	ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM	
l E		
	REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)	
	ACCESSION NBR:9105240173 DOC.DATE: 91/05/15 NOTARIZED: NO DOCKET # FACIL:50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe 05000397 AUTH.NAME AUTHOR AFFILIATION SORENSEN,G.C. Washington Public Power Supply System PECIP NAME PECIPIENT AFFILIATION	
	Document Control Branch (Document Control Desk)	R
	SUBJECT: Provides response to questions asked by licensee in 910510 ltr re rept on flaw in reactor recirculation piping.Drawing	• I
	ref refers to drawings included w/Ref 2.	D
	DISTRIBUTION CODE: A001D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 27 TITLE: OR Submittal: General Distribution	S
	NOTES:	/
	RECIPIENT COPIES RECIPIENT COPIES	A
	ID CODE/NAME LTTR ENCL ID CODE/NAME LTTR ENCL PD5 LA 1 1 PD5 PD 1 1	D

EXTERNAL: NRC PDR

}

INTERNAL: ACRS

ENG, P.L.

NRR/DST

OGC/HDS1

NRR/DET/ESGB

RES/DSIR/EIB

NRR/DST/SICB8H3

NUDOCS-ABSTRACT

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK, ROOM PI-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 24 ENCL 22

2

6

1

1

1

1

1

1

1

8E2

2

6

1

1

1

1

0

1

1

NRR/DET/ECMB 9H

NRR/DOEA/OTSB11

NRR/DST/SELB 8D NRR/DST/SRXB 8E

OC/LFMB-

REG=FTEE

NSIC

1

1

1

1

1

1

1

1

1

1

1

0

1

1

A D D S

D

S

R

Ι

D

S

.

4

15

tp

2

the second s





### WASHINGTON PUBLIC POWER SUPPLY SYSTEM

P.O. Box 968 • 3000 George Washington Way • Richland, Washington 99352

May 15, 1991 G02-91-098

1

Docket No. 50-397

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

Gentlemen:

91052401

ADO

PDR

91051

- Subject: NUCLEAR PLANT NO. 2, OPERATING LICENSE NPF-21 REPORT ON FLAW IN REACTOR RECIRCULATION PIPING, ADDITIONAL INFORMATION (TAC NO. 80358)
- References: 1) Letter, G02-91-096, G.C. Sorensen (SS) to NRC, same subject, dated May 10, 1991
  - 2) Letter, G02-89-123, G. C. Sorensen (SS) to NRC, "Supply System's Response to Generic letter 88-01 Request for Additional Information", dated July 20, 1989

The following is provided in response to questions asked by the Staff of the Reference 1 submittal.

- 1. Water Chemistry History The history of the WNP-2 water chemistry is provided in Attachment 2.
- 2. UT Characterization of 20RRC(6)-8 Indication The characterization of this indication is provided in Attachment 3.
- 3. Input to Flaw Evaluation This is provided in Attachment 4.
- Post-IHSI Examination IHSI was performed on this weld but it was not post IHSI UT examined because the IHSI was done on this weld prior to service.
- 5. Location of 20RRC(6)-8 The location of this weld is shown on Figure RRC-105 of Reference 2.

.

۰ ۲ ۲

. · • •

.

Page Two REPORT ON FLAW IN REACTOR RECIRCULATION PIPING ADDITIONAL INFORMATION

4

6. WNP-2 R6 Flaw Evaluation Summary - The summary provided in Reference 1 has been revised to define the code allowable crack depth of 0.62 inches based upon the welding process used for this weld. The revised summary is included as Attachment 1. Page 3 of this attachment discusses the need for the revision in more detail.

7. Sample Expansion - Three circumferential welds were scheduled to be examined during R6. As a result of the indication found on 20RRC(6)-8 the examination was expanded by an additional three circumferential welds of the same category (Category B).

<u>Weld</u>	<u>Drawing</u>
20RHR(2)-1 20RHR(2)-2	RHR-104 RHR-104
12RRC(7)B-1	RRC-107

The drawing reference refers to the drawings included with Reference 2.

Very truly yours,

G. C. Sorensen, Manager

Regulatory Programs

AGH/bk Attachments

Ť

cc: JB Martin - NRC RV NS Reynolds - Winston & Strawn PL Eng - NRC DL Williams - BPA/399 NRC Site Inspector - 901A

### Attachment 1

### WNP-2 R6 FLAW EVALUATION SUMMARY (Rev. 1)

### INTRODUCTION

A fracture mechanics evaluation was performed to evaluate a linear indication found during in-service inspection of ISI weld number 20 RRC (6)-8. This particular weld consists of a SA-358 GR. 304 stainless steel pipe welded to a valve manufactured from SA-351 CF8M stainless steel. The indication was found on the upstream side of valve RHR-V-113. The defect is located in the 304 base metal at the top of the pipe centered at the 0° location (twelve o'clock position). The defect was sized at 0.15 inches deep and 4.5 inches long. The size of the defect exceeds the 1986 ASME Code Section XI Table IWB 3514-2 allowable and thus requires evaluation per paragraph IWB 3640 of the Code. The following discussion provides a comprehensive summary of the fracture mechanics model, applied loads (stresses), and Code evaluations that were performed.

### METHODOLOGY

### Stress (Loads) Evaluation

The stress state at the location of the flaw is required to determine the driving force for crack propagation. Stresses for the applicable loading conditions were extracted from the ASME Class 1 Stress Report for the subject RHR piping (Calculation No. 8.14.107) to complete the RHR piping flaw evaluation.

The following load combinations were evaluated to determine if the crack would grow under the imposed loads. Two of the evaluations (fatigue and intergranular stress corrosion cracking (IGSCC)) encompass the requirements of IWB-3640. The third evaluation was done to evaluate the flaw growth under the relatively short duration applied load caused by the worst thermal transient experienced by the system, i.e. plant shutdown.

The imposed load for fatigue evaluation consists of superimposing the pressure, deadweight bending, normal operating thermal bending stress and the weld residual stress to complete the evaluation of the minimum fracture stress intensity. Pressure, deadweight bending, and thermal bending stresses are conservatively combined with the worst case faulted dynamic bending stresses (without regard to the direction of the applied stress) to complete the evaluation of the maximum fracture stress intensity range. This methodology conservatively includes faulted dynamic stresses in the normal/upset evaluation and conservatively adds additional thermal stresses into the faulted evaluation. The number of dynamic loading cycles is based on the design basis main steam safety relief valve actuations which yield approximately 300 stress cycles per year. The peak

I

### Attachment 1

### WNP-2 R6 FLAW EVALUATION SUMMARY (Rev. 1)

dynamic loading includes 300 cycles of the Safe Shutdown Earthquake event even though the plant design basis is 10 stress cycles.

The IGSCC evaluation was completed using the steady state deadweight pressure and bending stress and the normal plant operation thermal stress.

The thermal transient load evaluation superimposed the pressure and deadweight bending stresses on the thermal bending and thermal gradient stresses. The dynamic stress was not included due to the low probability of occurrence during the short duration of the peak thermal gradient stress.

In each loading condition the above stress states were then superimposed on the weld residual stress distribution to complete the respective flaw evaluations. The resulting flaw sizes were then evaluated against the end of evaluation period depth-to-thickness ratios from Tables IWB-3641-5 and IWB-3641-6.

### Flaw Evaluation

The indication was evaluated using the NASCRAC computer code developed by Failure Analysis Associates. This code uses stress field influence functions as the basis for flaw propagation. The NASCRAC model selected is a shell element containing an elliptically shaped circumferential flaw. The model is identified as 703 in the NASCRAC manual. This particular model includes three crack growth degrees of freedom encompassing the respective circumferential and crack depth coordinates. The evaluation was performed using conservative linear elastic fracture mechanics principles.

The modeling applies the requirements identified in NRC Generic Letter 88-01. The flaw was evaluated as an intergranular stress corrosion crack using the crack growth rate equation provided in the generic letter. The weld residual stress distribution provided in the letter was also used even though the weld in question had induction heat stress improvement (IHSI) performed on it in 1983. The weld residual stresses are developed from room temperature yield for 304 material (30 ksi) as the normalization stress outlined in the generic letter. The flaw aspect ratio was reviewed and compared to the requirements of NUREG-0313, Rev. 2. The aspect ratio was determined to be 30:1 which exceeds the NRC requirements for maintaining the same aspect ratio during crack growth. Therefore the final crack growth aspect ratio was determined by the NASCRAC flaw model.

