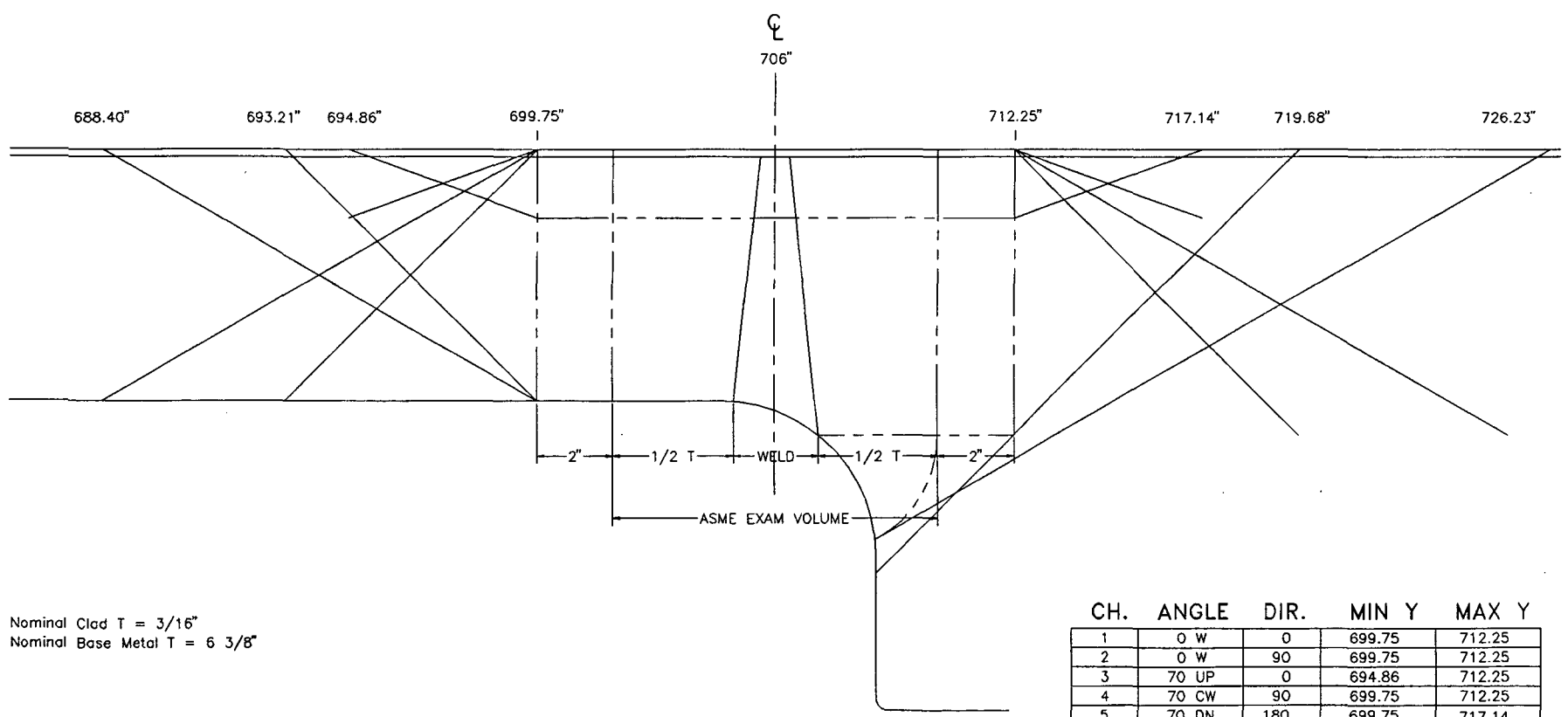
AN2AR

B F U 3 0000 1800

R1151

GE NUCLEAR ENERGY	BROWNS FERRY UNIT 3	VESSEL ROLLOUT & AS SCANNED PATCH LOCATIONS	BF-3-VMA	REV 0
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Pg 175 of 291



Nominal Clad T = 3/16"
 Nominal Base Metal T = 6 3/8"

CH.	ANGLE	DIR.	MIN Y	MAX Y
1	0 W	0	699.75	712.25
2	0 W	90	699.75	712.25
3	70 UP	0	694.86	712.25
4	70 CW	90	699.75	712.25
5	70 DN	180	699.75	717.14
6	70 CCW	270	699.75	712.25
7	45 UP	0	693.21	712.25
8	45 CW	90	699.75	712.25
9	45 DN	180	699.75	719.68
10	45 CCW	270	699.75	712.25
11	60 UP	0	688.40	712.25
12	60 CW	90	699.75	712.25
13	60 DN	180	699.75	726.23
14	60 CCW	270	699.75	712.25
15	0 BM	0	699.75	726.23
16	0 BM	90	688.40	712.25

00247

DRAWING NUMBER 1750

X 1121



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET

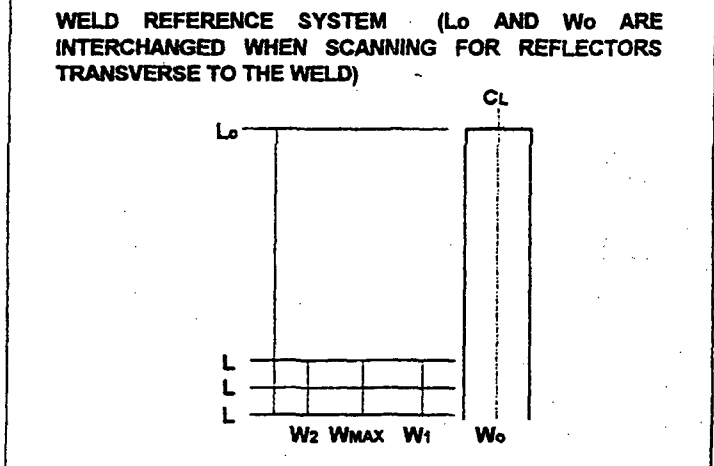
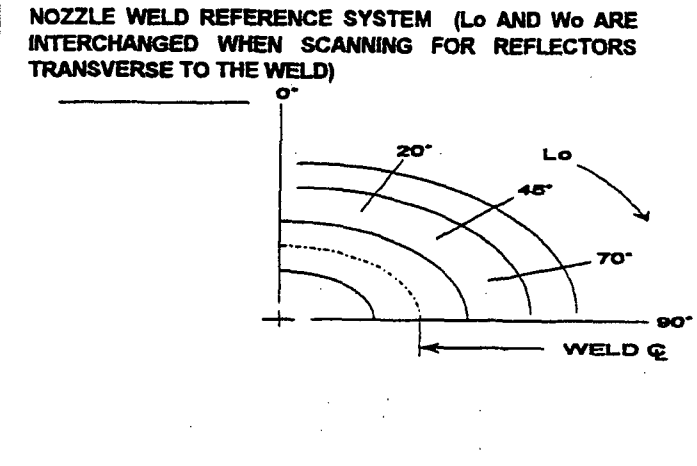
(MANUAL RPV VESSEL WELDS)

SITE: <u>Browns Ferry</u>	PROCEDURE NO.: <u>GE-UT-300</u>	REPORT NO.: <u>E-20</u>
UNIT: <u>3</u>	REVISION NO.: <u>6</u>	DATA SHEET NO.: <u>D-001</u>
PROJECT NO.: <u>00387</u>	FRR NO.: <u>004</u>	CALIBRATION SHEET NO.: 0° <u>C-104</u> 45° <u>N/A</u> 60° <u>N/A</u>

SYSTEM: RPV EXAM SURFACE TEMP: 69 °F COUPLANT: ULTRAGEL II EXAM START: 1802
 WELD ID: C-5-FLG THERMOMETER S/N: L0281CL BATCH NO.: 093011 EXAM END: 1814

BEAM ANGLE: 0° 45° 60° OTHER N/A SURFACE CONDITION: SMOOTH GROUND OTHER N/A
 MATERIAL TYPE: CS SS OTHER N/A EXAM SURFACE: ID OD

Lo REFERENCE VESSEL D° 0° SCAN SENSITIVITY 48.6 dB
 Wo REFERENCE WELD E 45° SCAN SENSITIVITY N/A dB
 60° SCAN SENSITIVITY N/A dB



L/R	% DAC (MAX)	W1 20% DAC	WF1 50% DAC	WM MAX DAC	WF2 50% DAC	W2 20% DAC	MP1 20% DAC	MPF1 50% DAC	MP MAX DAC	MPF2 50% DAC	MP2 20% DAC	CONTINUOUS (C) OR SPOT (S) TRANSVERSE (T) OR PARALLEL (P)	CW/CCW TOP OR BOTTOM
NO RECORDABLE INDICATIONS, WELD EXAM.													

REMARKS: EXAMINED 47" C.W. FROM E OF N3C TO 47" C.W. OF N3D E. NO Exam WAS PERFORMED ON THE TOPSIDE OF THE WELD DUE TO THE CONFIGURATION OF THE FLANGE.

<u>William Kimball II</u> EXAMINED BY	<u>10-18-93</u> LEVEL DATE	<u>2/26/94</u> UTILITY REVIEW DATE
<u>Leresa Kimball</u> GE REVIEWED BY	<u>12-21-93</u> DATE	<u>7/11/94</u> ANII REVIEW DATE



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET
(MANUAL RPV VESSEL WELDS)

SITE: Browns Ferry
UNIT: 3
PROJECT NO.: 00387

PROCEDURE NO.: GE-UT-300
REVISION NO.: 6
FRR NO.: DO4

REPORT NO.: E-20
DATA SHEET NO.: D-002
CALIBRATION SHEET NO.: 0° C-104
45° N/A 60° N/A

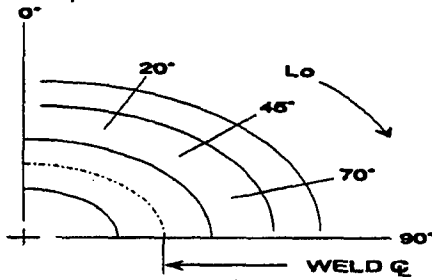
SYSTEM: RPV EXAM SURFACE TEMP: 69 °F COUPLANT: ULTRAGEL II EXAM START: 1754
WELD ID: C-5-FLG THERMOMETER S/N: L0281CL BATCH NO.: 093011 EXAM END: 1800

BEAM ANGLE: 0° 45° 60° OTHER N/A SURFACE CONDITION: SMOOTH GROUND OTHER N/A
MATERIAL TYPE: CS SS OTHER N/A EXAM SURFACE: ID OD

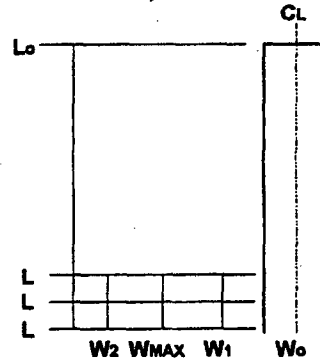
Lo REFERENCE VESSEL 0°
Wo REFERENCE weld

0° SCAN SENSITIVITY 48.6 dB
45° SCAN SENSITIVITY N/A dB
60° SCAN SENSITIVITY N/A dB

NOZZLE WELD REFERENCE SYSTEM (Lo AND Wo ARE INTERCHANGED WHEN SCANNING FOR REFLECTORS TRANSVERSE TO THE WELD)



WELD REFERENCE SYSTEM (Lo AND Wo ARE INTERCHANGED WHEN SCANNING FOR REFLECTORS TRANSVERSE TO THE WELD)



L/R	% DAC (MAX)	W1 20% DAC	WF1 50% DAC	WM MAX DAC	WF2 50% DAC	W2 20% DAC	MP1 20% DAC	MPF1 50% DAC	MP MAX DAC	MPF2 50% DAC	MP2 20% DAC	CONTINUOUS (C) OR SPOT (S) TRANSVERSE (T) OR PARALLEL (P)	CWCCW TOP OR BOTTOM
NO RECORDABLE INDICATIONS, BASE METAL EXAM													

REMARKS: EXAMINED 47" CCW FROM Q OF N3C TO 47" CW OF N3D E. NO EXAM WAS PERFORMED ON THE TOPSIDE DUE TO THE CONFIGURATION OF THE FLANGE.

Walter O'Brien II 10-18-93
EXAMINED BY LEVEL DATE
Ceresa Kimball 12-21-93
GE REVIEWED BY DATE

2 J Woody 1/26/94
UTILITY REVIEW DATE
Albert Taylor 7/1/94
ANII REVIEW DATE

PAGE: 1 OF: 1



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET

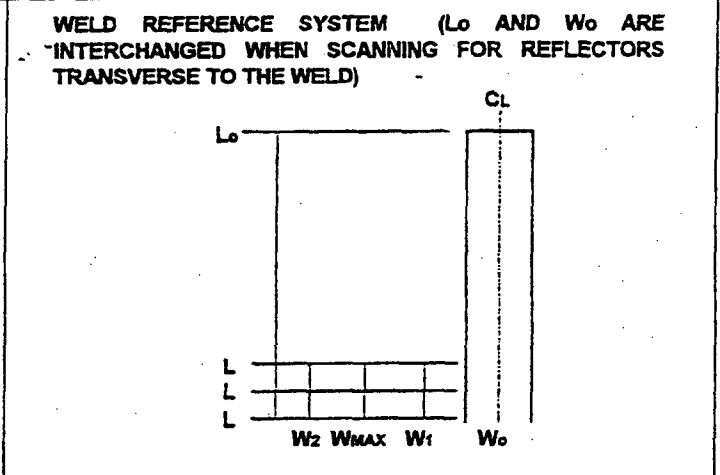
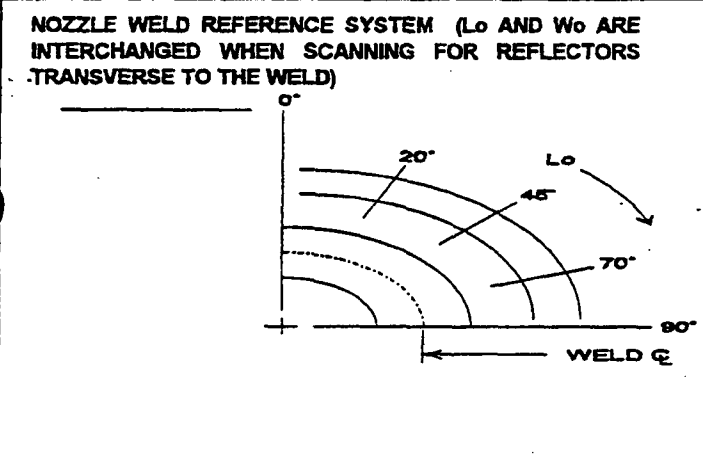
(MANUAL RPV VESSEL WELDS)

SITE: <u>BROWNS FERRY</u>	PROCEDURE NO.: <u>GE-UT-300</u>	REPORT NO.: <u>E-20</u>
UNIT: <u>3</u>	REVISION NO.: <u>6</u>	DATA SHEET NO.: <u>D-007</u>
PROJECT NO.: <u>00387</u>	FRR NO.: <u>004</u>	CALIBRATION SHEET NO.: 0° <u>N/A</u> 45° <u>C-107</u> 60° <u>N/A</u>

SYSTEM: RPV EXAM SURFACE TEMP: 69 °F COUPLANT: ULTRAGEL II EXAM START: 1627
 WELD ID: C-5-FLG THERMOMETER S/N: L0281CL BATCH NO.: 093011 EXAM END.: 1700

BEAM ANGLE: 0° 45° 60° OTHER N/A SURFACE CONDITION: SMOOTH GROUND OTHER N/A
 MATERIAL TYPE: CS SS OTHER N/A EXAM SURFACE: ID OD

Lo REFERENCE VESSEL 0° 0° SCAN SENSITIVITY N/A dB
 Wo REFERENCE WELD 45° 45° SCAN SENSITIVITY 55.8 dB
 60° SCAN SENSITIVITY N/A dB



L/R	% DAC (MAX)	W1 20% DAC	WF1 50% DAC	WM MAX DAC	WF2 50% DAC	W2 20% DAC	MP1 20% DAC	MPF1 50% DAC	MP MAX DAC	MPF2 50% DAC	MP2 20% DAC	CONTINUOUS (C) OR SPOT (S) TRANSVERSE (T) OR PARALLEL (P)	CW/CCW TOP OR BOTTOM
NO RECORDABLE INDICATIONS													

REMARKS: EXAMINED 31" CCW FROM E OF N3A TO 26" CW OF N3B. ALSO EXAMINED 47" CCW OF N3C TO 47" CW OF N3D. NO EXAM WAS PERFORMED ON THE TOPSIDE OF THE WELD DUE TO THE CONFIGURATION OF THE FLANGE.

EXAMINED BY: <u>John Kimball</u>	LEVEL: <u>II</u>	DATE: <u>10-21-93</u>	UTILITY REVIEW: <u>J. Wood</u>	DATE: <u>1/26/94</u>
GE REVIEWED BY: <u>John Kimball</u>	DATE: <u>12-21-93</u>	ANII REVIEW: <u>Albert Taylor</u>	DATE: <u>7/10/94</u>	PAGE: <u>1</u> OF: <u>1</u>



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET

(MANUAL RPV VESSEL WELDS)

SITE: Browns Ferry

PROCEDURE NO.: GE-UT-300

REPORT NO.: E-20

UNIT: 3

REVISION NO.: 6

DATA SHEET NO.: D-008

PROJECT NO.: 00387

FRR NO.: 004

CALIBRATION SHEET NO.: 0° N/A

45° N/A 60° C-108

SYSTEM: RPV EXAM SURFACE TEMP: 69 °F COUPLANT: Ultragel II EXAM START: 1540

WELD ID: C-5-FLG THERMOMETER S/N: L0281CL BATCH NO.: 093011 EXAM END: 1625

BEAM ANGLE: 0° 45° 60° OTHER N/A SURFACE CONDITION: SMOOTH GROUND OTHER N/A

MATERIAL TYPE: CS SS OTHER N/A EXAM SURFACE: ID OD

L₀ REFERENCE VESSEL 0°

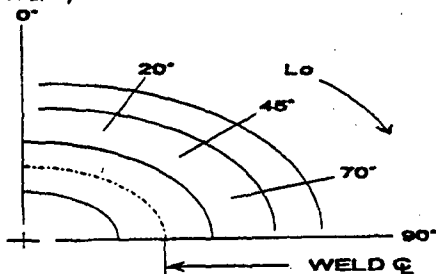
0° SCAN SENSITIVITY N/A dB

W₀ REFERENCE WELD 6

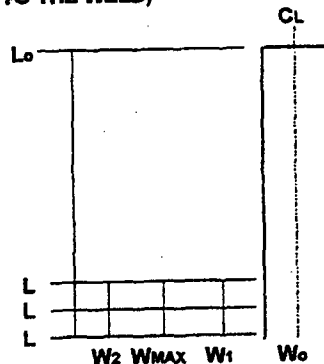
45° SCAN SENSITIVITY N/A dB

60° SCAN SENSITIVITY 602 dB

NOZZLE WELD REFERENCE SYSTEM (L₀ AND W₀ ARE INTERCHANGED WHEN SCANNING FOR REFLECTORS TRANSVERSE TO THE WELD)



WELD REFERENCE SYSTEM (L₀ AND W₀ ARE INTERCHANGED WHEN SCANNING FOR REFLECTORS TRANSVERSE TO THE WELD)



L/R	% DAC (MAX)	W1 20% DAC	WF1 50% DAC	WM MAX DAC	WF2 50% DAC	W2 20% DAC	MP1 20% DAC	MPF1 50% DAC	MP MAX DAC	MPF2 50% DAC	MP2 20% DAC	CONTINUOUS (C) OR SPOT (S) TRANSVERSE (T) OR PARALLEL (P)	CWCCW TOP OR BOTTOM
NO RECORDABLE INDICATIONS													

REMARKS: EXAMINED 31" CCW FROM 6 OF N3A TO 26" CW OF N3B. ALSO EXAMINED 47" CCW OF N3C TO 47" CW OF N3D. NO EXAM WAS PERFORMED ON THE TOPSIDE OF THE WELD DUE TO THE CONFIGURATION OF THE FLANGE.

EXAMINED BY: [Signature] LEVEL: II DATE: 10-21-93
 GE REVIEWED BY: [Signature] DATE: 12-21-93

UTILITY REVIEW: [Signature] DATE: 1/26/94
 ANII REVIEW: [Signature] DATE: 7/1/94

PAGE: 1 OF: 1



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET

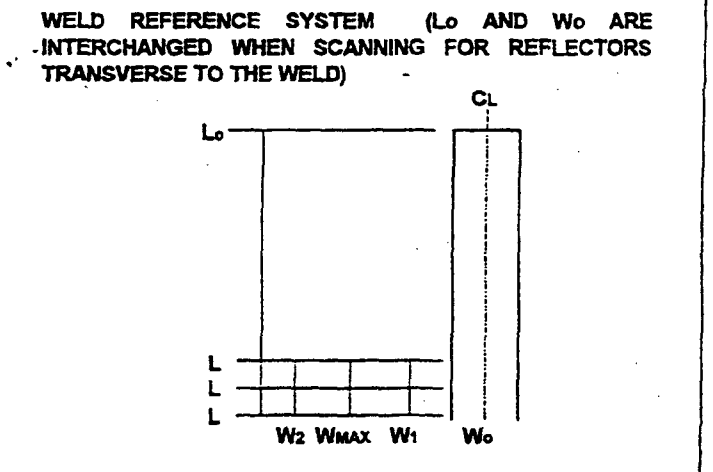
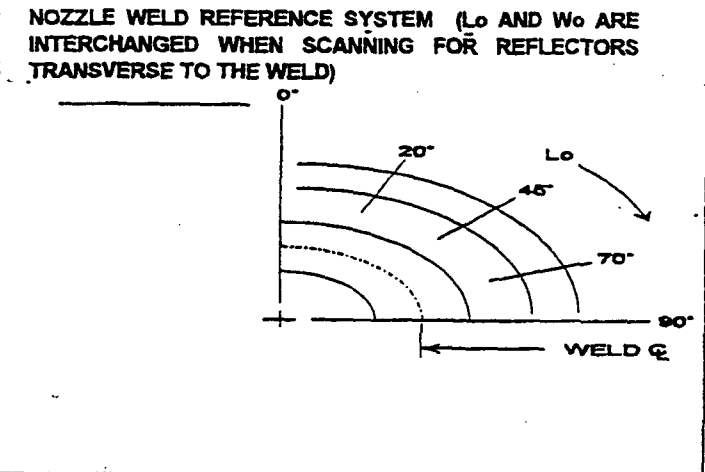
(MANUAL RPV VESSEL WELDS)

SITE: <u>BFNP</u>	PROCEDURE NO.: <u>GE-UT-300</u>	REPORT NO.: <u>E-20</u>
UNIT: <u>3</u>	REVISION NO.: <u>0</u>	DATA SHEET NO.: <u>0-009</u>
PROJECT NO.: <u>00387</u>	FRR NO.: <u>FRR-004</u>	CALIBRATION SHEET NO.: 0° <u>C-109</u> 45° <u>N/A</u> 60° <u>N/A</u>

SYSTEM: RPV EXAM SURFACE TEMP: 70 °F COUPLANT: ULTRAGEL II EXAM START: 16:40
 WELD ID: C-5-FLG THERMOMETER S/N: L0250CL BATCH NO.: 093011 EXAM END: 17:22

BEAM ANGLE: 0° 45° 60° OTHER N/A SURFACE CONDITION: SMOOTH GROUND OTHER N/A
 MATERIAL TYPE: CS SS OTHER N/A EXAM SURFACE: ID OD

Lo REFERENCE VESSEL 0° 0° SCAN SENSITIVITY 50.2 dB
 Wo REFERENCE CL 45° SCAN SENSITIVITY N/A dB
 60° SCAN SENSITIVITY N/A dB



LR	% DAC (MAX)	W1 20% DAC	WF1 50% DAC	WM MAX DAC	WF2 50% DAC	W2 20% DAC	MP1 20% DAC	MPF1 50% DAC	MP MAX DAC	MPF2 50% DAC	MP2 20% DAC	CONTINUOUS (C) OR SPOT (S) TRANSVERSE (T) OR PARALLEL (P)	CW/CW TOP OR BOTTOM
NO RECORDABLE INDICATIONS, WELD EXAM													

REMARKS: EXAMINED 31" CCW FROM TDC N3A AND ENDING 20" CW FROM TDC N3B

<u>Borden II</u> EXAMINED BY	<u>10-24-93</u> LEVEL DATE	<u>Wood</u> UTILITY REVIEW	<u>1/26/94</u> DATE
<u>Quera Kimball</u> GE REVIEWED BY	<u>12-21-93</u> DATE	<u>Albert Telford</u> ANII REVIEW	<u>7/1/94</u> DATE



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET

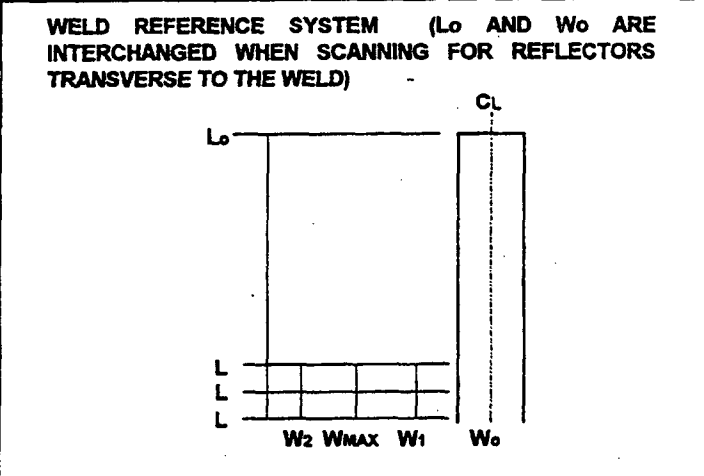
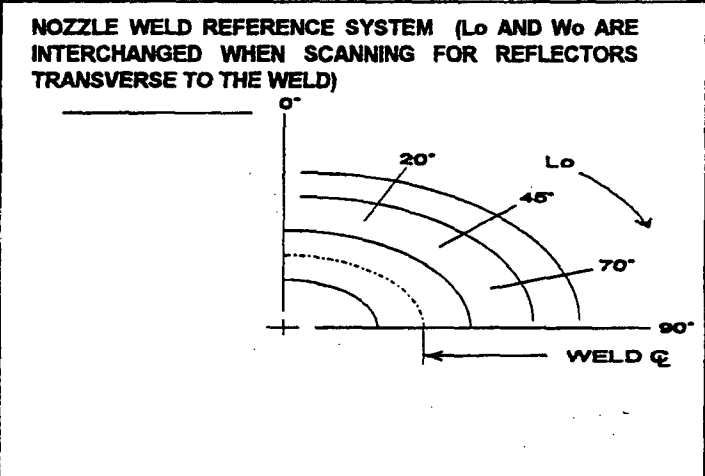
(MANUAL RPV VESSEL WELDS)

SITE: <u>BFNP</u>	PROCEDURE NO.: <u>GE-UT-300</u>	REPORT NO.: <u>E-20</u>
UNIT: <u>3</u>	REVISION NO.: <u>0</u>	DATA SHEET NO.: <u>D-010</u>
PROJECT NO.: <u>00387</u>	FRR NO.: <u>004</u>	CALIBRATION SHEET NO.: 0° <u>C-109</u> 45° <u>N/A</u> 60° <u>N/A</u>

SYSTEM: RPV EXAM SURFACE TEMP: 70 °E COUPLANT: ULTRAGEL II EXAM START: 110410
 WELD ID: C-5-FLG THERMOMETER S/N: L0250CL BATCH NO.: 093011 EXAM END: 1722

BEAM ANGLE: 0° 45° 60° OTHER N/A SURFACE CONDITION: SMOOTH GROUND OTHER N/A
 MATERIAL TYPE: CS SS OTHER N/A EXAM SURFACE: ID OD

Lo REFERENCE VESSEL 0° 0° SCAN SENSITIVITY 00 dB
 Wo REFERENCE ⊕ 45° SCAN SENSITIVITY N/A dB
 60° SCAN SENSITIVITY N/A dB



L/R	% DAC (MAX)	W1 20% DAC	WF1 50% DAC	WM MAX DAC	WF2 50% DAC	W2 20% DAC	MP1 20% DAC	MPF1 50% DAC	MP MAX DAC	MPF2 50% DAC	MP2 20% DAC	CONTINUOUS (C) OR SPOT (S) TRANSVERSE (T) OR PARALLEL (P)	CWCCW TOP OR BOTTOM
NO RECORDABLE INDICATIONS, BASE METAL													

REMARKS: EXAMINED FROM 59° TO 119°. VSA IS LOCATED AT 90°
 EXAMINED 139" STARTING AT 31" CCW FROM TDC N3A AND ENDING 210" CW FROM TDC N3B
 TOPSIDE NOT PERFORMED DUE TO FLANGE CONFIGURATION

<u>Robert II</u> 10-24-93	<u>J. Wood</u> 1/26/94
EXAMINED BY LEVEL DATE	UTILITY REVIEW DATE
<u>Quesa Kimball</u> 12-21-93	<u>Robert</u> 1/11/94
GE REVIEWED BY DATE	ANI REVIEW DATE
	<u>1/25/94</u>

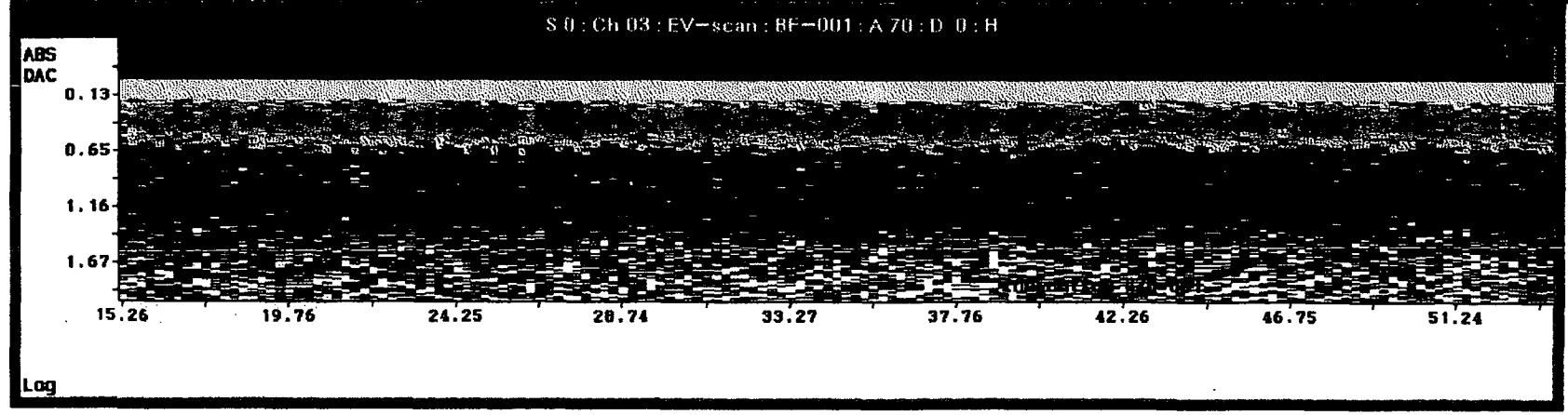
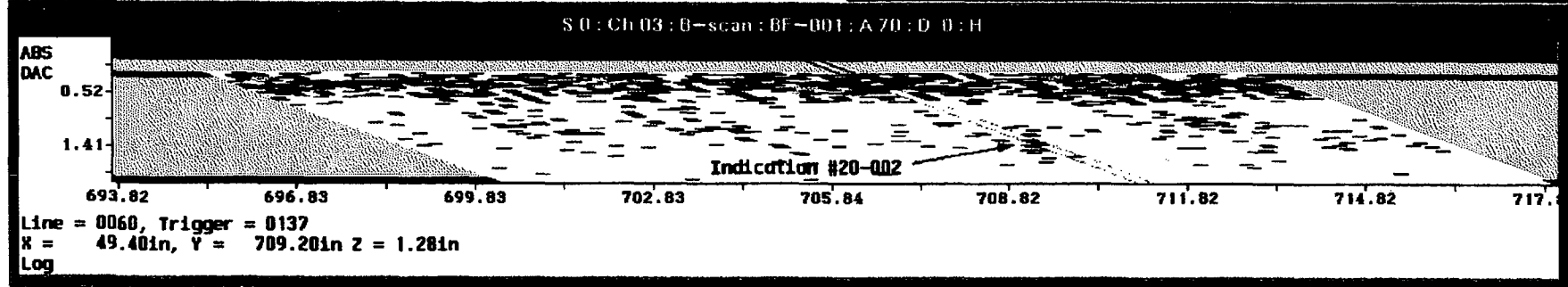
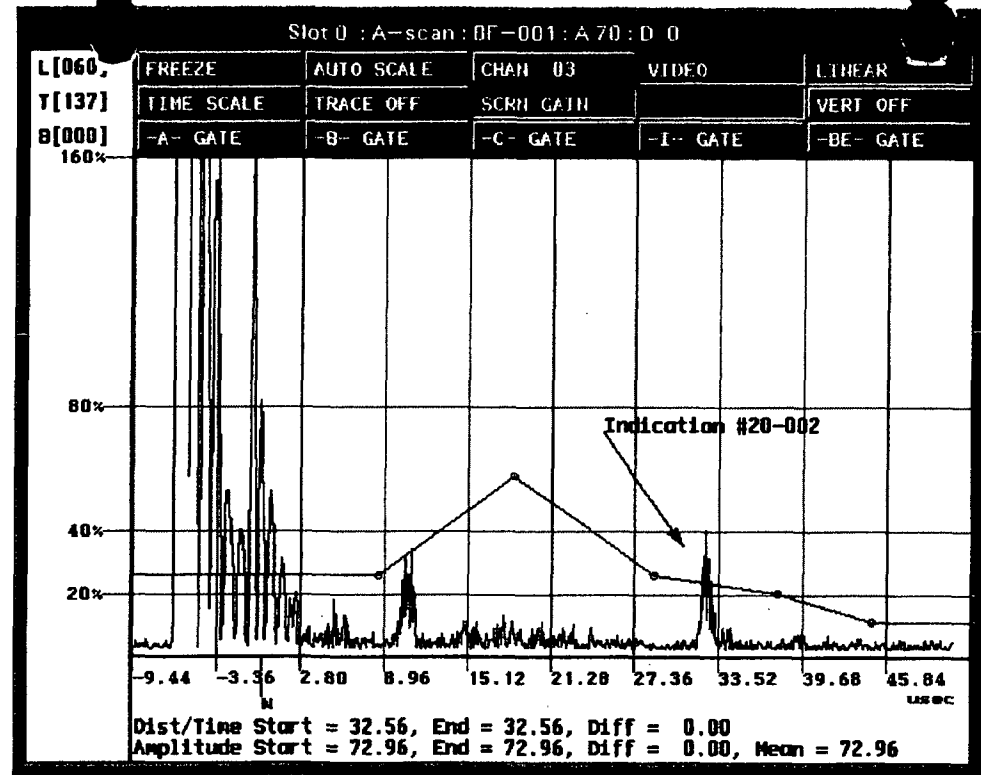
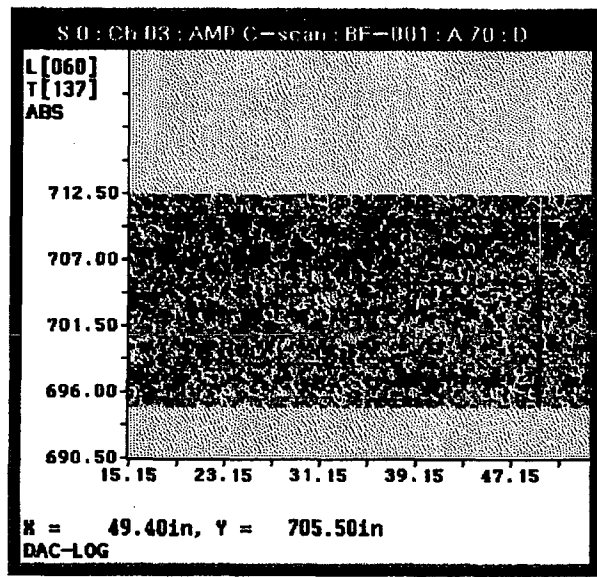
S 0 : Scale

5.4
11.5
17.7
23.8
30.8
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

DAC

Lower Ten
/test>dump /max
ter 3/20-002



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00254

S 0 : Scale

5.4

11.5

17.7

23.8

30.0

36.1

42.2 100%

48.4 50%

54.5 20%

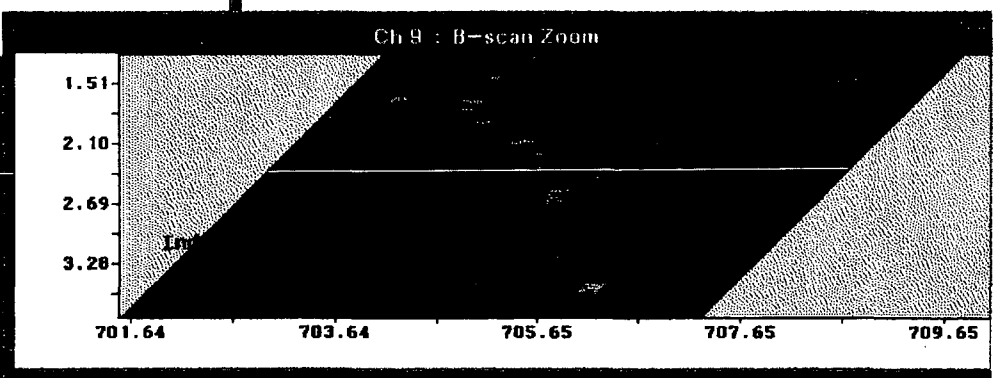
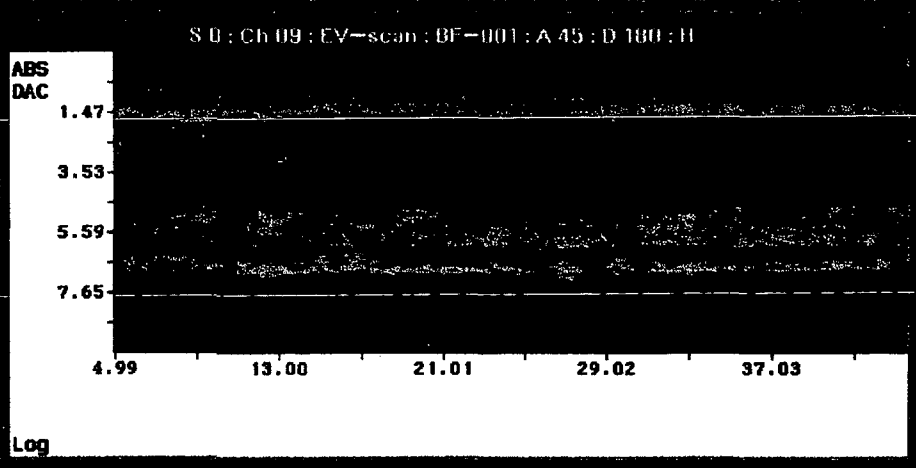
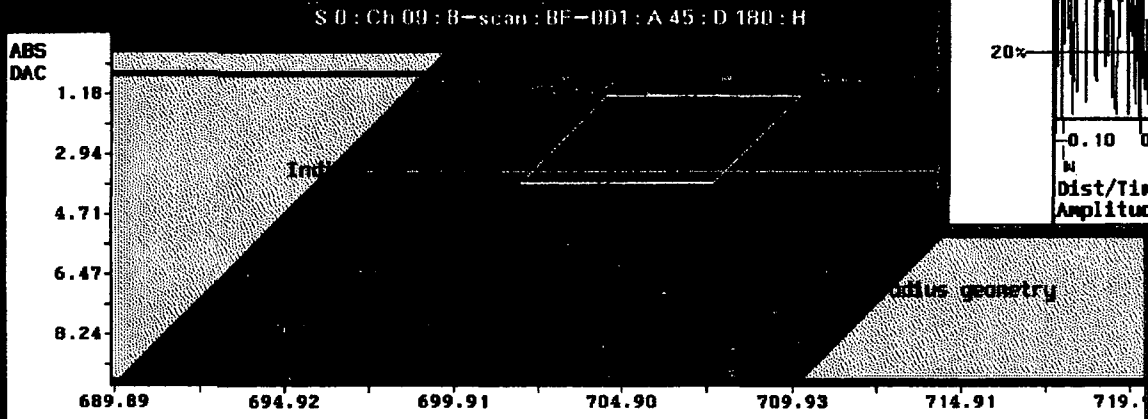
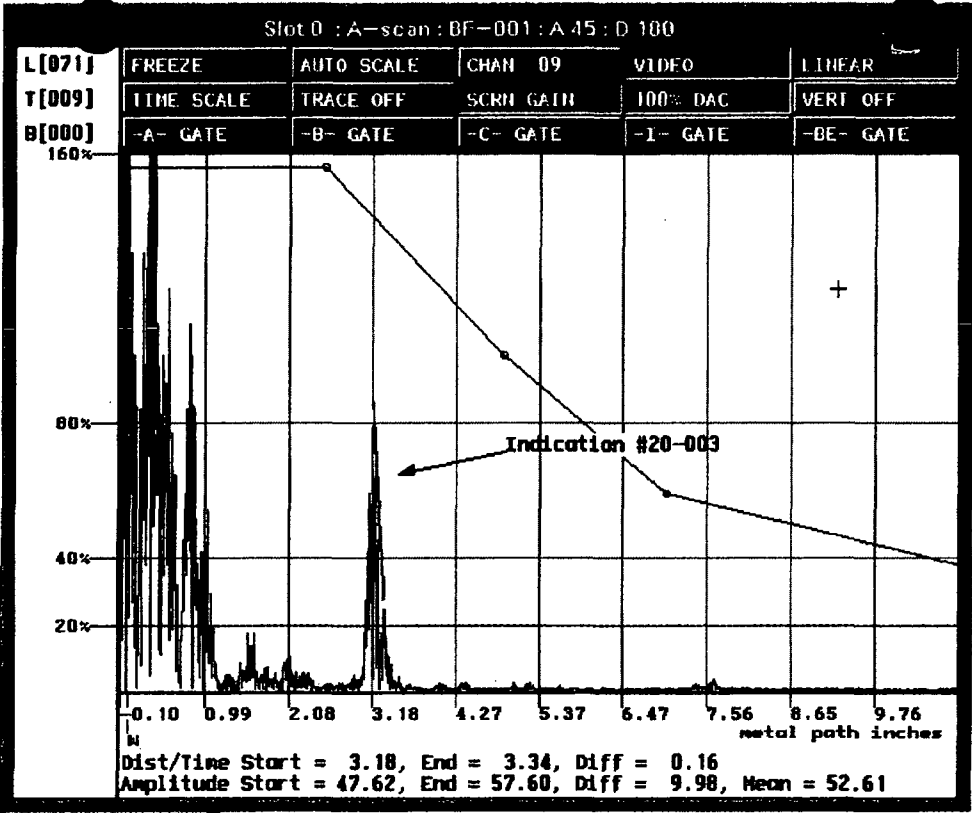
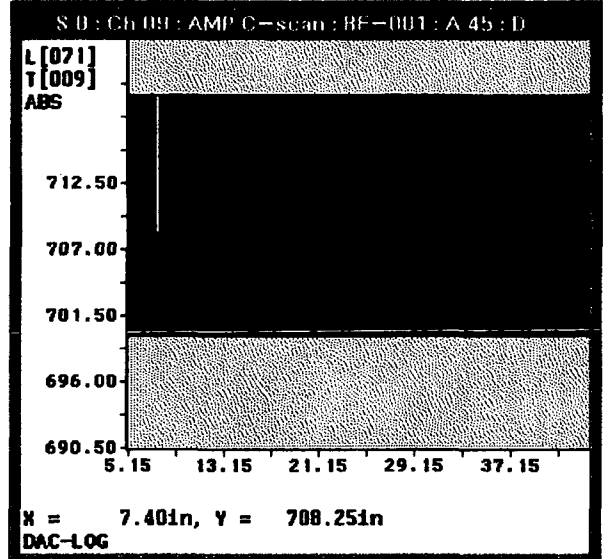
60.7

66.8

73.0

79.1

85.2



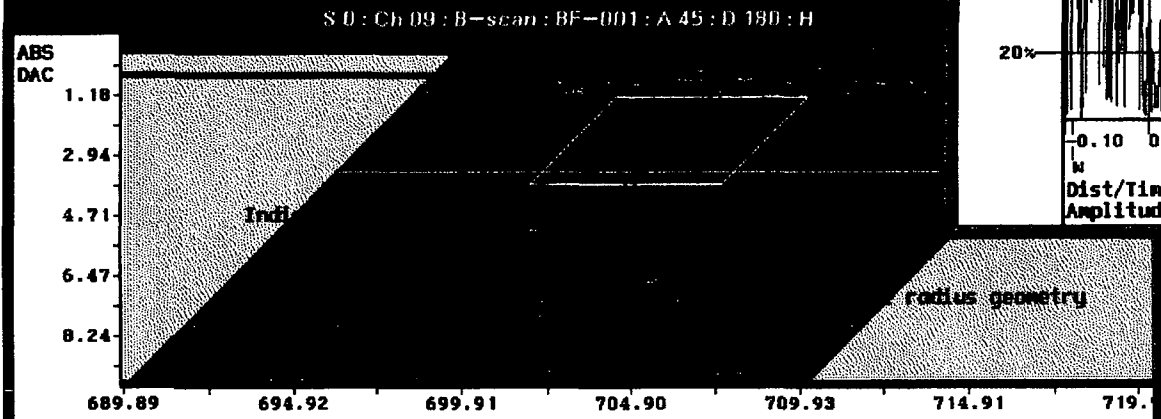
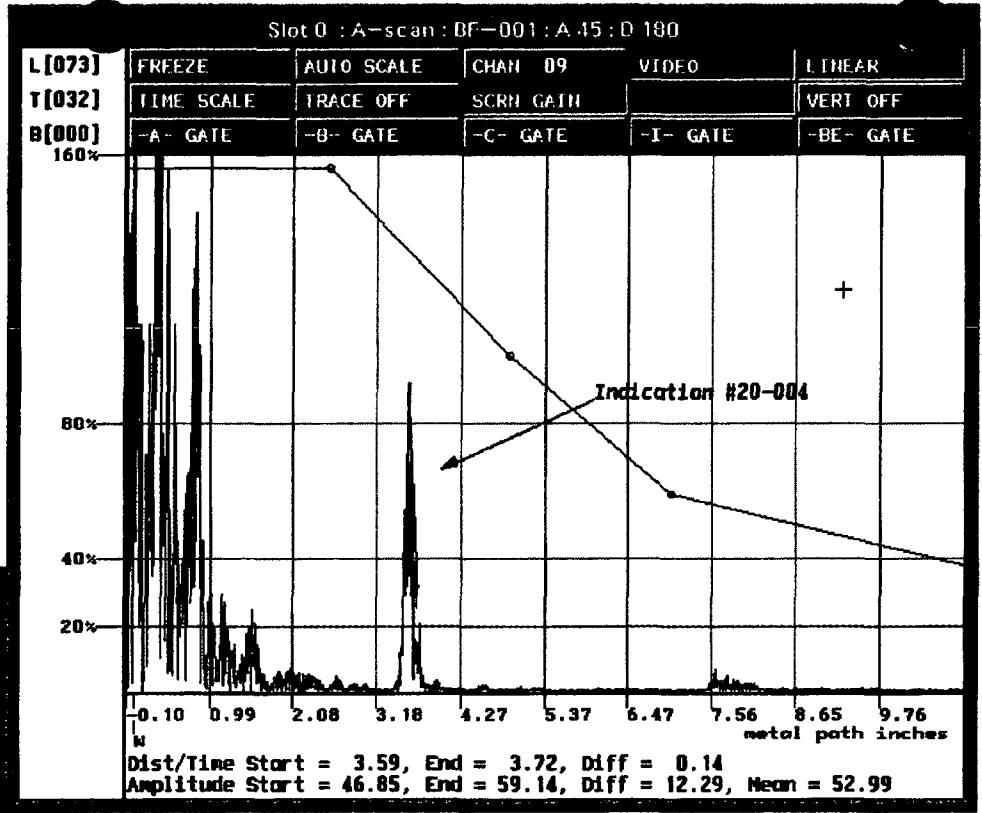
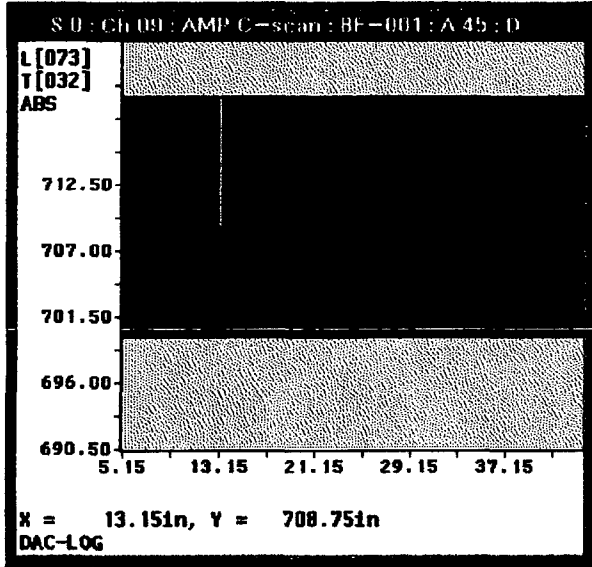
Lower Ten
/test/dump /max
ton3/20-003

60255

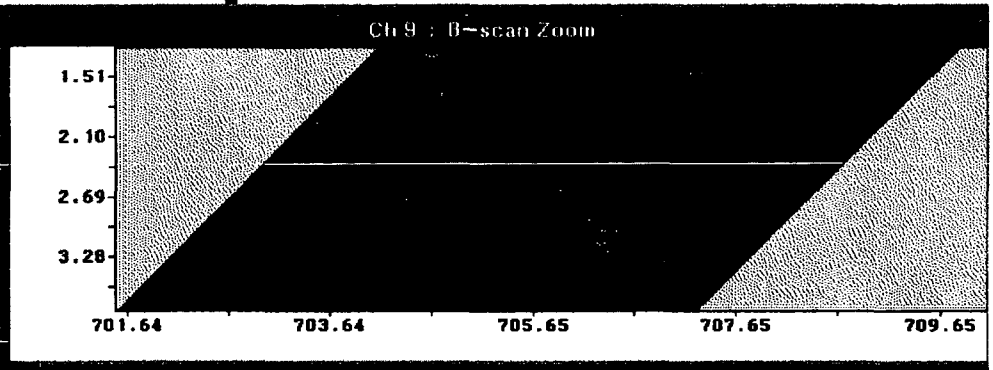
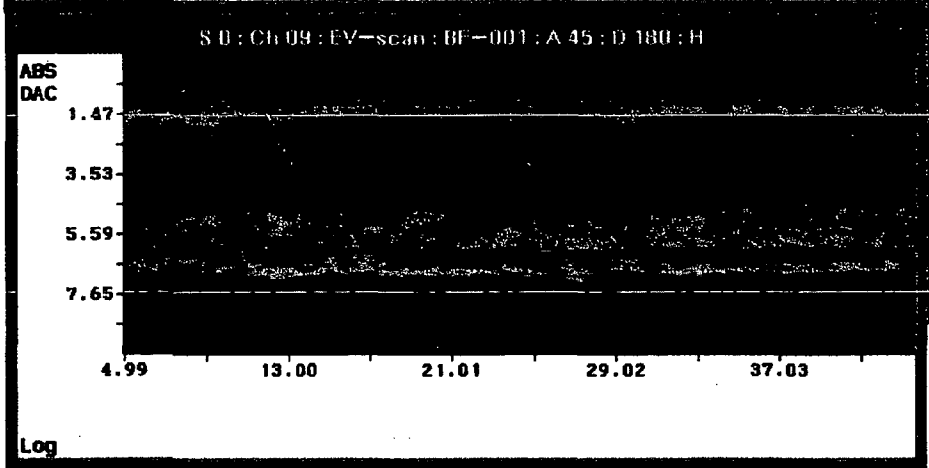
R1151
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S 0 : Scale

5.4	
11.5	
17.7	
23.8	
30.0	
36.1	
42.2	100%
48.4	50%
54.5	20%
60.7	
66.8	
73.0	
79.1	
85.2	



Line = 0073, Trigger = 0032
X = 13.15in, Y = 705.87in Z = 2.56in
Log



Lower Ten
/test>dump /max
tor3/20-004

00256

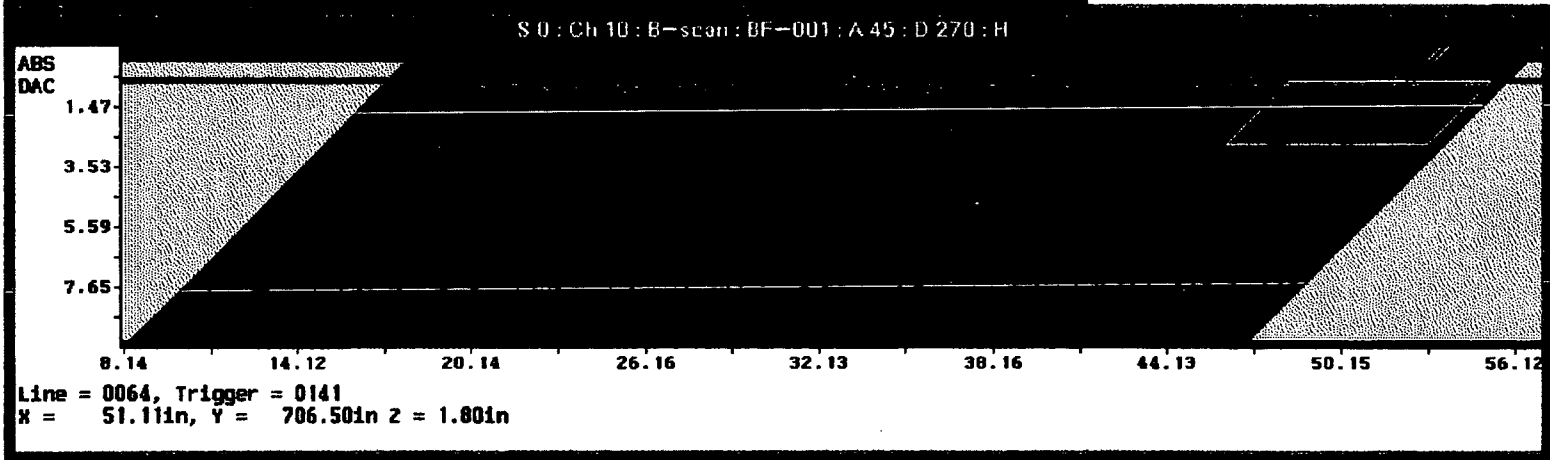
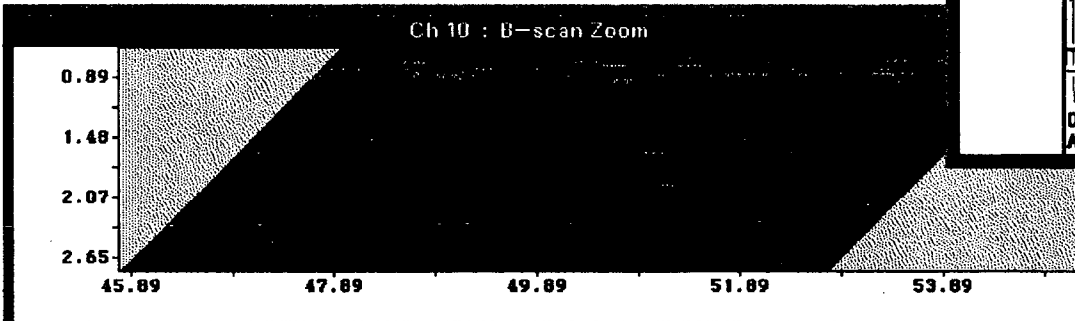
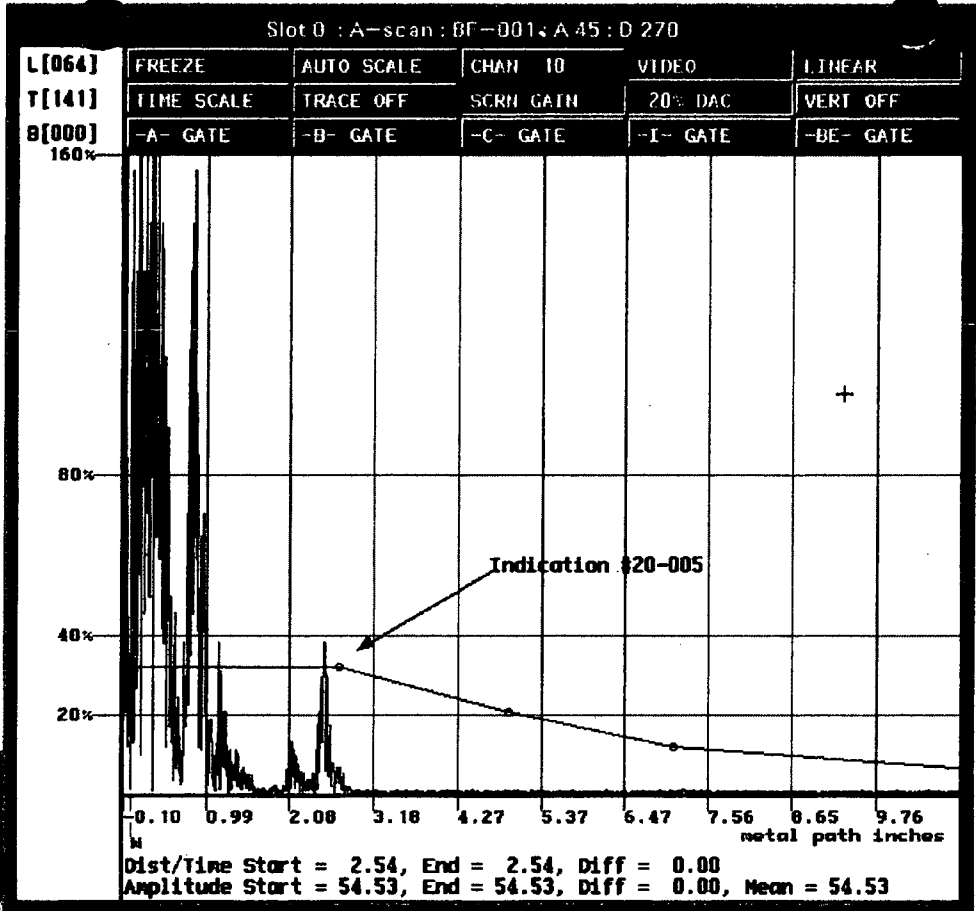
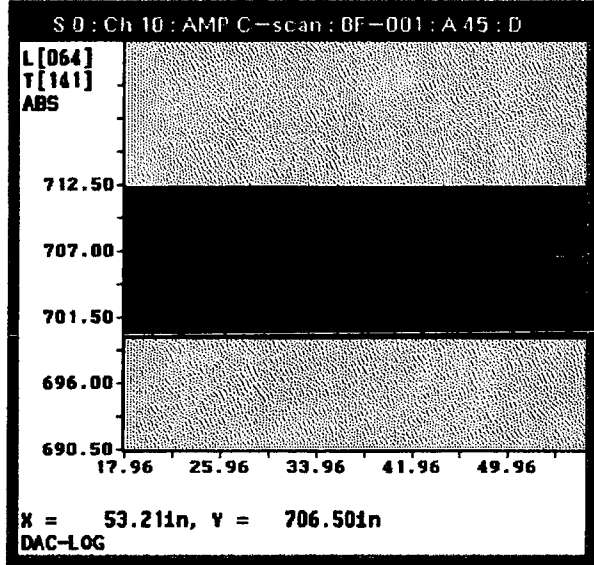
Pg 184 of 291

R 1151

S 0 : Scale

5.4	100%
11.5	50%
17.7	20%
23.8	
30.0	
36.1	
42.2	
48.4	
54.5	
60.7	
66.8	
73.0	
79.1	
85.2	
91.4	

DAC



Lower Ten
/test>dump /max
tor3/20-005

R 1151
Pg 185 of 291

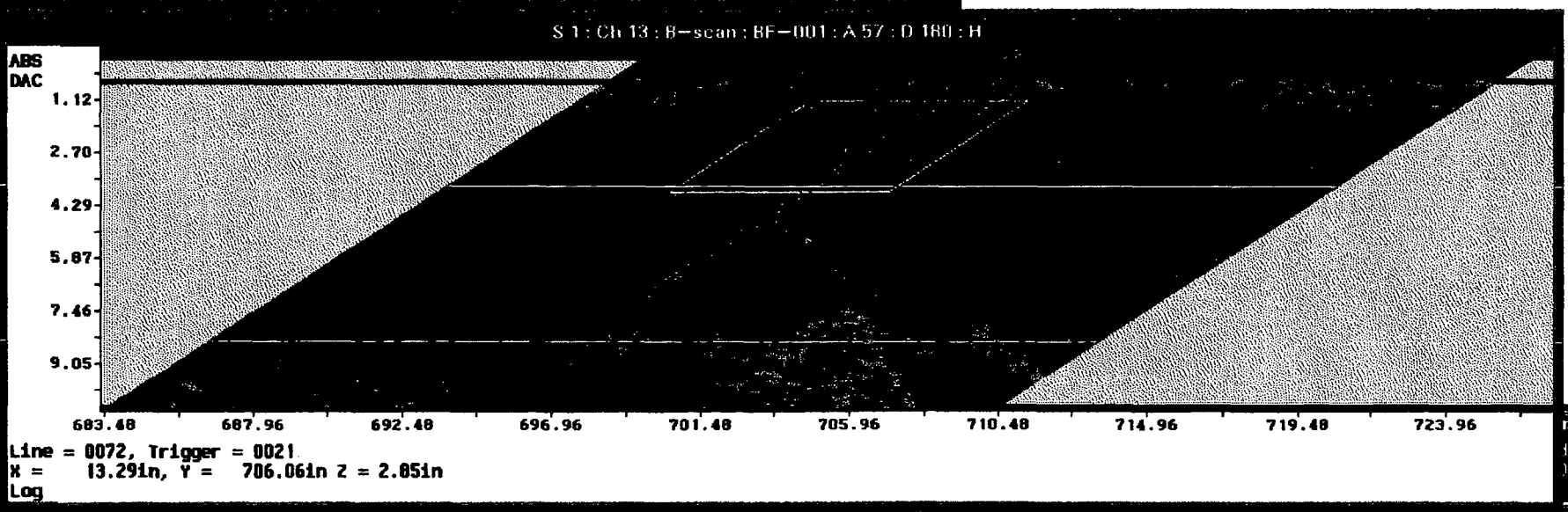
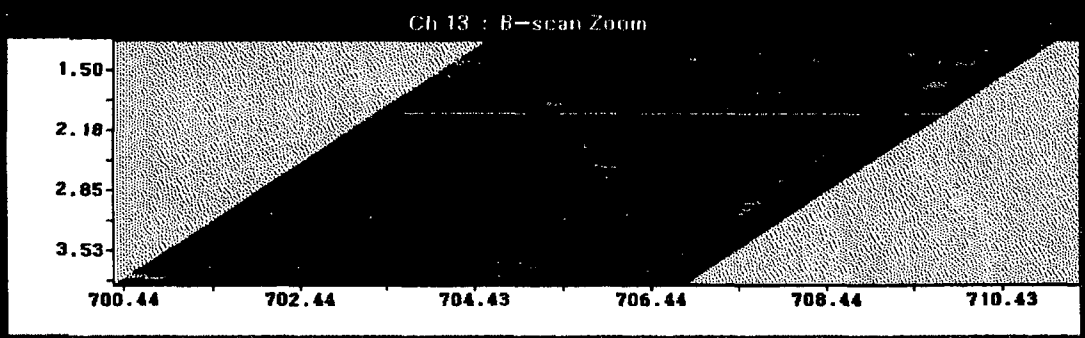
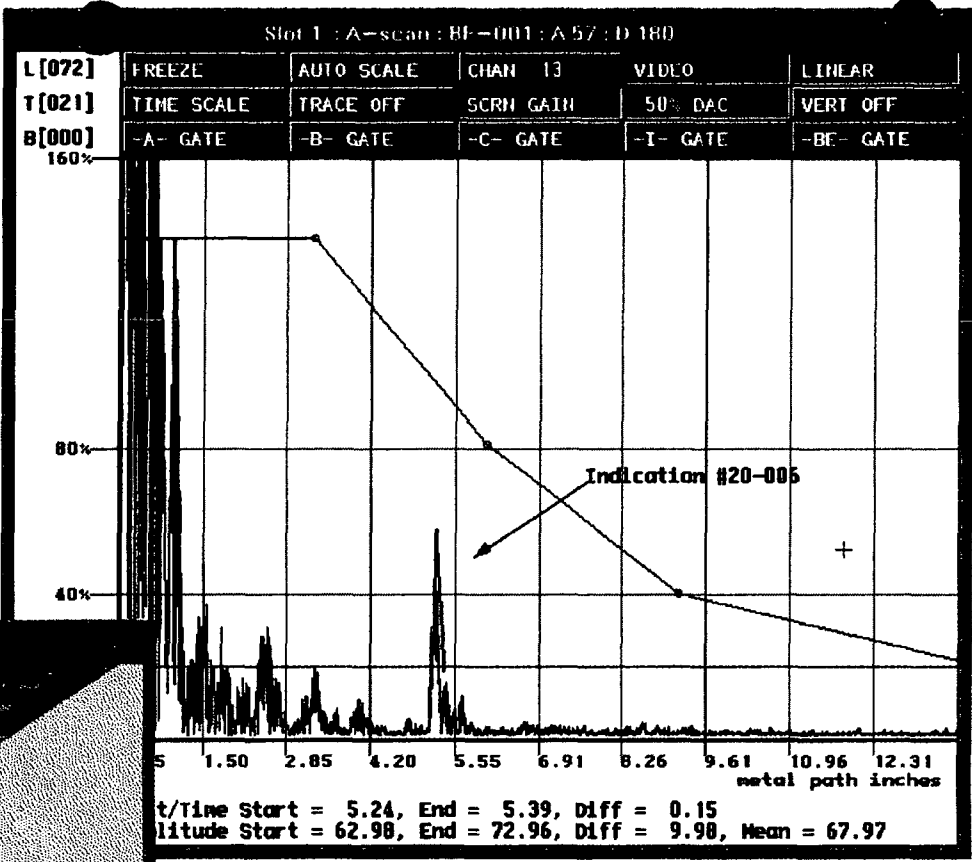
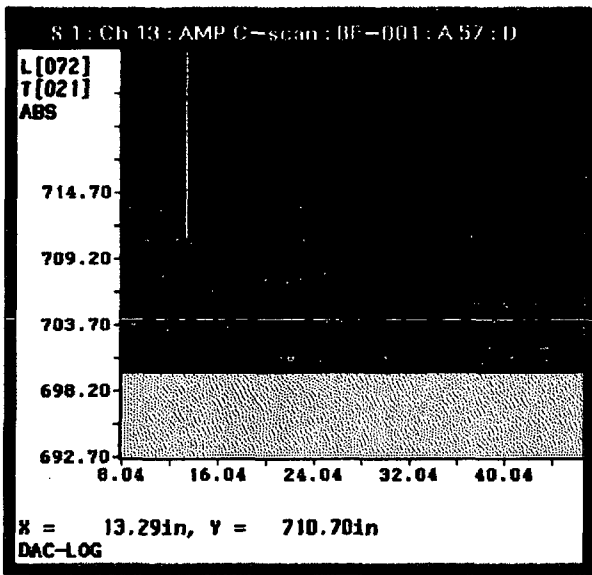
00257

S 1 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

DAC



00258

R 1151

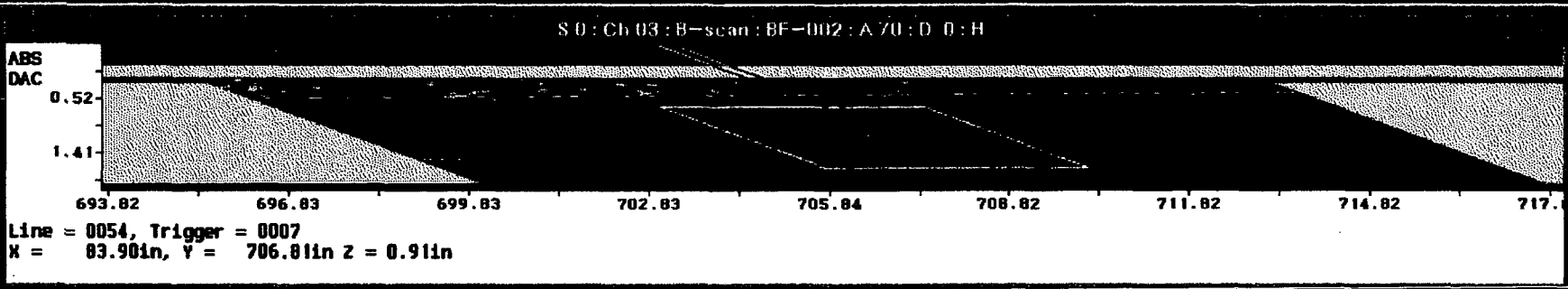
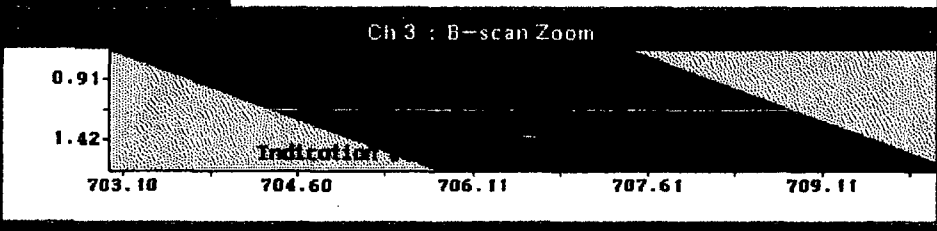
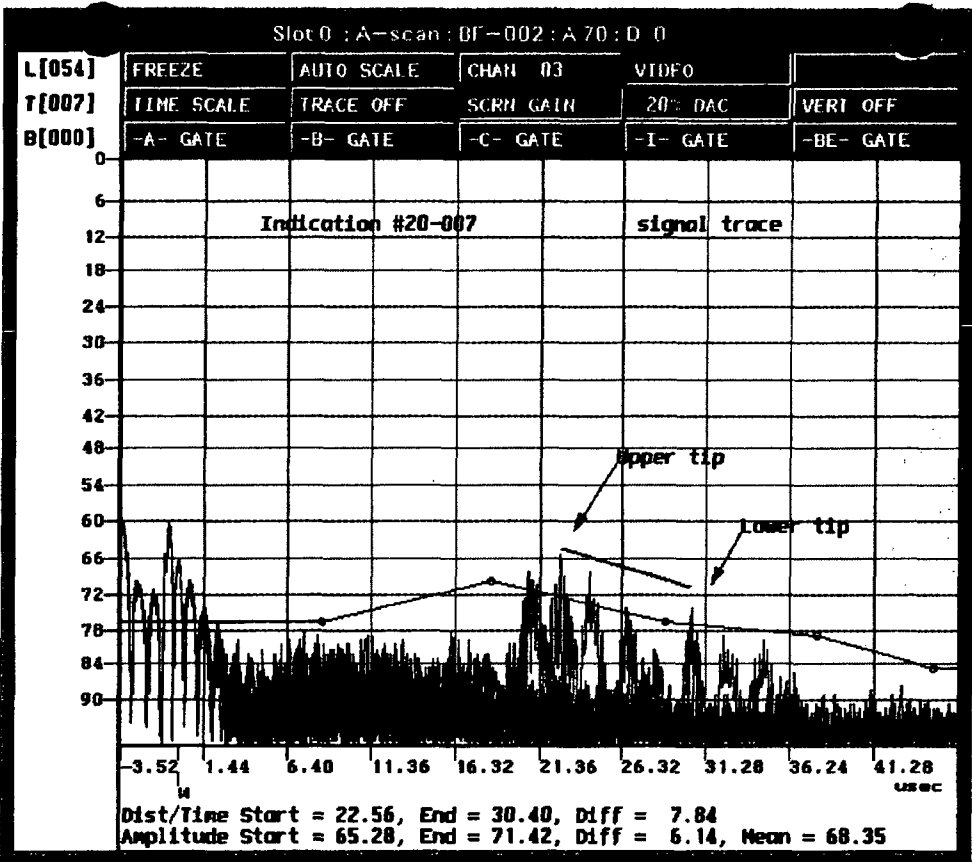
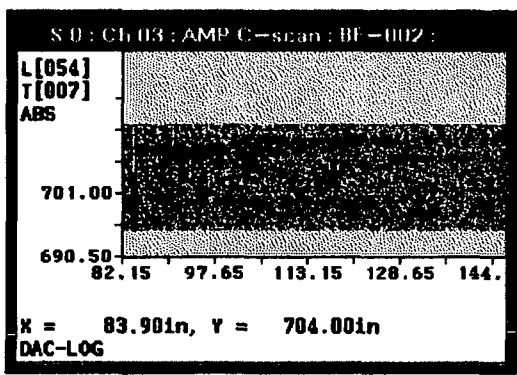
Pg 186 of 291

S 0 : Scale

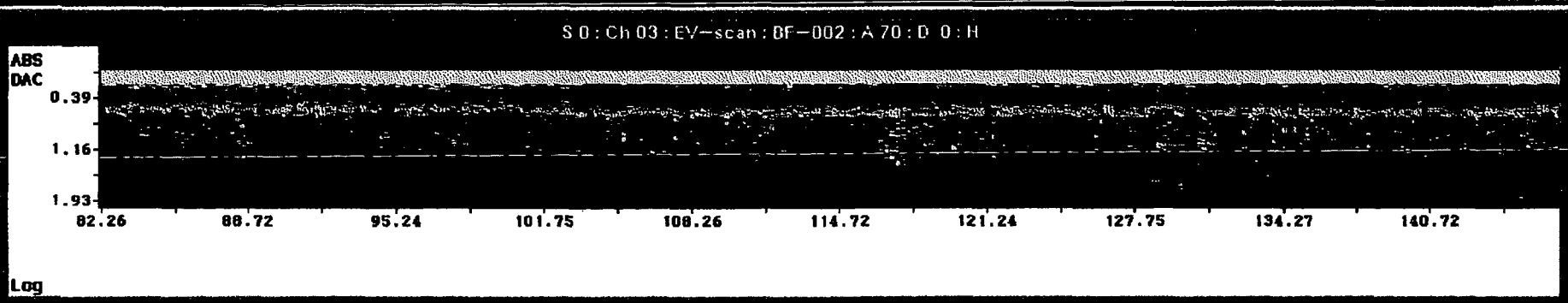
5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

DAC



wer Ten
>dump /max
/20-007



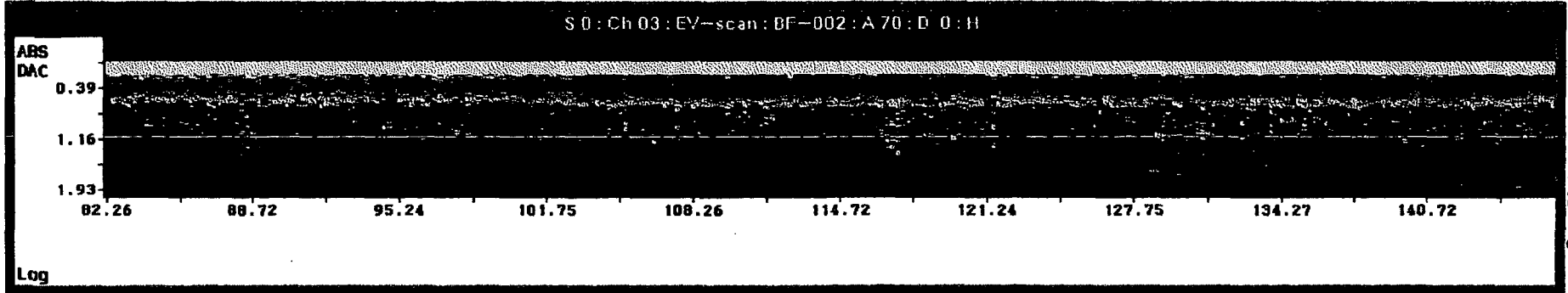
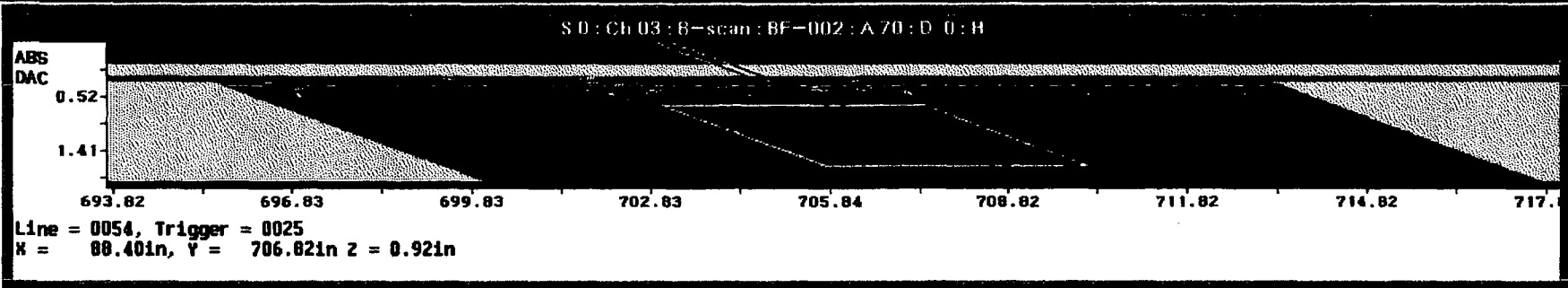
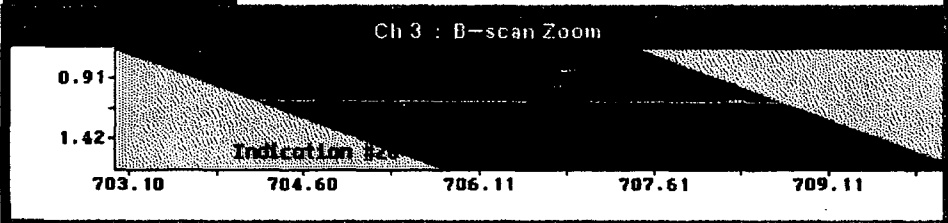
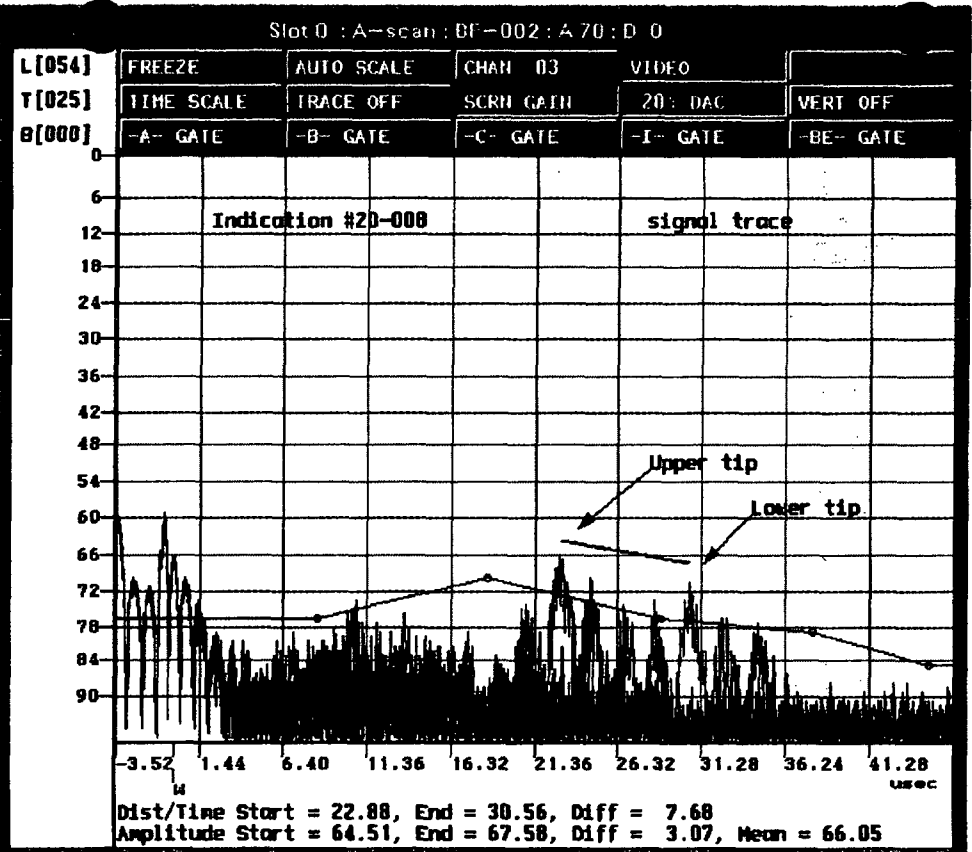
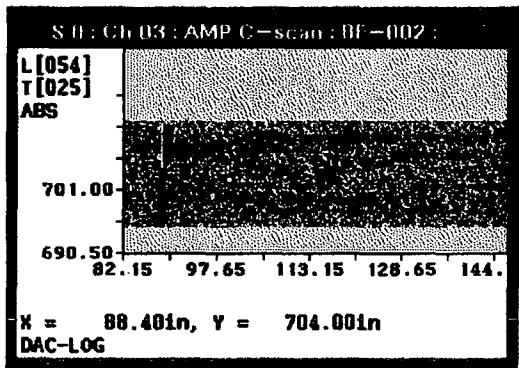
R 1151
Pg 187 of 291
00259

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

DAC



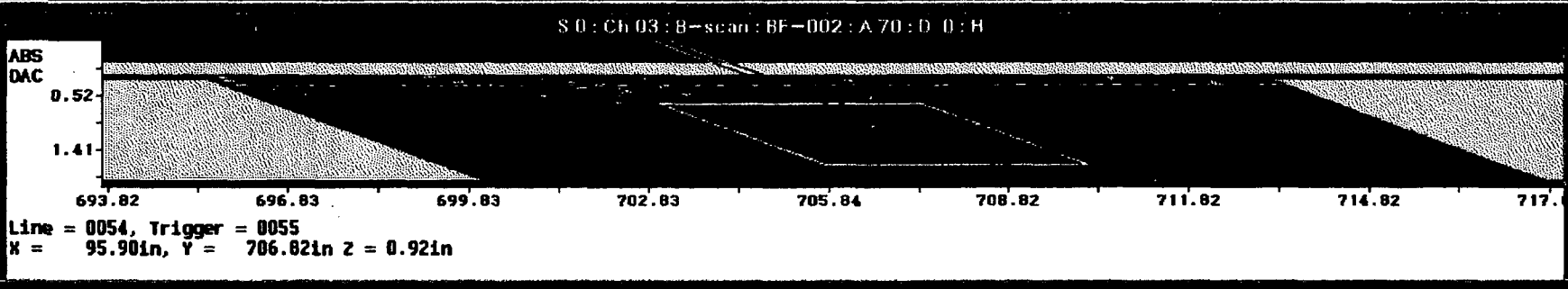
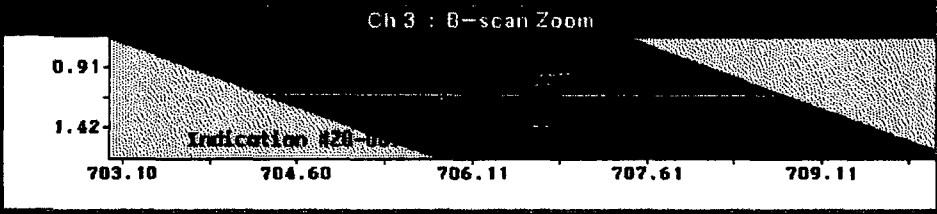
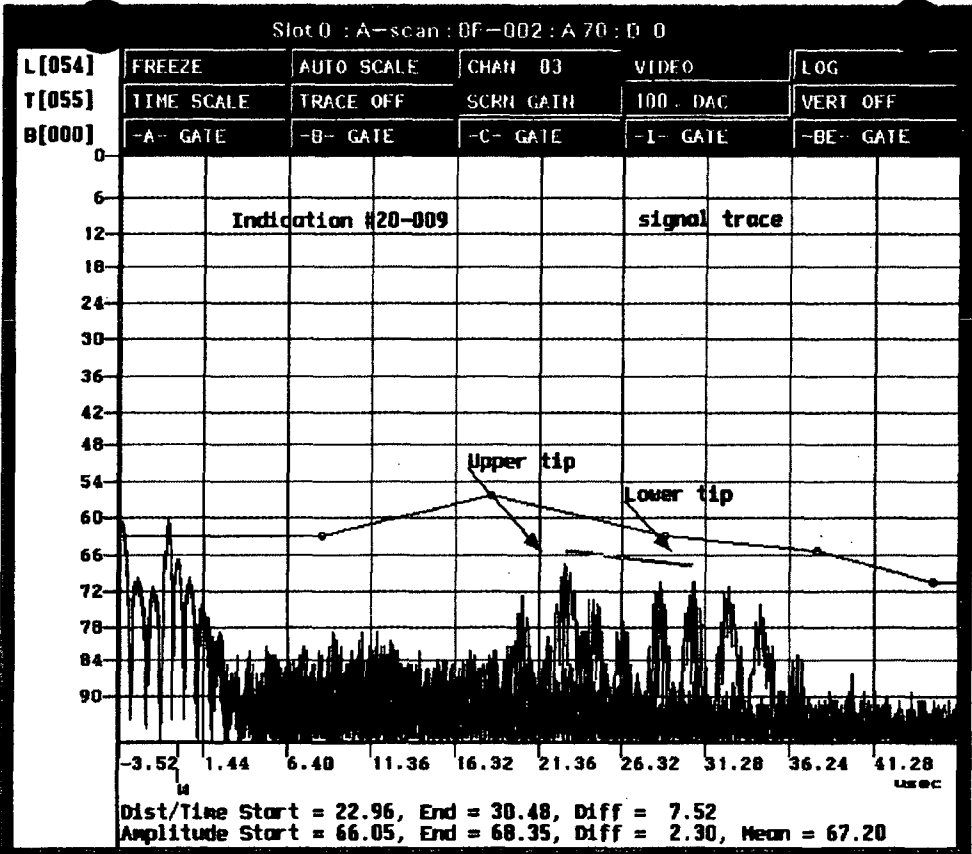
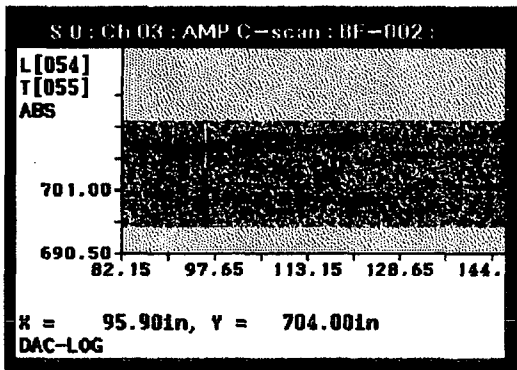
R1151
P91880F291
00260

S D : Scale

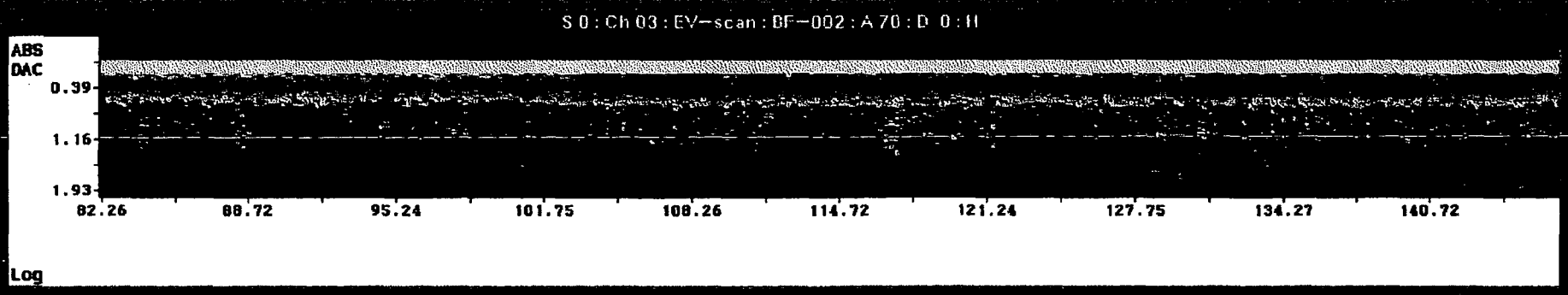
5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

DAC



Ver Ter
c>dump /max
20-009



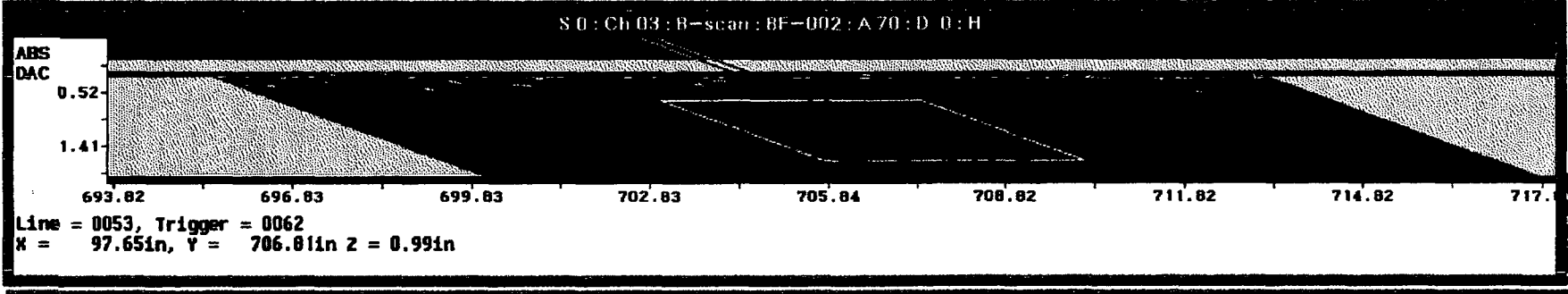
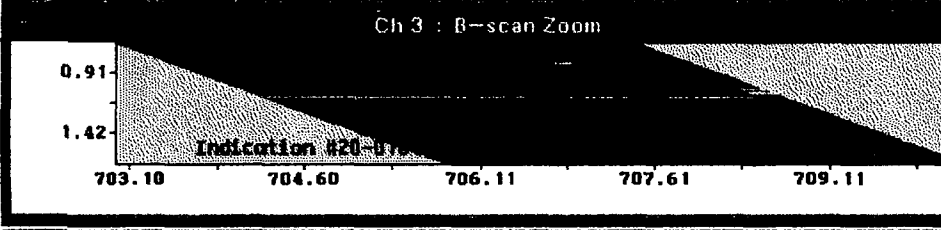
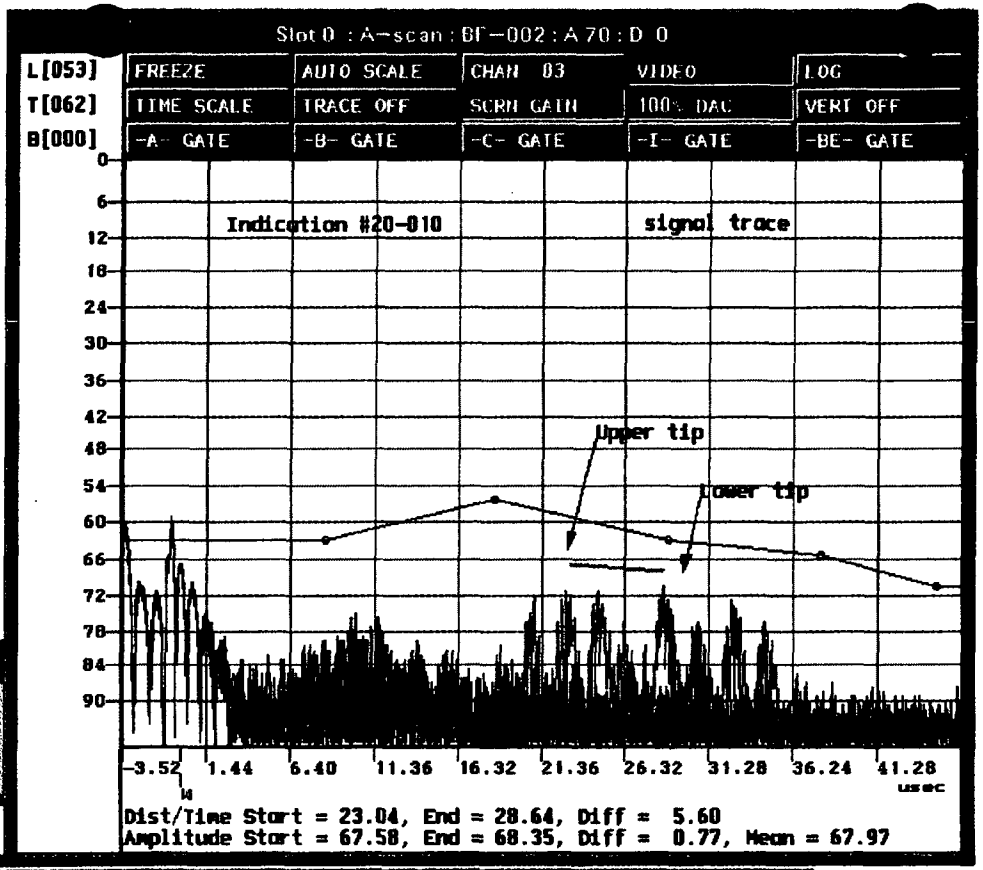
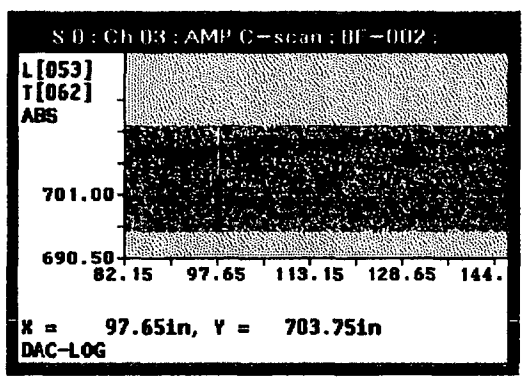
R 1151
Pg 189 of 291
00261

S 0 : Scale

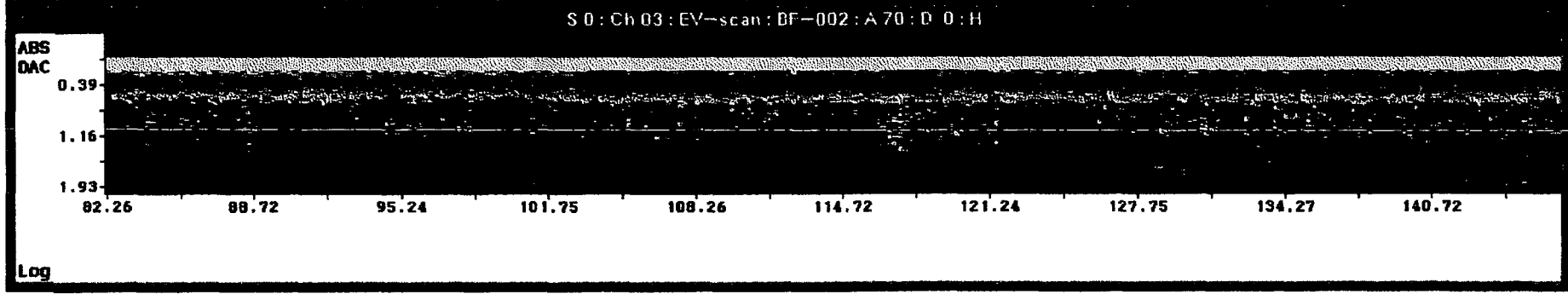
5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

DAC



wer Ten
t:dump /max
/20-010



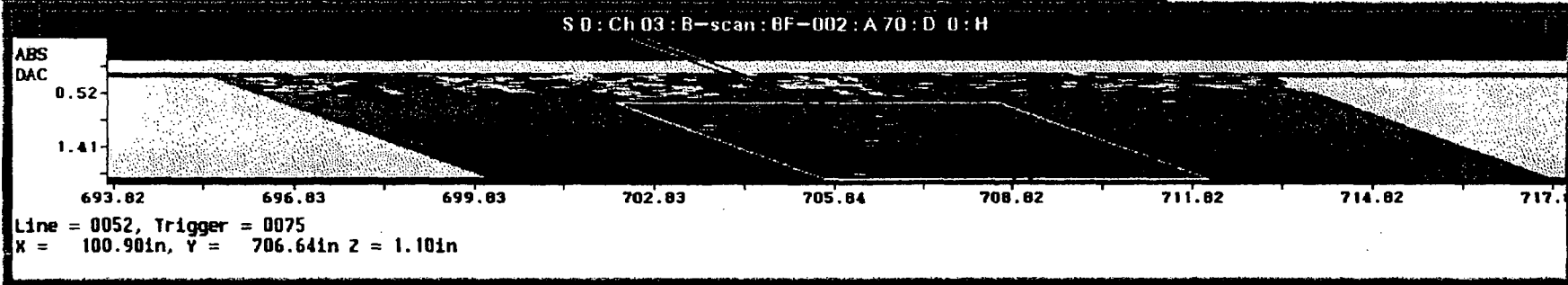
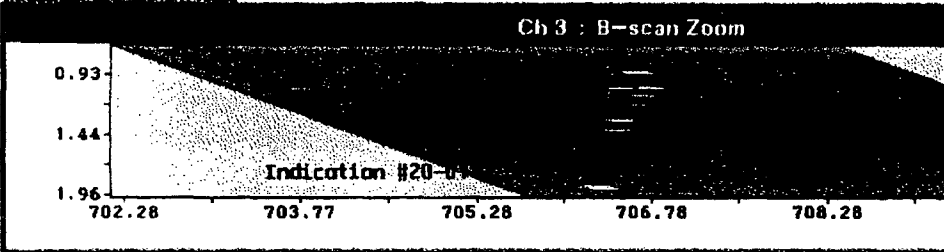
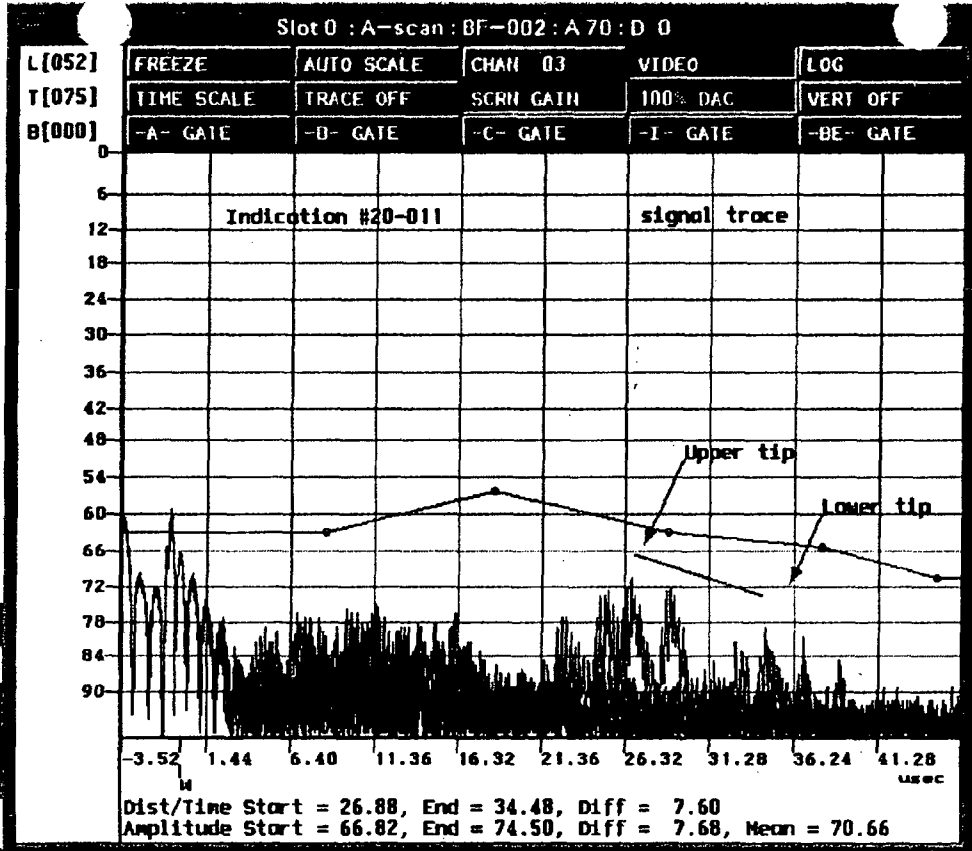
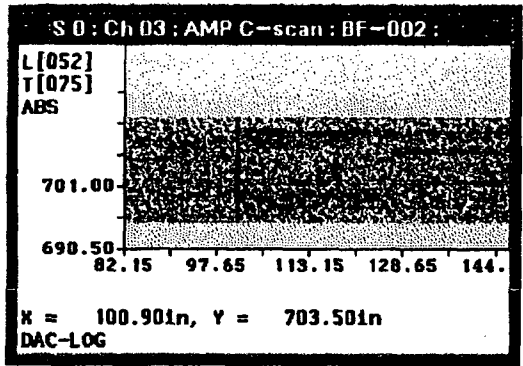
R1151
Pg 190 of 291
00262