In performing the evaluation the flaw model was run to evaluate fatigue damage for a one year operating cycle. The crack was evaluated using both a da/dn curve

2 of 3

### Attachment 1

### WNP-2 R6 FLAW EVALUATION SUMMARY (Rev. 1)

for BWR water environments and an air environment for austenitic stainless steel. The da/dn equation used for BWR environments was provided in the EPRI report NP-4690-SR "Evaluation of Flaws in Austenitic Piping " dated July 1986, page 3-2, Equation 3-1. In this EPRI equation the E-factor selected for a BWR environment was taken as ten. The curve used for the air environment is that provided in ASME Code Section XI, Appendix C, Figure C-3210-1 for an R-ratio of 0.79.

Upon completion of the fatigue evaluation the NASCRAC flaw model was executed to complete the IGSCC evaluation. The crack dimensions for the evaluation period as determined by fatigue would normally be used as input for the initial crack dimensions for the IGSCC model. However the growth due to the 300 fatigue cycles did not yield a significant change in the initial crack size. Therefore the original flaw size was used as the input for the IGSCC model. The equation used for the IGSCC crack growth rate, as mentioned earlier, was that provided in the generic letter.

The above described flaw evaluation and computer outputs are documented in Supply System calculation ME-02-91-30.

### CONCLUSION

Based on the flaw evaluation results it is determined that WNP-2 may operate for the single cycle evaluation period before reevaluation of the linear indication is again required. The evaluation demonstrates that under the worst imposed loading conditions the flaw meets the acceptance criteria of ASME Section XI Tables IWB-3641-5 and 3641-6. The Fatigue evaluation for the flaw propagation shows that growth due to the piping system mechanical loads is insignificant. The fracture mechanism which can propagate the flaw is intergranular stress corrosion cracking. If the IGSCC phenomena is active the crack will increase in depth to 0.29 inches in the next year which is less than the ASME Code allowable of 0.62 inches per Table IWB-3641-5 and 6.

Revision 1: The weld root and hot passes were performed using gas tungsten-arc welding (GTAW) for an approximate thickness of 1/8 to 3/16 inch. The remainder of the weld was performed utilizing shielded metal arc welding (SMAW). Therefore the acceptance criteria of tables IWB-3641-5 and IWB-3641-6 is used in lieu of IWB-3641-1 and IWB-3641-2. ATTACHMENT 2 WATER CHEMISTRY HISTORY

ŧ

· · ·

· · ·



•

WEEKLY AVERAGE OF DAILY READINGS

•

u.

REACTOR WATER CHLORIDE AVG. (PPB)

ን

•

\* N • --9

19' 11' -1 , ,

**、** 

·

*1.*\*

.

•

· · · · · · ·



DAILY READINGS

.

L

e · `

• •

, , , •

\* 6

.

•



-

•

ふ

. . .

e it

٤. A

2

.... FS.

ł

' 1

\*\*\*\*

۰,



•

.

٠

۴

ø

a. × r

9

\$

i. 1 .

. . . N

a .

. 1

,

,





, .

5 **b** 



и<sup>л</sup> . А.ж. т

ίς το **χ**η το το τ

، • • • A e Constanting and the second se

•



.

WEEKLY AVERAGE OF DAILY READINGS

REACTOR WATER CONDUCTIVITY AVG. (UMHO/CM)

× \* ۲ • . . • • •

۰, x ı

2.1

# • ;

. • L. .

\* ,



\* }

• • • • • 

می می از ا 

×

**A**`



×

WEEKLY MAXIMUM OF DAILY READINGS

REACTOR WATER CONDUCTIVITY MAX. (UMHO/CM)

<u>ې</u> ا

ATTACHMENT 3

L T d F

.

,

UT CHARACTERIZATION OF 20RRC(6)-8

## WASHINGTON PUBLIC POWER SUPPLY SYSTEM

WNP-2 ISI Evaluation Sheet

.

٠

Evaluation Sheet No.:	Examination Method		Examination F	Report No.: IRRU-155
. 1-065	Volumetric Sur	ace 🔲 Visual 🔲 -		1RRU-156
Project:	System:		ISI Drawing N	0.:
S-9aw	R K	$\leq \dot{\langle}$	Γ K	RC-105
Originalor	Examination Procedur	re No.: /	Revision No.:	
HON WELCH	QCI 6-3F	RO/6-25 R.O.	,	0/0
Weld/Part Description:	· · · · · · · · · · · · · · · · · · ·	Weld/Part No.:	·····	
PIPE TO VA	LVE	•	ZO RRC (	(4)-B
Description of Reportable Indication:	0 //1	Acceptance Criteria:	IWB 35	14-3 AND
60° ? 70° RL dATA length	of 2.5" however	Jeso	C GO/N	060
STEINE CLATA OT SOTIOTIO RE	suct 15, 1.>.	Turbuction of Surface		
reveals maximum of 15	6 three wall (15")			
(4/2=.03 a/+% ISI MAX= 10.66)	(****)	Acceptable	Rejectable, Sub	mit to RTO
Evaluation of Volumetric Indication (check a	applicable boxes):			· · ·
Acceptable: . Geometry:	Flav	w Size <80%	Flaw Size ≥80	% of acceptance
See justification below See justification below	tion below of a	cceptance level	level, submit to	o RTO
Justification:				
				٩
	r. A		·	
Level III Review: Dat	э:	RTO Concurrence:		Date:
			•	
Reexamination No.:	Results:	······································	Evaluation Sh	eet No.:



· · ·

۲. ۲. ۱ \*; 4

X

. , <sup>2</sup>

и К





,

· · · ·

E Auclear Energy	INDICATION PLO	T SHEET	SITE: <u>いいわ-z.</u> PROJECT NO: <u>いた-</u>	UNIT:_2	REPORT NO.
YSTEM:	COMPONENT ID NO:	20RRC (6)-8	_ CONFIGURATION:	Prpe.	LOW
JAY	٧Ę	<u> </u>		P	CPE
		24° 540	R COMPONENT INDICATE	0N#1	
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	70 KL	
		N I Z-	1	<u>,</u>	
					Page_Of
Drawn By L	avel Date Boylewed By	Level Dale	Beviewed By Ti	ile Date	FORM 137 1-13-90

Ň 1

.

. λ.

and the stand of the

.' ^. . ,

میده آن الکور ا به او

и 9

SUPPLY S	YSTEM
----------	-------

ULTRASONIC CALIBRATION SHEET

5.