S 0 : Scale

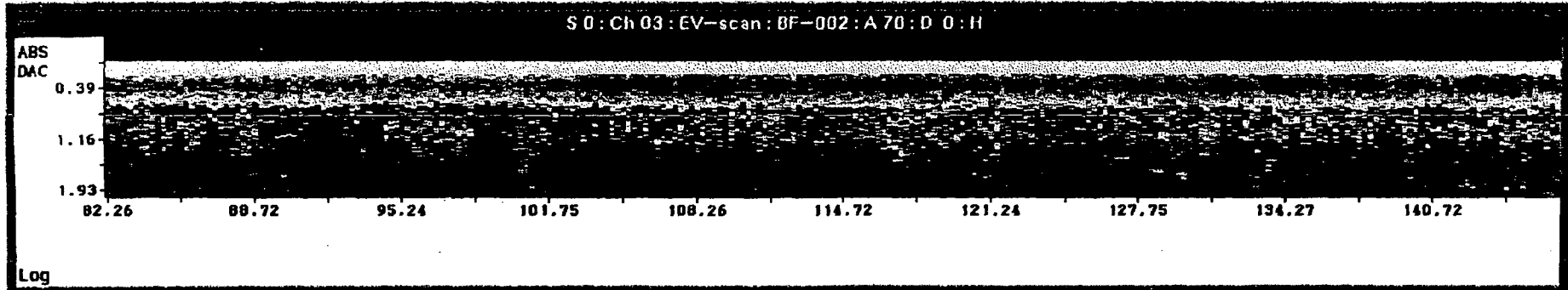
5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

DAC



wbr Terj
t>dump /max
/20-011

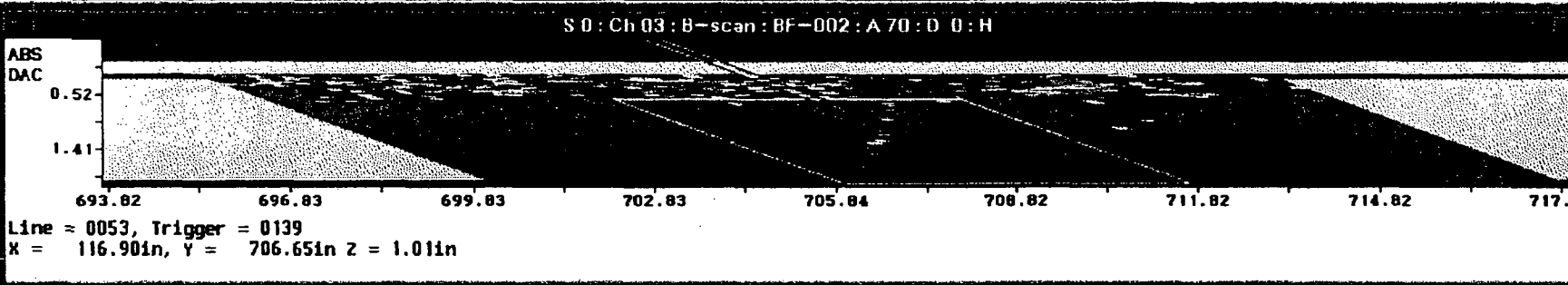
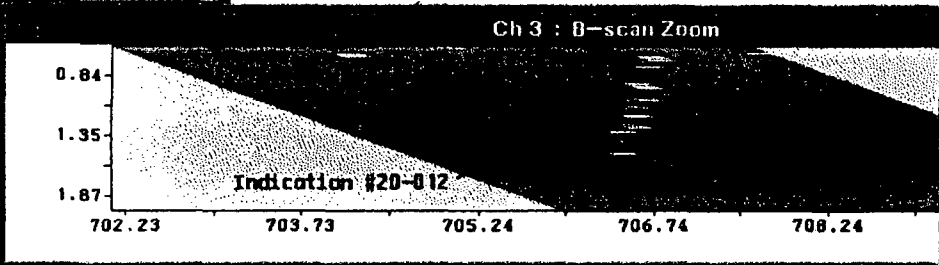
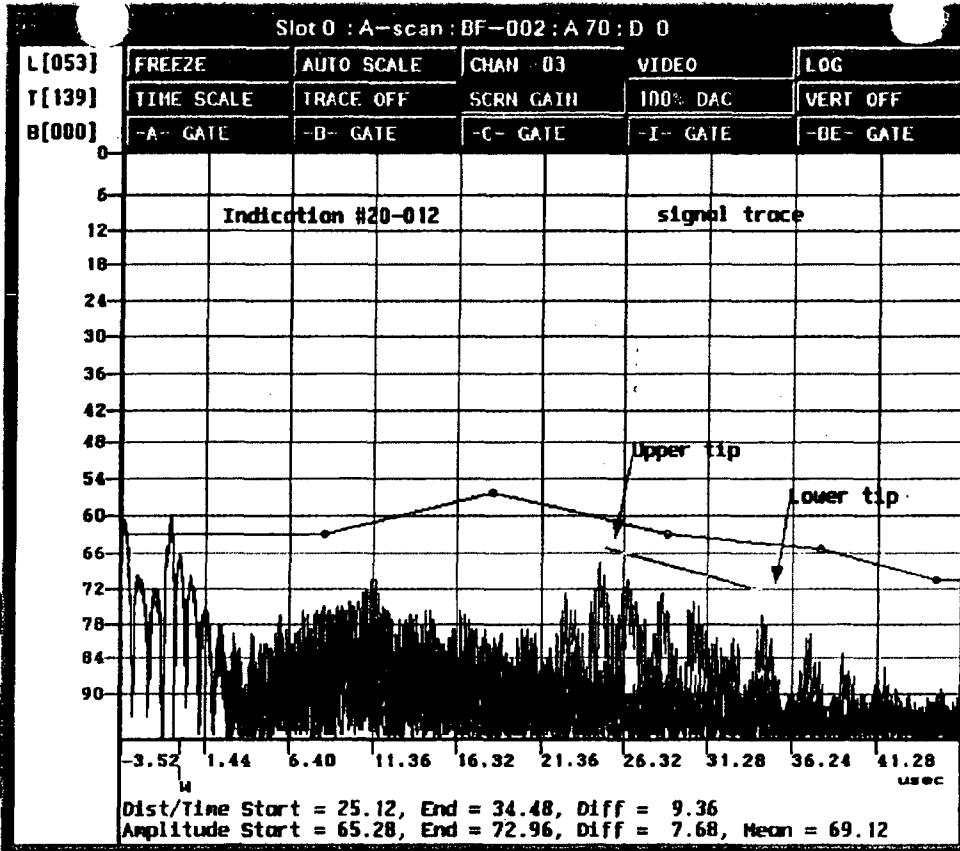
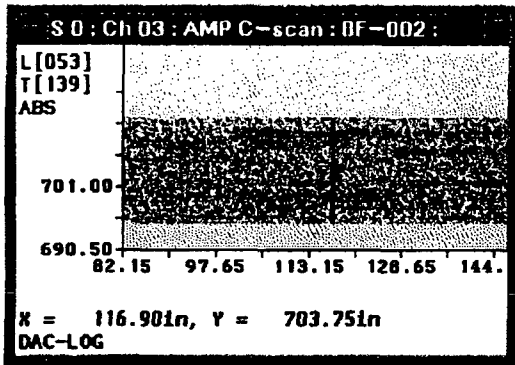


R1151
Pg 19/1 of 29/1
00263

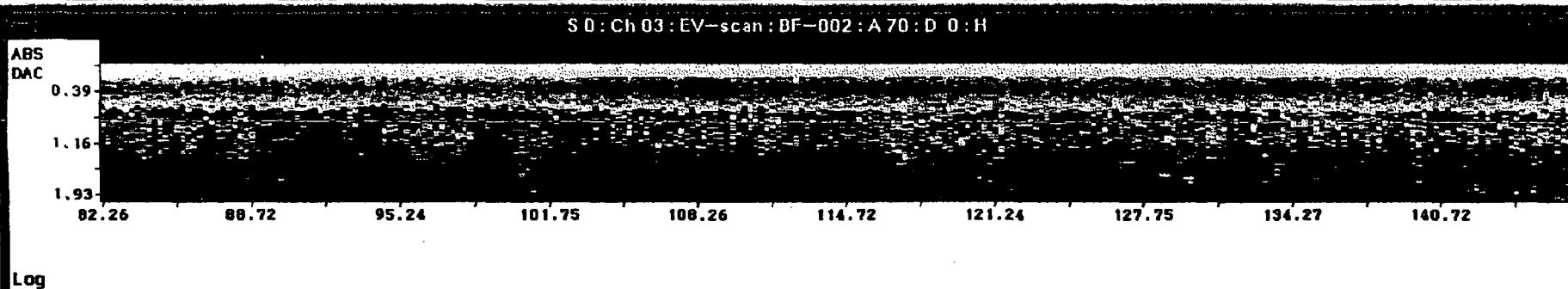
S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%



War Ten
t>dump /max
/20-012

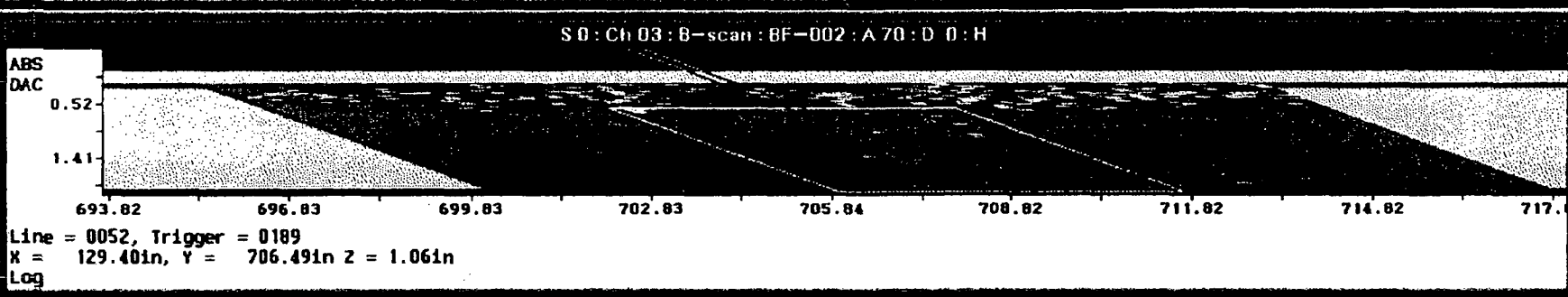
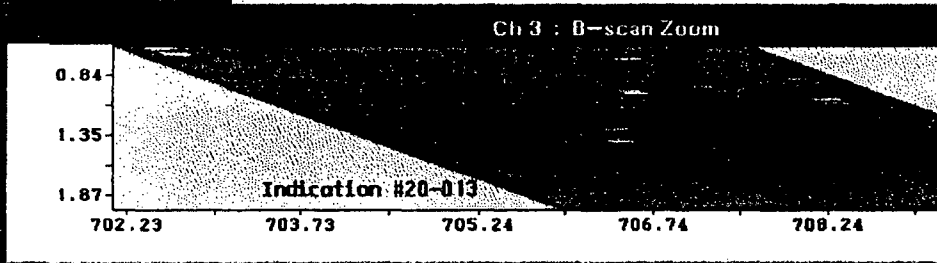
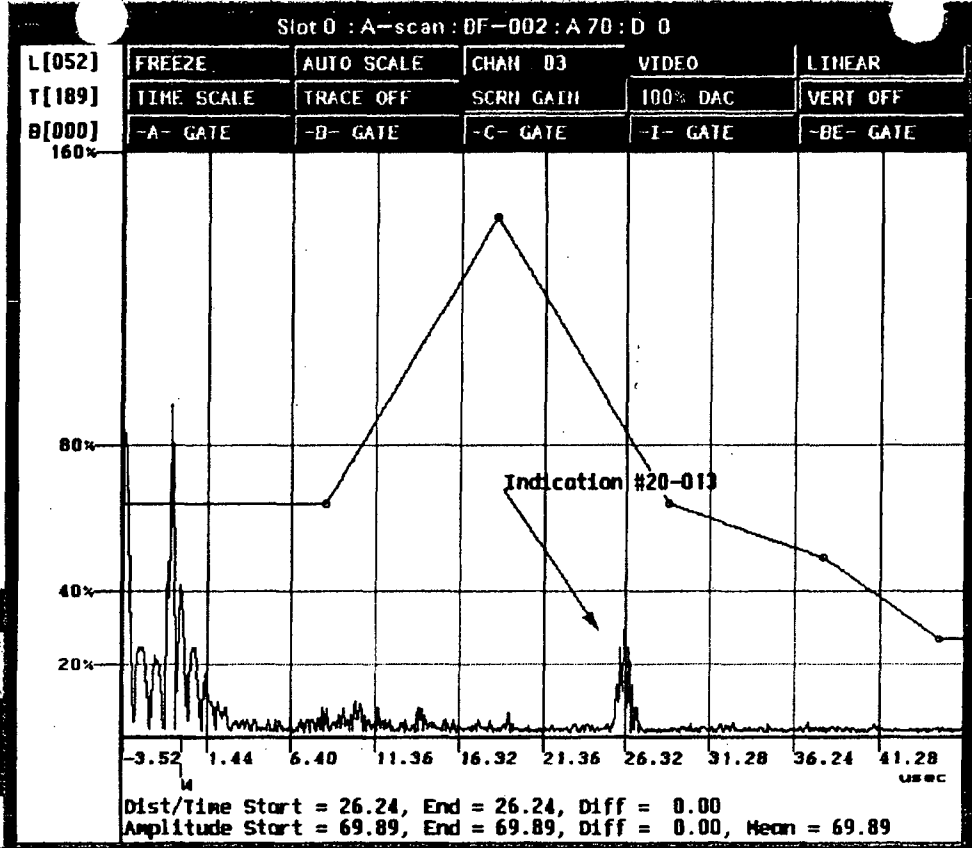
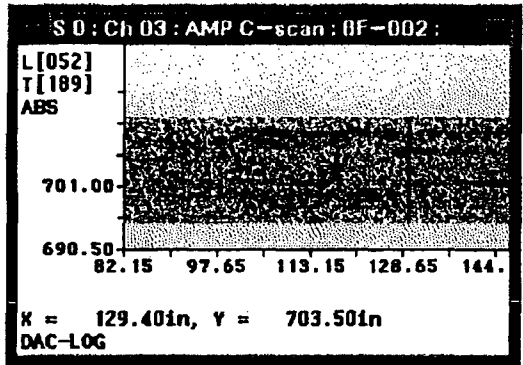


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R1151
00261

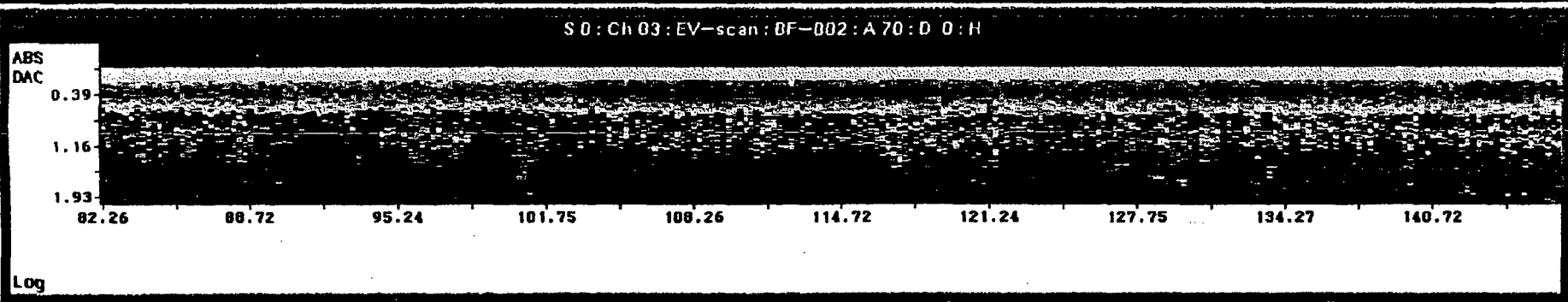
S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.0
73.0
79.1
85.2
91.4

100%
50%
20%



war Ten
t>dump /max
/20-013

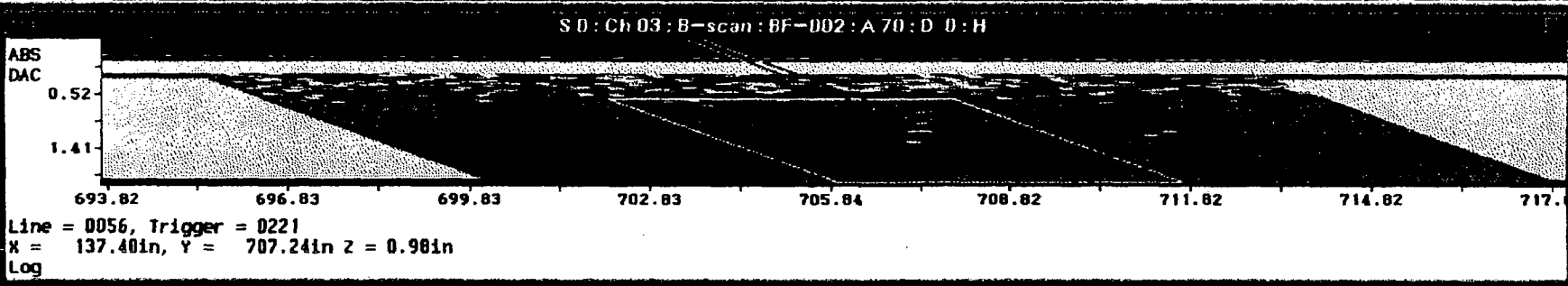
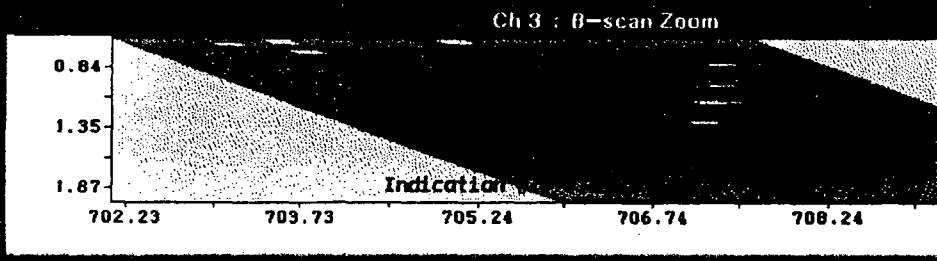
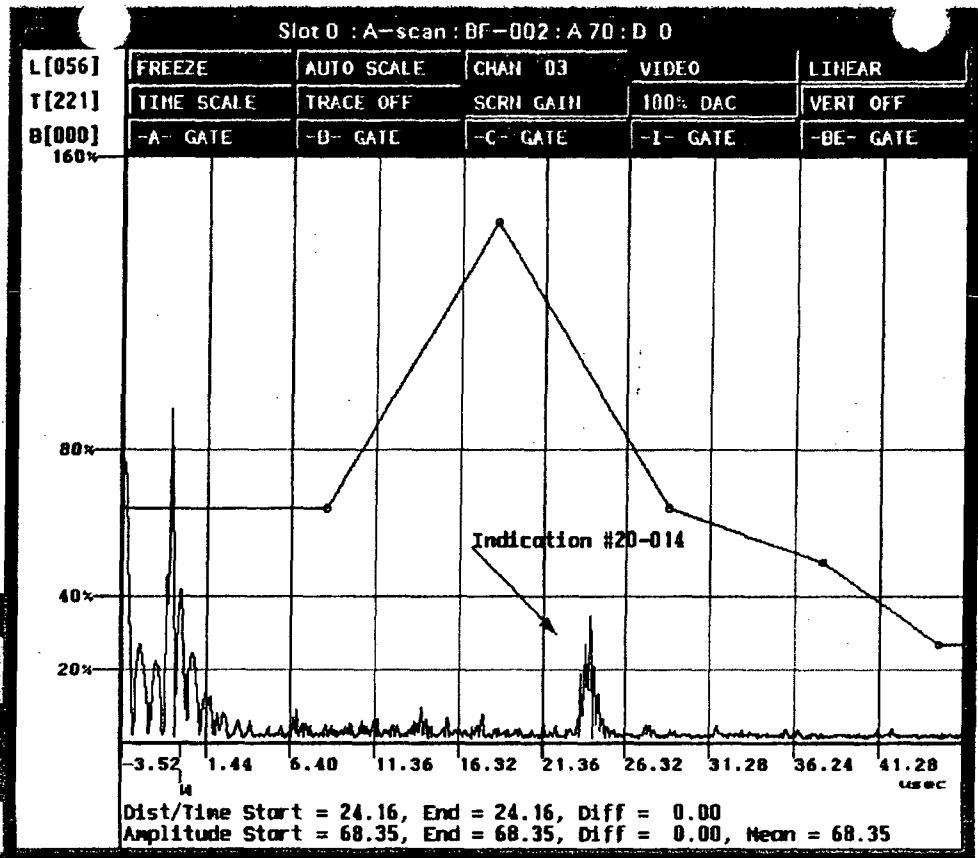
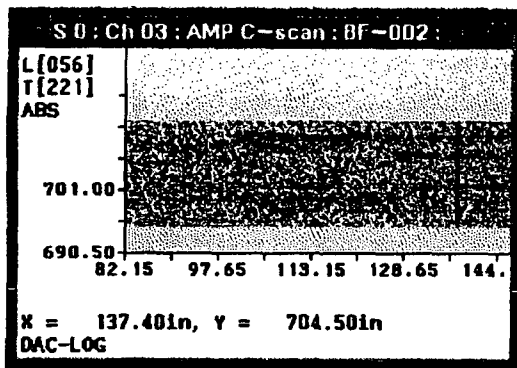


R1151
89193 of 291
00265

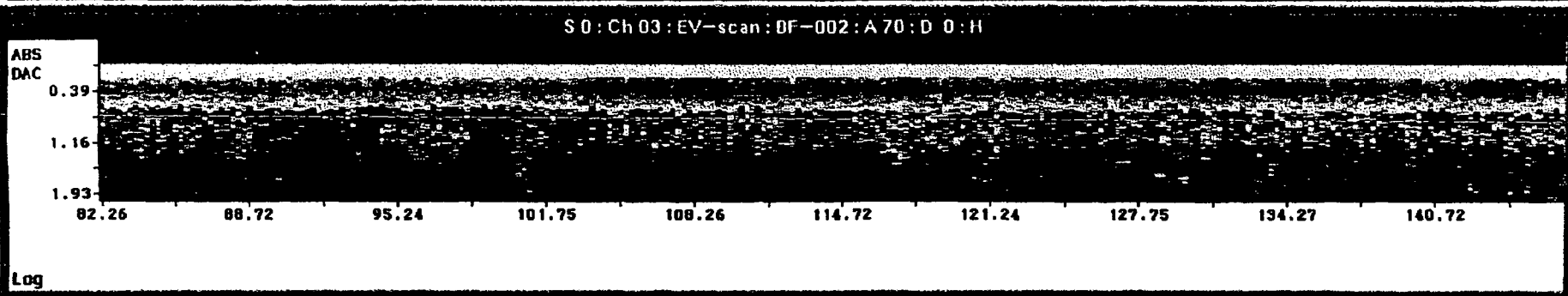
S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%



over Tan
t>dump /max
/20-014

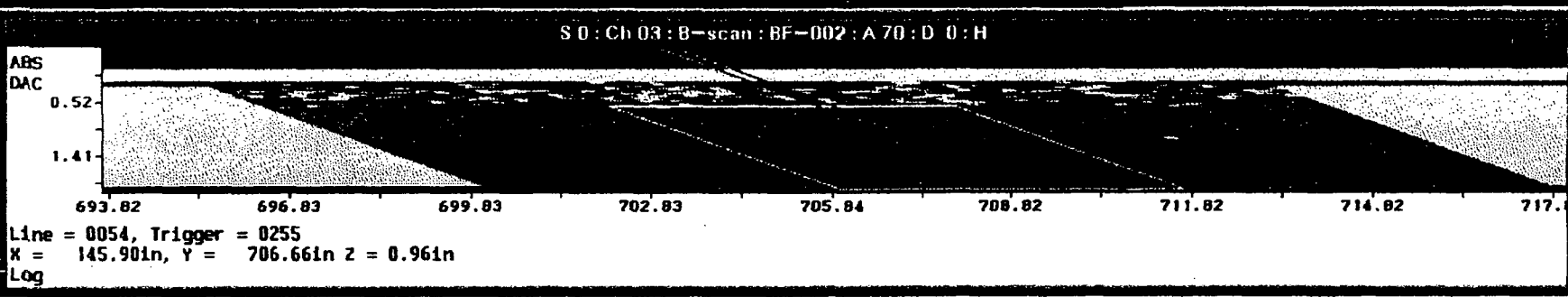
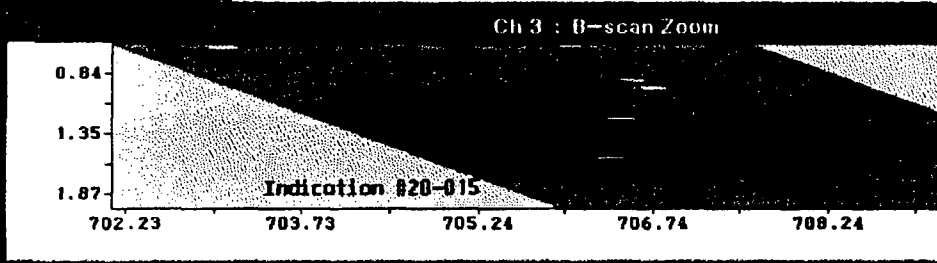
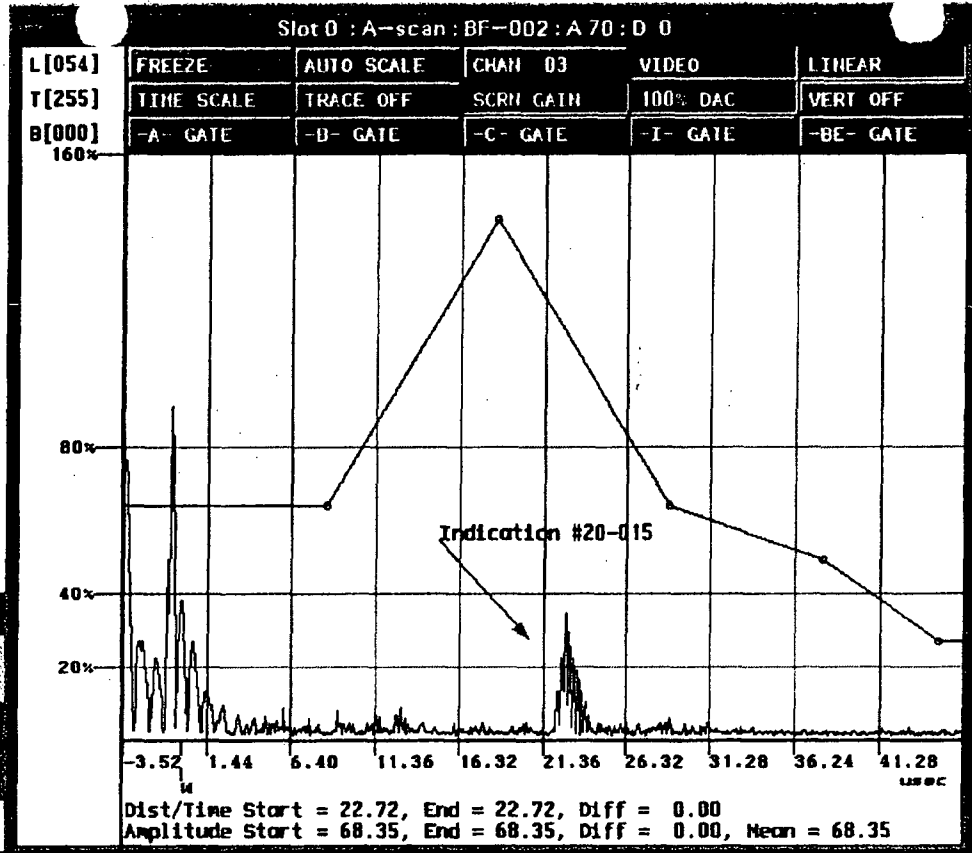
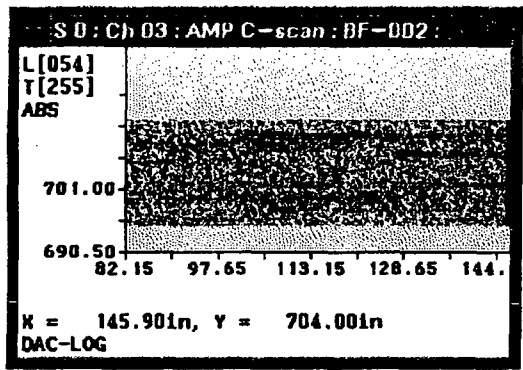


R1151
Pg 197 of 291
00266

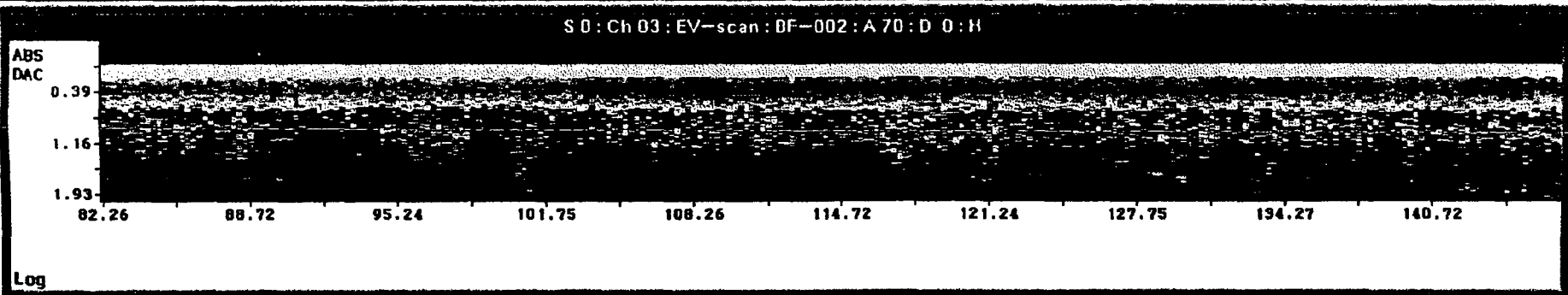
S D : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.0
73.0
79.1
85.2
91.4

100%
50%
20%



Wdr Ter
c:\dump /max
/20-015

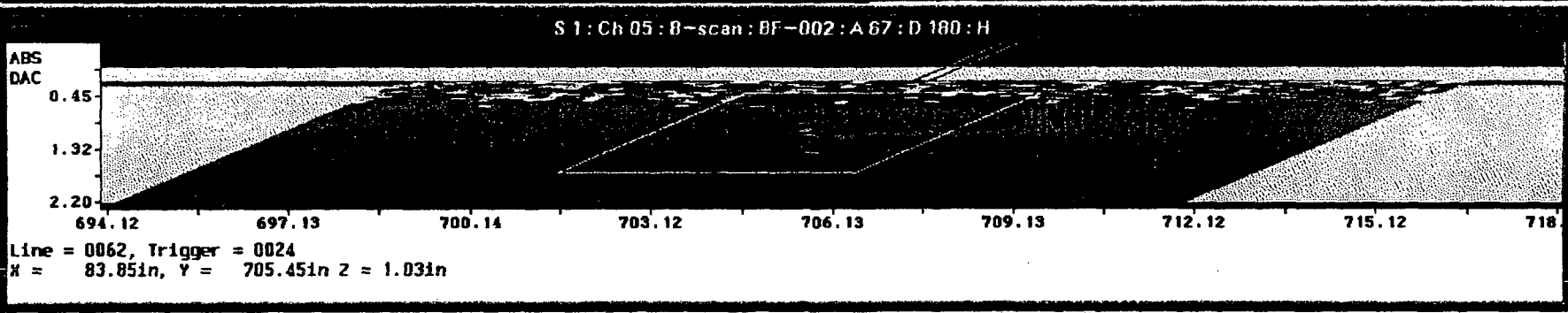
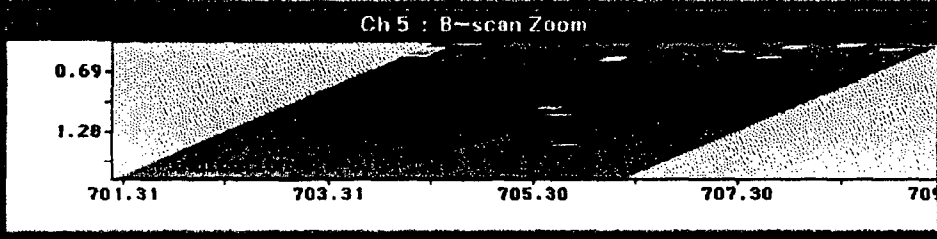
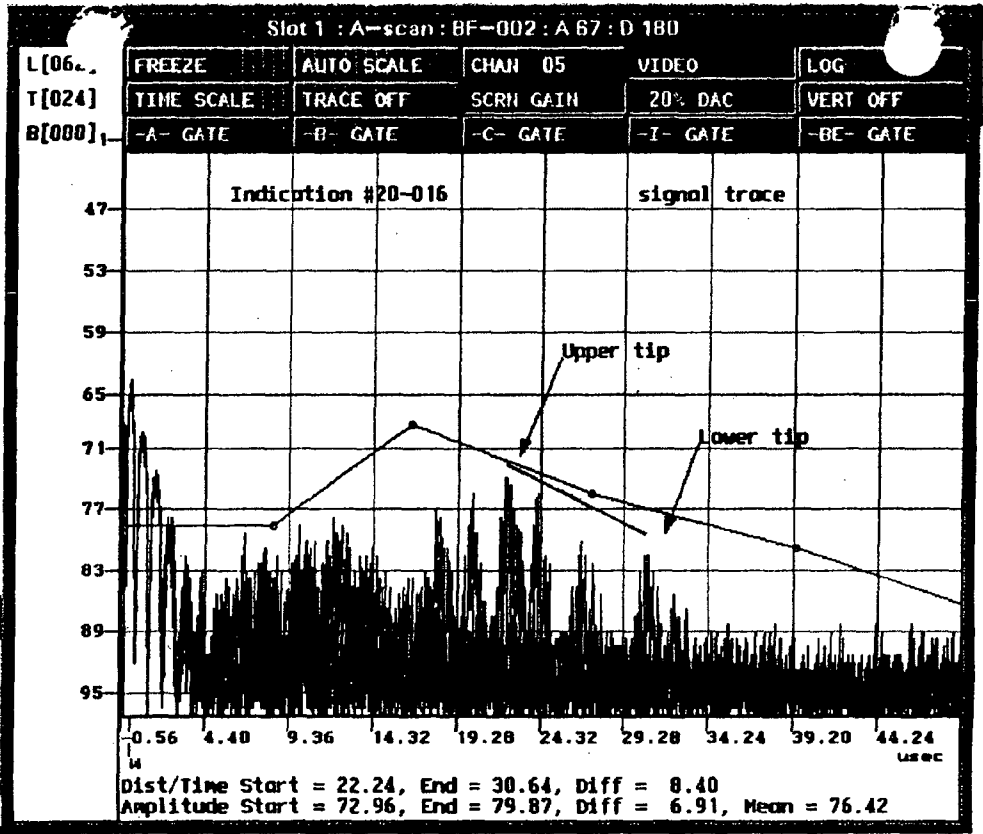
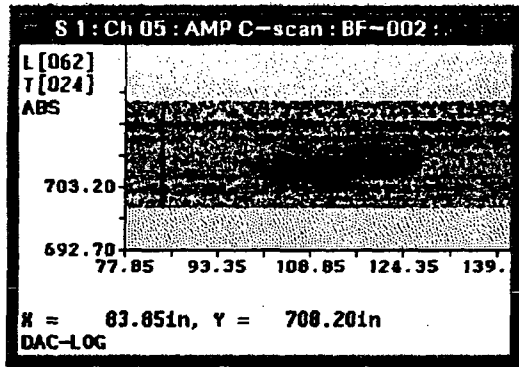


R1151
19 195 of 291
00267

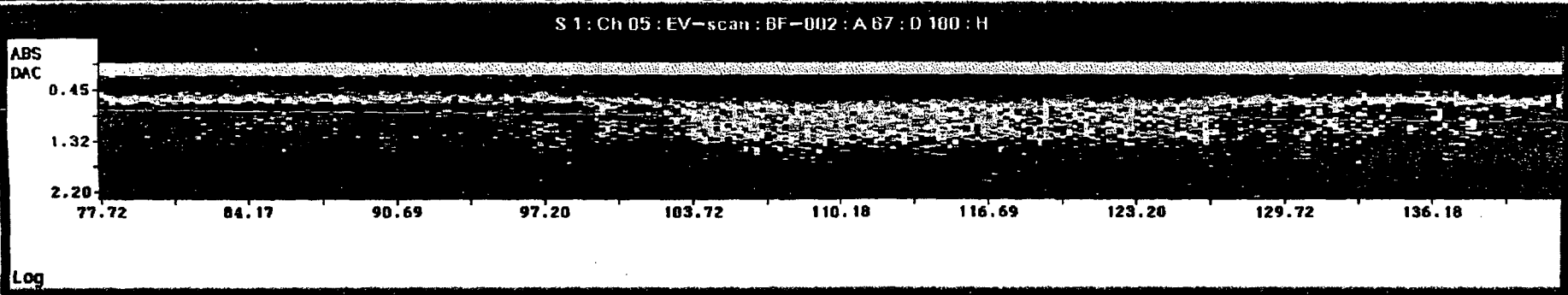
S 1 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%



ir Tern
0-016

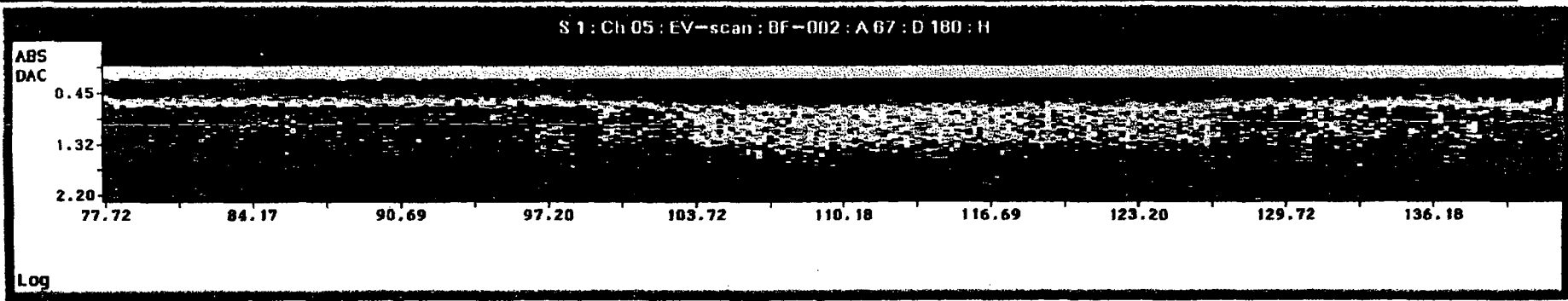
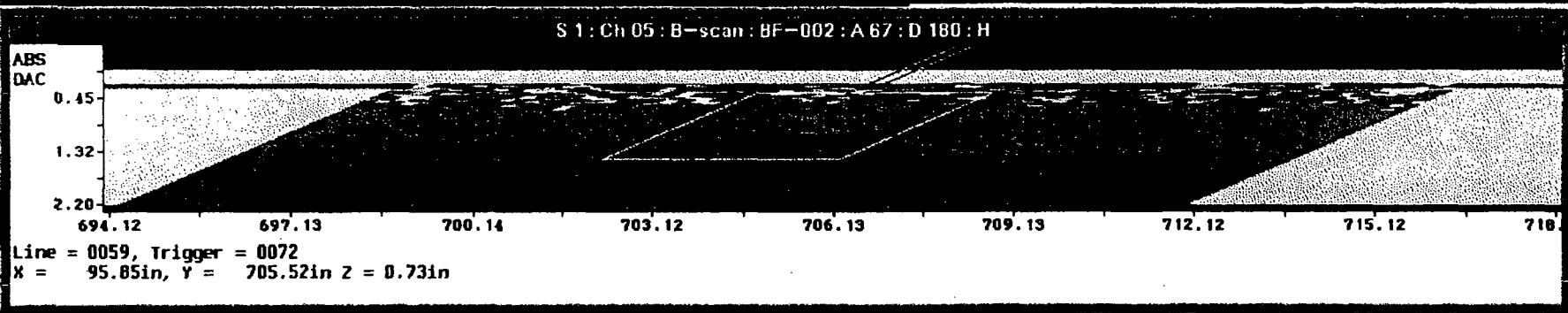
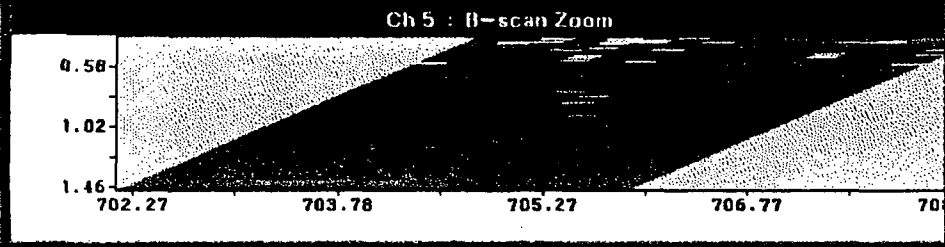
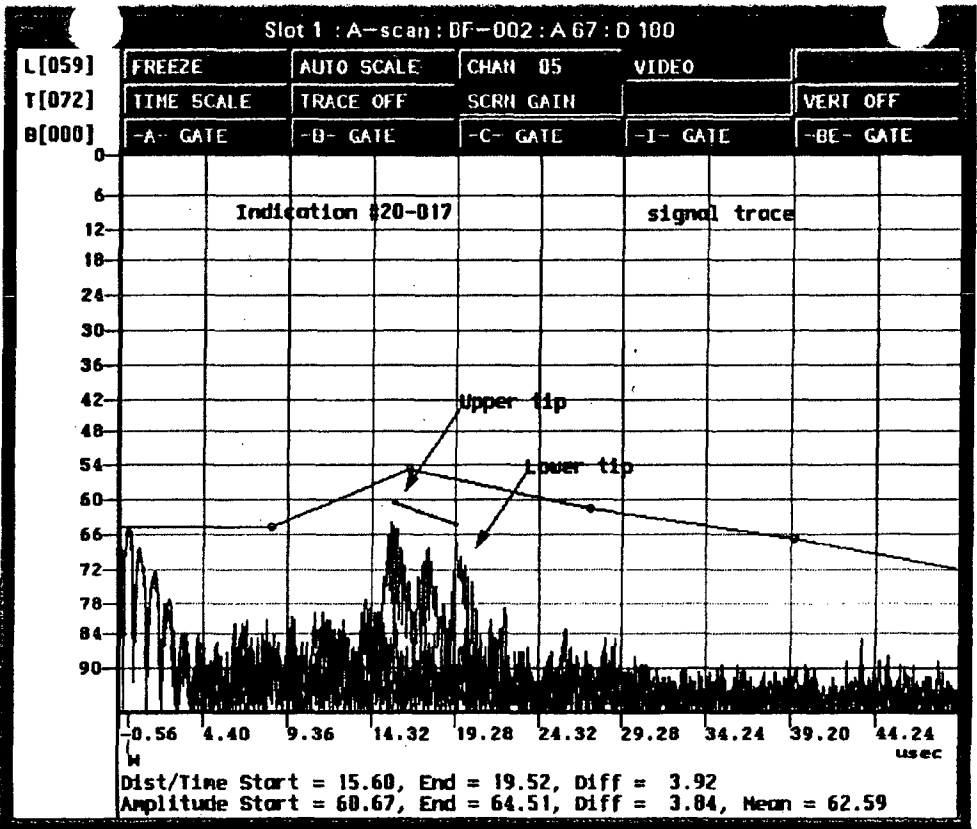
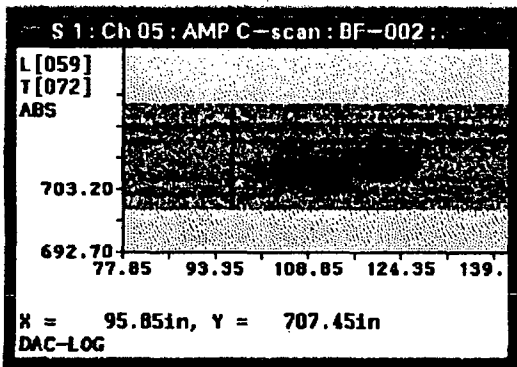


R1151
Pg 196 of 291
00268

S 1 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%



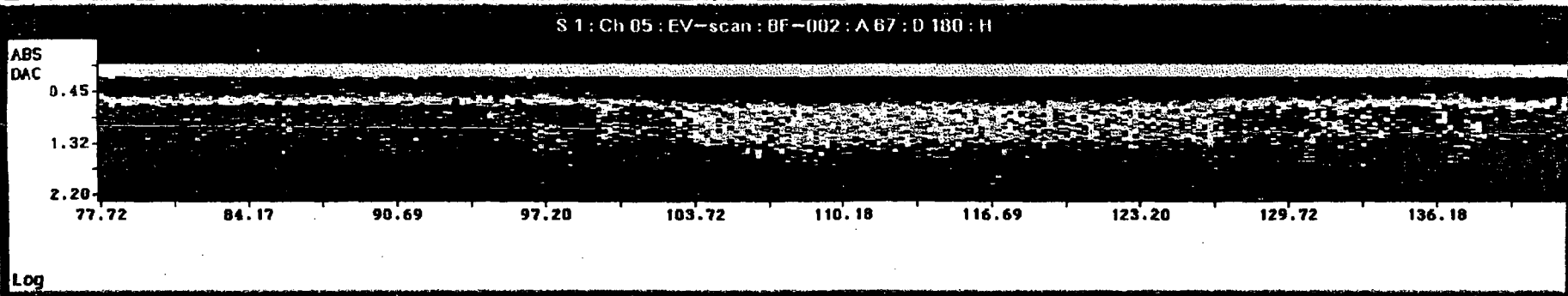
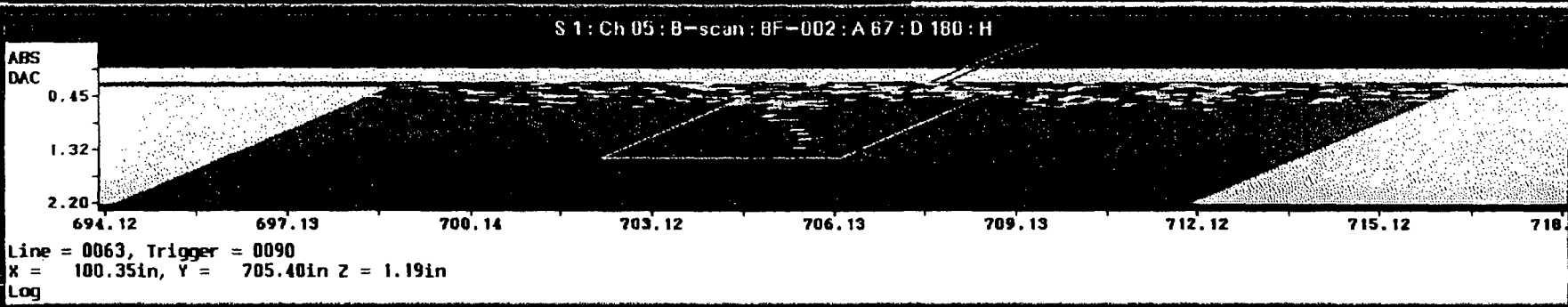
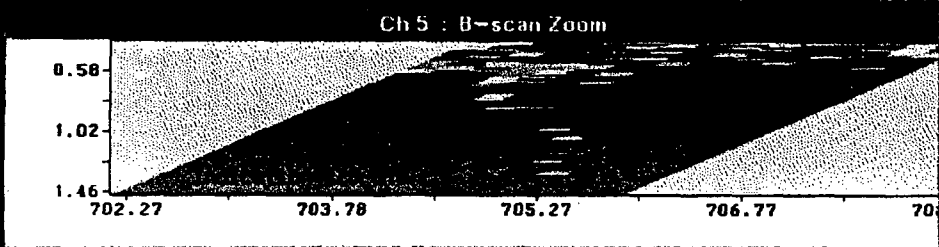
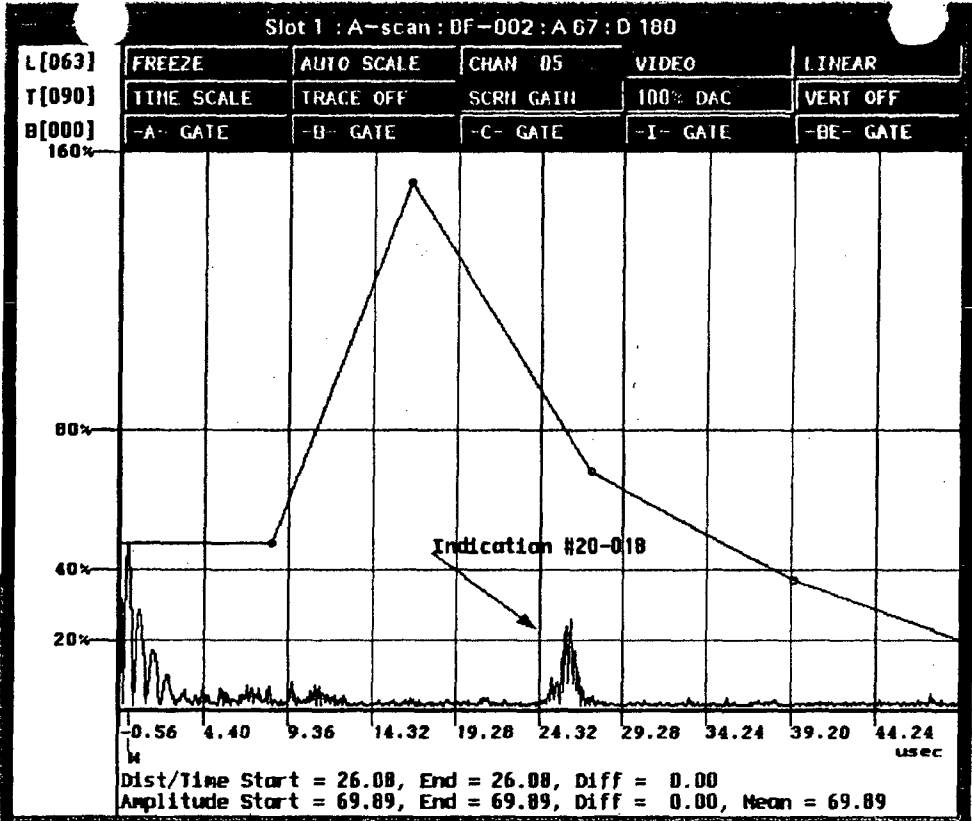
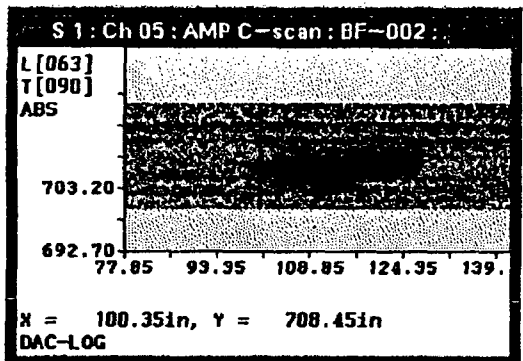
Terj
dump / max
0-017

R 1151
P9 19708-291
00269

S 1 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.0
73.0
79.1
85.2
91.4

100%
50%
20%



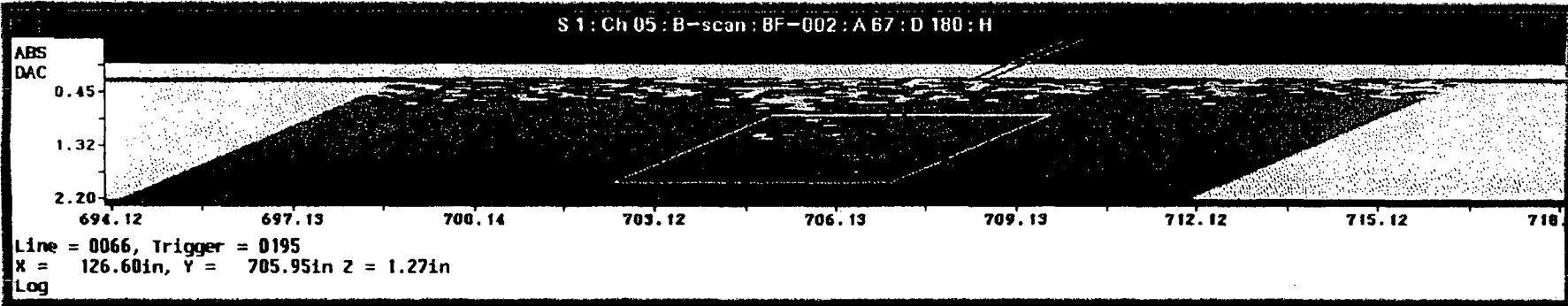
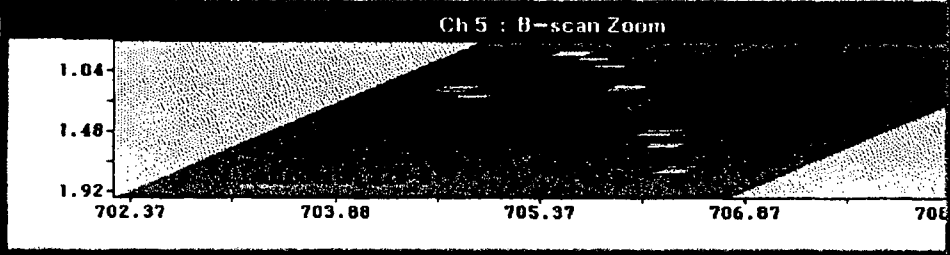
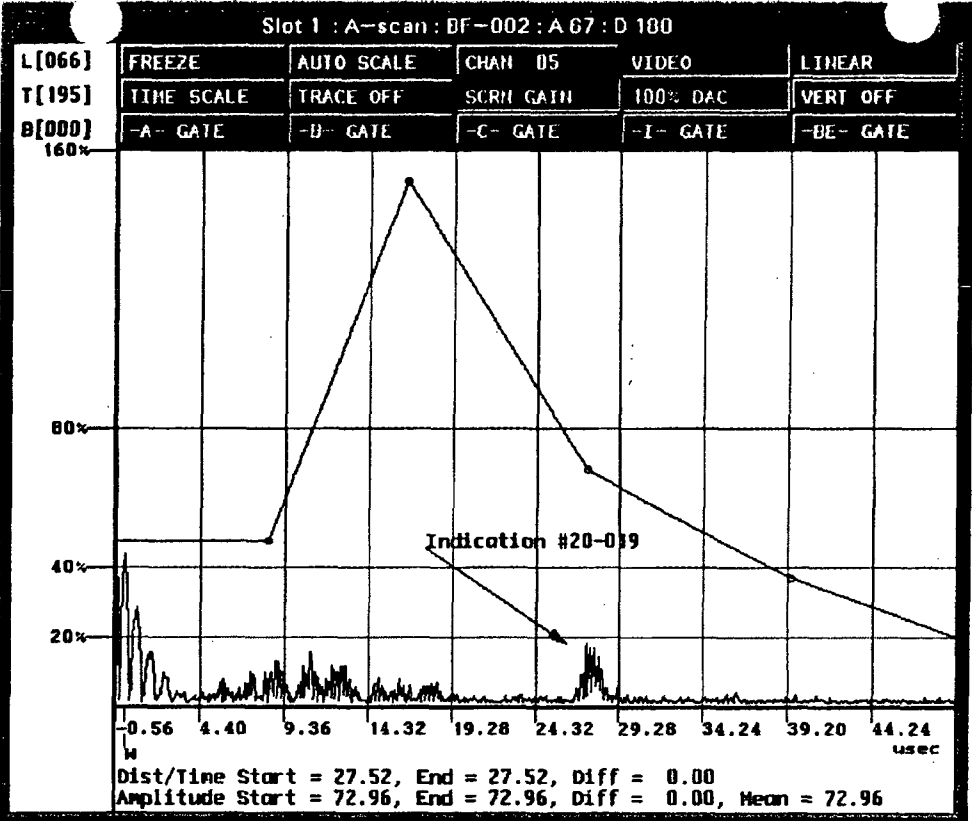
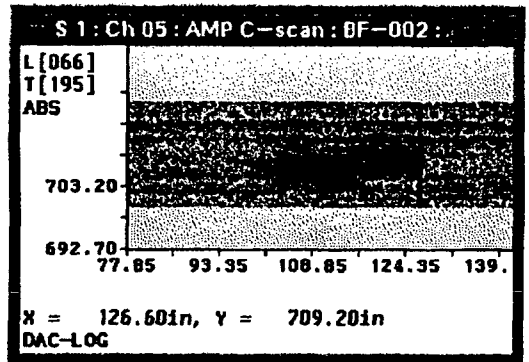
Tr Ten
Dump /max
0-018

R 1151
Pg 198 of 291
00270

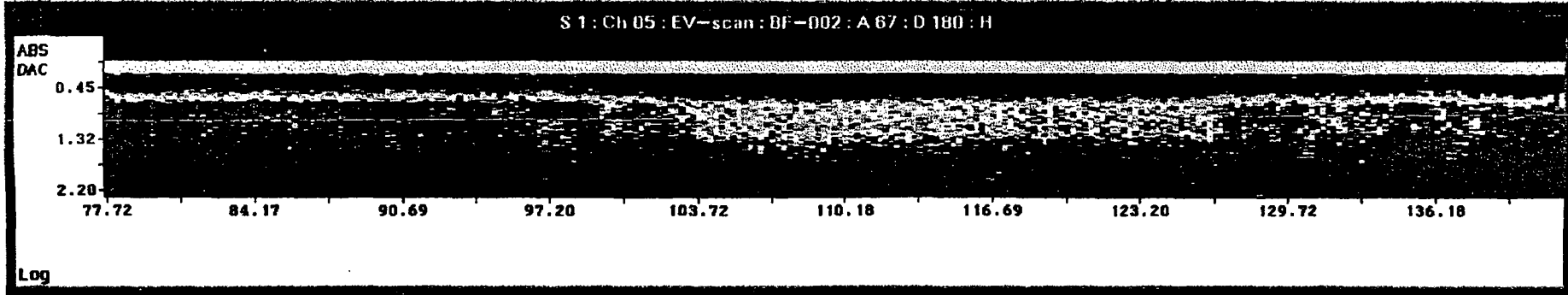
S 1: Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2

100%
50%
20%



Jump / max
0-019



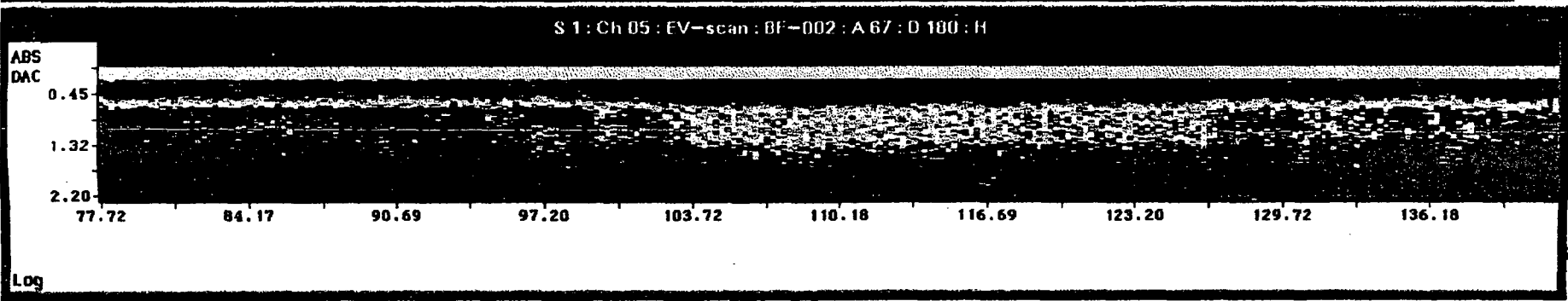
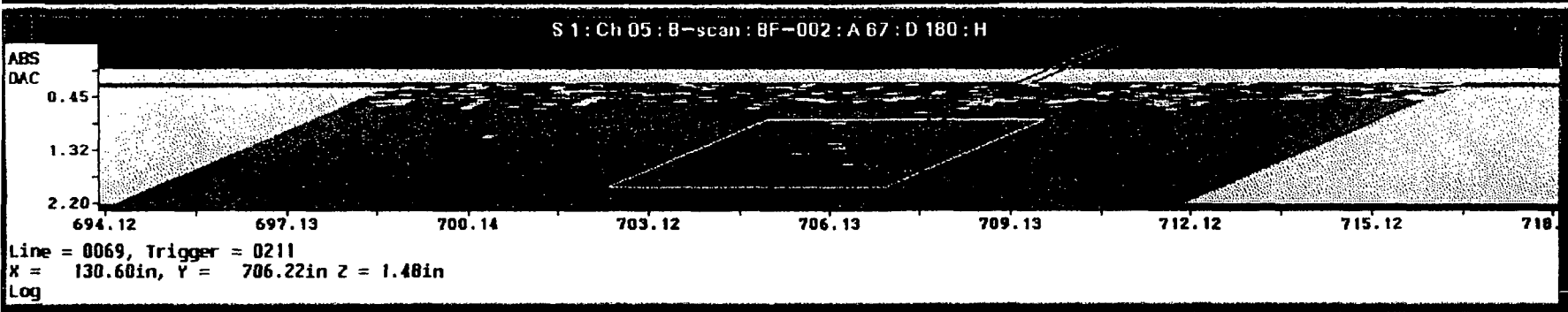
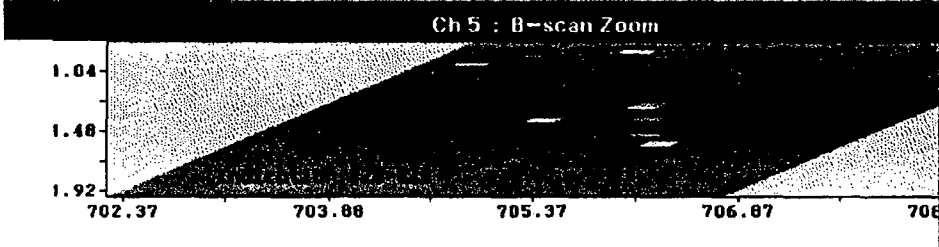
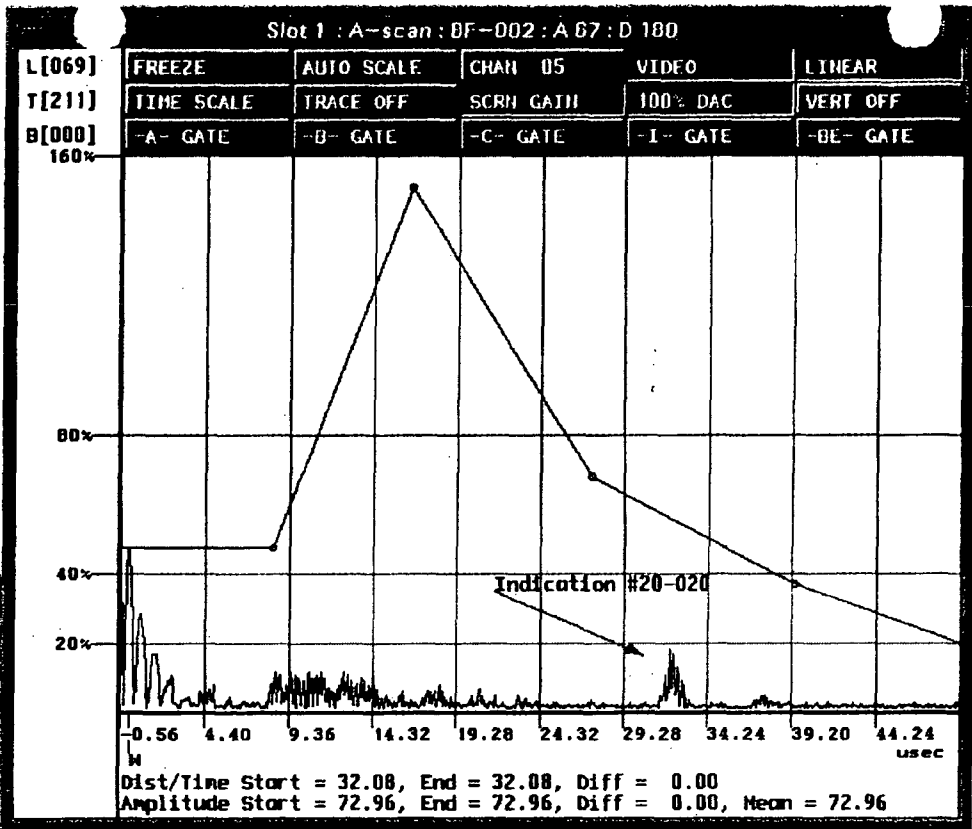
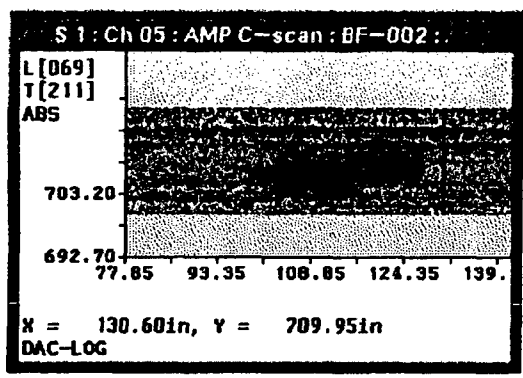
Pg 199 of 291
60271

R1151

S 1 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.0
73.0
79.1
85.2

100%
50%
20%



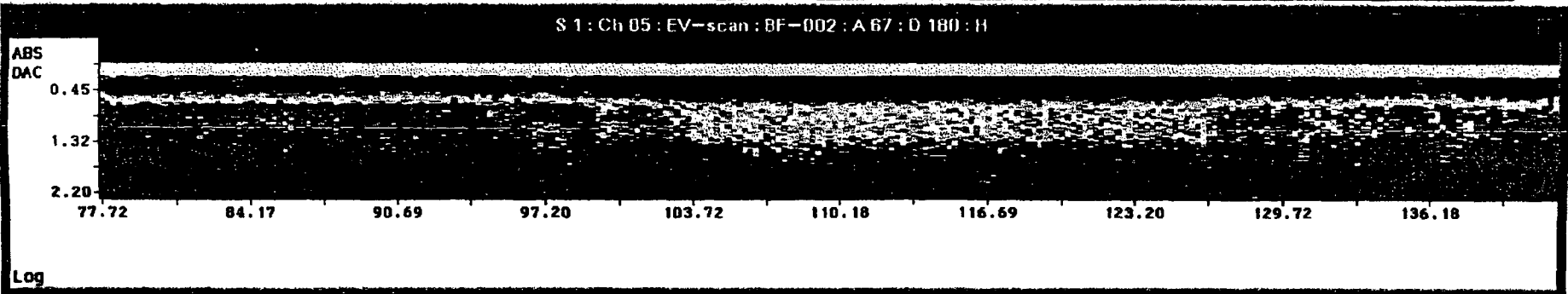
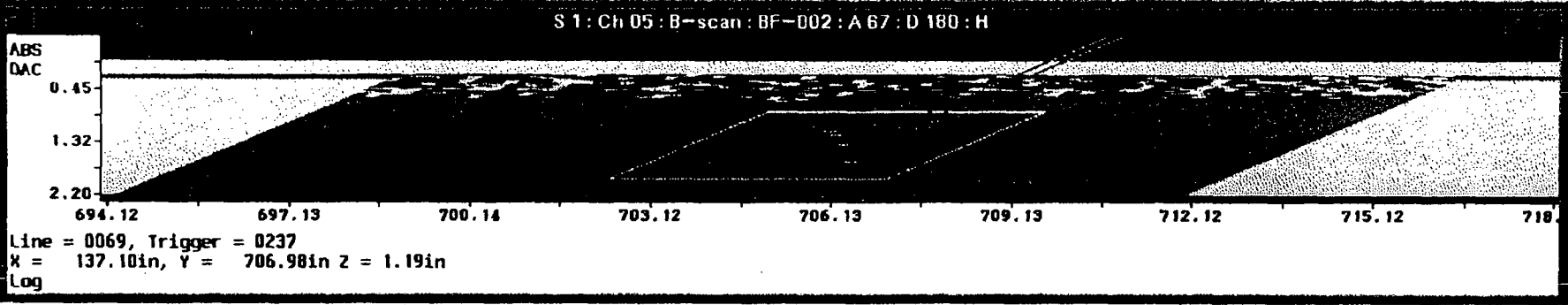
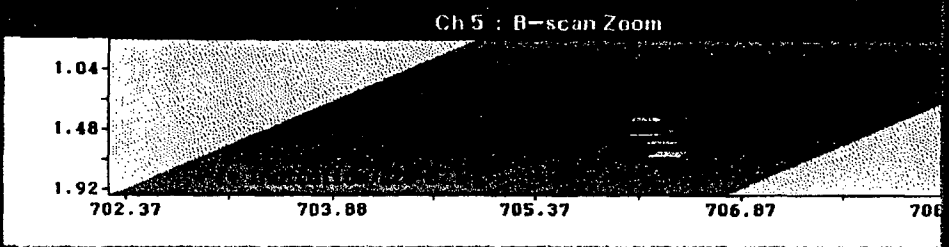
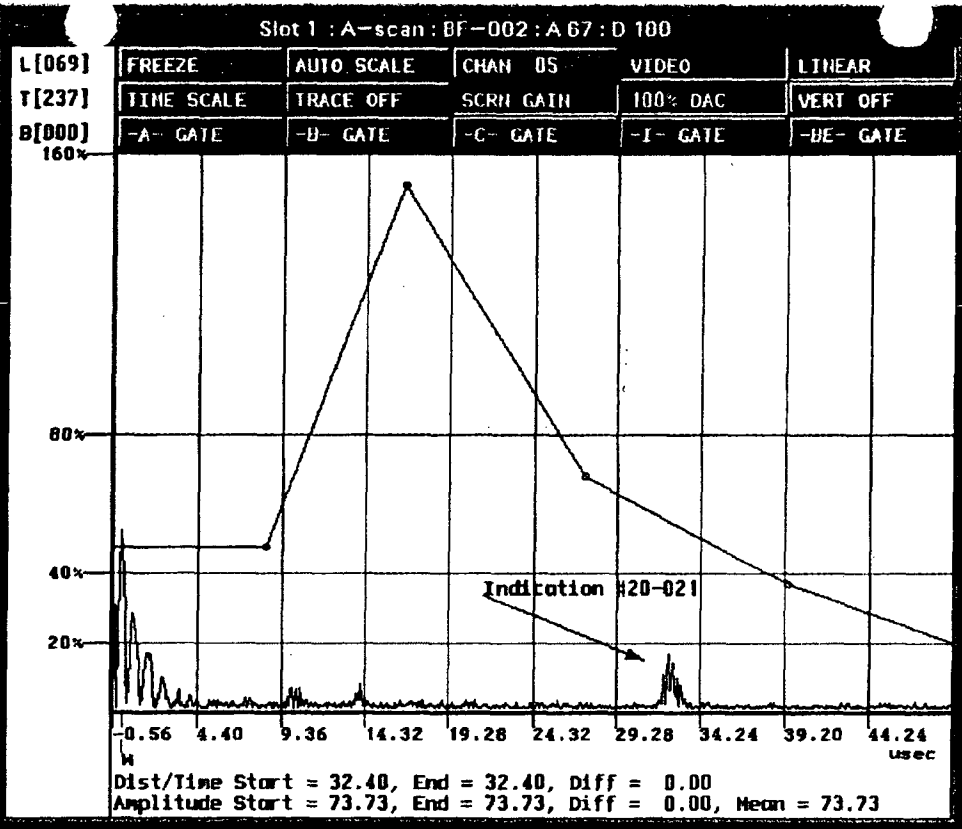
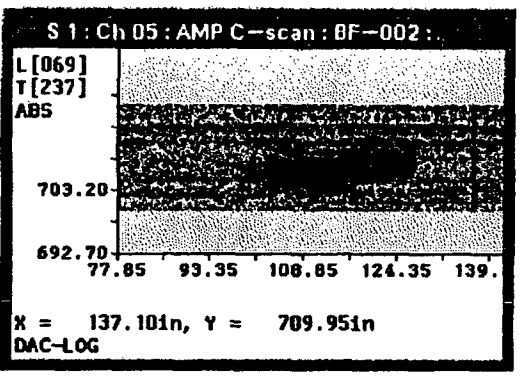
Pg 200 of 291
00272

R1151

S 1 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2

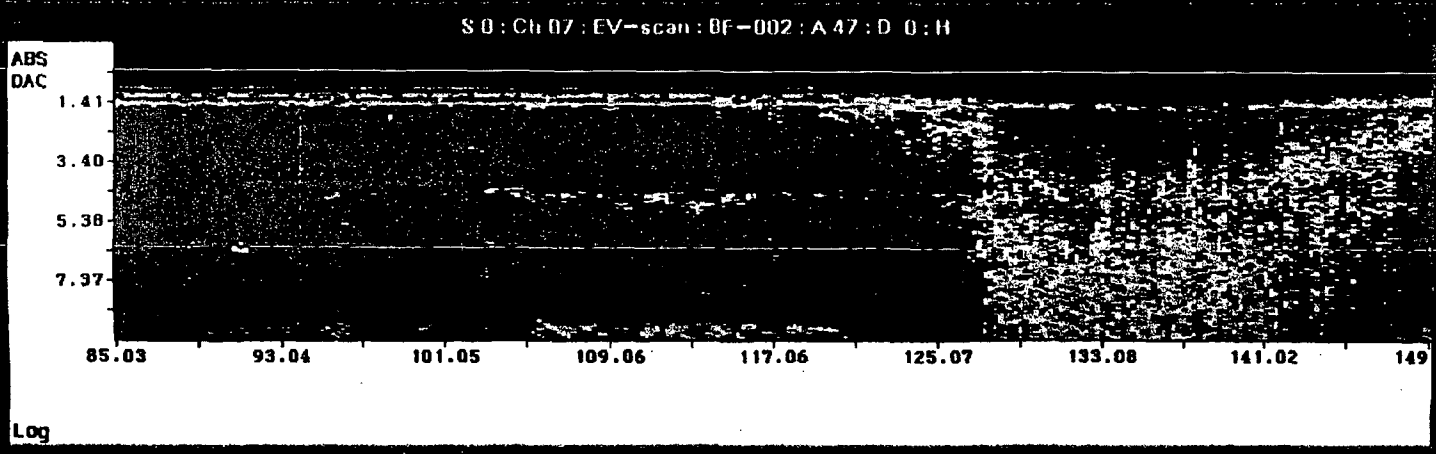
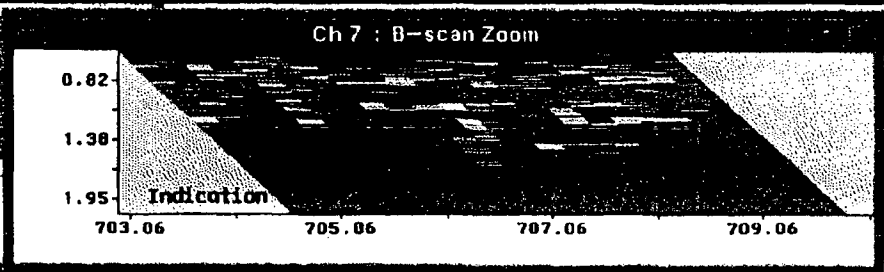
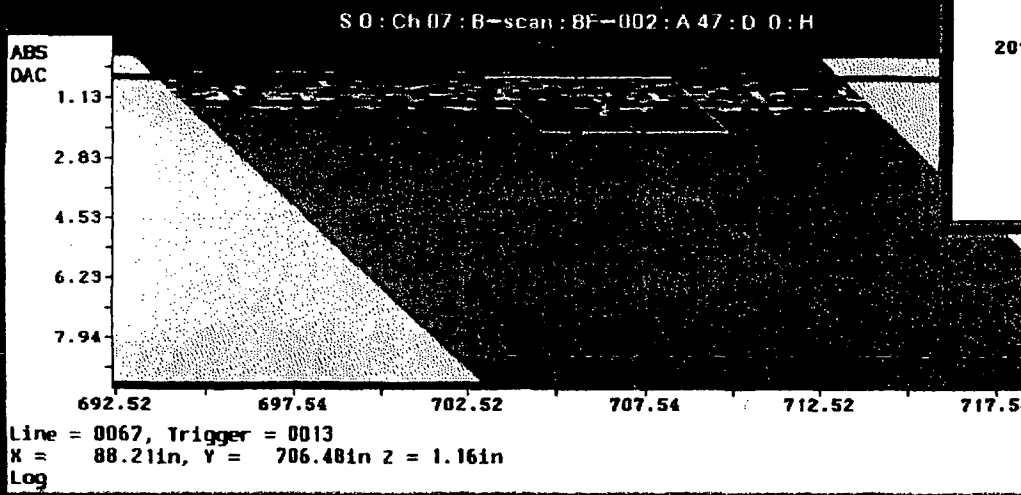
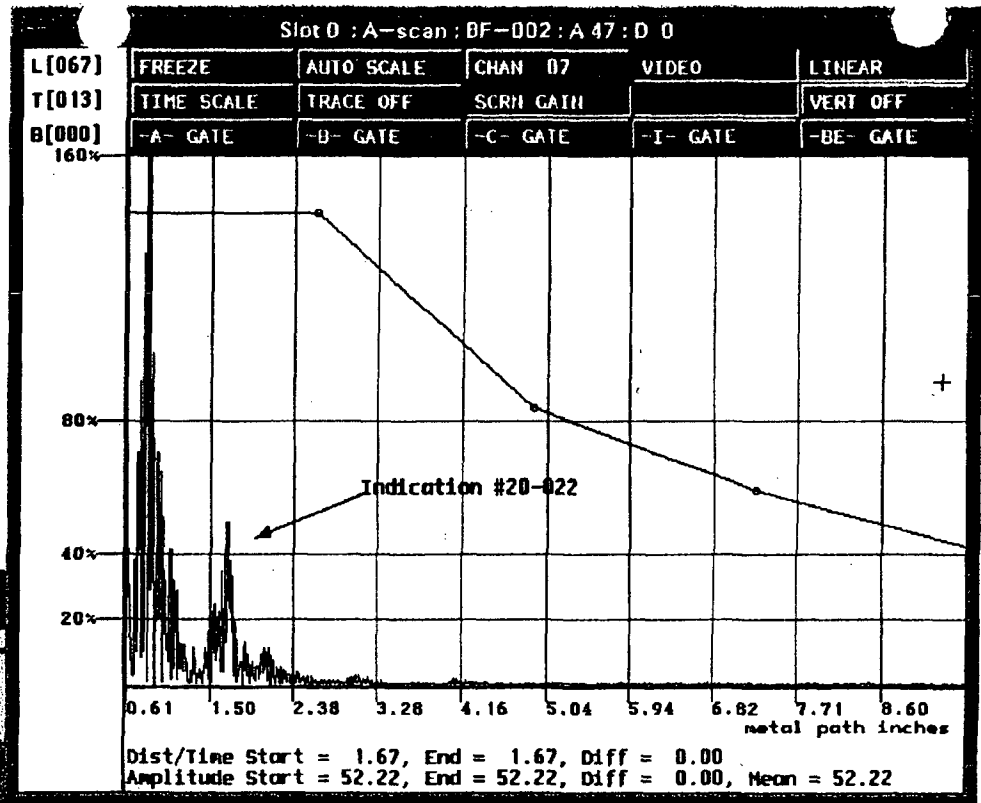
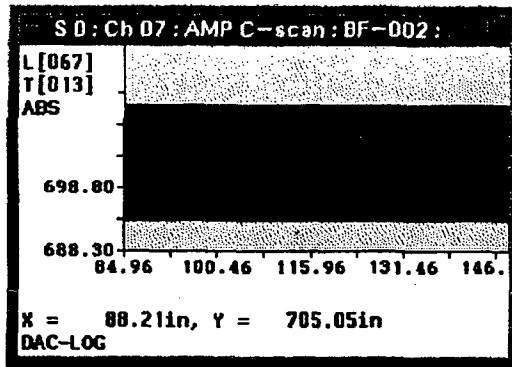
100%
50%
20%



R 1151
Pg 201 of 291
00273

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2 --- 100%
48.4 --- 50%
54.5 --- 20%
60.7
66.8
73.0
79.1
85.2

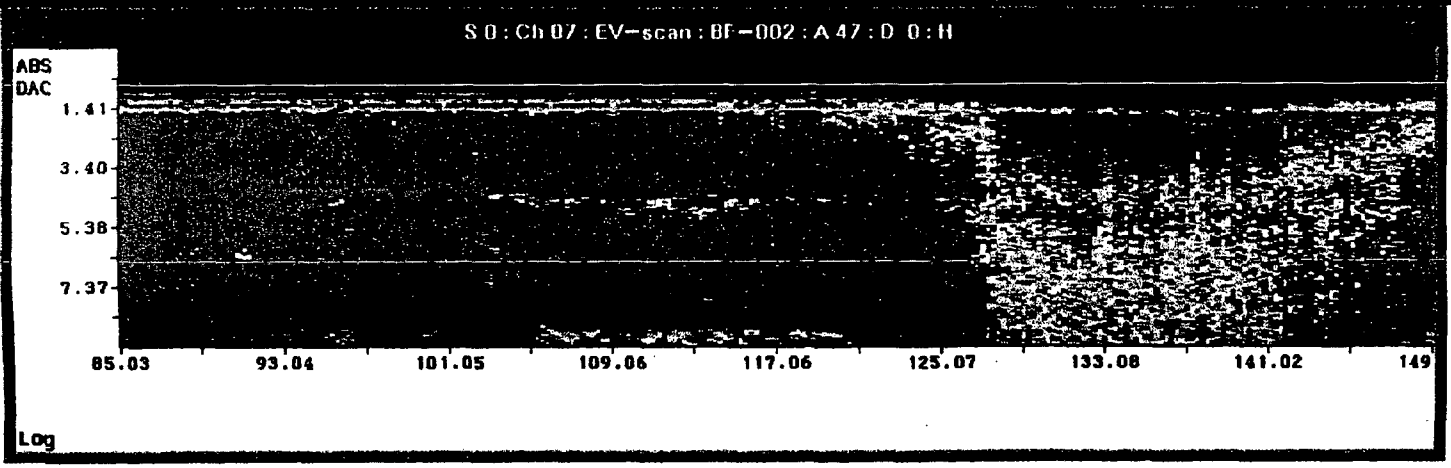
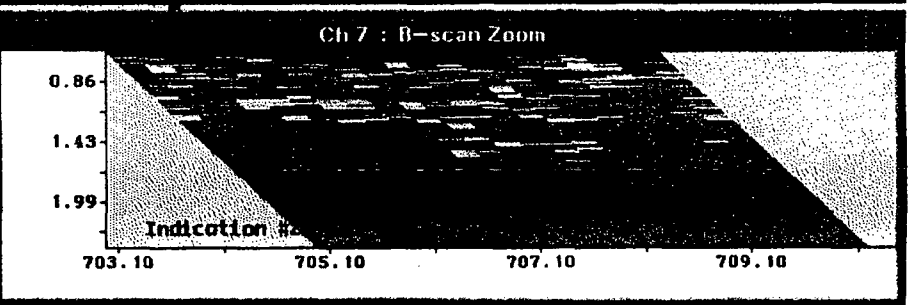
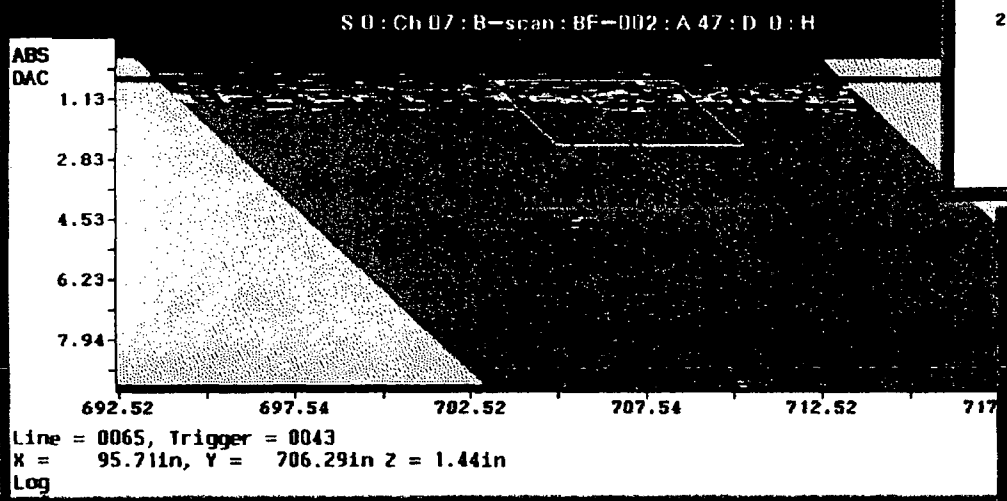
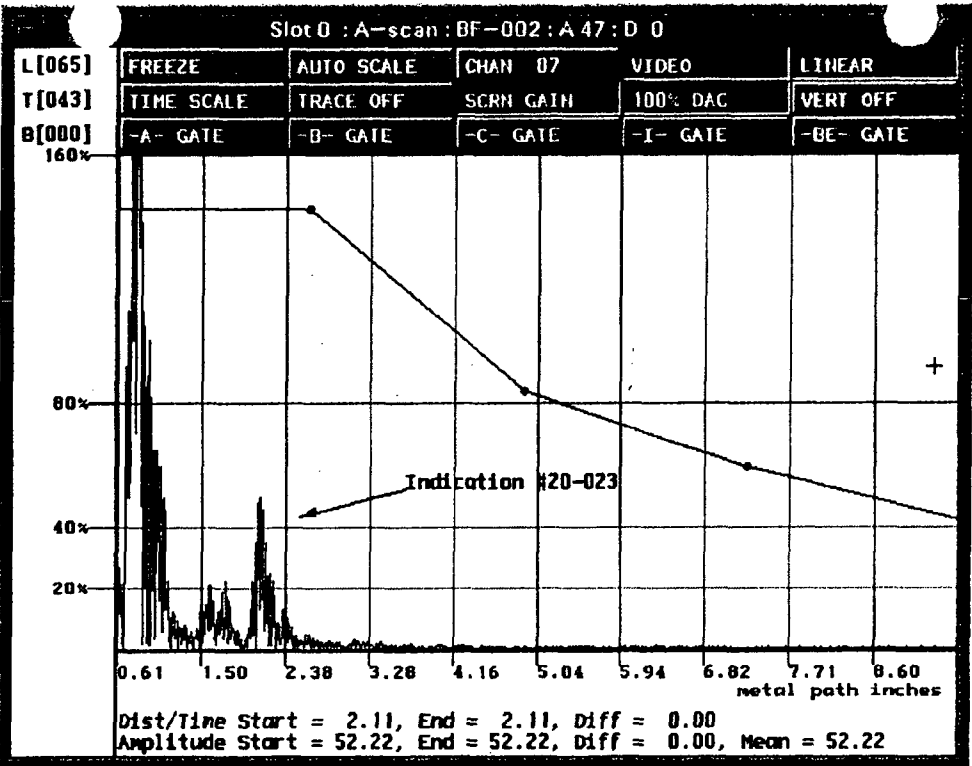
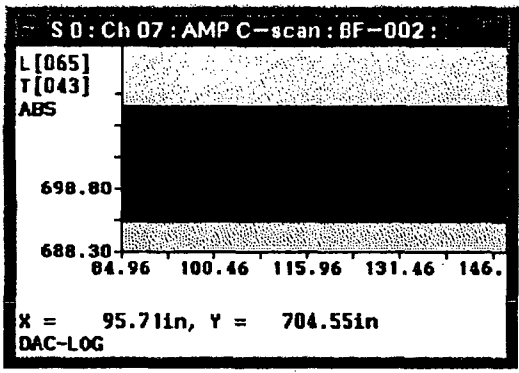


Lower Ten
/test/dump /max
ton3/20-022

R 1151
Pg 202 of 291
00274

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2 100%
48.4 50%
54.5 20%
60.7
66.8
73.0
79.1
85.2



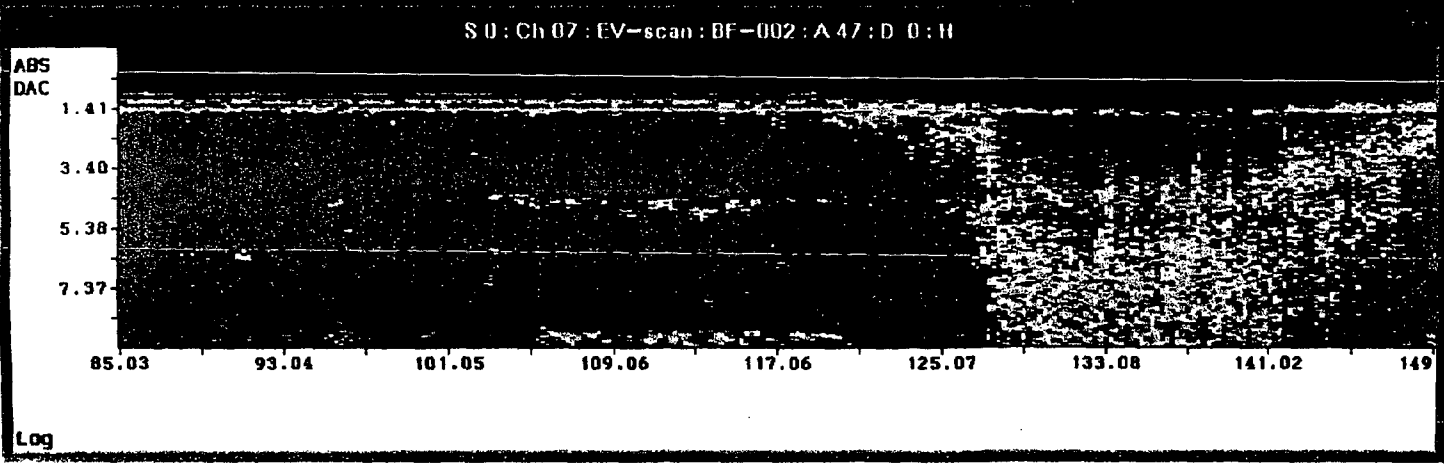
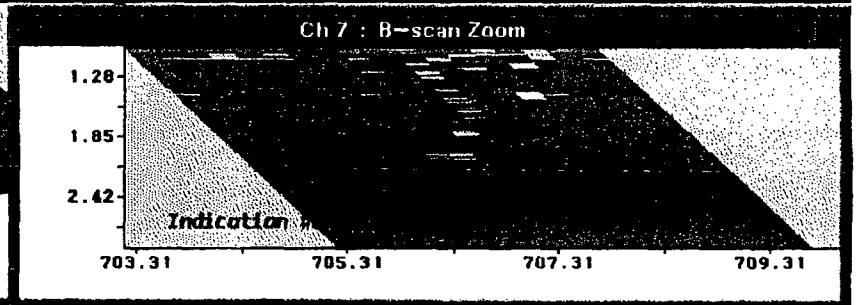
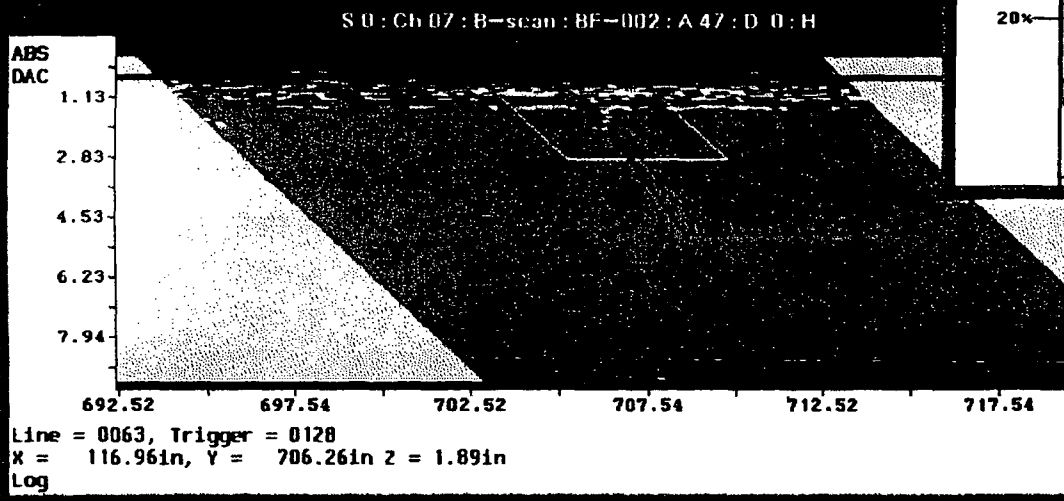
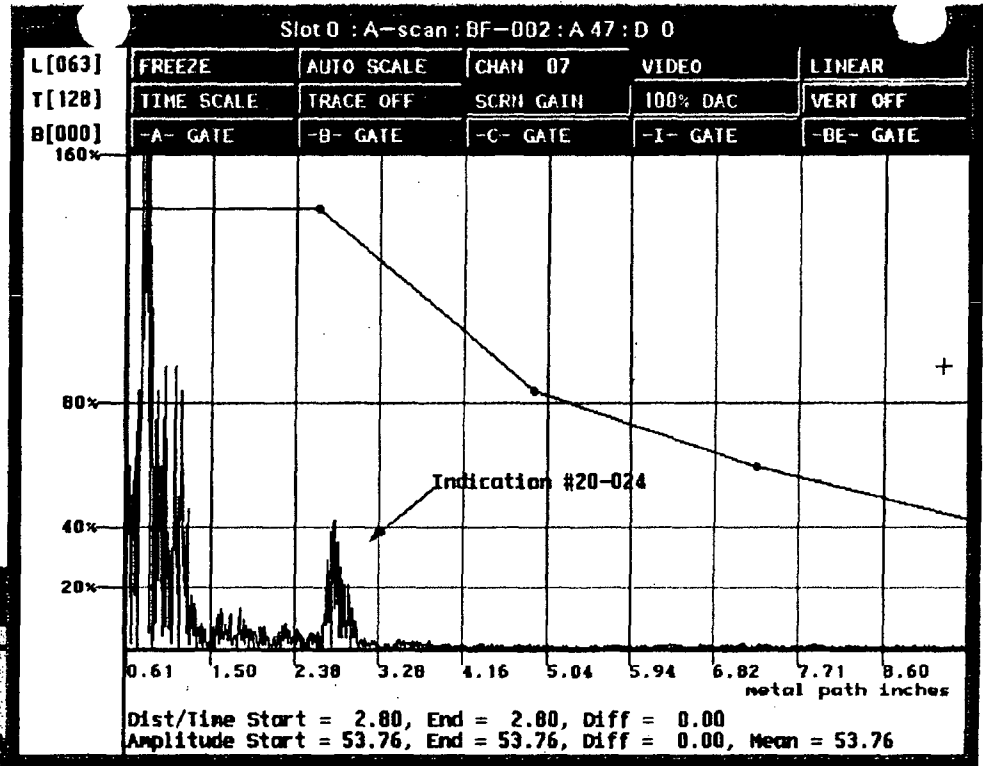
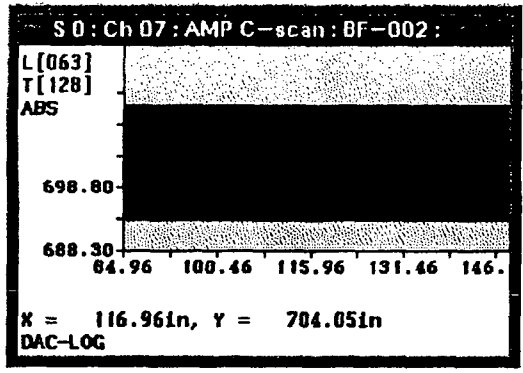
Lower Tern
/test/dump /max
tor3/20-023

R 1151
00275
F9 203 of 291

S O : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2

100%
50%
20%



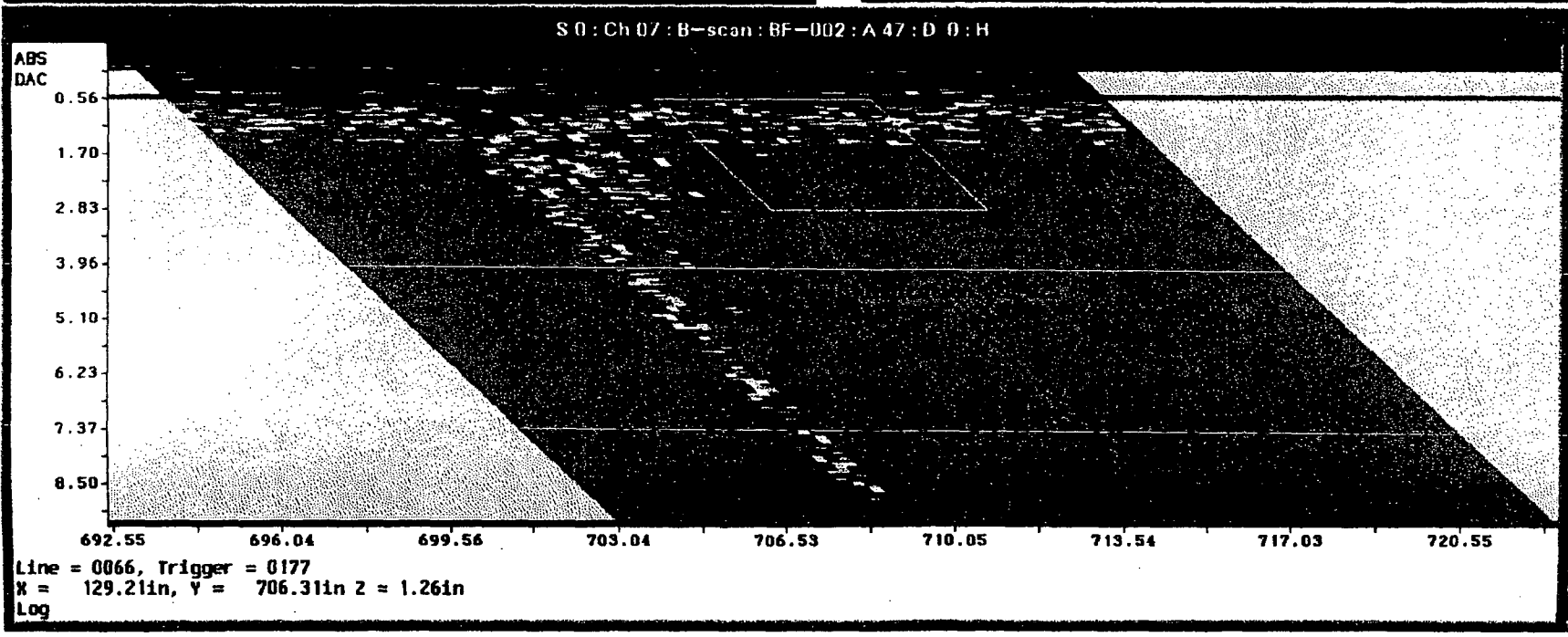
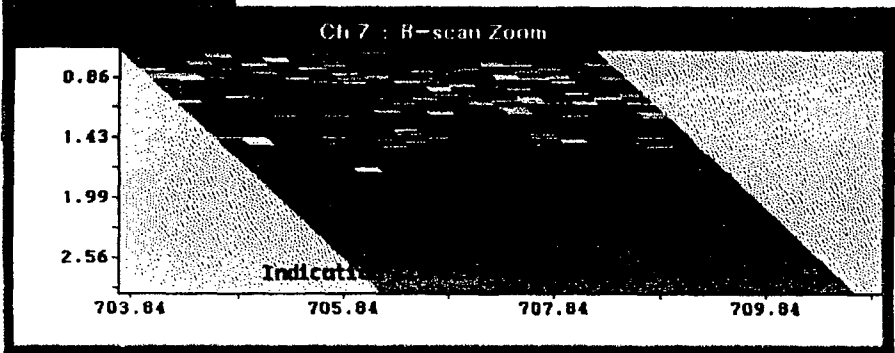
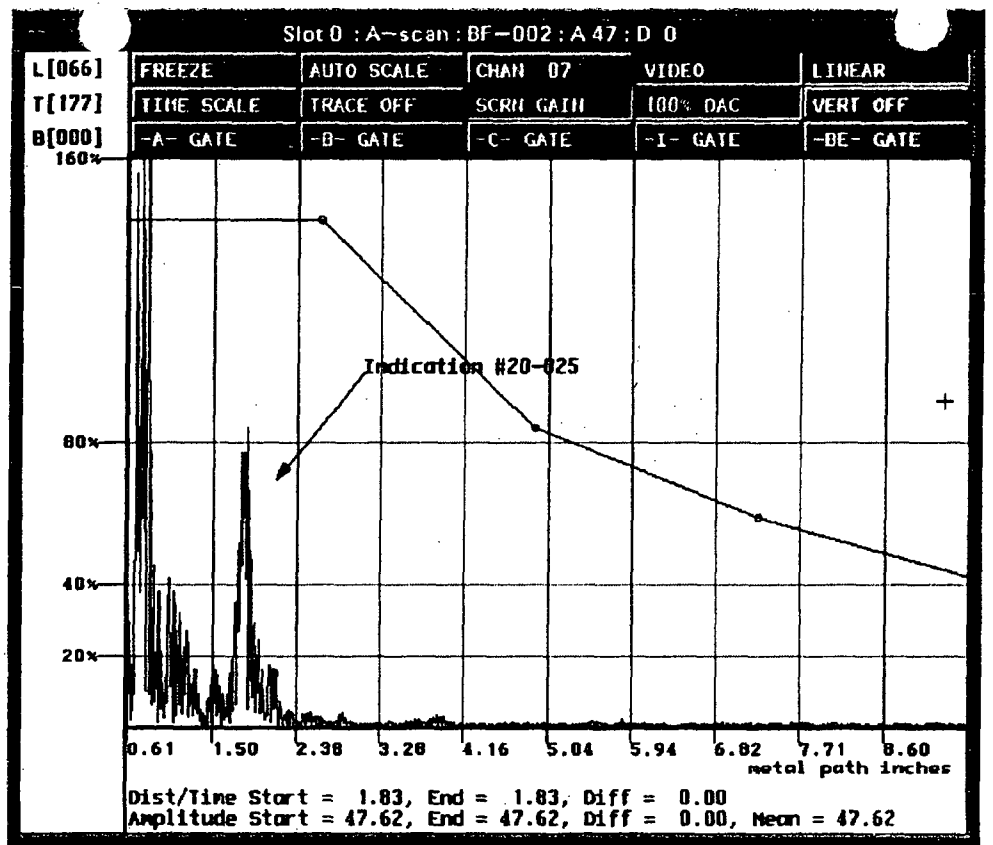
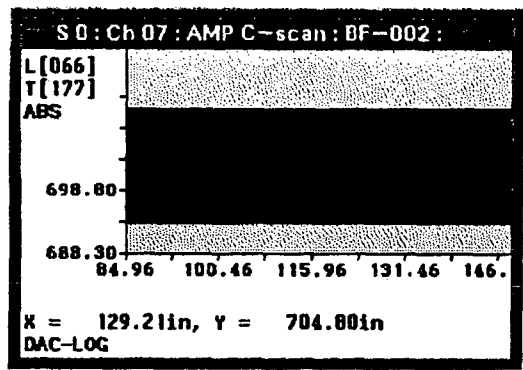
Lower Tan
/test>dump /max
tor3/20-024

R 1151
Pg 204 of 291
* 00276

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0

100%
50%
20%



Lower Tar
est dump / max
in 3/20-025

R 1151
Pg 205 of 291
00277

S D : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8

100%
50%
20%

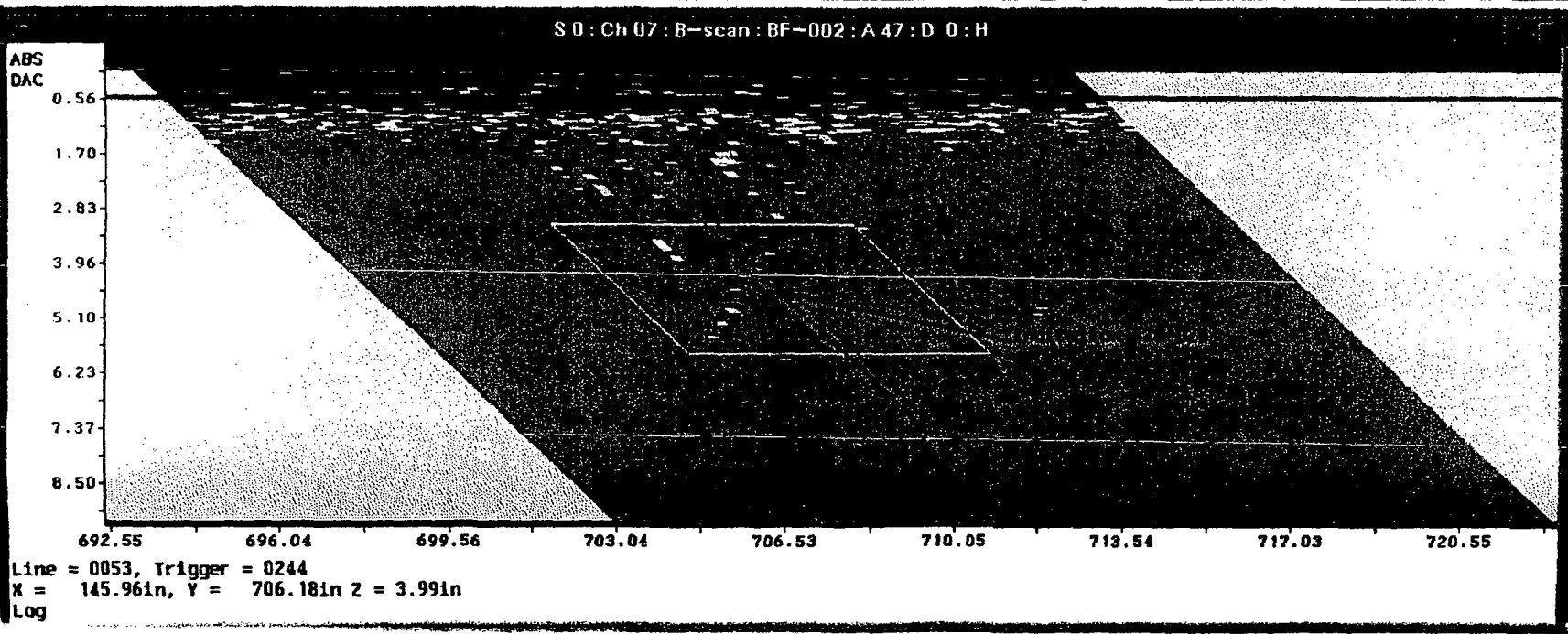
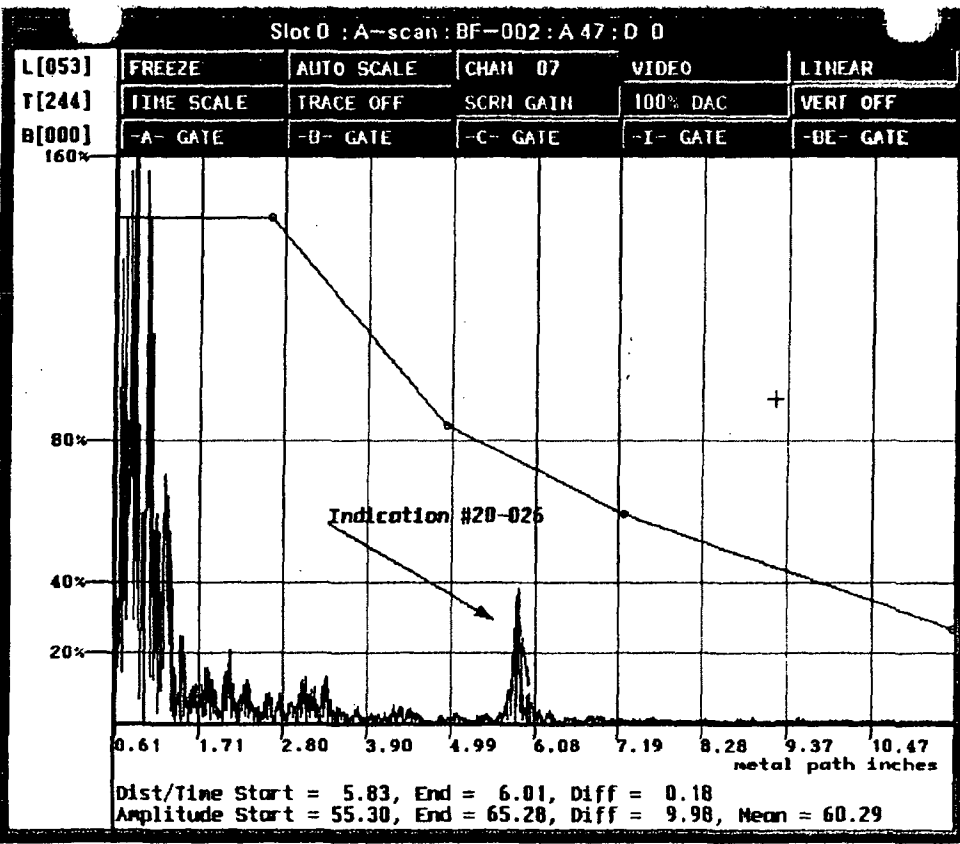
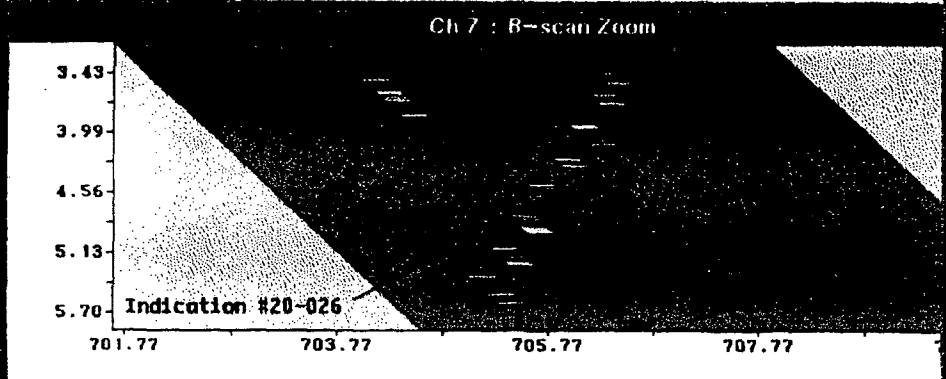
S D : Ch 07 : AMP C-scan : BF-002 :

L [053]
T [244]
ABS

698.80
688.30

84.96 100.46 115.96 131.46 146.

X = 145.96in, Y = 701.55in
DAC-LOG



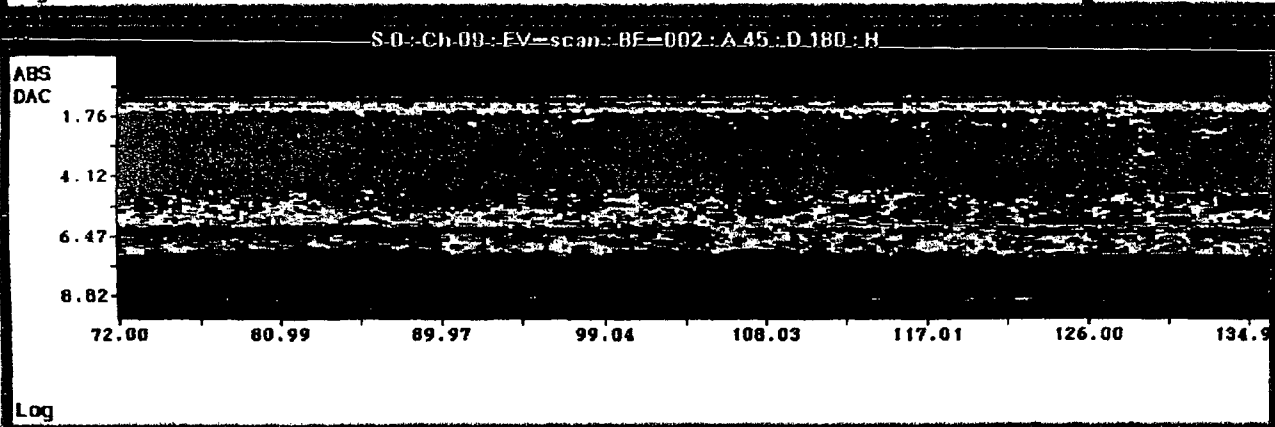
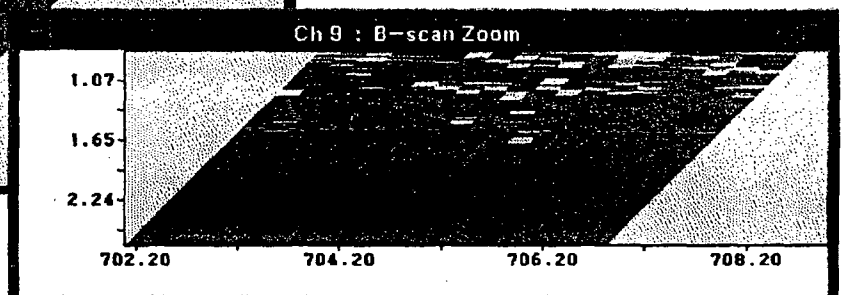
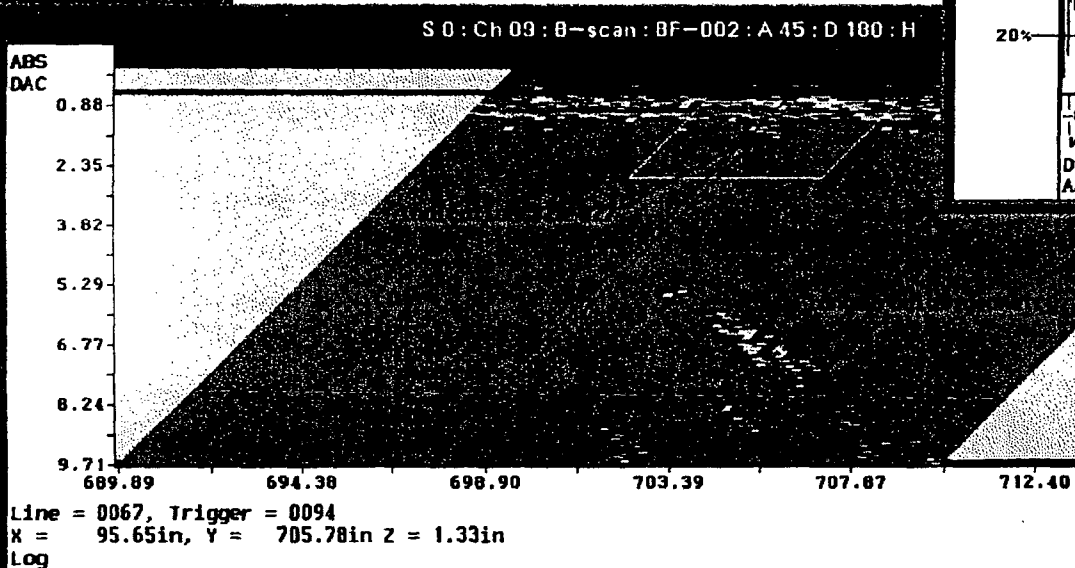
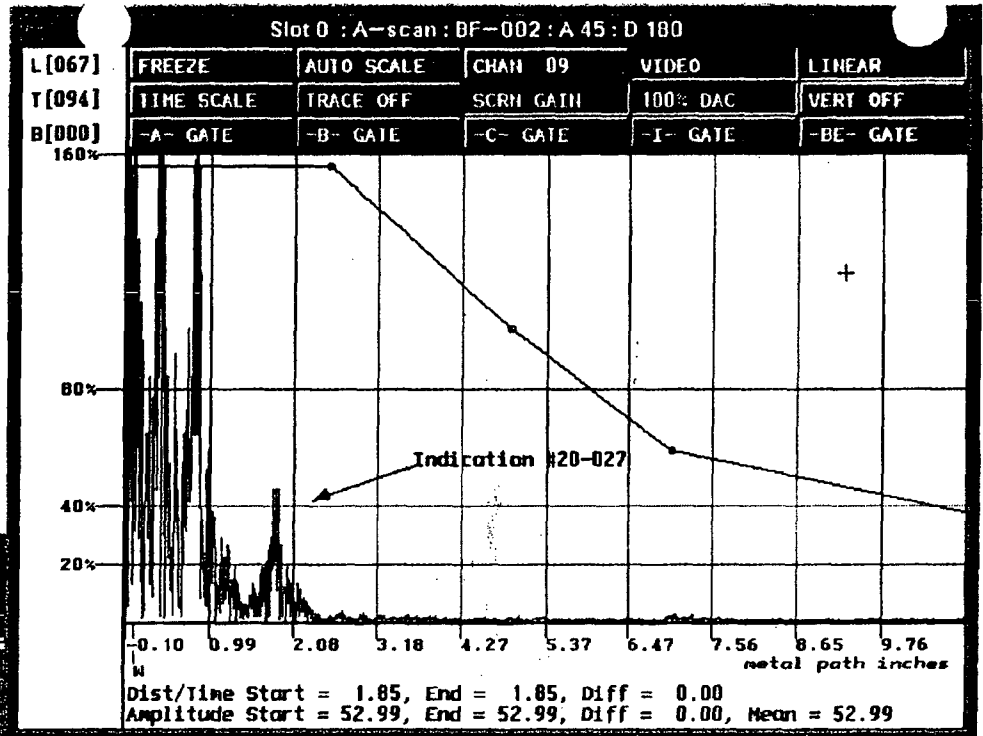
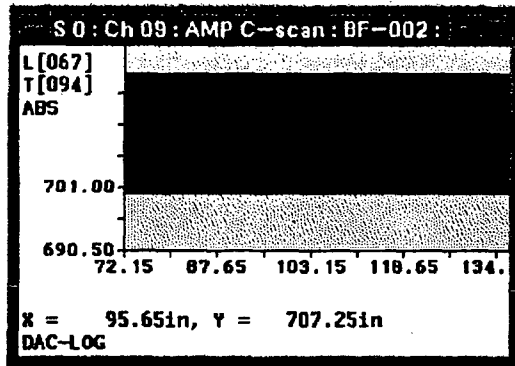
Lower Term
Iy[genis]/loc
st>dump./maxt
/20-026

Pg 206 of 291
R 1151
00278

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1

100%
50%
20%



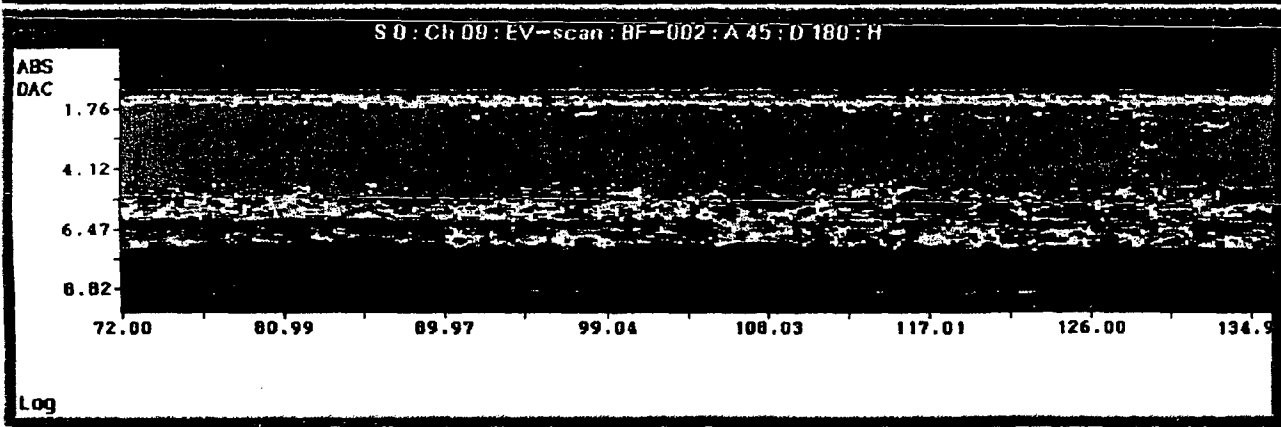
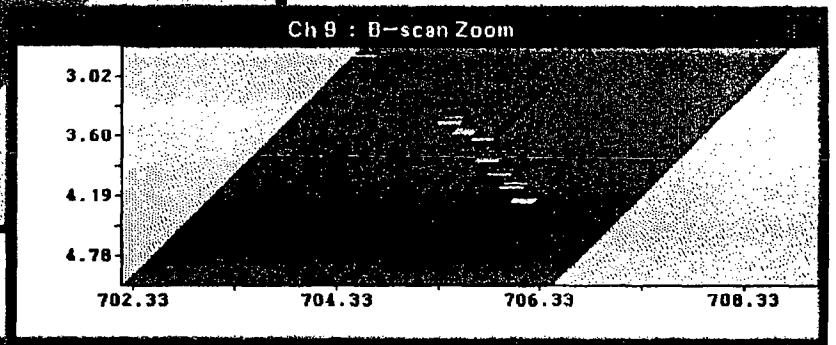
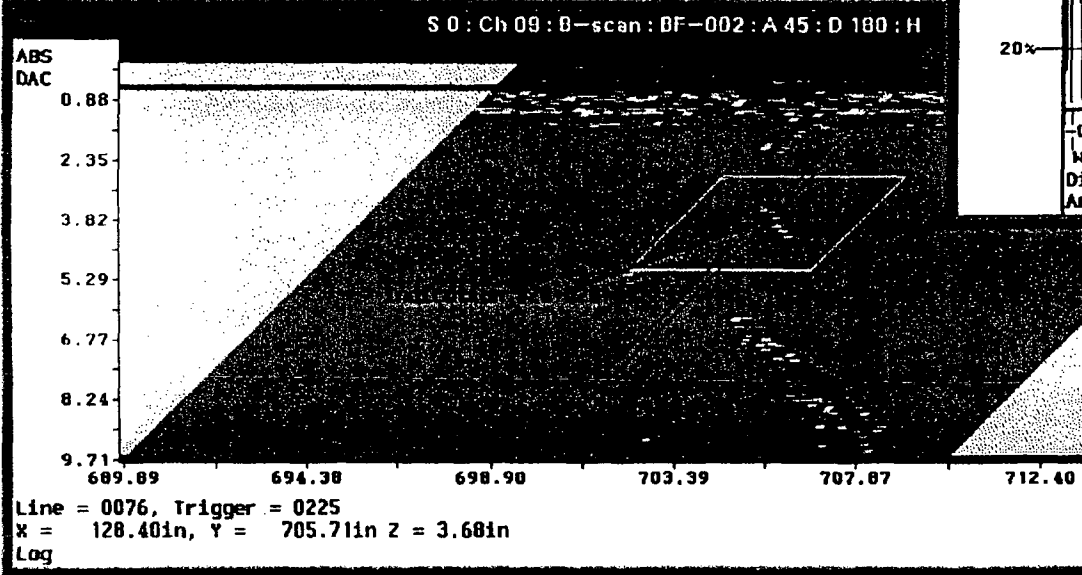
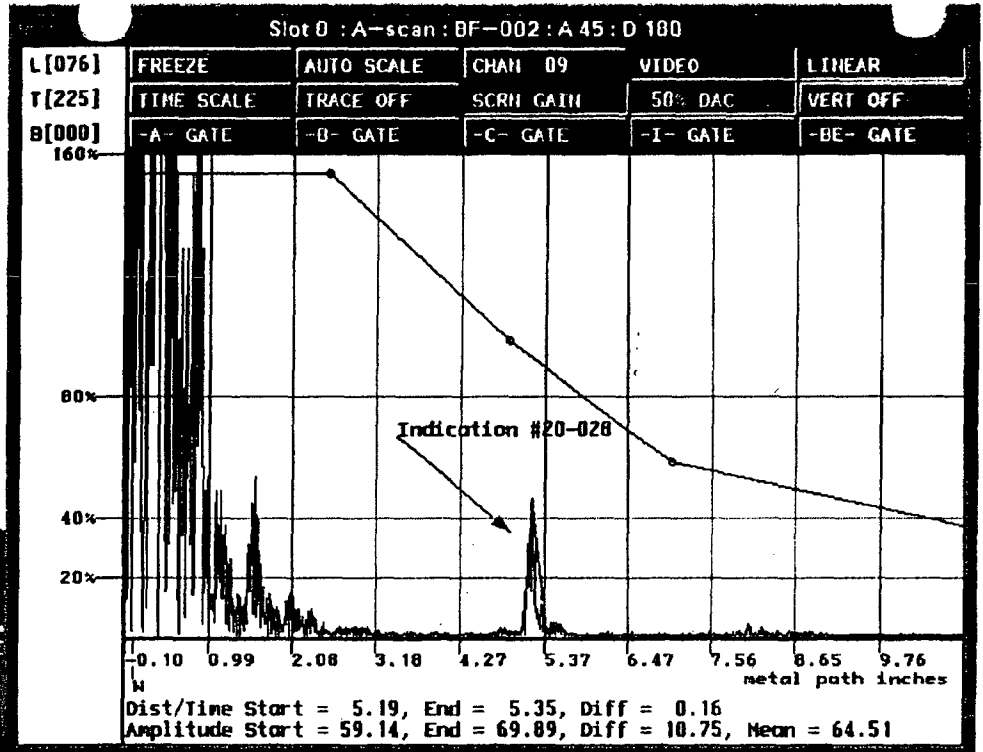
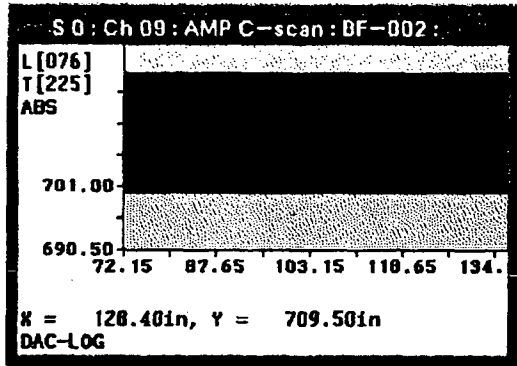
Lower Term
curly[geris]/loc
/test>dump /maxt
or3/20-027

00279
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R 1151

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1

100%
50%
20%



Lower Term
curly[eris]/loc
/test>dump./maxt
on3/20-028

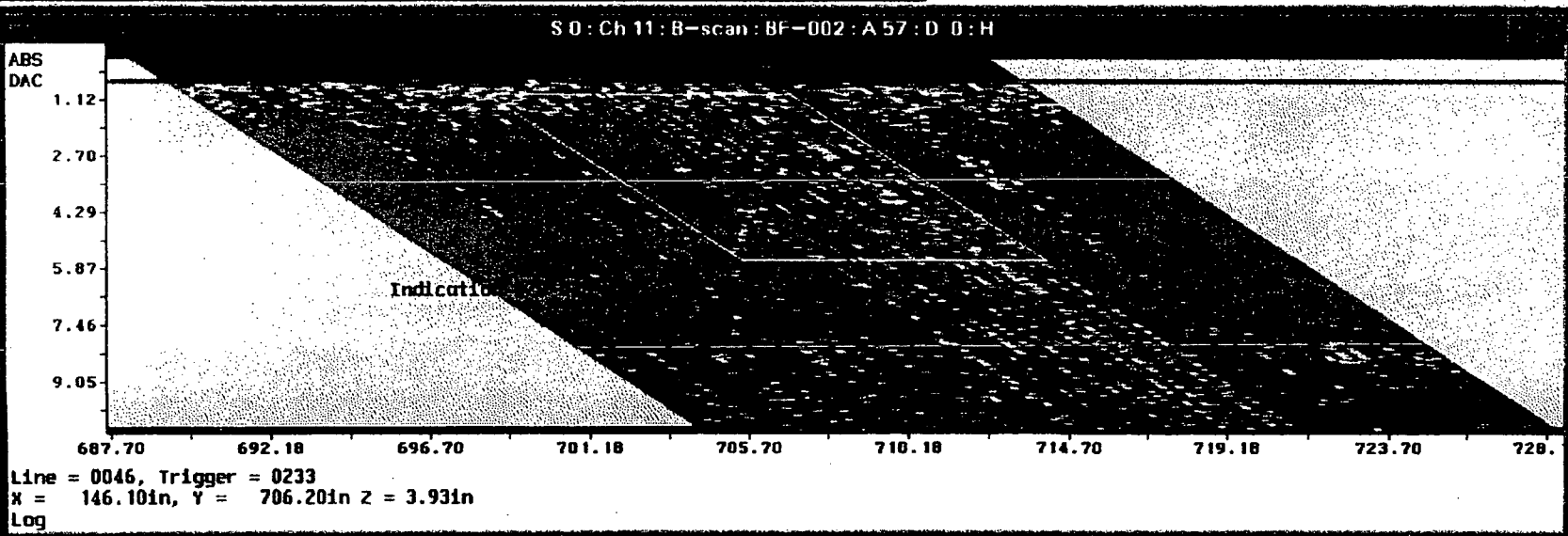
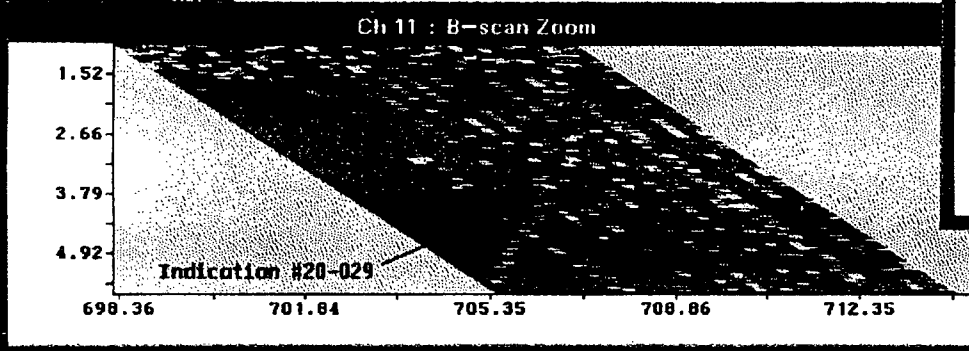
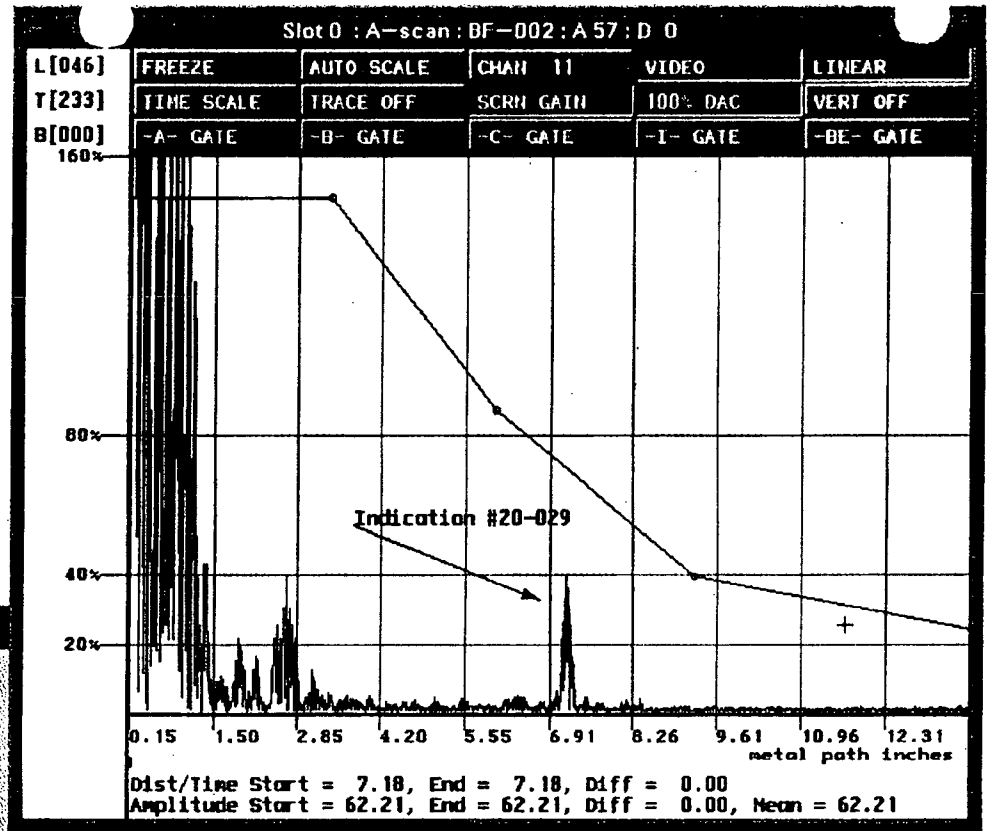
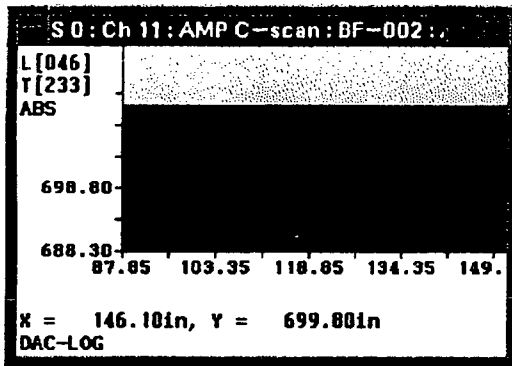
R 1151
Pg 208 of 291

00280

S0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.0
73.0
79.1
85.2
91.4

100%
50%
20%



Lower Term
curly[geris]/loc
/test>dump /max
or/3/20-029

R 1151
P9 2008 of 291
209
00281

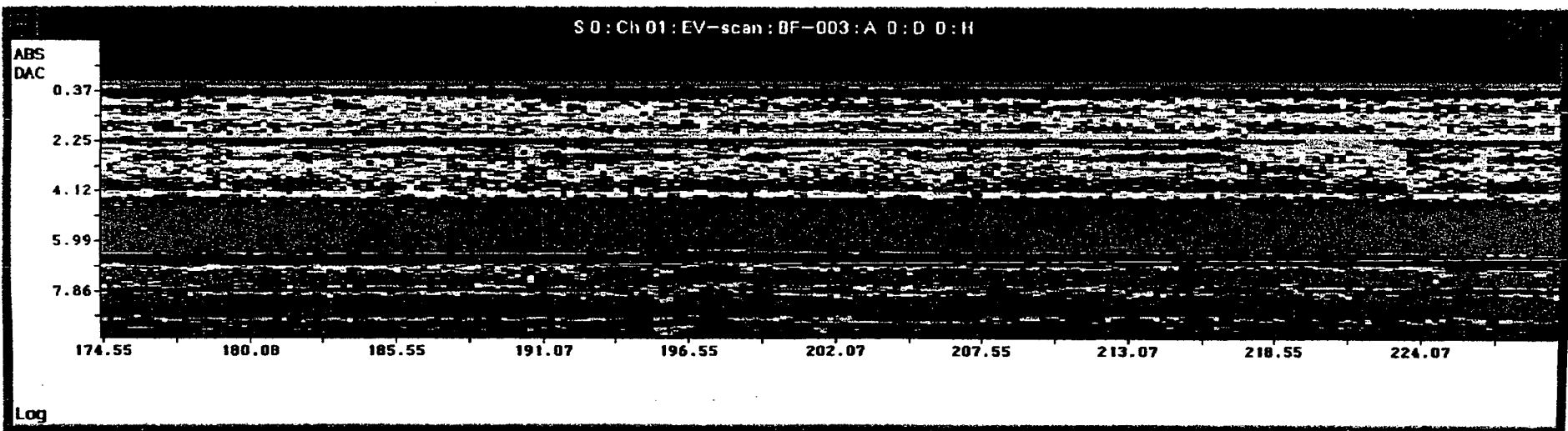
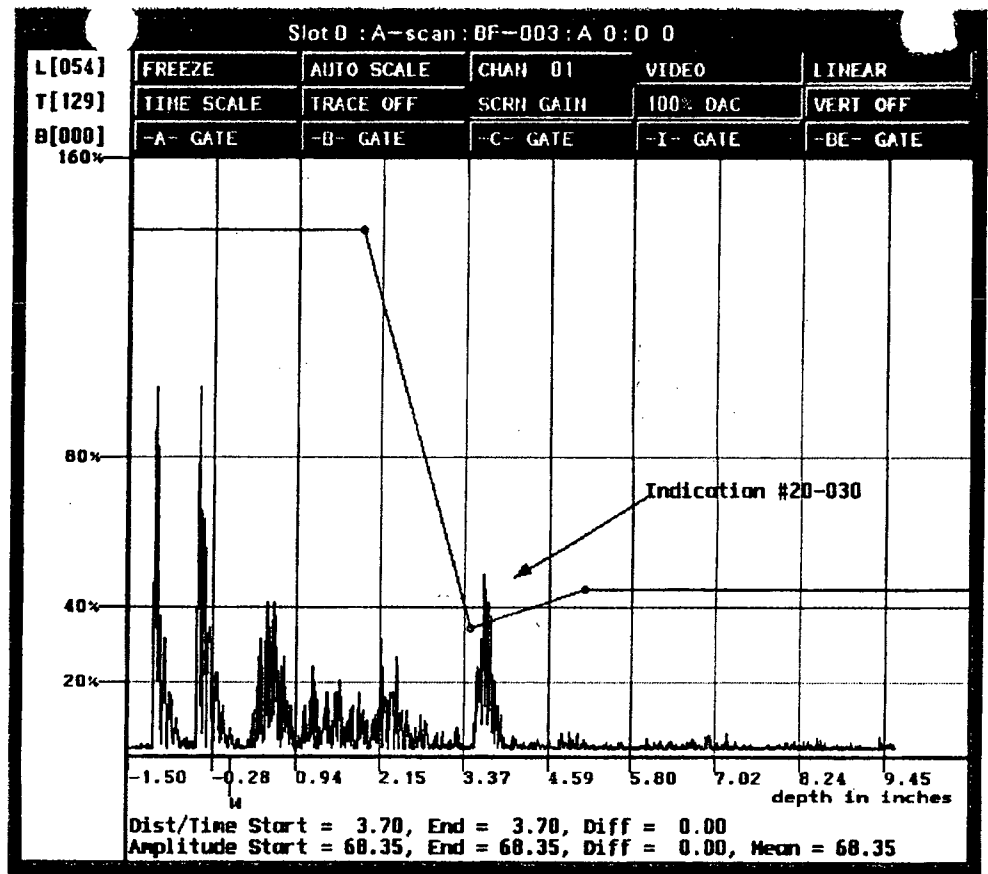
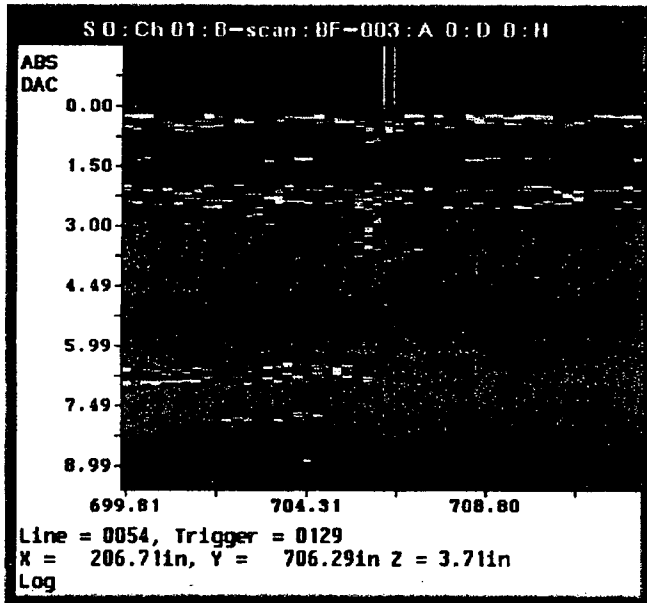
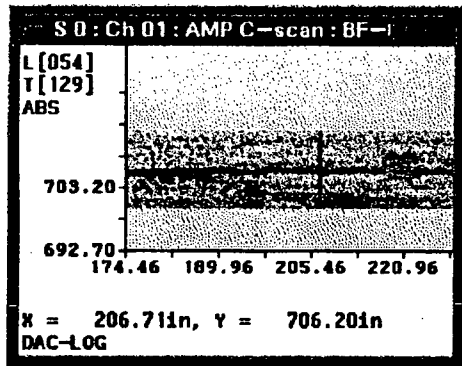
S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.0
73.0
79.1
85.2
91.4

100%
50%
20%

DAC

Lower Tern
curly[geris]/lo
/test/dump /max
tor3/20-030

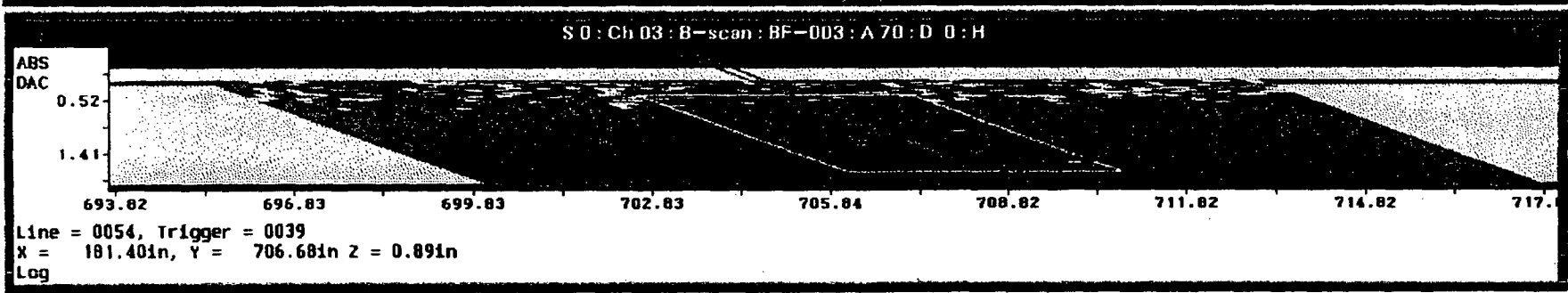
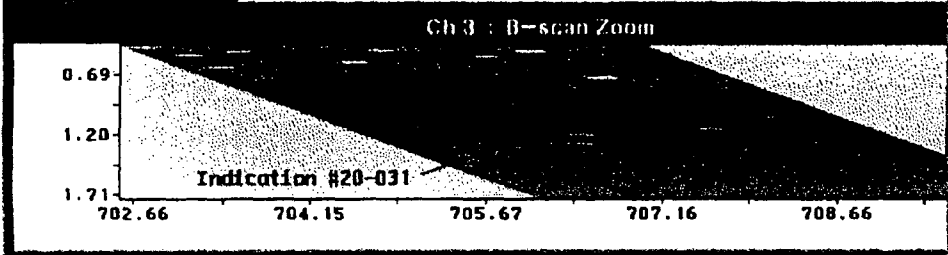
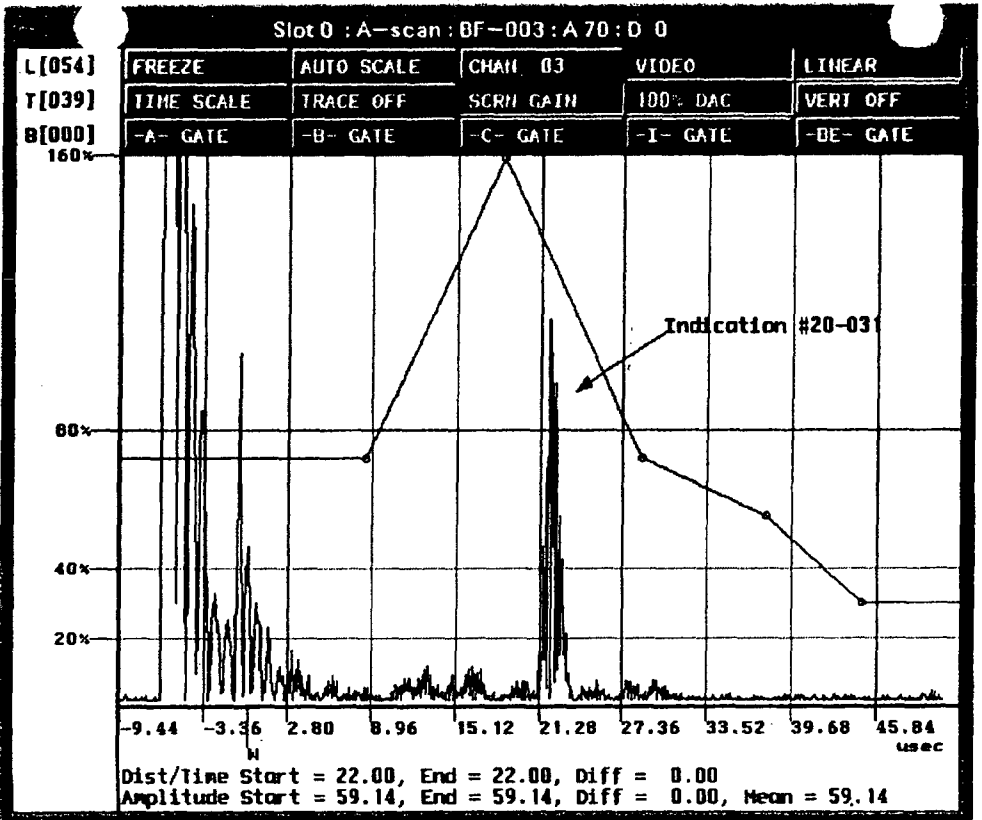
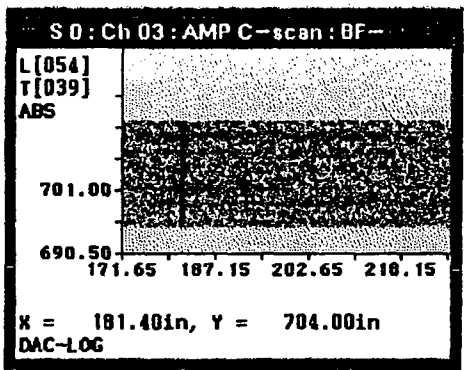


R 1151
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00282

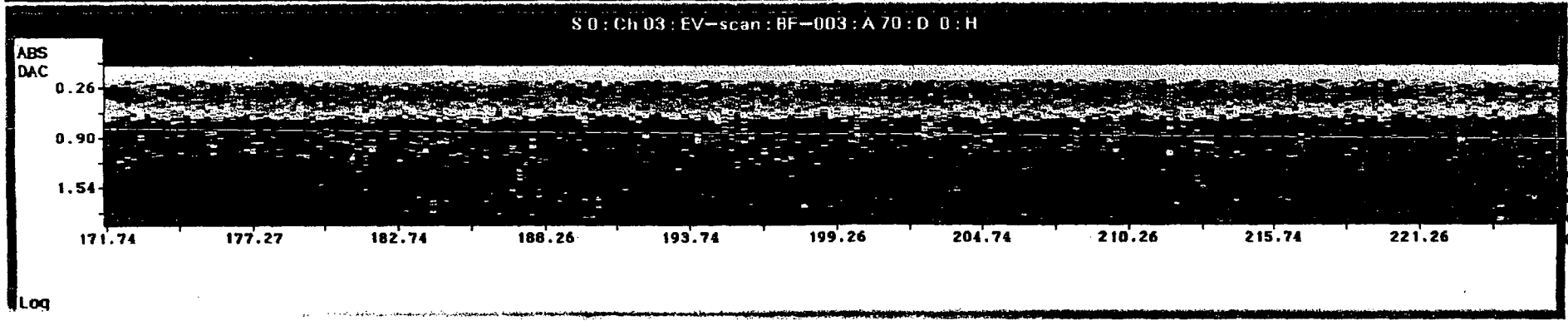
S 0 : Scale

5.4
11.5
17.7
23.0
30.0
36.1
42.2
48.4
54.5
60.7
66.0
73.0
79.1
85.2

100%
50%
20%



Ver Ten
|geris|/le
>dump /max
20-031

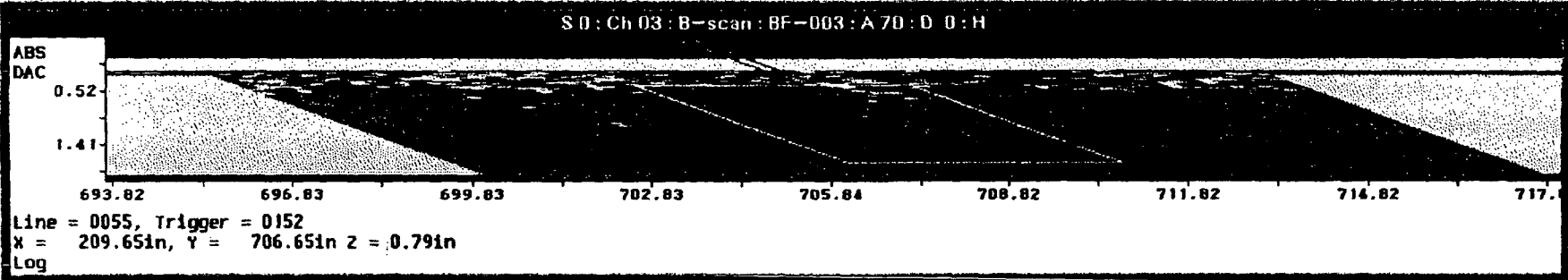
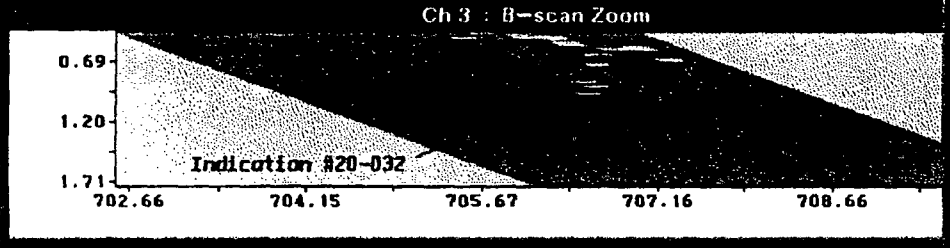
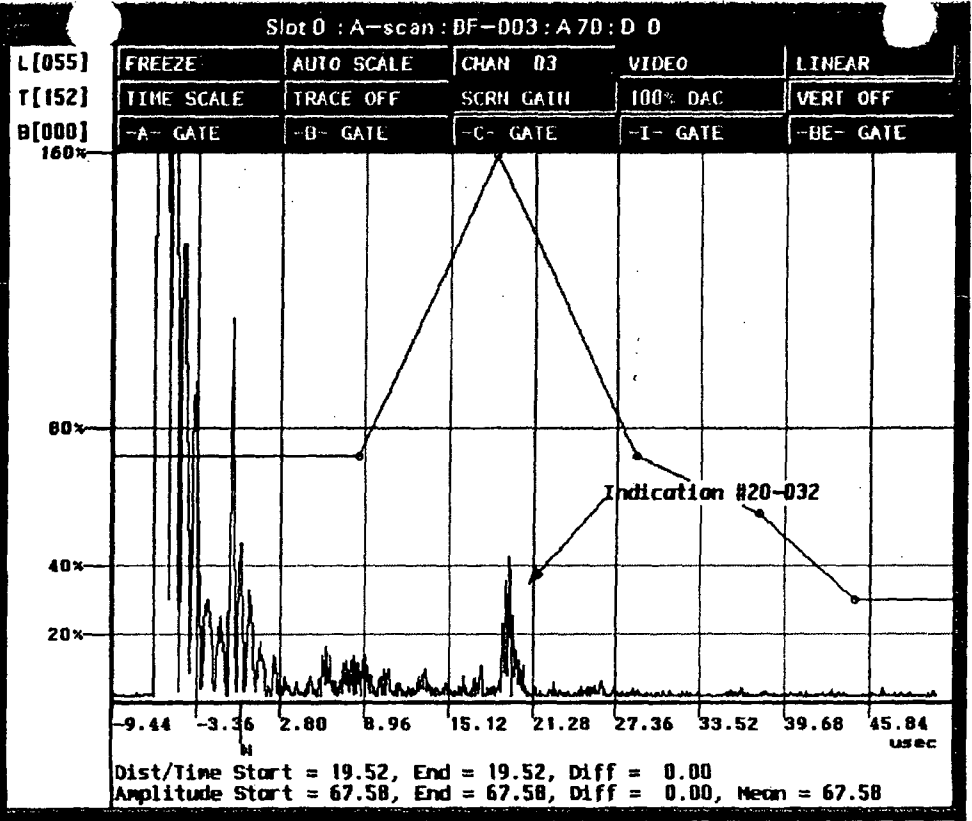
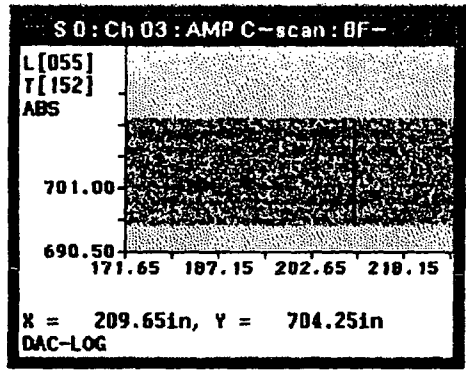


R 1151
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00283

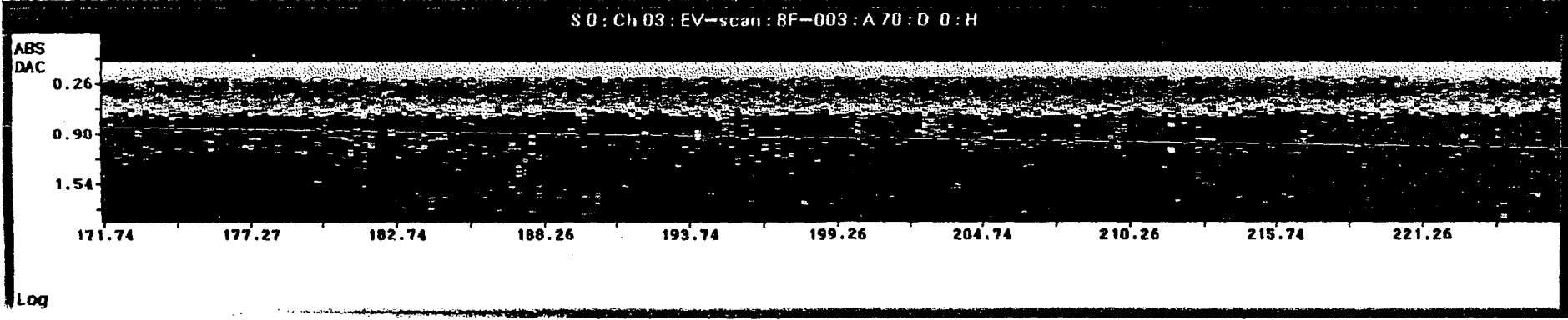
S 0 : Scale

5.4
11.5
17.7
23.0
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2

100%
50%
20%



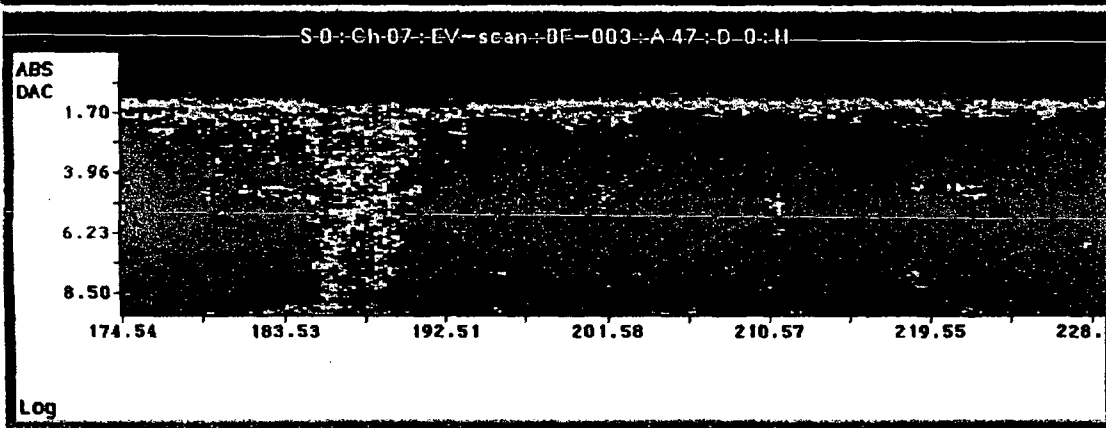
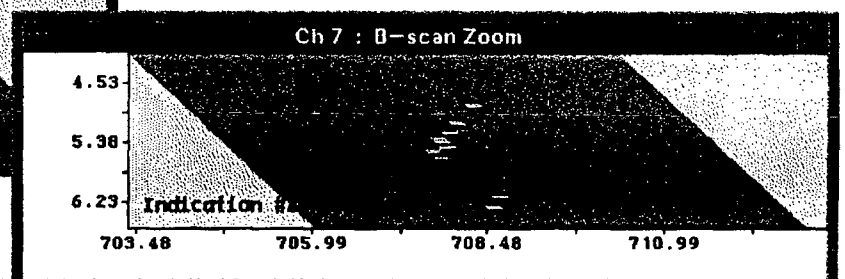
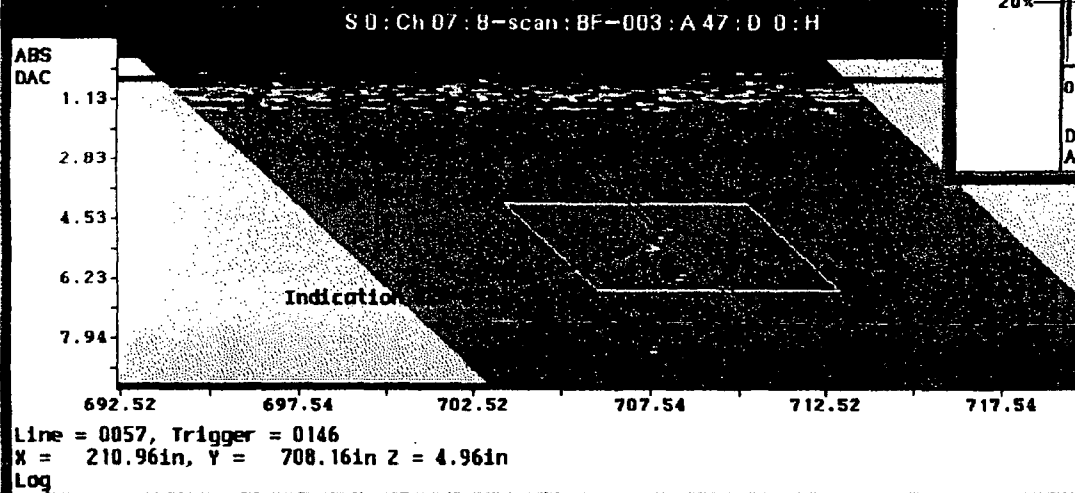
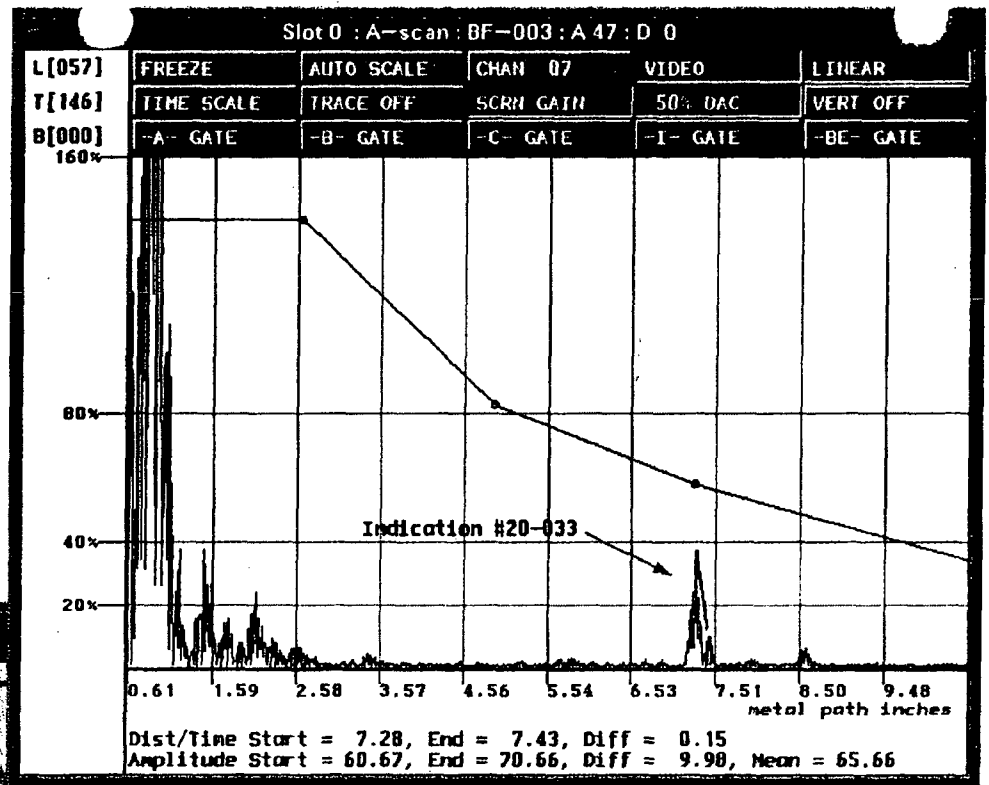
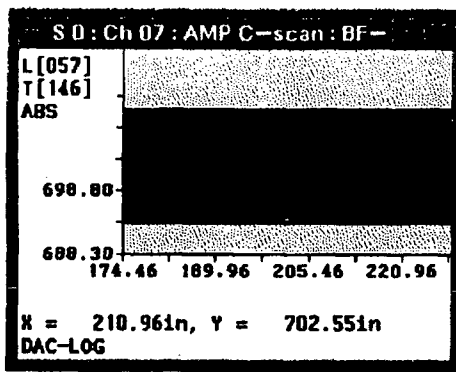
Ver Tor
[geris]/lo
>dump /max
/20-032



R 1151
Pg 2/2 of 291
00284

S 0 : Scale

5.4
11.5
17.7
23.0
30.0
36.1
42.2 100%
48.4 50%
54.5 20%
60.7
66.8
73.0
79.1
85.2
91.4



Lower Ten
c:\lu[geris]/lo
/test>dump /max
tor3/20-033

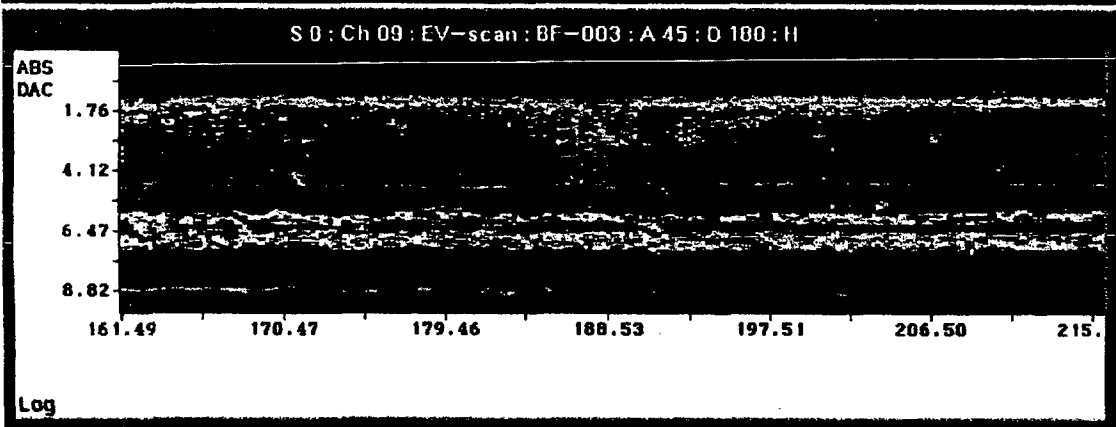
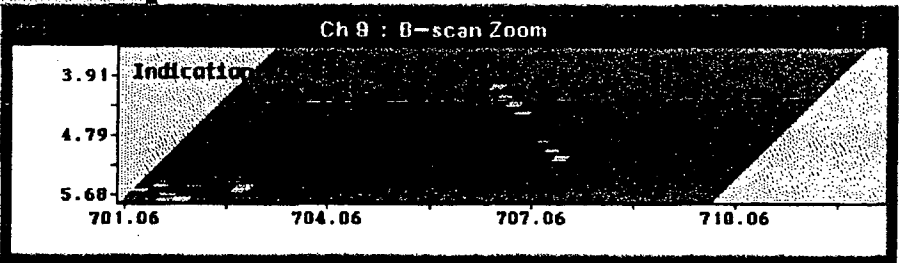
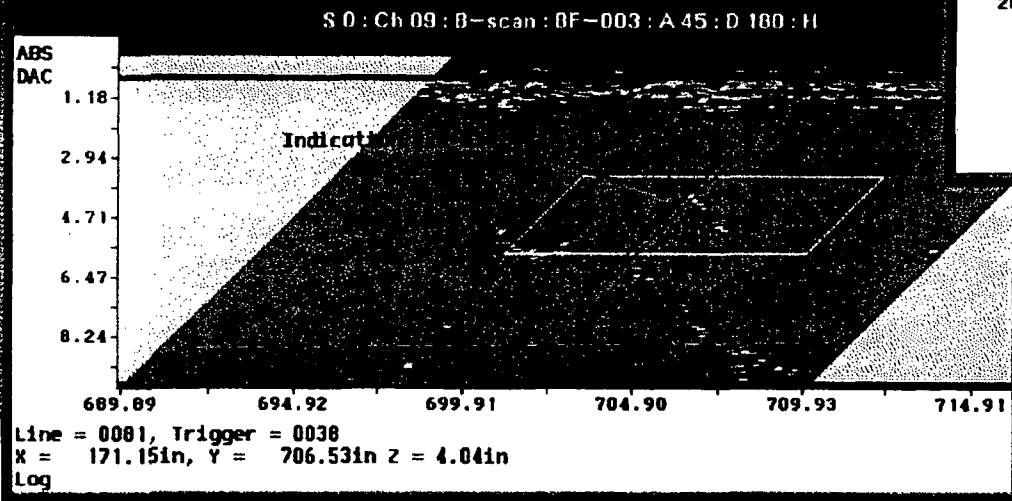
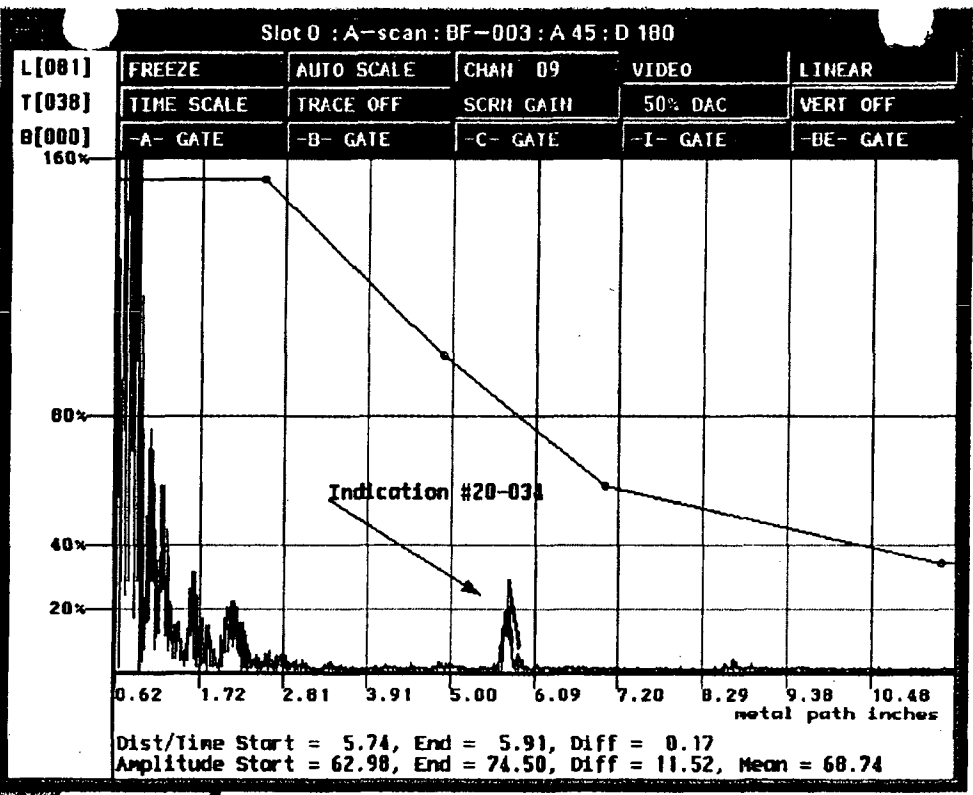
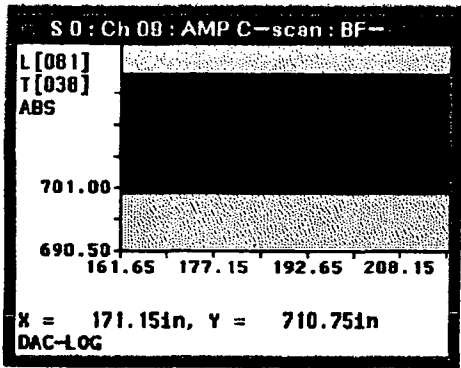
00285
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R1151

0000 0000

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%



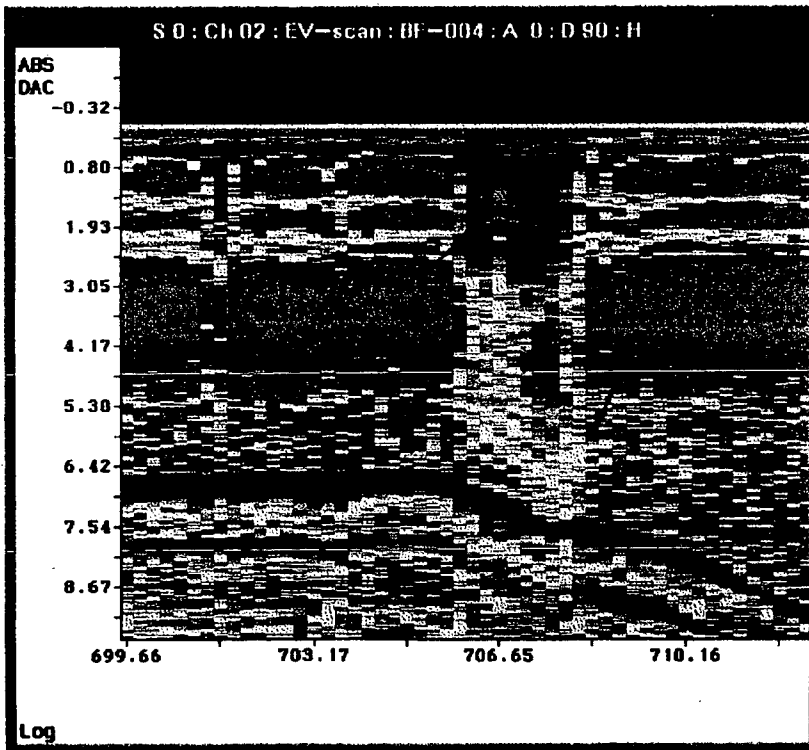
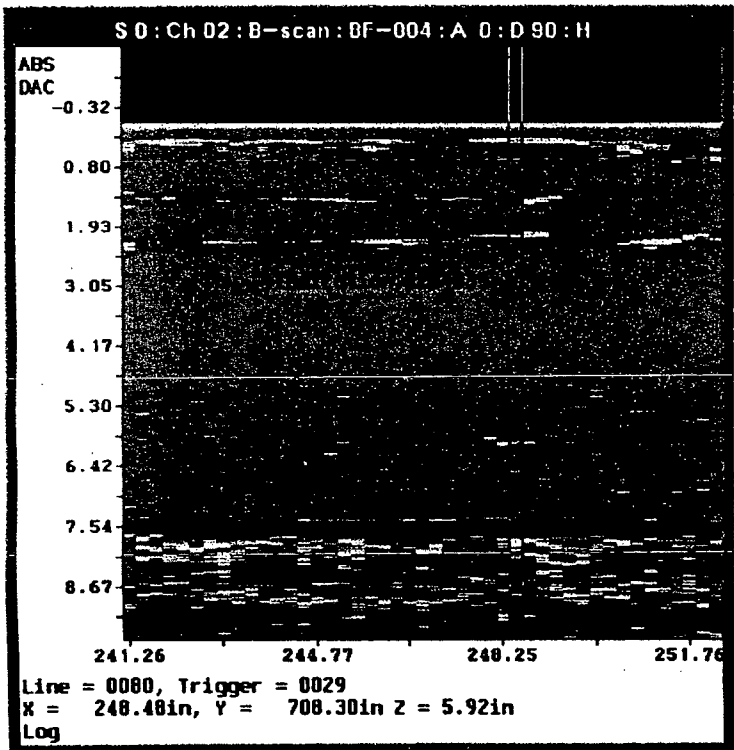
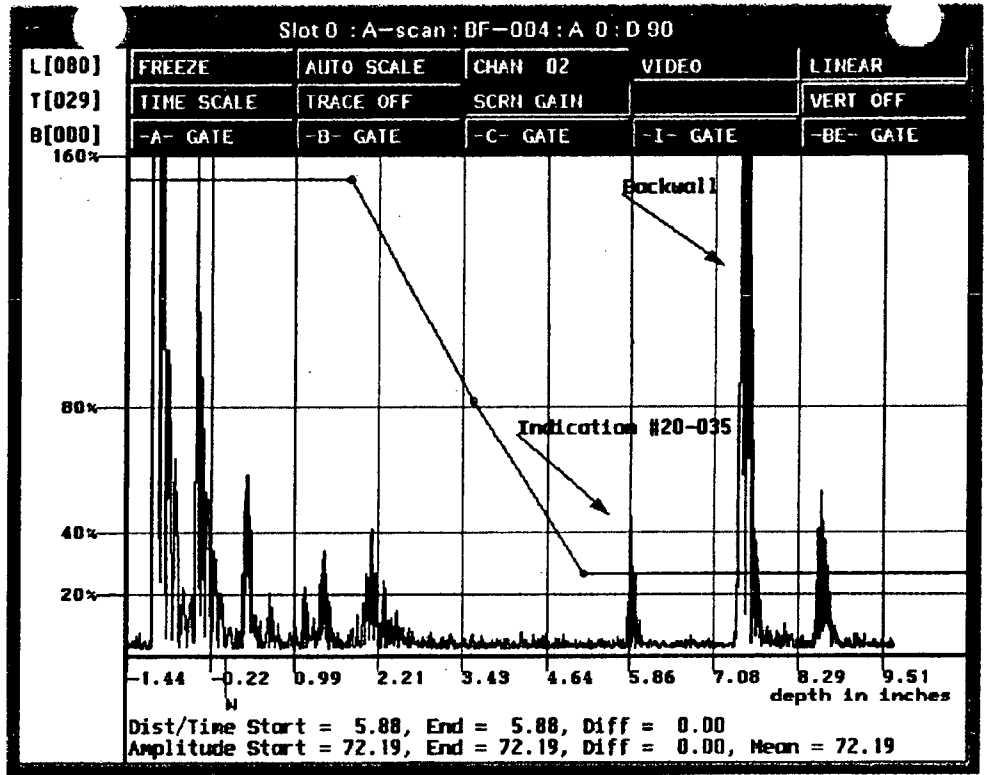
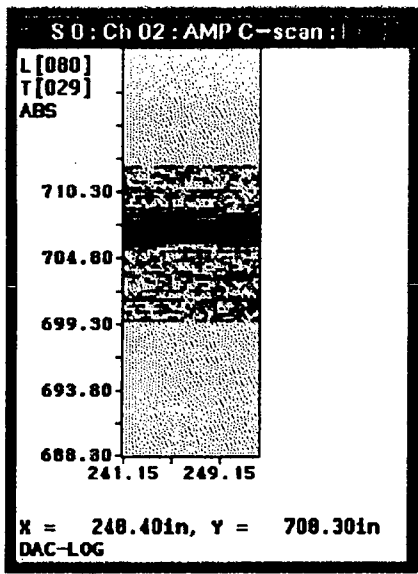
Lower Ten
curly(genis)/lo
/test/dump /max
tor3/30-034

00286
R1151
Pp 214 of 291

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7 100%
66.0 50%
73.0 20%
79.1
85.2
91.4

DAC



Lower Tern
curly[genis]/lo
/test/dump /max
tor3/20-035

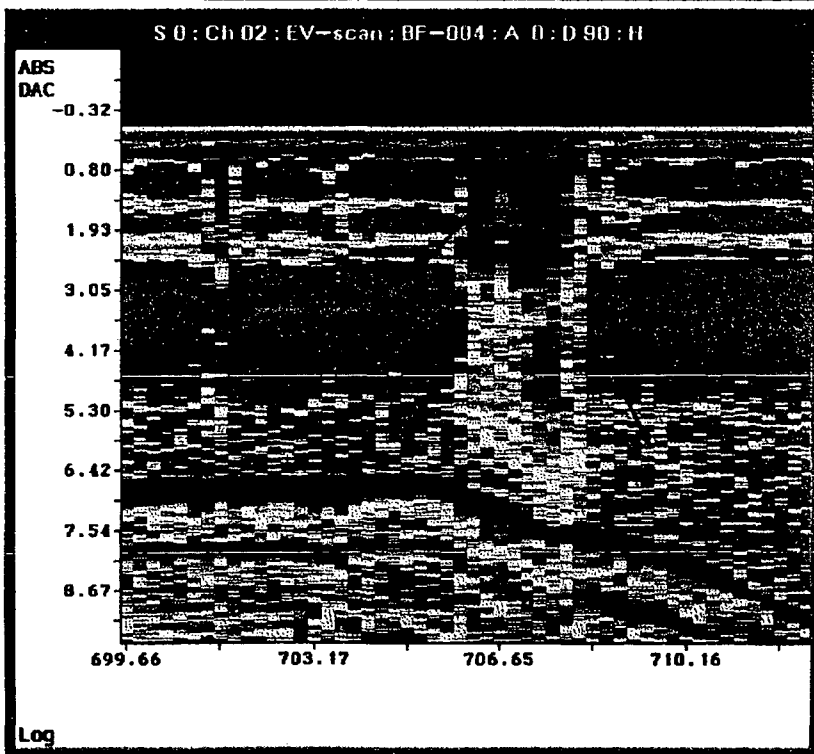
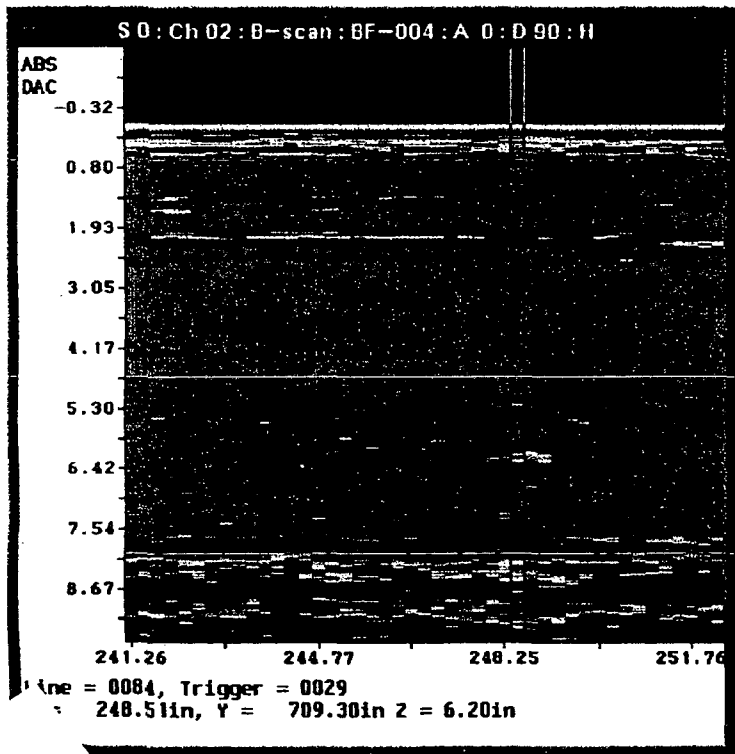
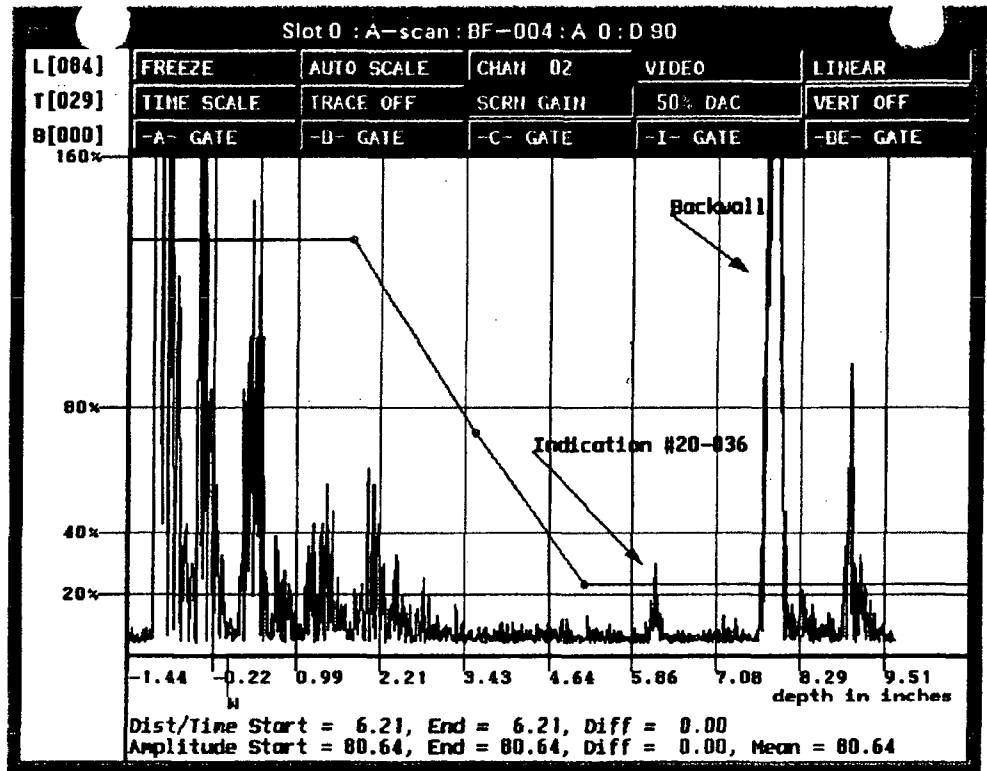
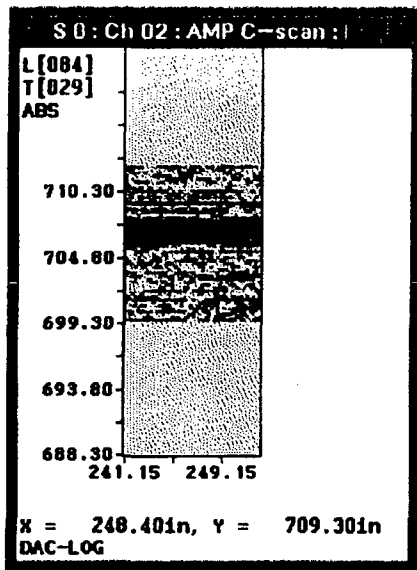
00287
Pg 215 of 291
R1151

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

DAC



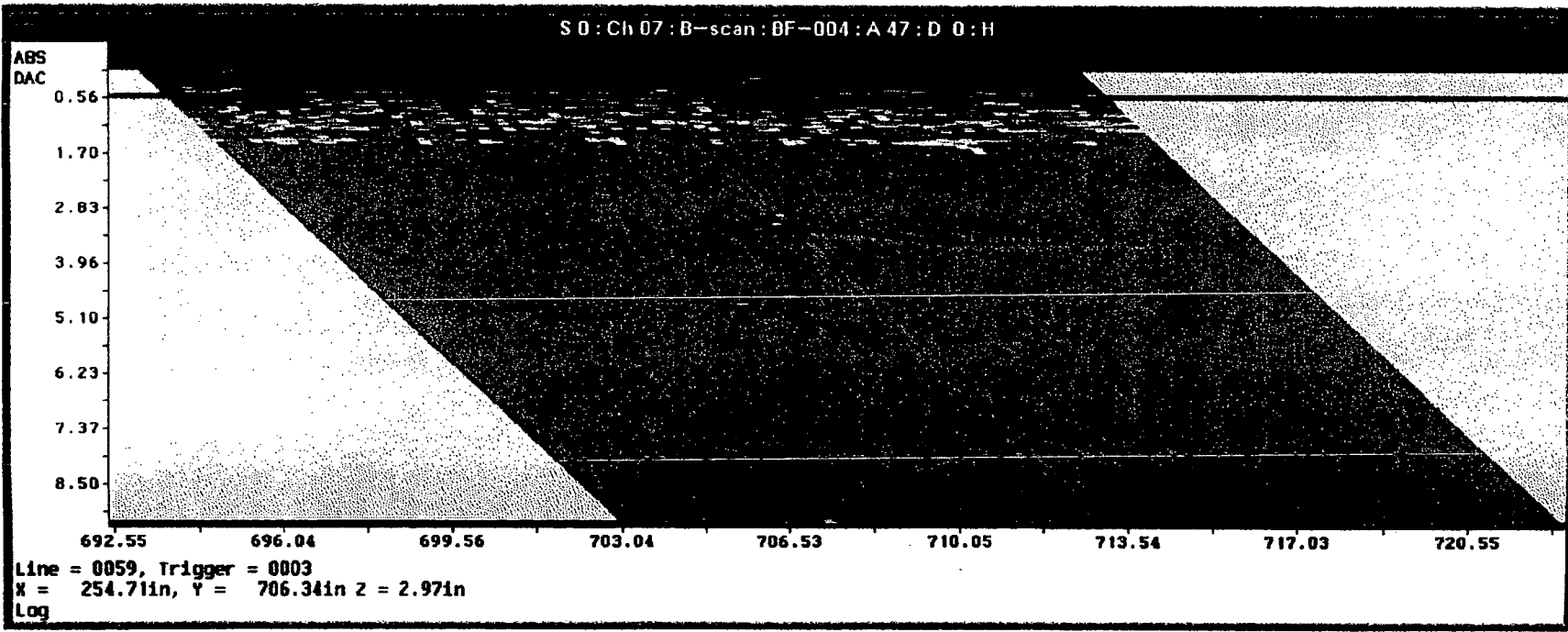
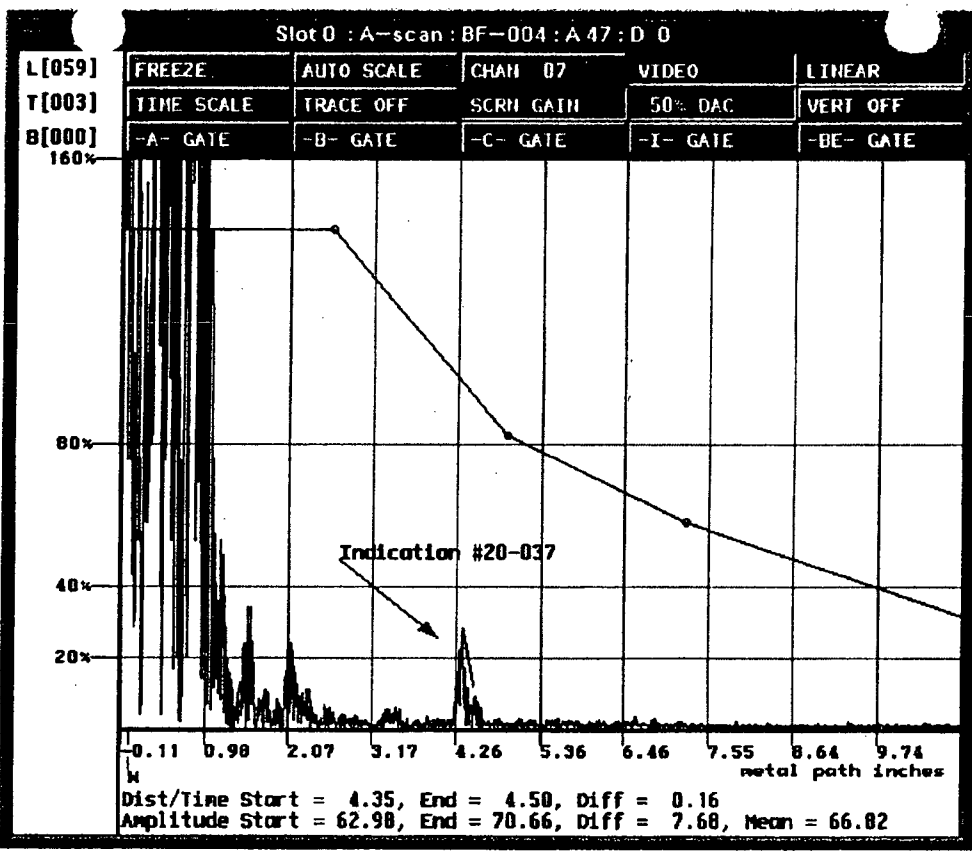
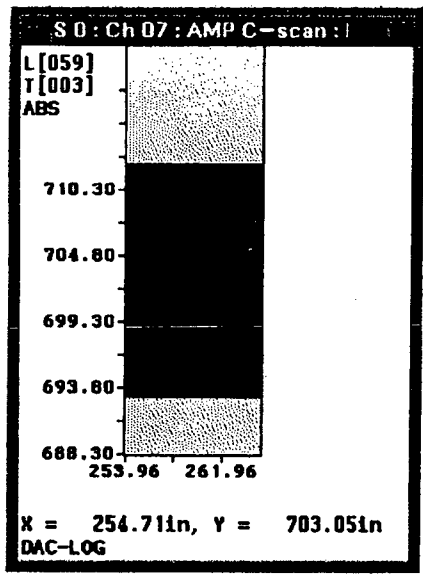
Lower Ten
curly[genis]/lo
/test/dump /max
tor3/20-036

88288
Pg 216 of 291
R 1151

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2 100%
48.4 50%
54.5 20%
60.7
66.8
72.0
79.1
85.2
91.4

DAC



Lower Tern
mly[genis]/lo
test/dump /max
pr3/20-037

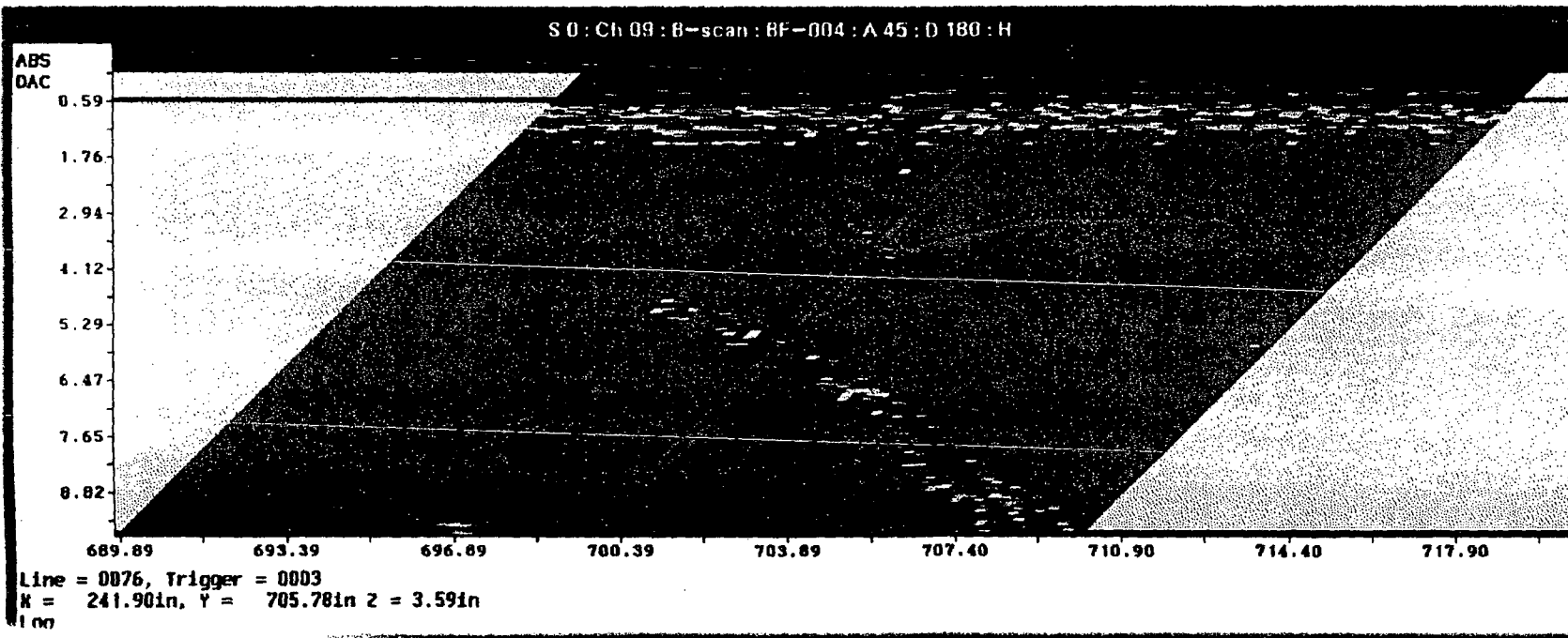
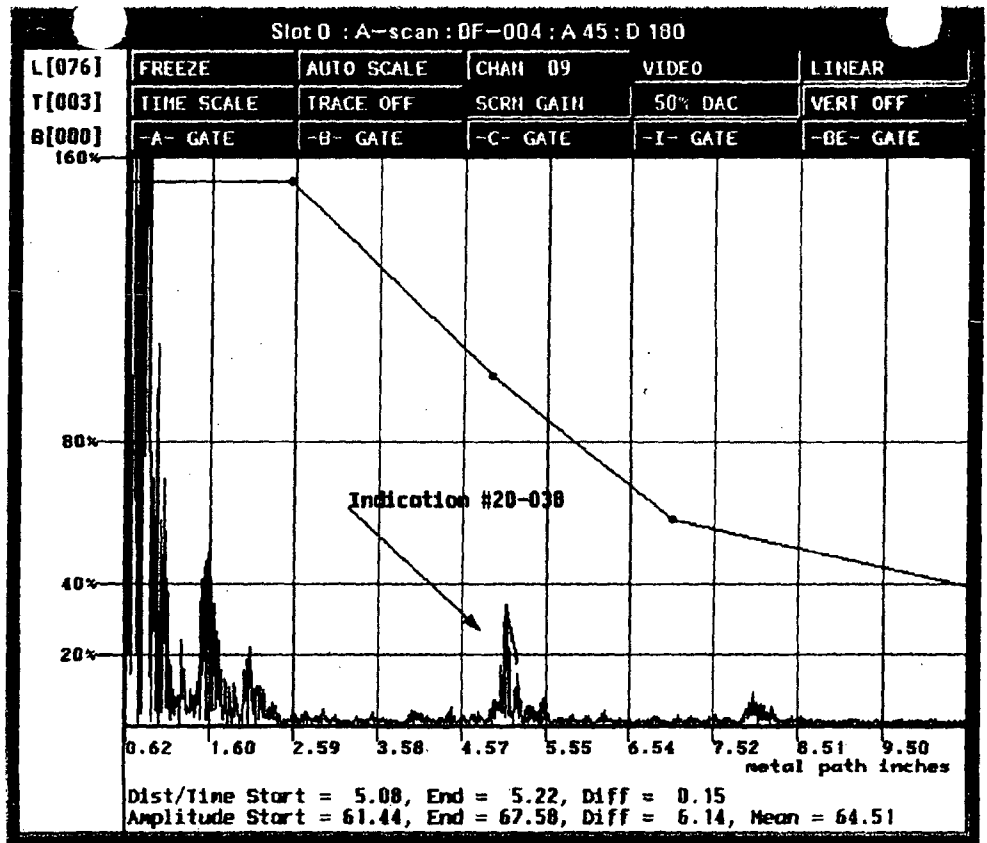
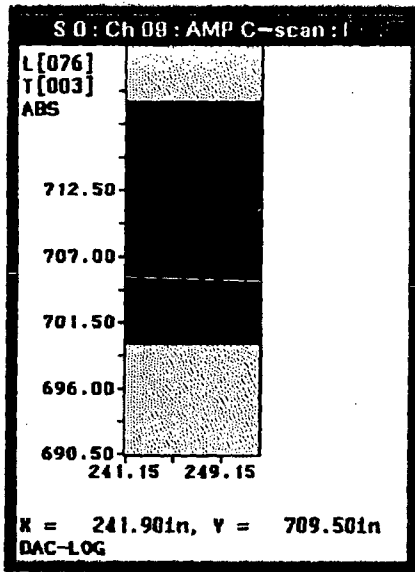
00289

R1151
Pg 217 of 291

S 0 : Scale

5.4	
11.5	
17.7	
23.8	
30.0	
36.1	
42.2	100%
48.4	50%
54.5	20%
60.7	
66.8	
73.0	
79.1	
85.2	
91.4	

DAC



Lower Ten
curlj[geris]/10
/test2/dump /max
tor3/20-038

00290

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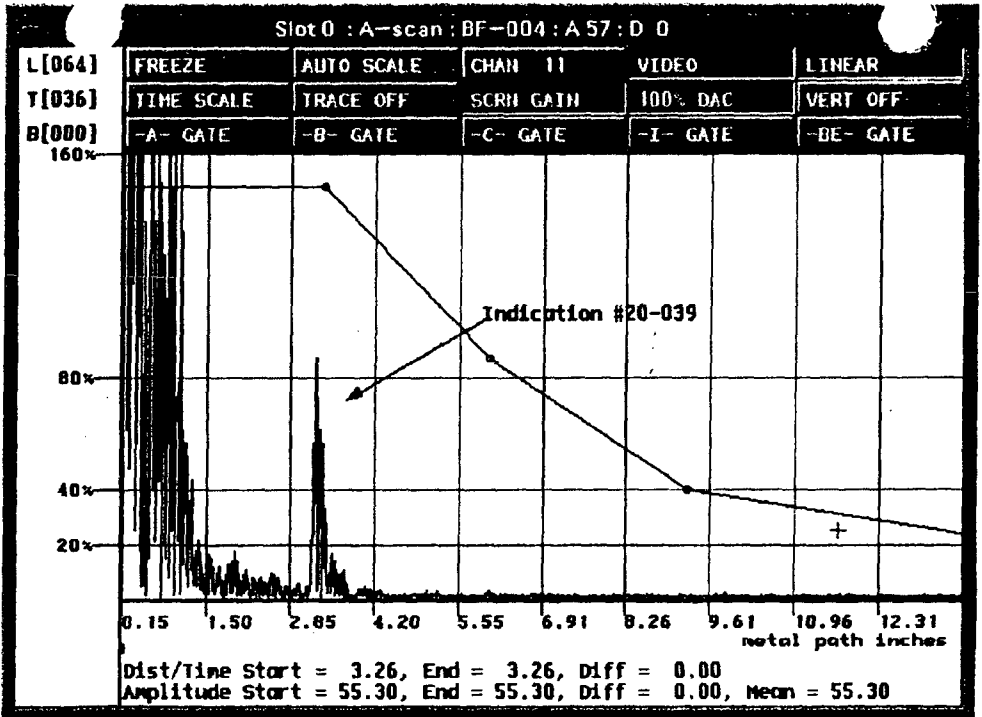
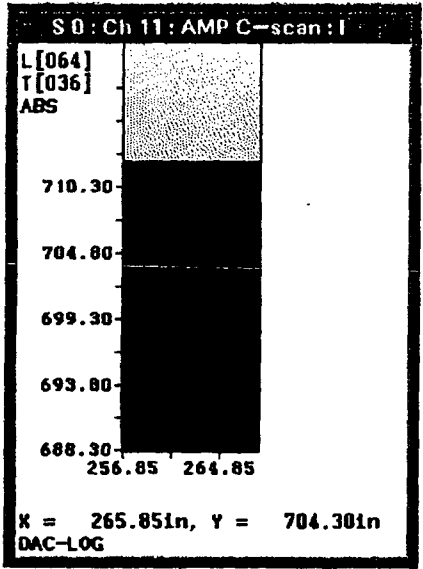
R1151