	- <b>14 3</b>		208664	VELDS	OR PARTS E		ED		z		10	$\left  - \right $			┼╌┼		┛	-	/-		
•	FILTER	- FIL 2	SEARCH U			UMFE	RENTIA	<u> </u>			30 20					·			/		
• ** •	REJECT	- <u>500</u>			/						40 —	┼╌┼			┼╌┼					/ -	<u></u>
٠	GAIN IN db	- 67.6d D	18/8/	IODE							50 <b>—</b>						+	-		$\frac{1}{1}$	1
•	FREQUENCY	- 2.25	1 8/A/v	IODE	<u></u>	X	A				60				╞──┤		┥	_		<u>~/</u> ~	
	DELAY CALIB	- ,405	N8/4 M	ODE		~	Ζ				80										
•	RANGE CALIB	<u> </u>	NIA/8	ODE				$\neq$	-		90	┼──┼		+	ED	NOTC	-  - H				/
	COARSE DELAY	- 1.50	۲ <u>۳ ۳ ۳ ۳ ۳ ۳ ۳ ۳ ۳ ۳ ۳ ۳ ۳ ۳ ۳ ۳ ۳ ۳ ۳</u>		<u>80°le</u>	<u>-</u>	C	16	7		100			<u> </u>	T	- <u>-</u>		-			
2	INSTRUME	NT SETTINGS	REFLECTO	RS	%FSH		IN IN	CHES				SC	REEN	DACI	PRESE	ITATI	ON		CAL	CHECK	<u>s /</u>
•	INITIAL CAL TIN	AE:13	40				SY	STEM C	ALIE	BRATIC	DN		FIN	IAL CA	LTIM	E:	1620	<u></u>			
*⊒ ≱	* /	40 35 30	25 20 15	10	LOW	+-	40	$\square$							MITS %	*	32-48	16-2	4 64 -	96	96 64 - 96
<u>,</u> ,,,	HIGH 100. 90	80 70 60	50 40 30	20	db	+2	0	-2 /	54	-8-	-8 -1	)12	-14	db C	HANG	E	6	-12	+6		+12
	۶۰۰ FOI	R CONTINUOUS G	AIN CONTROL				FOR 2	db STE	P GA	IN COŅ	TROL	$\leq$		AMP	LITUDE	: *	80	80	40		20
	· · ·	SCREEN HEIGHT	LINEARITY	PREV	IUUSLY PER	FURM	SCRE	EN HE	IGHT	LINEA	ARITY			1		AMP	LITUDE	CONTR	OL LINEAR	ITY	
•				DOCU			INST	RUMEN	IT CA	LIBRA	TION	050			<u></u>						
_• _	CHART RECORD	ER TYPE:	N	\A		S/N:	NIA	-	U	T INST	RUMENT	TYPE		<u></u> o	NEC	_13	a		S/N:	(020	382-21
•-	TEMPERATURE .	70	°F   GA	IN IN di	b				A	CTUAL	ANGLE		60	•		ВА	TCH NO	)	874-	<u>A</u>	
	THICKNESS	1.031	AM	P	N A SWE	EP		1	1. SI	ZE 2(	10×18]	<u>nn</u> FRI	a	2	M		UPLAN	r	LTRAG	EL .	П
	SERIAL NUMBER	и ЦТ 9			TEN	1P /		°	=  s/	R N _8	.TD - 8.319	WAVE	MOD	E	RL	LE	NGTH'		8'		
F 7	CALIBR	<u>Donnel</u> ATION STANDAF	Hebert		ATION STAN		SIMUL	ATOR	┦			RANSD		e.h	<u>6-5</u>	C.4	BLETY	PE (	2) RG	174	
۰ <i>ـ</i>	EXAMINER:	Wes (	Money C	<u>ت وم</u>	E LEVEL:	TIL					<u>5-3</u>	<u>-91</u>	~	111			5/N: L	13169	1.21 4	239	•21
	PROJECT:	-WN6-3		 ī	SYSTEM:			RRC						SHI	EET NO	).:	3	14			*ء • مد:





.



\*

. d .

	WASHINGTON PLALIC POWER
S)	SUPPLY SYSTEM

ULTRASONIC EXAMINATION DATA SHEET

REPORT NO .:	+@	IRRU-	15	55

	PROJECT	Γ:		·	7-			SI	STEM			Rit	<u>د</u>		ISI DR.	AWING	NO.:	RRC	-105	RE		· · · ]
	WELD/P	ART DESCRIPT	ION:	 2.	<u> </u>	PI	PE	TU 1	VAL	VE	CIG	2 WI	 ELD		WELD/	PART	NO.:	20 R	12.6	(6)-8		
5	MATERI	AL TYPE:			<u> </u>		<u></u>	c	AL STA	NDARD	NO.:	u.	т 9		тніск	NESS:		1.031			•	,
	NO. OF S	SCAN DIRECTI	ONS:	(3) {	A C +	D		LI	MITED	EXAM:			<b>NO</b>	* XYES	ACCEP	TANCE	CRITE	RIA: (	ŊCI	6.3	REVC	5
	INSTRUC	TION NO.:	60	ĩ	lor.3			R	EVISIO	N: (	>		ANGLE:	)° RL	ANGLE	:		/	ANGLE	:		$\square$
5.42	EXAMIN	ER: Wes	$\gamma$	lone	e.u (	-t-	) c		EVEL:	TL			DATE: S	.3.91	DATE:			/	DATE:	•		7
-	EXAMIN	ER: Down	. h.	. He	bent		G D(H	£ LI	EVEL:	п			TIME START:	1505	TIME S	TART	N/A		TIME S	TART: A	7 <u>a</u>	
	" WE	I D HEIGHT	.10	<u>THIC</u>	KNESS	MEAS		NTS		1.2"			TIME STOP:	15.55	TIME S	TOP:	/		TIME S	тор: /	,	
	SU	RFACE ONE								SURFA	CE TW	10	PART TEMP:	89.6 °F	PART	гемр:		· %	PART	EMP:		
	-	BM		TER	HAZ	WE	LD E	НА	z C		R	вм	CAL SHEET NO.	: 314	CALS	IEET N	10.:		CALSF	IEET NO.	;	
	°0 '					T					$\mathbf{P}$	_	CHART NO.:	AIA	CHART	'NO.:			CHART	NO.:		
	• 90°						υ						NOTES: * N	O EXAM ON	0 720	UE T	OVAL	VE CO	NFIGL	14+750	N	
	180°					7	A					·• .										
•	270°																	•				
ř	NON		2	ш	NO	•	F	BLE	٩¥ ,	100 TO	50 TO	20 TO	SEARCH		THR	DUGH	WALL D	ATA		a, sc	EVA UATI	
-	CAT	A - B OR PART NO.	EAM IGLE	RFAC	ECT	DUNE		MPAE	NX AI	100	50	20	MAXIMU	ЈМ АМР	MAX	мим	MINI	мим	SP	SP C(	CEPT	JECT
		A B	ĒĀ	sus		ы К	Û	DAI	×.	L	ENGTI	н	L	w	88P.3	D	SP	D	4	4	AC	Ë
	<b>≭</b> 1	0-90	60	Z	A	2.16	0-25	N/a	200	<u>،</u> ۳	2"	2.5	2.0	2.05	N/A							$\checkmark$
•	3	-					<u> </u>															
		*										<u> </u>										
	-														<u> </u>							
		•							<u> </u>								[				<b> </b>	
												ļ			ļ						<b> </b>	
	-			_					<u> </u>						<u> </u>						]	
															<u> </u>						]	
	·														<u> </u>						<b> </b> ]	
									<b> </b>						<u> </u>							
ž				_			ļ	/	<b></b>			Ļ	ļ		<u> </u>		<u> </u>					L
	REVIEW	ED BY LEVEL	111:	$\langle e \rangle$	-	<u>I ll</u>	1 A	<u> </u>	DATE	: 5-	4-9	/	<b>REVIEWED BY:</b>			-	-		DAT	E:		
	968-162	93,	-0												•		48	PAG	E 1 OF	1		

19 .

a tapan survey na nake ta

1494 e

्रम् भिर्म्स स

,, ts > 555 s \* N \* \_<sup>\*</sup>\*\*#35 \*

Na Vi

.

2

۱. ۴



PROJECT:		SYSTEM:		RRC						SHEET NO.:		31	5	
EXAMINER: LUCE MAN	, (the)	LEVEL:	π	13	D	ATE:	۲-2	-91		THERMOMET	ER S/N: L	13169	-21 42.39	- 21
EXAMINER:	Hebert Di	GE LEVEL: TT	<u>г</u>		IN	ISTRUC	TION NO.	:	00	.I. 6-3		REVI	SION: O	
CALIBRATION STANDABD	CAL	IBRATION STAND	DARD	SIMULATOP	7		TR	ANSDI	ICER		CABLE TY	PE(	2) RG174	
SERIAL NUMBER	S/N	TEMP	~		F S/	יא <u>88</u> אי	TO -322 1	NAVE	MODE	RL	LENGTH _		8'	
THICKNESS 1.031		N A SWEEP		1	N. ISI	IZE 2	(10x18)m	FRF	0	2 мн7		r (11	TRAGEL I	Π
	°E GA14TA	I dh		•					ביי הר	0	BATCHNO		8764	
	F Gain in		/2.2.				ANGLE _				BAICHNO	•		
CHART RECORDER TYPE:	NIA	5/	/N:					YPE:		SONIC	136		15/10: (020	<u>2382-2</u>
•	PR	EVIOUSLY PERFO	ORME	D ON CALIB	RATIO	ON SHE	ET NUMB	ER _	~	NA				
SCREEN HEIGHT L	INEARITY	1	· · · ·	SCREEN HE	IGHT		RITY			A	MPLITUDE	CONTRO	DL LINEARITY	
FOR CONTINUOUS GA	IN CONTROL		F	OR 2db STE	PGA	IN CONT	ROL			AMPLITUDE %	80	80	40	20
HIGH 100 90 80 70 60	50 40 30 2	20 db	+2	0 -2	<u>م</u> بر	a-6 -	-8 -10	-12	-14	db CHANGE	6	-12	+6	+12
LOW 50 45 40 35 30	25 20 15 1	IO HIGH		-80						READING %	32	16.2	<u> </u>	96
INITIAL CAL TIME:	330			SYSTEM	CALIB	BRATIO	<u>. I</u>	l	FINA	L CAL TIME:	161	5		1
INSTRUMENT SETTINGS	REFLECTORS	AMPLITUDE %FSH	SW	EEP READI	IG			SCF	REEN	DAC PRESENTA	TION		CAL CHE	CKS
COARSE RANGE - 2 OU	५ /8 NODI	E 00°/0		45								ľ		
COARSE DELAY - CBD	ANA /8 NODE				オ		100					ן ר		
	/3/A		+-		-		90					┥┟		/
				/			80		+	LO NO TCH		┥┝		-/
	/8 NODE	· · · · · · · · · · · · · · · · · · ·			-		70					┥┟		_/
2,25	10 11001		4		-	۲	60			<u> </u>	┟╼╍┟╼╼╌┟╼	-		/
GAIN IN 65 73.84B	F 18 MODE	/			_		50		-				N/	/
DAMPING - SOO	NIA /8 NODE				-		40				<b>  </b>		A	<u>A-</u>
REJECT - OFF	BKR NIA dt						30				-	_	/- -	
FILTER FIL 2	ORIENTATION		MFER	ENTIAL			20		_ _	<u> </u>	_	_	/	
- /	WELC	DS OR PARTS EXA	MINE	D			10						/	
N	2018RC(6)-8			$\sim$	₫.								_/	
· - A	N		A		-		0 1	2	3	456	7 8 9	10		
					7		FULL	SCRE	en sw	EEP <u>1.5</u>	5 DEPTH	_ IN. [	/	
			_			_						······		_

• **f** 

۵ i satisfica de la construcción de la constr

**x**\* 

<u>-</u> مال مالی به

ም --

s.

	ULTR	ASONIC EX		JAT	ION D/	άτα ε	SHEET	-			<b>S</b>	UPP	IN SYSTEM			REPO	RT NO.:		RRU-	· 154	· · ·	
	PROJECT	ſ: -	WN	<u>ر</u> - 2				SY	STEM		R	zc	¢ K		ISI DRA	AWING	NO.:	RRC	-10	<u>s ri</u>	V 3	<u>**</u> *
	WELD/P	ART DESCRIPT	ION:		20"	61	PE	то	VAL	JE	CIR	we	LP		WELD/	PART	NO.:	20	RRC	( <sub>6</sub> ) _	8	<u>·</u>
	MATERI	AL TYPE:	<u>ss</u>					C/	AL STA	NDARD	NO.:	<u> </u>	<u>T-9</u>		тніск	NESS:		1.03	<u>ا</u>			<u> </u>
	NO. OF S	CAN DIRECTI	ONS: (	(3)	A, C,	۵	12"	LI	MITED	EXAM				* XYES	ACCEP	TANCE	CRITE	RIA: (	jcI	6.3	REV C	2
N, Å	INSTRUC	TION NO.:	QC	I	<u>le-3</u>			R	EVISIO	<u>N: O</u>			ANGLE: 70	° <u>r</u> l	ANGLE	:			ANGLE	: 	*	4
	EXAMIN		$\sqrt{\gamma}$	Jon	وب (	J)	GE		VEL:	ЛТ		. <u> </u>	DATE: 5-	3-91	DATE:			$\square$	DATE:	, 	/	
	EXAMIN	ER: Do	nng	_ <u>L</u> ,	Hel	x rt	<u>Our</u>	E LE	VEL:	π			TIME START:	1400	TIME S	TART:	N/A		TIME S	TART:	v/~	
	WE	LD HEIGHT		U'	CKNESS	WELL	DREME	4 <u>15</u> 4	1	.2"			TIME STOP:	1500	TIME S	TOP:			TIME S			
	SU	RFACE ONE-							>-	SURFA	CE TW	0	PART TEMP:	89.6 °F	PART			۴	PART	TEMP:		F
		ВМ	COUN	TER E	HAZ	<u>WE</u>	LDE	НА;	z	OUNTE BORE	R 	BM	CAL SHEET NO.	: 315	CALS	IEET N	0.:		CALS	IEET NO.		
	0°	-1.03"	١١٨	ℯ	1.03"		.15"			NIA		LA	CHART NO.:	NIA	CHART	NO.:		11.5	CHART	NO.:		
	90°										$\perp$		NOTES: # NO	JEXAM DNS HEAR COH	PONEL		LETAL	PAT	4	· • • • • • • • •	0.0	
Ŷ.	180°					<u> </u>	5			,			_									
	. 270°				- <b>-</b>											<u> </u>		<u> </u>		6	FVA	
	TION	LOCATION	р И И	2 4	M		г	BLE	d Wb	100 TO	50 TO	20 سر TO	SEARCH	HUNIT ON AT	THRO	DUGH	NALL D	ATA		soc		
	NCA.	OR_PART NO.	BEAI	SCA	BEA	PATI	XTE	AMPA	XDA XDA	100	50	20	MAXIMU	JM AMP	MAXI	MUM	MINI	мим	<u>م</u>	\sP (	CEP	EJEC
	žž	A – B	۴	Ū				à	2	L	ENGTI	1 	L	W	» SP *	D	SP.S.	D	<u> </u>	<u> </u>	<u>A</u>	E I
٠.	·#1	0-90	70*	2	A	2.66	0-2.5	**/~	100-	01	20	25	2.0"	2.7"	1.7~							$\overline{}$
•	41	0-90	70°	2	A	1.32	0.25	NA	100	1.0	2.0	2.5	Z.0"	<u></u>	4/A						- <sup>N</sup>	
													<u> </u>						<u> </u>			
									-													
-	*	· · · · ·				<b> </b>																
													· · ·									
						<u>.                                    </u>											<u> </u>					
-	· ·	<u> </u>	<b></b>																<u></u>			
	` 	•															<u> </u>					
•	·								<b> </b>								<u> </u>					
-1-1	REVIEW			$\sim$			1.1	¢	DATE	ـــــــ : ح	J_01	ļ	REVIEWED BY:	ļ	J	l	<u>1</u>	L ł	DAT	l 'E:	I	<u>f</u>
• .	968-162	93	×	19	Lond	<u>ALU</u>	1(			<b>_</b>			1					PA	351.05	1		

,

÷

1 01 \*



**š. ب** ا

\$\$ \$\$**\$**\$\$\$

•**4**\$

\*

ш',





• • • . .

ي و مي م بر مير في که 19.

- žen - 2 7 2

1

:

4 \*



I	ULTRASONIC Projects - WAT	FLAW S	ZINO		NG BRA	TION. Date:	SHE	ET ^ 1-91	<u> </u>	<u>71.5.</u>	<u></u>	<u>кр.тіс</u> - 10-	N SHI Sýstem:	ET NO.		316	3: .:	SifeFit
ł	Examiner: 5P.1	TOMP	KIN	5 (01	2.	Level:	T				•'•	¥. 94. 5	Instructio	on No.: a	CF 6.	-25 Re	0	I
ſ	Exaniiner. * *	: ~!	A			Level:		N,	IA_				Cable Ty	PC: BAU	/DUA	IL LEM	<u> </u>	1
ļ	Couplant: UU	TRAGEL	Γ			Batch	No.:	887	12				Length:	6. 2	161	1	l Anala	1
ļ	🔉 .Transducer N	lodel	S	N	Free	lucucy		Size			Турс/	Nave Mo		11001	Distance	Nomina	I Migic	l
ļ	WS4-70-2		565	26	2	Mhz	_ -	2"01	<u>.</u>	30	-70-`	<u>76 ~~ 7:</u>	SINGLE	기 :	1/A.			
ł	ICTD TRUE	LAUST_	86-0	136	21	<u>462</u>		(643)	<u>m)</u>	DUA	<u> </u>	<u>CREEPP</u>	1100		la-			
ł	HDEPI 66		158/	05	7/	Mnz:		<u>a an</u> 1/211		DUA	<u></u>	VG. 54	0					
ł	MEL DEAL	~ ~	7	<u>267</u>		5 Alb-		1/2 and	<u>a</u>	SING.	<u>د .</u> ۱۶	C UKAR	<u>,</u>	~/	Ip.			
ł		JAGA	0	<u></u>	<del> </del>	-5////		- <u>n</u> - D ( 1	<u></u> i	5.009	<u></u>	3 4 6 11						l
Ì					İ		T											
Í			1	~	Scr	een He	ight	Lincar	ity				An	nplitude C	ontrol L	incarity		
	Instrument & S	Serial #	dB	+2 7	0	-2	.4	1 -6	-3	-10	-12	% FSH	dB	80 - 6	80 - 12	2 40 + 6	20 + 12	Į
Ì	SONIC 1	36	High		80			1				<i>a</i> , 1	SH					
	C 0 7038	23	Low		40	$\sum$						.01		$\overline{\mathbf{N}}$	<u> </u>		<u> </u>	ļ
			High		80		~	1	<u> </u>	1		<i>%</i> 1	-SH	1 2	1.			
i			Low	<b> </b>	40	!		1/-	<u> </u>	<u> </u>		ļ			12		<u> </u>	1
			High		80			1~	<u> </u>			%	FSH	1		$\checkmark$		
			LOW		40				$\rightarrow$	<u> </u>	!		. <u> </u>				<del>i</del>	
			a prince be									-			•			1
			High,		80 40			+		$\frac{\mathbf{x}}{1}$		501	FSH					Ī
	Calibration Stan	dard SN:	Low	<u> </u>	40			1		Calibra	1	Solution S	PSH					
	Calibration Stan	dard SiN:	Low	- <u>45</u>	40					Calibra Thicka	tion <sup>§</sup> S	% I iandard S	PSH /N: ~	[Temp	•F:			
	Calibration Stan Titickness: Initial Cal Time	dard_S/N: 14	Low UT-	-45 Temp	40 40	Final	C <sup>2</sup> ]	<u>і</u>  Гіте:	61	Calibra Thickn	tion <sup>1</sup> S css:	iandard S	FSH	Temp meter SA	•F:			1
	Calibration.Stan Thickness: Initial Cal Time Method	dard_S/N:   4 : 12:1	Low UT	-95 Temp	40 40	Final	C1 .	Time:	615:	Calibra Thickn 25	tion <sup>k</sup> S css:	iandard S	Thermo	Temp meter SA	•F:	(G) 5H	EAR	، ،
	Calibration.Stan Thickness: Initial Cal Time Method Transducer	card S/N: ( 1/ : 12:1 36-70-7 M/54-70	Low UT 5	-45  Temp	40 40 77 71L 0	Final	Cal .		E 15:	Calibra Thickn 25	tion <sup>1</sup> S ess:	% 1 iandard S 5144AR	Thermo	Temp meter SA SAEA	•F: :: R: 6	<u>(6)</u> 5н 45°1.5м	EAR kz Shou	
	Calibration Stan Thickness: Initial Cal Time Method Transducer Cal Block	dard S/N: [ " : IQ:   36-70-7 W54-70 UT-93	Low UT- 5 20 (1 - 2	-45  Temp	80 40 2: 77 ALC DTR	Final (Final (CA2A =95	Cal (2)	Time: Moe Ade	15: 15: 17: 17: 17: 19: 10: 10: 10: 10: 10: 10: 10: 10: 10: 10	Calibra Thickn 25 (3	tion <sup>1</sup> S css: 45	5,445,AR 5,445,AR 10 3,5,41). 10 7 - 45	Thermo	Temp meter S/N S/4E/A 4/5 <sup>c</sup> 3.5/M	•F: i: Ri (5) hz Shazi	(С) 5н 45°1.5м ЦТ-ч	EAR Kz Show	احصدا انداعية عبالي الجالية بالمعا
	Calibration.Stan Thickness: Initial Cal Time Method Transducer Cal Block	dard S/N: 1 1/ : 12:1 36-70-7 W54-70 UT-95 31-4002FN	Low UT	-45  Temp	40 40 77 77 71L 0 71L 0 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Final Final Cr2A -95	Cal (2) (2) (2) (2) (2) (2) (2) (2) (2) (2)	Time: Moe Ade	15: 15: 15: 15: 15: 15: 15: 15: 15: 15:	Calibra Thickn 25 (3) 0	tion <sup>1</sup> S css: 45	5,449,AR 5,449,AR -0 3,5,41A -0 7,541 -0 7	Thermo	TIPS	•F: :: R: 6) h= 5h21 ATT 0559	(6) 5H 45°1.5M 47- Th44C	EAR Kz Shan There sth	احصحوا اعوالهما مبالب البرياب المرابع
	Calibration Stan Thickness: Initial Cal Time Method Transducer Cal Block	dard S/N: 1 " 36-70-7 W54-70 UT-95 31=402FF 21=302FF 21=302FF 21=502FF	Low UT 5 70 ( 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-45  Temp	40 40 5: 77 77 77 77 77 77 77 77 77 77 77 77 77	Final Final CA2A =95 wb orac	C -1 	Time: Moe Ade UI P <sup>W</sup> -UP E <sup>E</sup> P	15: 15: 15: 15: 15: 15: 15: 15: 15: 15:	L Calibra Thicka 25 (5 0 5 0	tion <sup>1</sup> S css: 45 5F	5144AR 5144AR 10 3.541A UT- 95 07	Thermo	TIPS WD	•F: 	(6) SH 45°1.5M UT- ThFFC Cal 1/2	EAR Kz Show There Vnoth	احصما المداحيا حمالية ليبابي بسب
	Calibration Stan Thickness: Initial Cal Time Method Transducer Cal Block	dard S/N: [ " : 12:1 36-70-7 W54-70- U7-95 :31-4020FN :21-367NF :11=1090FN :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-367NF :21-	High Low UT 5 70 2 75 70 75	Temp	30 40 2: 77 77 77 77 77 77 77 77 77 77 77	Final (Final CAZA -95 UT 072 1-20	Cal (2) 157 157	Time: Mog Ade UI P <sup>W</sup> UP S <sup>D</sup>	15: 17 17 10 17 10 19 19 19 19 19 19 19 19 19 19 19 19 19	Calibra Thickn 25 (3) 0	tion <sup>1</sup> S css: 45 5F 1	5,144,AR 5,144,AR 0 3,5,414 117-95 07 07 07 07 07 07 07 07 07	Thermo	ITEMP meter SA SAEA SAEA UT-95 TIPS DIP 2011	•F: 	(G) 5H 45°1.5M 45°1.5M 47-0 16420 Cal 12 Cal	EAR Kz Shan Thoe Unoth	
	Calibration.Stan Thickness: Initial Cal Time Method Transducer Cal Block Screen	dard S/N: ( 1/ : 12: 36-70-7 W54-70 UT-95 UT-95 :1:= 030 F (cl y.C	High Low UT 5 0 (1 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2		30 40 2: 77 71L 0 D TR UT V035 V07 V07 V07	Final Final CA2A =95 wV or 1=20	Cal 22 Just	Time: Mog Ade U P <sup>W</sup> -UP S <sup>E</sup> U	15: 17 44 F	Calibra Thickn 25 (3)	tion <sup>1</sup> S ess: 45 5F 1 -to	5,444,AR 5,444,AR 10 3,5,41,A 10 3,5,41,A 10 7 0 7 0 7 0 7 0 7 0 7 0 7 0 7 0 7 0 7	Thermo	LA Temp meter SA SAEA 4/5 <sup>-3</sup> 3.5M UT-95 FIP5 P TIP5 P TIP5 P TIP5 P TIP5 P TIP5 P TIP5 P	•F: R: (5) A= 5A24 A+T [- 2473] B DAV B DAV	(6) 5H 45°1.5M 47-1 There cal 12 60% 6 DN	EAR Kz Shar The Inoth	احصحوا ابتداحيا مالي ليسلب بليديل مستعدين
	Calibration Stan Thickness: Initial Cal Time Method Transducer Cal Block Screen	dard S/N: [ " : 12:1 30-70-7 W54-700 U7-95 J1-406 FW J1-306 FW L1-500 F L2-307 FS L2-307			30 40 5: 77 51L 0 10 TR UT 10 TR UT	Final Gaza Gaza Gaza Gaza S Caza S Caza S S S S S S S S S S S S S	Cal (2) (2) (2) (2) (2) (2) (2) (2) (2) (2)	Time: <u>Mos</u> <u>Ade</u> <u>D</u> <sup>W</sup> <u>D</u> br><u>D</u> <sup>W</sup> <u>D</u> <u>D</u> <u>D</u> <u>D</u> <u>D</u> <u>D</u> <u>D</u> <u>D</u>	15: 17 17 17 17 17 17 17 17 17 17 17 17 17	Calibra Thicka 25 (3)	tion <sup>1</sup> S css: 45 5F 1 -to -to	5144AR 5144AR 03.5414 UT- 45 07 070 070 070 070 070 070 070 070 070	Thermo	<u>Тетр</u> meter SA SAEA SAEA UT-95 TIP5 P STP5 TWD 2014	•F: 	(G) SH 45°1.5H 45°1.5H 47-9 18720 Cal 12 60% 60% 60%	EAR hz Show Thote Unoth	احتصما المعالمية فينالب للمالية للمالية والمعارفة والمعالية والمعالي
	Calibration Stan Thickness: Initial Cal Time Method Transducer Cal Block Screen Presentation	dard SiN: 1 " 36-70-7 W54-70- U7-95 31-402 Fr 21-30% Fr 21-			$\frac{30}{40}$	Final CA2A -95 -13(	Cal (2) (us) (us)	Time: <u>Moe</u> <u>Ade</u> <u>U</u> <u>pw</u> up <u>sep</u> up <u>sep</u> up	15: 15: 15: 15: 15: 15: 15: 15: 15: 15:	Calibra Thicka 25 (3)	tion <sup>1</sup> S css: 4/5 5F 1 -+tc 	5,144,AR 5,144,AR 0 3,5,41,4 107-95 07 0970 0970 0970 0970 0970 0970 0970	Thermo Thermo (4) s Slac UD UNUL 136	TIPS TOTO SOUL	•F: 	(6) 54 45°1.5M 45°1.5M 47° 167°C Cal 52 60°T 60°T 60°T 60°T 60°T 60°T 60°T 60°T	EAR Kz Shan There Vnoth L	