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.0
73.0
79.1
85.2
91.4

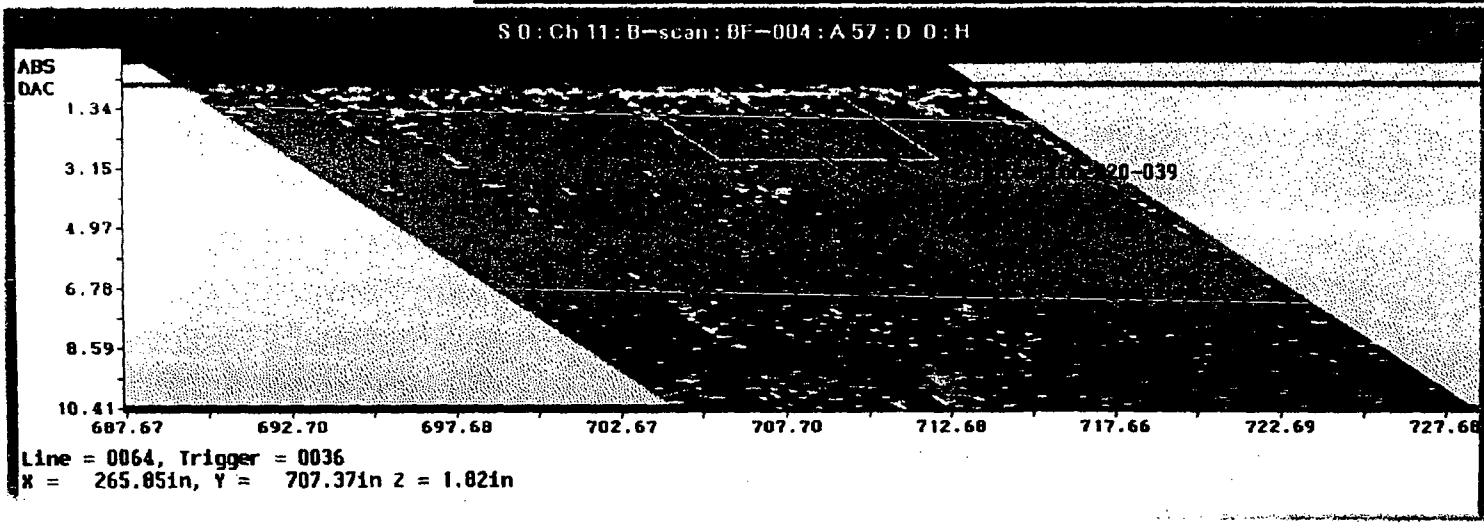
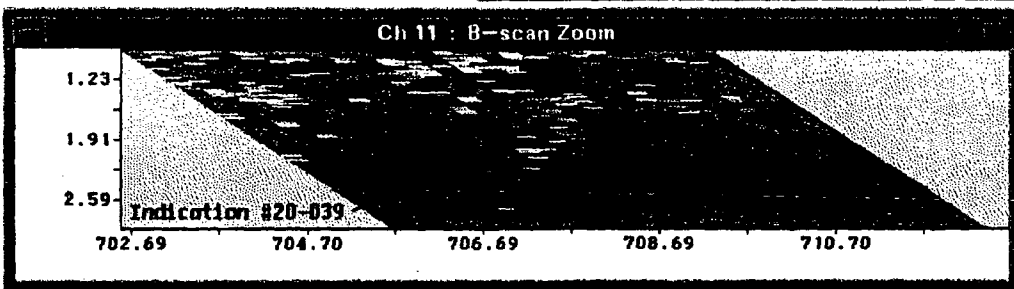
100%
50%
20%

DAC



Lower Ter

curly[geris]/lo
/test>dump /max
tor3/20-039



00291

Pg 2/19 of

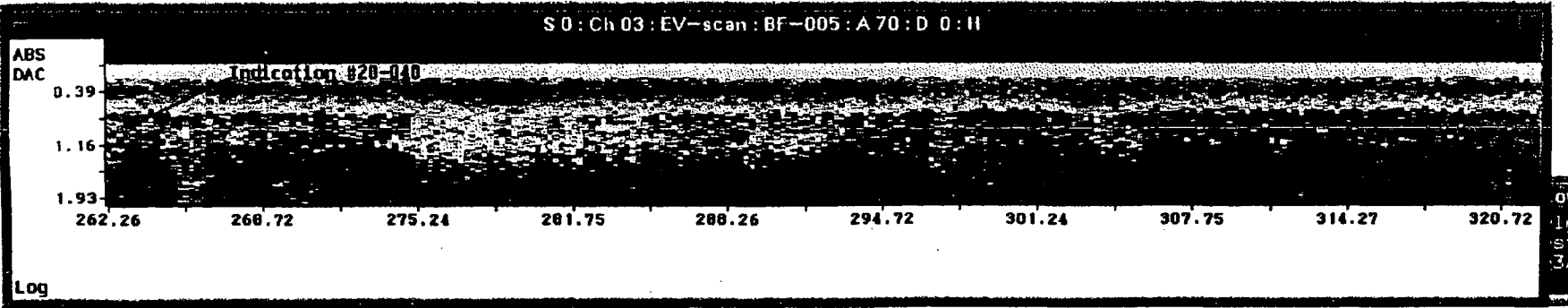
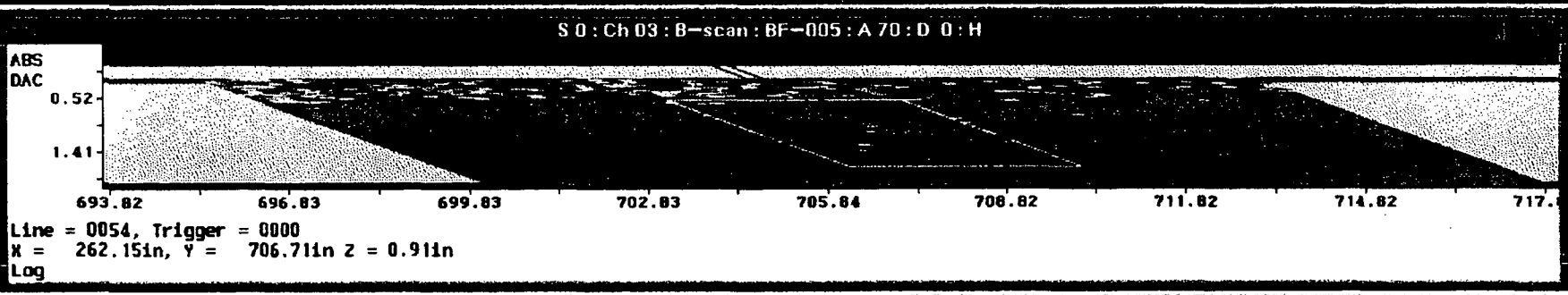
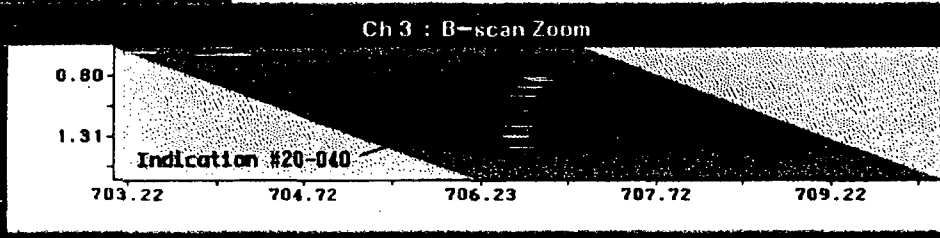
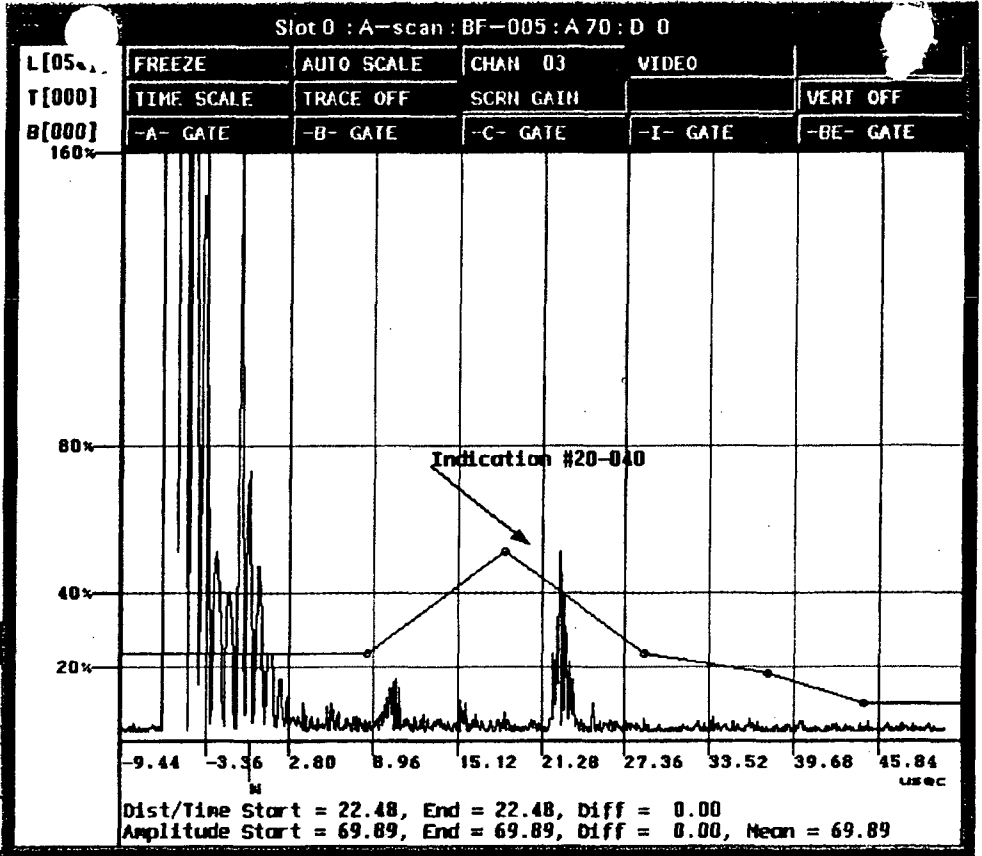
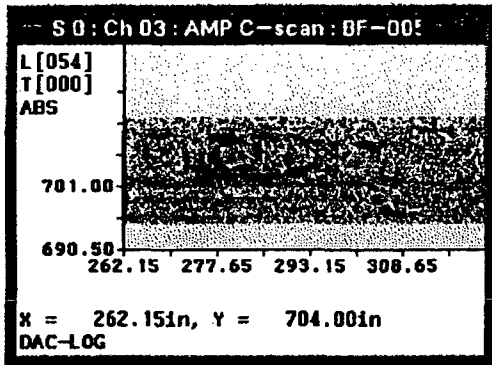
R 115'

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

DAC



Lower Ter
ly[genis]16
st>dump /max
3/20-040

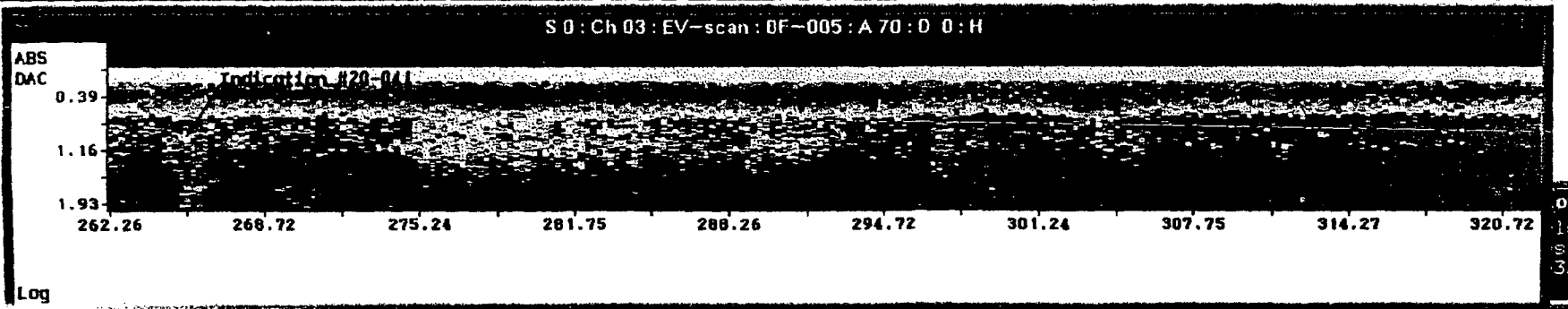
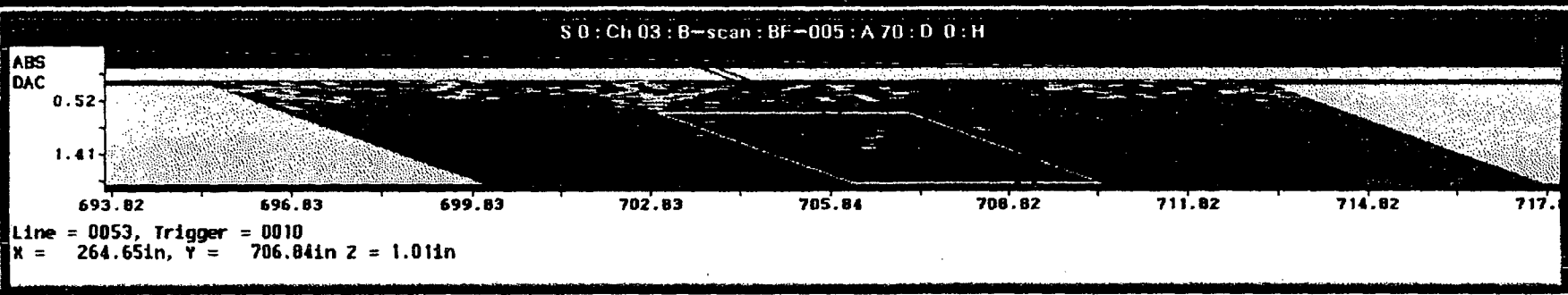
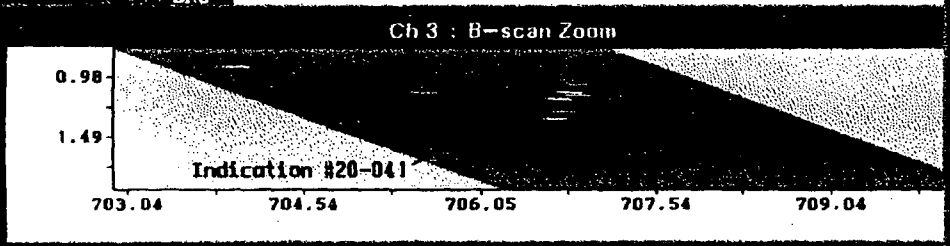
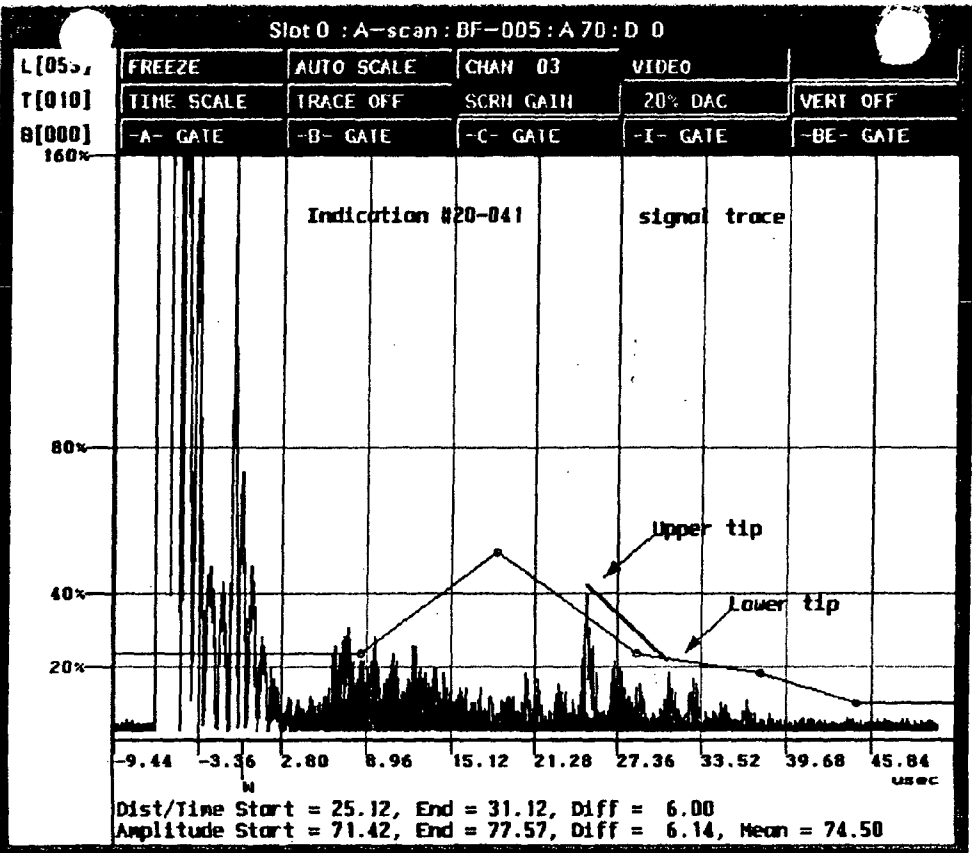
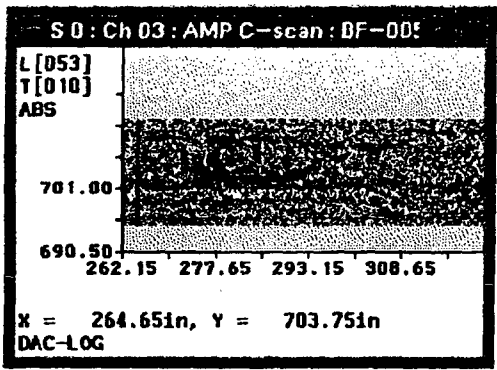
00292
R 1151
Pg 220 of 291

S D : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

DAC



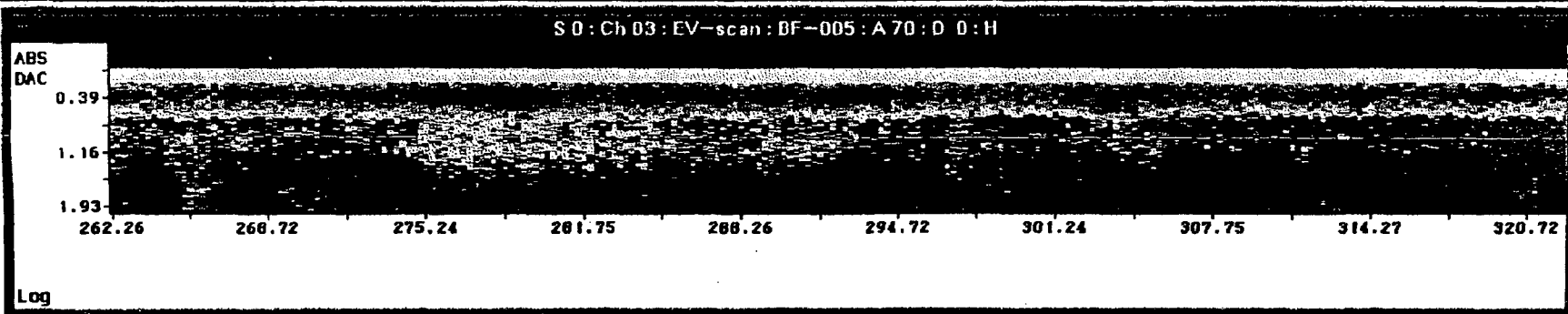
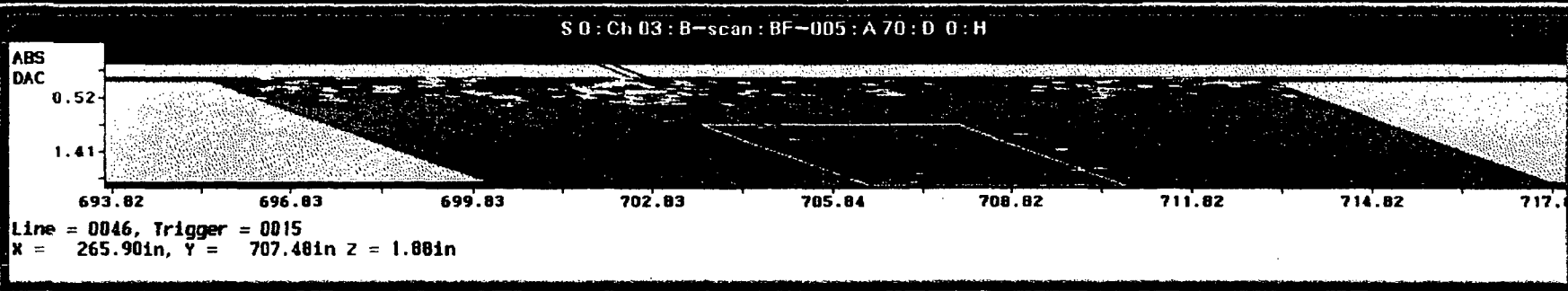
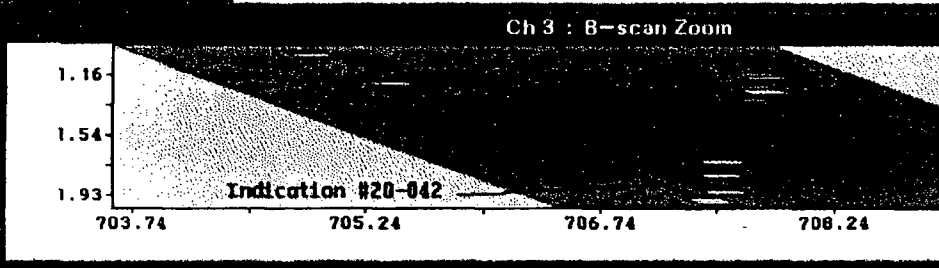
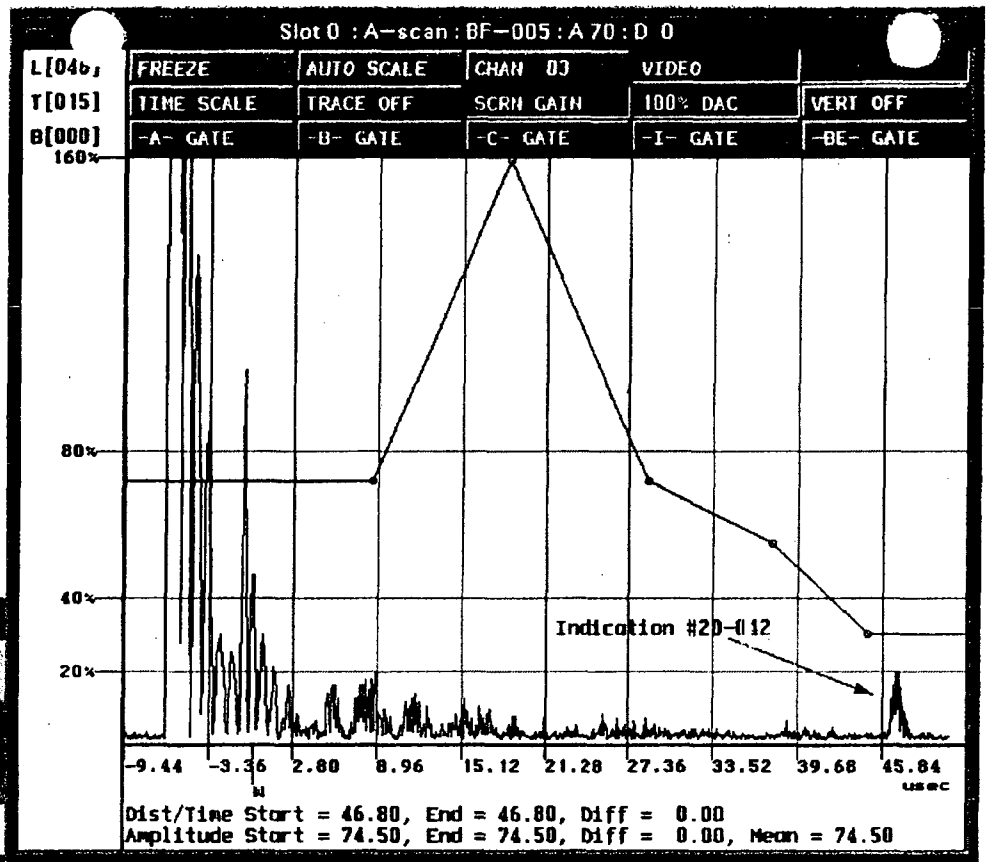
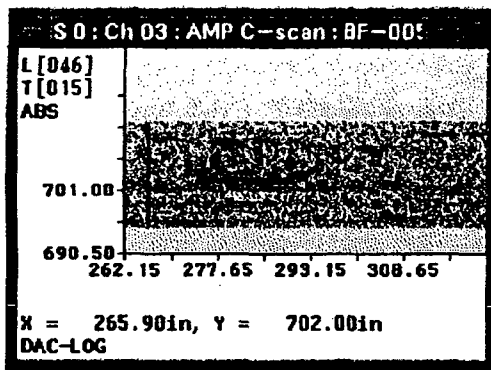
Lower Ten
lujgeris/10
st>dump /max
3/20-041

R 1151
P9 22/07 291
00293

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%



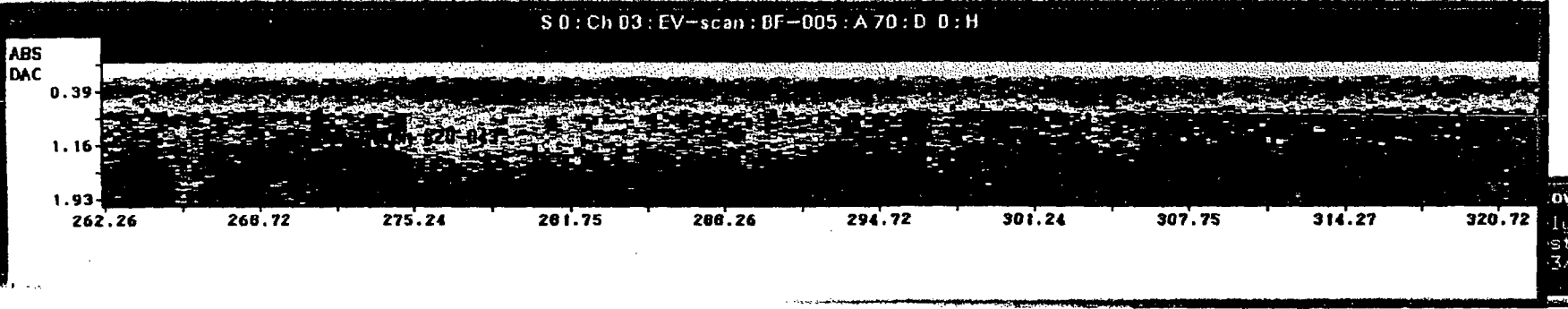
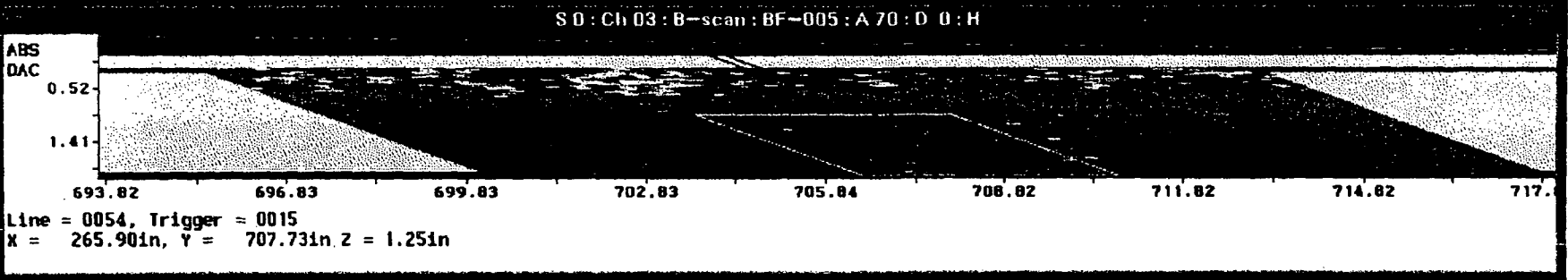
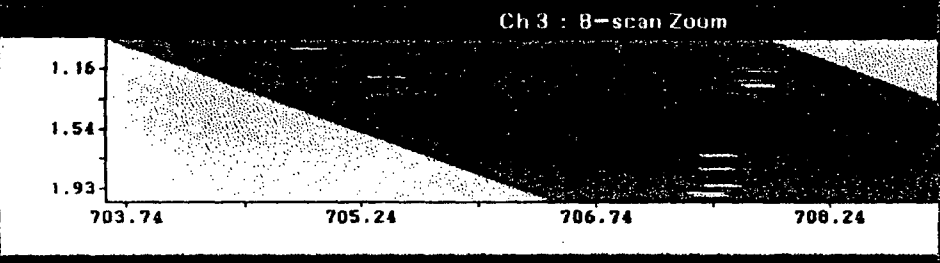
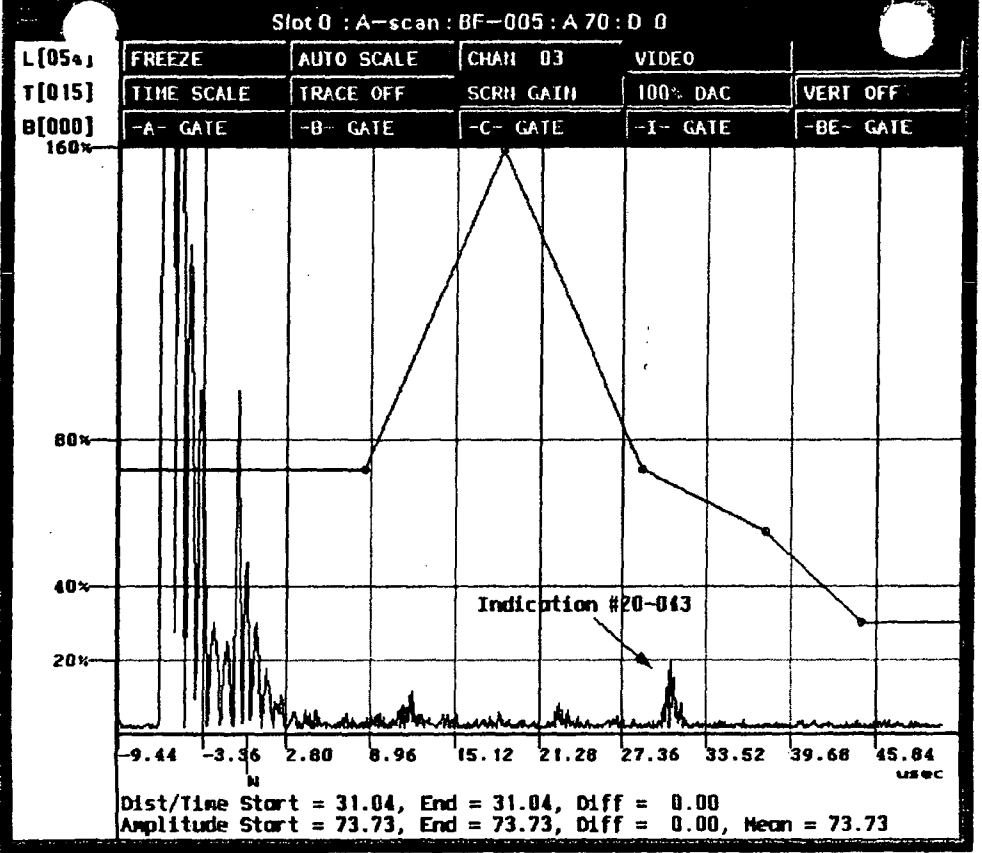
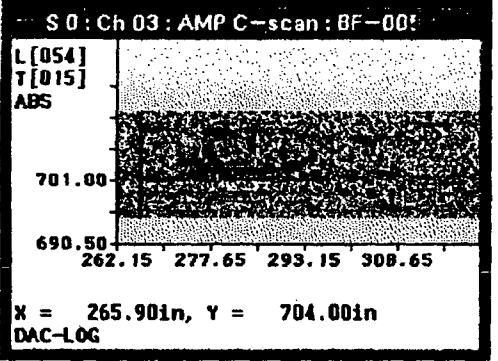
ower Ten
ly/genie/10
et/dump /max
3/20-042

R 1151
Pg 222 of 291
00294

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%



ower Ter
lufgeris/le
st>dump /max
3/20-043

R1151
P9 223 of 291
00295

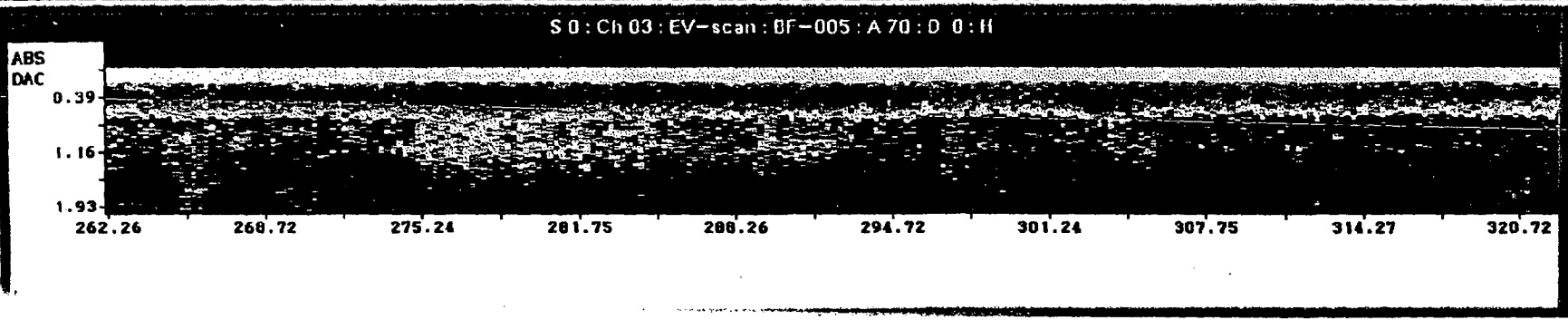
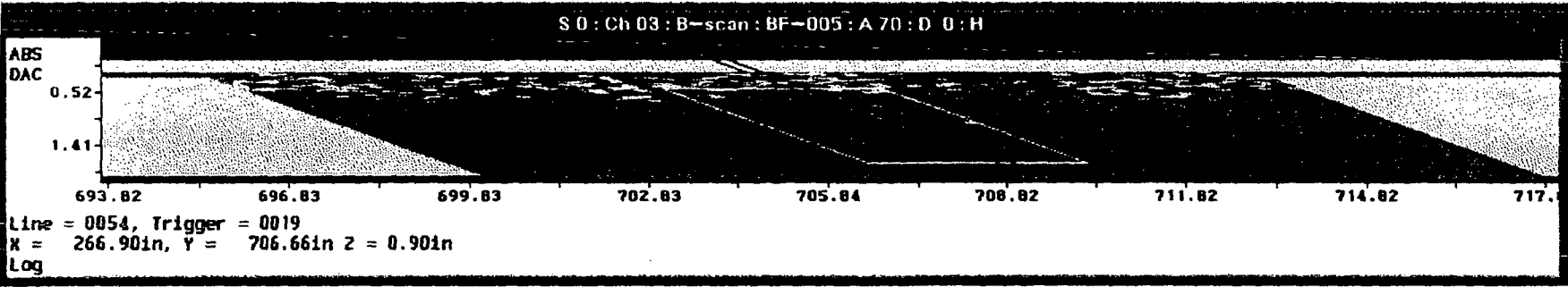
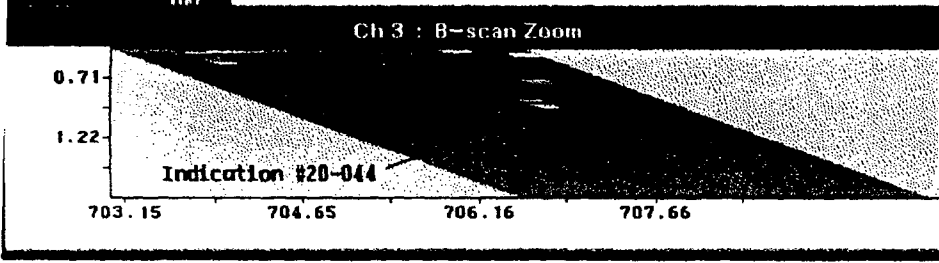
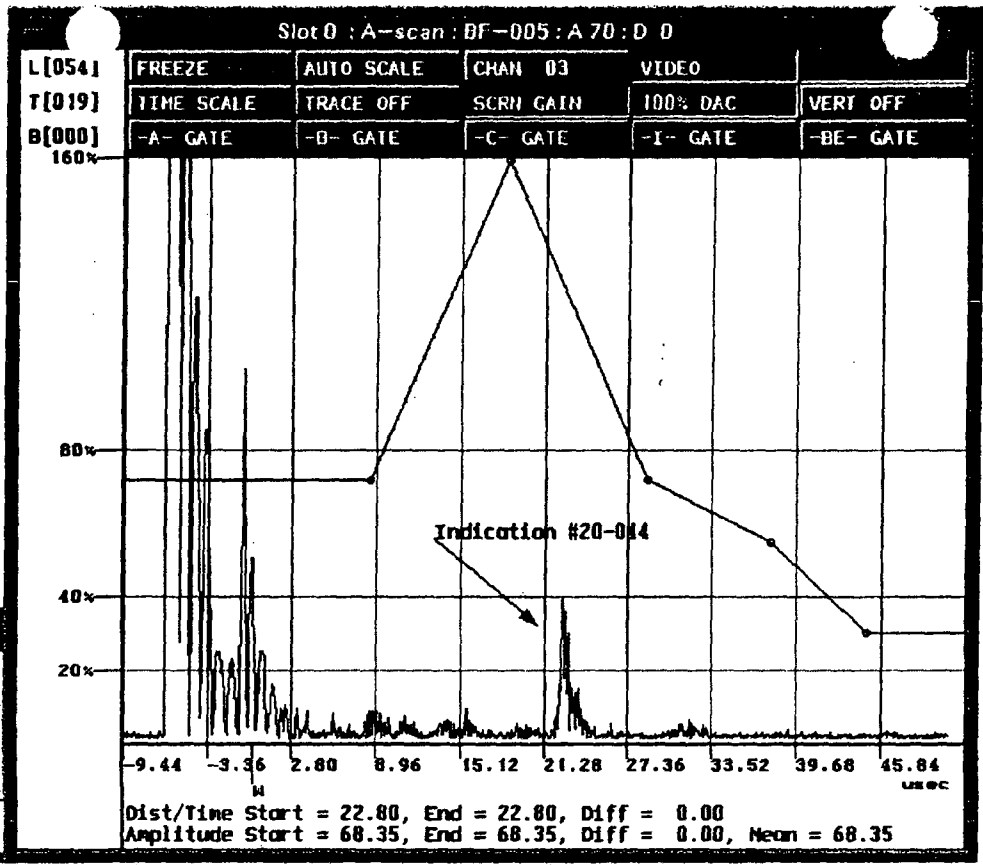
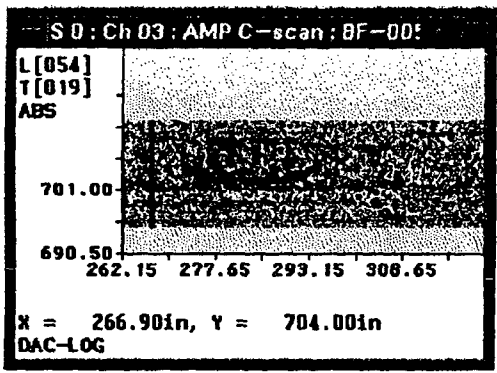
S 0 : Scale

4
1.5
7.7
3.0
0.0
6.1
2.2
8.4
5.5
0.7
6.8
7.0
9.1
5.2
1.4

100%
50%
20%

100%
50%
20%

100%
50%
20%



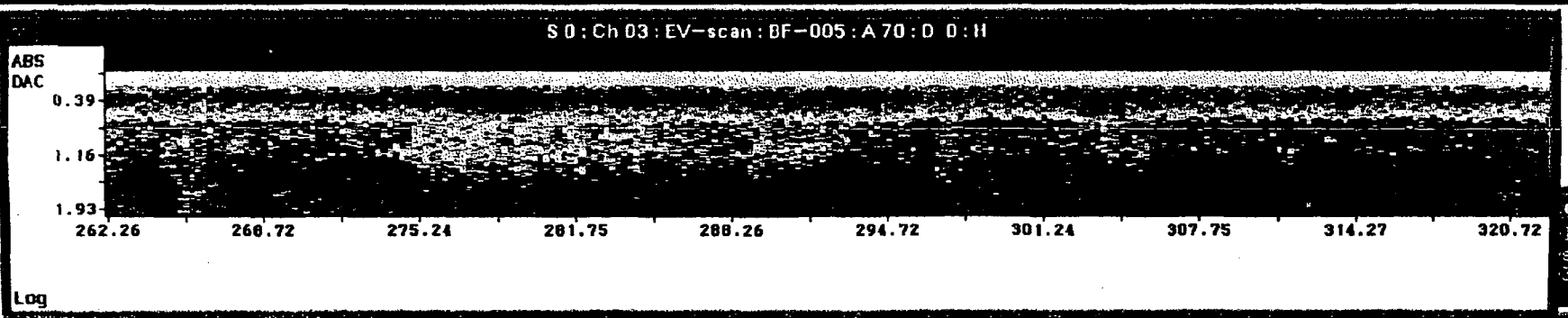
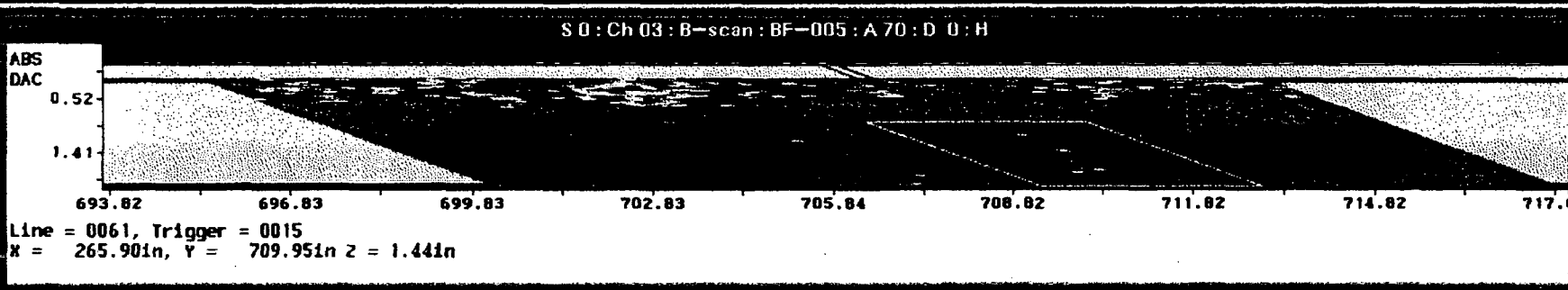
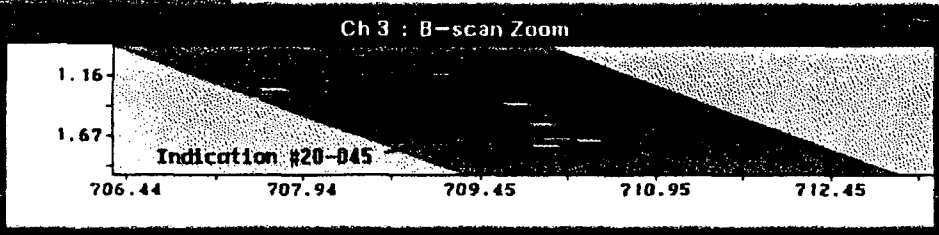
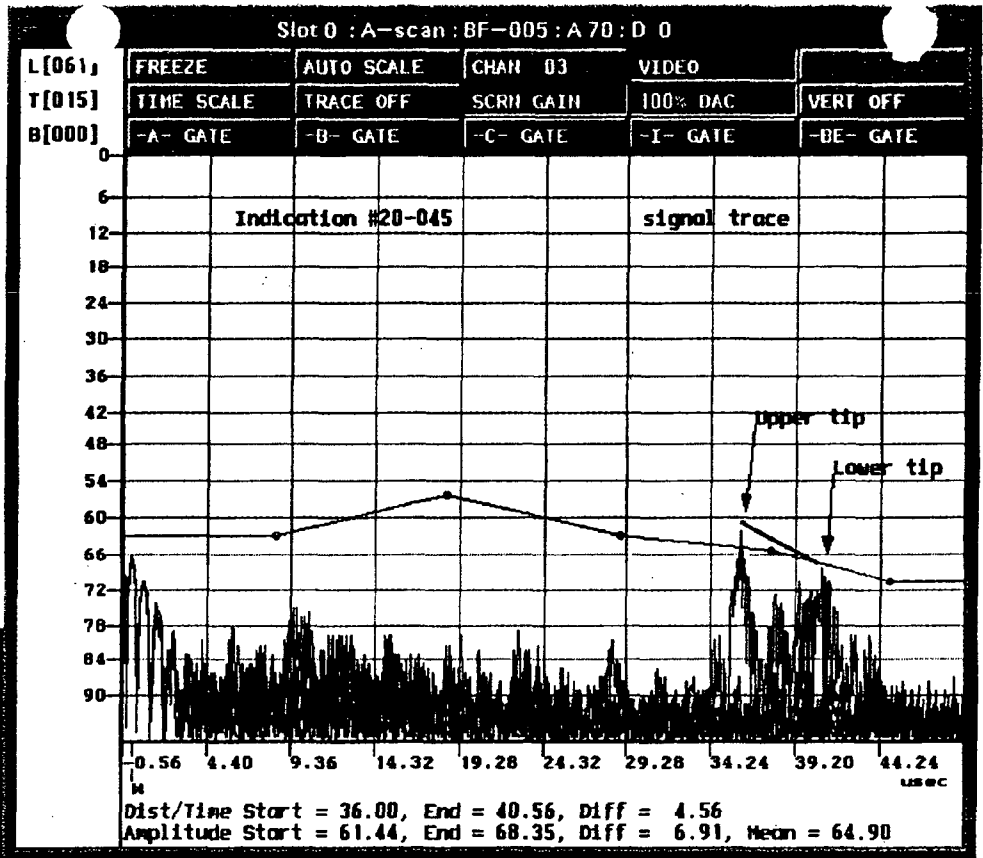
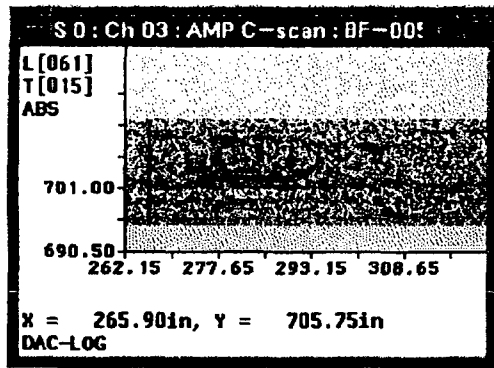
R1151
A9 2248 291
60296

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

DAC



Lower Ter
ly[geris]/lo
st>dump /max
3/20-045

00297

P9225 of 291

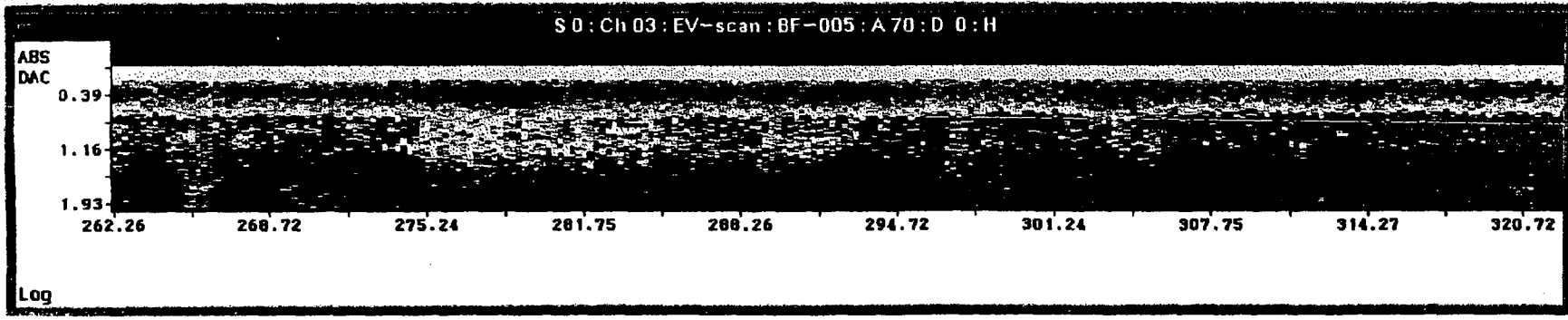
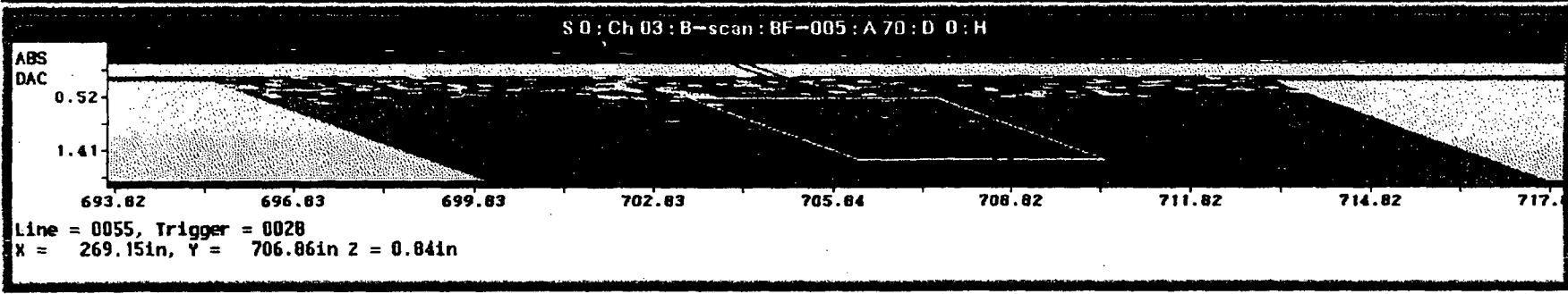
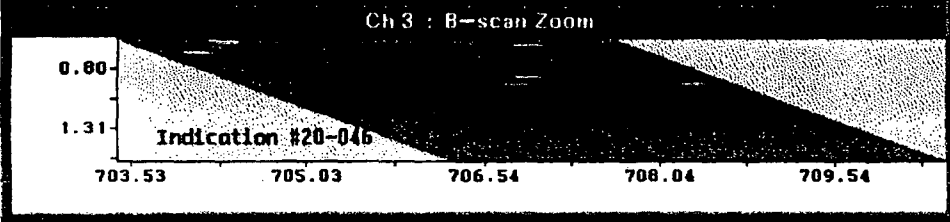
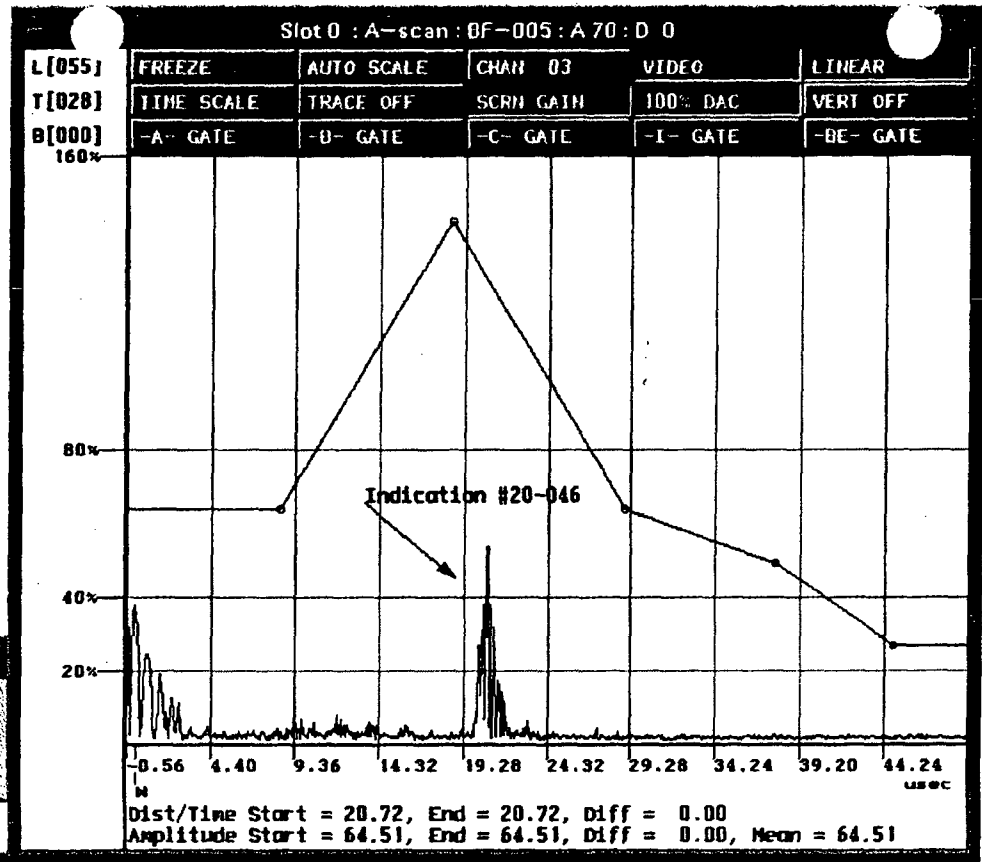
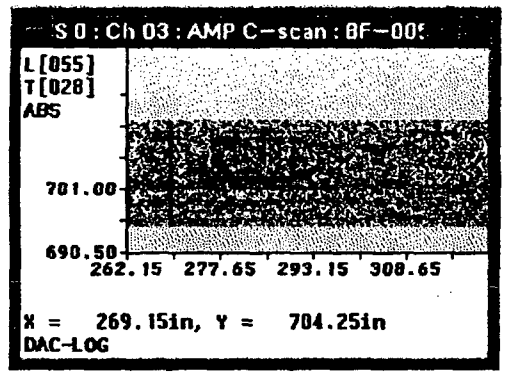
R1151

S 0 : Scale

S.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.0
73.0
79.1
85.2
91.4

100%
50%
20%

DAC



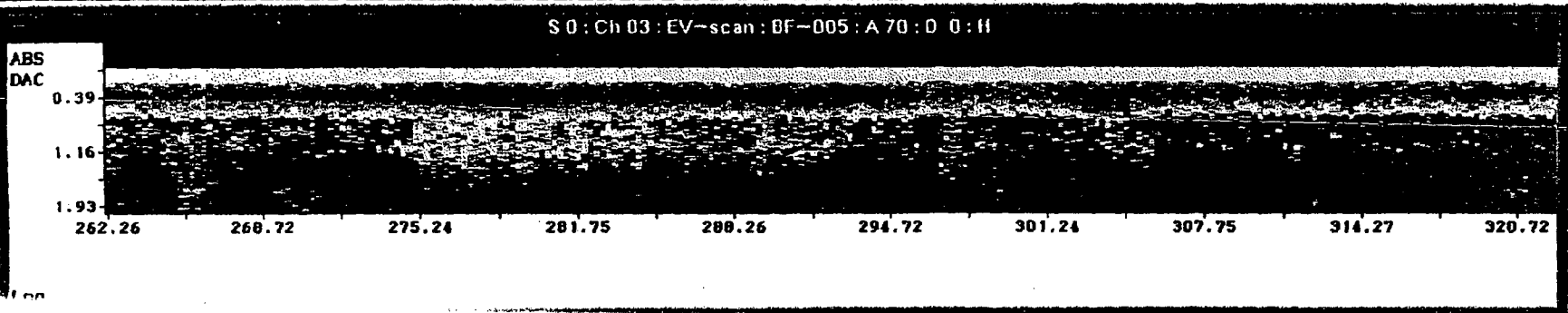
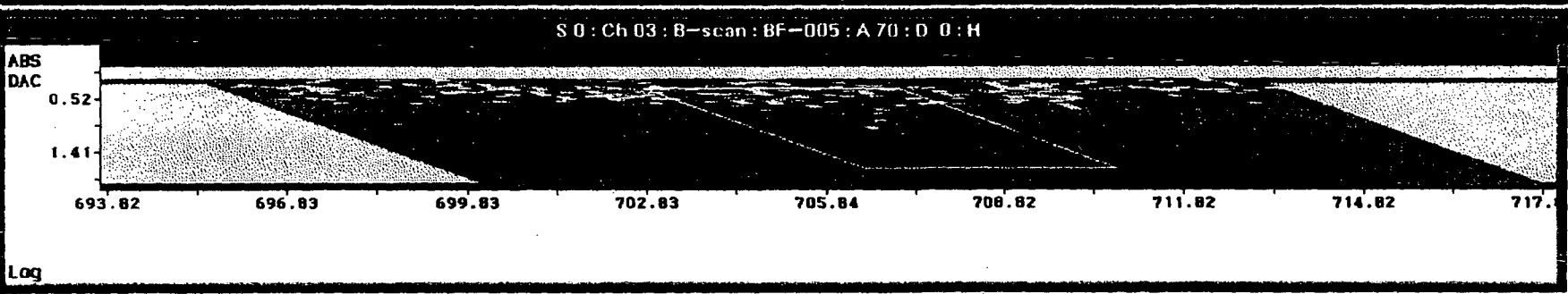
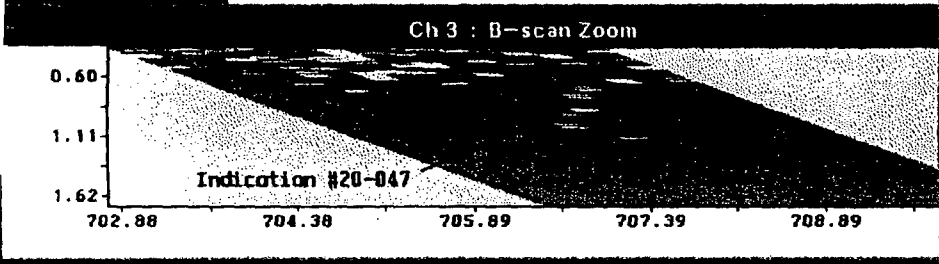
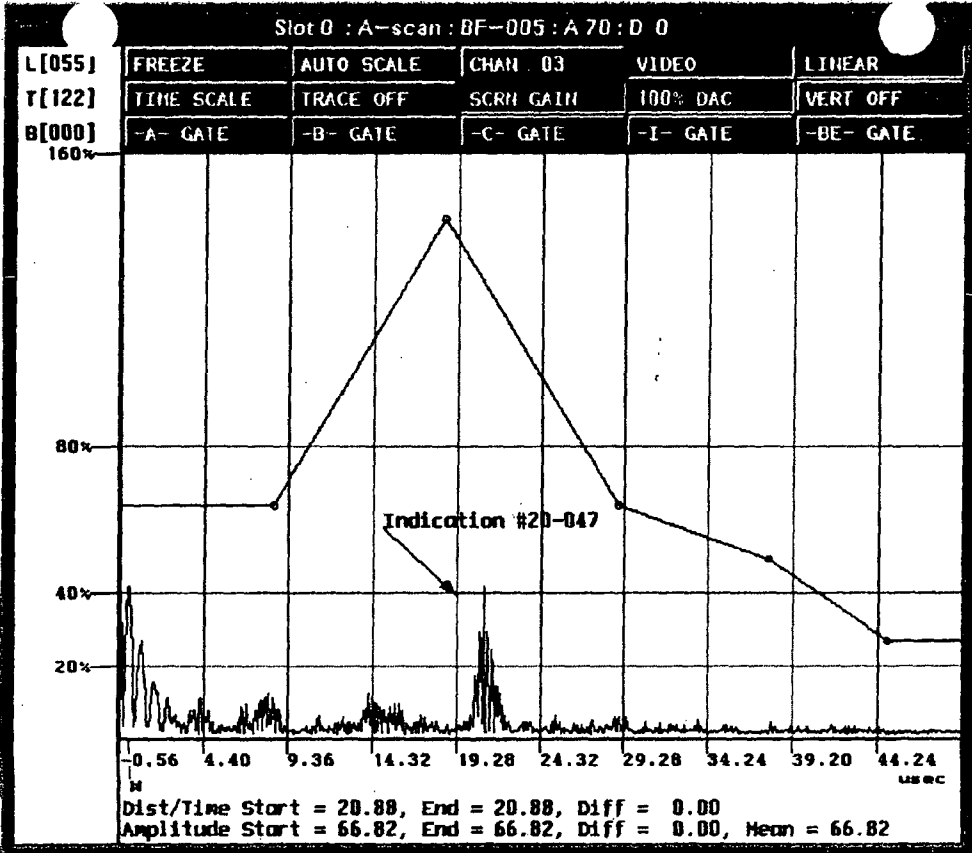
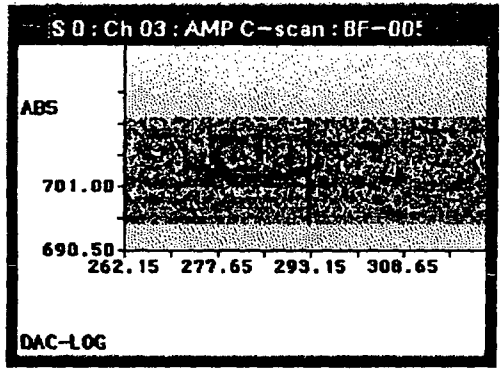
Lower Tern
ij[geris] / lo
st>dump /max
3/20-046

R 1151
Pg 226 of 291
00298

S 0 : Scale

4
1.5
7.7
3.8
80.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%



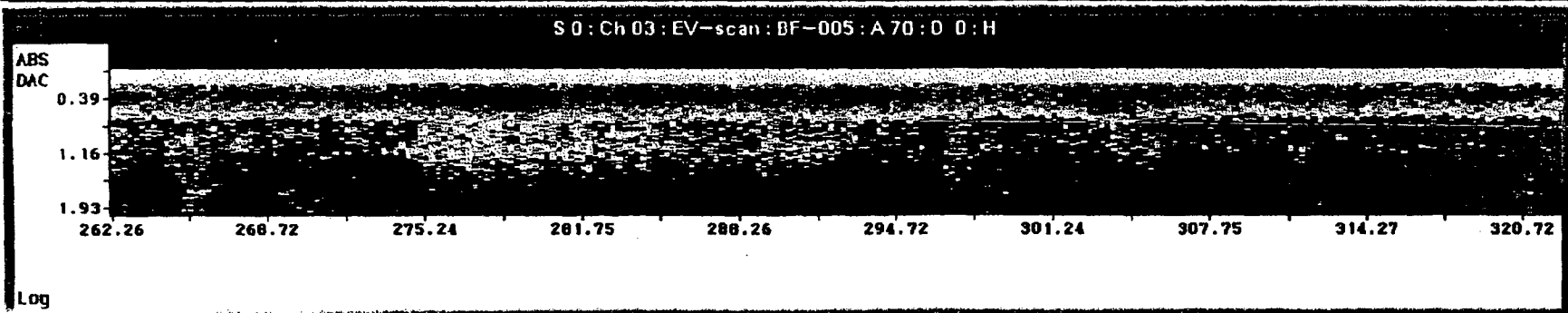
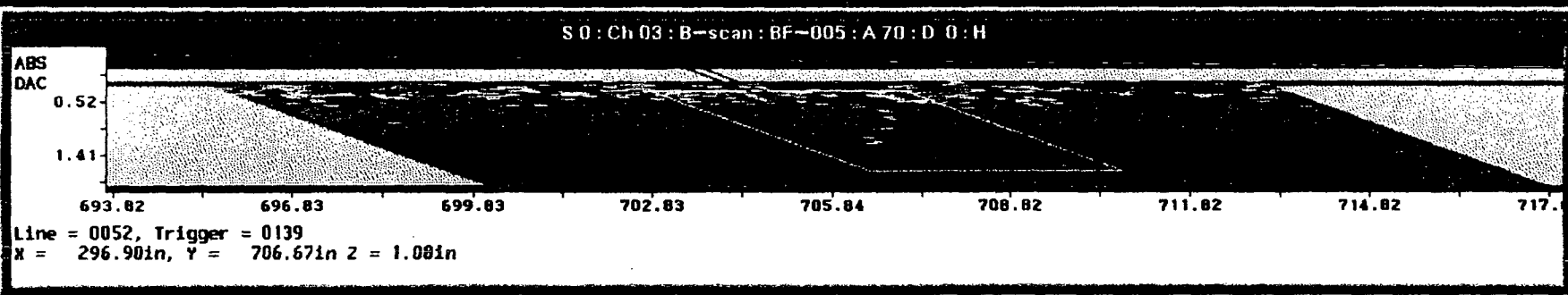
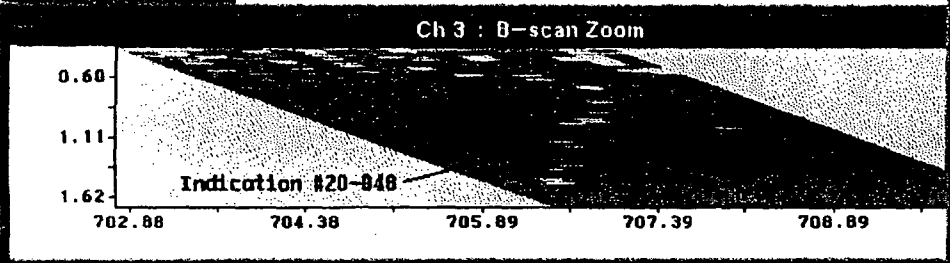
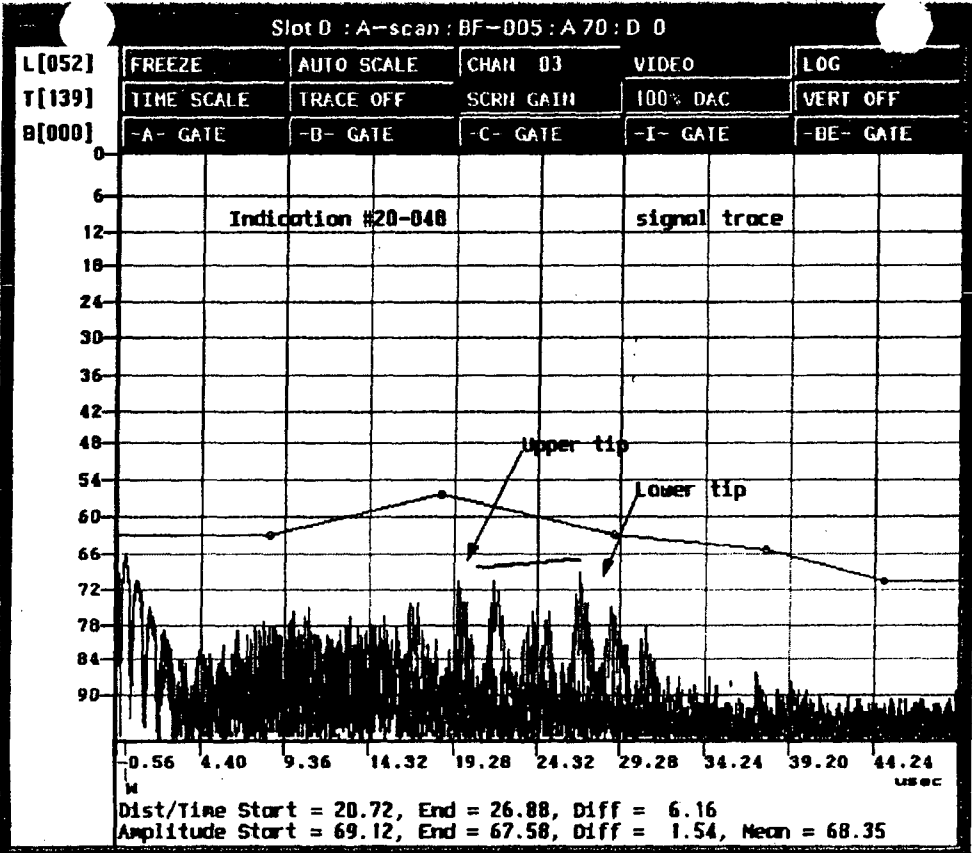
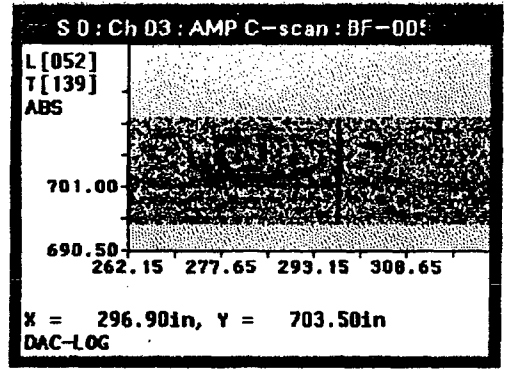
ower Ten
ly[geris]/io
st/dump /max
3/20-047

R1151
P92277-291
00299

S D : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%



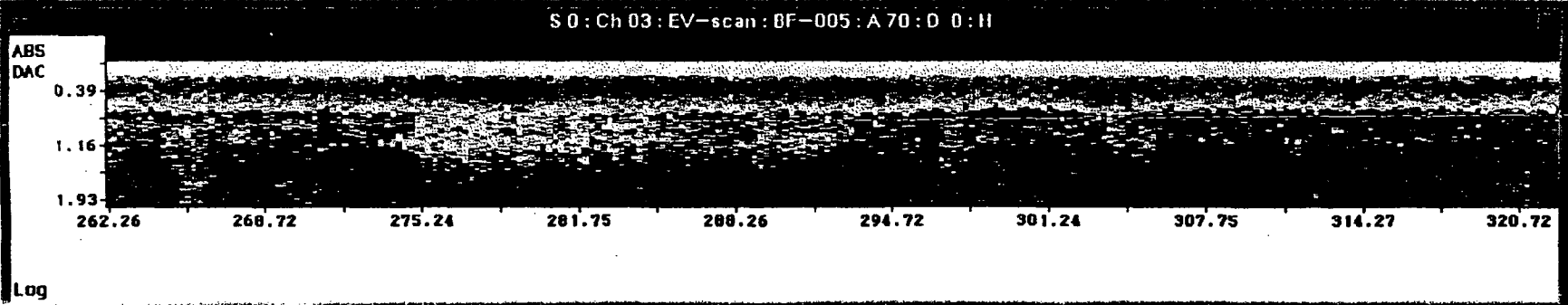
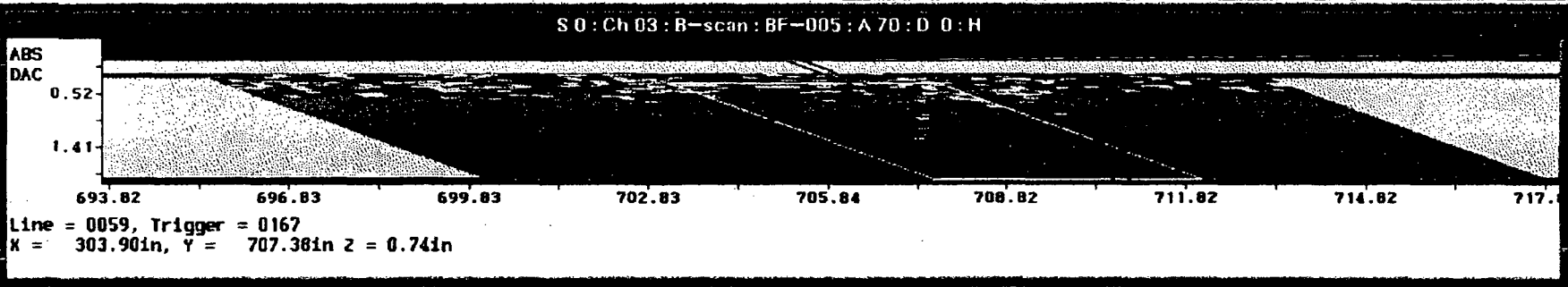
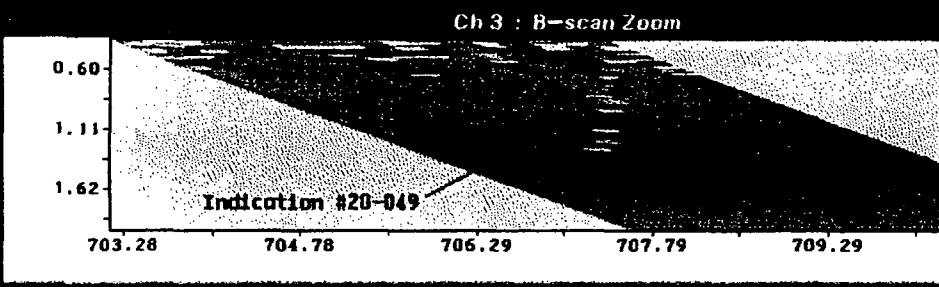
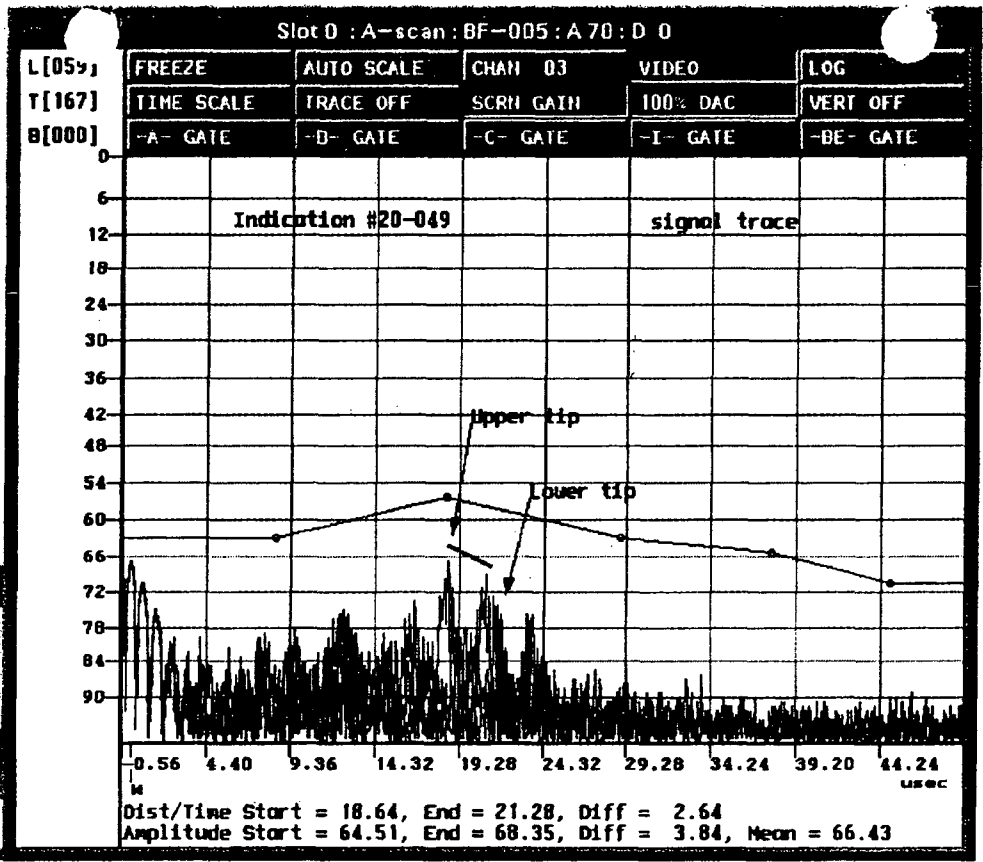
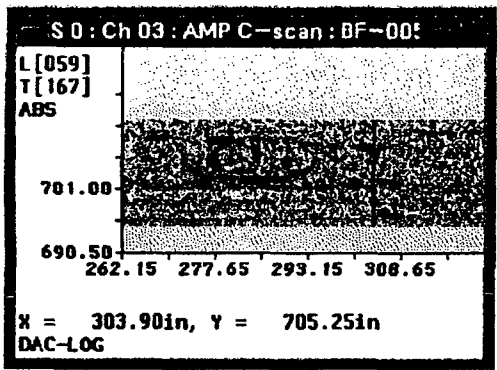
Lower Ten
lytigeris/lo
st/dump /max
3/20-048

R1151
Pp 2288-291
00300

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.0
73.0
79.1
85.2

100%
50%
20%

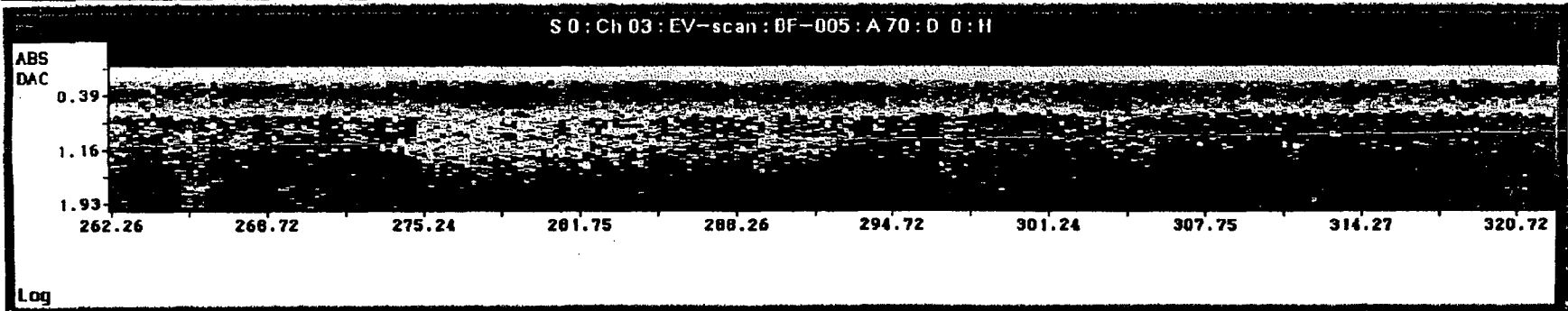
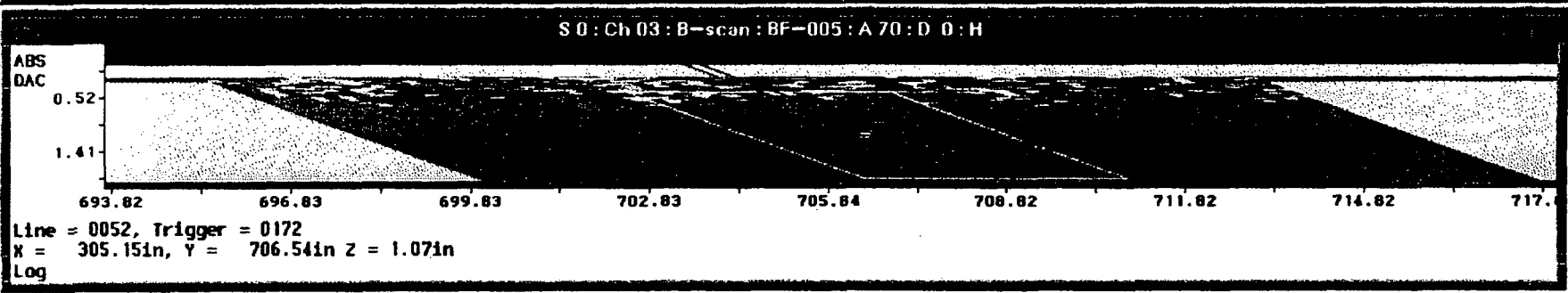
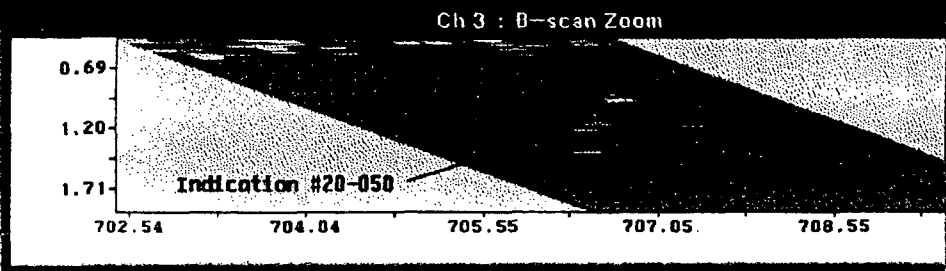
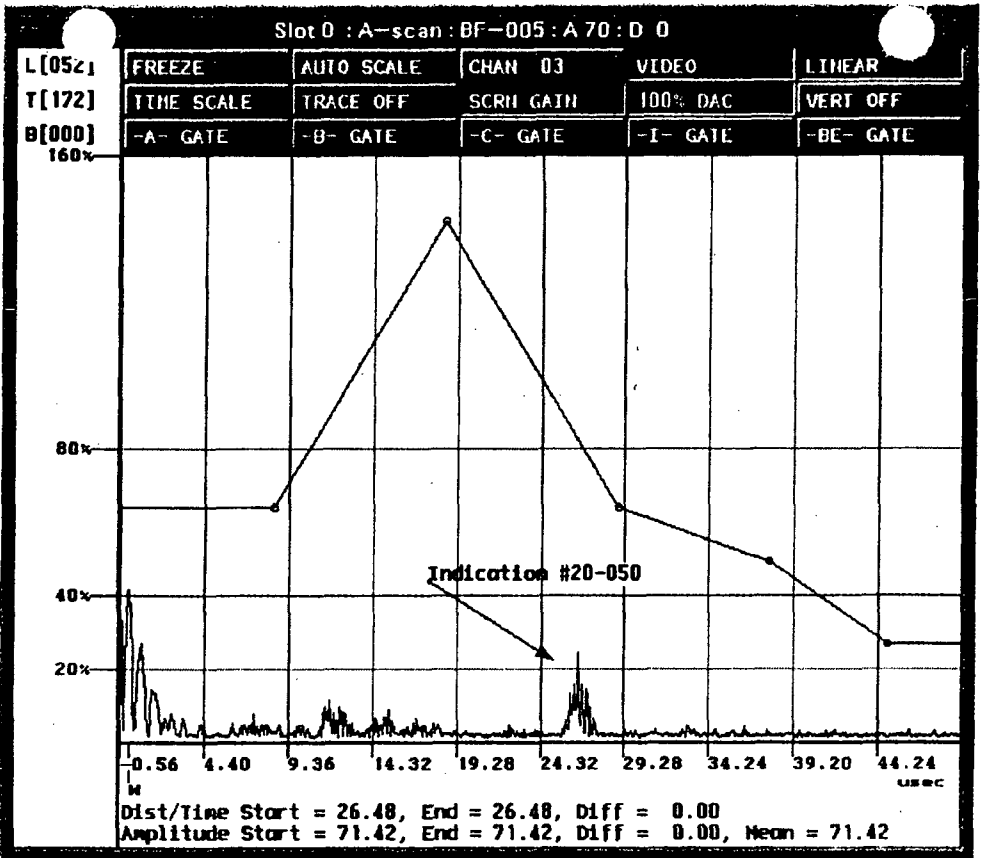
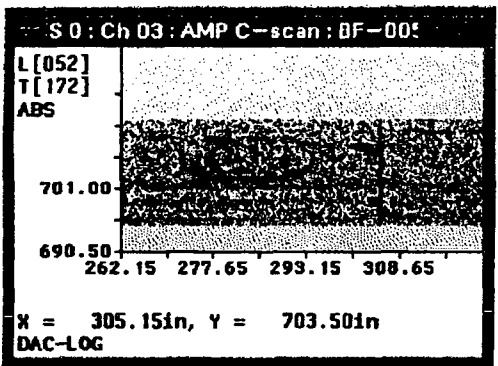


R1151
P9 229 of 291
S 00301
Power Ten
lu[geris]/lo
st/dump /max
3/20-049

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%



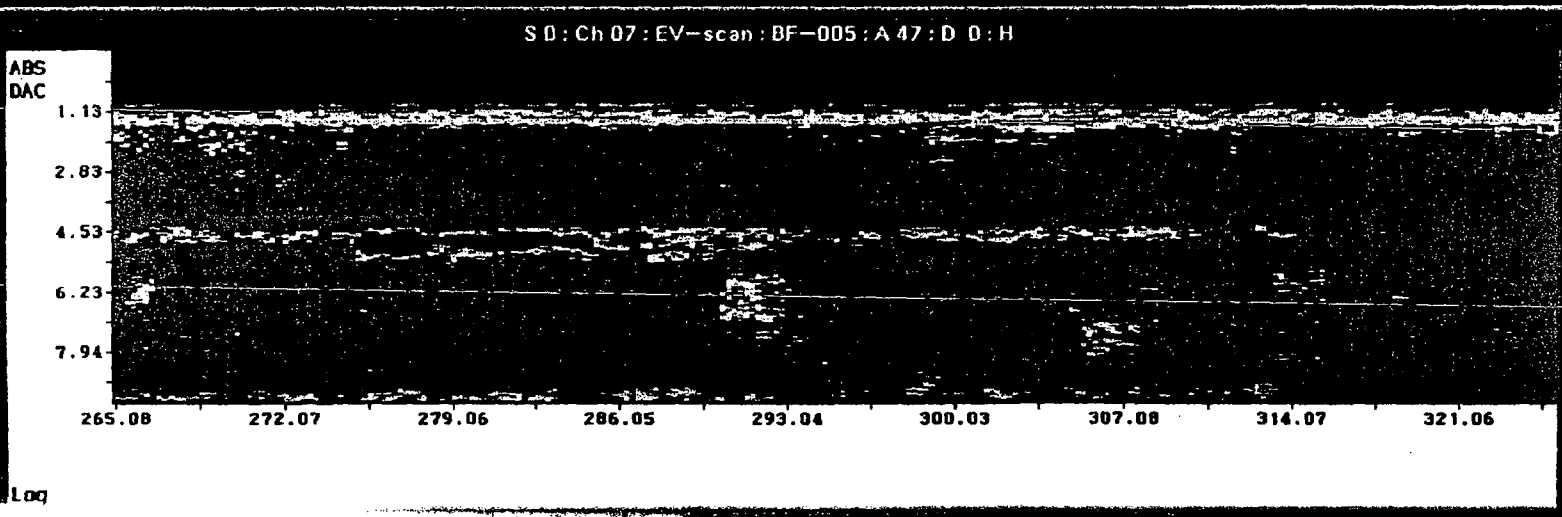
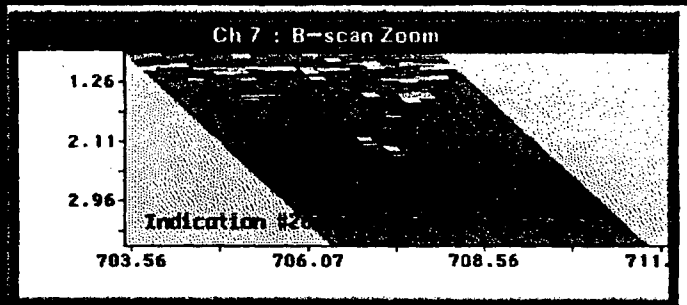
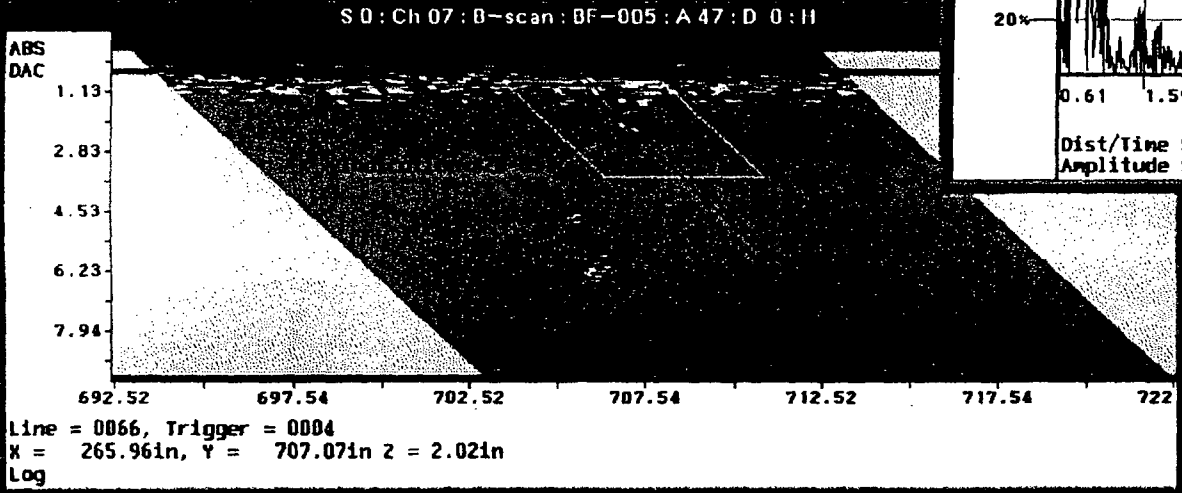
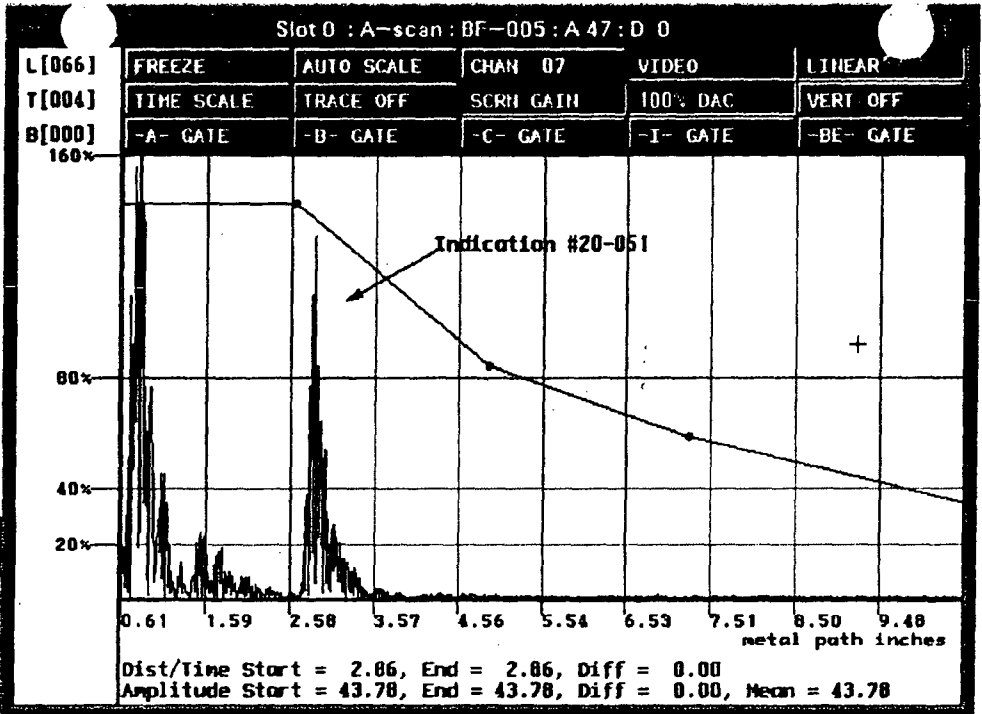
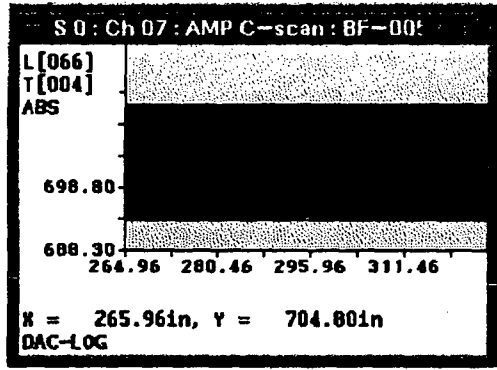
ower Ter
lg[eris]/ld
st>dump /max
3/20-050

R1151
P9230 & 291
00302

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1

100%
50%
20%



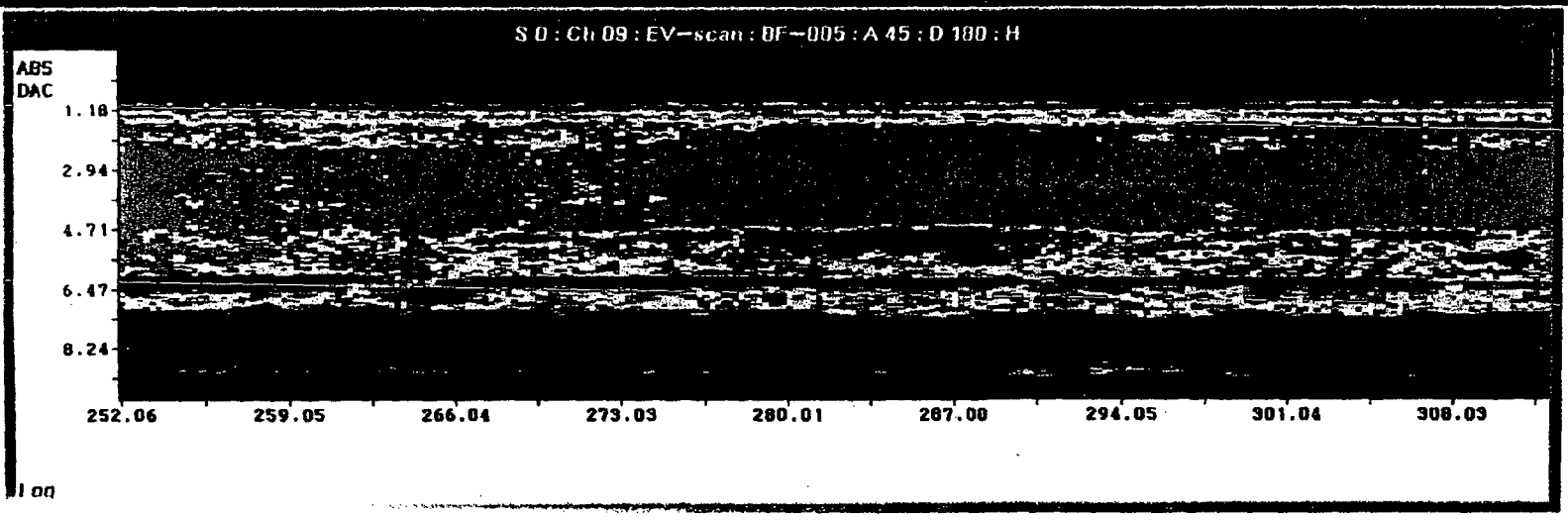
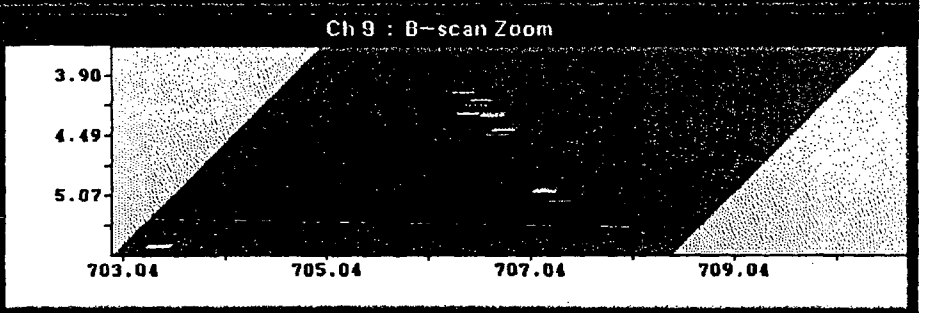
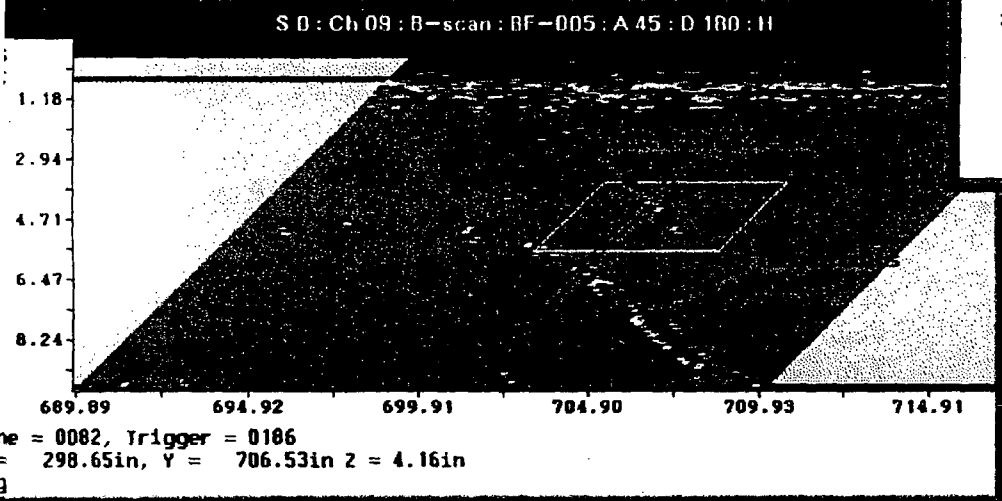
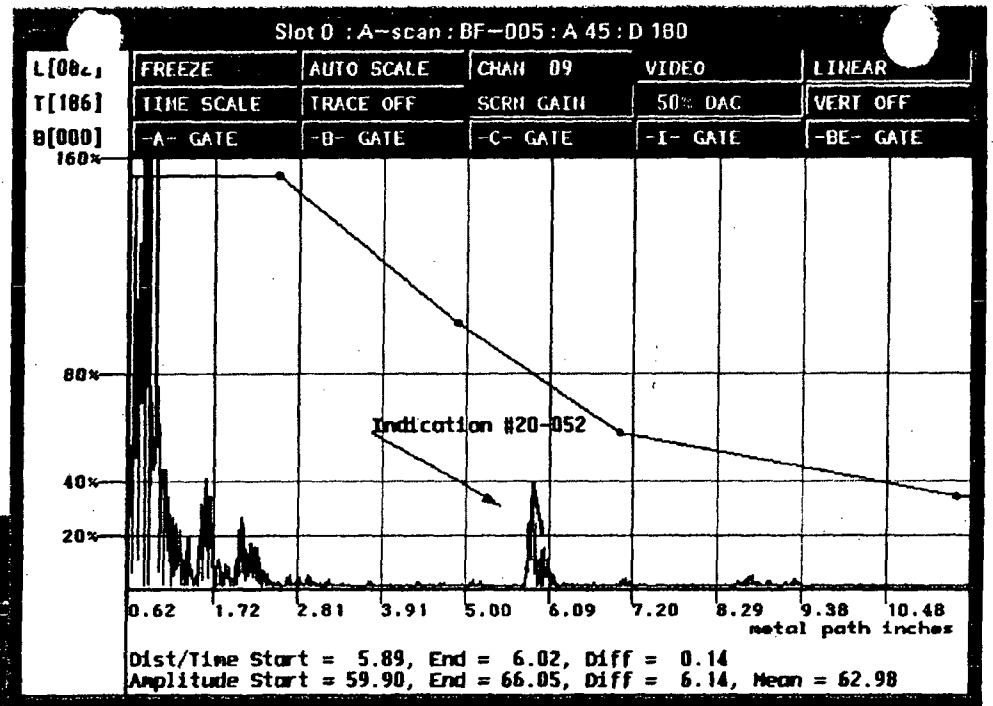
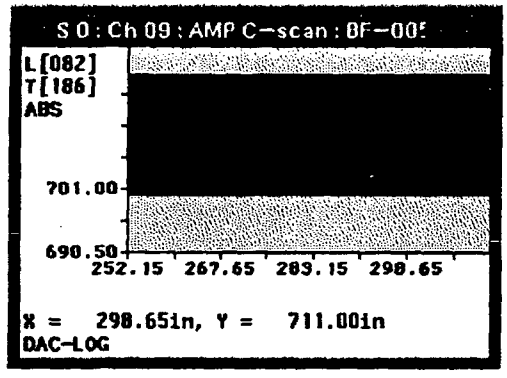
Lower Ten
curly[geris]/lo
/test>dump /max
for 3/20-051