	Calibration Stan Thickness: Initial Cal Time Method Transducer Cal Block Screen Presentation Presentation	dard S/N: 1 " 3C-70-7 WS4-70- UT-95 31-402FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C2FF 21-3C			30 40 21 77 77 77 77 77 77 77 77 77 7	Final (Final CA2A -95 WP 000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=20000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=2000 1=20000 1=20000 1=20000 1=20000 1=20000 1=20000 1=20000 1=20000 1=20000 1=20000 1=20000 1=20000 1=20000 1=20000 1=200000 1=20000 1=20000 1=2000000 1=200000 1=20	Cal ·	Time: Mog Ade U P <sup>W</sup> UP S <sup>2</sup> D S <sup>2</sup> D S <sup>2</sup> D S <sup>0</sup> D		Calibra Thickn 25 (3 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0	<u>uion<sup>1</sup>S</u> css: 45 5F 1 -tc -tc	5,444, 5,444, 5,444, 5,444, 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70 0,70	Thermo Thermo (4) s Skar up Umu 136	LA Temp meter SA SAEA UT-95 TIPS P TIPS TWD SOURC	•F: 	(6) 5H 45°1.5M 45°1.5M 47- 1642C Cal 12 60% 6 XI 40% 6 XI 40% 50% 50%	EAR Kz Shar TREE Vroth L L L L L L L L L L L L L	
	Calibration Stan Thickness: Initial Cal Time Method Transducer Cal Block Screen Presentation Presentation	dard S/N: 1 " 30-70-7 WS4-700 UT-95 UT-95 11=690 F 02 04 04 04 04 04 04 04 04 04 04			30 40 40 51 L 0 D TR UT V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V07 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V	Final GALA GALA -95 wb co 1=20 -134 C Mhz	Cal . 42 437 740 740	Time: Mog Ade UI P <sup>W</sup> TUP SEP U SO Z	EIJ IJ IJ IJ IJ IJ IJ IJ IJ IJ	Calibra Thicka 25 (3) 2 2 36 36 36	tion <sup>1</sup> S css: 45 5F 1 -tc 4	5.14 iandard S 5.444AR 10 3.541A 17-45 07 07 07 07 07 07 07 07 07 07	Thermo Thermo (4) s Slac wD wD wD wD wD wD wD wD wD wD	Гетр те:er SA SAEA SAEA UT-95 TIPS P Corror 2017 SONIC SING 51NG 51NG	•F: 	(G) SH 45°1.5M 45°1.5M 47° 50% 60% 60% 60% 60% 60% 60% 60% 60% 60% 6	EAR KZ Shan TROED Unoth L L L L L L L L L L L L L	
	Calibration Stan Thickness: Initial Cal Time Method Transducer Cal Block Screen Presentation Presentation Instrument S/N Single/Dual 2 Strequency S	dard SiN: 1 " 36-70-7 W54-70 UT-95 31-402 Fr 21-30% Fr 21-3	High Low UT 5 70 2 70 70 70 70 70 70 70 70 70 70 70 70 70		$\frac{30}{40}$ $\frac{40}{77}$ $\frac{11}{77}$ $11$	Final CA2A -95 WP 02 1=20 -134 C Mhz	Cal Just TwD	Time: Moe Ade U P <sup>W</sup> UP SEP U S S O Z Z	(15) 15) 15) 17 17 17 17 17 17 17 17 17 17	Сацівта Тhicka 25 (3 25 25 25 25 25 25 25 25 25 25	tion <sup>1</sup> S css: 46 5F 1 46	5,1 iandard S 5,144,AR 0 3,5,41,A 0 7 0 7 0 7 0 7 0 7 0 7 0 7 0 7	Thermo Thermo (4) s sloar UNU 1 136 2 2	Слания Тетр тетег SA SAEA SAEA UT-95 TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS P TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS TIPS	•F: 	(6) 5H 45°1.5M 45°1.5M 47- 7672C Cal 5A 6 D 1 5 M 5 M 6 1 M 4 4 4	EAR Kz Show TKOE Vnoth L L L L L L L L L L L L L	
	Calibration Stan Thickness: Initial Cal Time Method Transducer Cal Block Screen Cal Block Screen Presentation Presentation Instrument S/N Single/Dual 2 Micefuency S D/MC4in Sea Coarst Sweep	dard S/N: 1 " 30-70-7 W54-70- UT-95 1-900 F 1-900 F 1-900 F 0-1-900 F 1-900 F 0-1-900 F	High Low UT 5 0 2 2 0 7 2 2 2 7 5 2 2 7 5 2 2 7 5 1 2 2 7 5 1 2 7 5 1 2 7 5 1 2 7 5 1 7 5 1 7 7 5 1 7 7 7 7 7 7 7 7 7 7		30 40 40 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.25 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2.55	Final Final CA2A -95 WP 000 1=70 1=70 C Mhz -13(4 C Mhz	Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal Cal	Time: MOG Ade UI PWTUP SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE U SSE SSE	13: 13: 15: 15: 15: 15: 15: 15: 15: 15	Calibra Thickn 25 (5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5	tion <sup>1</sup> S css: 45 3F 1 -tc -tc	501 5145AR 5145AR 03.541A UT-95 070 070 070 070 070 070 070 07	Thermo Thermo Scar UNA UNA UNA UNA UNA UNA UNA UNA UNA UNA	LA Temp meter SN SAEA UT-95 TIPS P TIPS	•F: 	(G) SH 45°1.5H 45°1.5H 47-9 1642C Cal 12 60 <sup>57C</sup> 82 <sup>17</sup> 50 <sup>17</sup> 50 <sup>17</sup> 50 <sup>17</sup> 1 M 4 <sup>1</sup> 4 <sup>1</sup> 4 <sup>1</sup> 4 <sup>1</sup> 4 <sup>1</sup>	EAR hz Shoor The D The D	
	Calibration Stan Thickness: Initial Cal Time Method Transducer Cal Block Screen Presentation Presentation Instrument S/N Single/Dyal 2 Mingle/Dyal 2 Mingle/Dyal 2 Mingle/Dyal 2 Mingle/Dyal 2 Mingle/Dyal 2 Mingle/Dyal 2	dard S/N: 1 " 36-70-7 WS4-70 UT-95 J1=30% F 11=690 F (cl 55550 SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SESSION SES	High Low UT 5072 7072 717 7275 7072 717 7275 717 7275 717 7275 717 7275 717 717 717 717 717 717 717 717 717 7		30 40 40 51L 0 D TR UT V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 1 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V073 V07 V073 V07 V07 V07 V07 V07 V07 V07 V07	Final Cr2A -95 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134 -134		Time: MOG Ade UI P <sup>W</sup> TUD SED UI SED UI SED UI SED UI SED UI SED UI SED UI SED UI SED UI SED UI SED UI SED UI SED UI SED UI SED UI SED UI SED UI SED UI SED UI SED UI SED UI SED UI SED UI SED SED SED SED SED SED SED SED	15: 15: 15: 15: 15: 15: 15: 15:	Calibra Thicka 25 (3 ) 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tion <sup>1</sup> S css: 45 5F 1 - -	501 5449 AR 0 3.5414 17- 95 07 07 07 07 07 07 07 07 07 07	-SH Thermo - (4) - (	Гетр тетеr SA SAEA SAEA UT-95 TIPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS DTPS D	•F: 	(G) 5H 45°1.5M 45°1.5M 45°1.5M 47° 56% 68 <sup>M</sup> 56% 56% 56% 101 444 444 7.56	EAR kz Shan Thoe Intoth L L L L L L L L L L L L L L L L L L L	
	Calibration Stan Thickness: Initial Cal Time Method Transducer Cal Block Screen Presentation Presentation Instrument S/N Instrument S/N Instr	dard S/N: 1 " 36-70-7 WS4-70 UT-95 31-900 F 21-300	High Low UT 5 0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		30 40 40 21 20 77 11 07 10 77 12 10 77 12 10 77 12 10 77 12 10 77 12 12 12 12 12 12 12 12 12 12	Final CA2A -95 WT 07 1=20 1=20 1=20 C Mhz C -13( C -13( C -13( C -13( C -13( C -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -13( -1)		Time: Moe Ade U P <sup>W</sup> UP SED U SO Z C	15: 15: 15: 15: 15: 15: 15: 15:	Calibra Thickn 25 (3 ) D D D D D D D D D D D D D D D D D D	<u>vion</u> <sup>1</sup> S css: 46 5 7 7 7 7 7	507 5144AR 0 3.541A UT- 95 07 07 07 07 07 07 07 07 07 07	Thermo Thermo Sha Sha Sha Sha Sha Sha Sha Sha Sha Sha	LA Temp meter SA SAEA UT-95 TIP <sup>5</sup> P TIP	•F: 	(6) 5H 45°1.5M 45°1.5M 45°1.5M 45°1.5M 5M 60% 60% 50% 50% 50% 10% 444 2.5% 737	EAR Kz Show TREE Vnoth L L L L L L L L L L L L L L L L L L L	