00303

R 1151
Pg 231 of 291

S D : Scale

5.4
11.5
17.7
23.0
30.0
36.1
42.2 100%
48.4 50%
54.5 20%
60.7
66.8
73.0
79.1



00304

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R1151

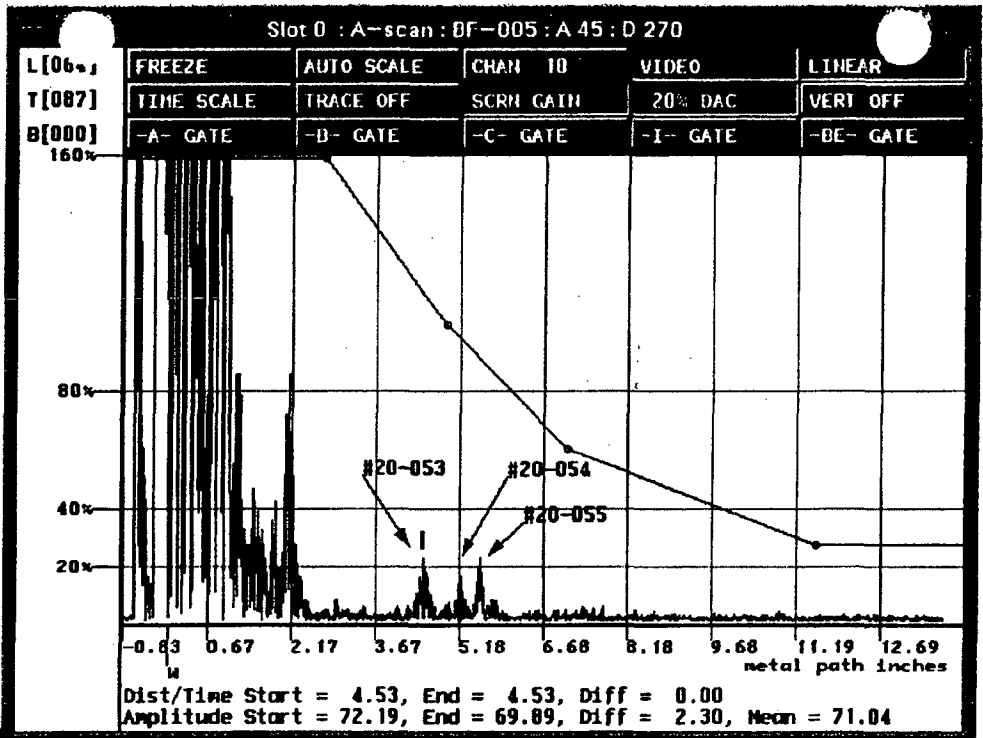
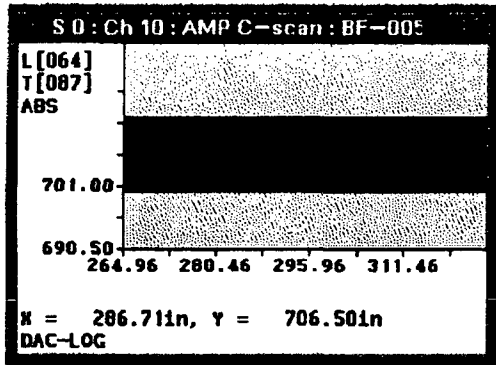
Lower Ten

curligens1/lo
/test/dump /max
tor3/20-052

S 0 : Scale

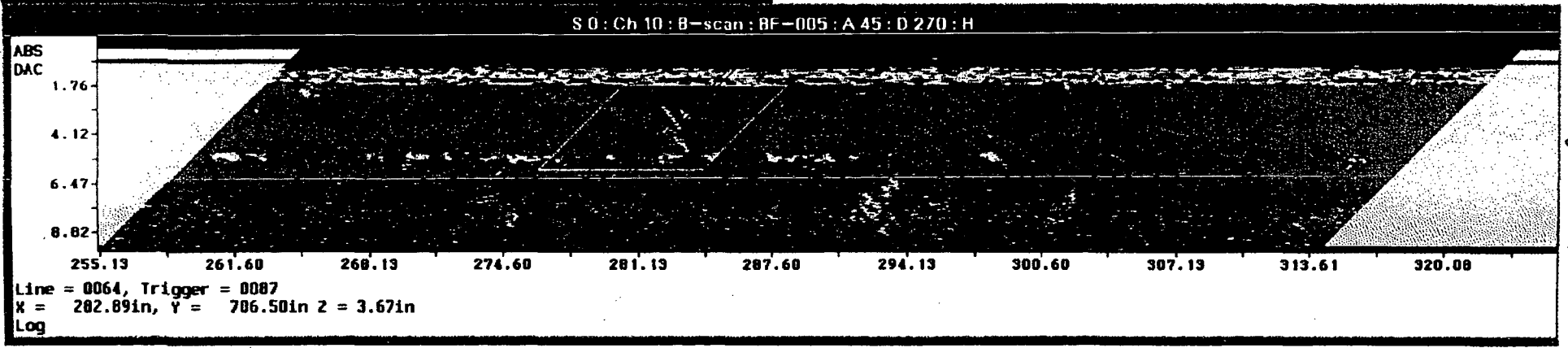
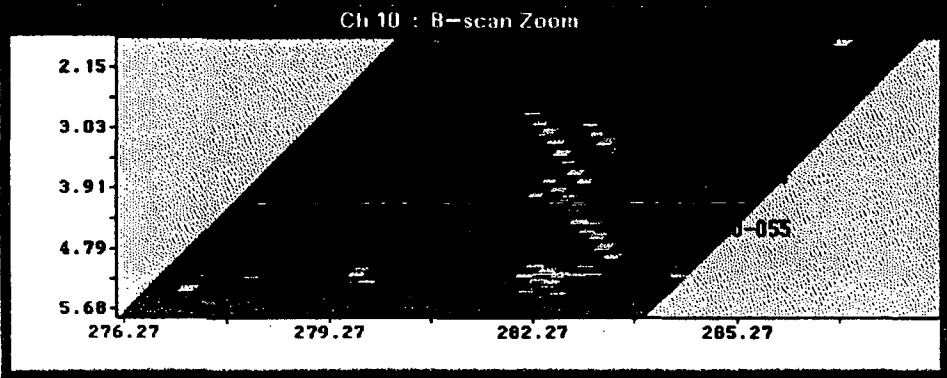
5.4
11.5
17.7
23.8
30.0
36.1
42.2 100%
48.4 50%
54.5 20%
60.7
66.8
73.0
79.1
85.2
91.4

DAC



Lower Ten

curly[geris]/lo
/test>dump /max



R 1151 ± 00305
R9 233 of 291

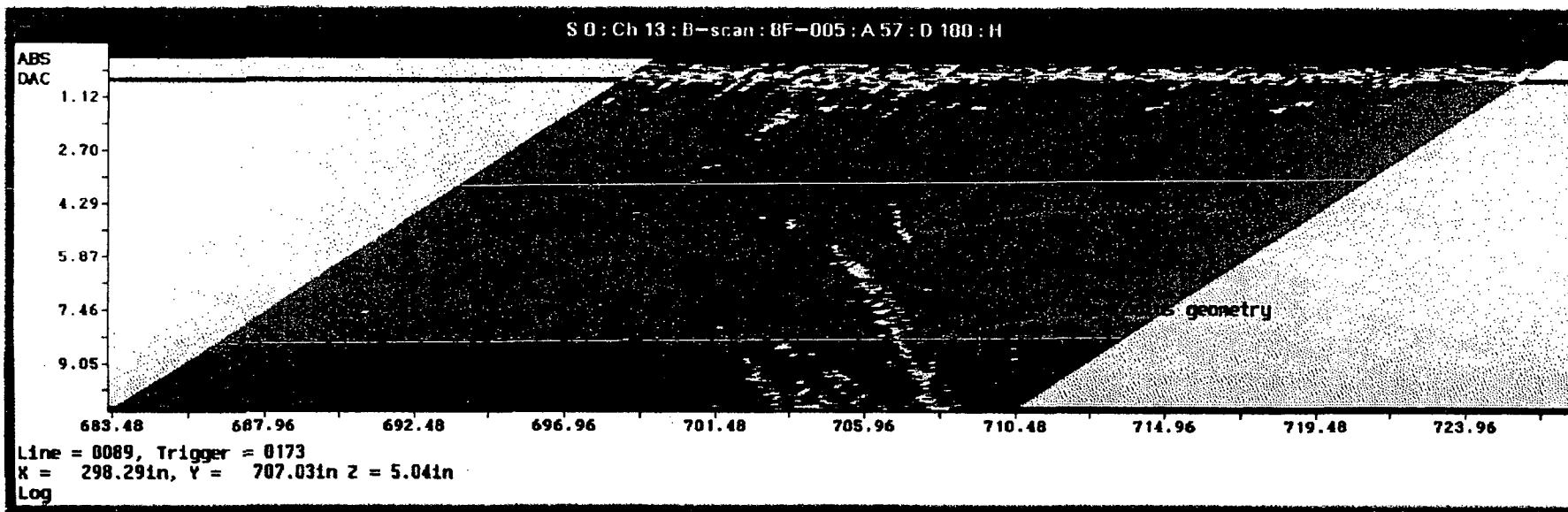
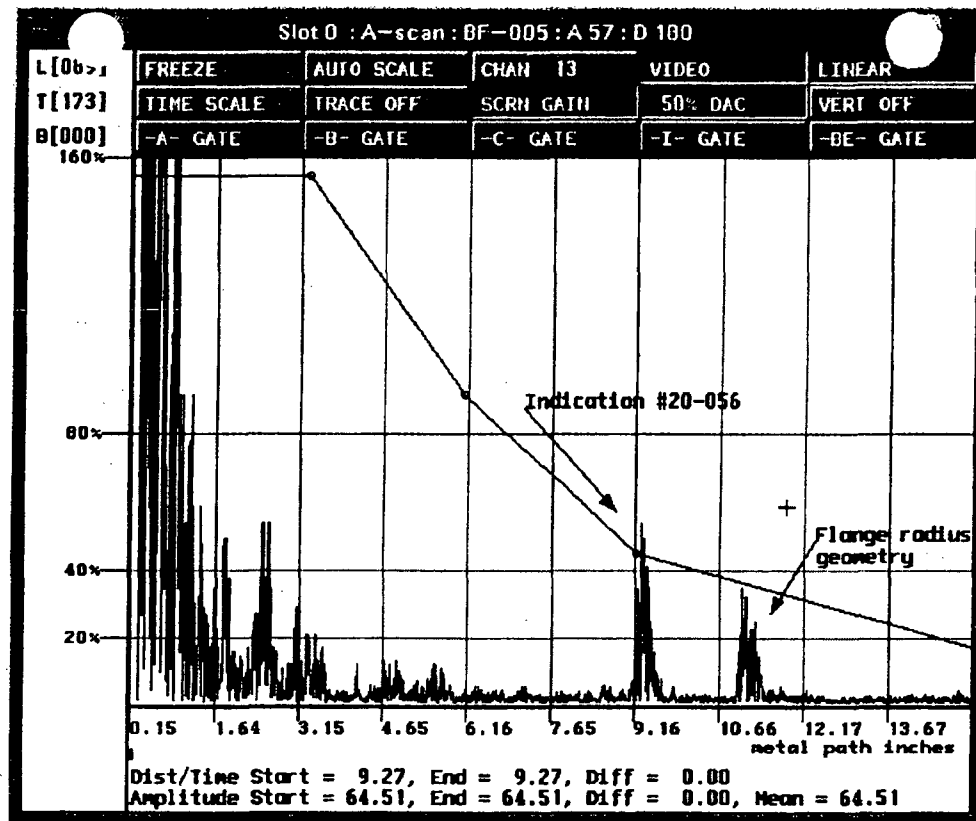
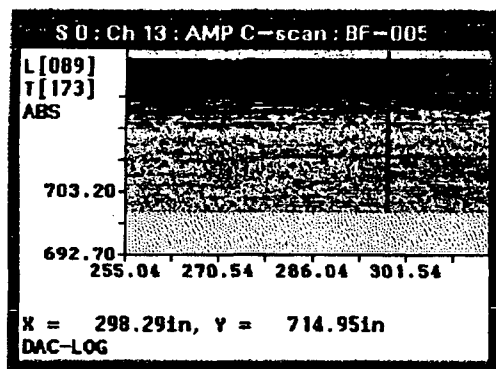
S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

DAC

Lower Tern

curly[genie]/lo
/test/dump /max
ton3/20-056



00306

Pg 234 of 291

R1151

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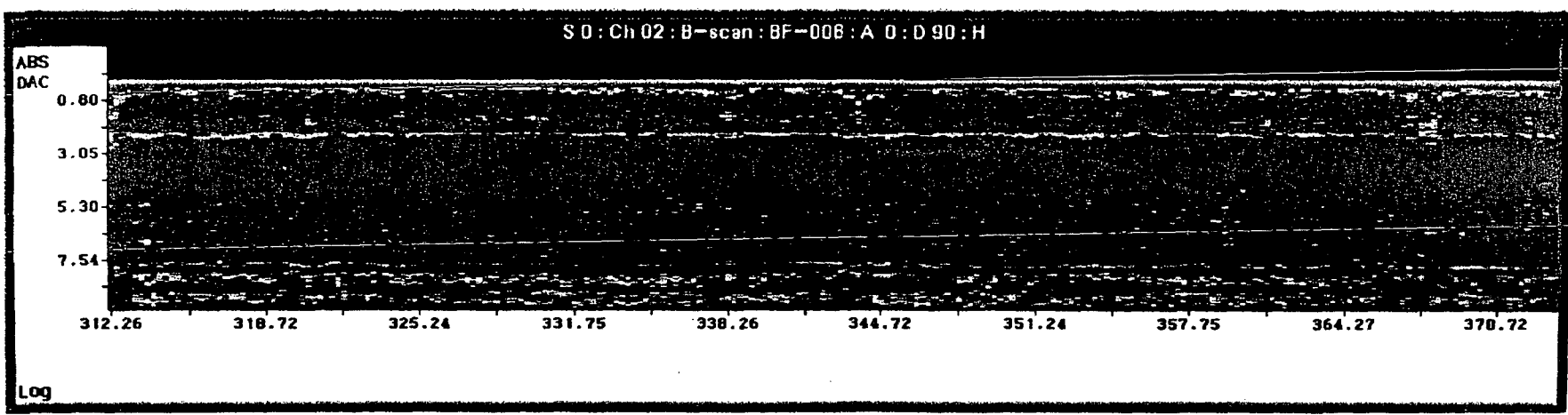
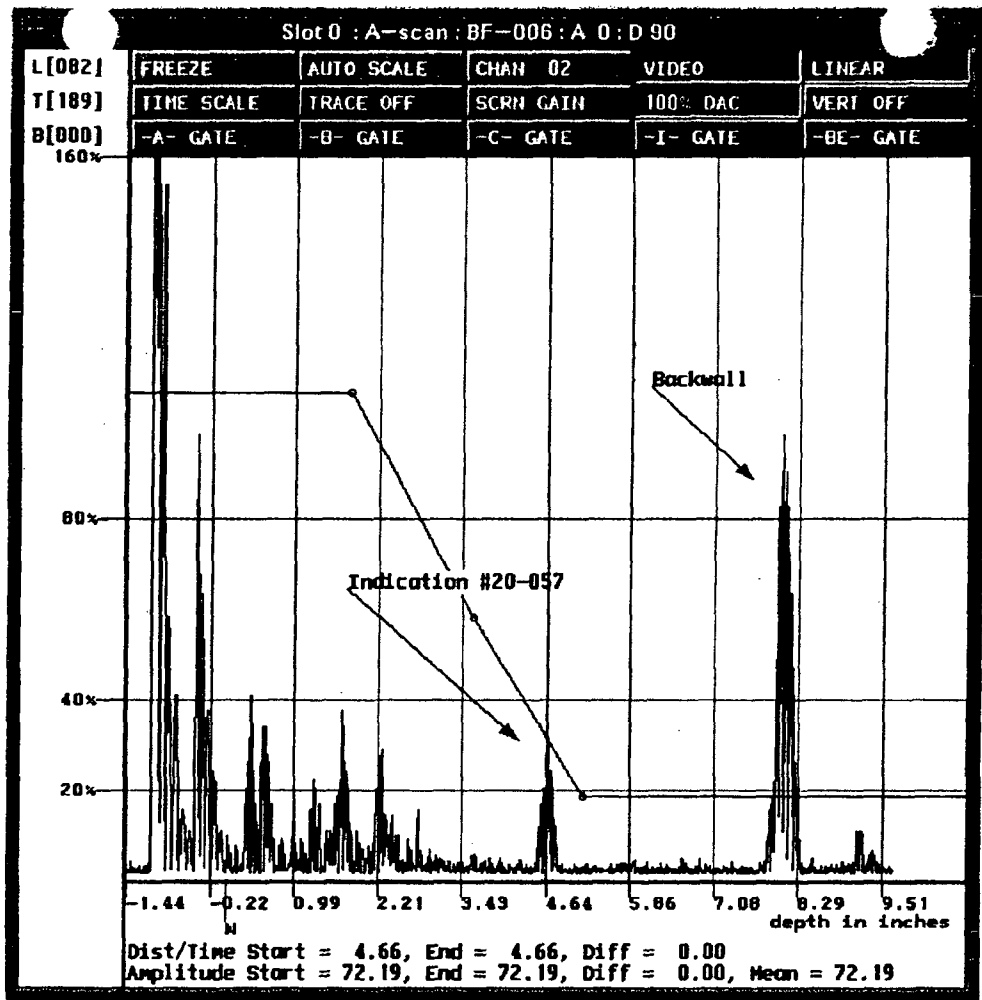
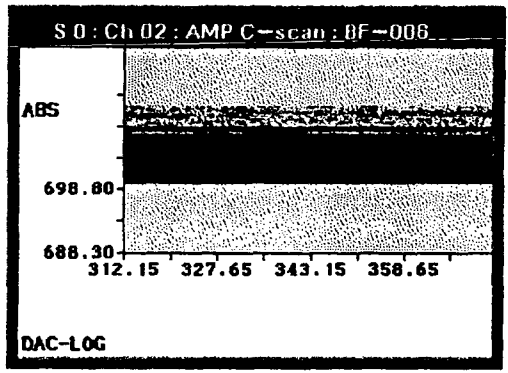
S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

DAC

Lower Tern
ump /max on 3/20
-037



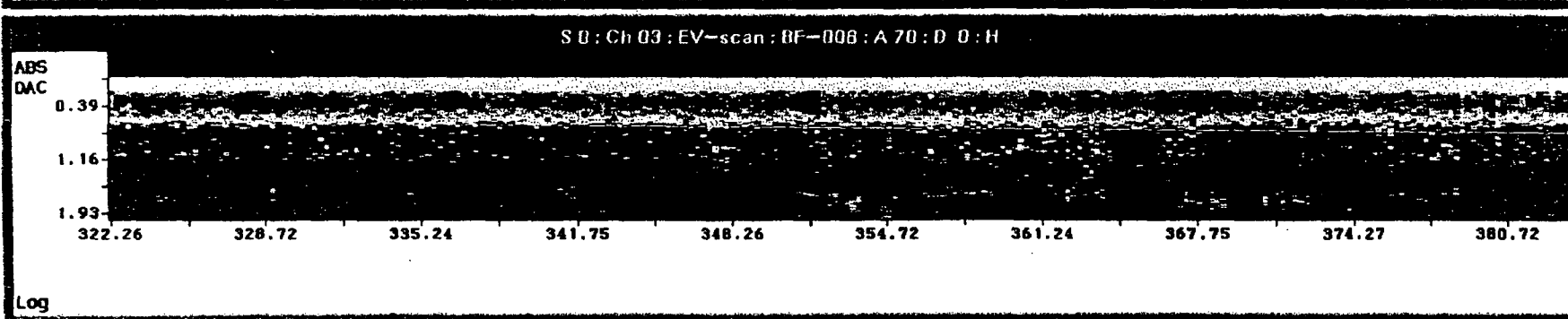
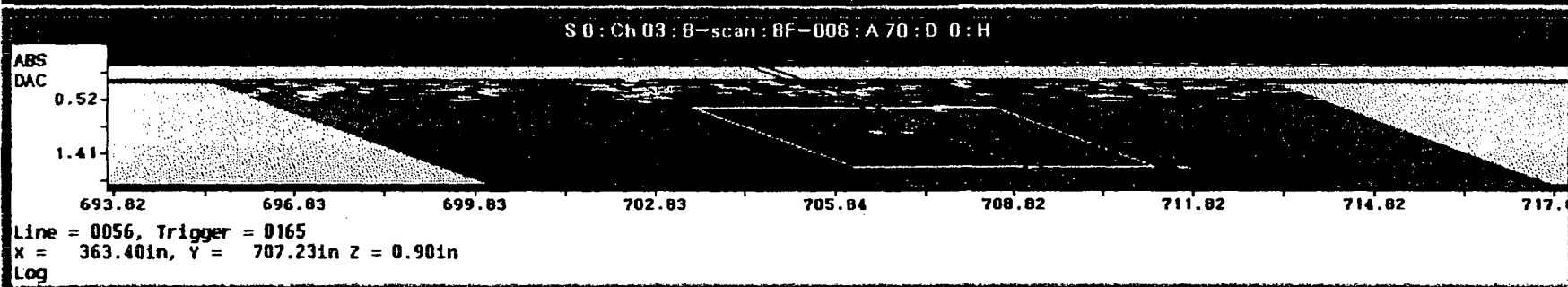
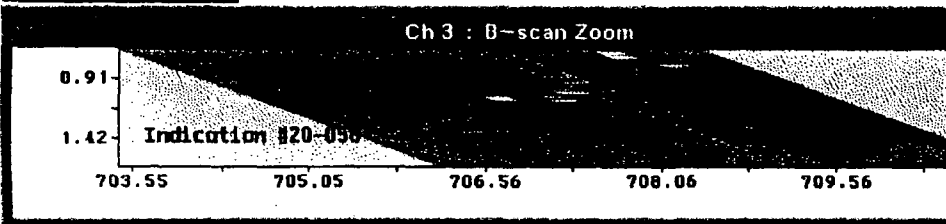
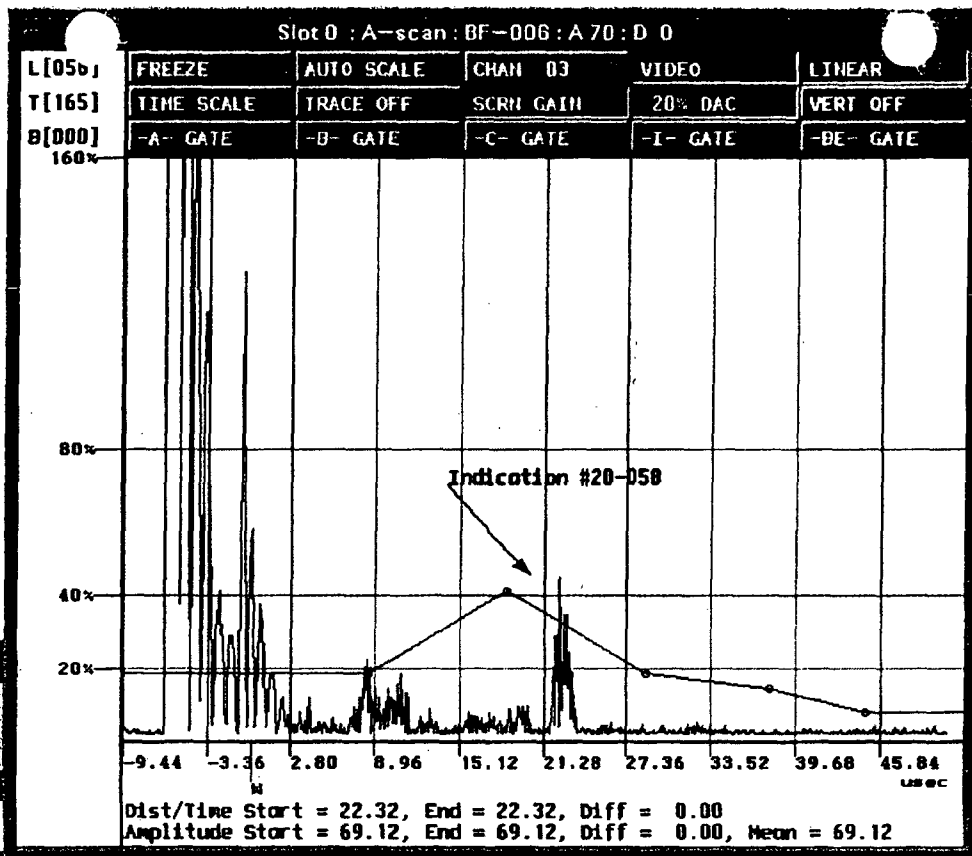
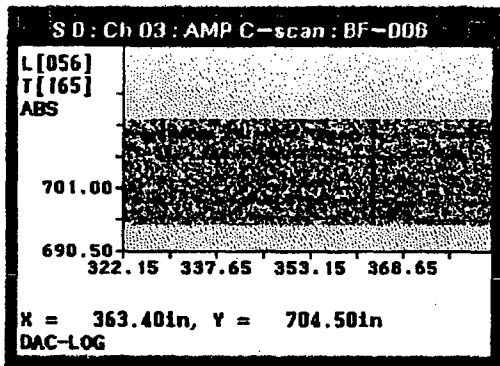
R1151
00307
89 235 of 291

S 0 : Scale

5.4
11.5
17.7
23.0
30.0
36.1
42.2
48.4
54.5
60.7
66.0
73.0
79.1
85.2
91.4

100%
50%
20%

DAC



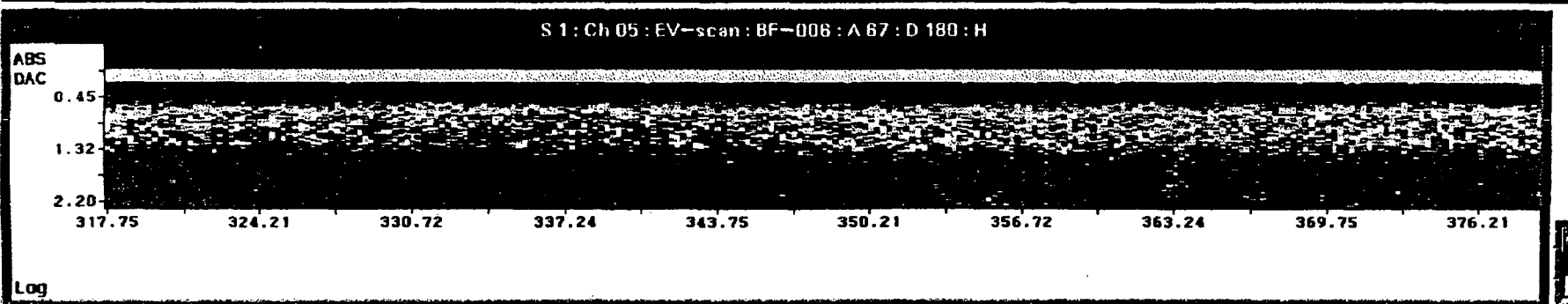
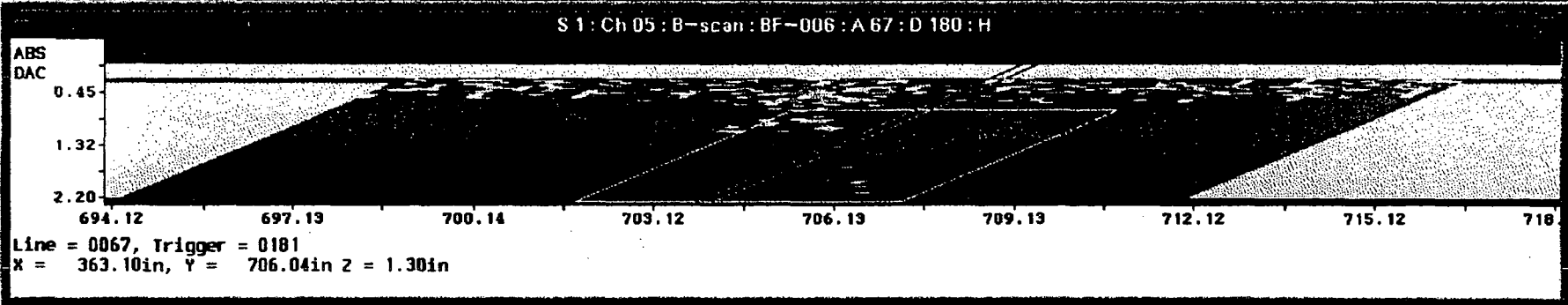
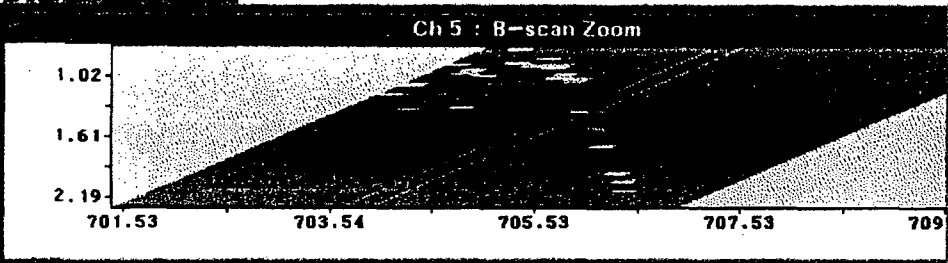
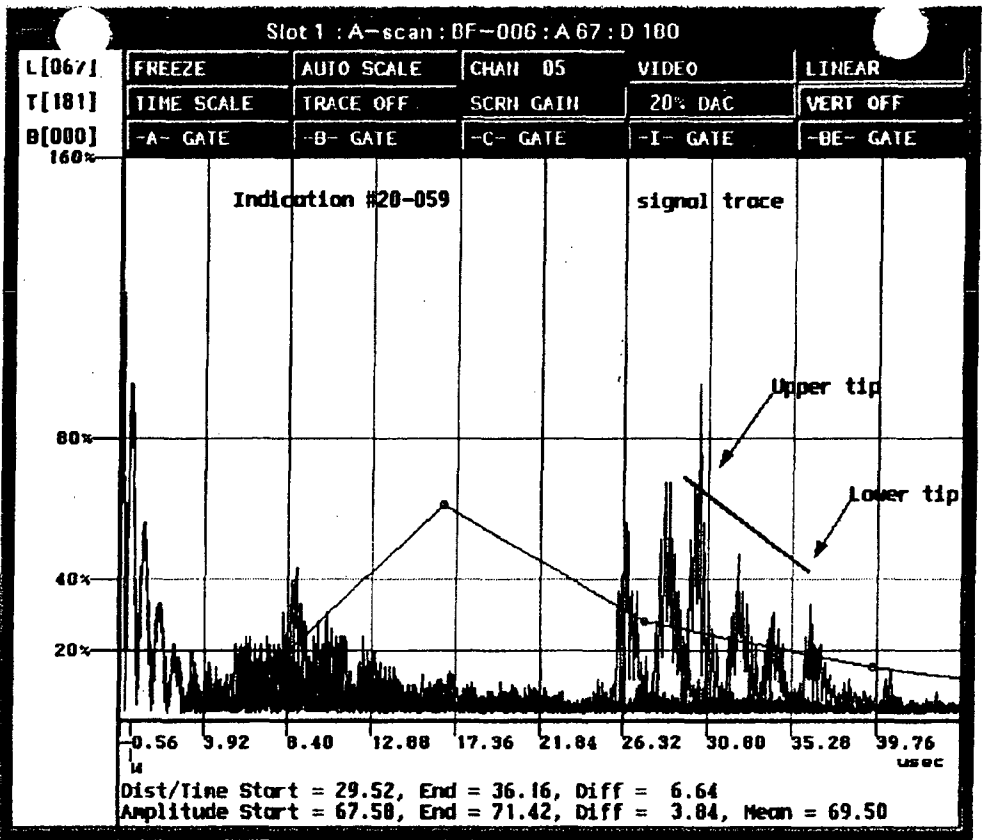
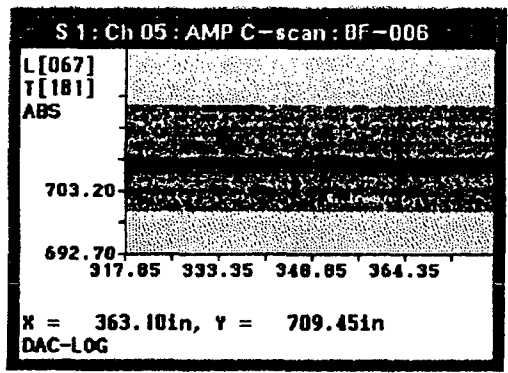
Lower Tan
058

R1151
Pg 236 of 291
00308

S 1 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2

100%
50%
20%



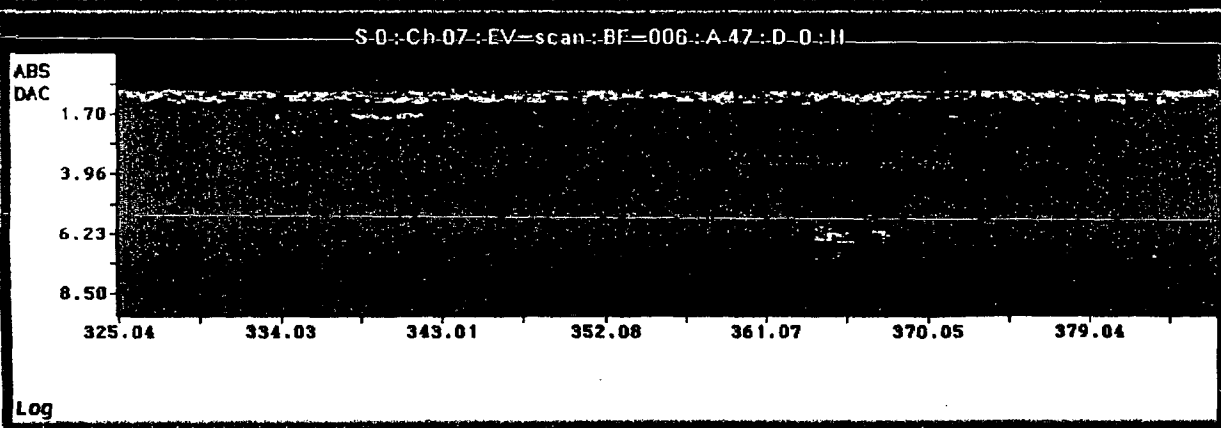
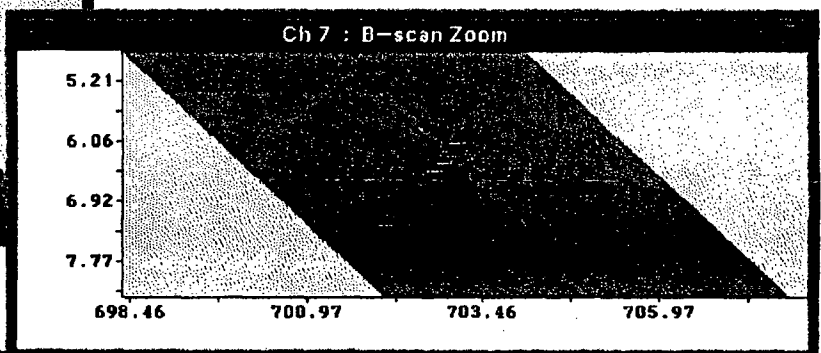
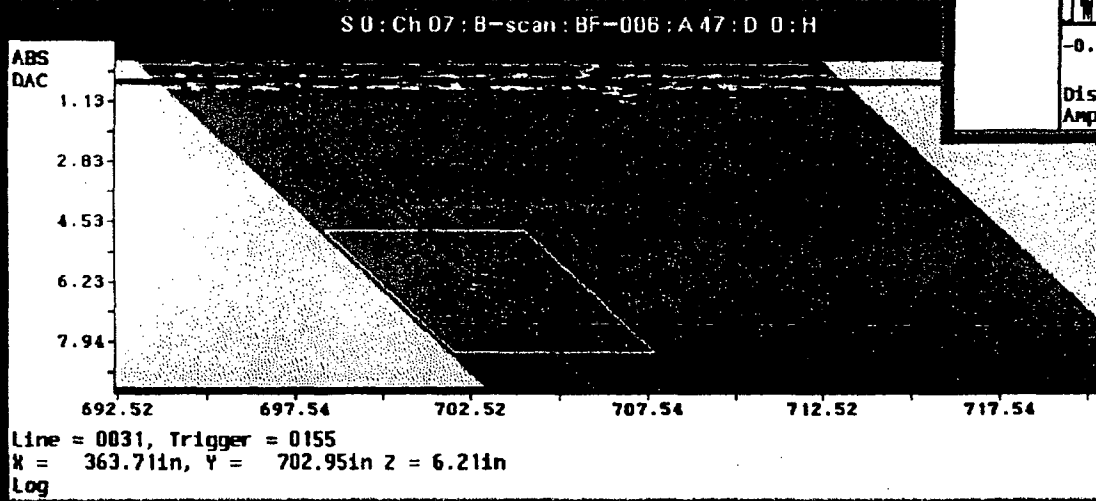
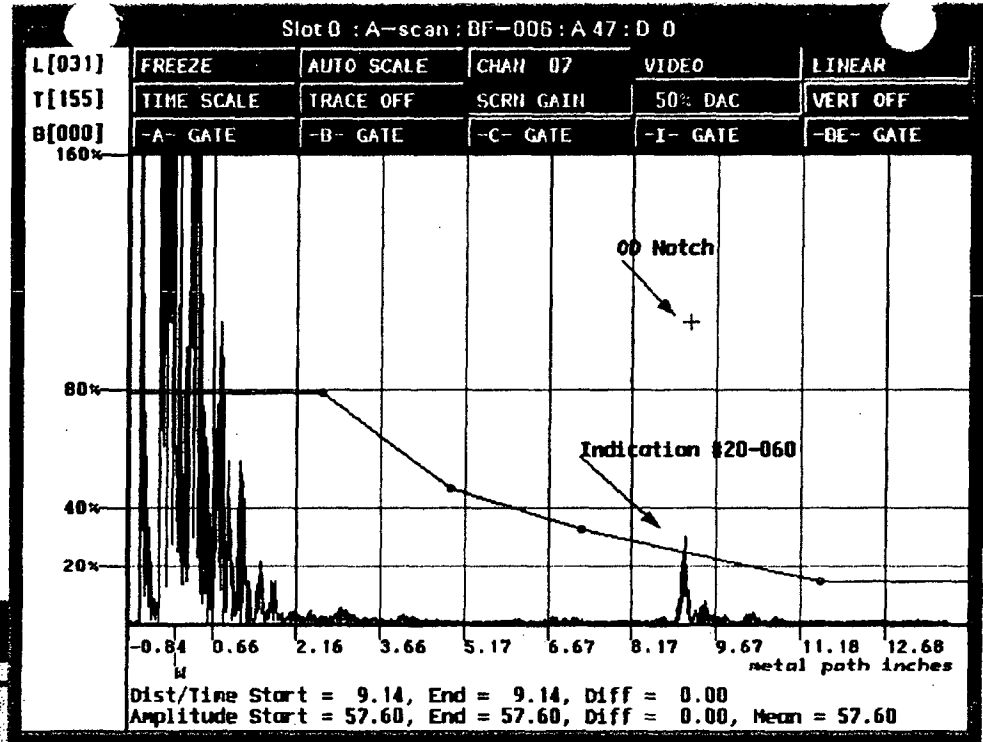
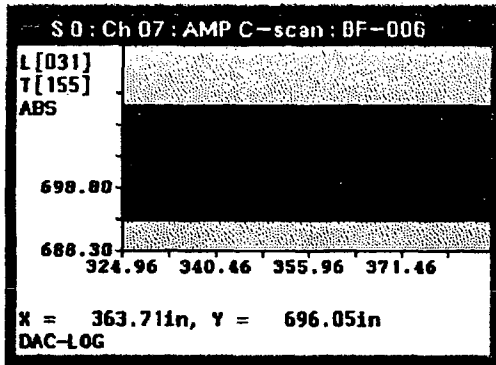
Lower Ten
tor3/20-05

R 1151
Pg 237 of 291
00309

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%



Lower Ten
tor 3/20-060

00310
Pg 238 of 291
R 1151

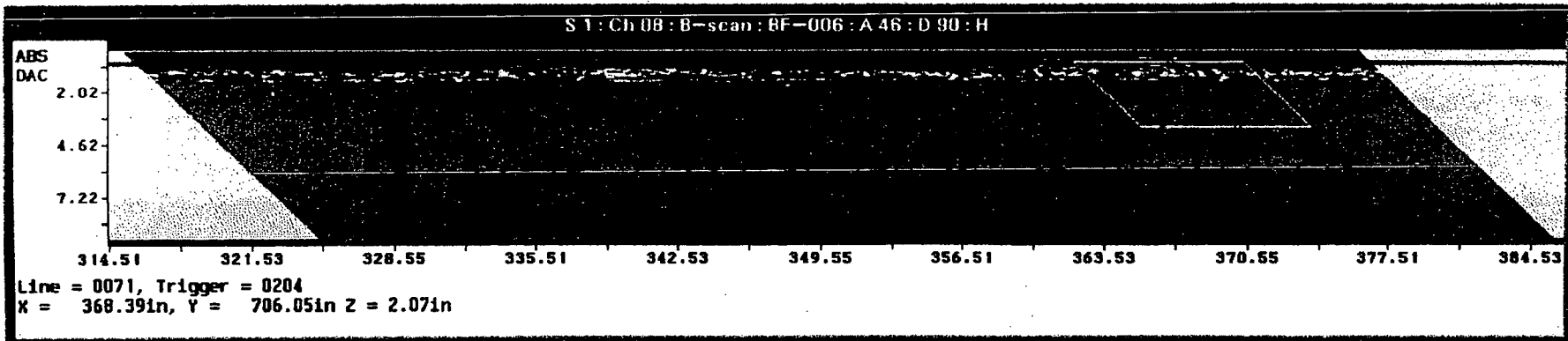
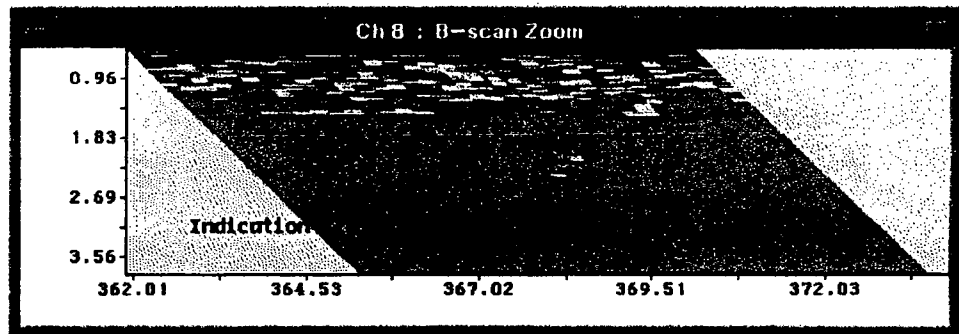
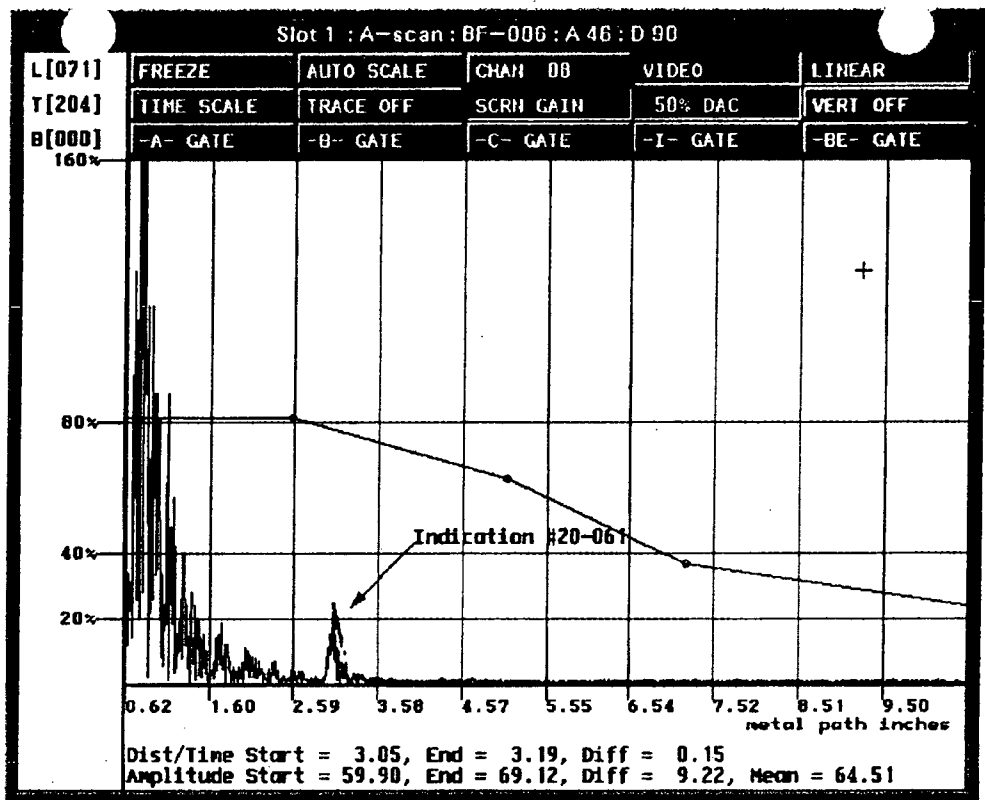
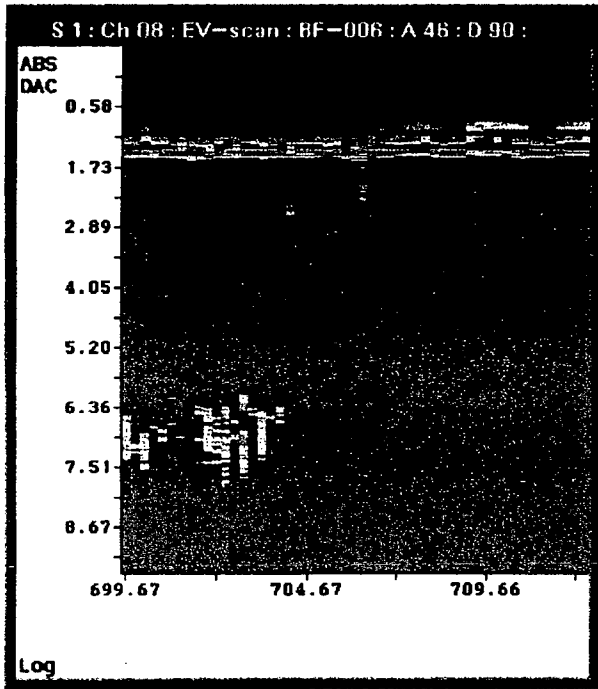
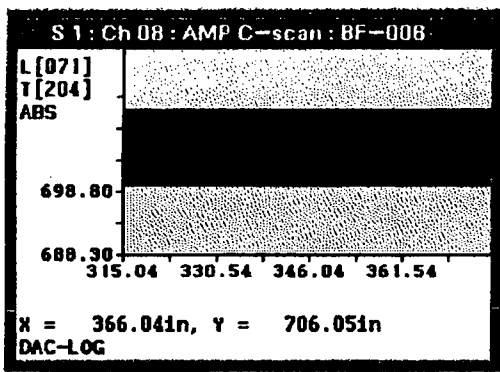
S 1 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

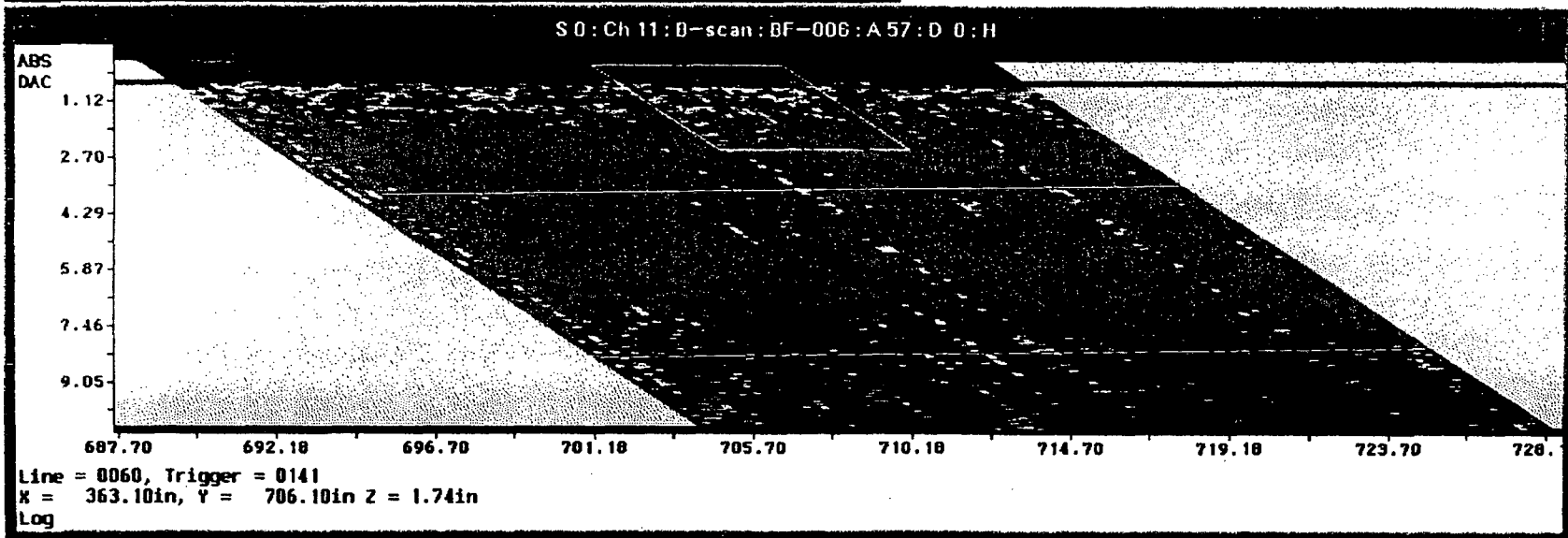
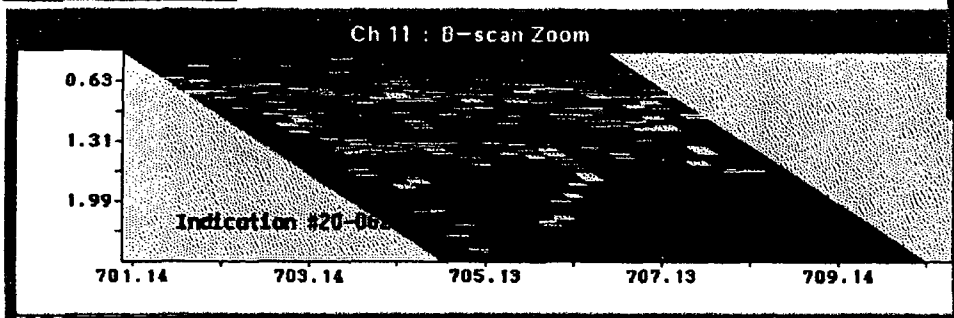
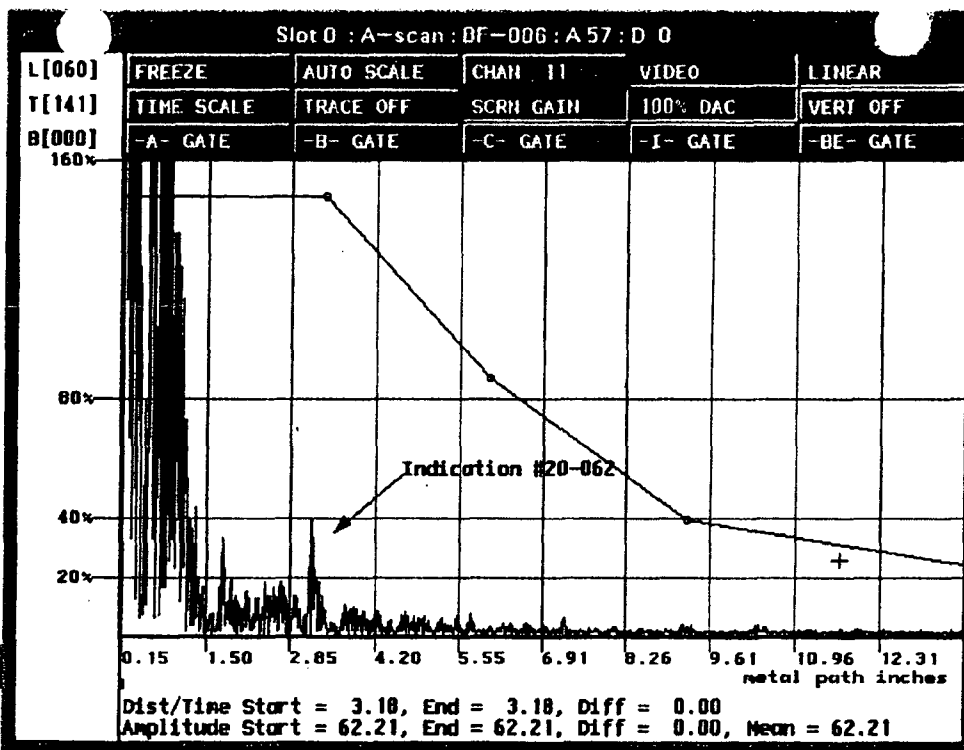
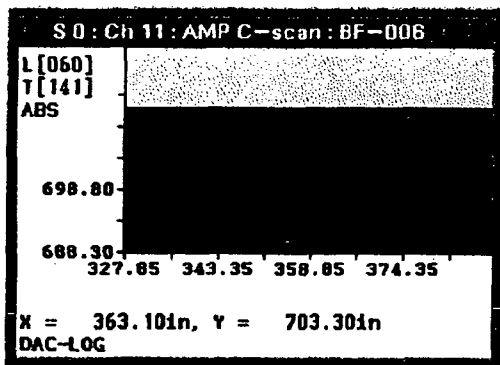
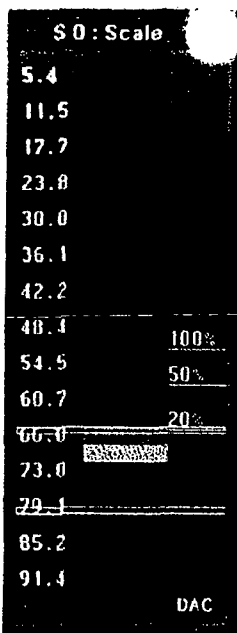
100%
50%
20%

DAC

Lower Tern
tor3/20-061



R 1151
Pg 239 of 291
00311



Lower Ten
tor3/20-062

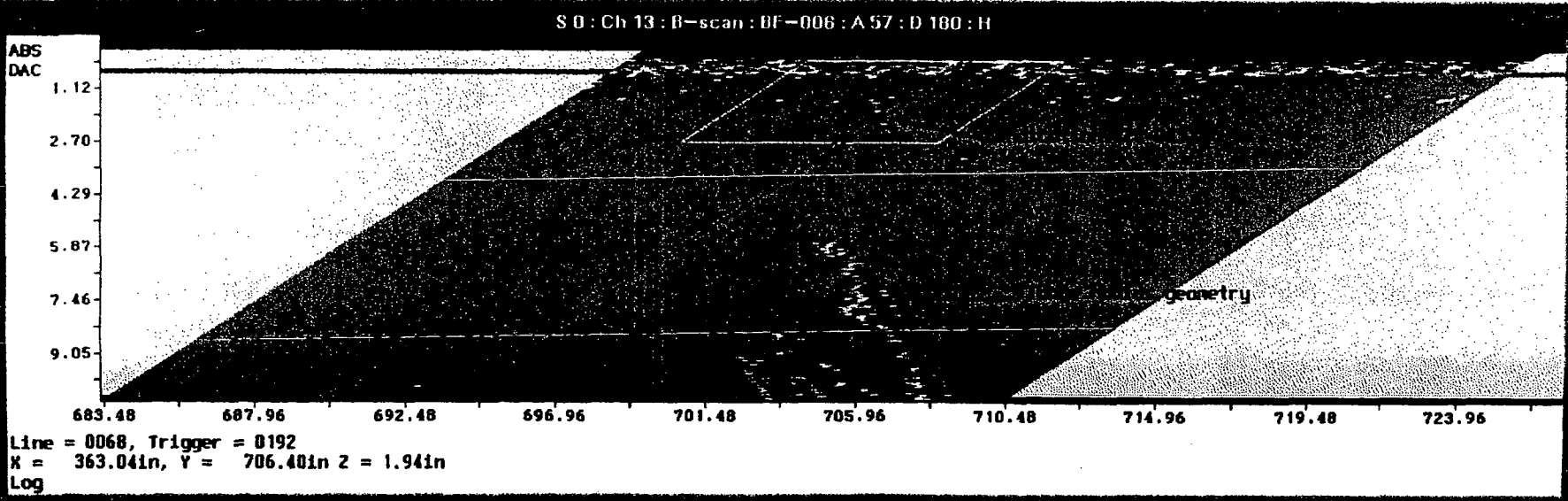
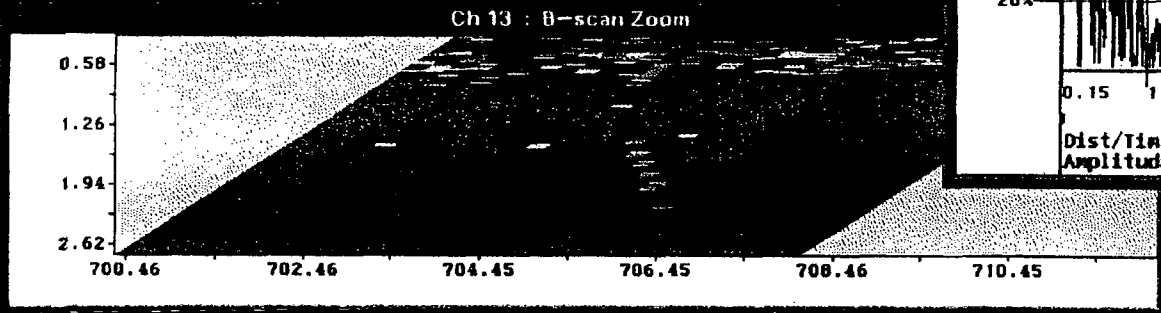
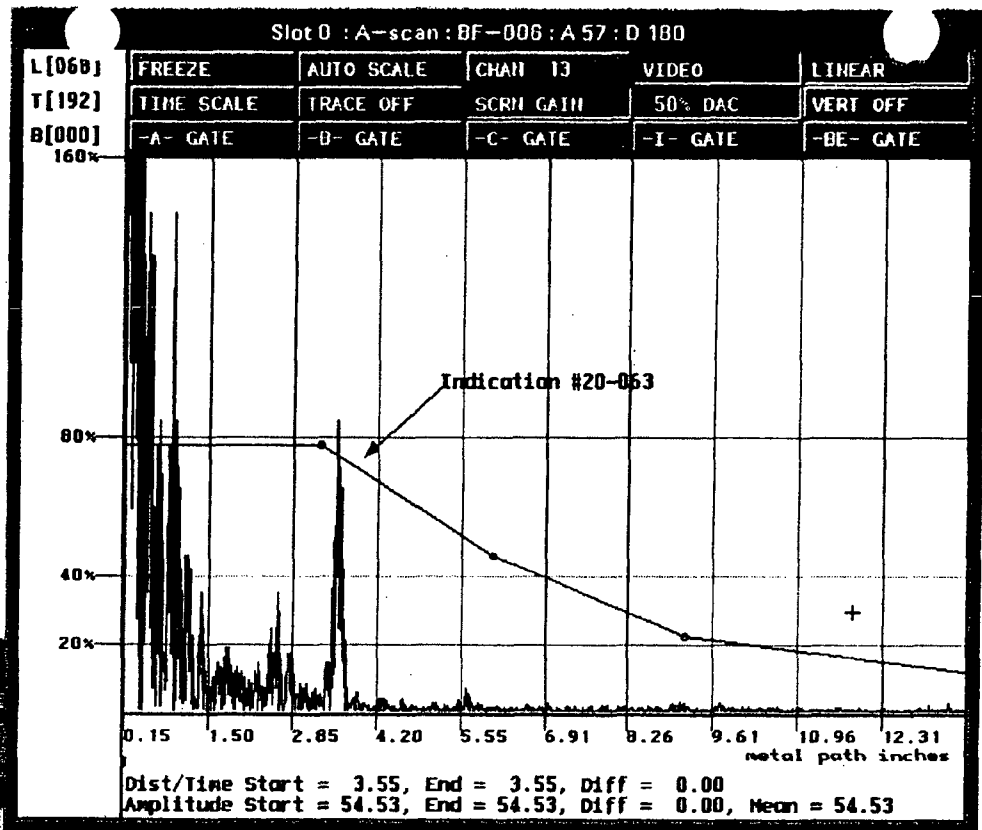
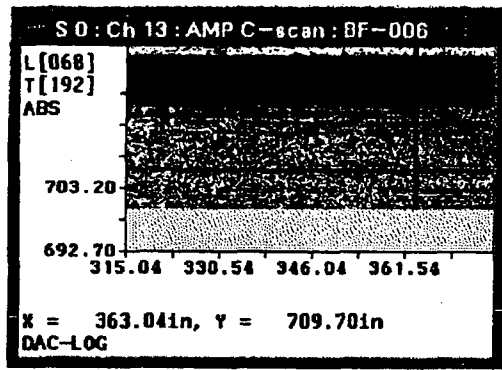
R 1151
Pg 240 of 291
00312

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

DAC



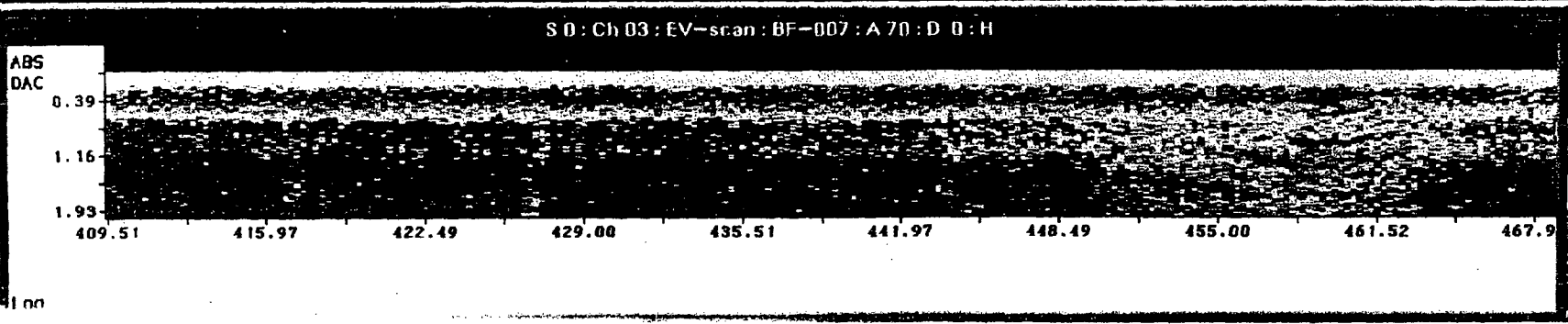
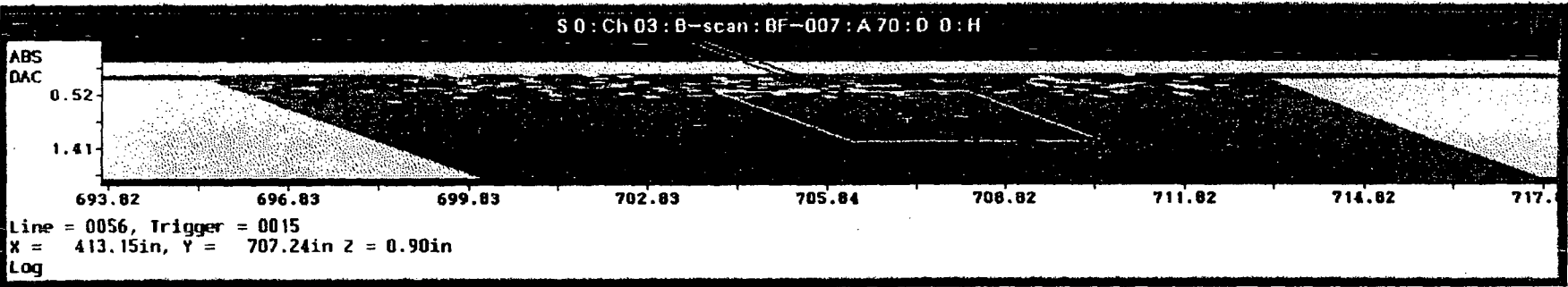
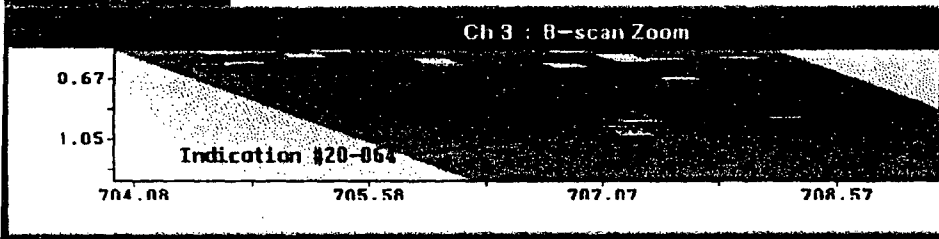
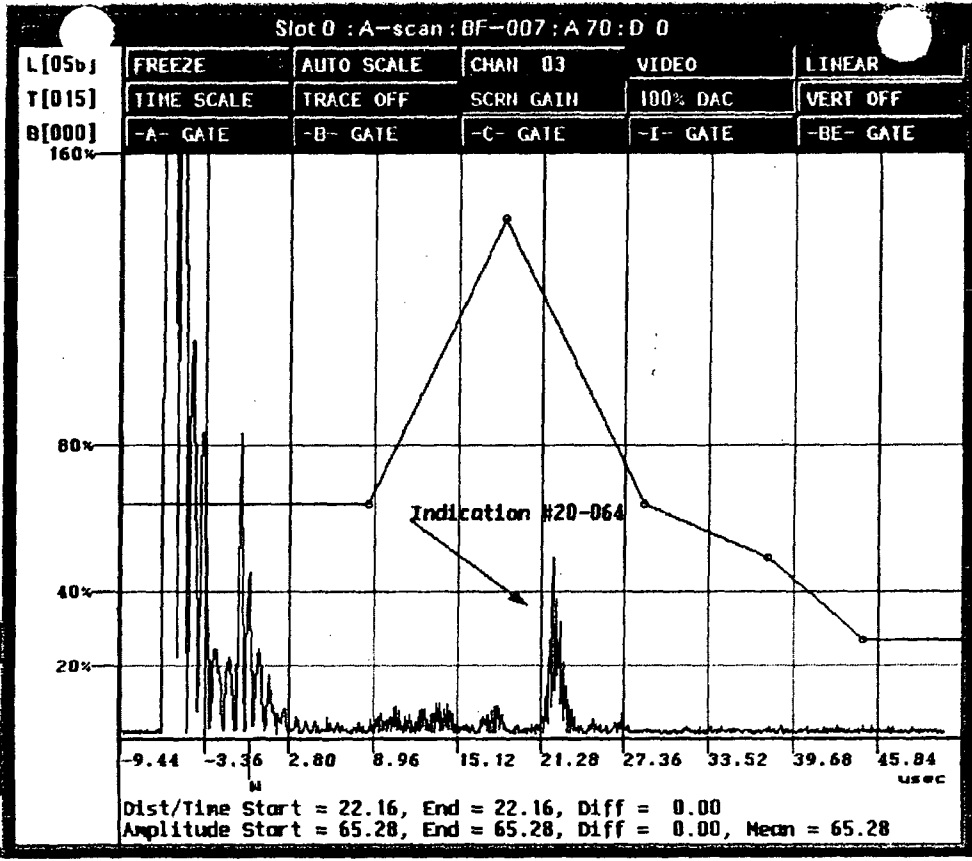
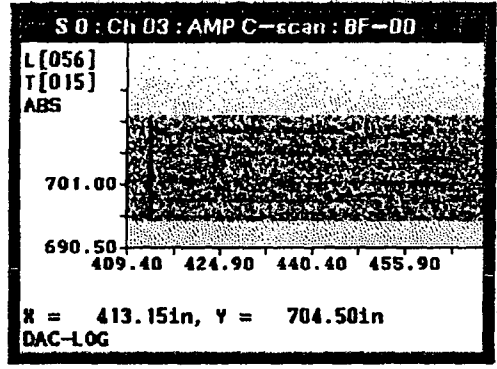
R 1151
Pg 241 of 291
00313
Ter
0-063

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

DAC



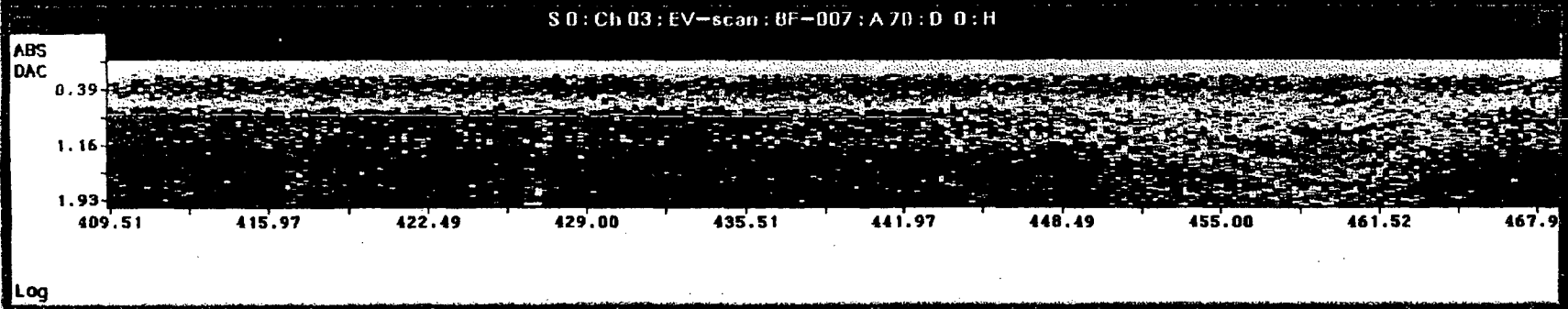
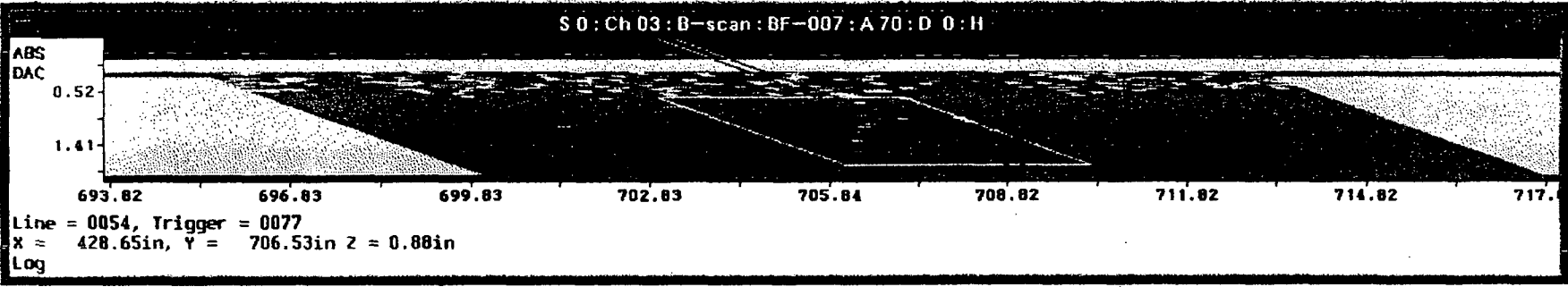
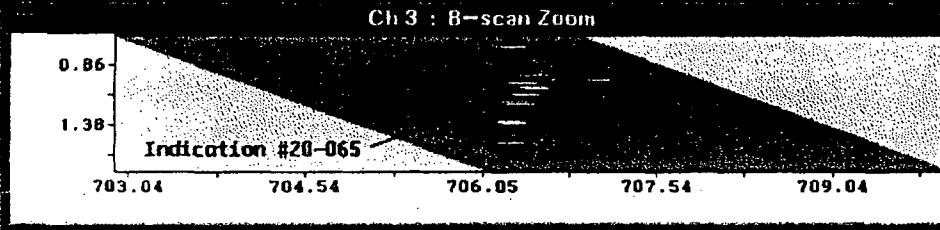
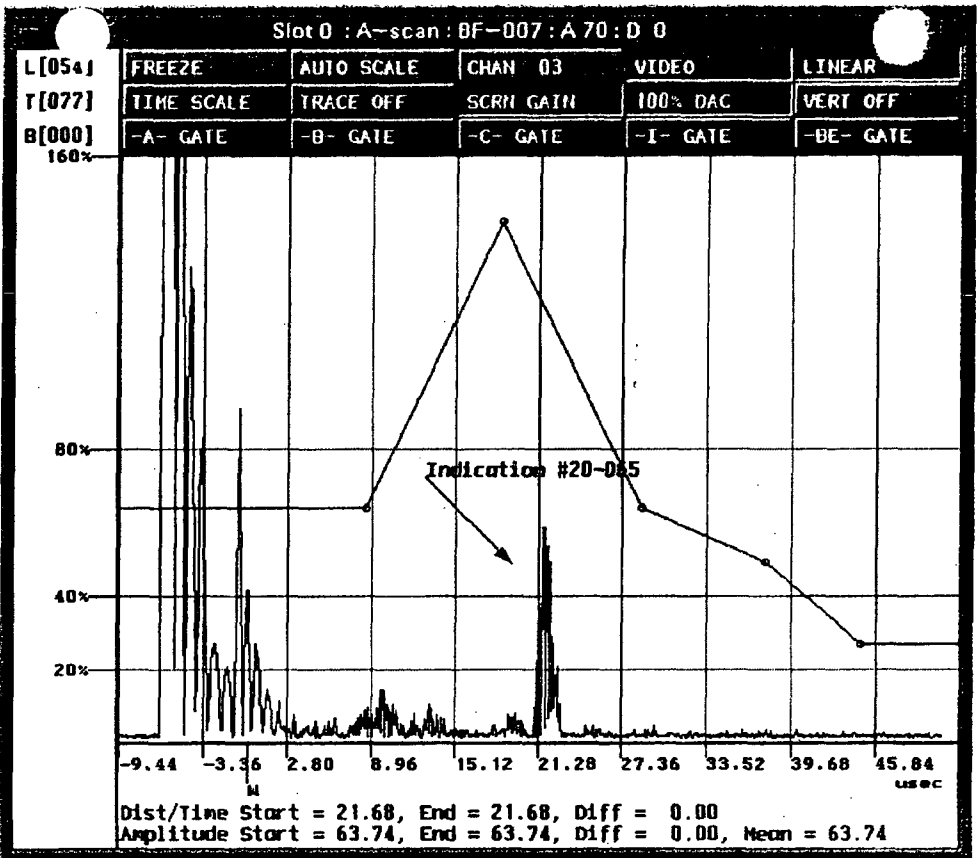
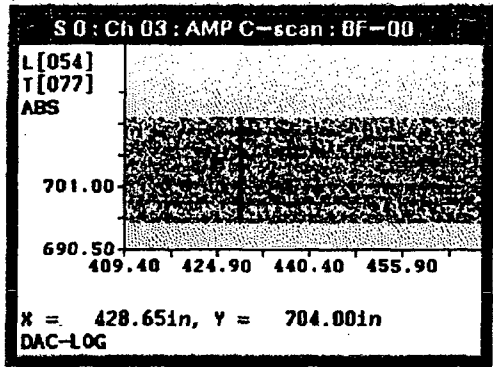
R 1151
Pg 242 of 291
00314

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

DAC



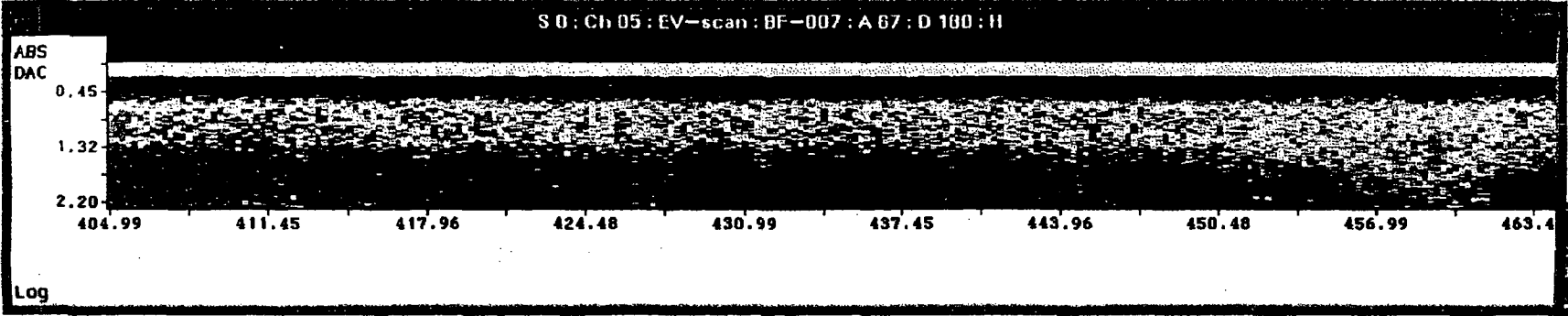
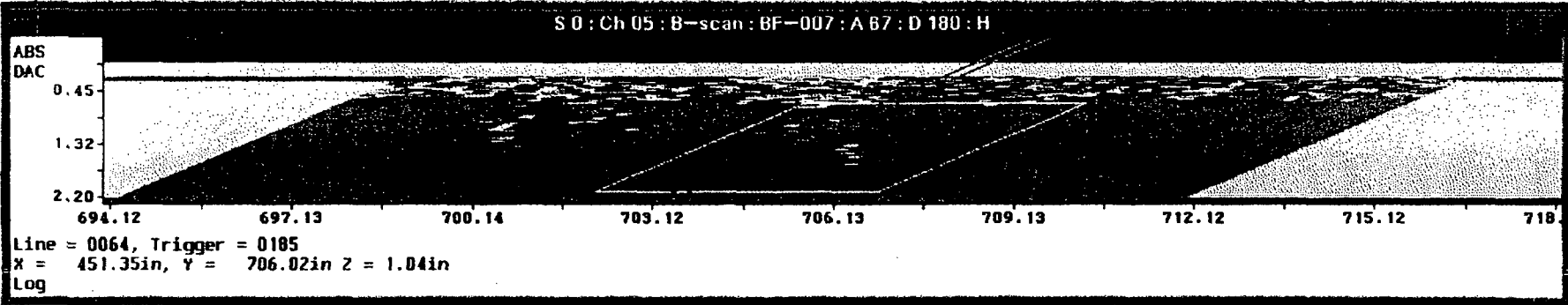
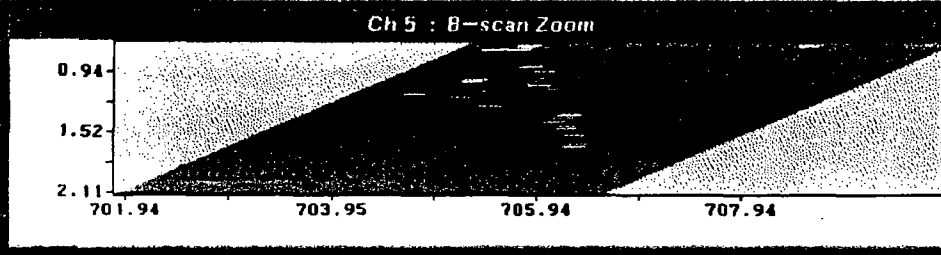
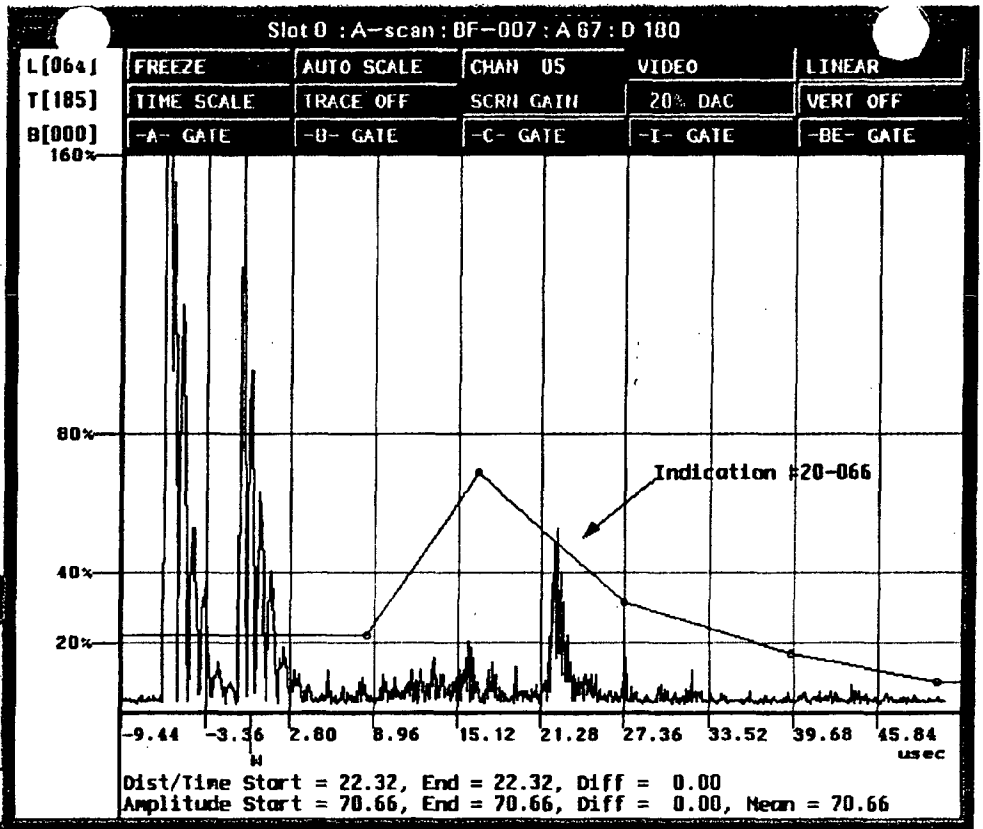
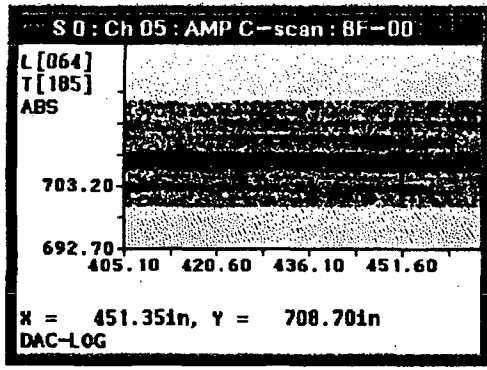
Lower Ten
test>dump /max
3/20-065

00315
R1151
Pg 243 of 291

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2

100%
50%
20%



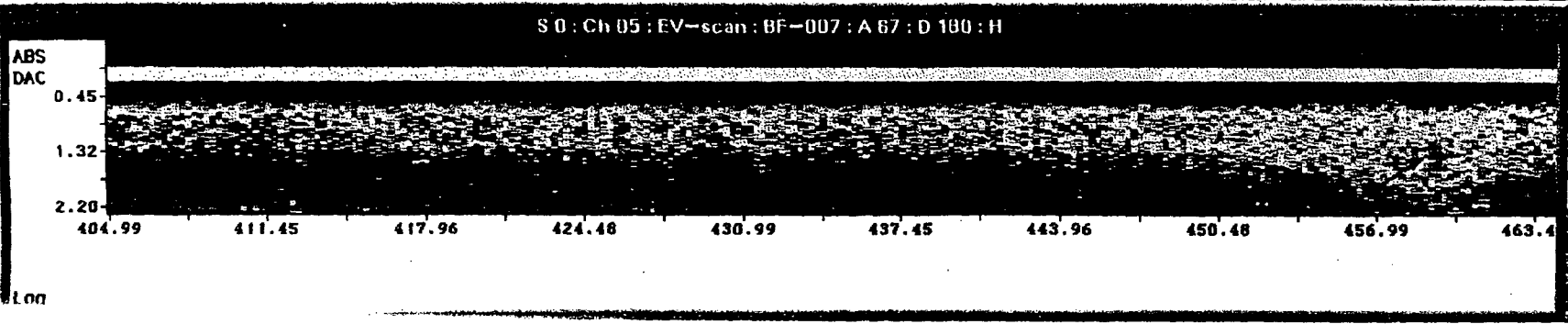
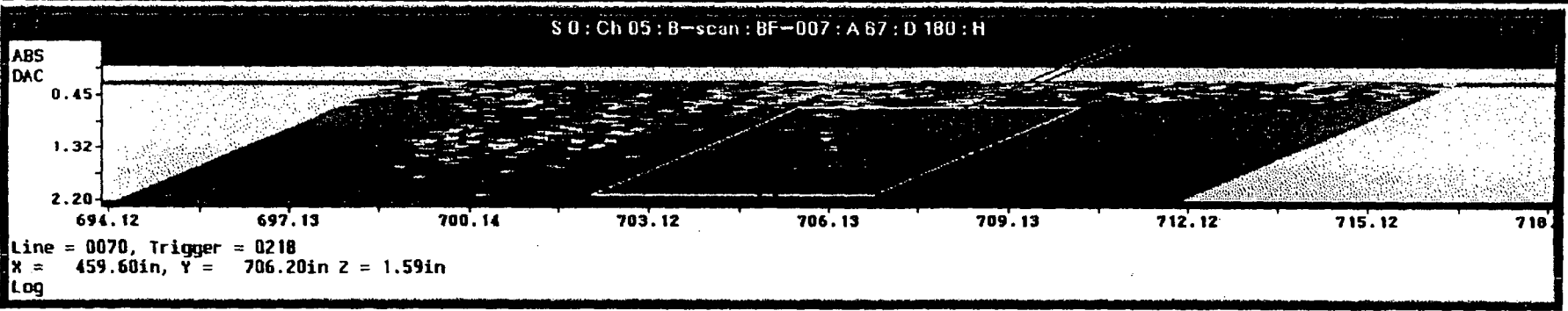
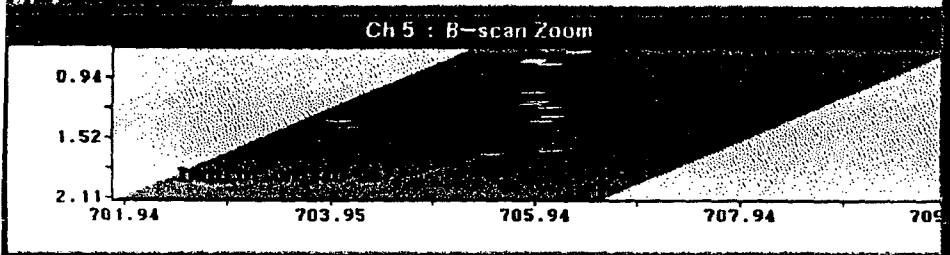
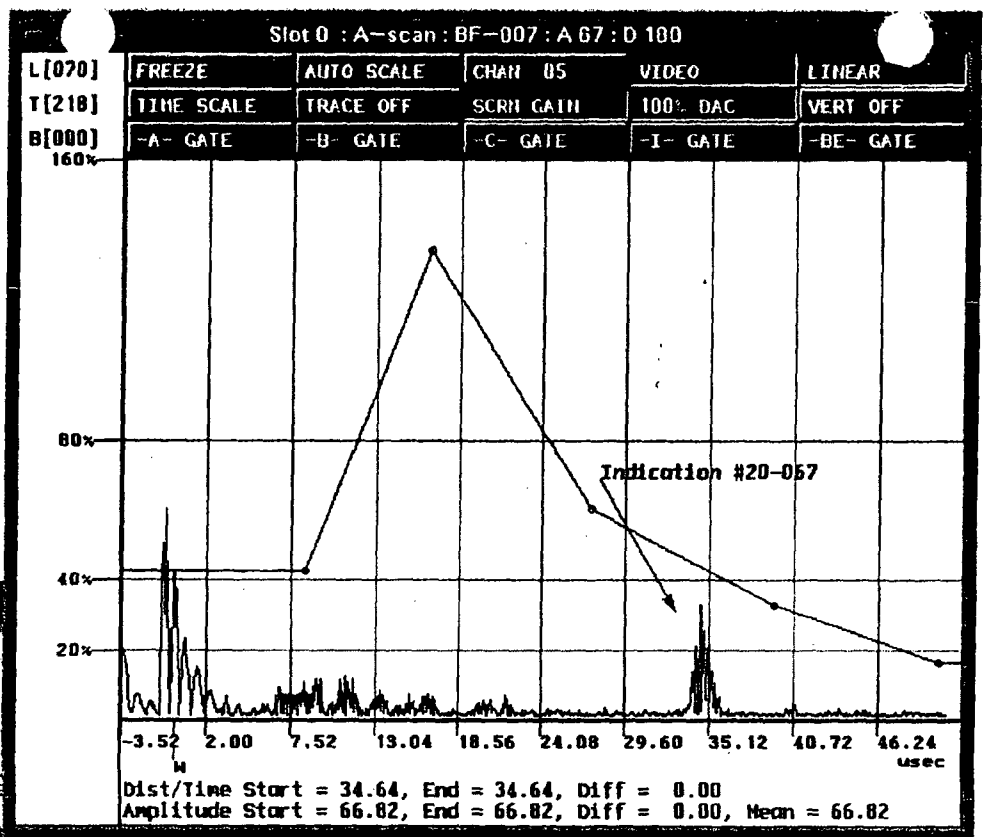
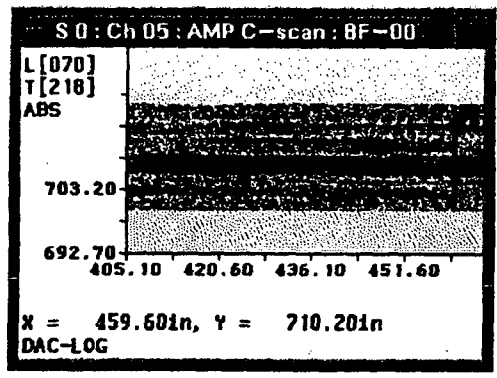
Lower Ten
est>dump /max
r3/20-066

00316
R 1151
Pg 244 of 291

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2

100%
50%
20%



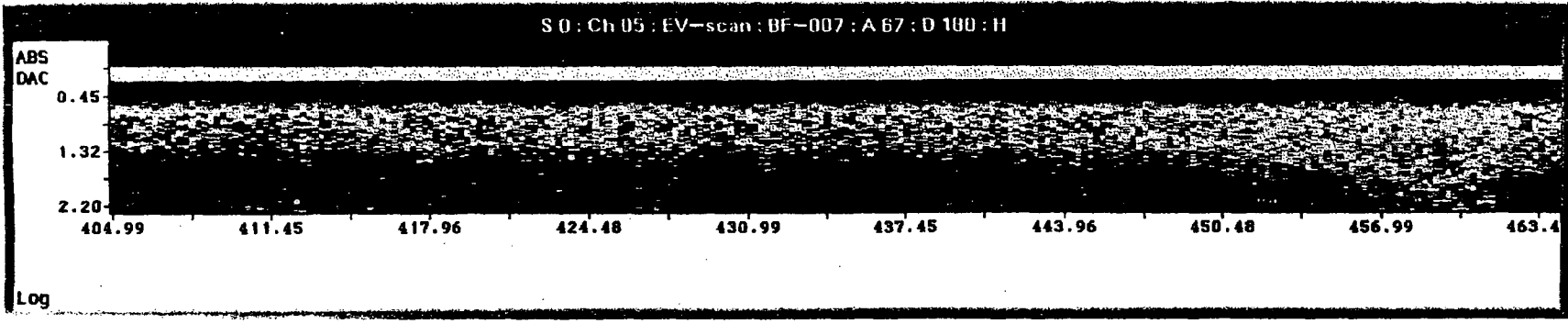
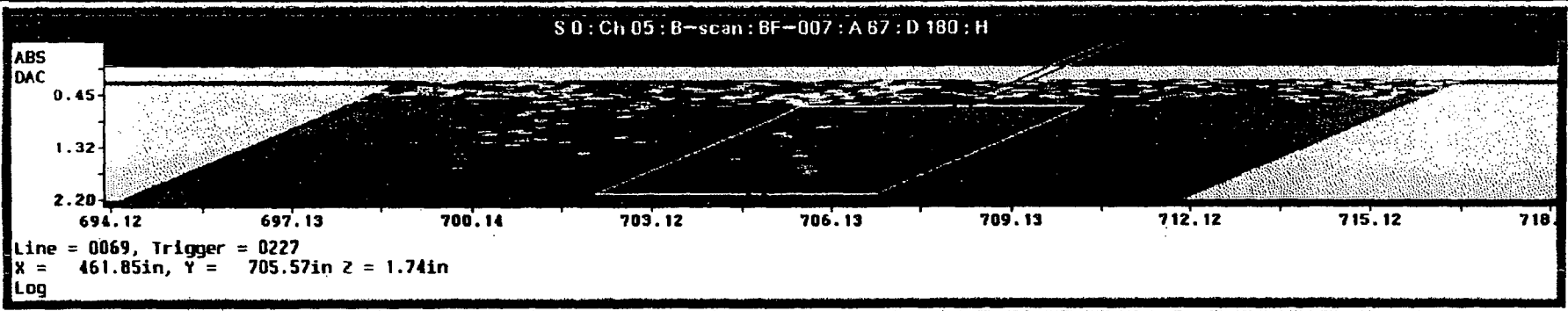
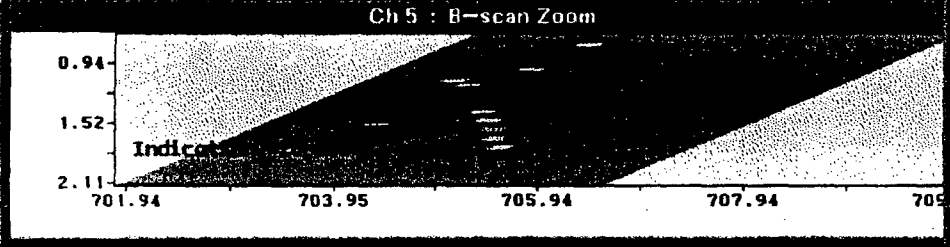
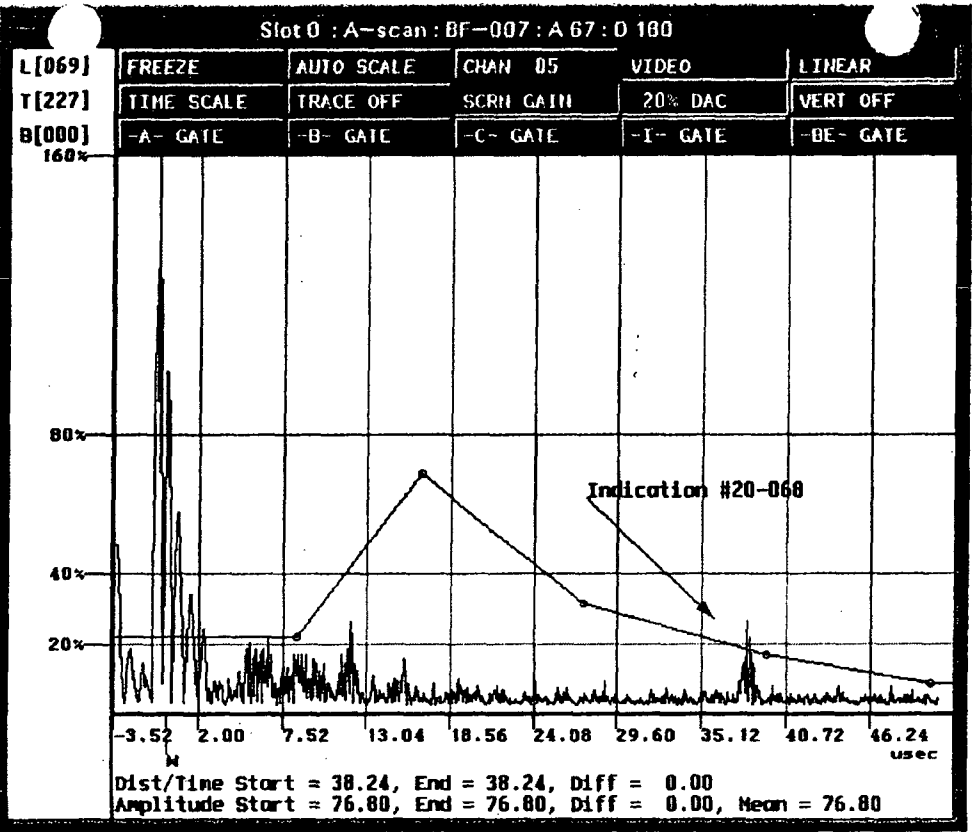
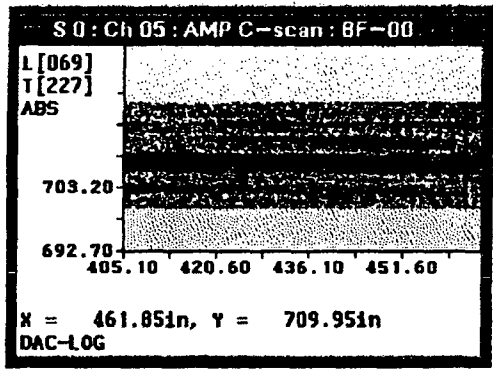
Lower Ten
:est>dump /max
r3/20-067

By 2/15/2011
R1151
00317

S0: Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2

100%
50%
20%



Lower Ten
est>dump /max
r3/20-068

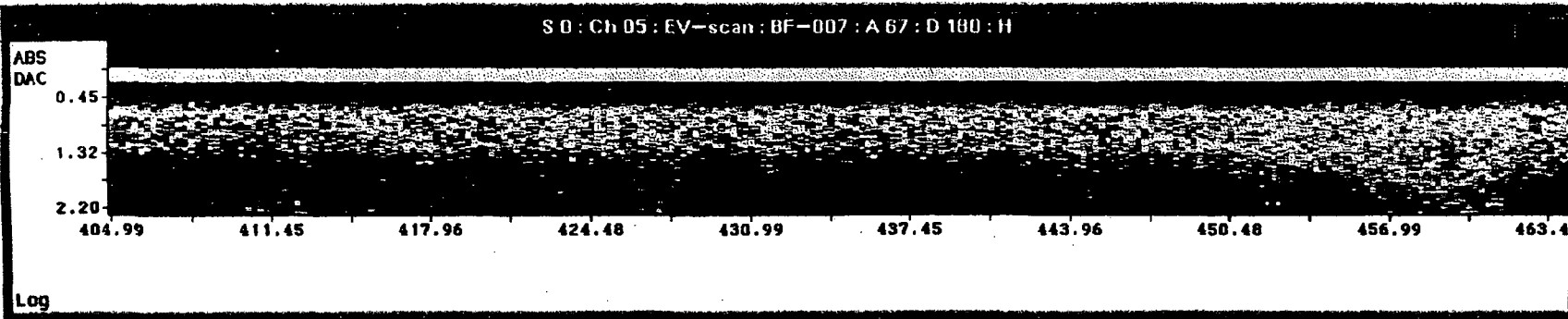
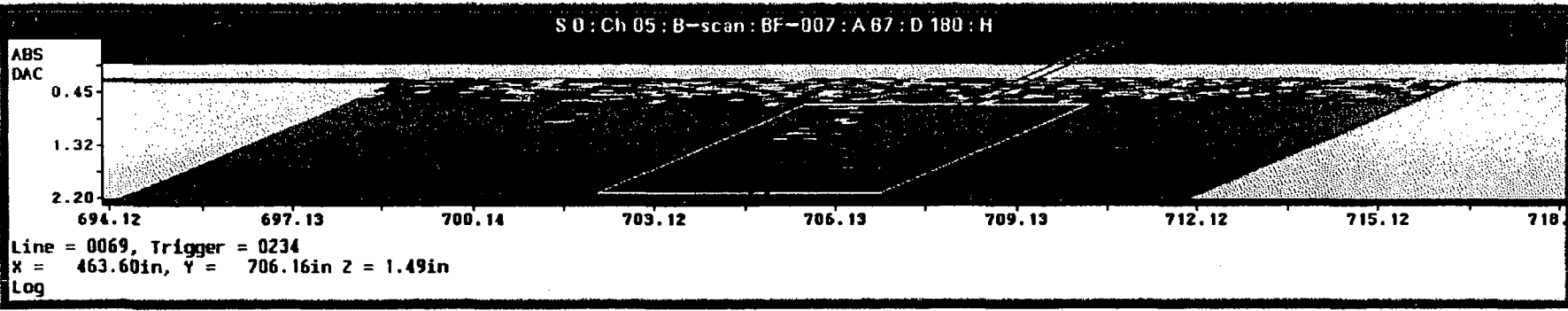
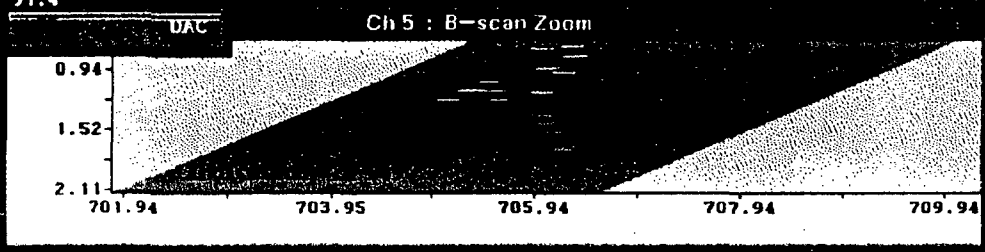
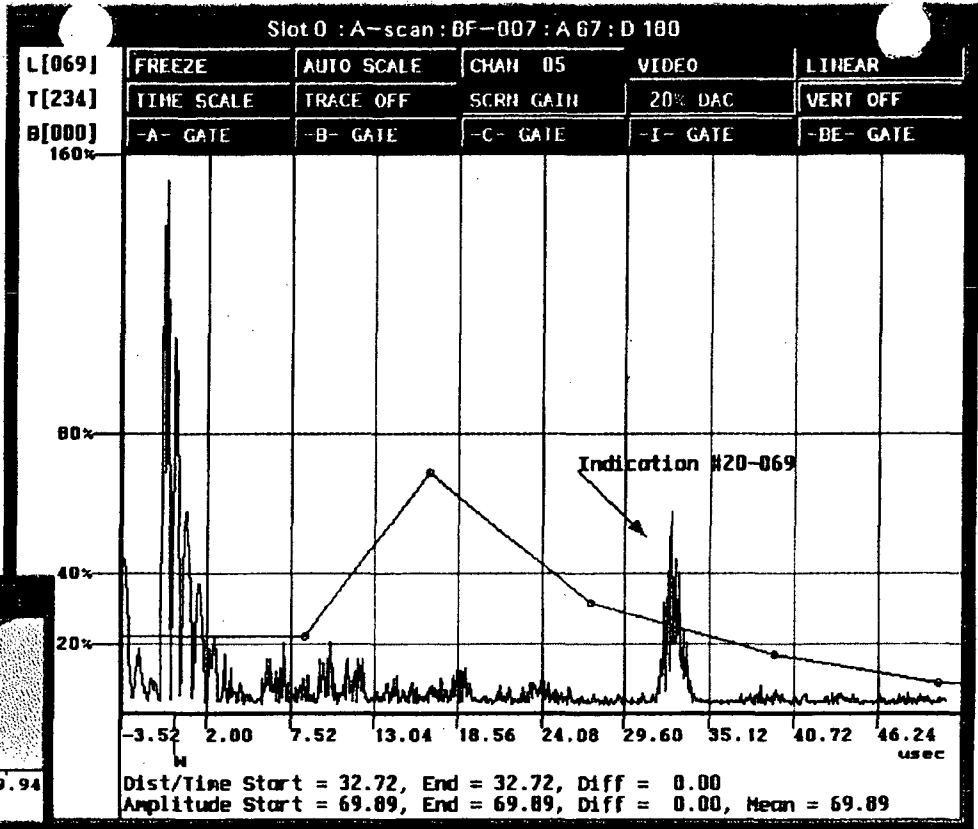
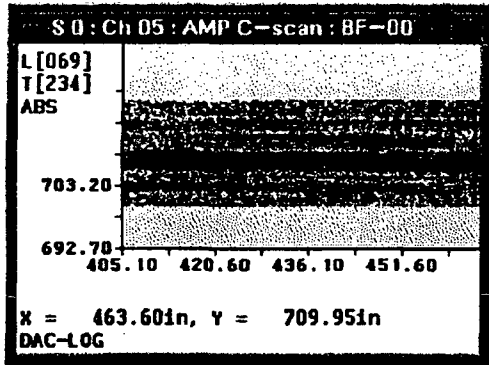
R 1151
Pg 246 of 291
00318