	Calibration Stan Thickness: Initial Cal Time Method Transducer Cal Block Screen Presentation Presentation Instrument S/M Instrument S/M Instr	dard S/N: 1 " 3C-70-7 W54-700 UT-95 3J=405PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2J=302PH 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	High Low UT 50 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2		30 40 40 51 L 0 D TR 40 D TR 40 D TR 40 2.25 50 2.25 50 2.25 50 2.25 50 50 50 50 50 50 50 50 50 5	Final Final CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CAA CA		Time: <u>Mos</u> <u>Ade</u> <u>U</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u>		1 Calibra Thickn 25 (5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5	tion <sup>1</sup> S css: 45 5F 1 	501 5145AR 5145AR 03.5MA UT-95 07 07 07 07 07 07 07 07 07 07	Thermo Thermo Sha Sha Sha Sha Sha Sha Sha Sha Sha Sha		•F: R: G) hz Shar ATT 25730 B DIV 136 CF 12 136 CF 12 136 CF 12 136 CF 12 136 CF 12 136 CF 12 136 CF 12 136 CF 12 136 CF 12 136 CF 12 136 CF 12 12 12 12 12 12 12 12 12 12	(G) SH 45°1.5M 45°1.5M 45°1.5M 47° 50° 60° 60° 60° 60° 60° 60° 60° 60° 60° 6	EAR KZ Shan TROED Inoth LE LE LE JOCUNS	
	Calibration Stan Thickness: Initial Cal Time Method Transducer Cal Block Screen Presentation Presentation Screen Instrument S/N Spirite/Deal 2 Minete/Deal 2	dard SIN: 1 " 30-70-7 WS4-70 UT-95 J-405 FT J-300 FT	High Low UT 5072 7072 757 757 757 757 757 757 757 757 757 7		30 40 40 51L 0 77 77 77 77 77 77 77 77 77 7	Final C. 2.A - 45 - 136 - 136 - 136 - 136 - 136 - 136 - 136 - 136 - 136 - 20 - 136 - 20 - 20 20 - 20 - 20 		Time: <u>Moe</u> <u>Ade</u> <u>U</u> <u>P</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u>		Calibra Thicka 25 (3 0 20 20 20 20 20 20 20 20 20 20 20 20 2	tion <sup>1</sup> S css: 4/5 5 7 1 	501 5444AR 0 3.5414 17- 95 07 07 07 07 07 07 07 07 07 07	Thermo Thermo (4) s Slace in 36 c r c r c r c r c r c r c r c r c r c	Гетр тете SA SAEA SAEA UT-95 TIPS DT-95 TIPS DT-95 TIPS DT-95 TIPS DT-95 TIPS DT-95 TIPS DT-95 TIPS DT-95 TIPS DT-95 TIPS DT-95 TIPS DT-95 TIPS DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95	*F: R: G) h= Shar ATT 2473 BDW ATT 136 477 136 477 5. 136 477 136 477 136 136 136 136 136 136 136 136	(G) 5H 45°1.5M 45°1.5M 45°1.5M 47° 56% 6 D 56% 50% 50% 50% 1 M 444 2.50 1 37 500 2.50 1 37 500 2.50 1 37	EAR Kz Shan Thoep Inoth L L L J J J J J J J J J J J J J	
	Calibration Stan Thickness: Initial Cal Time Method Transducer Cal Block Screen Presentation Presentation Instrument S/N Instrument S/N Instr	dard S/N: 1 " 36-70-7 WS4-70 UT-95 JI-900 P JI-500	High Low UT 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 50 50 500 2 500 2 500 2 50 50 50 50 50 50 50 50 50 50 50 50 50		30 40 40 11L C D TR UT 12L C D TR UT 12L C 12 12 12 12 12 12 12 12 12 12	Final (Final CA2A -95 WT 07 1=20 1=20 1=20 C Mhz C -13( C Mhz -95 -13( C -13( -95 -13( -95 -95 -95 -95 -95 -95 -95 -95	Cal (2) (2) (2) (2) (2) (2) (2) (2) (2) (2)	Time: <u>Moe</u> <u>Ade</u> <u>U</u> <u>P</u> <u>So</u> <u>So</u> <u>So</u> <u>F</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u>	15: 15: 15: 15: 15: 15: 15: 15:	Calibra Thickn 25 (3) 25 0 36 36 36 36 245 245	<u>vion</u> <sup>1</sup> S css: 45 5F 1 	501 5449AR 0 3.541A UT- 95 07 07 07 07 07 07 07 07 07 07	Thermo Thermo (4) s slow in D cons z cons cons	LA Temp meter SA SAEA UT-95 TIP <sup>5</sup> P TIP	•F: R: 6) ATT 24730 BDW ATT 24730 BDW ATT 30 ATT 30 ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 BDW ATT 30 ATT 30 BDW ATT 30 ATT 30 BDW ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT 30 ATT ATT ATT ATT ATT ATT ATT AT	(6) 5H 45°1.5M 45°1.5M 45°1.5M 45°1.5M 50°7 60°7 60°7 60°7 60°7 60°7 60°7 50°7 50°7 7500 7500 7500 7500 7500 7	EAR Kz Show TROED Vnoth L L L L L L L L L L L L L	
	Calibration Stan Thickness: Initial Cal Time Method Transducer Cal Block Screen Presentation Presentation Presentation Single/Dyal 2 Micefuency M Micefuency M M Micefuency M M M M M M M M M M M M M M M M M M M	dard S/N: 1 " 30-70-7 WS4-700 UT-95 31-4005 FM 31-4005 FM 21-3202 FM	HIGH LOW UT 500-2 22 200 200 200 200 200 200 200 200		30 40 40 11 L 0 77 11 L 0 77 11 L 0 77 11 L 0 77 12 L 0 17 17 17 17 17 17 17 17 17 17	Final Final CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CA2A CAA CA		Time: <u>Mos</u> <u>Ade</u> <u>U</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u>	15: 15: 15: 15: 15: 15: 15: 15:	Calibra Thickn 25 (5) 25 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5	ion <sup>1</sup> S css: 45 5F 1 	501 5145AR 5145AR 0 3.541A UT- 95 07 07 07 07 07 07 07 07 07 07	Thermo Thermo Sha Sha Sha Sha Sha Sha Sha Sha Sha Sha		*F: R: R: R: R: R: R: R: R: R: R	(G) 5H 45°1.5M 45°1.5M 45°1.5M 47° 50° 60° 60° 60° 60° 60° 60° 60° 60° 60° 6	EAR KZ 5/221 TROED Unoth L L L L L L L L L L L L L	
	Calibration Stan Thickness: Initial Cal Time Method Transducer Cal Block Screen Presentation Presentation Spect/Dural 2 Streefuency St Spect/Dural 2 Streefuency St Spect/Dural 2 Streefuency St Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scalibration Scal	dard SIN: 1" 3C-70-7 WS4-70 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95 UT-95	1115h Low UT 5 0 2 5 0 0 2 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		30 40 40 11L 0 12L	Final CA2A CA2A -95 W CA2A -95 W CA2A -95 -134 CA2A -95 -134 CA2A -95 -134 CA2A -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -95 -134 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145 -145		Time: <u>Moe</u> <u>Ade</u> <u>U</u> <u>P</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u>	E 15: 15: 15: 15: 15: 15: 15: 15:	Calibra Thickn 25 (3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		501 5444AR 0 3.54114 UT- 95 07 07 07 07 07 07 07 07 07 07	Thermo Thermo (4) s slock 1 3 6 1 3 6 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	LA Temp meter SA SAEA UT-95 TIPS DT-95 TIPS DT-95 TIPS DT-95 TIPS DT-95 TIPS DT-95 TIPS DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-95 DT-	*F: E: R: R: R: C: C: C: C: C: C: C: C: C: C	(6) 54 45°1.5M 45°1.5M 47° 264 60% 50% 50% 50% 50% 70% 70% 70% 70% 70% 70% 70% 70% 70% 7	EAR kz Shan The L L L L L L L L L L L L L	
NO 444 244 474 22 4470 62 15 4200 10 41 42 42 52 52 44 72 4 24 52 4 24 5	Calibration Stan Thickness: Initial Cal Time Method Transducer Cal Block Screen Presentation Presentation Instrument S/M Instrument	dard SIN: 1" 3C-70-7 W54-70 UT-95 J-403 FL J-2-30 FL J-2-30 FL J-2-30 FL J-30 FL J-	HIGH LOW UT		30 40 40 11L C D TR UT 12L C VOV VOV VOV VOV VOV VOV VOV VO	Final $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_{2}2A$ $C_$		Time: <u>Moe</u> <u>Ade</u> <u>U</u> <u>P</u> <u>So</u> <u>So</u> <u>So</u> <u>C</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u> <u>So</u>	15: 15: 15: 15: 15: 15: 15: 15:	Calibra Thickn 25 (3) 20 36 36 36 36 20 20 5 20 5 20 5 20 5 20 5 20 5 20 5		501 5449AR 03.541A UT-95 070 070 070 070 070 070 070 07	Thermo Thermo (4) s slow in D cons in S cons in S cons	LA Temp meter SA SAEA UT-95 TIP <sup>5</sup> P TIP	•F: R: 6) ATT 24730 BDV ATT 24730 BDV ATT 30 CF 136 CF 12 5. 12005 CONS CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1005 CI 1	(6) 5H 45°1.5M 45°1.5M 45°1.5M 47-4 50% 50% 50% 50% 100 100 100 100 100 100 100 100 100 1	EAR Kz Show TROED Vnoth L L L L L L L L L L L L L	