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

DAC



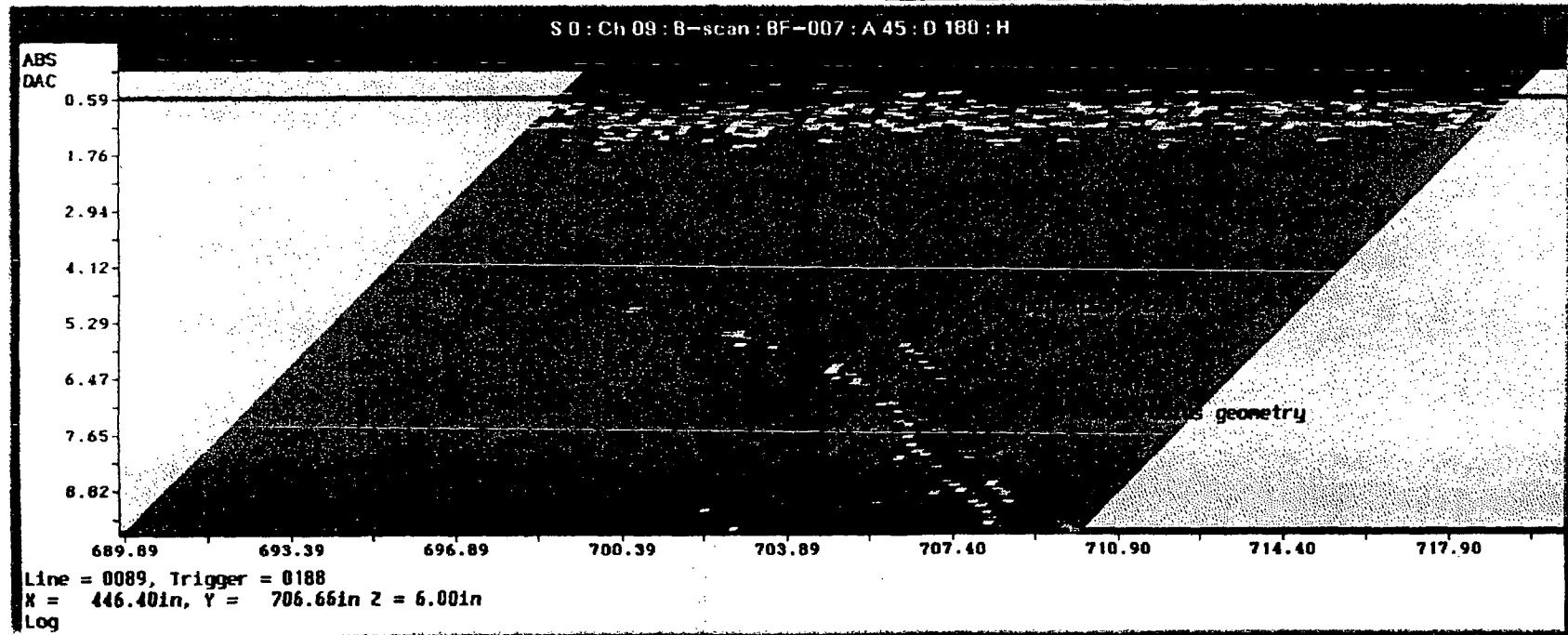
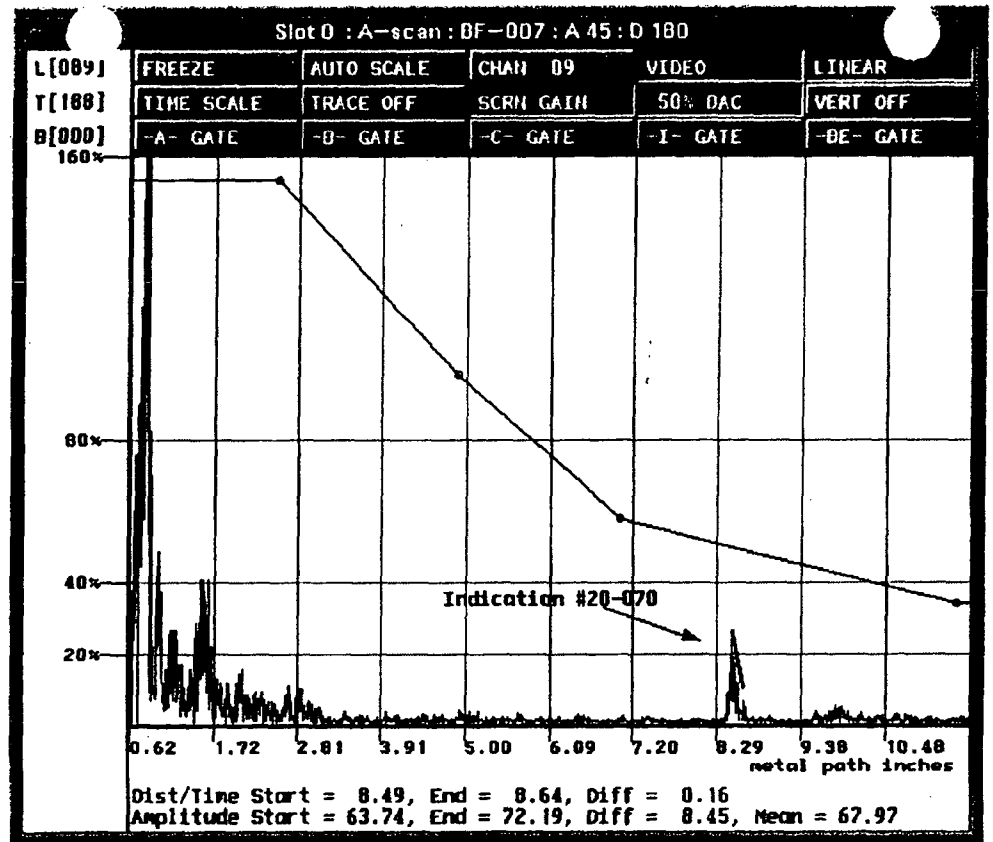
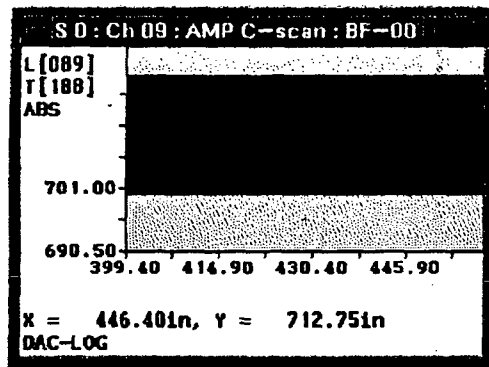
Lower Ten
test>dump /max
or 3/20-069

R 1151
00319
Pg 247 of 291

S 0 : Scale

5.4	
11.5	
17.7	
23.8	
30.0	
36.1	
42.2	100%
48.4	50%
54.5	20%
60.7	
66.8	
73.0	
79.1	
85.2	
91.4	

DAC



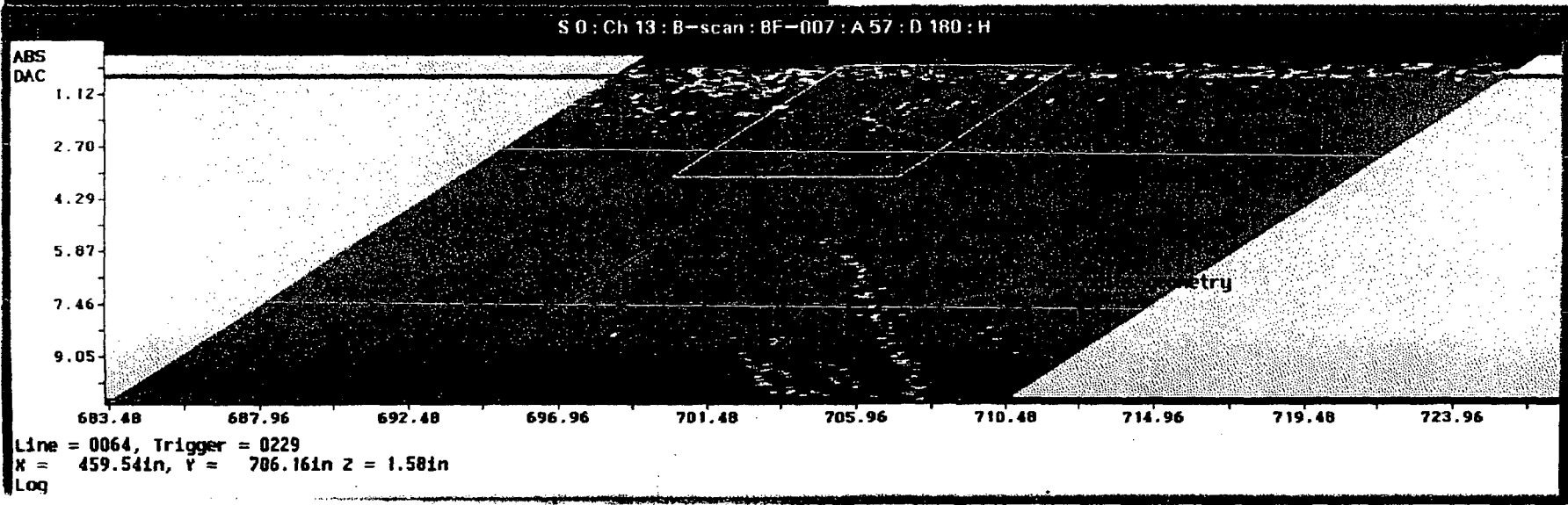
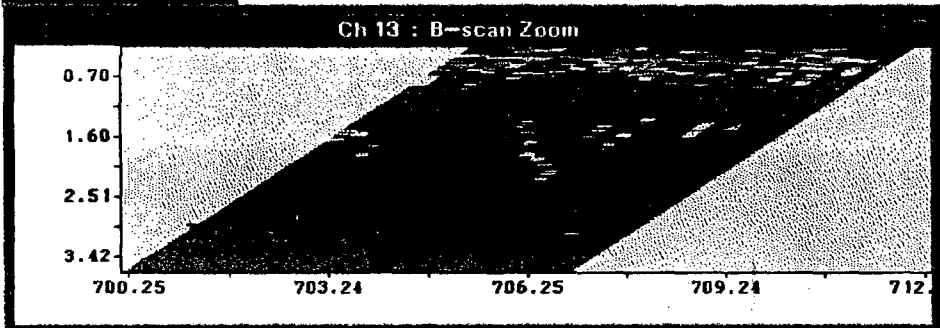
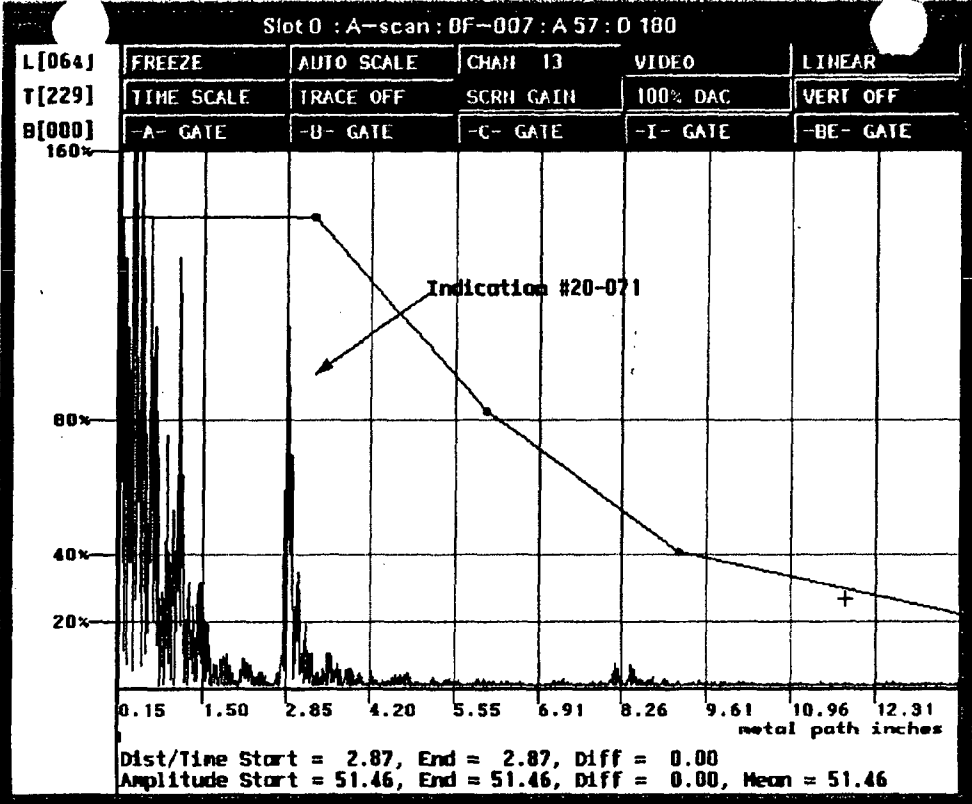
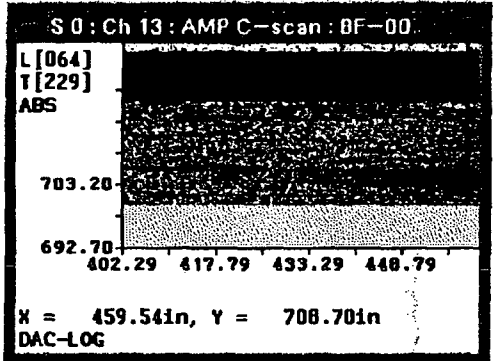
Lower Ten
/test>dump /max
tor3/20-070

R1151
Pg 248 of 291
00320

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4 100%
54.5 50%
60.7 20%
66.8
73.0
79.1
85.2
91.4

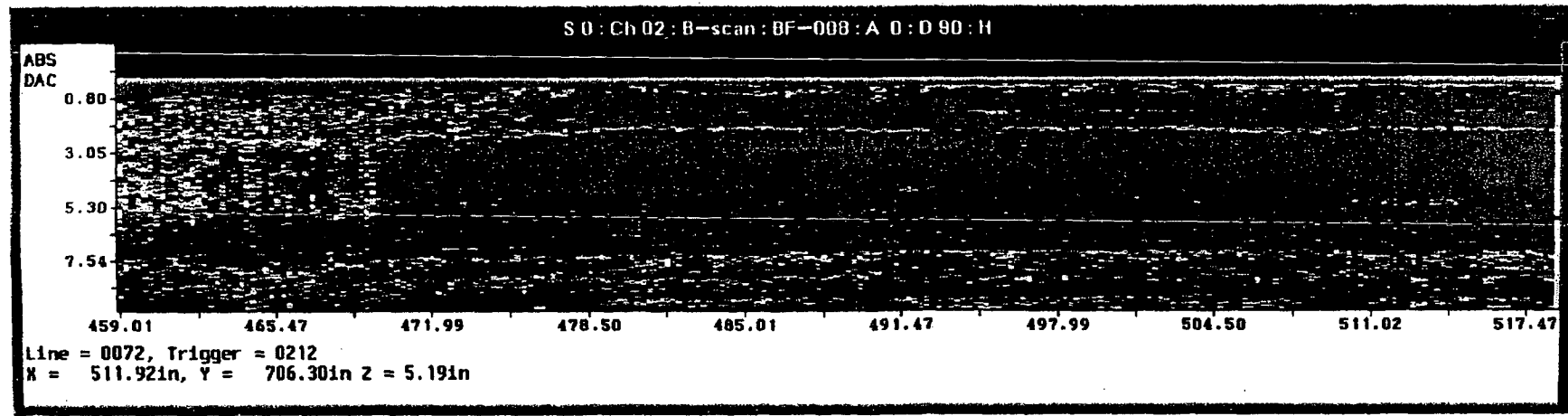
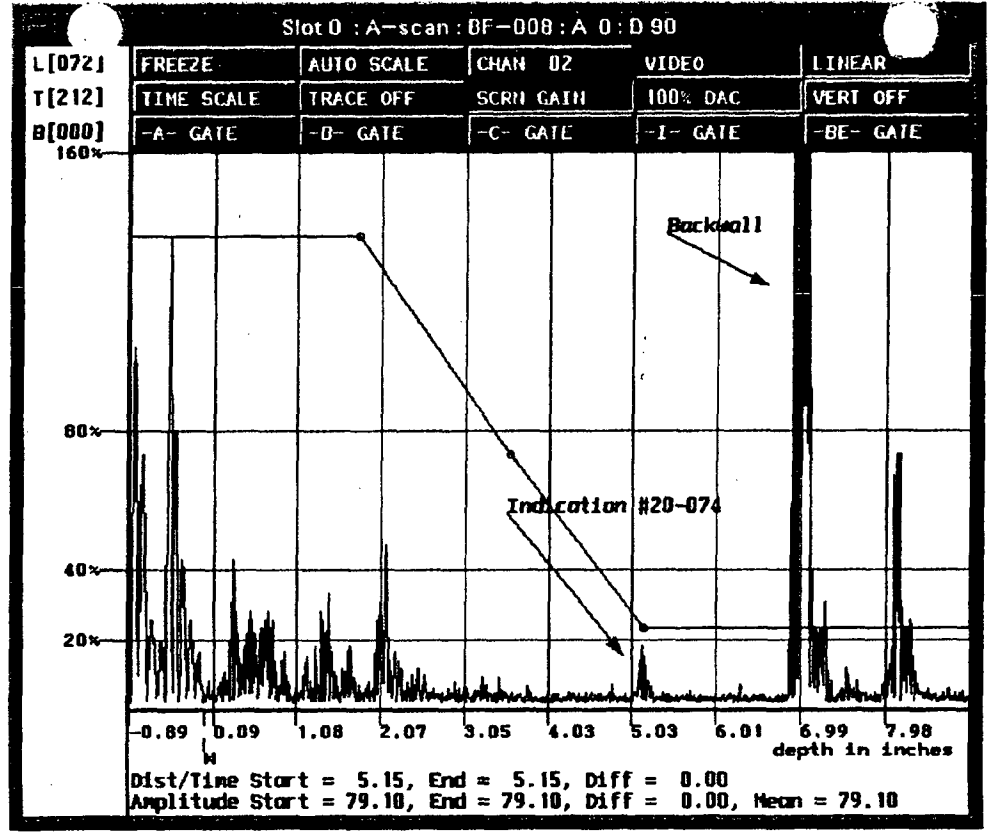
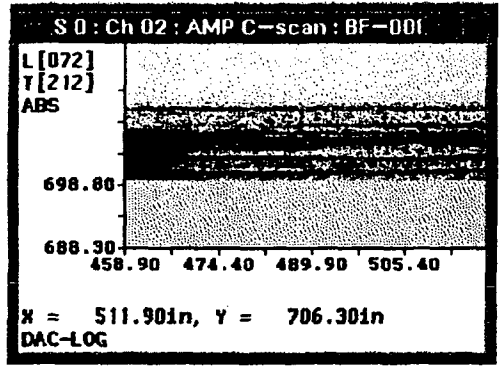
DAC



S 0 : Scale

5.4	
11.5	
17.7	
23.8	
30.0	
36.1	
42.2	
48.4	
54.5	
60.7	100%
66.8	50%
73.0	20%
79.1	
85.2	
91.4	

DAC



00322

R 250 of 291

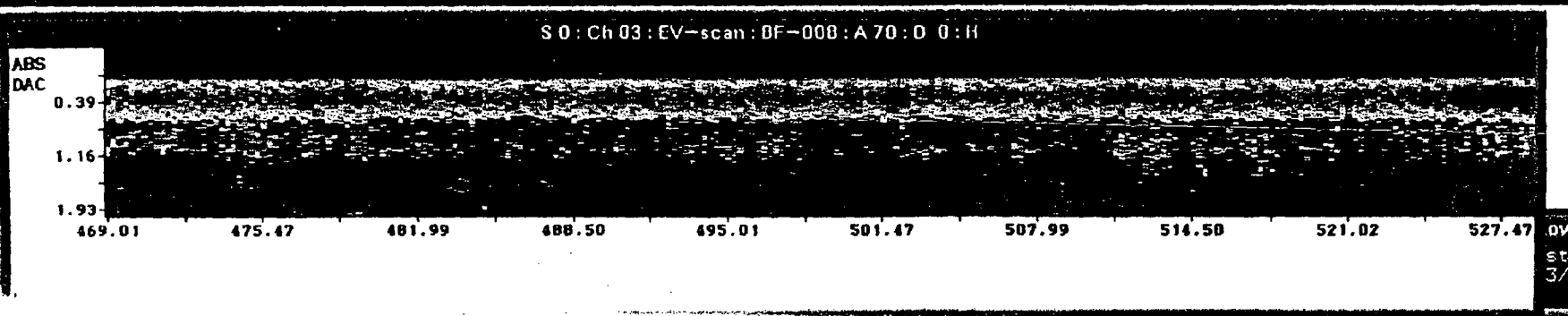
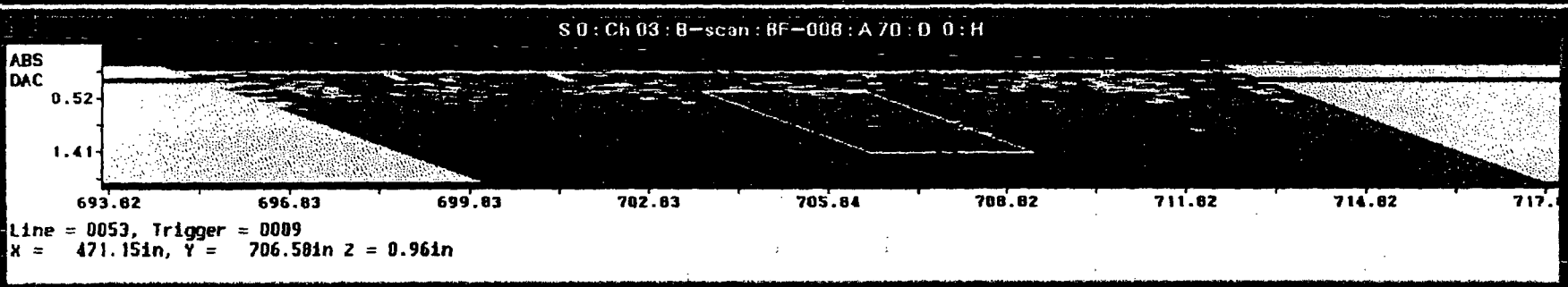
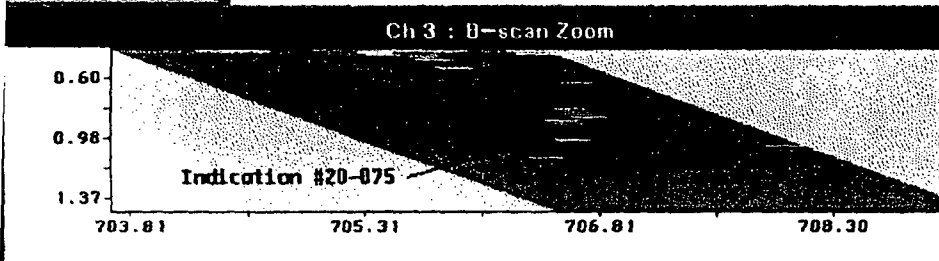
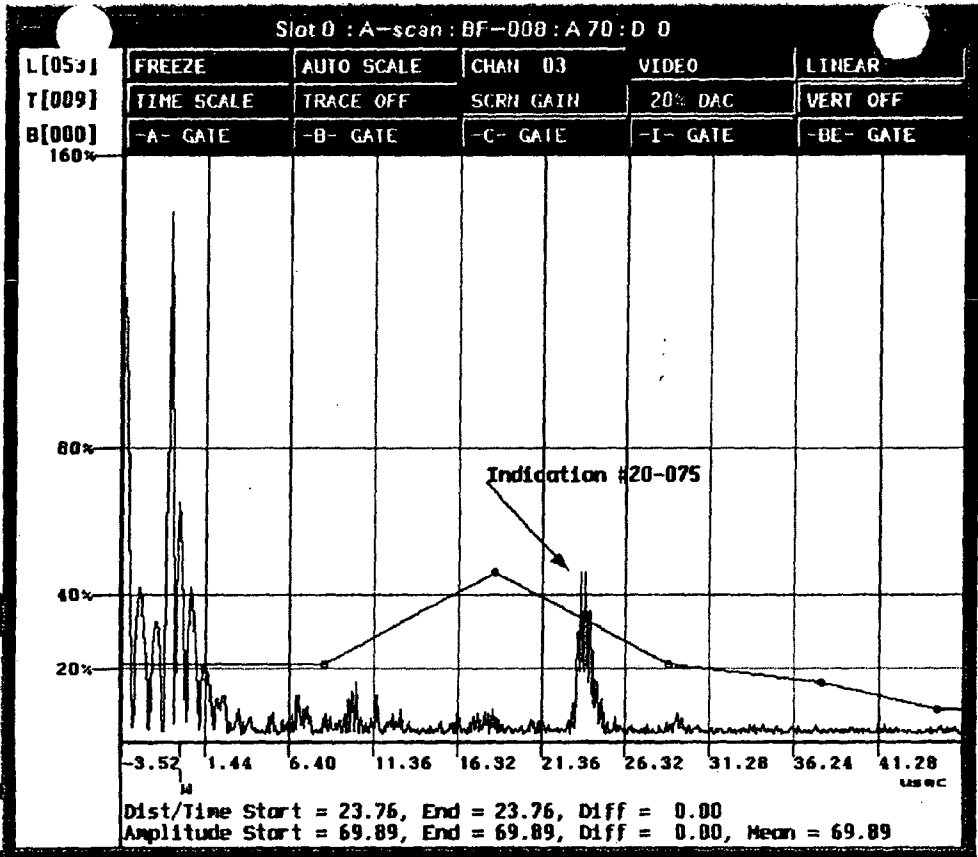
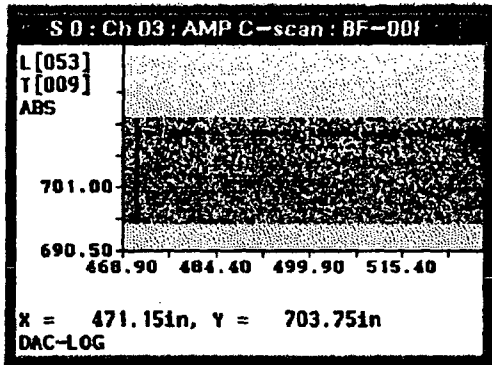
R 1151

ower Ten
st>dump /max
3/20-072

S 0 : Scale

4
1.5
7.7
3.0
80.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

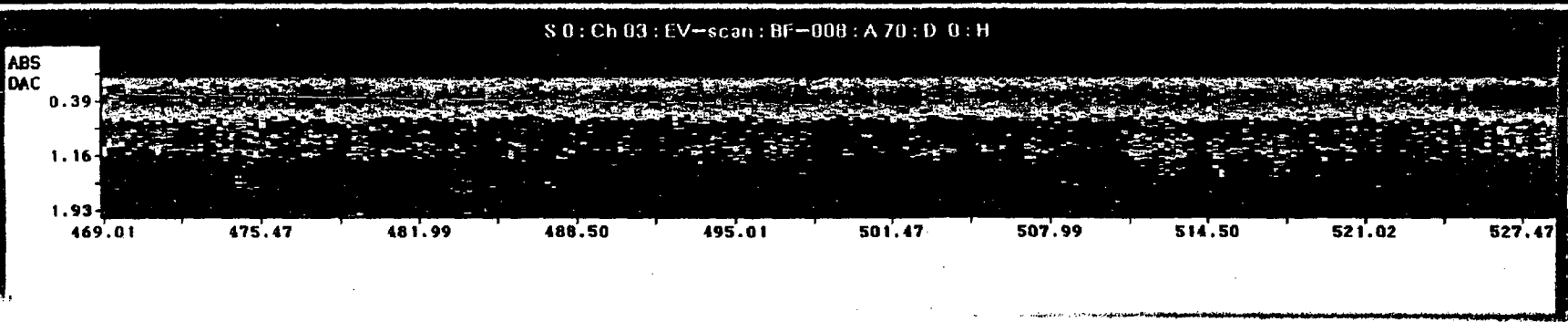
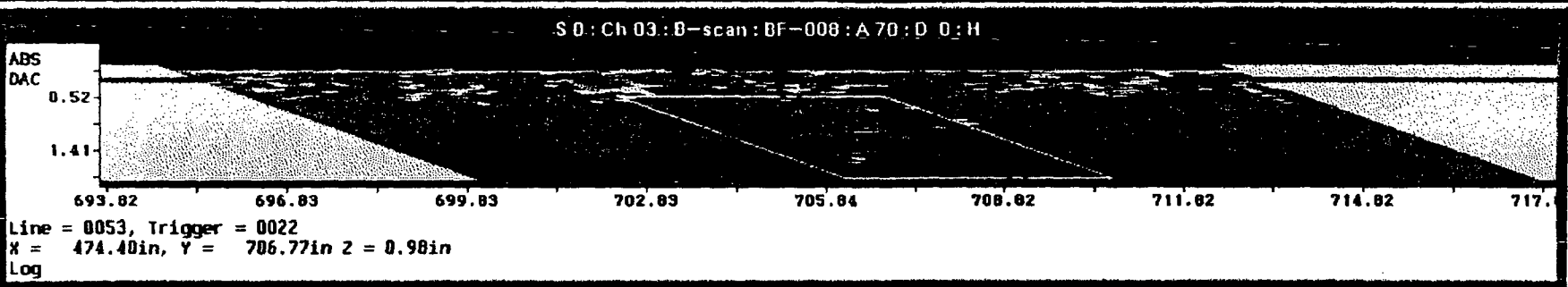
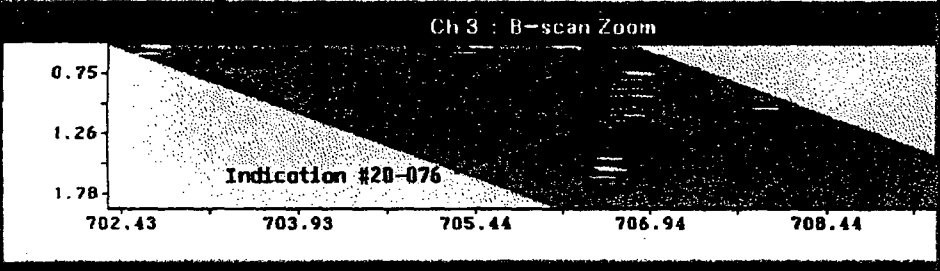
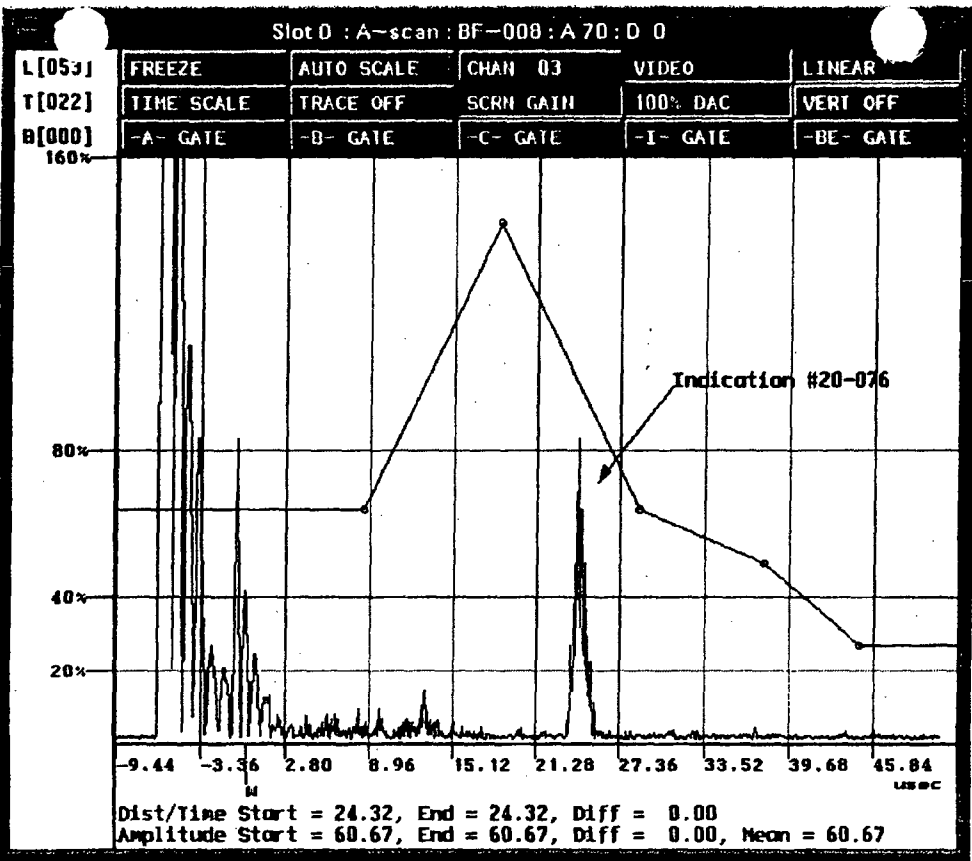
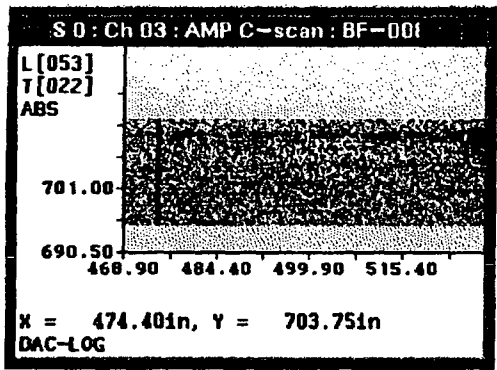


R 1151
Pg 25/4-291
00323

S D : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%



Lower Ten
st>dump /max
3/20-076

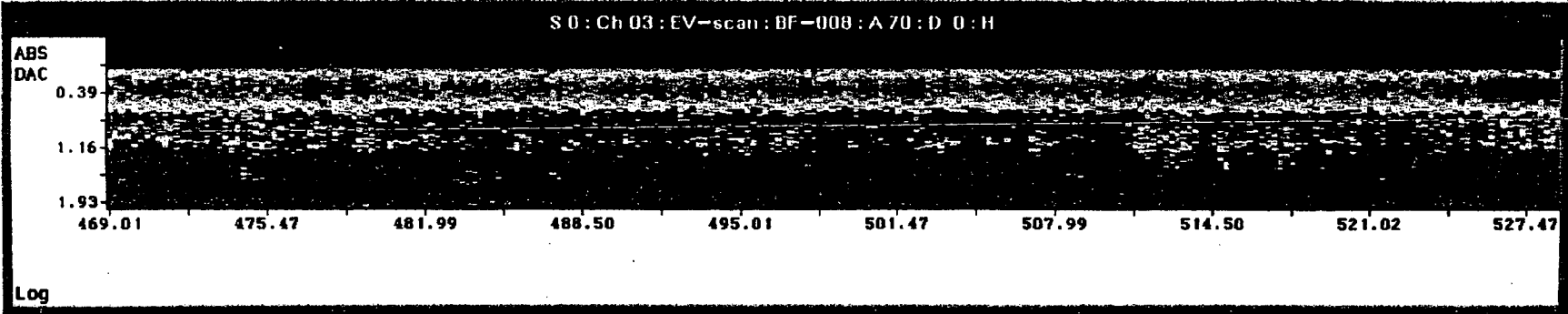
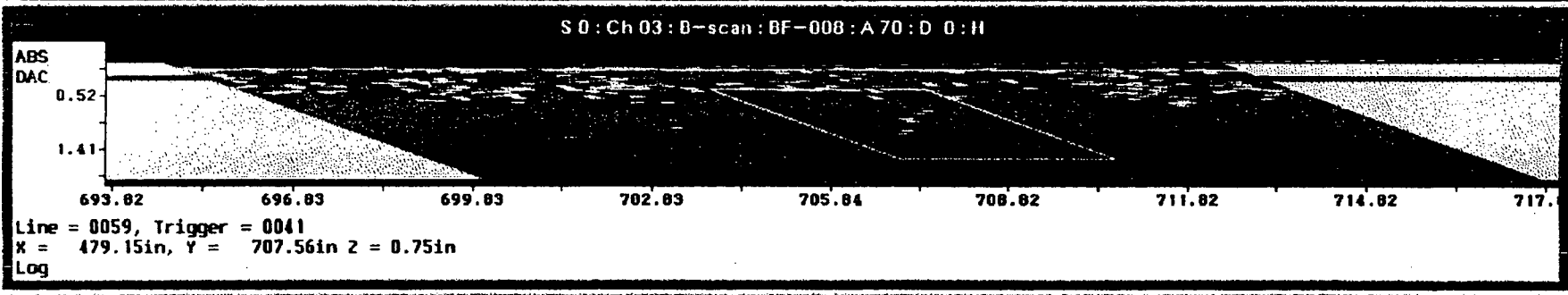
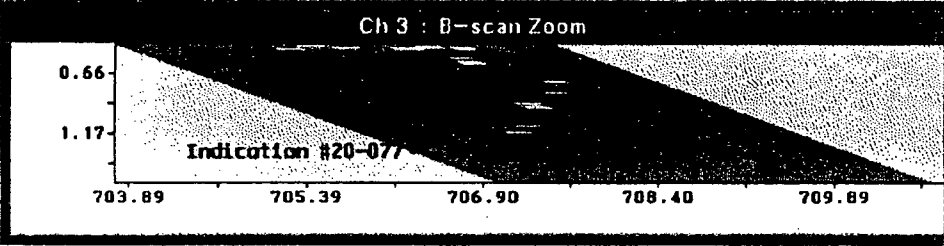
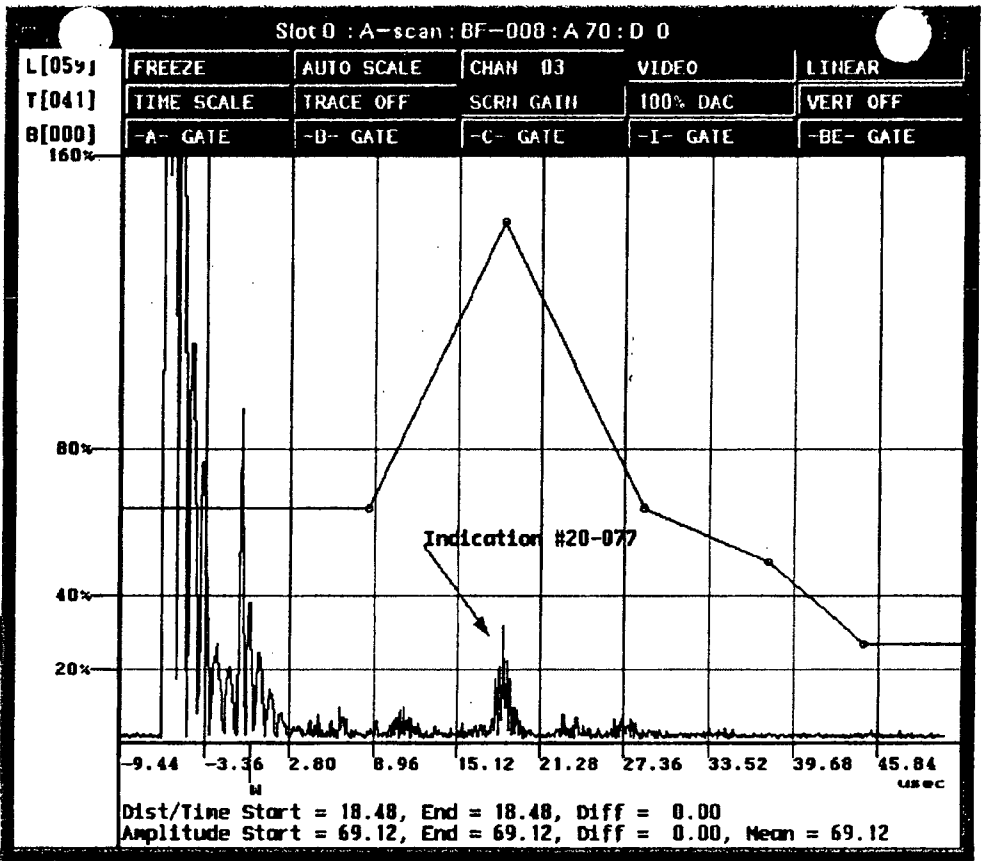
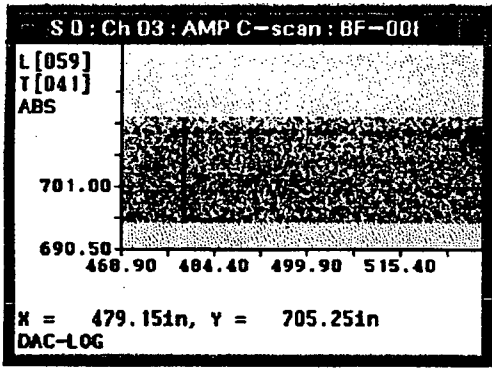
00324
Pg 252 of 291
R1151

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

DAC



Lower Ten
st>dump /max
3/20-077

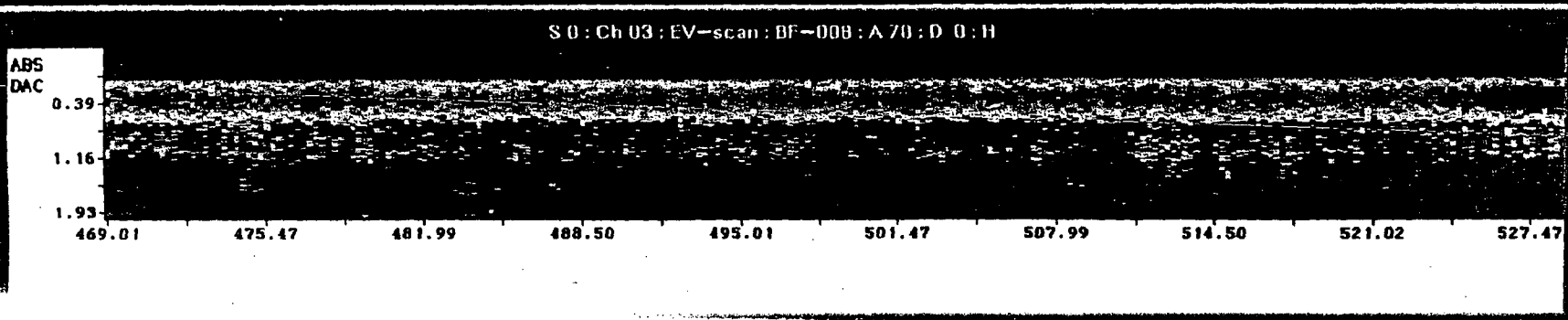
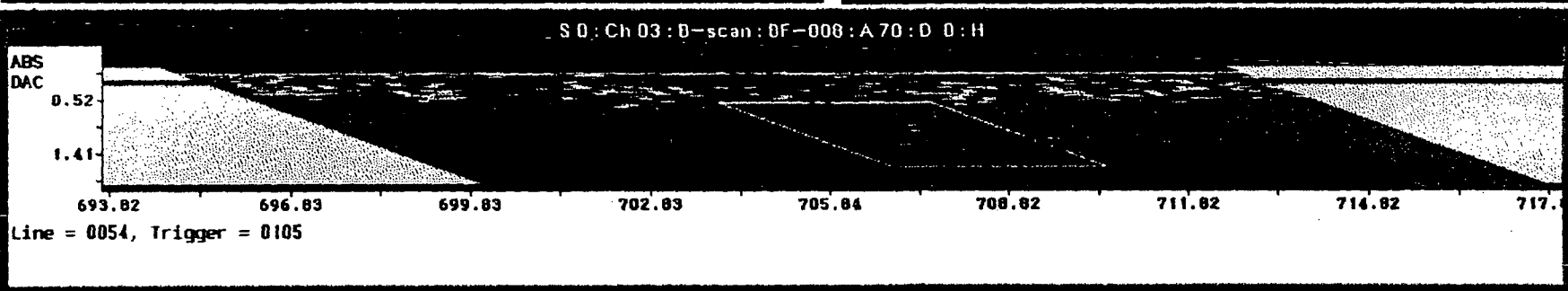
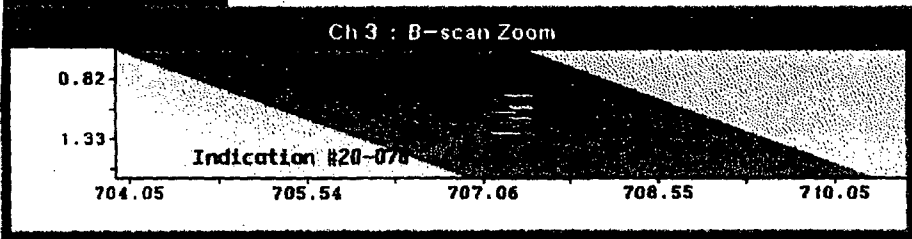
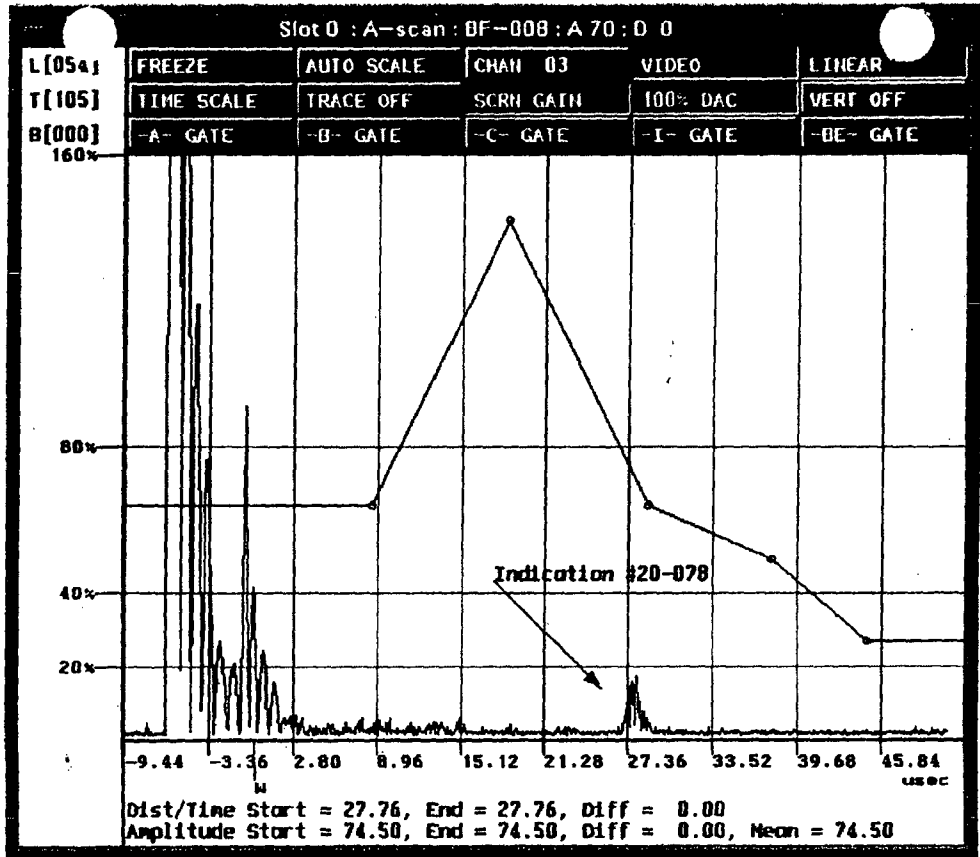
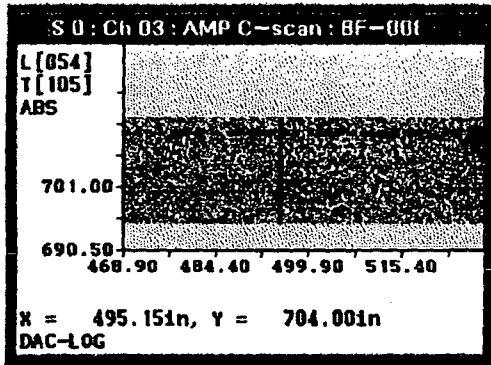
Pg 253 of 291
00325
R1151

S 0 : Scale

4
1.5
7.7
3.0
0.0
6.1
2.2
8.4
5.5
6.7
66.8
73.0
79.4
85.2
91.4

100%
50%
20%

DAC



Power Ten
st>dump /max
3/20-078

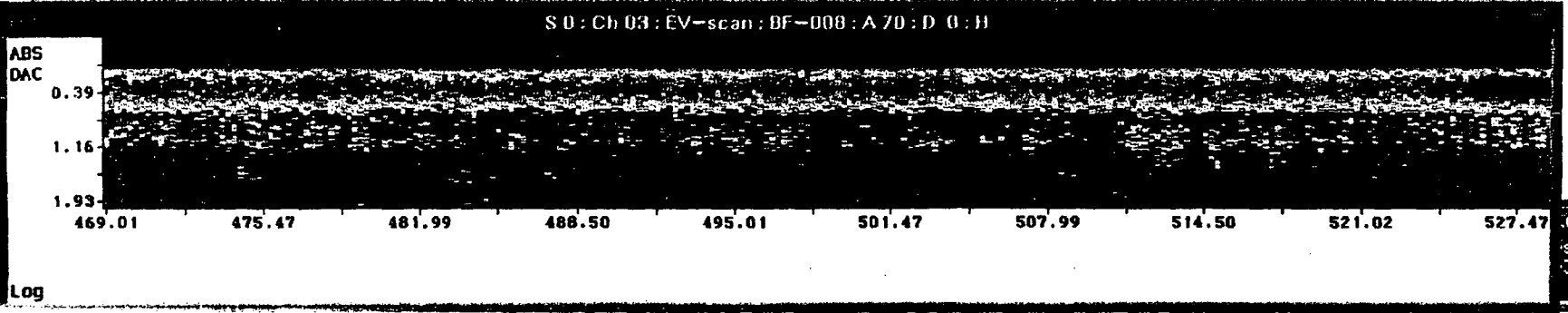
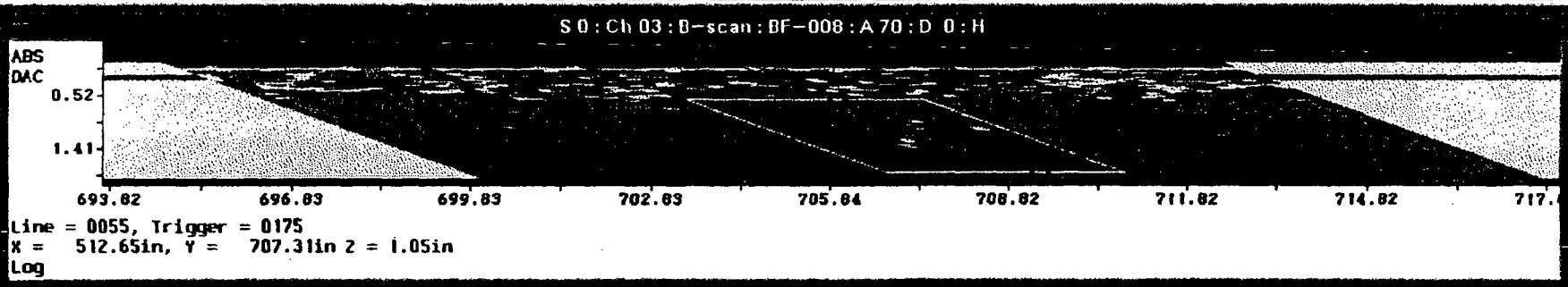
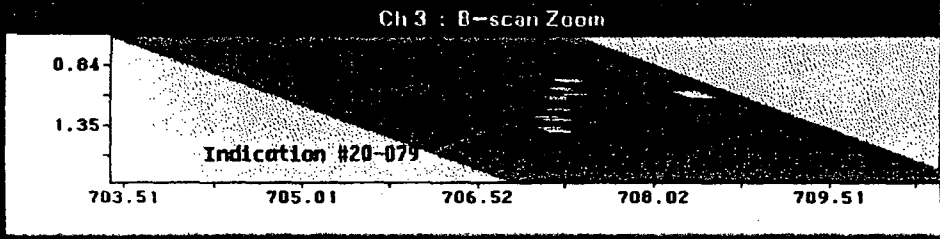
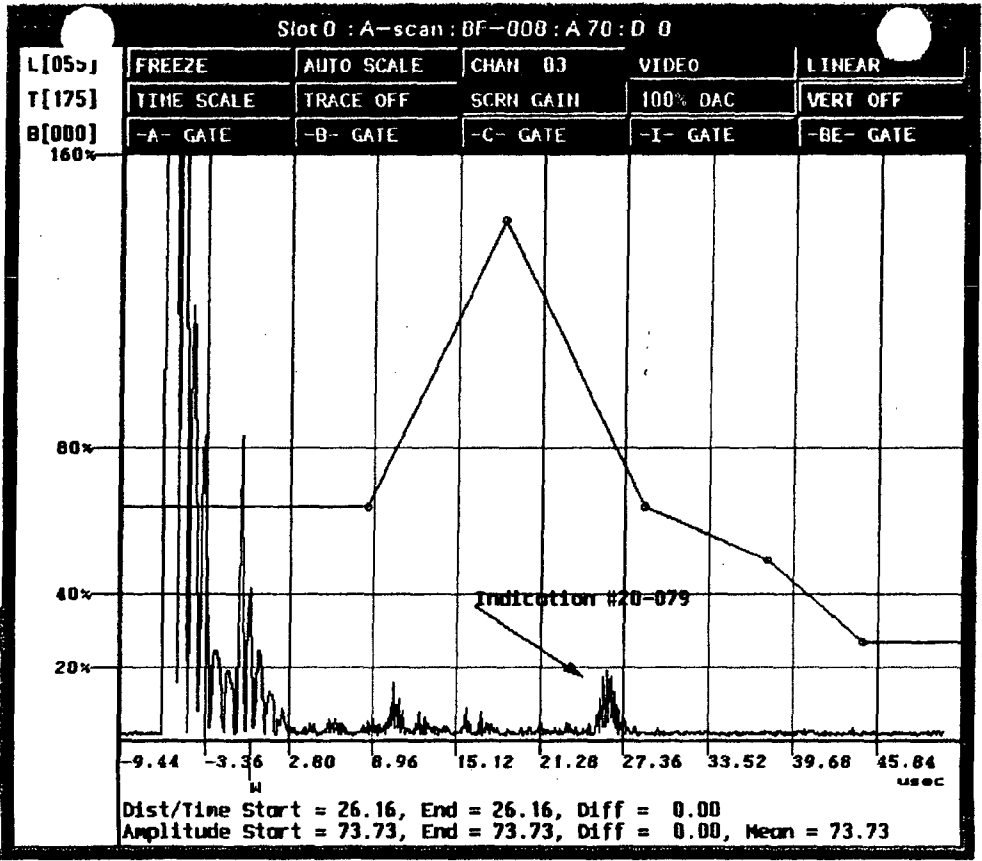
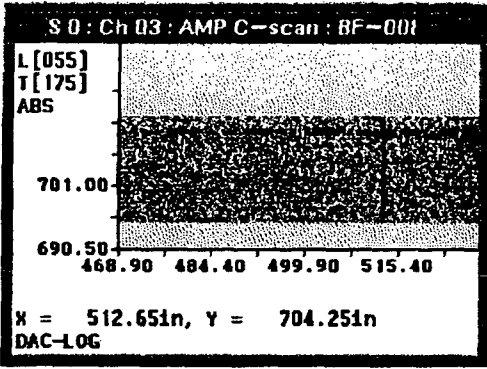
00326
R 1151
Pg 254 of 291

S0: Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

DAC



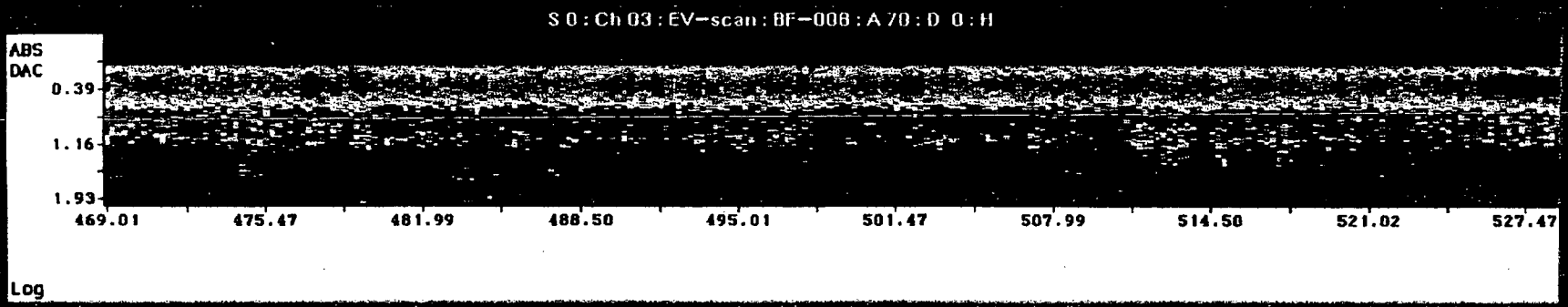
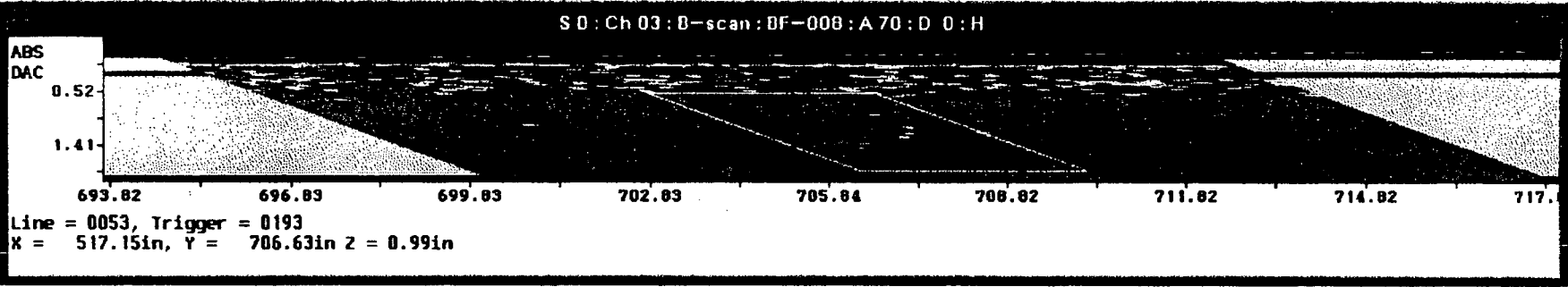
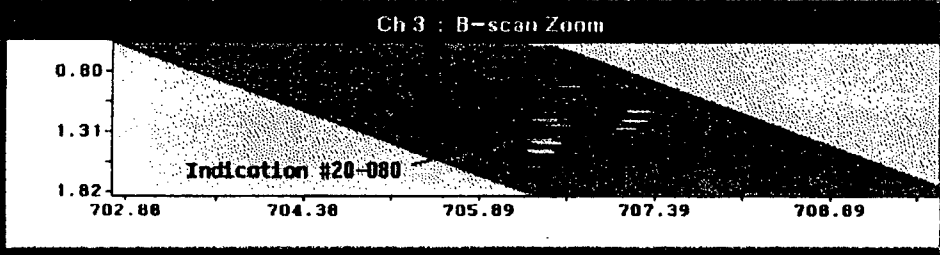
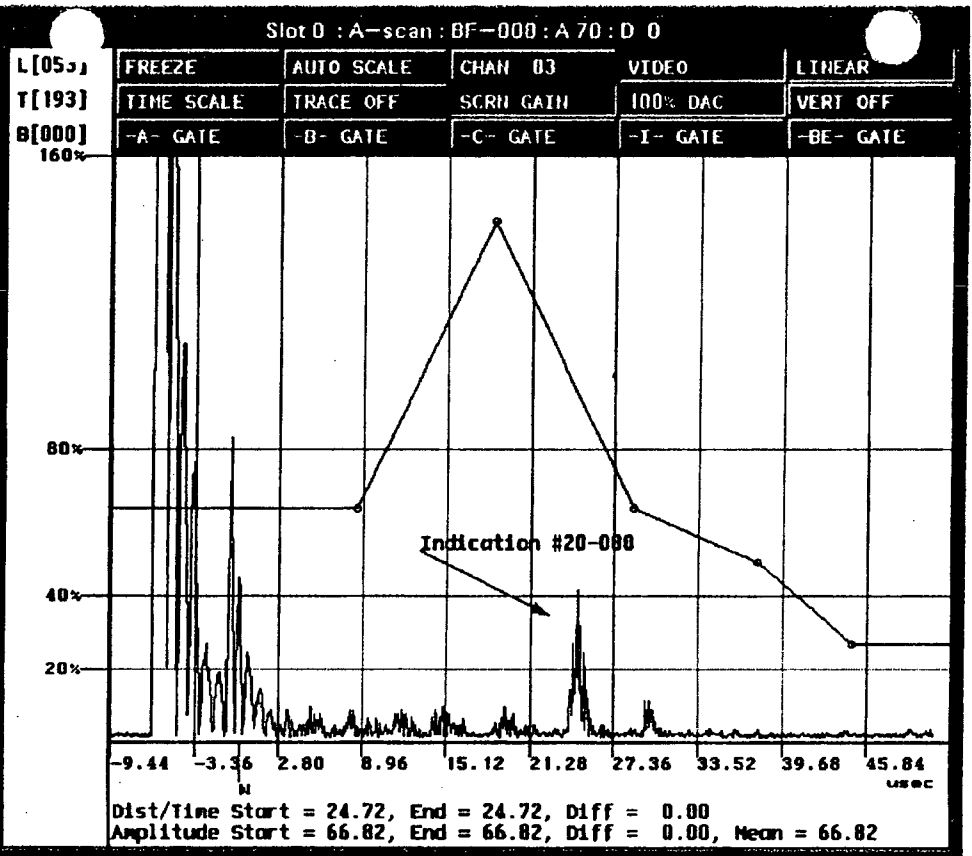
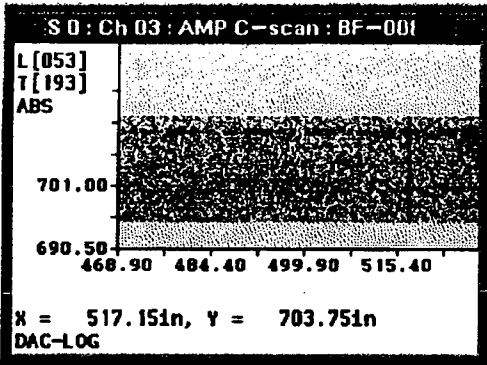
Lower Ten
st>dump /max
3/20-079

00327
Pg 255 of 291
R 1151

S 0 : Scale

5.4
11.5
17.7
23.0
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%



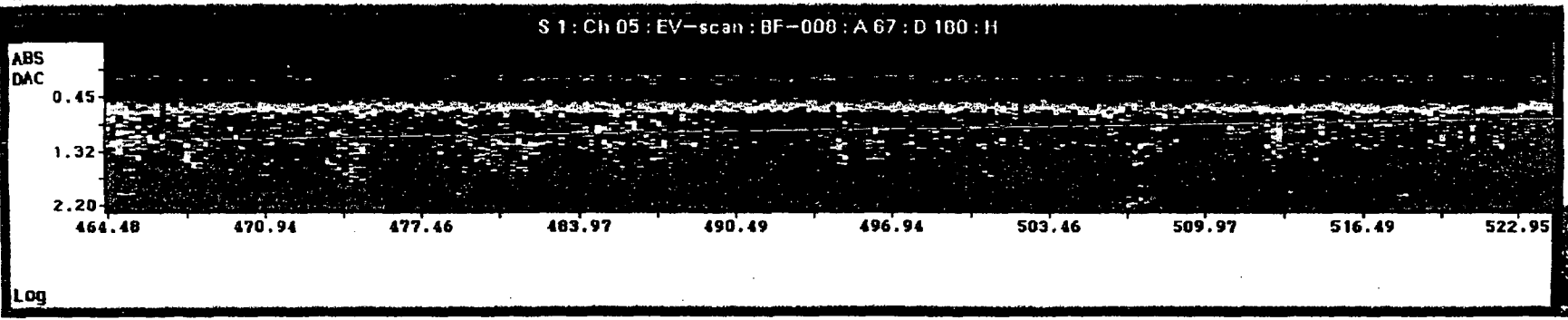
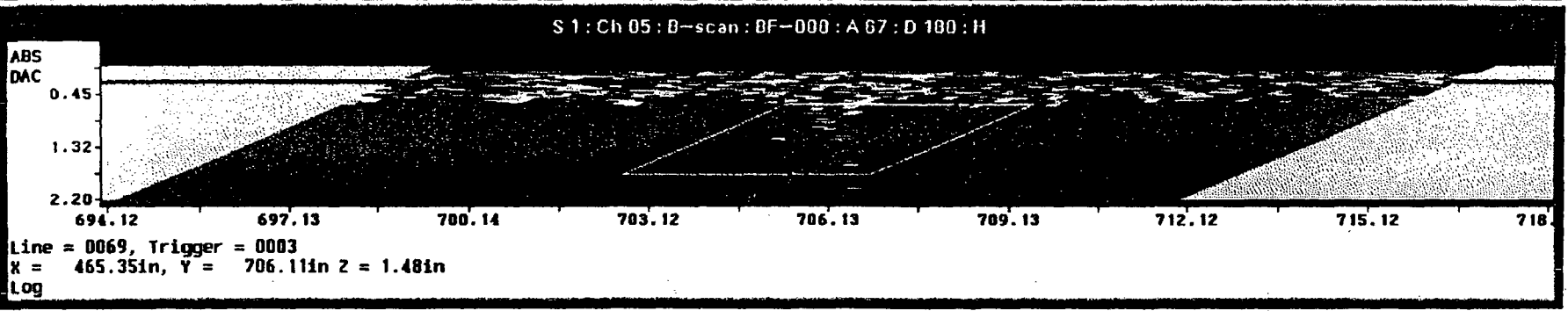
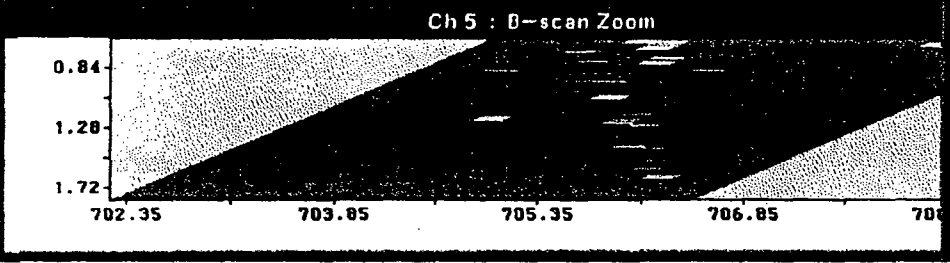
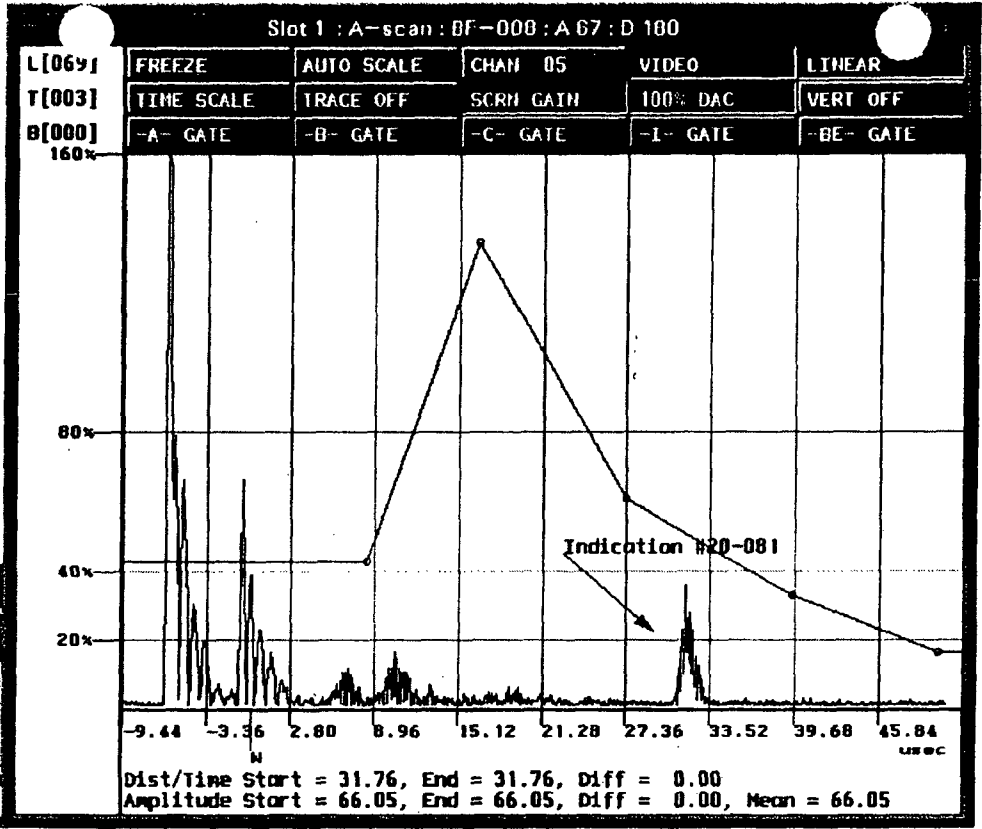
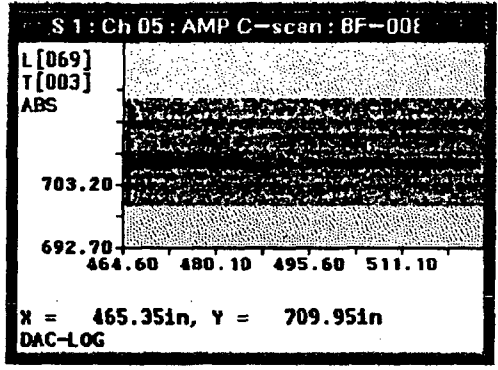
Lower Tern
st>dump /max
3/20-080

R 1151
Pg 256 of 291
00328

S 1: Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2

100%
50%
20%



Power Ten
est. dump / max
3/20-081

00329

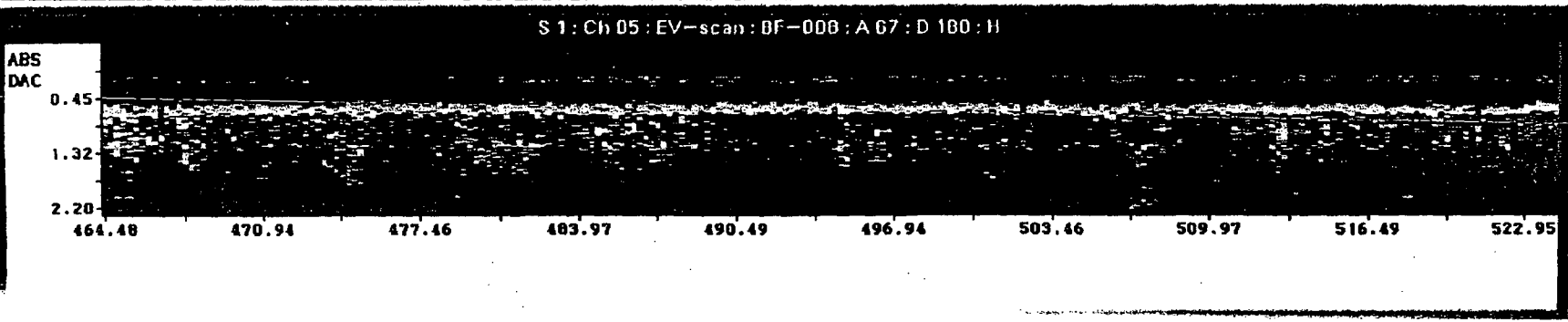
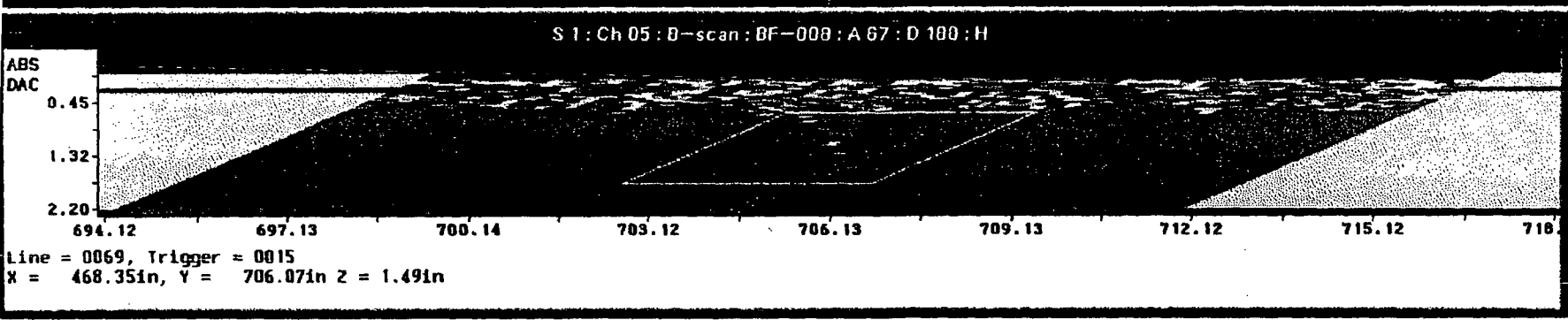
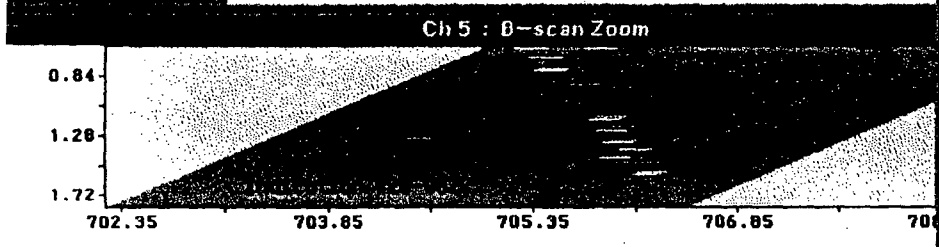
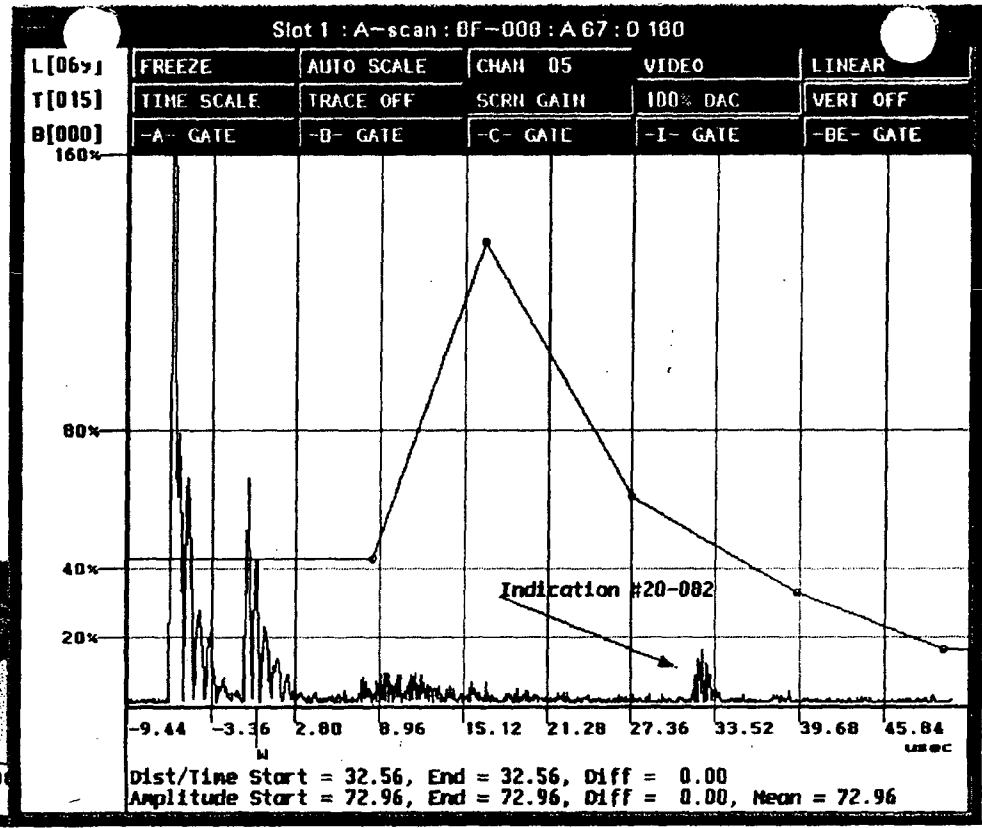
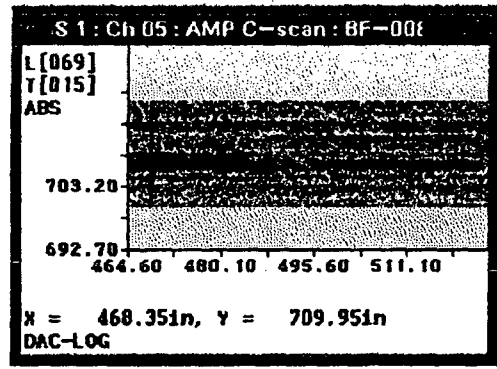
Rg 257 of 291

R 1151

S 1 : Scale

4
1.5
7.7
3.8
80.0
96.1
72.2
88.4
54.5
60.7
56.8
73.0
20.1
35.2

100%
50%
20%



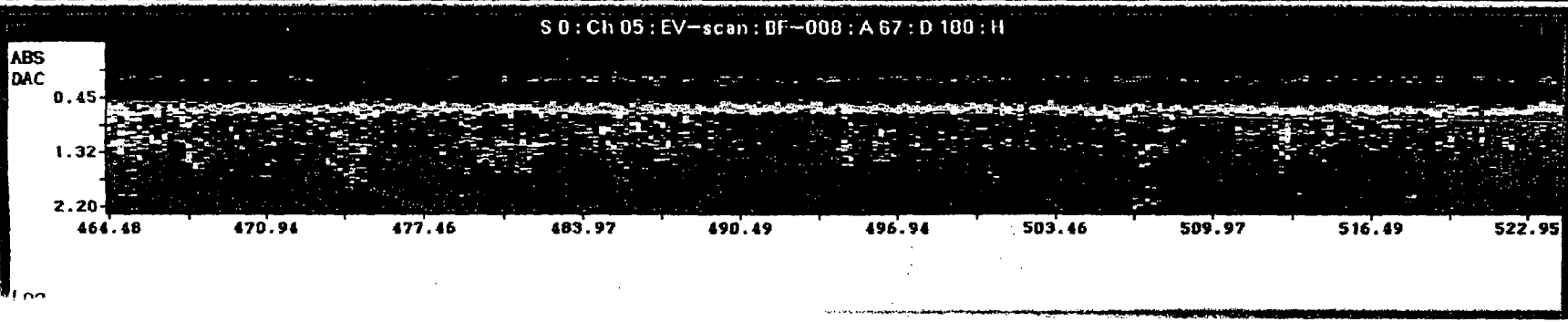
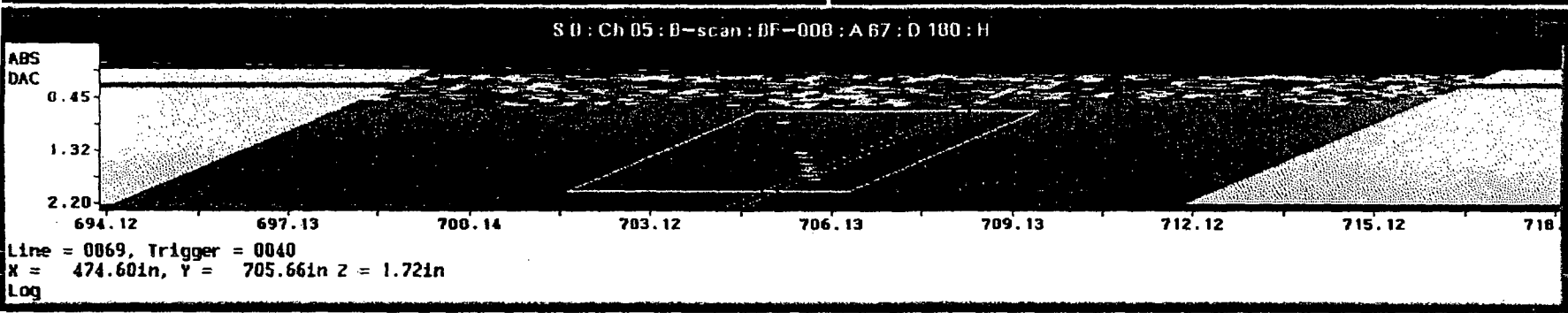
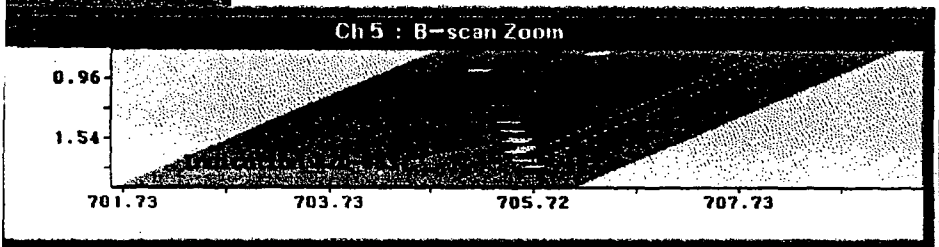
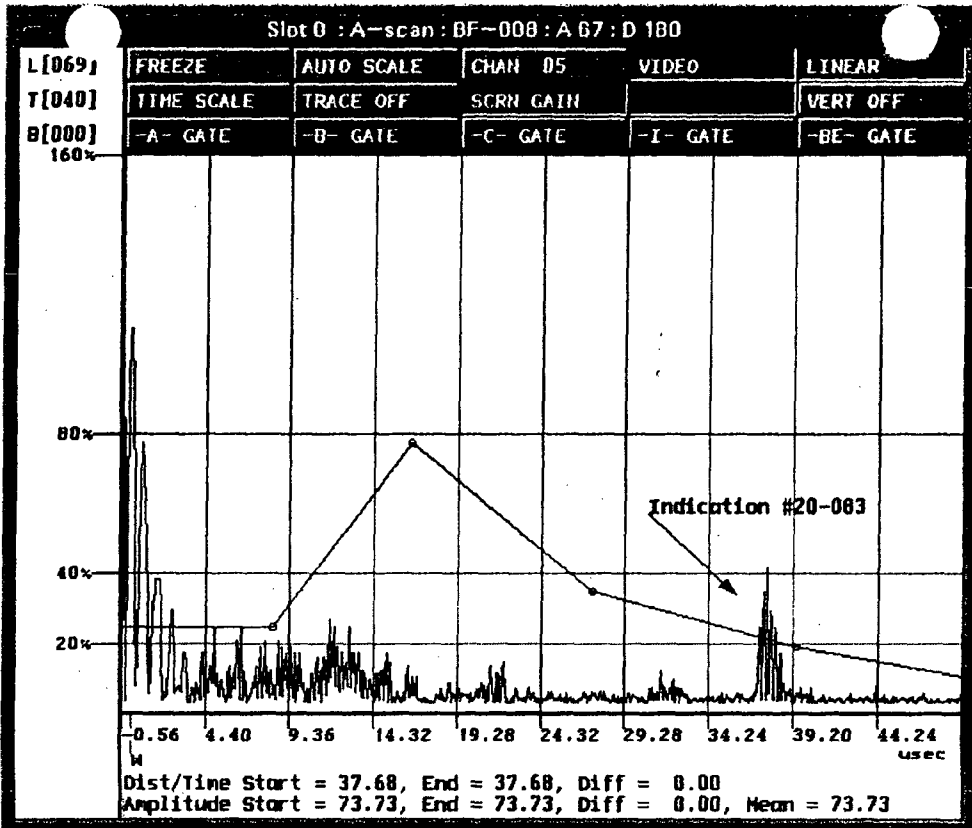
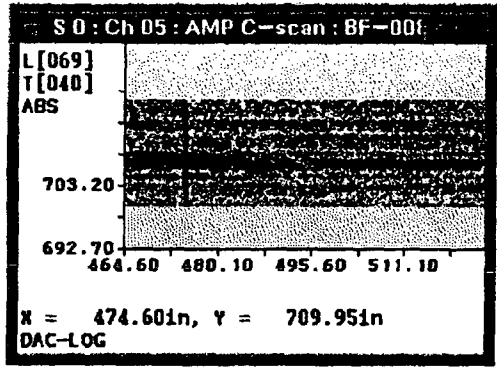
Lower Tern
st>dump /max
3/20-062

00330
R 1151
P9 258 of 291

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%



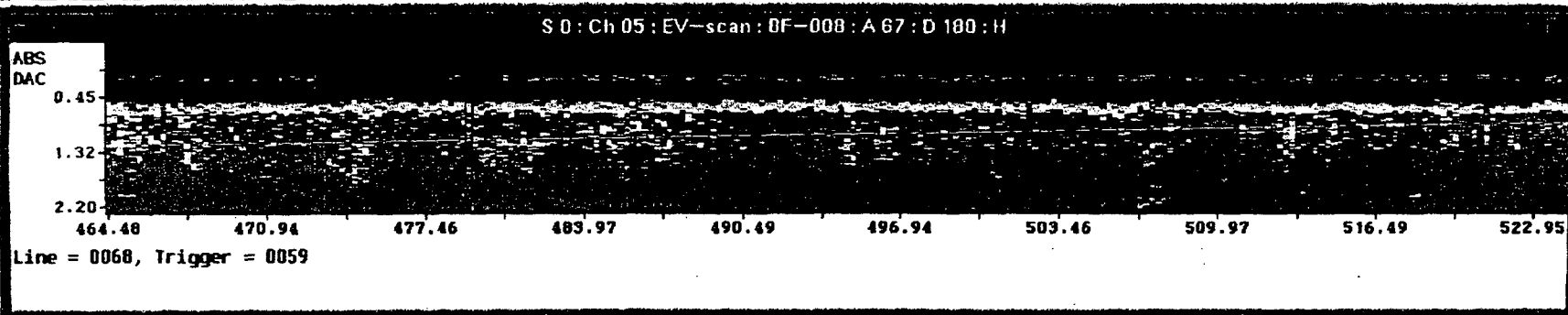
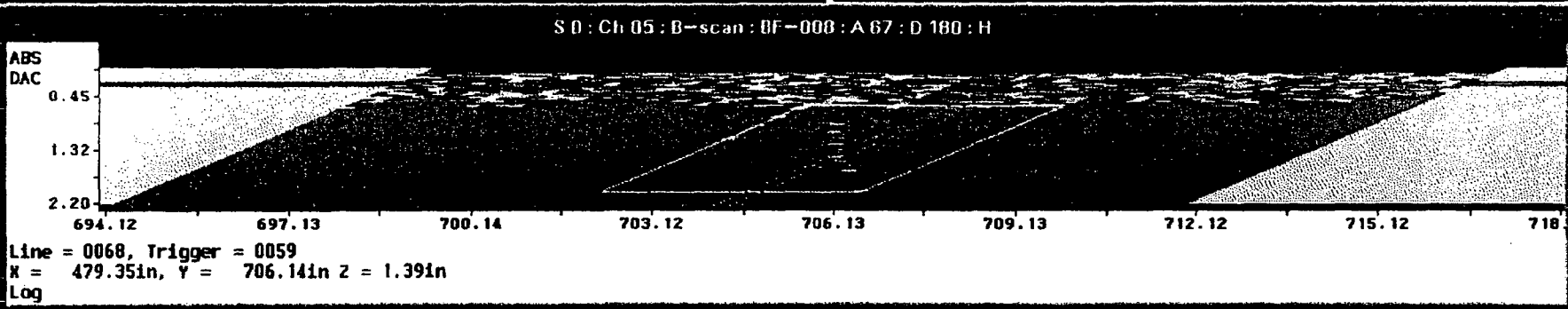
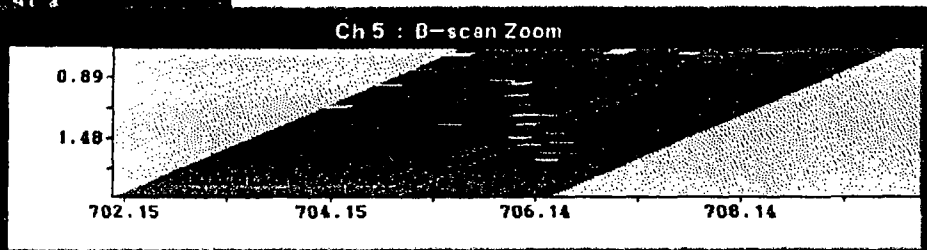
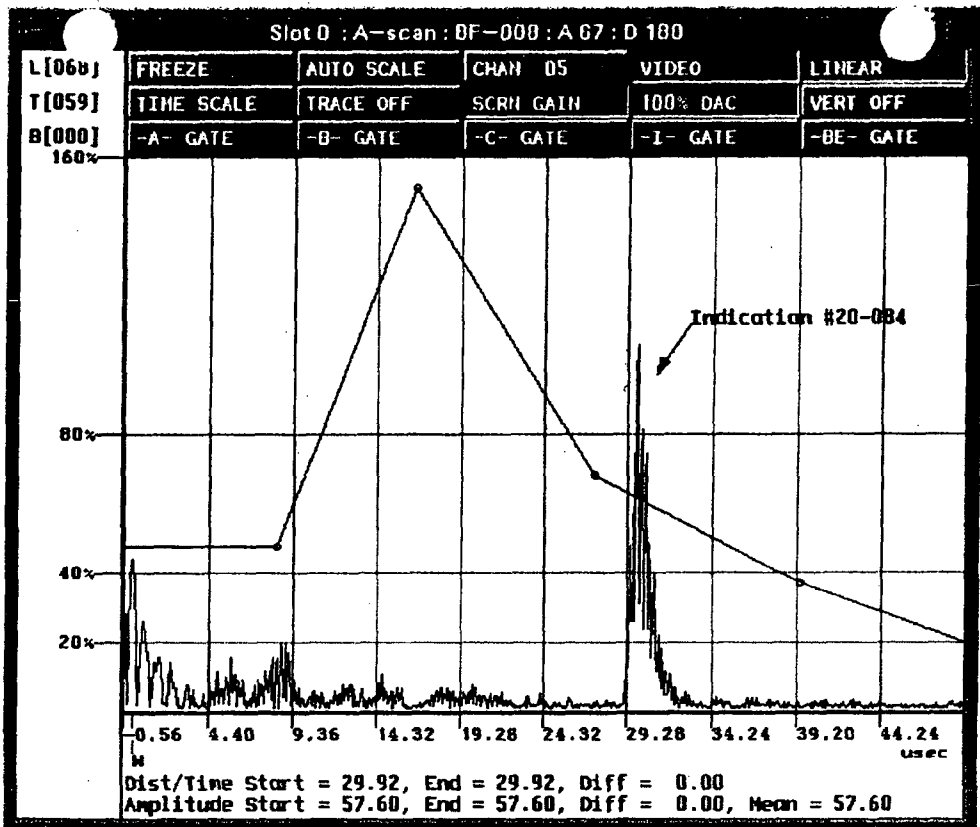
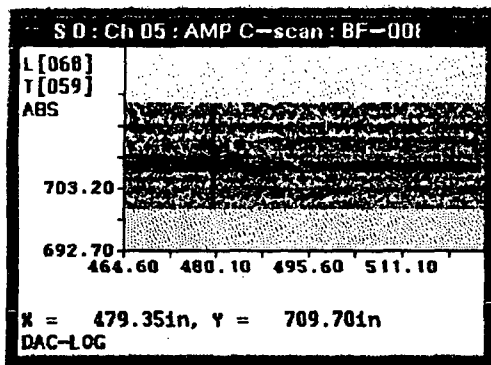
Lower Tern
lg[genis]/ld
/maxtor3/20
13

R 1151
Pg 259 of 291
00331

S D : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.0
73.0
79.1
85.2
91.4

100%
50%
20%



Lower Ten
ly[geris]/lo
st>dump /max
3/20-084

00332

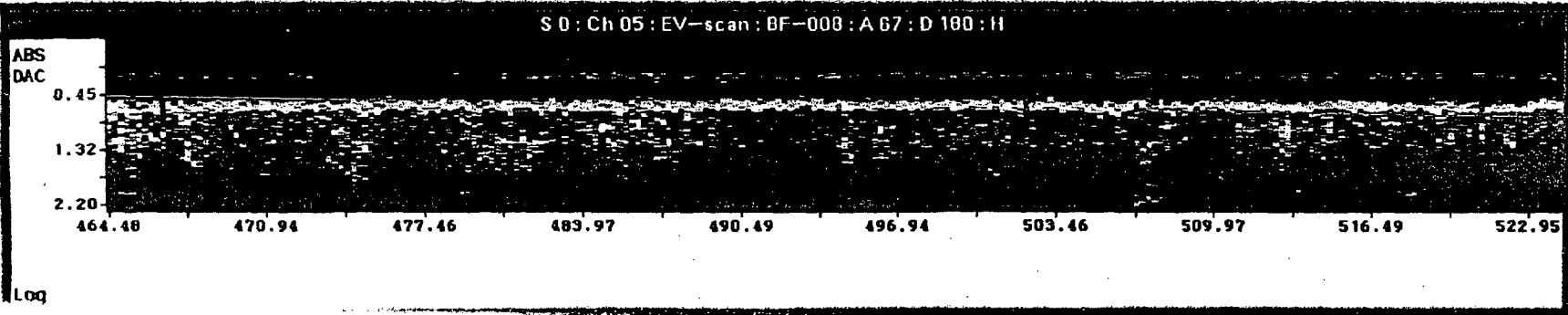
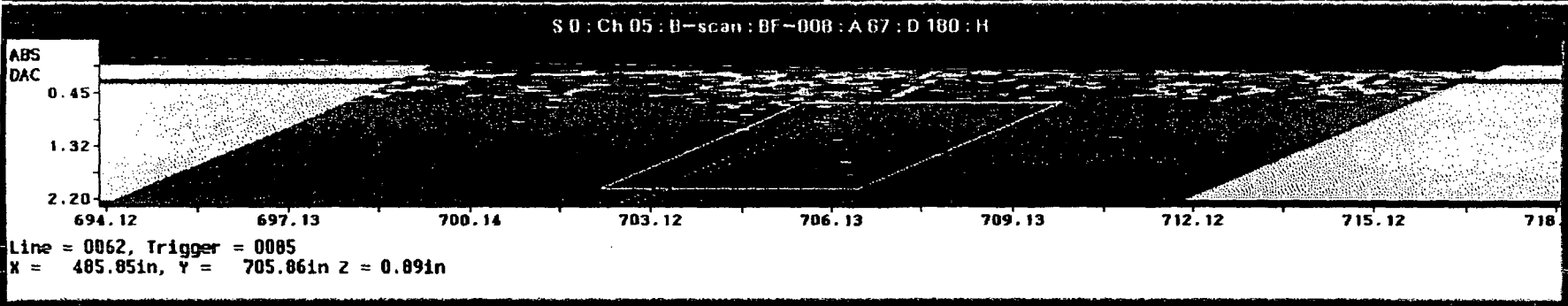
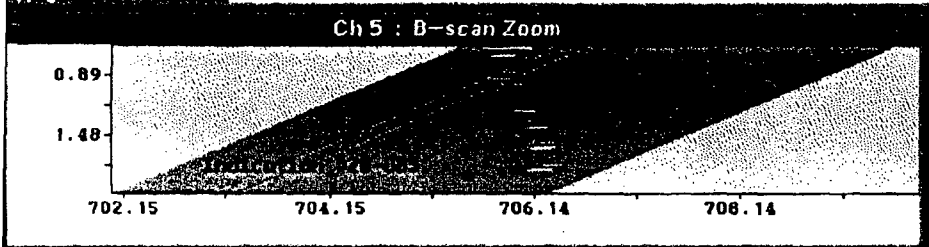
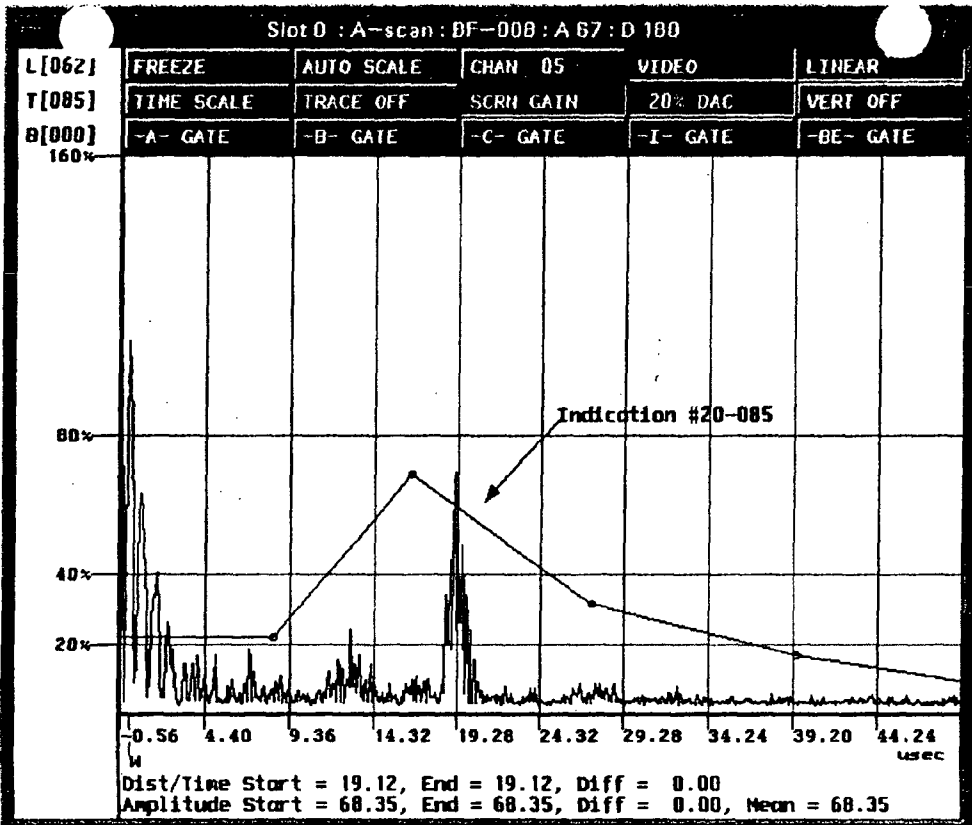
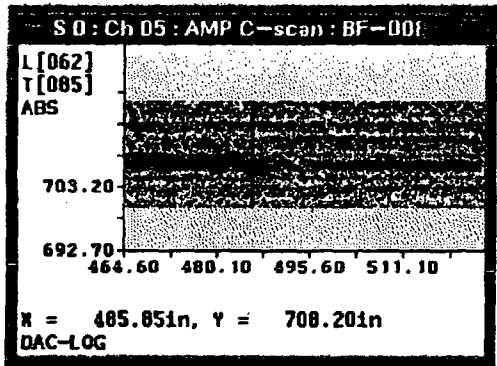
Pg 200 of 291

R 1151

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%



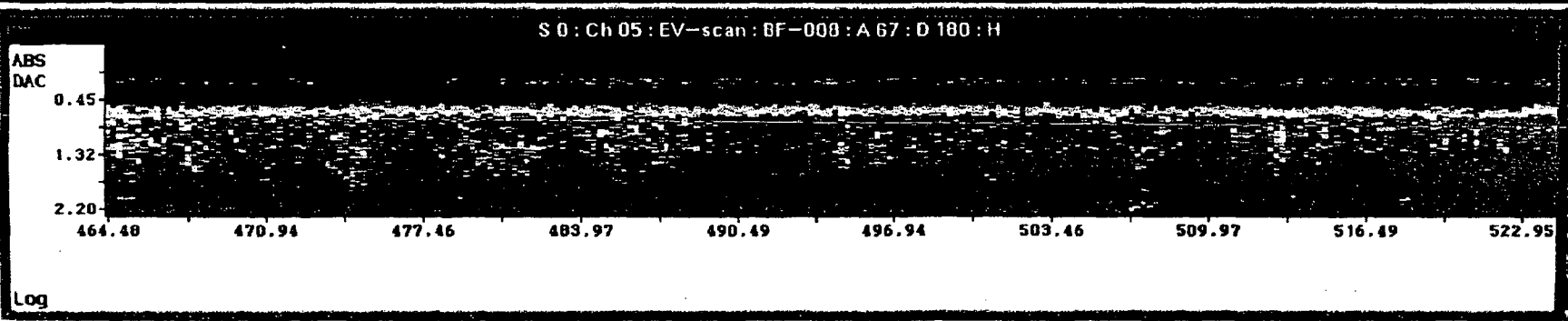
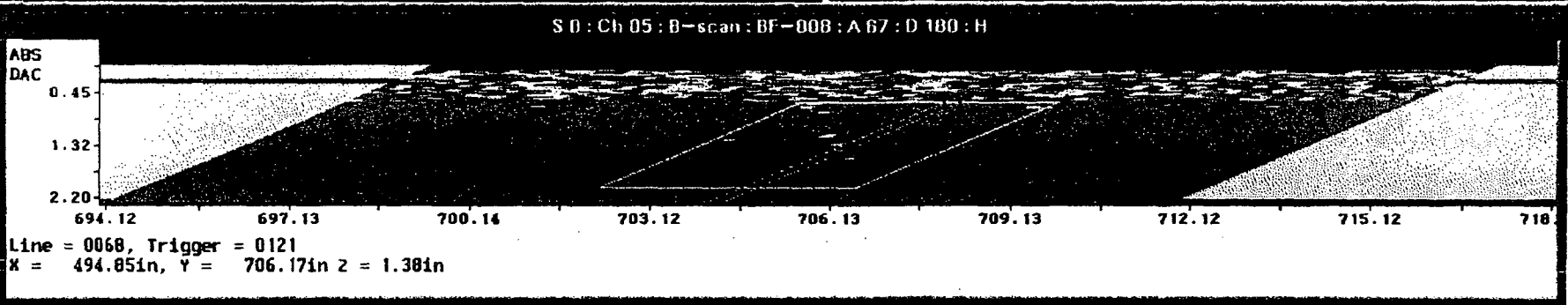
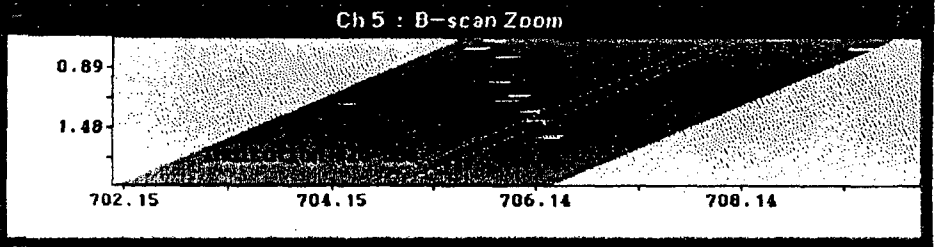
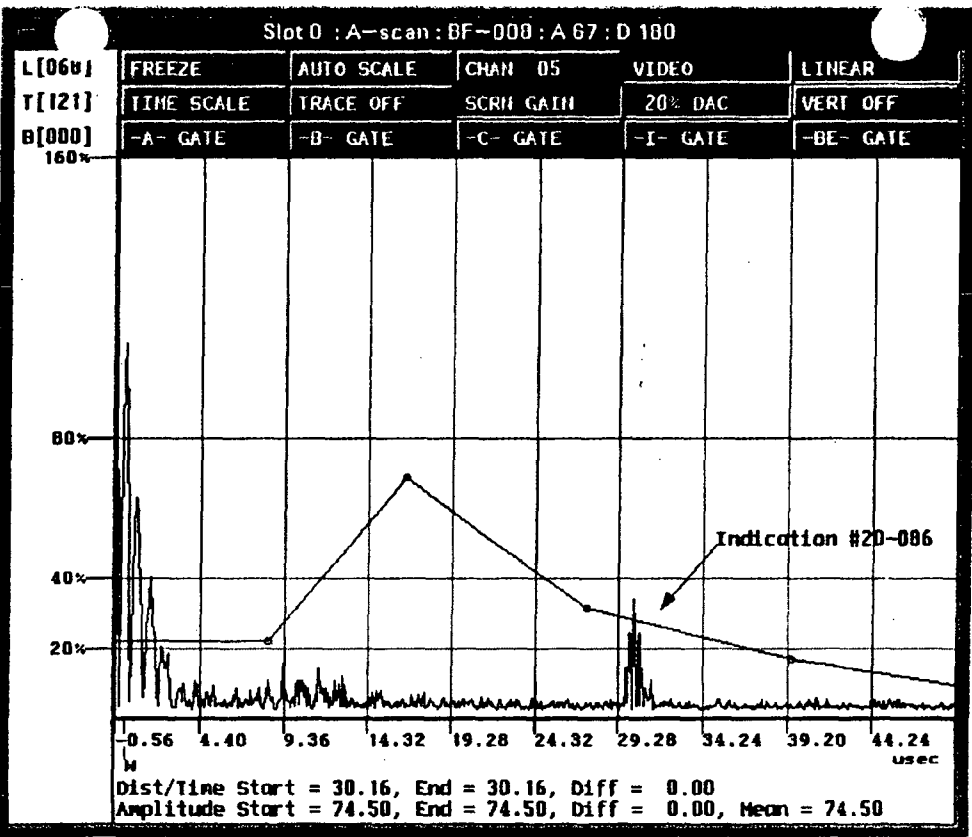
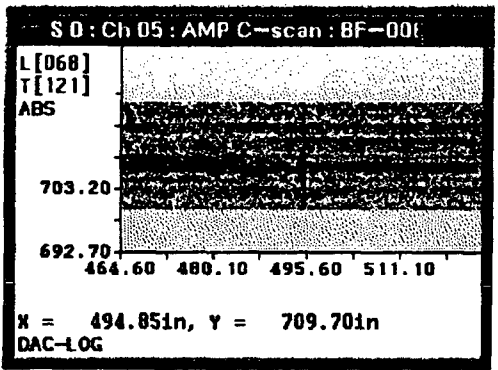
ower Ter
ly[geris]/lo
st>dump /max
3/20-085

00333
R1151
Pg 201 of 291

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%



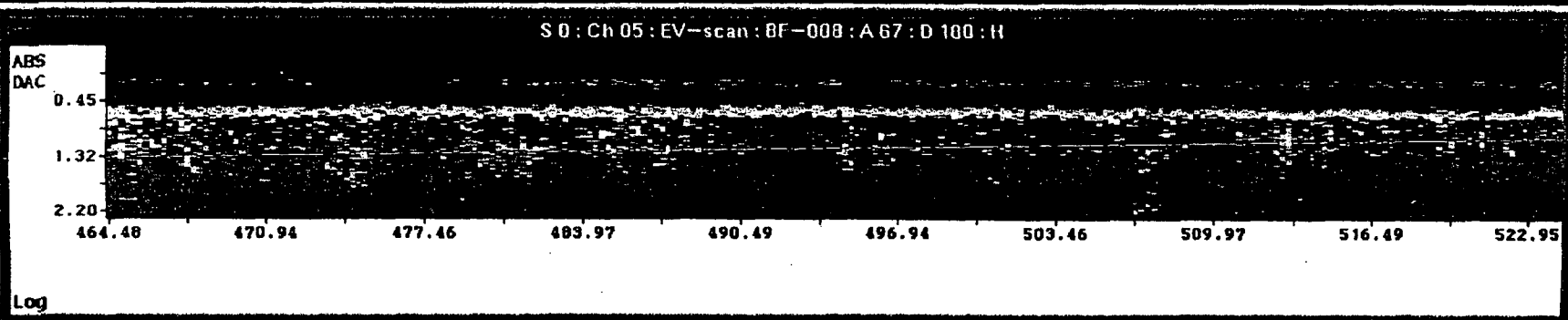
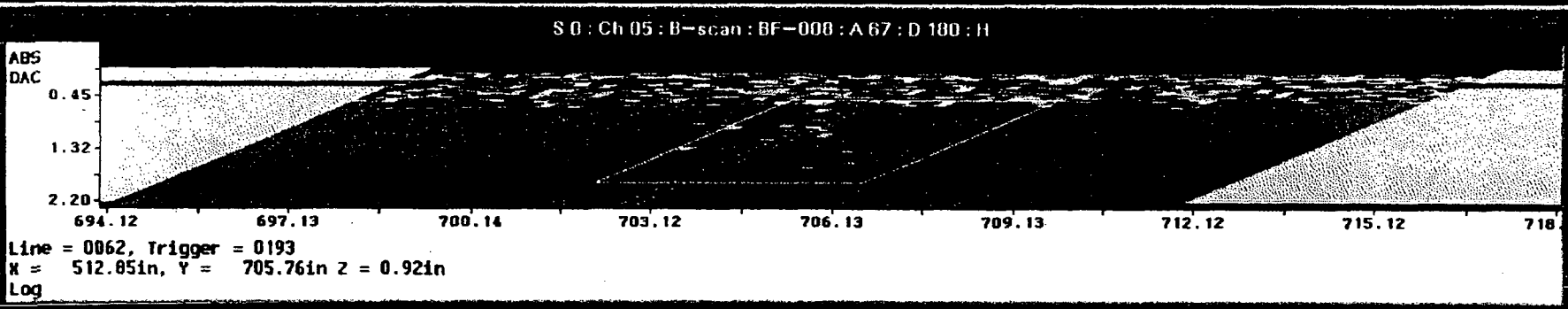
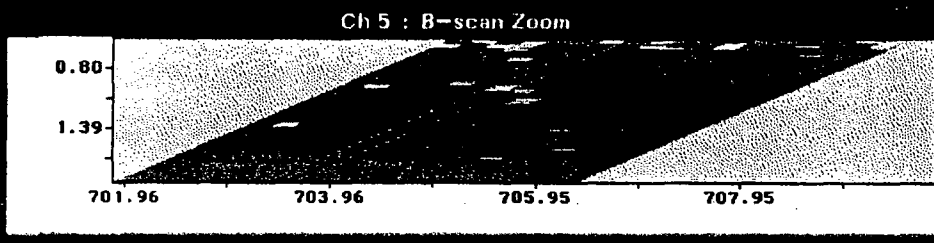
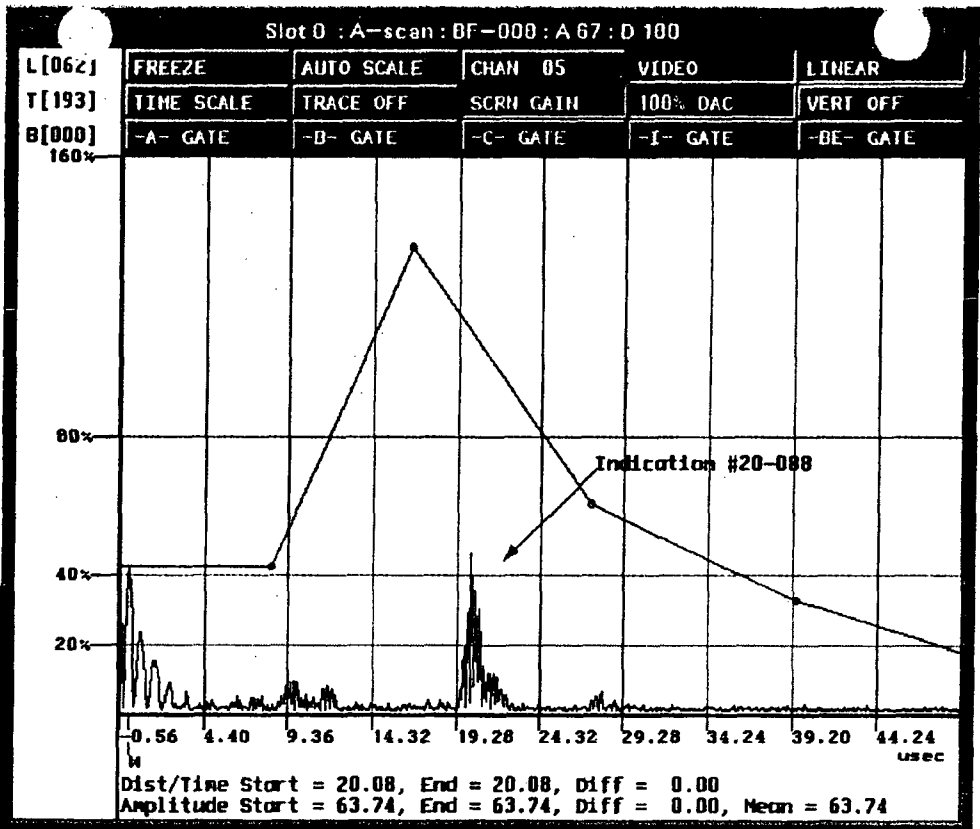
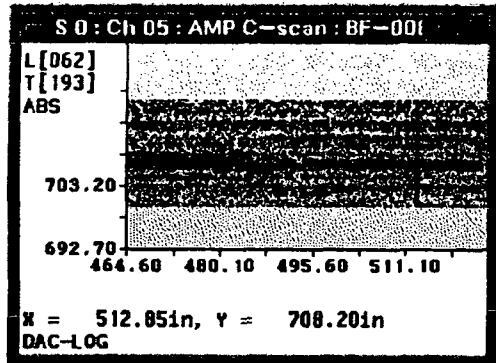
Power Ten
ly[geris]/lo
st>dump /max
3/20-086

R 1151
Pg 262 of 291
00334

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%



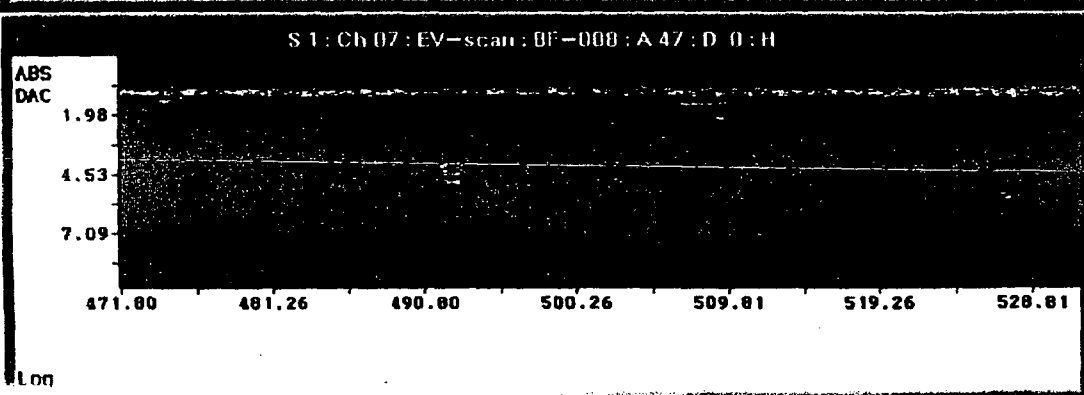
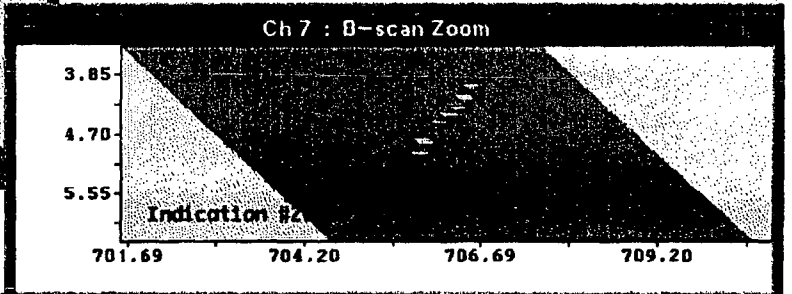
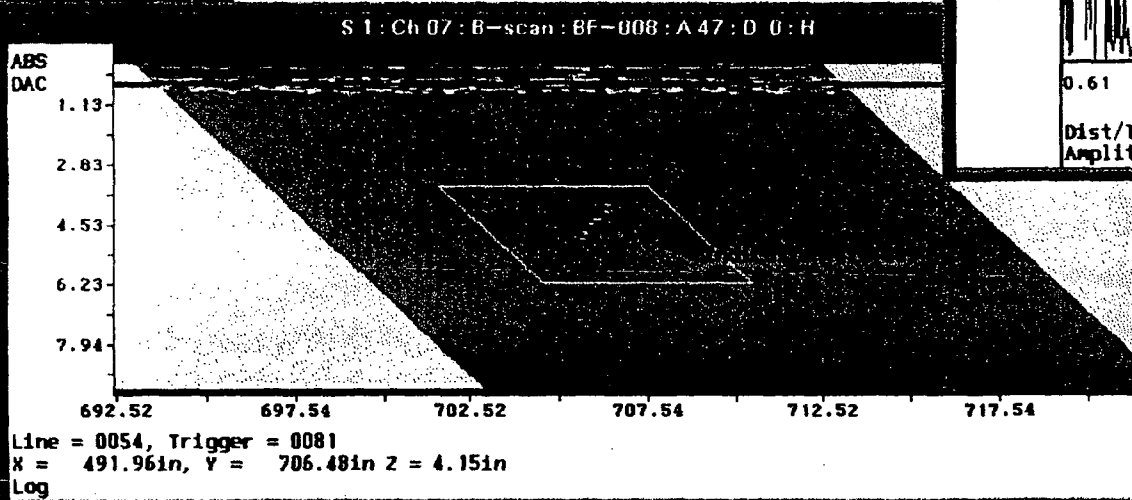
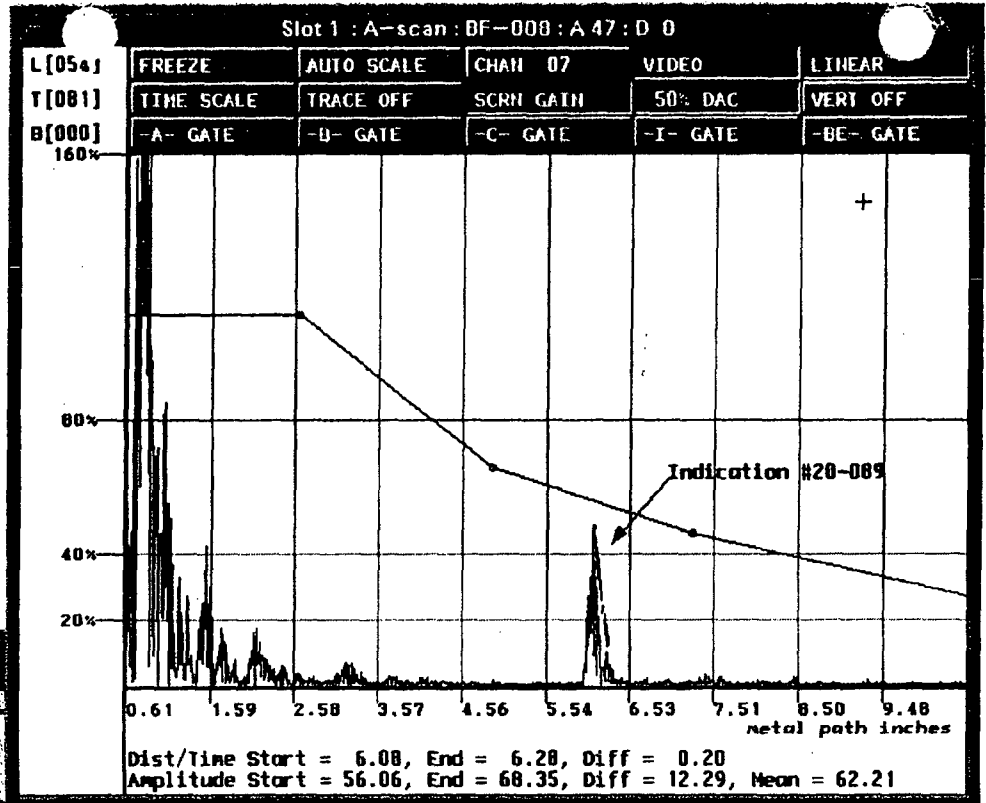
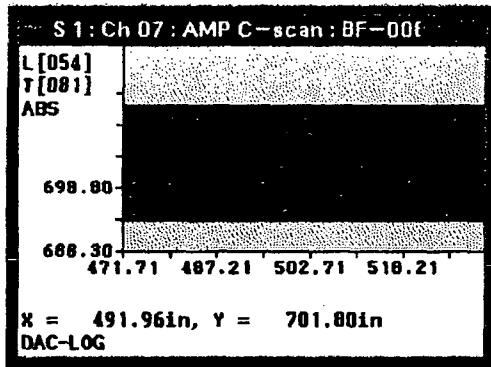
ower.Ten
ly[geris]/lo
st>dump /max
3/20-088

00336
R1151
Pg 269 of 291

S 1 : Scale

5.4
11.5
17.7
23.0
30.0
36.1
42.2 100%
48.4 50%
54.5 20%
60.7
66.8
73.0
79.1
85.2
91.4

DAC



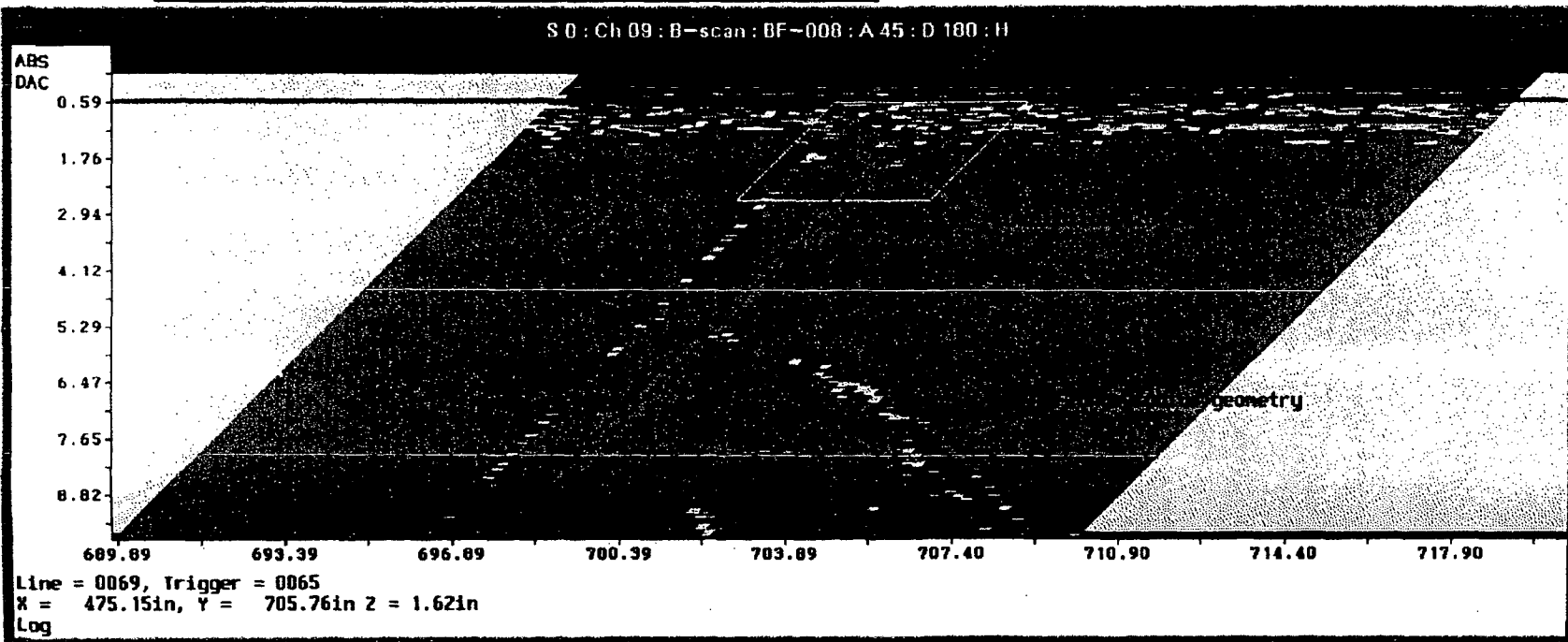
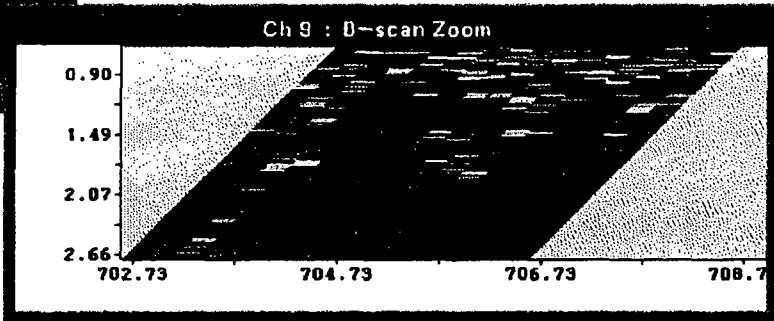
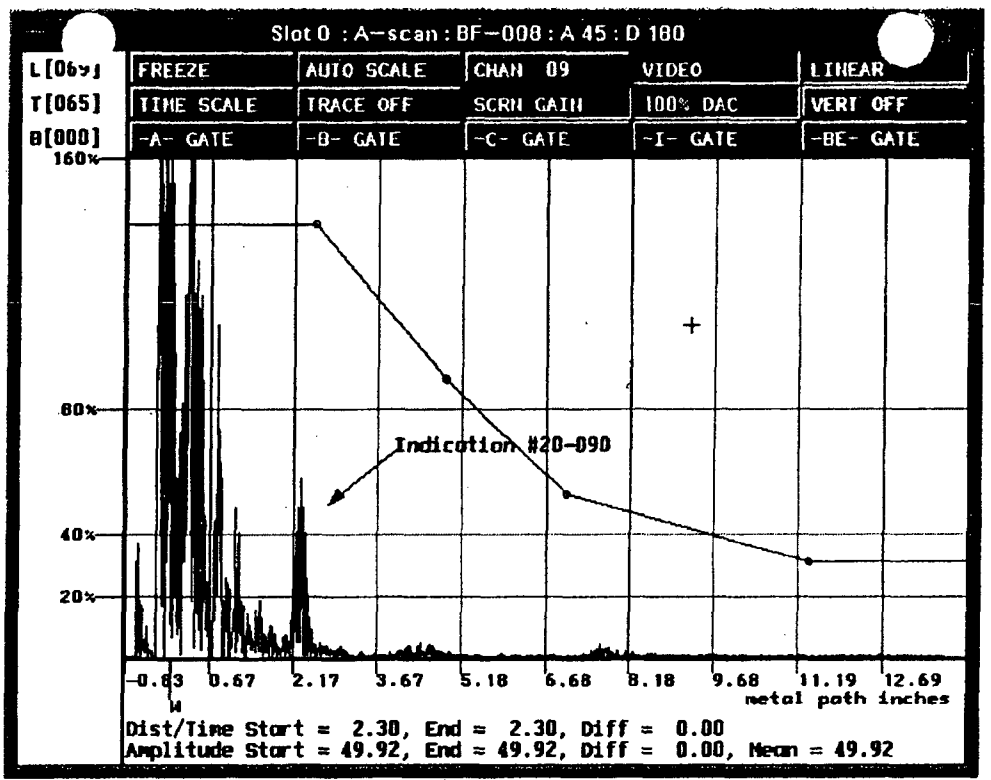
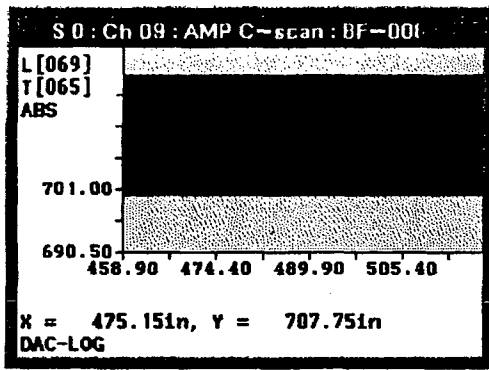
Lower Ter
curlygenis/lo
/test/dump /max
tor3/20-089

00337

R 1151
Pg 265 of 291

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2 100%
48.4 50%
53.5 20%
60.7
66.8
73.0
79.1
85.2
91.4

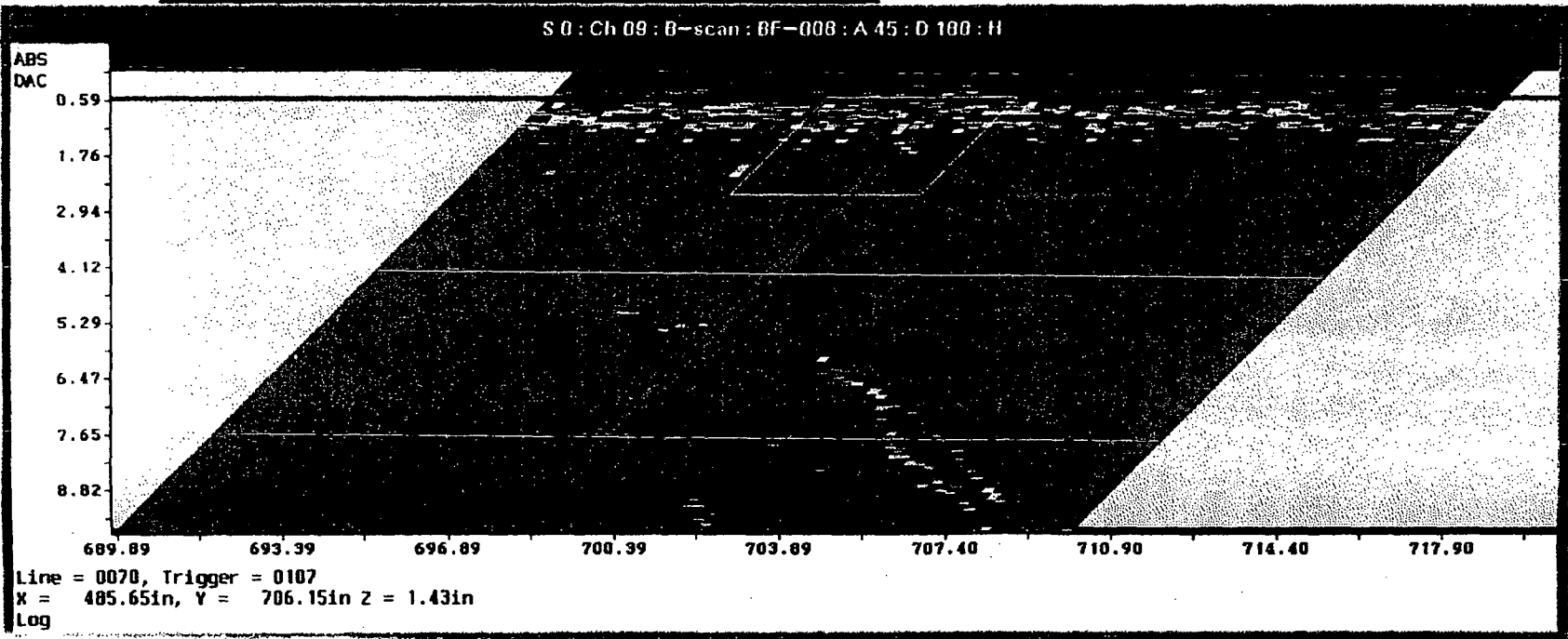
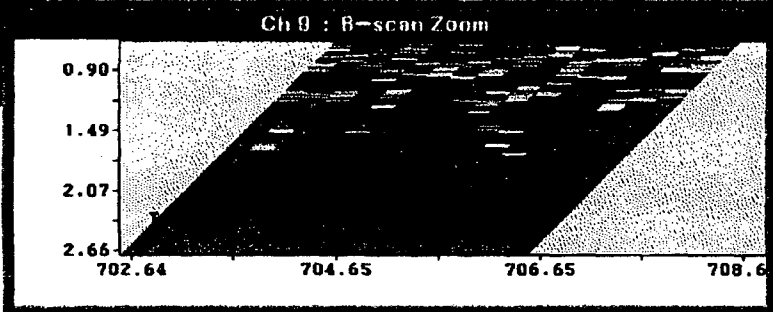
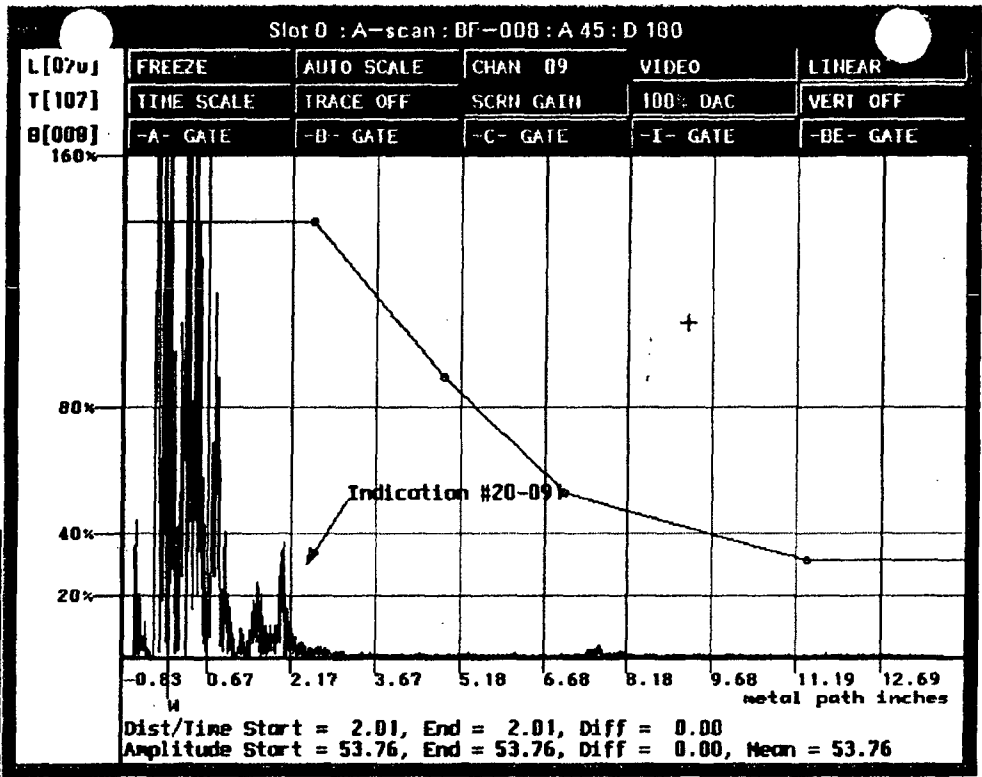
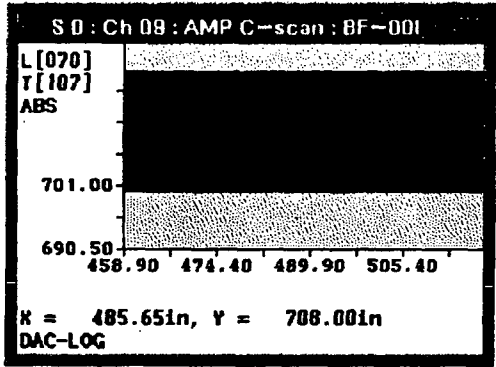


Lower Ter
curly[geris]/lo
/test>dump /max
tor3/20-090

R 1151
Pg 266 of 291
00338

S O : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2 100
48.4 50
54.5 20
60.7
66.8
73.0
79.1
85.2
91.4



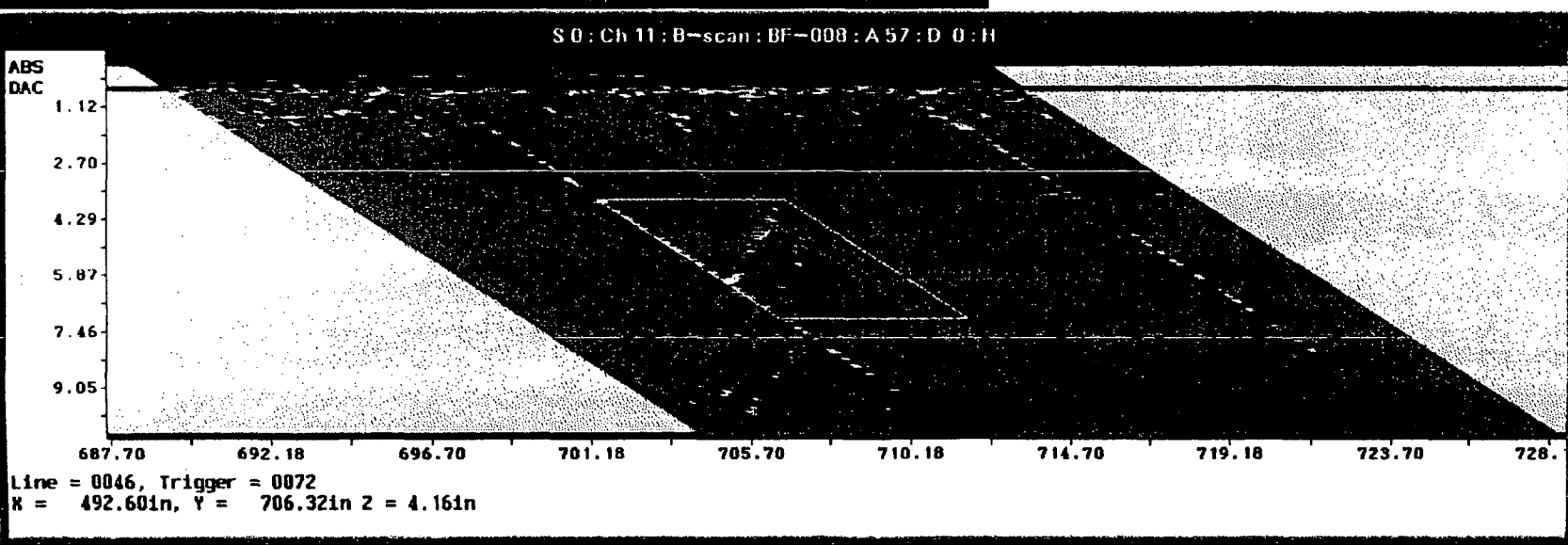
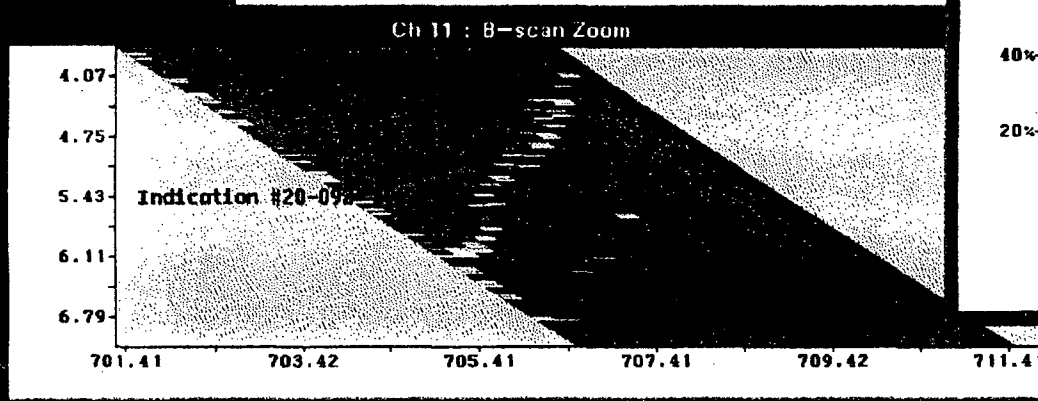
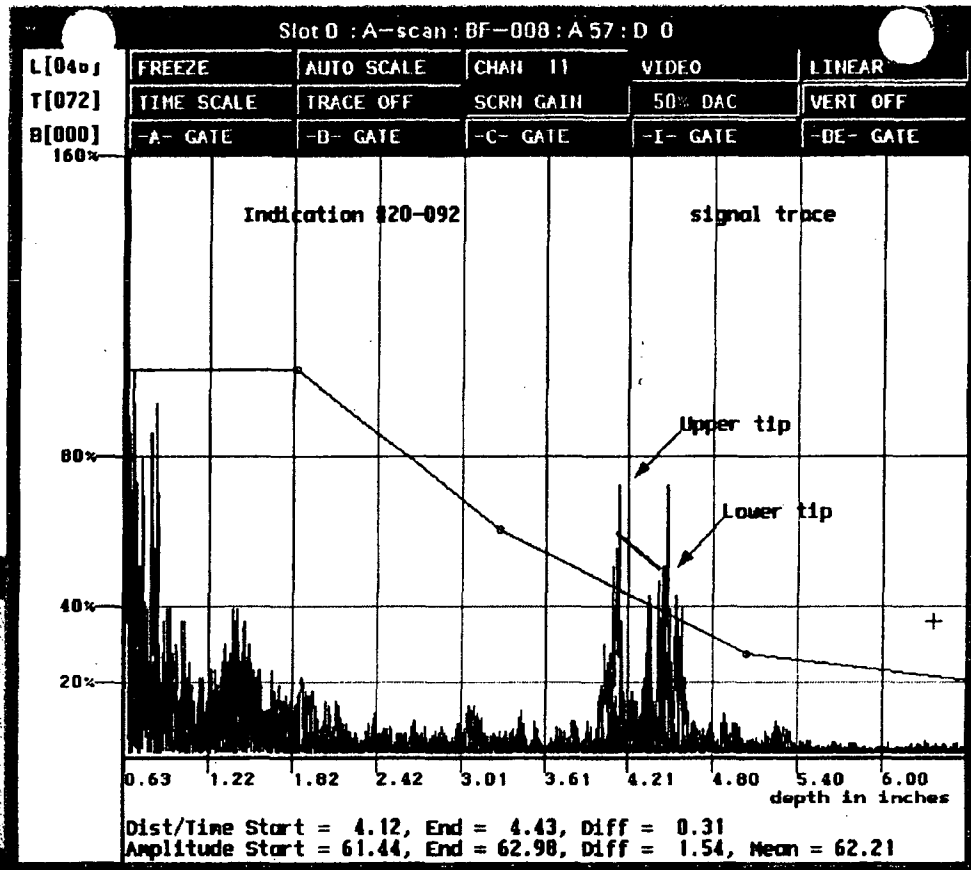
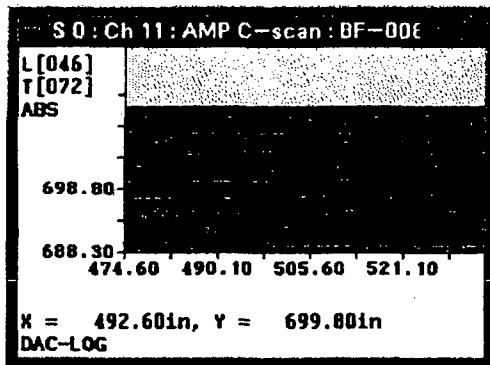
Lower Tern
curly[geris]/lc
/test>dump /max
tor3/20-091

R 1151
Pg 26 of 291
00339

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2

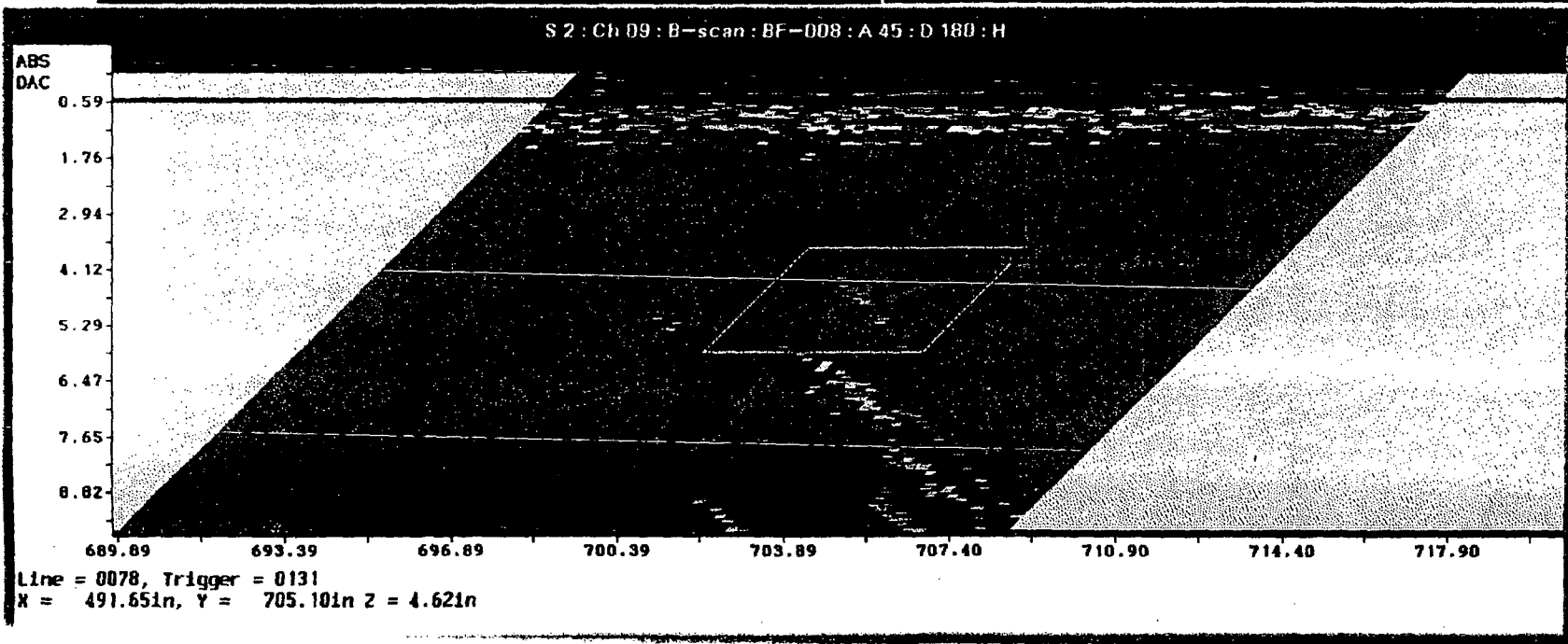
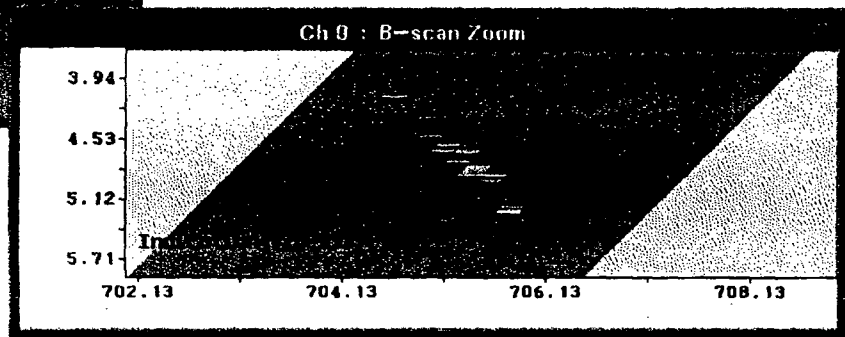
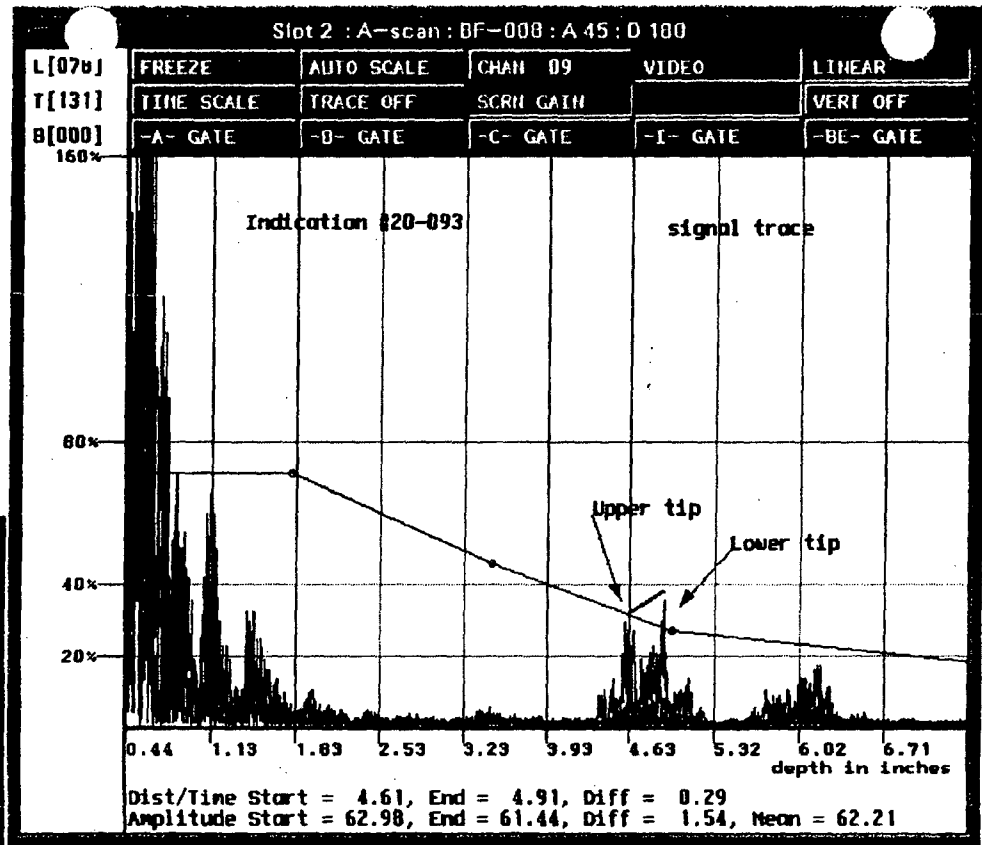
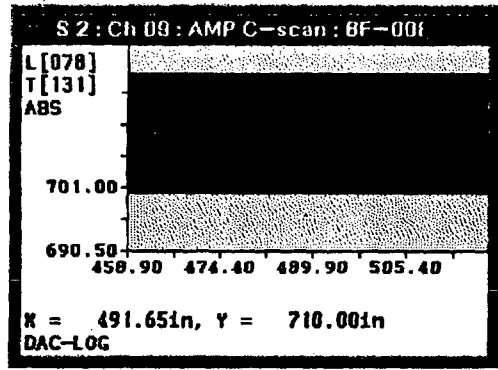
100%
50%
20%



Lower Ten
curly[geris]/lo
/test>dump /max
tor3/20-092

Pg 268 of 291
00340
R 1151

- S 2 : Scale
- 5.4
 - 11.5
 - 17.7
 - 23.8
 - 30.0
 - 36.1
 - 42.2
 - 48.4
 - 54.5
 - 60.7
 - 66.8
 - 73.0
 - 79.1
 - 85.2
 - 91.4
- 100%
50%
20%



Lower Ten
curlig[eris]/lo
/test>dump /max
tor3/20-093

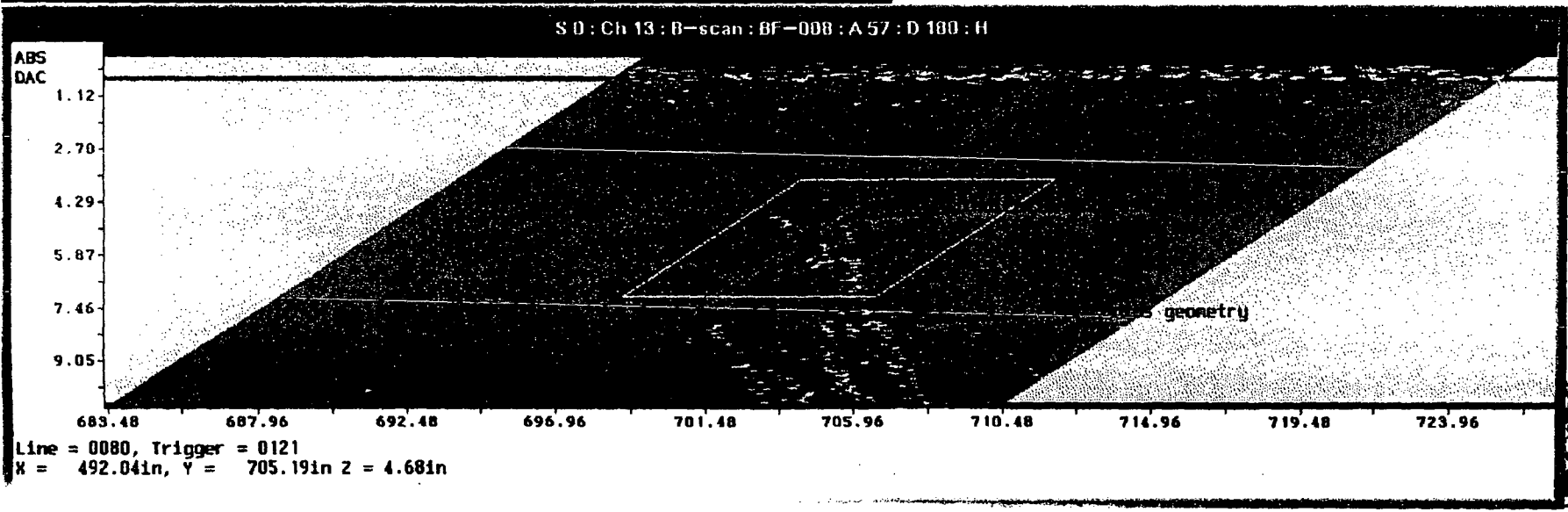
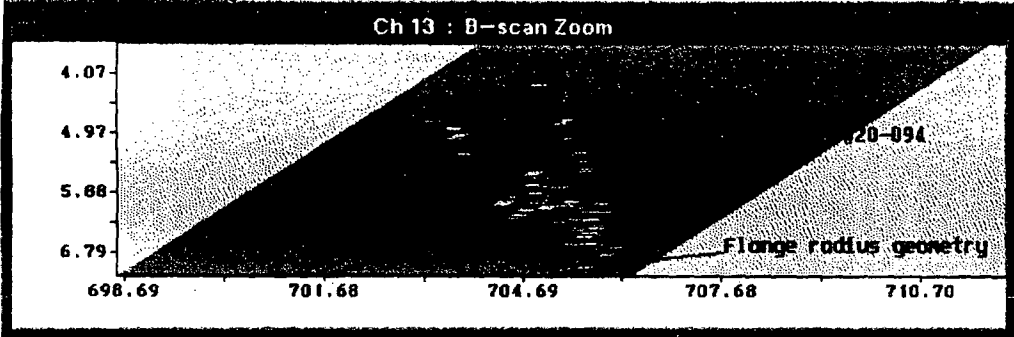
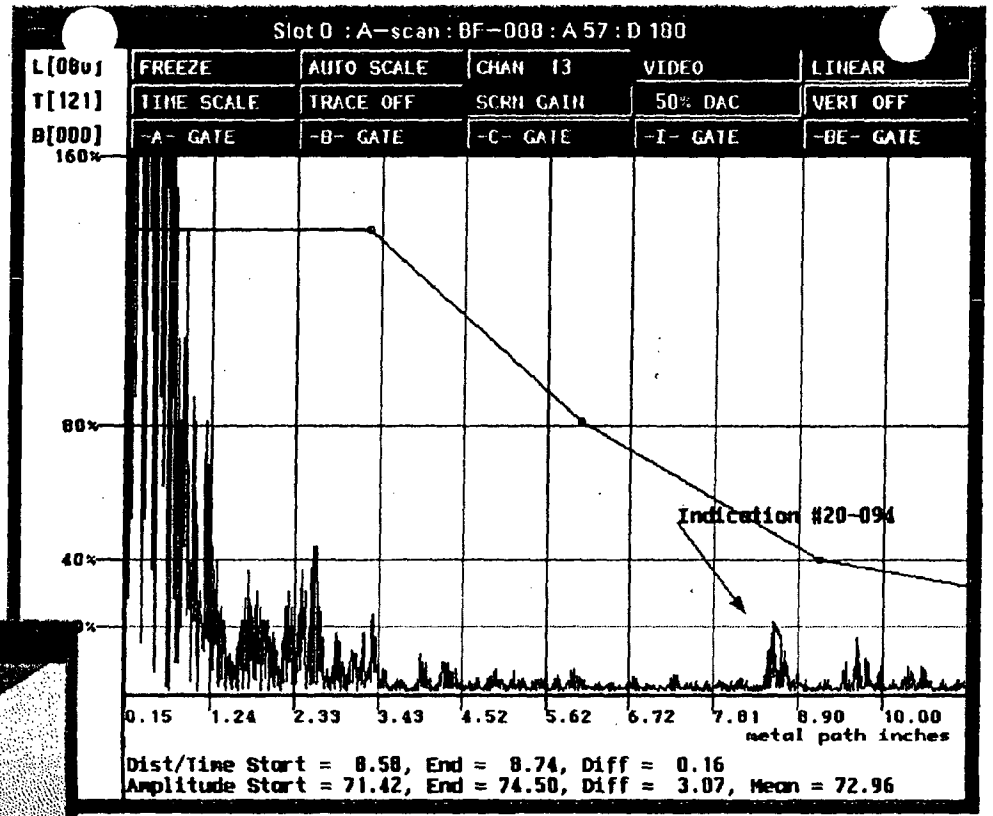
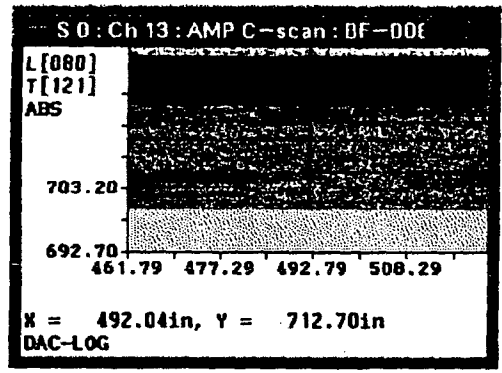
Pg 269 of 291
003A1
R 1151

SD: Scale

5.4
11.5
17.7
23.0
30.0
36.1
42.2
48.4
54.5
60.7
66.0
73.0
79.1
85.2
91.4

100%
50%
20%

DAC



Ter
Serial/ID
Lump/Max
I-094

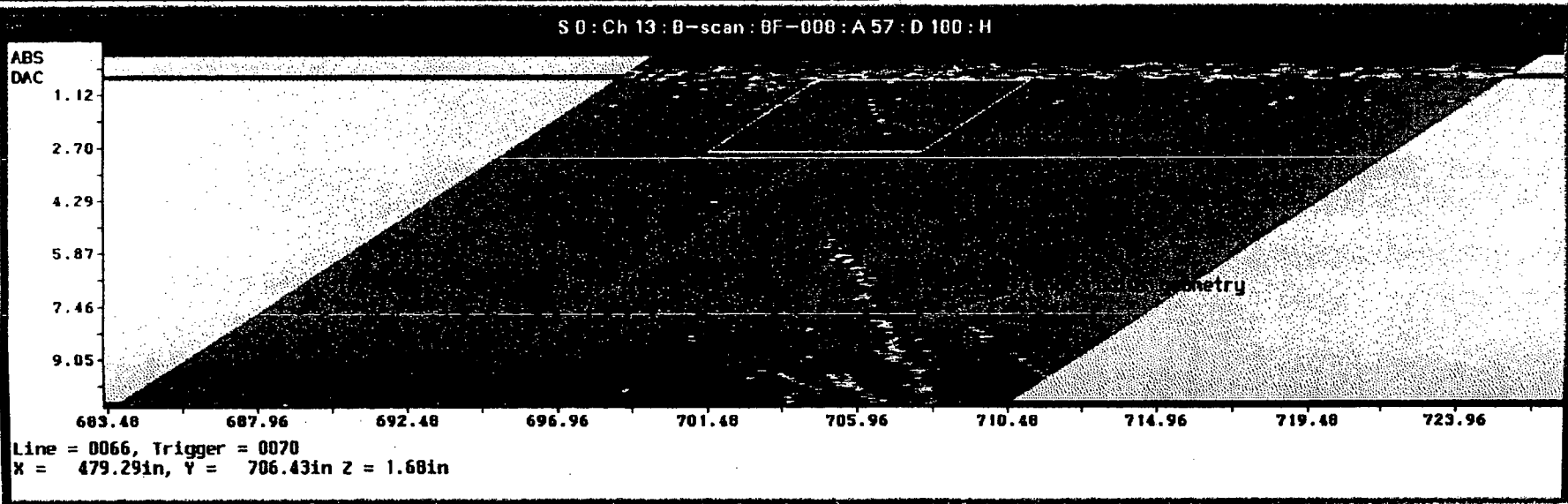
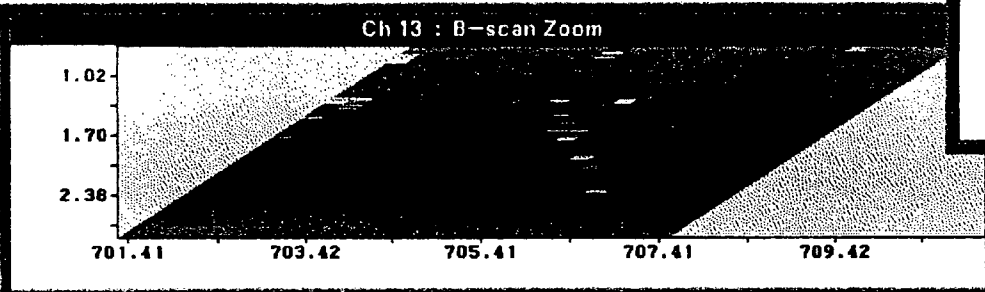
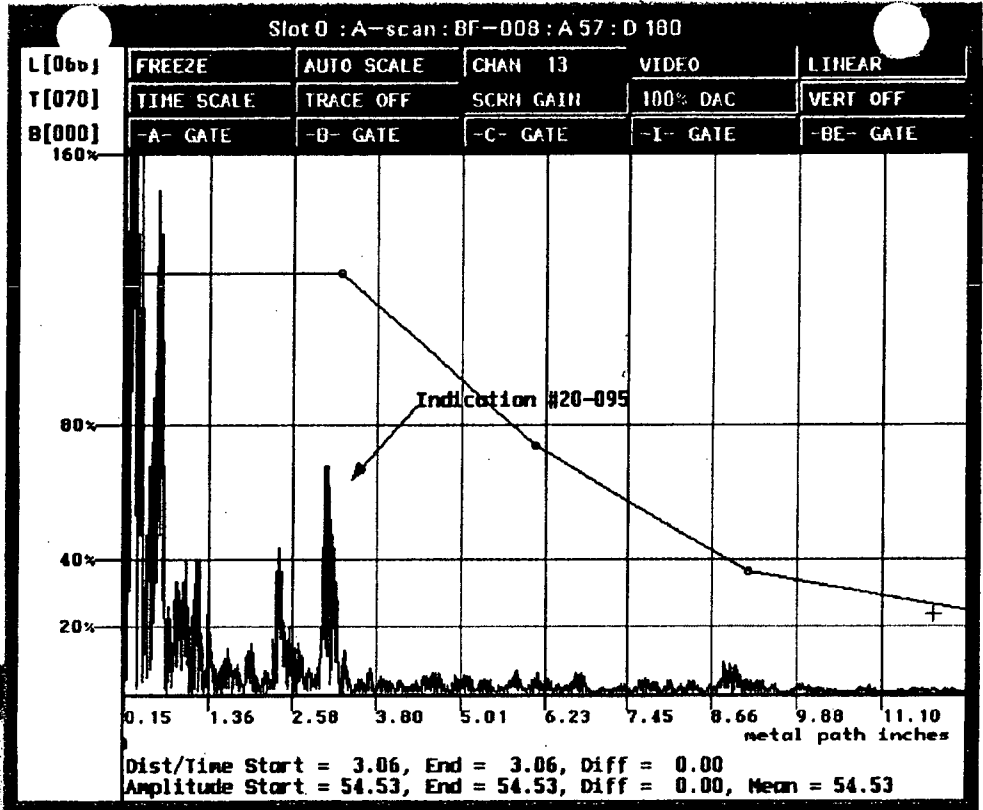
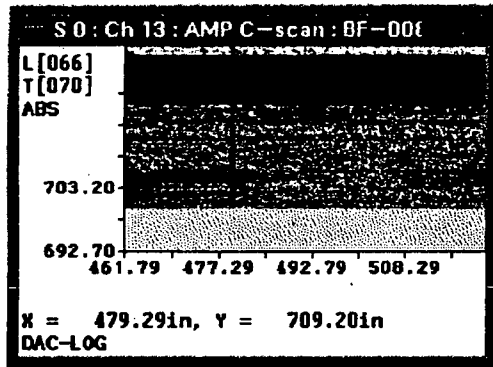
R1151
Pg 270 of 291
00342

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

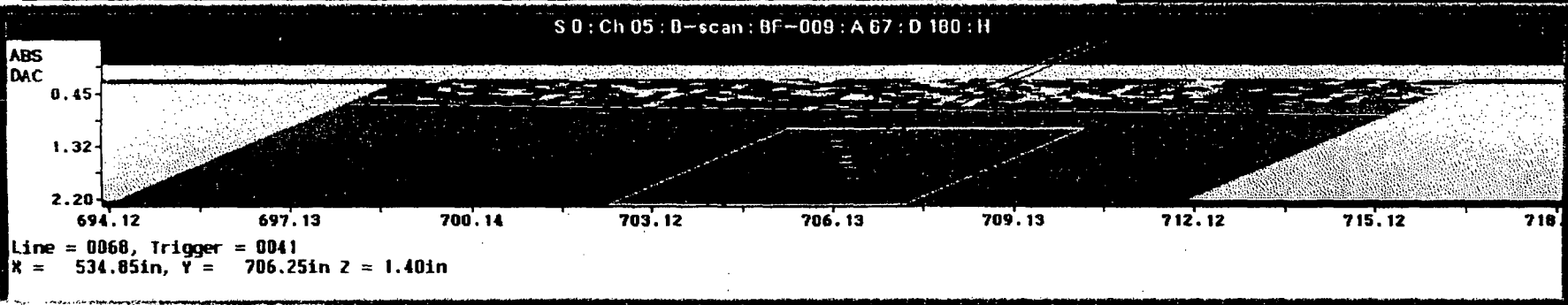
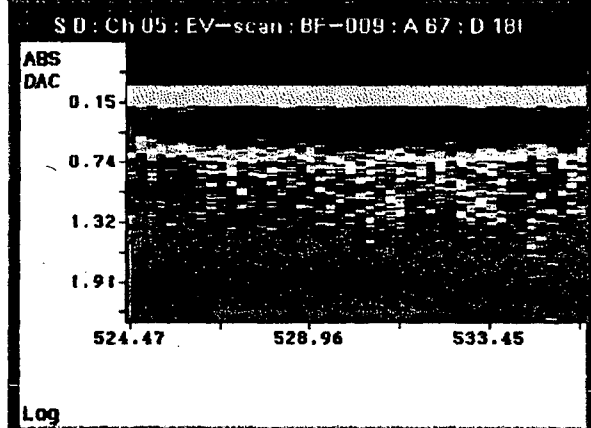
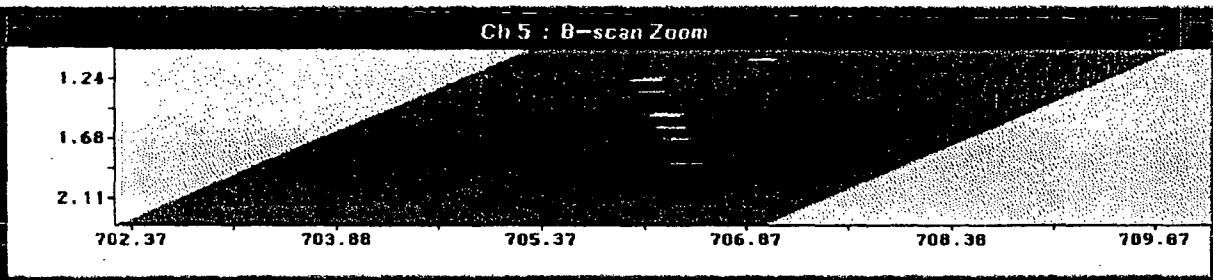
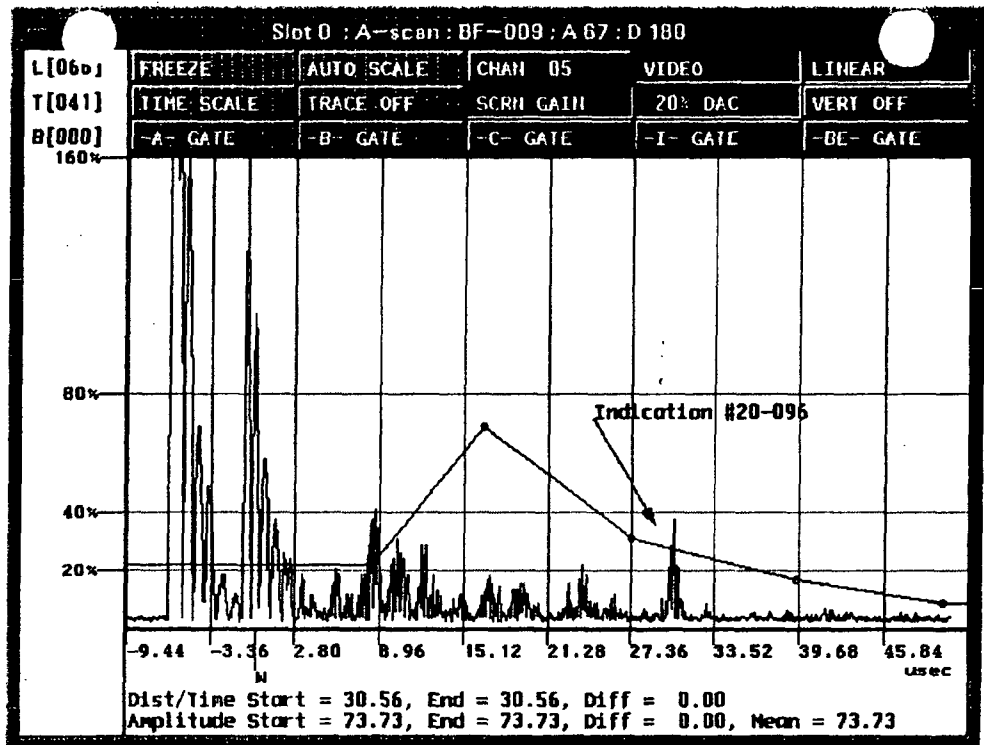
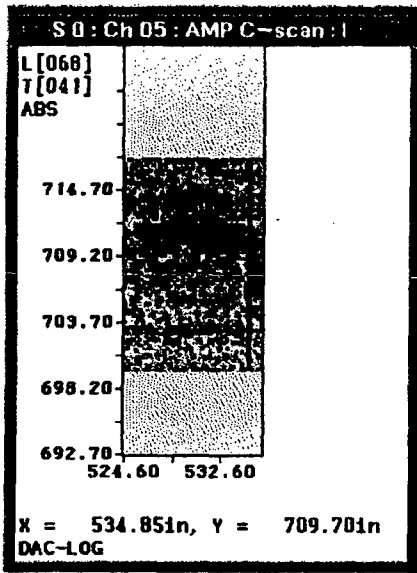
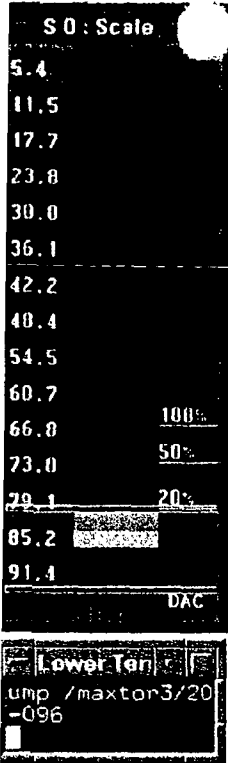
100%
50%
20%

DAC



rTen
genis]/10
dump /max
0-095

R1151
Pg 271 of 291
00343



R 1151
99272 of 291
00344

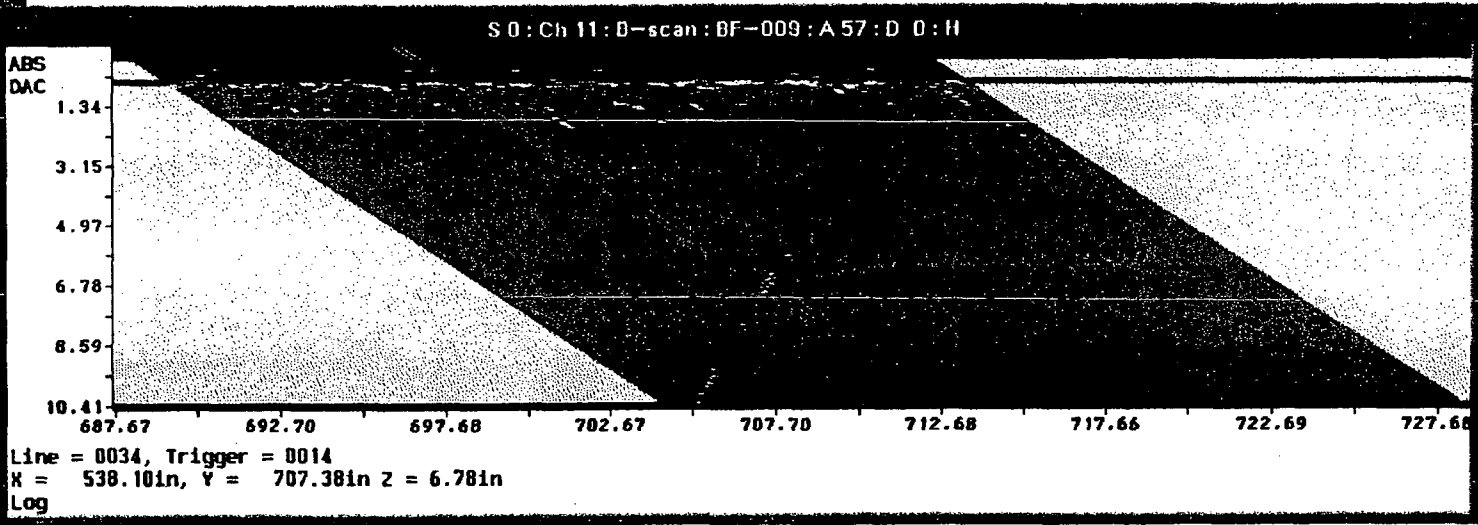
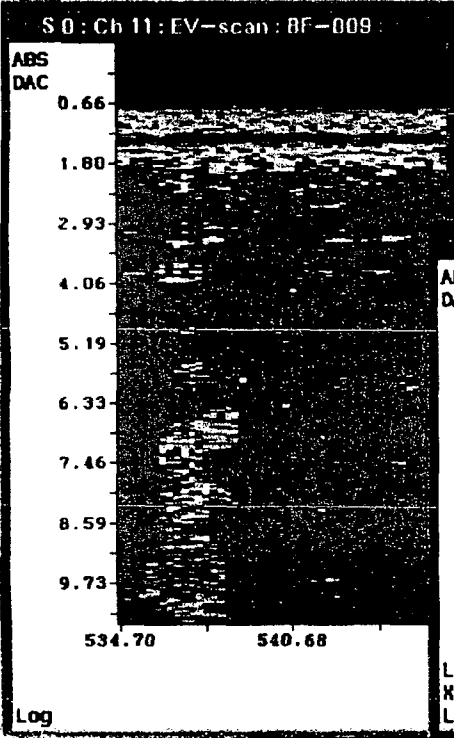
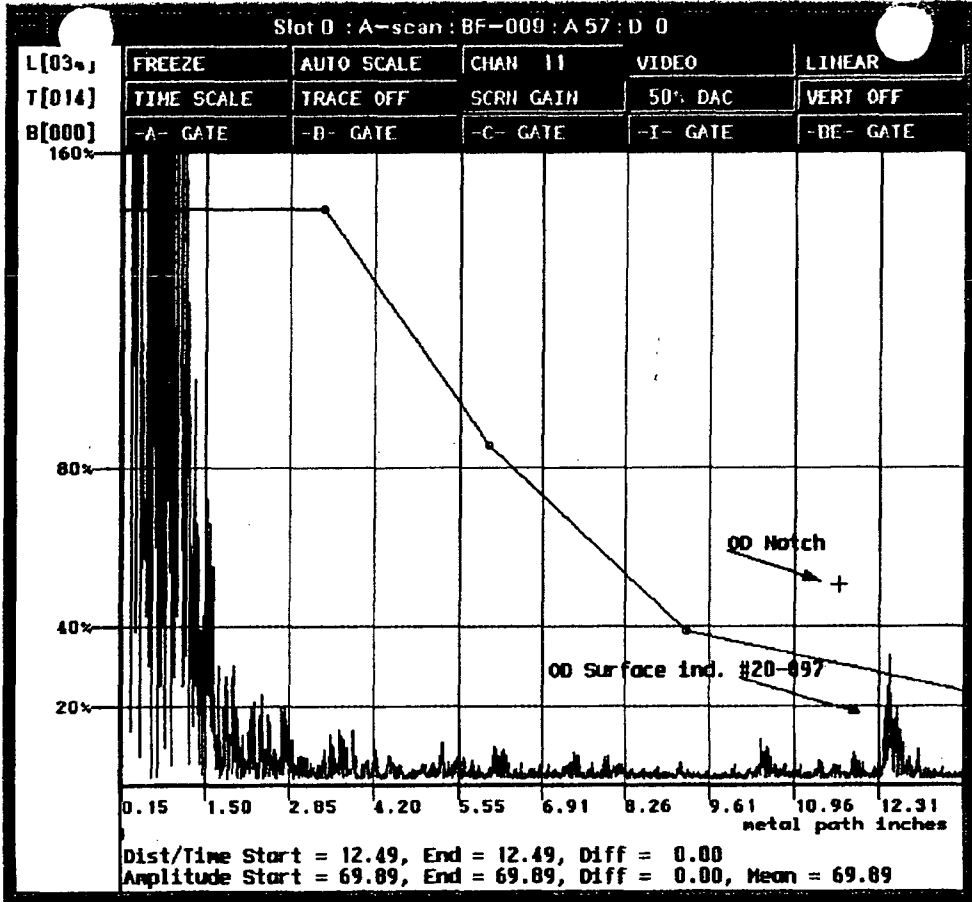
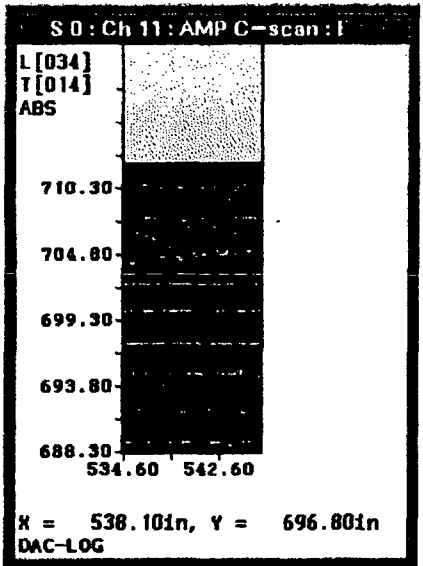
S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4
54.5
60.7
66.8
73.0
79.1
85.2
91.4

100%
50%
20%

DAC

Lower Tern
/test>dump /max
tor3/20-097

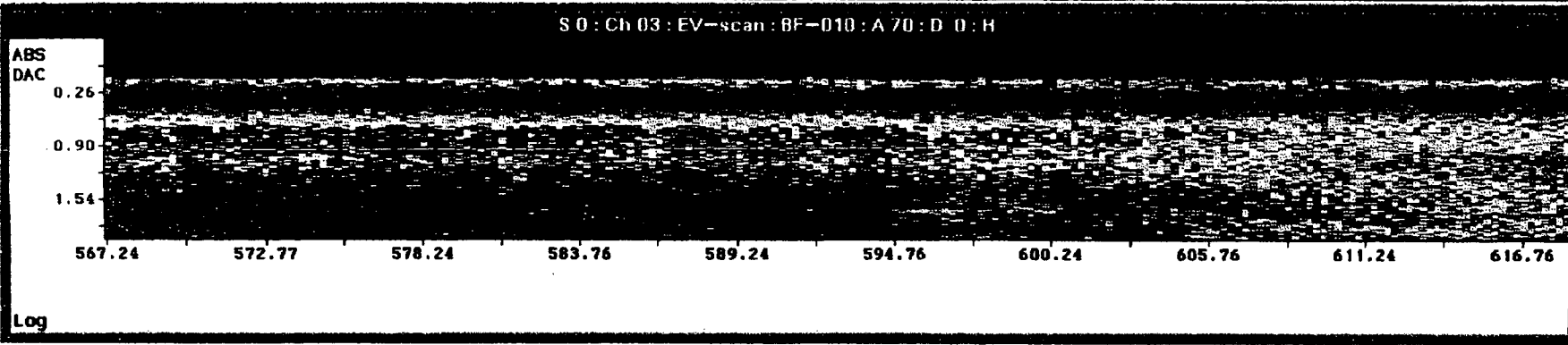
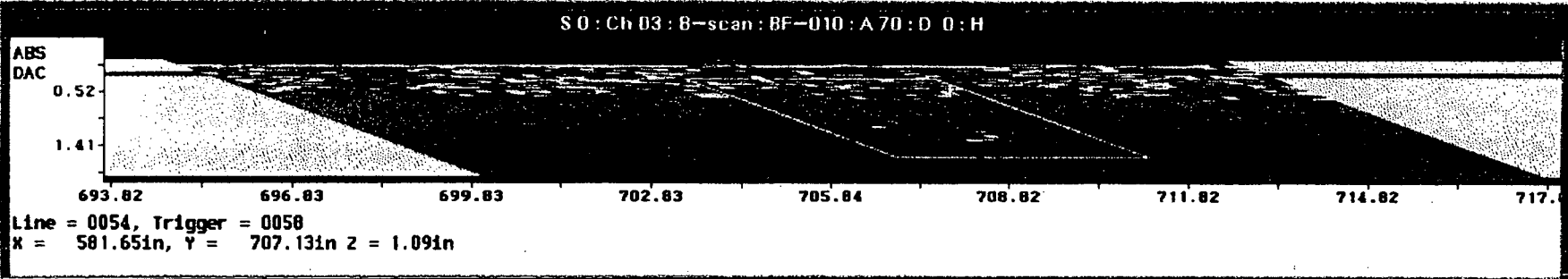
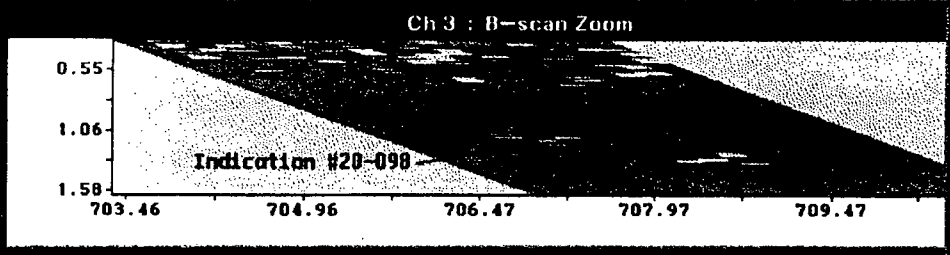
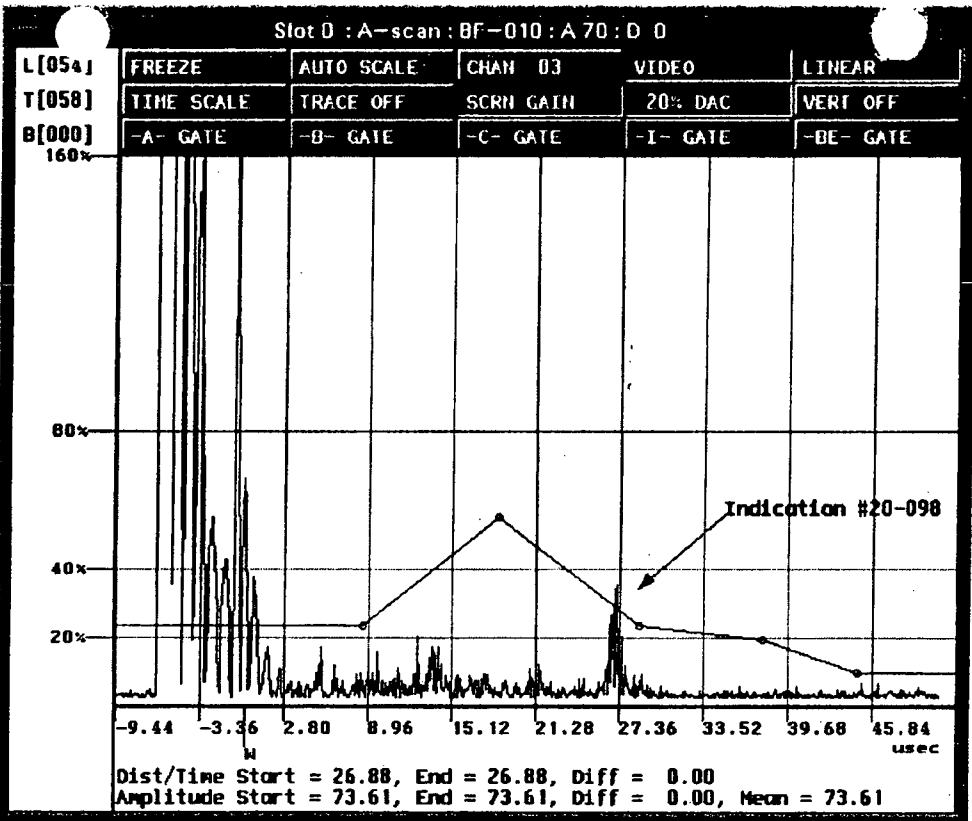
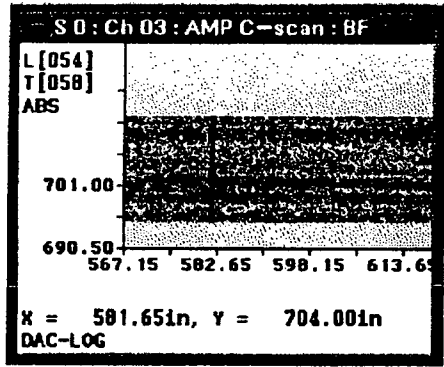


R 1151
P9273 of 291
00345

S0 : Scale

32.3
36.6
41.0
45.3
49.7
54.0
58.4
62.7
67.1
71.4
75.8
80.1
84.5
88.8

100%
50%
20%



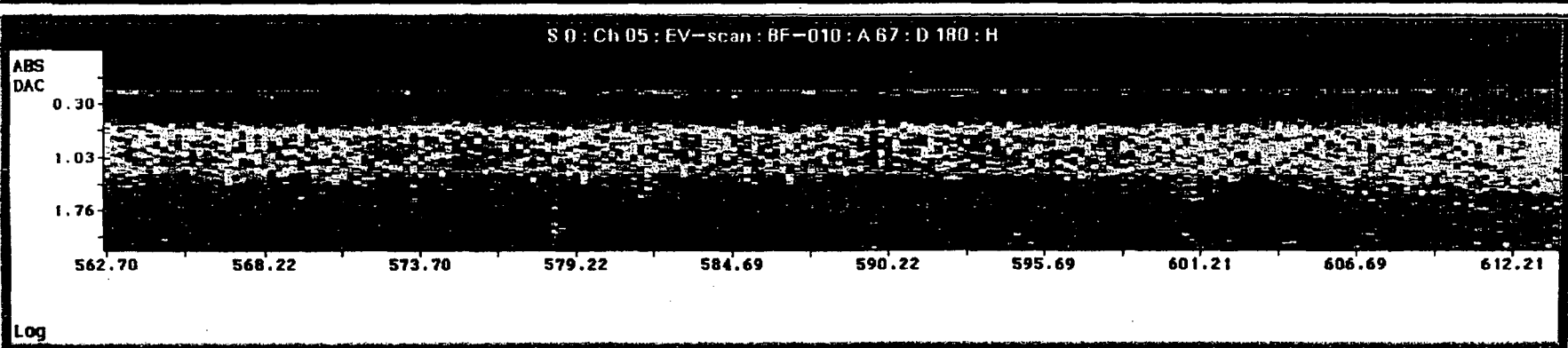
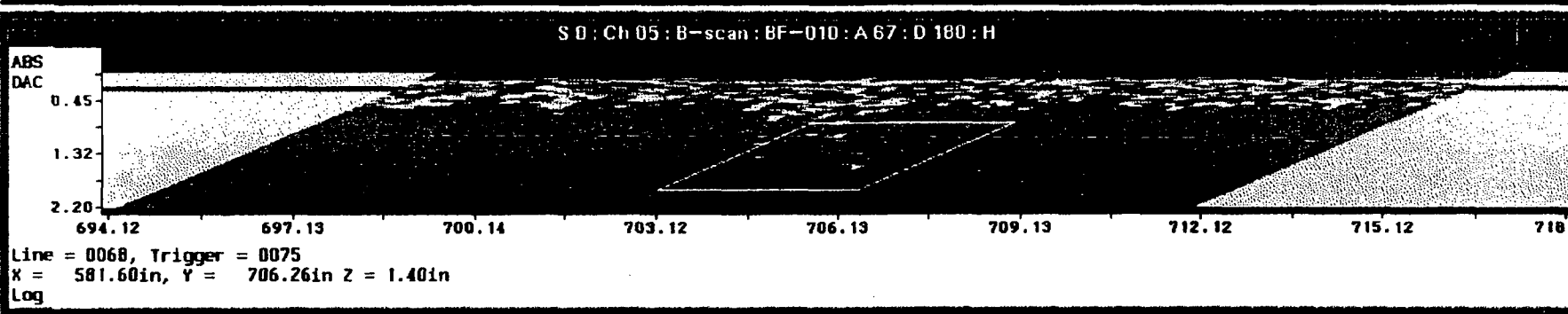
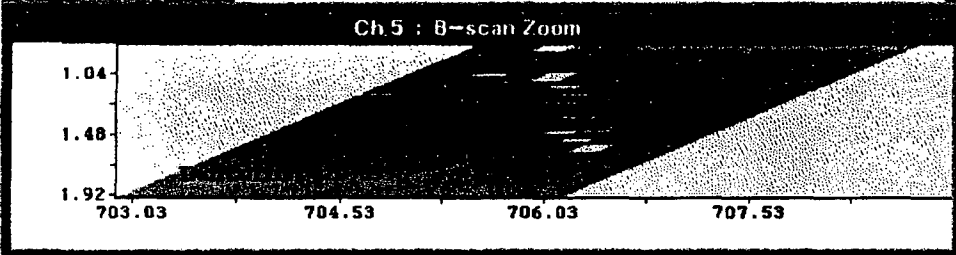
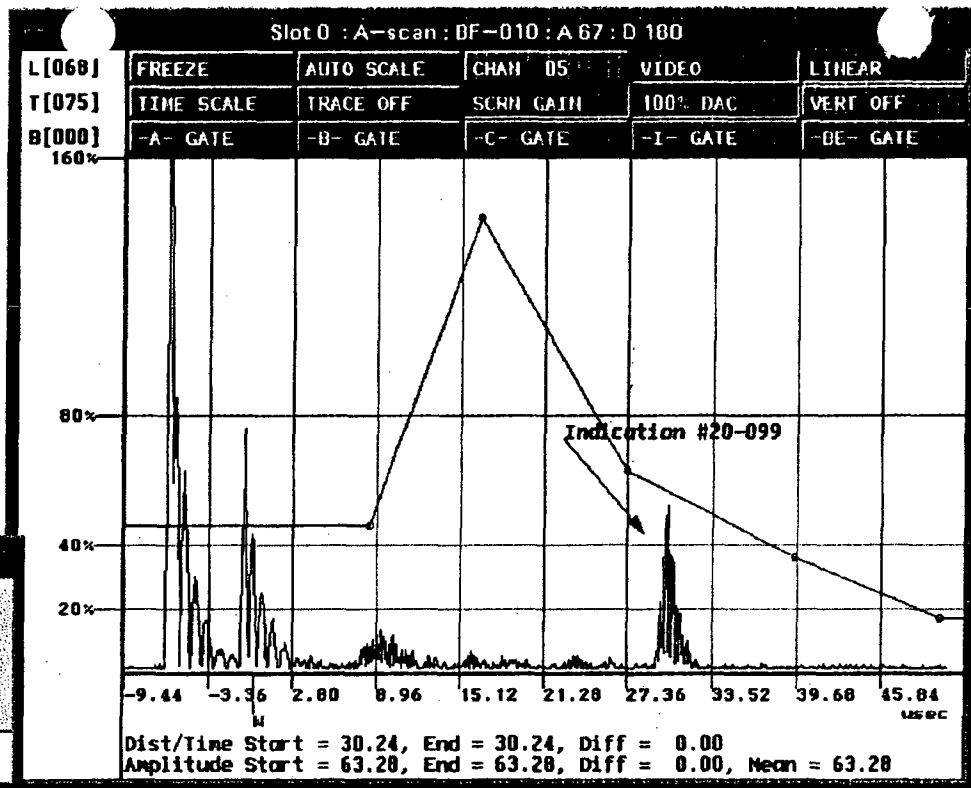
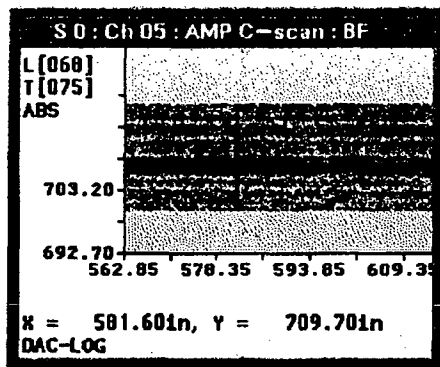
er Terj
>dump /max
20-098

R 1151
Pg 274 of 291
00346

S 0 : Scale

32.3
36.6
41.0
45.3
49.7
51.0
58.4
62.7
67.1
71.4
75.0
80.1
84.5

100%
50%
20%



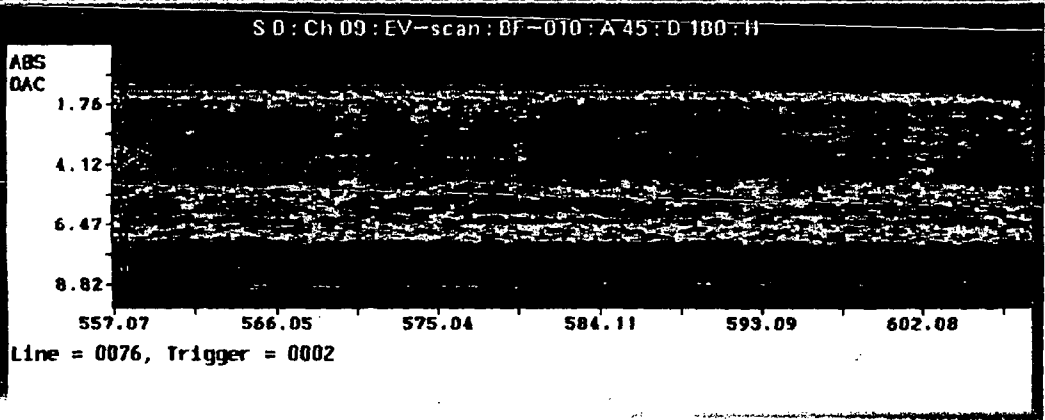
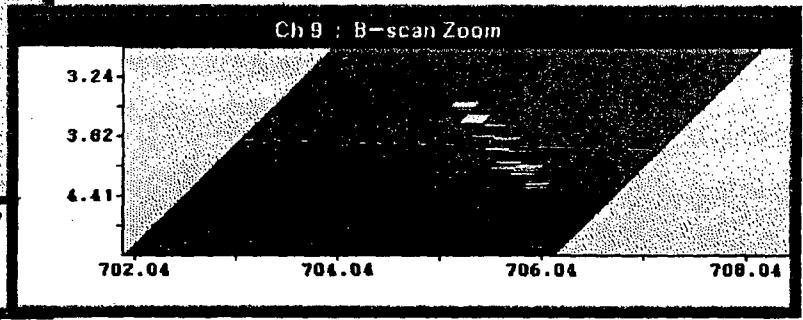
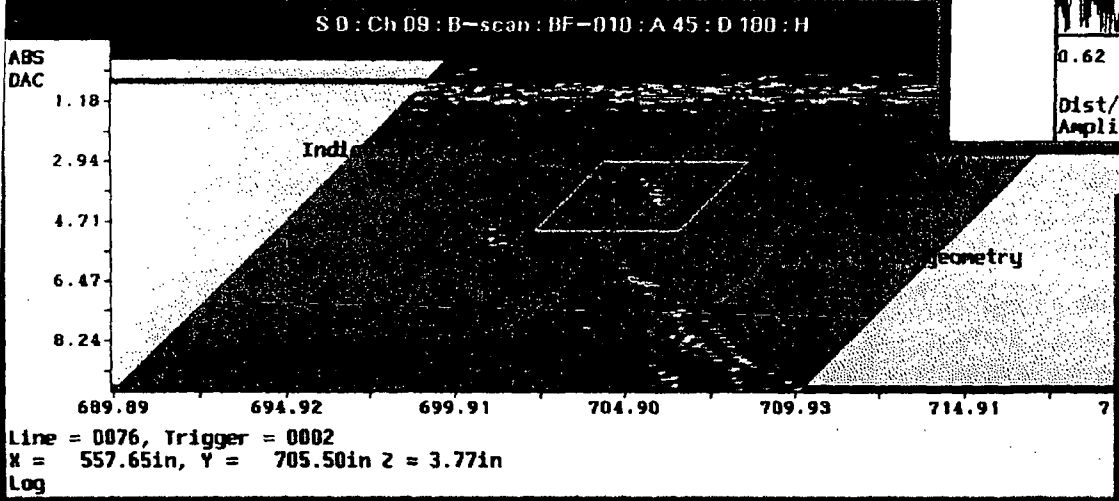
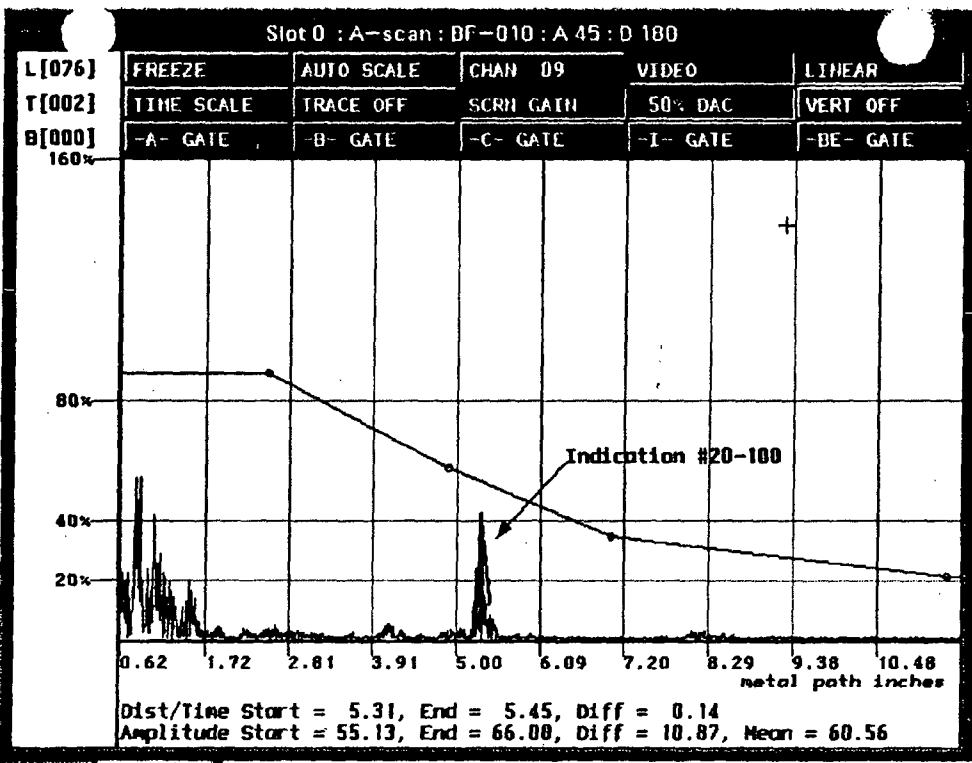
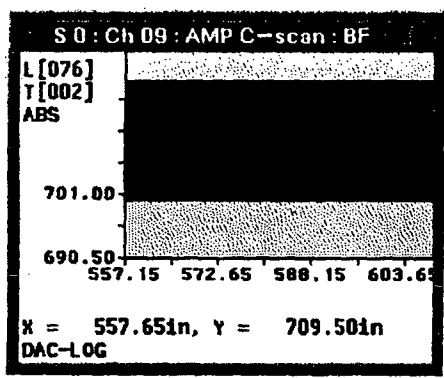
er Ter
Dump /max
20-099

R 1151
Pg 275 of 291
00347

S 0 : Scale

2.3
 6.6
 11.0
 15.3
 19.7
 24.0
 28.4
 32.7
 37.1
 41.4
 45.8
 50.1
 54.5
 58.8
 63.2

100%
 50%
 20%



Lower Tern
 /test>dump /max
 tor3/20-100

R 1151
 P 276 of 291
 00348

S 0 : Scale

32.3
36.6
41.0
45.3
49.7
54.0
58.4
62.7
67.1
71.4
75.8
80.1
84.5
88.8
93.2

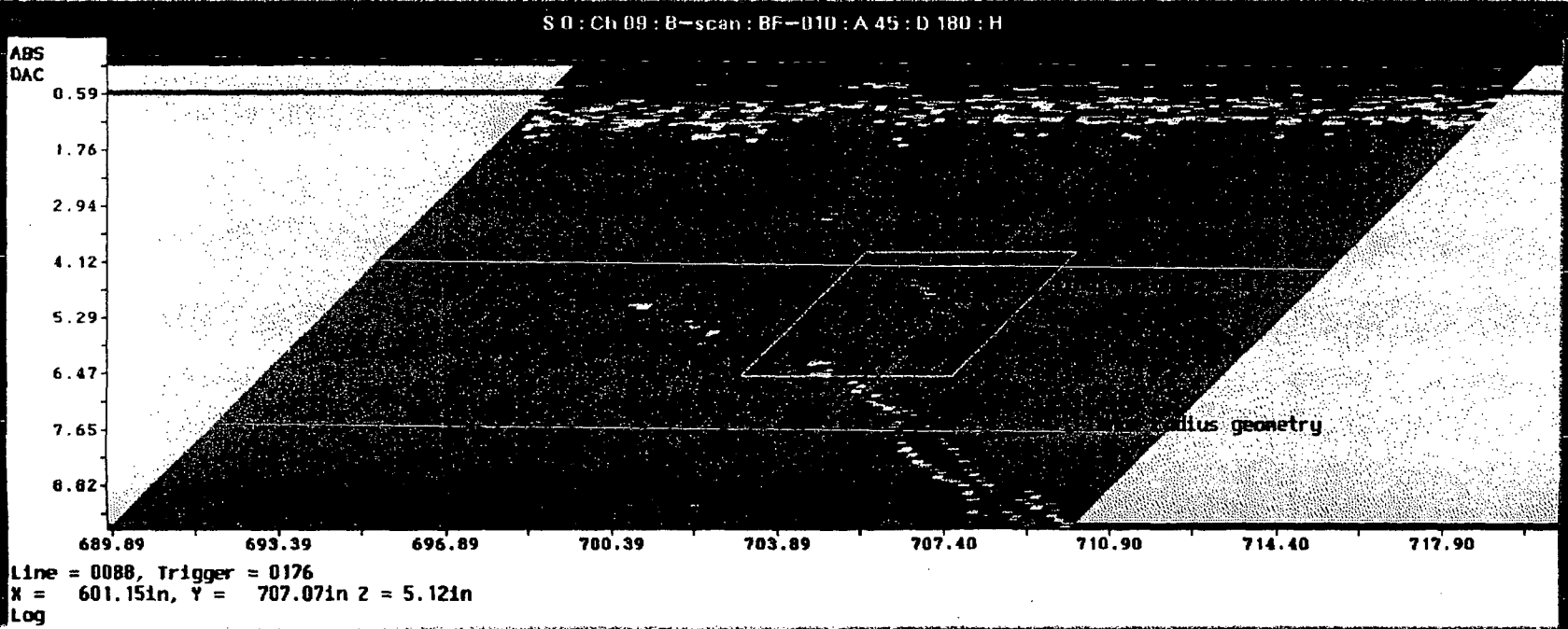
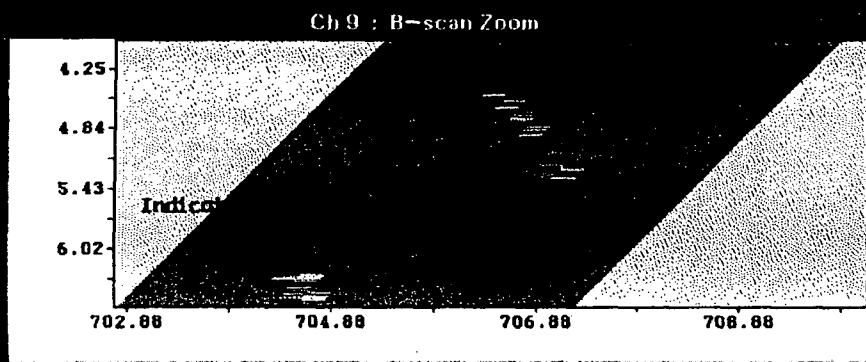
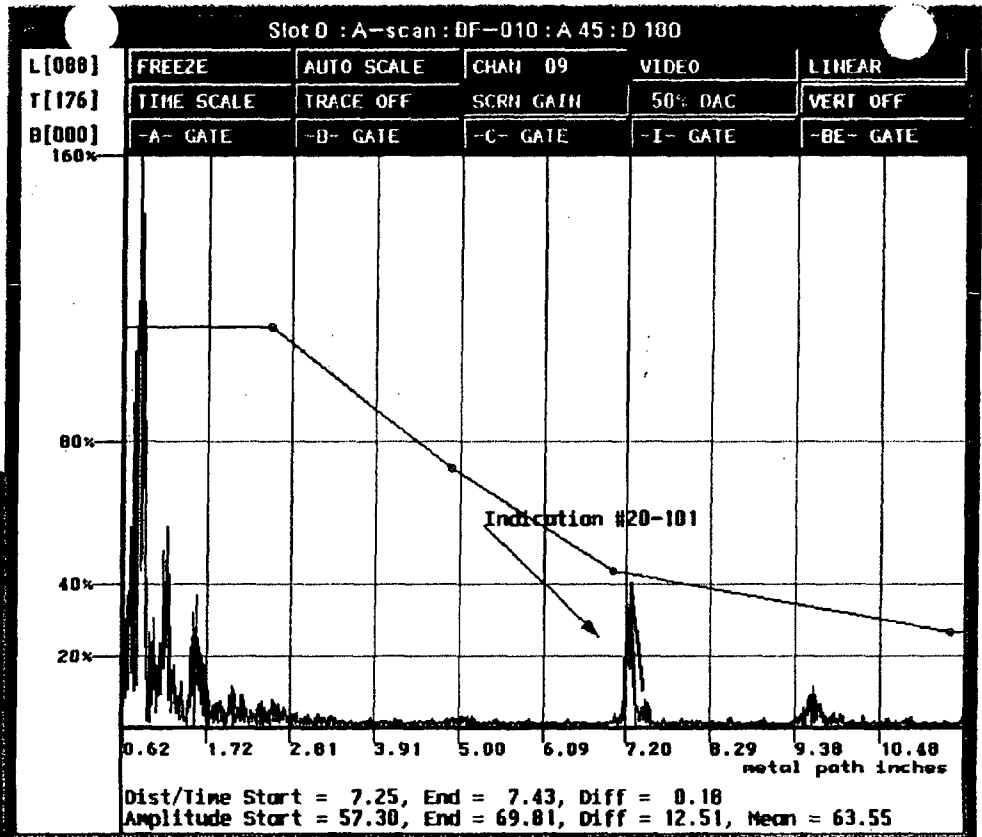
100%
50%
20%

S 0 : Ch 09 : AMP C-scan : BF

L [088]
T [176]
ABS

701.00
690.50
557.15 572.65 588.15 603.65

x = 601.151n, y = 712.501n
DAC-LOG

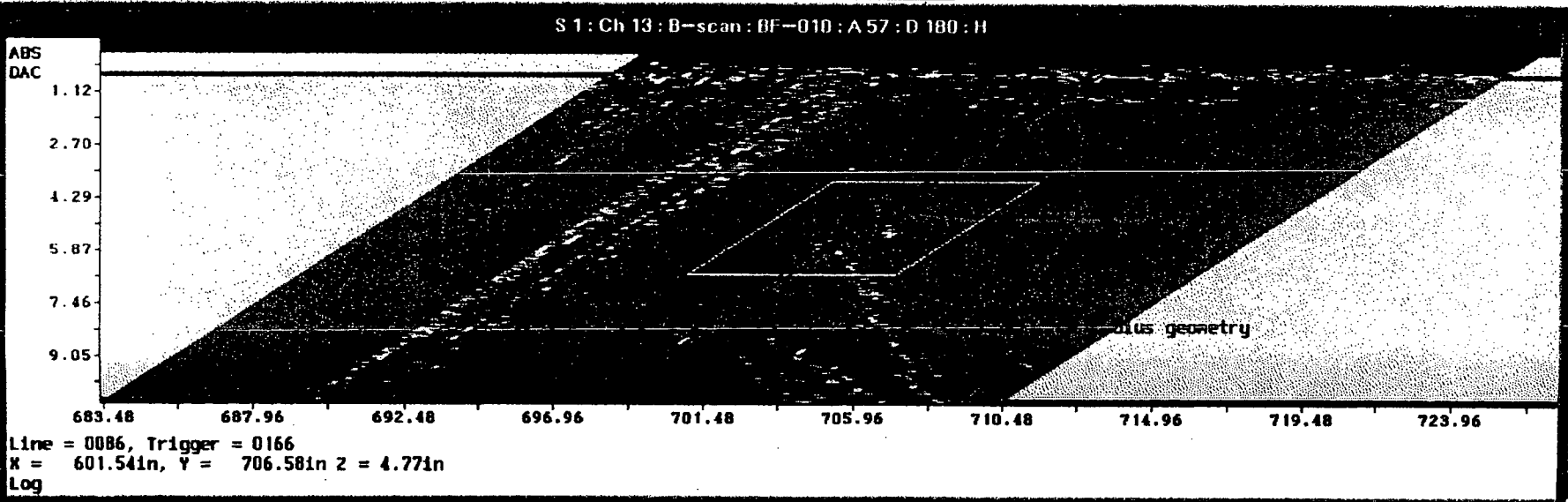
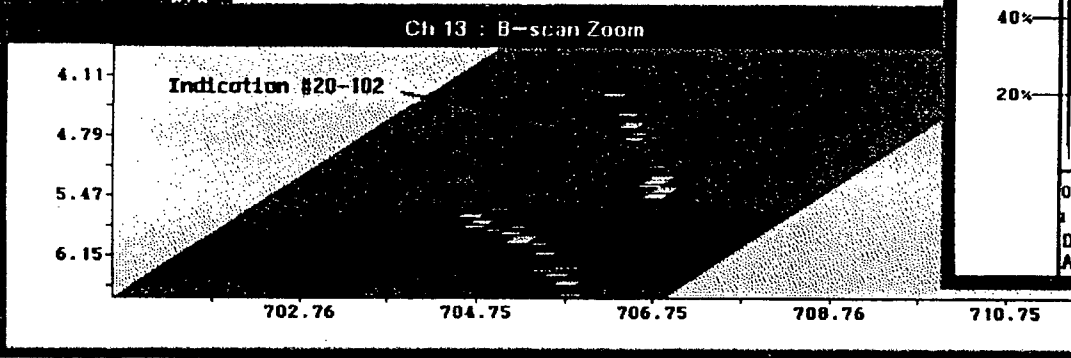
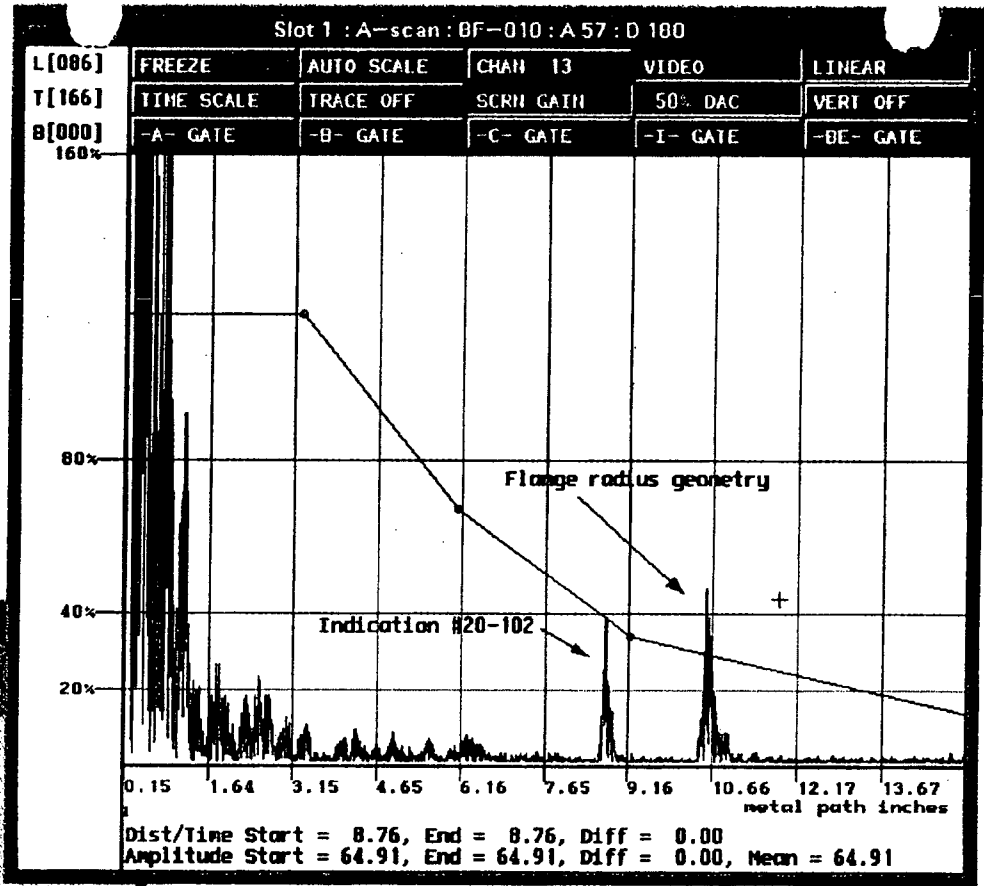
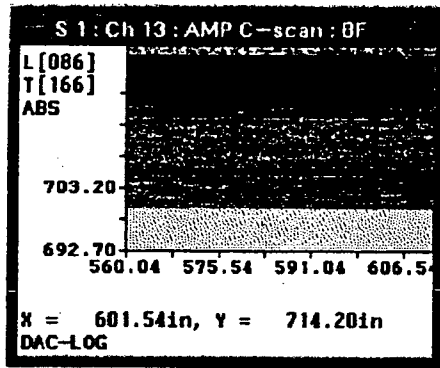


Lower Ten
/test>dump /max
tor3/20-101

R 1151
Pg 277 of 291
00349

S 1 : Scale

32.3
36.6
41.0
45.3
49.7 100%
54.0 50%
58.4
62.7 20%
67.1
71.4
75.0
80.1
84.5
88.8
93.2



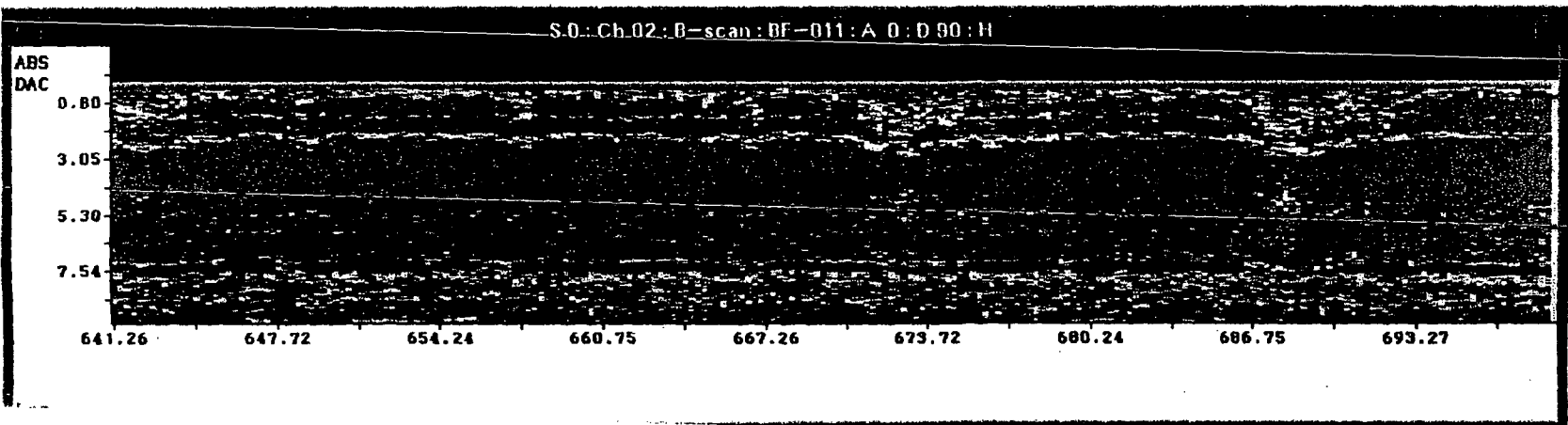
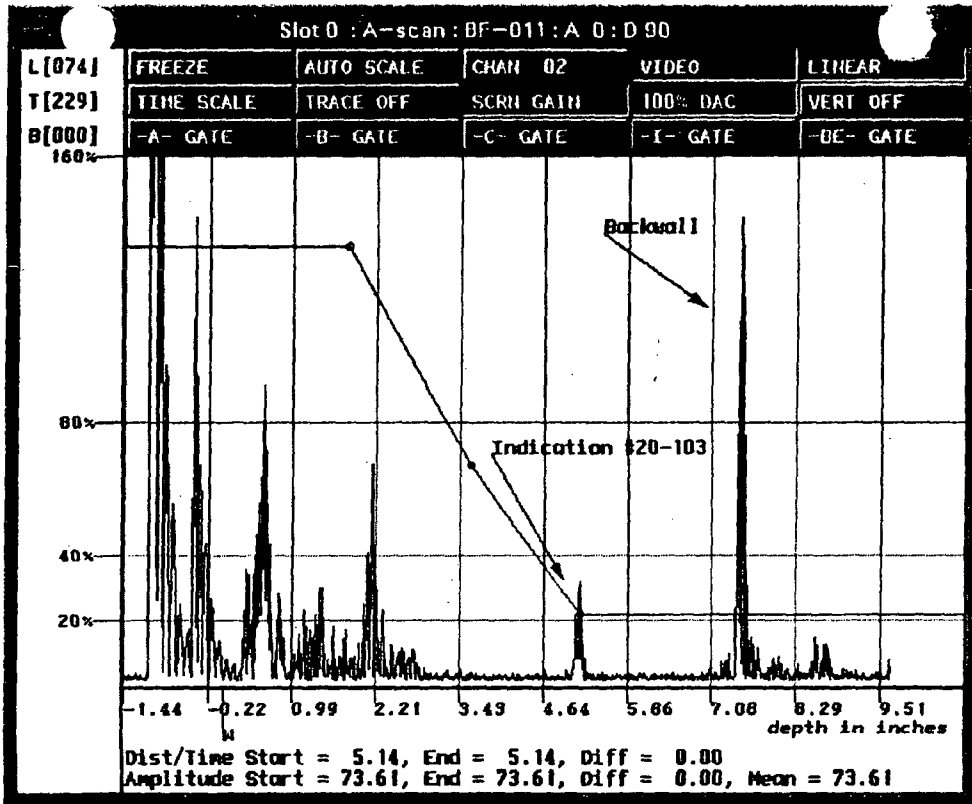
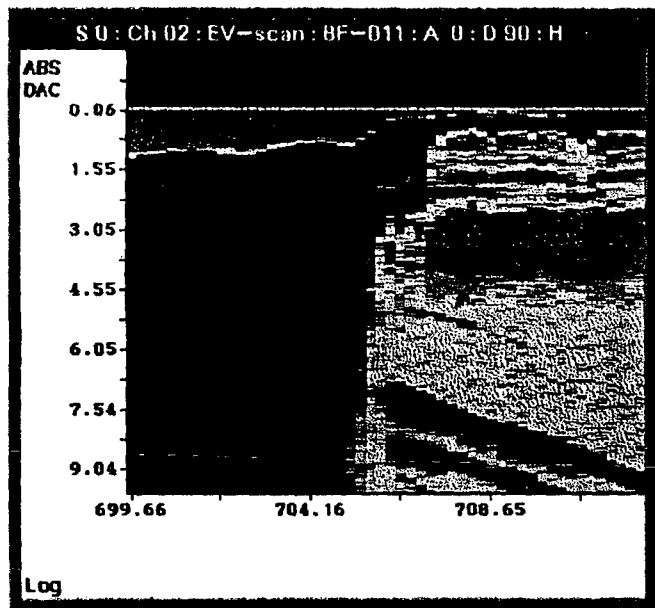
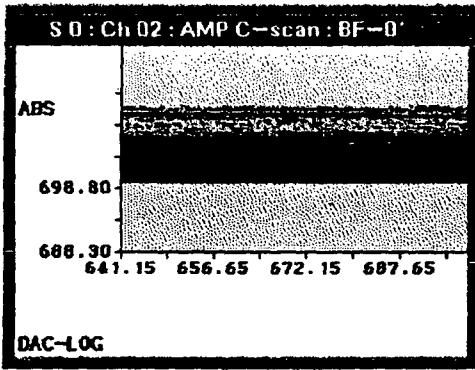
Jump / max
0-102

R1151
Pg 228 of 291
00350

S 0 : Scale

32.3
36.6
41.0
45.3
49.7
54.0
58.4
62.7 100%
67.1 50%
71.4
75.8 20%
80.1
84.5
88.8
93.2 DAC

Lower Ten
curly[geris]/ld
ump /maxtor 3/20
-103



R 1151
Pg 279 of 291
00351

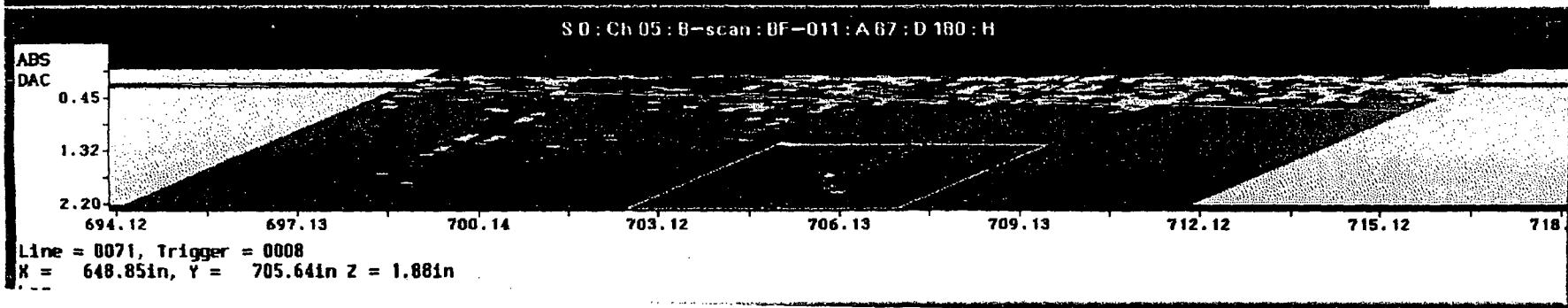
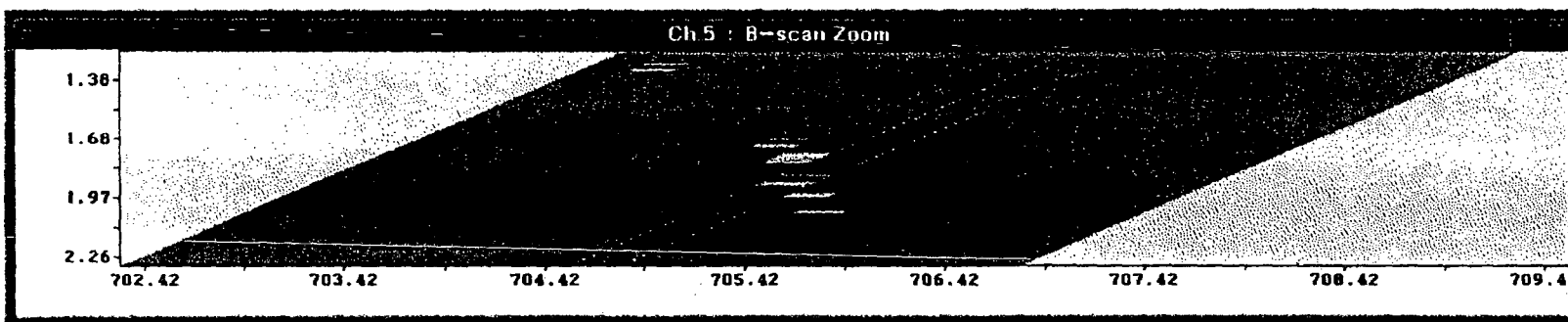
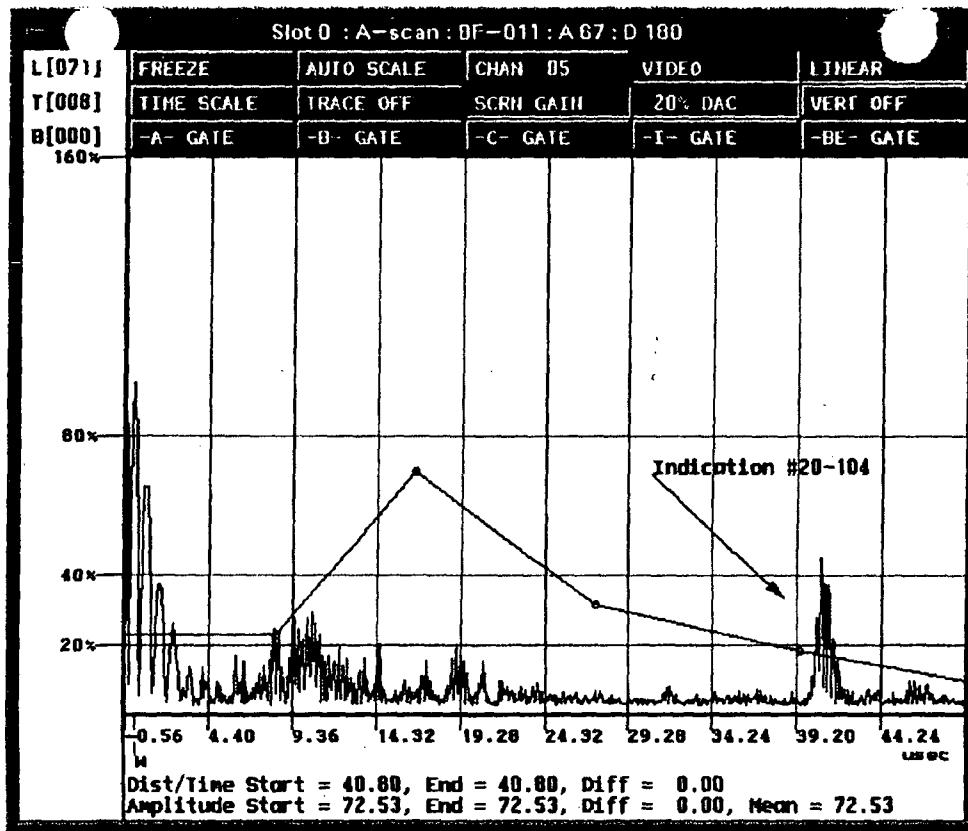
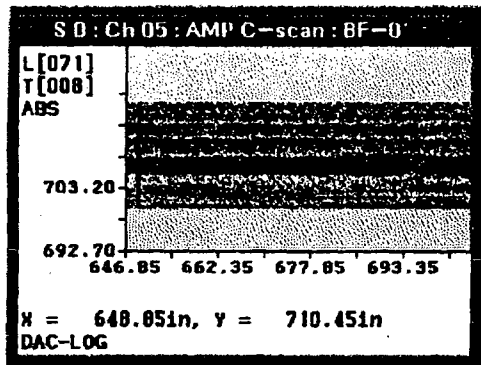
S 0 : Scale

32.3
36.6
41.0
45.3
49.7
54.0
58.4
62.7
67.1
71.4
75.8
80.1
84.5
88.0
93.2

100%
50%
20%

DAC

Lower Ten
curly[geris]/id
/test/dump /max
tor3/20-104



R 1151
Pg 280 of 291
00352

S D : Scale

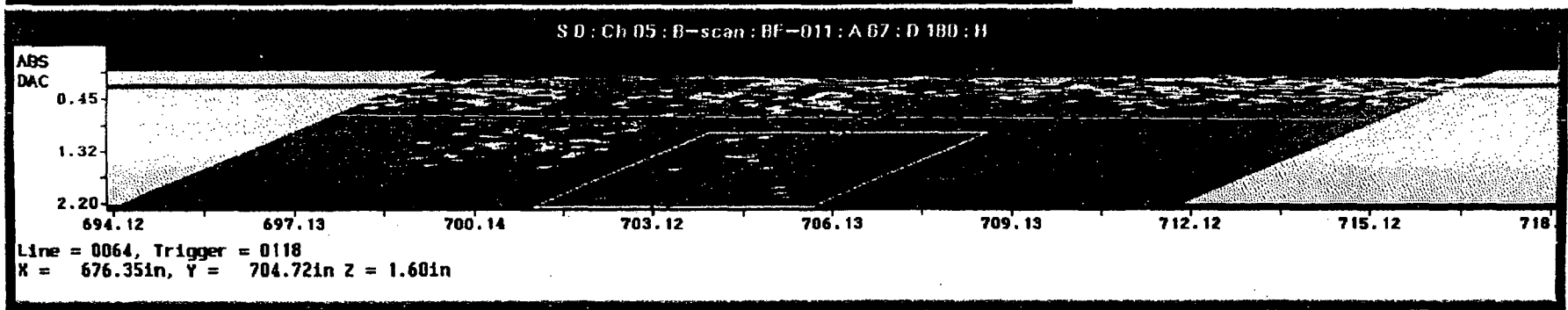
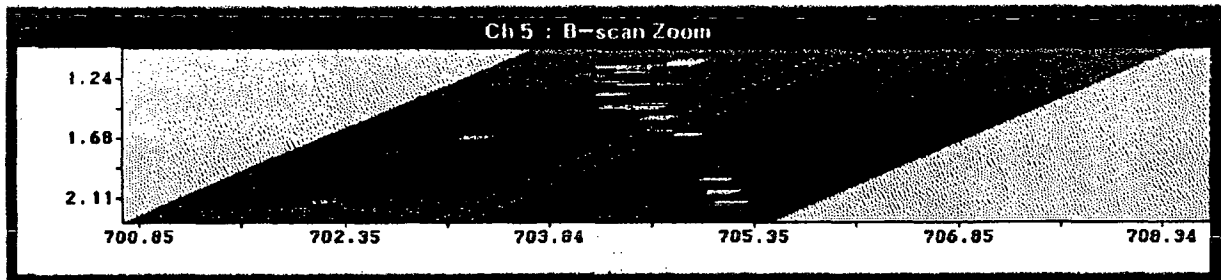
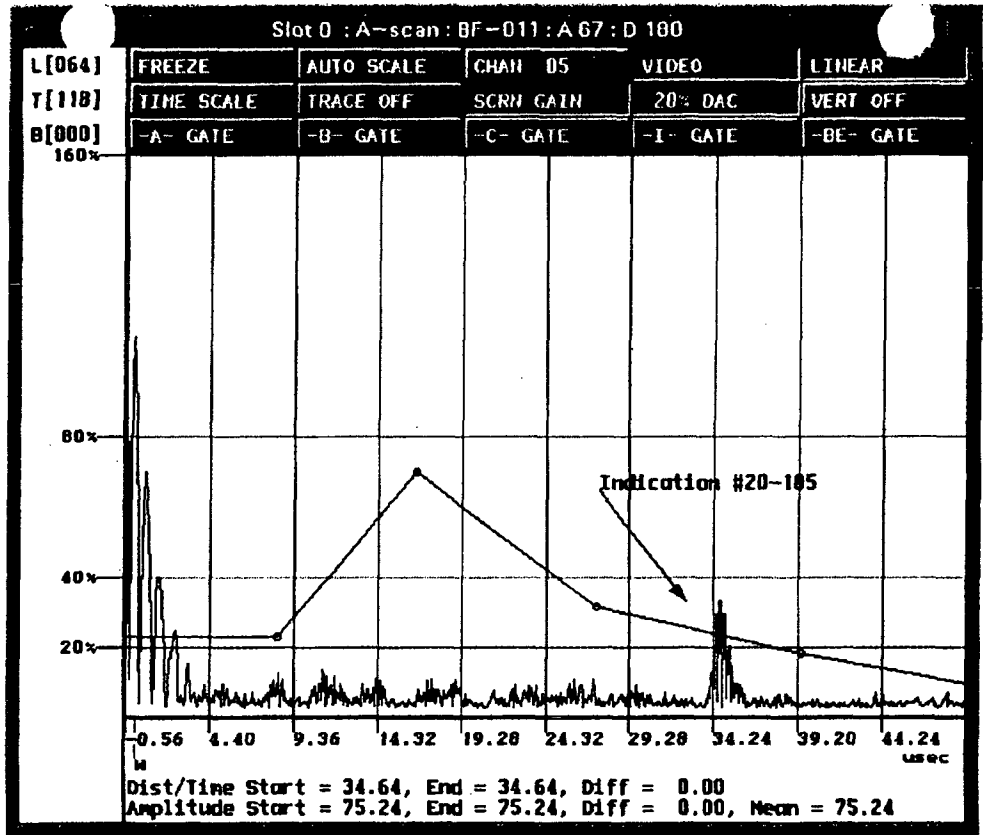
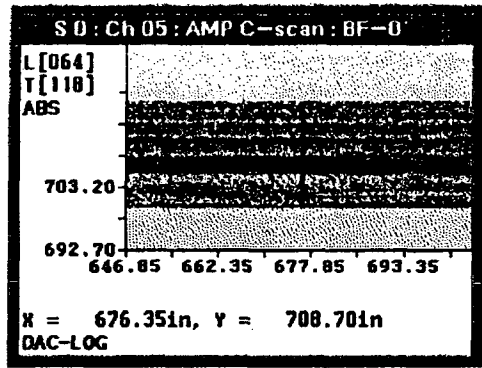
32.3
36.6
41.0
45.3
49.7
54.0
58.4
62.7
67.1
71.4
75.8
80.1
84.5
88.0
92.2

100%
50%
20%

DAC

Lower Tern

curly[geris]/id
/test>dump /max
tor3/20-105



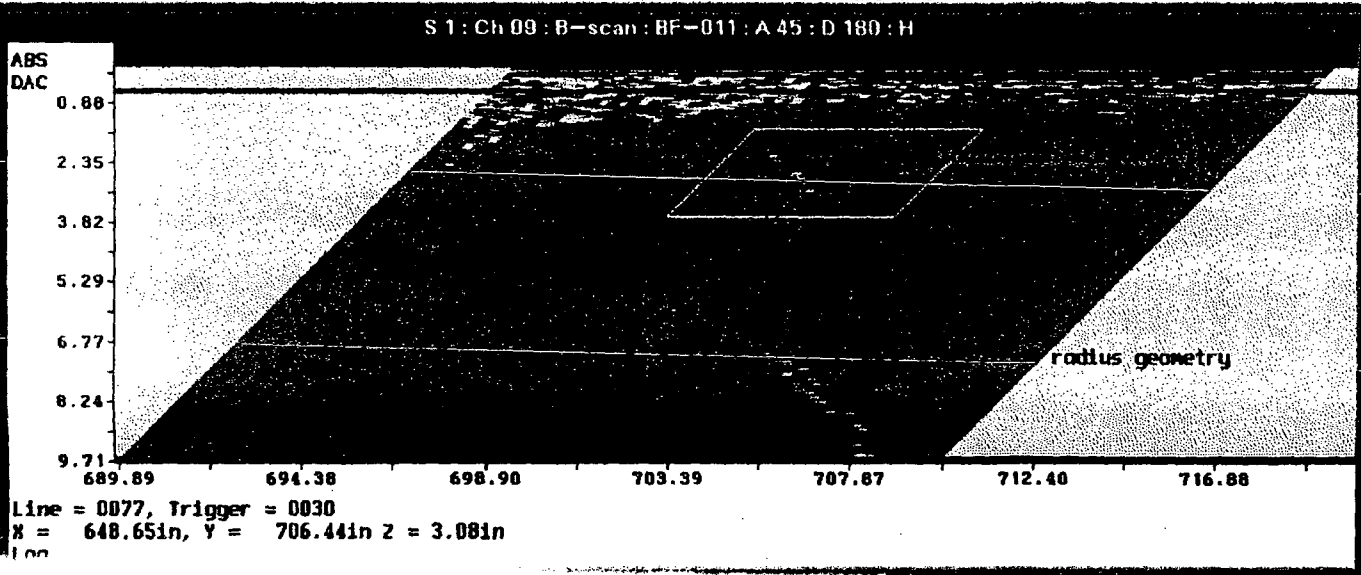
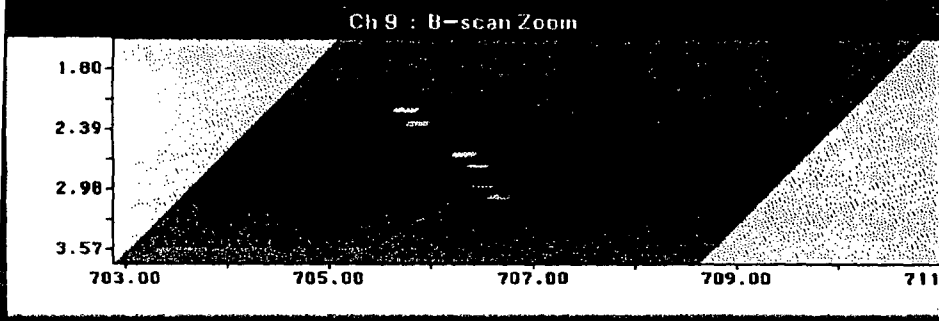
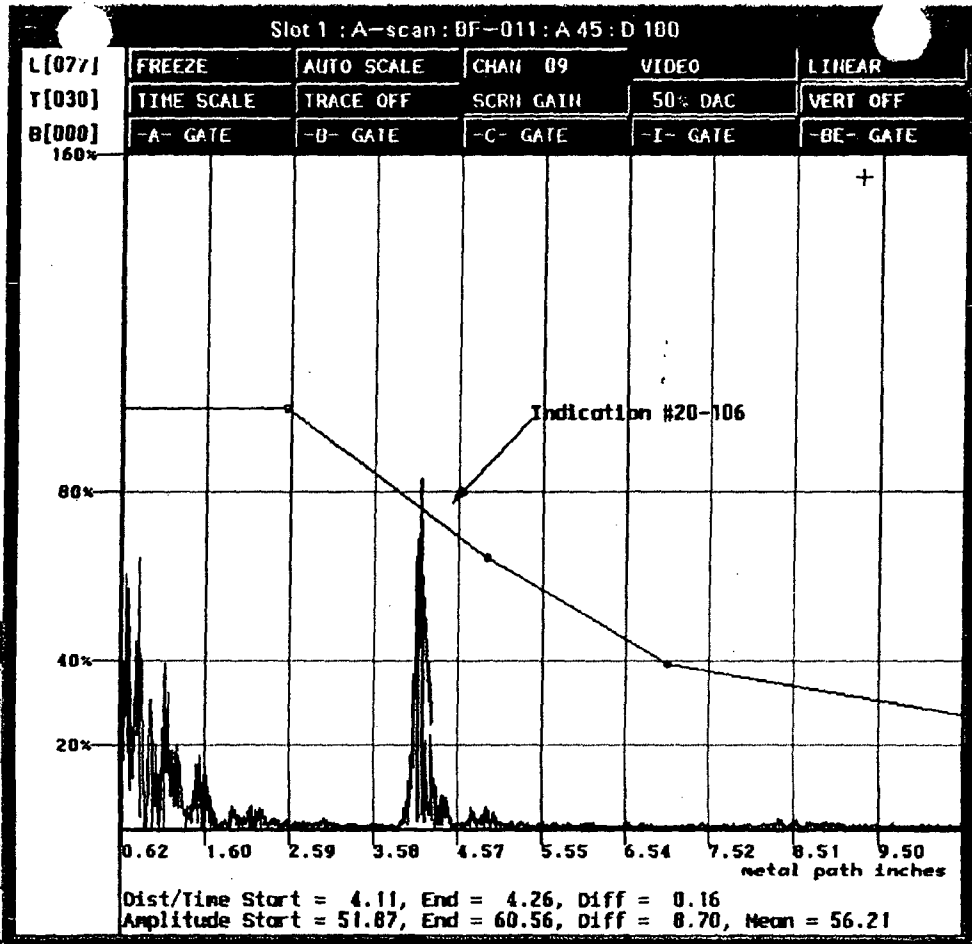
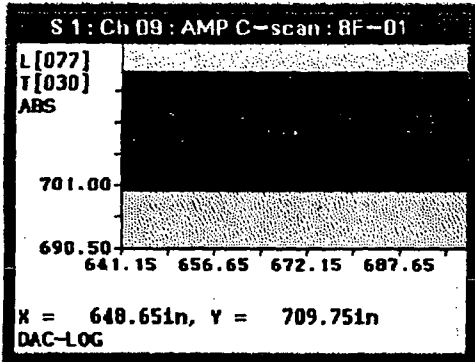
R 1151
Pg 281 of 291
00353

S 1: Scale

32.3
36.6
41.0
45.3
49.7
54.0
58.4
62.7
67.1
71.4
75.8
80.1
84.5
88.8
93.2

100%
50%
20%

DAC



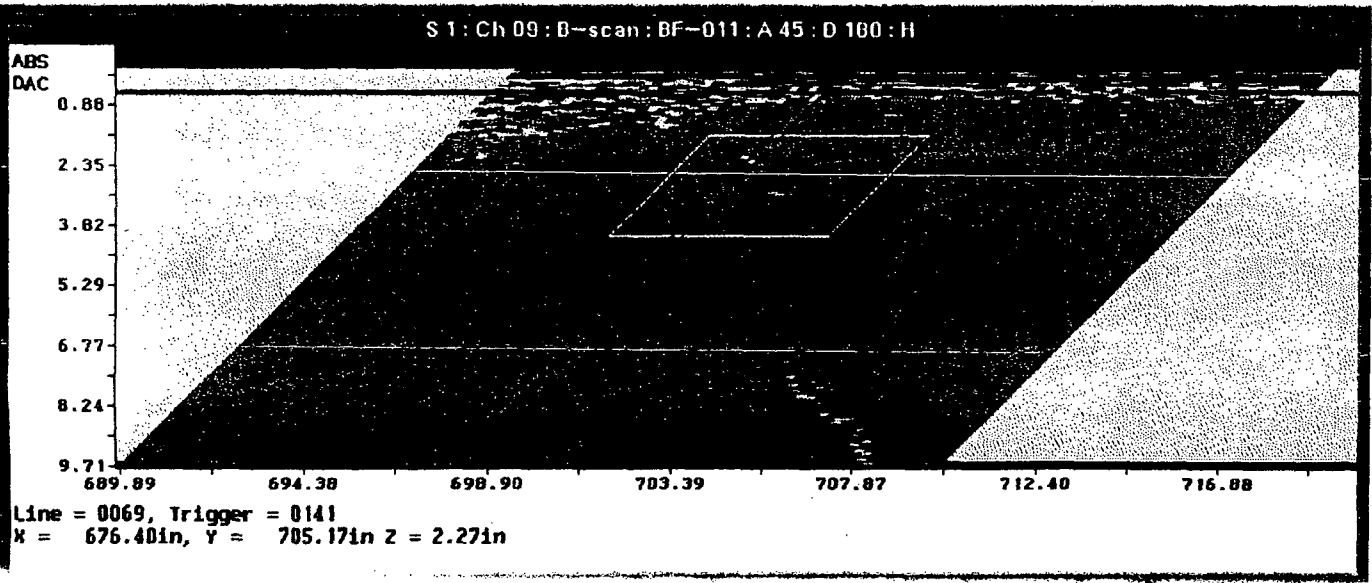
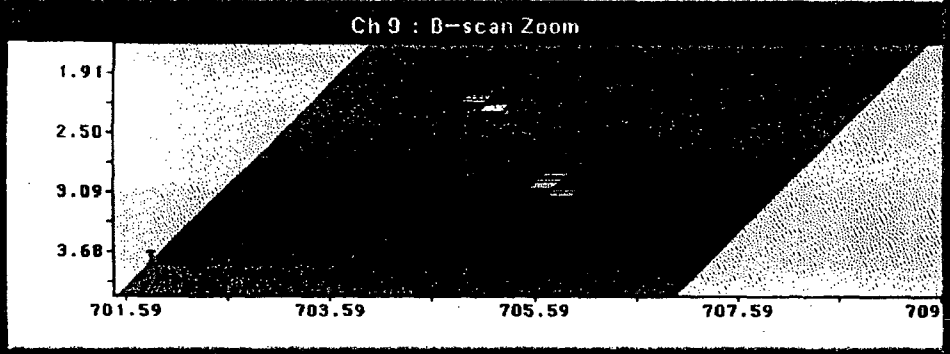
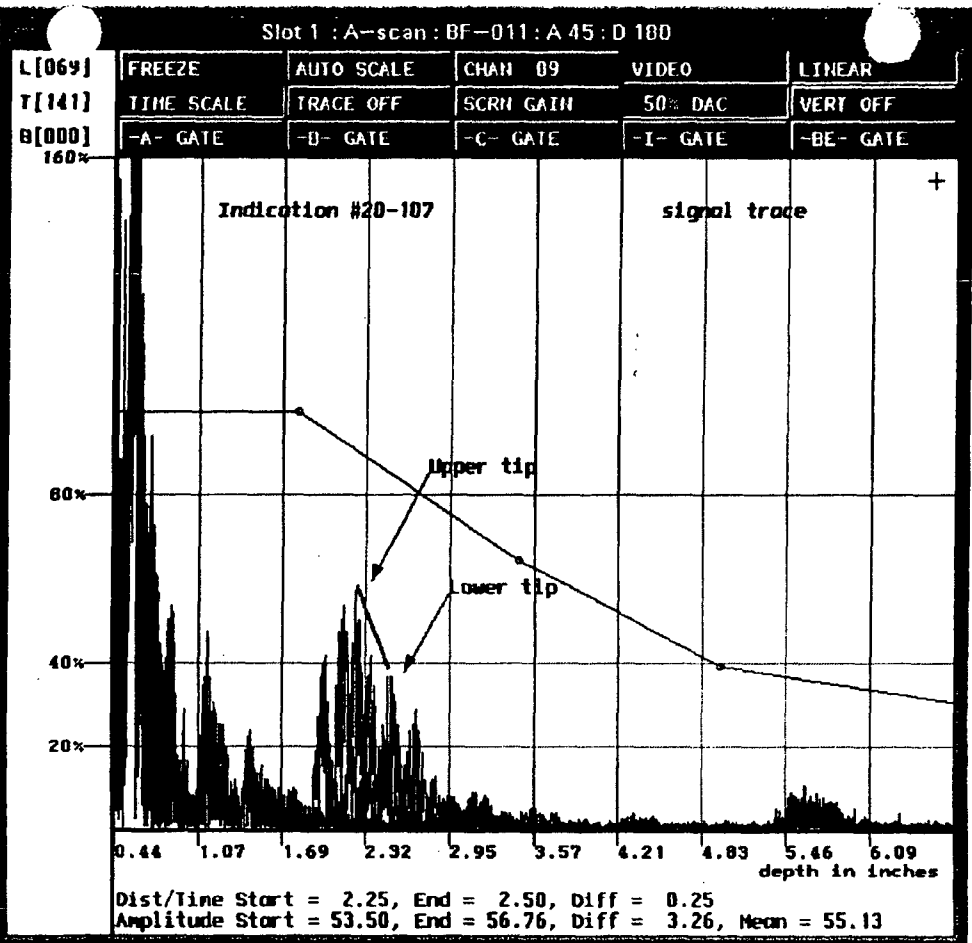
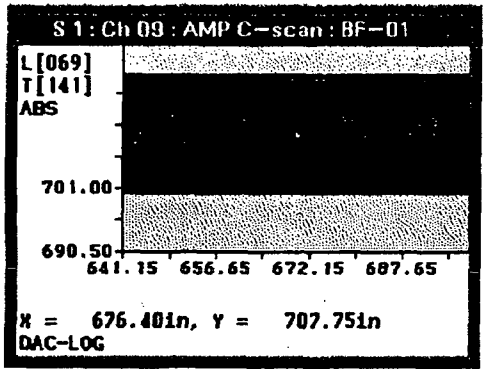
Lower Tern
curly[geris]/12
/test/dump /max
ter3/20-105

R 1151
Pg 282 of 291
00354

S 1 : Scale

32.3
36.6
41.0
45.3
49.7
54.0
58.4
62.2
67.1
71.4
75.0
80.1
84.5
88.8
93.2

100%
50%
20%



Lower Ten
curly[genis]/10
/test>dump /max
ton3/20-107

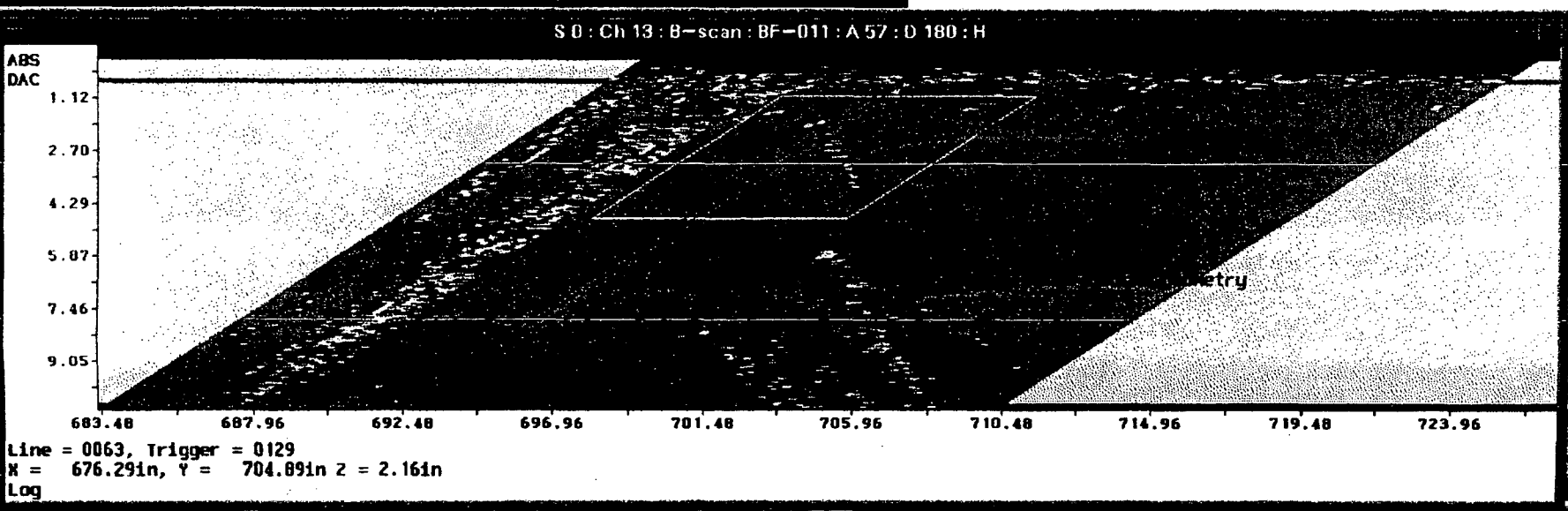
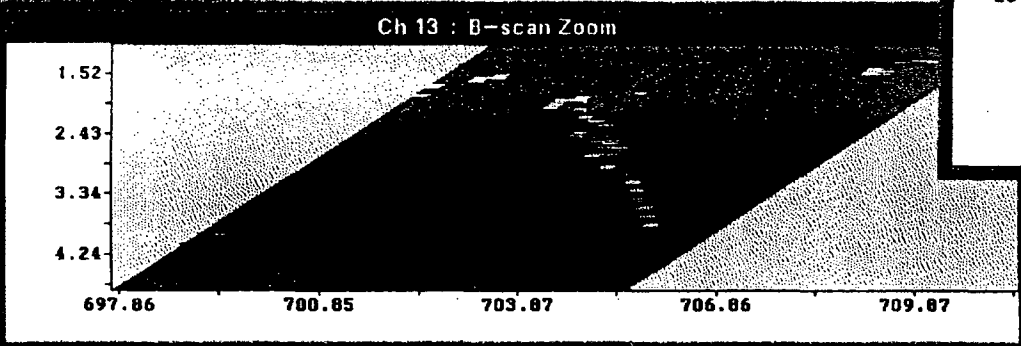
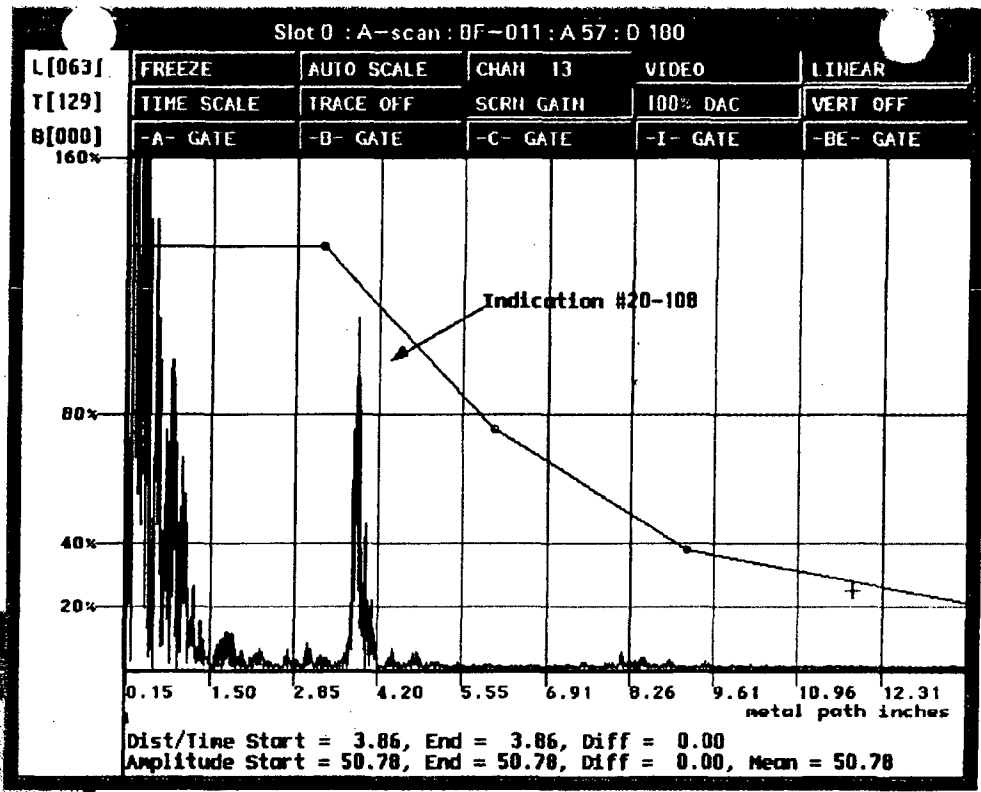
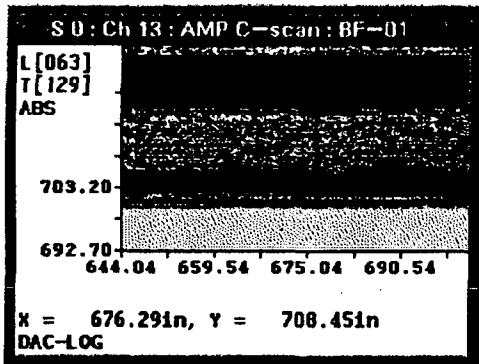
Pg 283 of 291
00355

R 1151

S D : Scale

32.3
36.6
41.0
45.3
49.7 100%
54.0 50%
58.4
62.7 20%
67.1
71.4
75.8
80.1
84.5
88.8
93.2

DAC



Ter
rensl/lo
lump /max
-108

R 1151
F9 284 of 291
00356

S 1 : Scale

32.3
36.6
41.0
45.3
49.7
53.0
58.4
62.7
67.1
71.4
75.0
80.1
84.5
88.8
93.2

100%
50%
20%

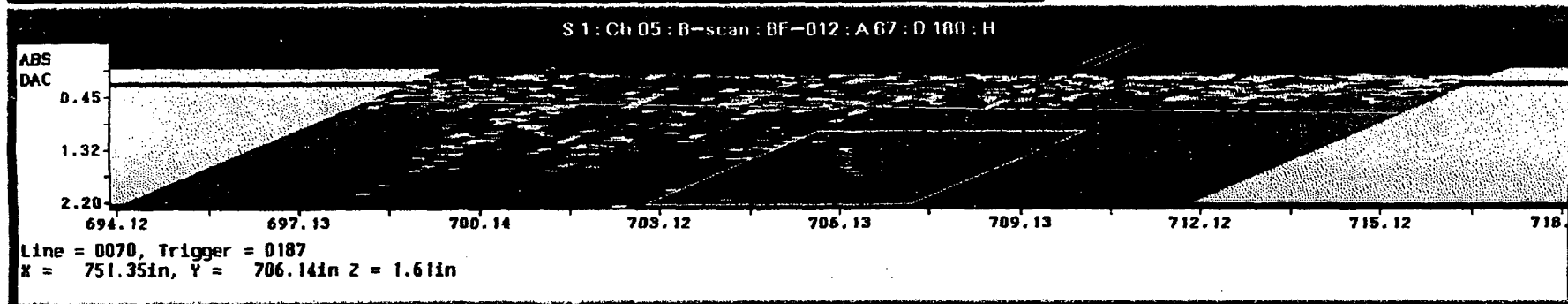
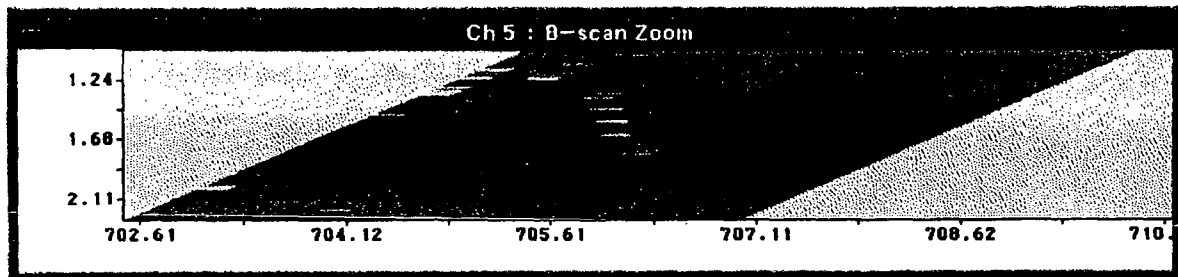
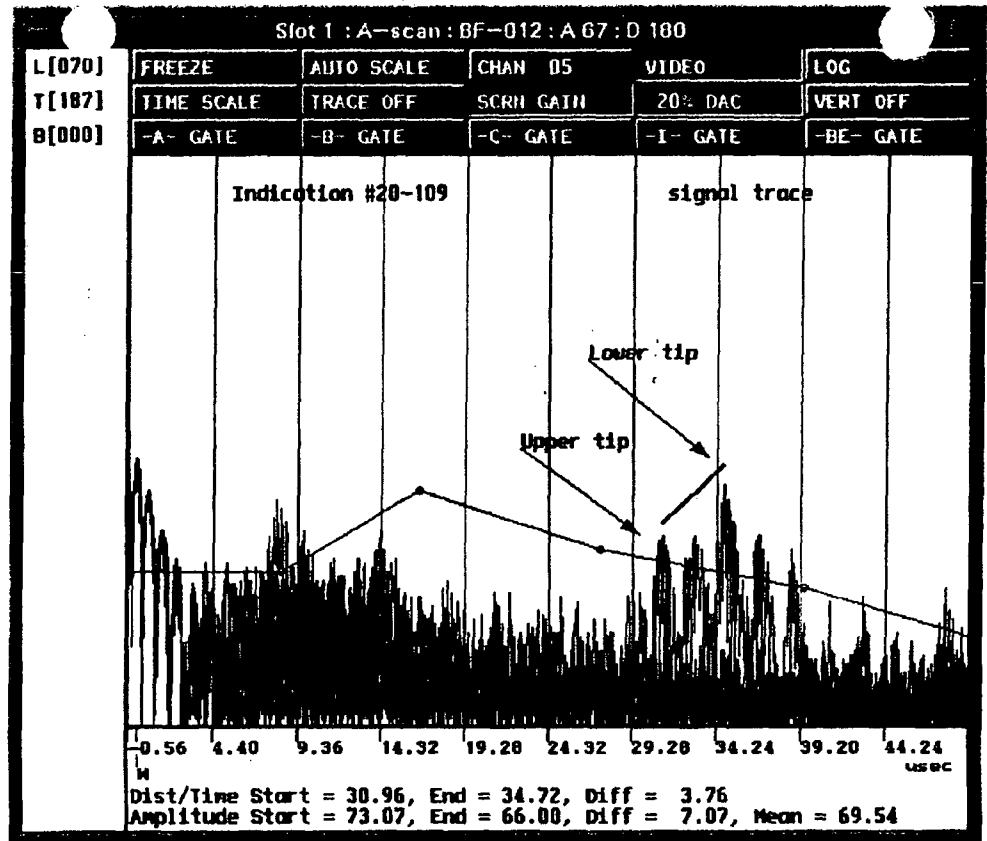
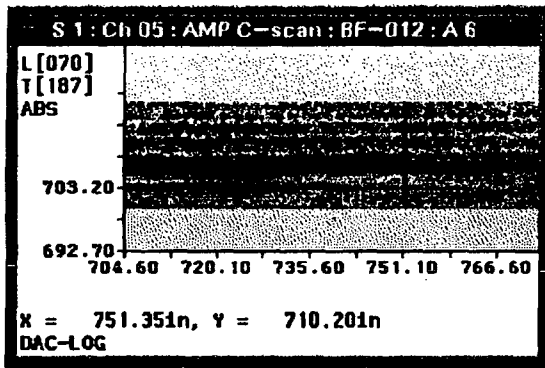
DAC

Lower Ter

```

curly[eris]/10
/test>dump /max
tar3/20-109

```



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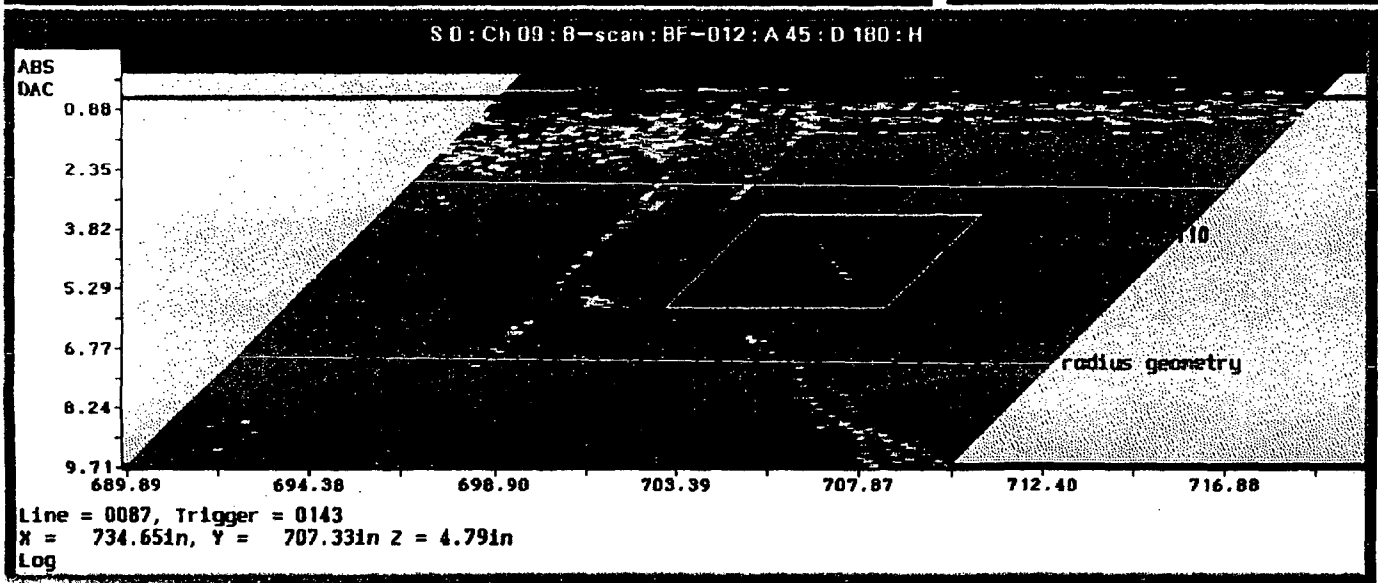
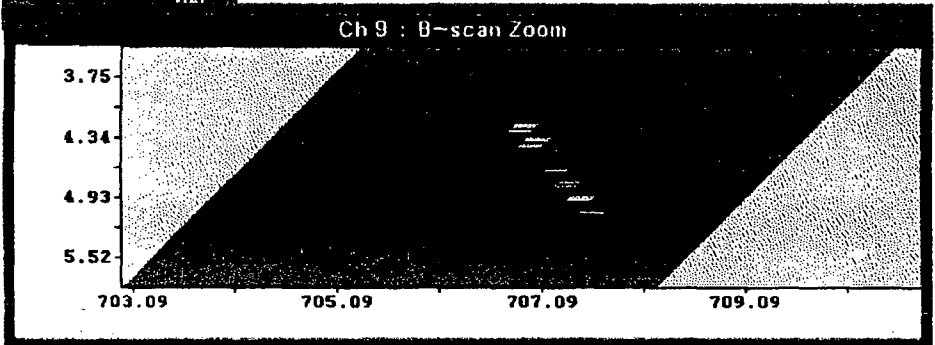
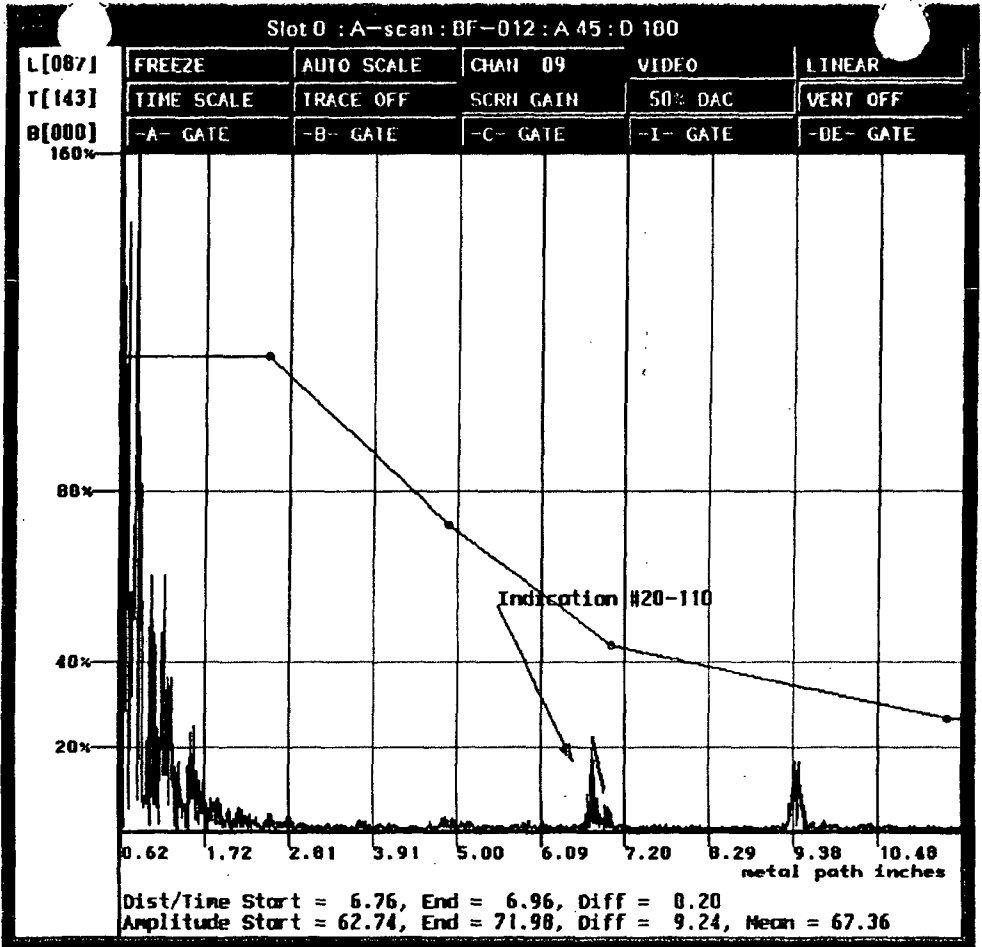
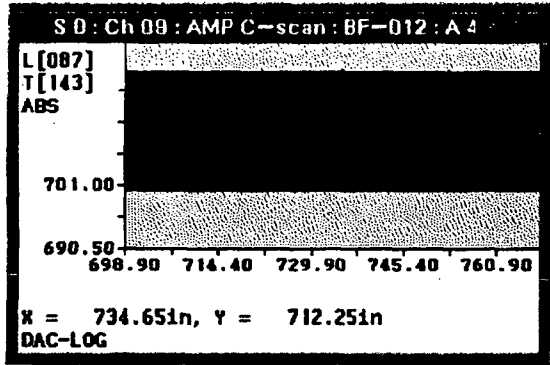
R1151

00357

SD: Scale

32.3
36.6
41.0
45.3
49.7
54.0
58.4
62.7
67.1
71.4
75.8
80.1
84.5
88.8
93.2

100%
50%
20%



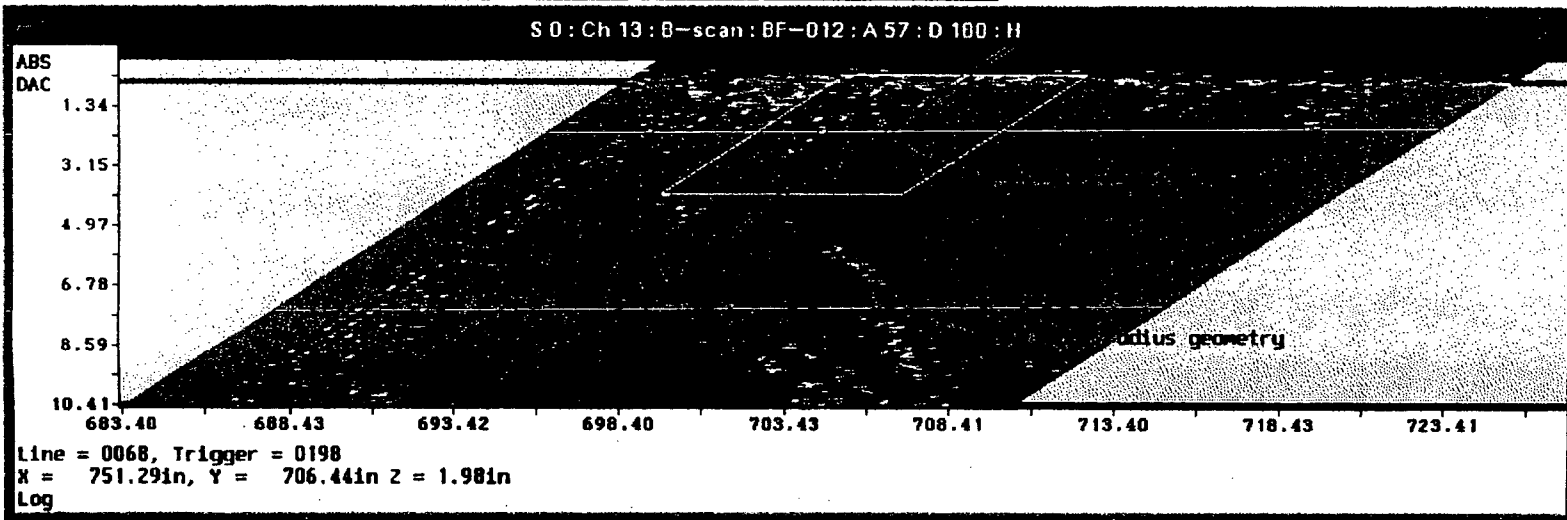
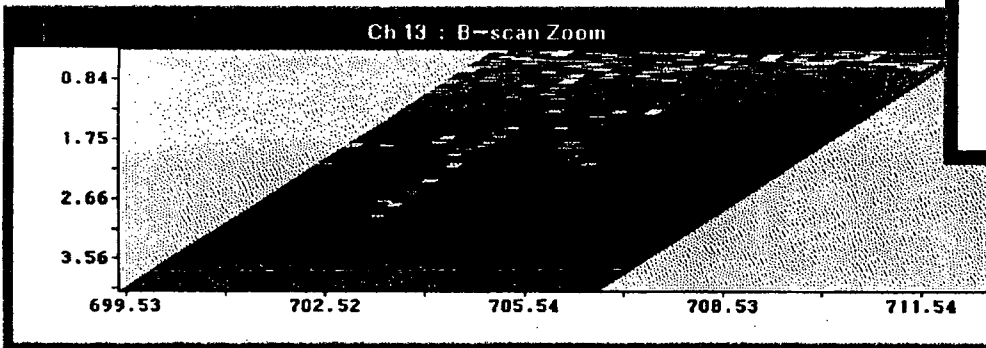
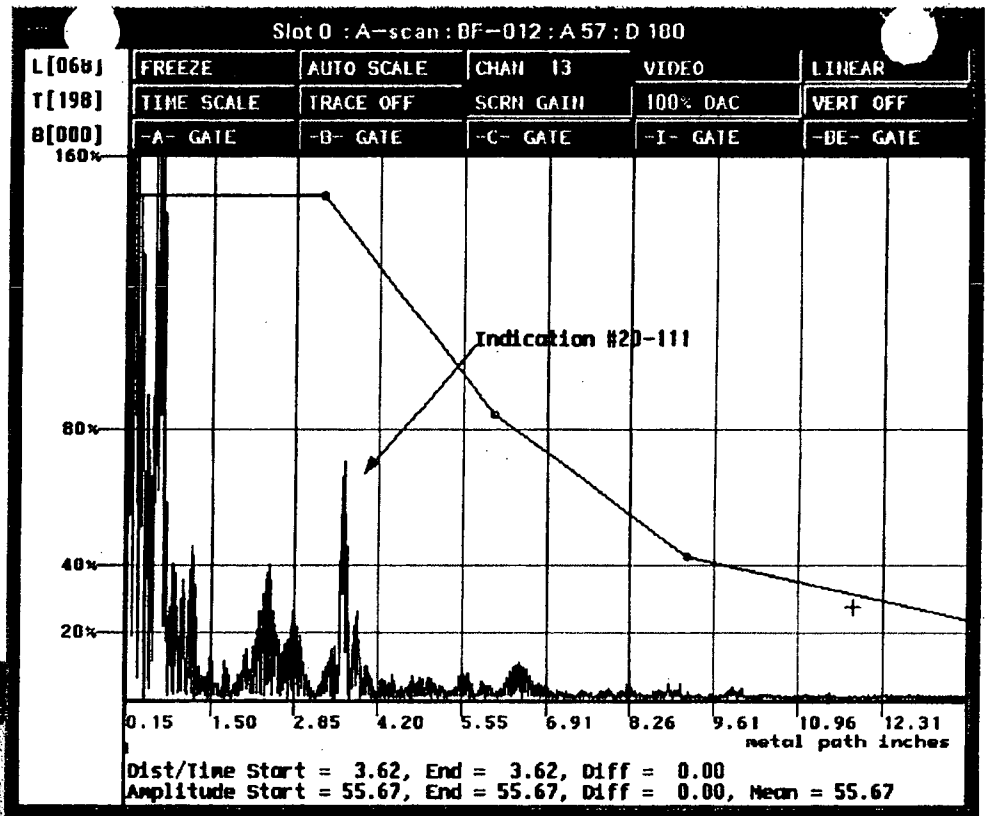
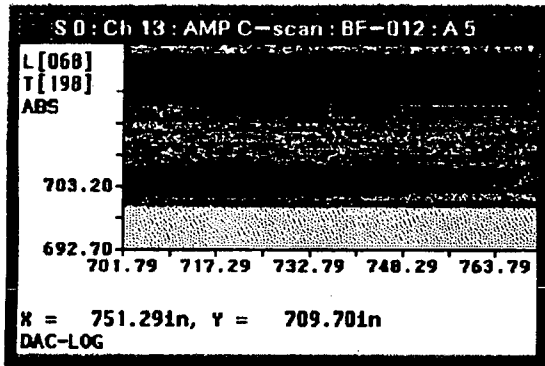
Lower Tan
curly[eris]/ic
/test>dump /max
tor3/20-110

P92869 291
00358
R 1151

S 0 : Scale

32.3
36.6
41.0
45.3
49.7 100%
54.0 50%
58.4
62.7 20%
67.1
71.4
75.8
80.1
84.5
88.8
93.2

DAC



Lower Ten
curly[geris]/lo
/test>dump /max
tor3/20-111

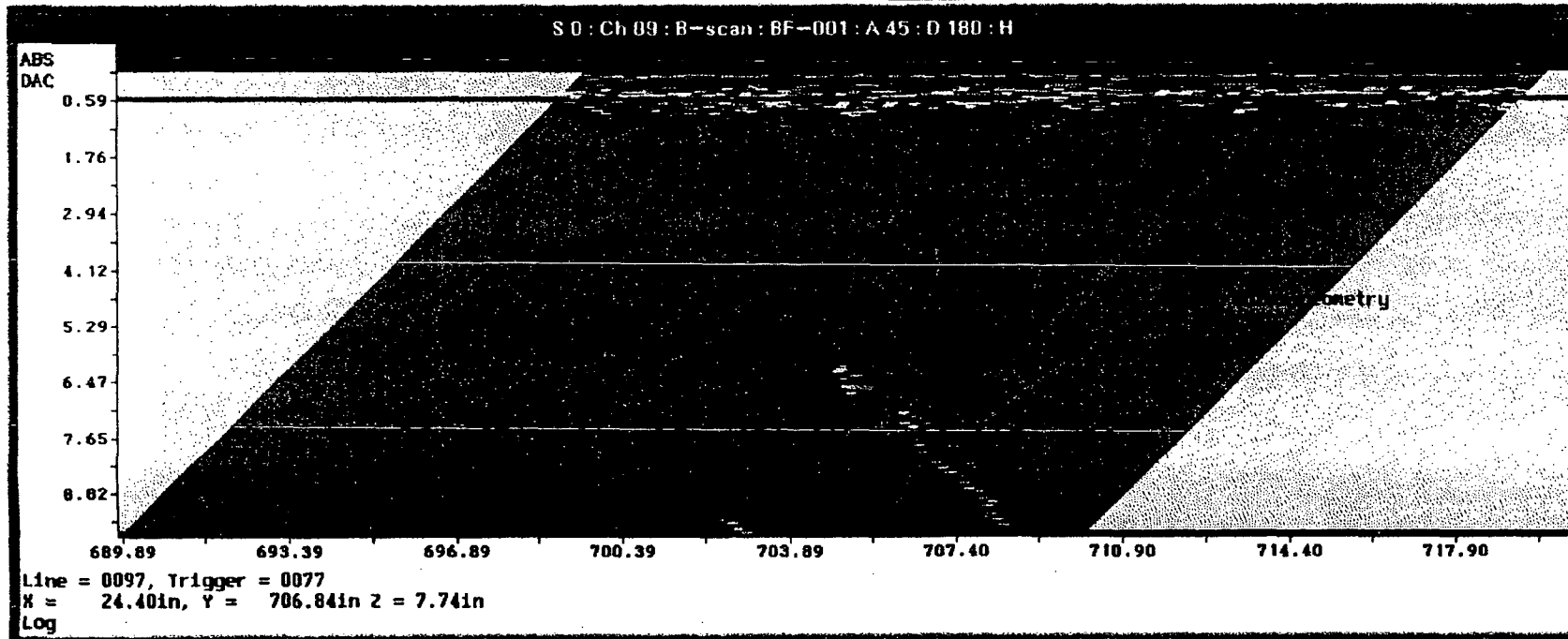
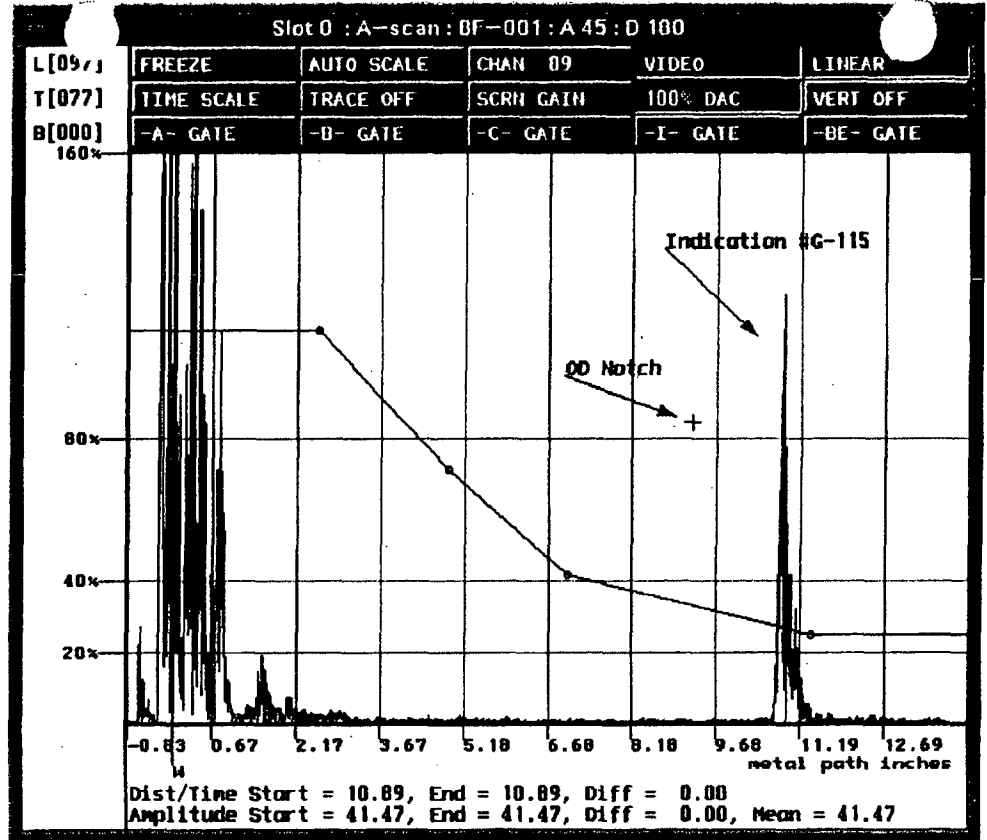
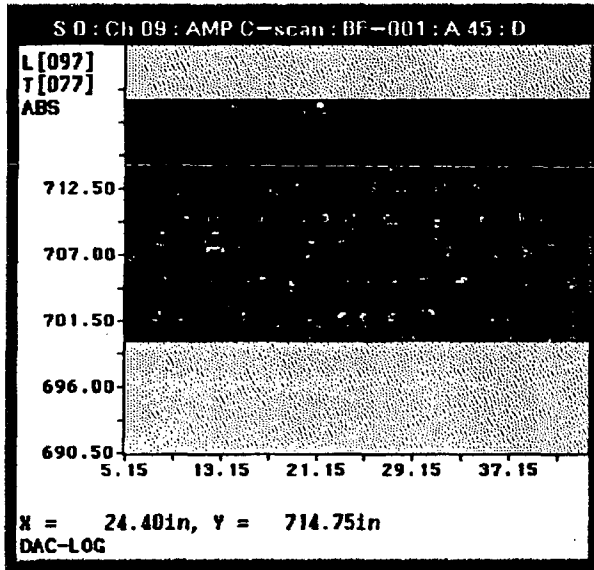
Pg 287 of 291
00359
R1151

S 0 : Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2 100%
48.4 50%
54.5 20%
60.7
66.8
73.0
79.1
85.2
91.4

DAC

Lower Tern
tor3/G-115



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R1151

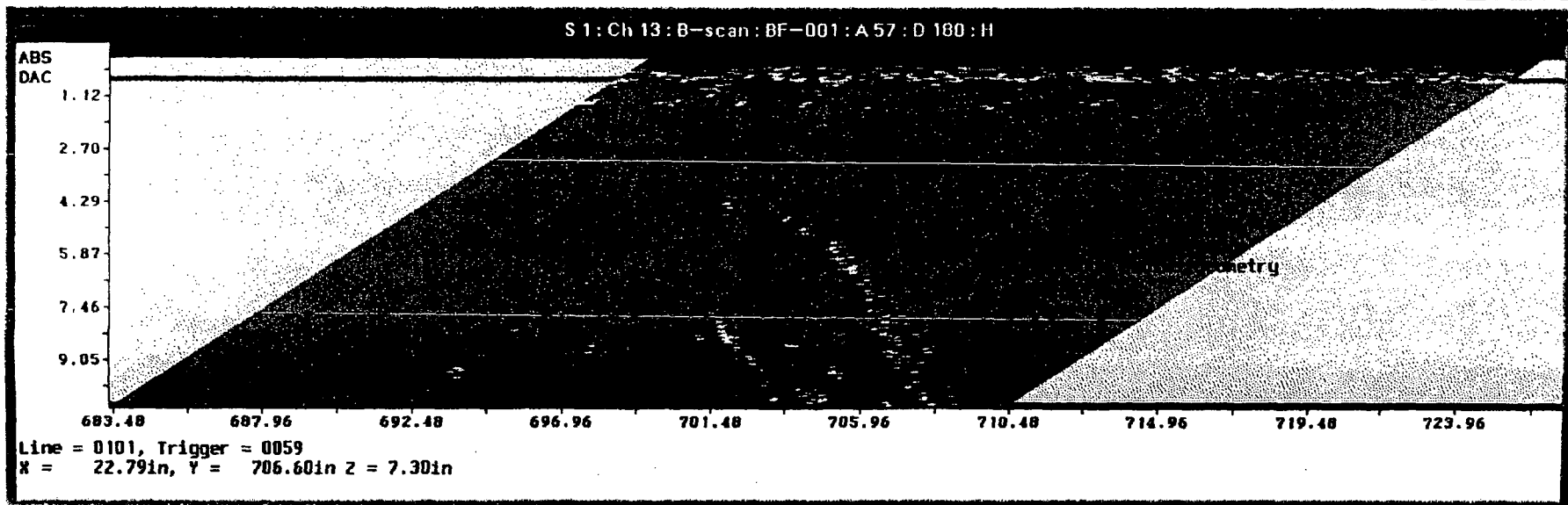
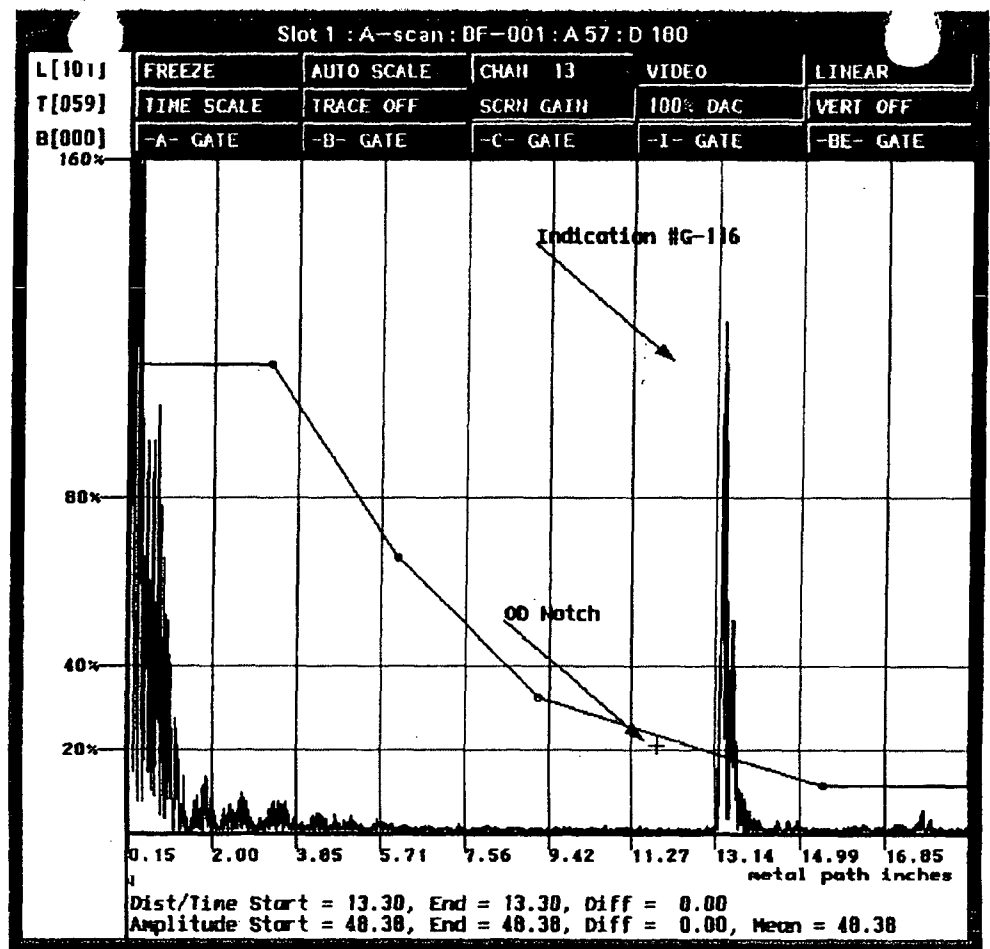
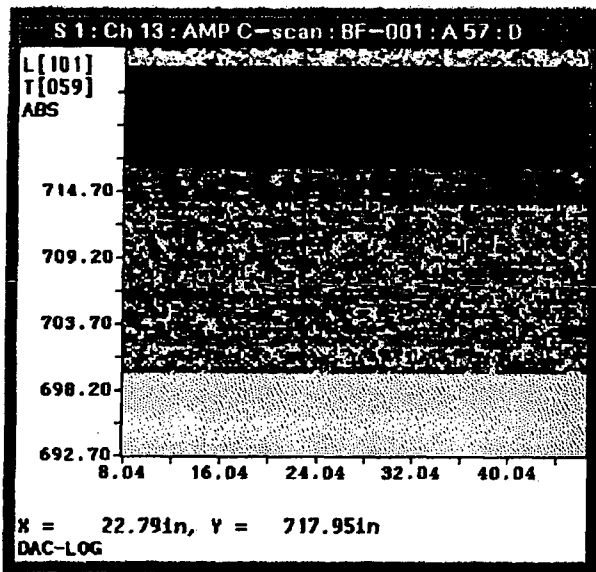
00360

S 1: Scale

5.4
11.5
17.7
23.8
30.0
36.1
42.2
48.4 100%
54.5 50%
60.7 20%
66.8
73.0
79.1
85.2
91.4

DAC

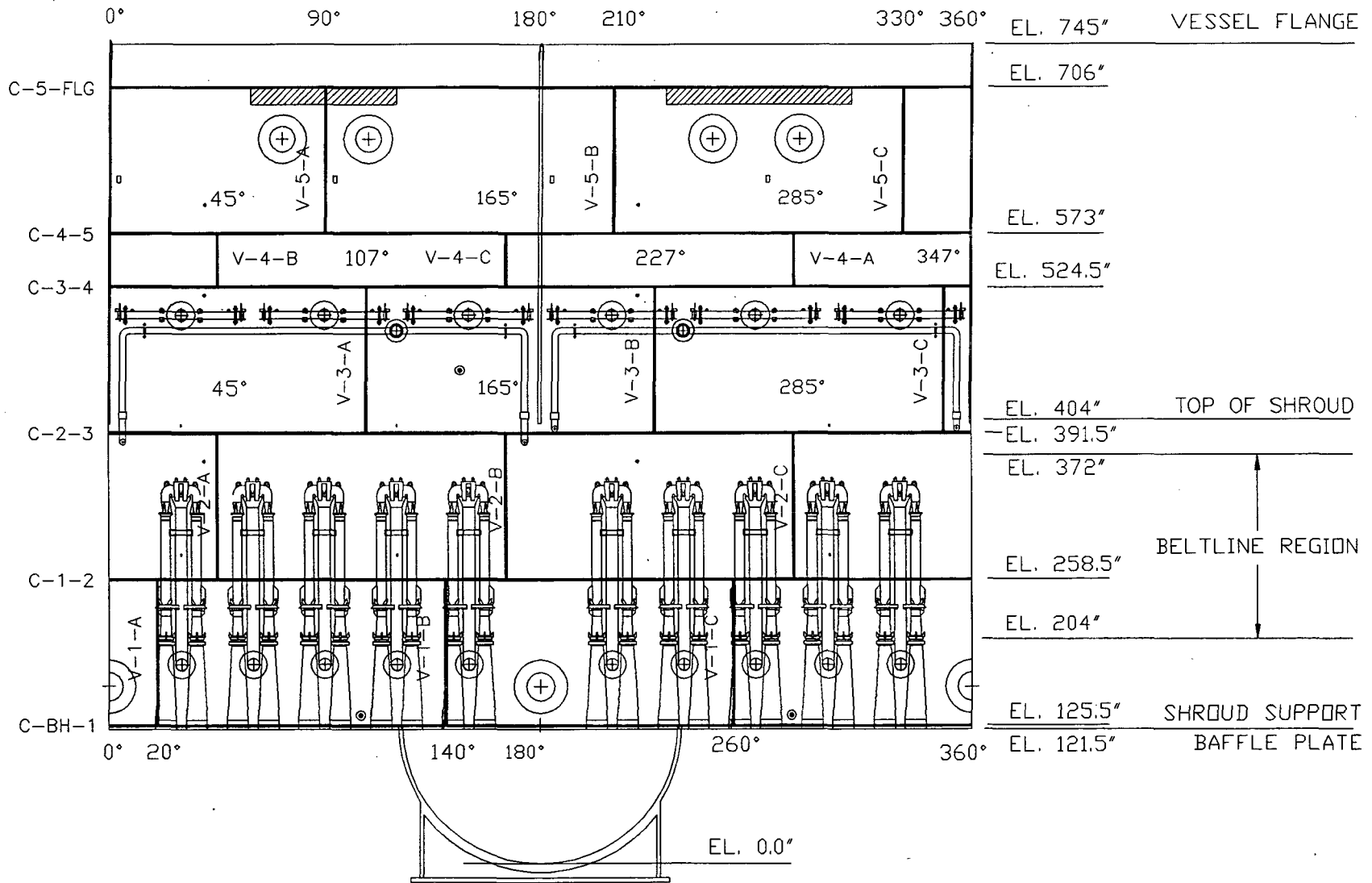
Lower Ter
tor3/G-116



R 1151
Pg 289 of 291
00361

00000 0000

BROWNS FERRY UNIT-3 WELD LOCATIONS



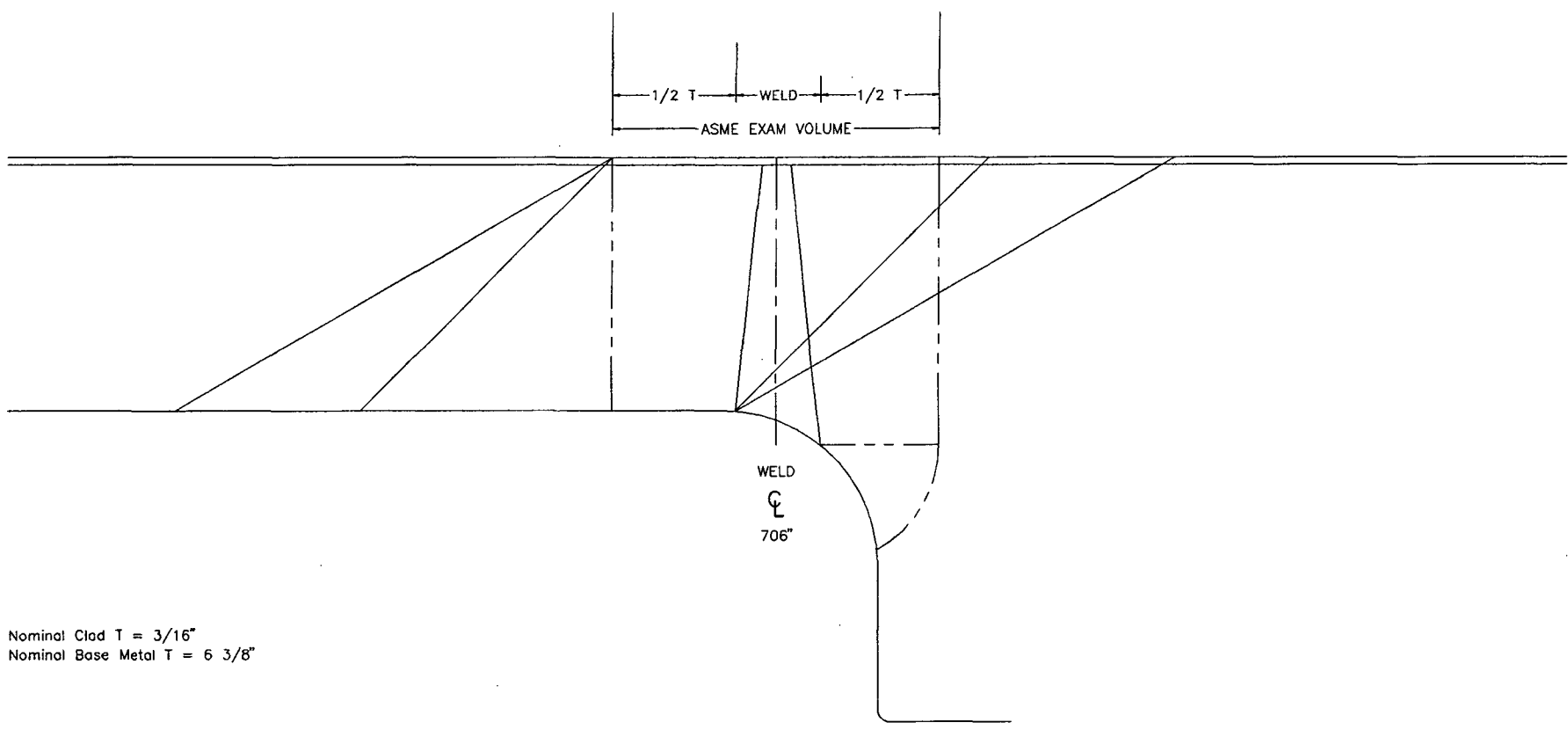
168 290 291
 60:52

168 290 291
 60:52

R 1151

00000-1498

R1151



Nominal Clad T = $3/16"$
 Nominal Base Metal T = $6 \ 3/8"$

00383
 P9291A291

GE NUCLEAR ENERGY	BROWNS FERRY UNIT 3	WELD C-5-FLG MANUAL PICKUP	SCALE: NONE	DWG. MANC-5-F	REV. 0
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