STAVELEY	INSTRUMENTS - SONIC 136 PLOU DATA R DISPLAY # 1 CAL PROGRAM 3 - MOST RANGE 2.801n GAIN 74 DELAY 1.111n DISPLAY I	R A.OdB FILT2
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	OFF 222nS 500 <sup>22</sup>
	GAIN REFERENCE GAIN 74.0dB REF LVL 40.0dB % CHANGE XXXX dB CHANGE 34.0	
COMPANY	INSPECTION REPORT	
ADDRESS OPERATOR TNSP. PROCEDURE	P.L. TOMPKINS QCI 6-25 Rev.C TIME 13:47	
CODE/SPEC	5121.04	
JOB NUMBER OBJECT TRANSDUCER TYPE COMMENTS	ADEPT 60 - MOST MATERIAL 55	
SIGNATURE	Puul h. Tompleius DATE 5-4-91	

ATTACHMENT TO 1 RRU- 157

,

> a signation of No. 1

57.

4

\$ 1 .\*\*\* '

i

· · 

٢ , M •

÷.

- 3-

.

STAVELEY	INSTRUMENTS - SONIC 136 PLUE DATA REPORT				
STORED DISPLAY # 2 CAL PROGRAM 3 - MOST					
	RANGE RECEIVER RANGE 2.801n GAIN 74.0dB DELAY 1.1111n DISPLAY FILT2 VEL 0.227 in/us FREQ 2.25MHz UNITS in REJECT OFF <u>GATE</u> <u>PULSER</u> LEVEL OFF PULSE 222nS POSN 1.811n DAMPING 500 <sup>10</sup> WIDTH 0.7011n DUAL POLARITY + REP RATE 4 KHz GAIN REFERENCE GAIN 74.0dB REF LVL 40.00B COC % CHANGE 34.0 INSPECTION REPORT				
COMPANY	<u>Supply</u> System				
ADDRESS OPERATOR ·	P.L. TOMPKINS TIME 13:50				
INSP. PROCEDURE	<u>ACIG-25 REVO</u>				
ACCEPTANCE LEVEL	5121-WG				
OBJECT TRANSDUCER TYPE	ADEPT 60 MOST MATERIAL 55				
Syla Marab	·				
SIGNATURE	Paul L. Tompkins DATE 5-4-91				

76.

. .

ĩ

ATTACHMENT TO 1 R.R. - 157

	<b>.</b>	••••	<b>V</b>
STAVELEY	INSTRUMEN	rs - sonic 136	PLUE DATA REPORT
STORED	DISPLAY # 3	PROGRAM #41 SPOT	-
	TIP	RANGE RANGE 0.7461n DELAY 1.331n VEL 0.127 in/us UNITS in GATE LEVEL 85% POSN 1.68in WIDTH 0.119in POLARITY + GAIN REFERENCE GAIN 66.2dB REF LVL 36-2dB % CHANGE XXXX dB CHANGE 30.0	RECEIVER GAIN 66.2dB DISPLAY FILT1 FREQ 5MHz REJECT OFF PULSE 10075 DAMPING 500: PULSE ECHO REP RATE 4 KHz
ه. ۲	INSPECT:	ION REPORT	ŝ
COMPANY	Supply System		<b>م</b>
ADDRESS	0: <u> </u>		
OPERATOR	P.L. TOMPKINS	TIME	
INSP. PROCEDURE	QCL 6-25 Rev. 0		······································
CODE/SPEC		<u></u>	······································
ACCEPTANCE LEVEL	512144	، <u> </u>	
JOB NUMBER OBJECT	and	MATERIAL	55
TRANSDUCER TYPE	por ou - Att	-1 3101 -1-	o. , MAZ SALUL 45
COMMENTS			
^			
	0	, .	•
SIGNATURE	Vaulh. Tompk	DATE	5-4-91
•	ş •		
			b

ţ,

ATTACHMENT TO IRRU-157



### Stress (Loads) Evaluation

The stress state at the location of the flaw is required to determine the driving force for crack propagation. Stresses for the applicable loading conditions were extracted from the ASME Class 1 Stress Report for the subject RHR piping (Calculation No. 8.14.107) to complete the RHR piping flaw evaluation.

The input data and loads for the RHR-V-113 flaw evaluation are tabulated below.

Pipe Stresses and Geometry:

Deadweight (Dwt)	1494 psi
Pressure (P)	6062 psi
Upset	1754 psi
Emergency	1907 psi
Faulted (F)	3275 psi
Thermal NPO (TH)	1050 psi

Total Load Dwt + P + TH + F = 11881 psi

Physical Dimensions:Nominal Pipe OD.20 in.Nominal Pipe Thick.1.031 in.Moment of Inertia2770 in<sup>4</sup>

Material Allowable: SA-358 type 304  $S_m$ =16675 psi.

Load Combinations:

The following load combinations were evaluated to determine if the crack would grow under the imposed loads. The evaluations (fatigue and intergranular stress corrosion cracking (IGSCC)) encompass the requirements of IWB-3640.

The imposed load for fatigue evaluation consists of superimposing the pressure, deadweight bending, normal operating thermal bending stress and the weld residual stress to complete the evaluation of the minimum fracture stress intensity. Pressure, deadweight bending, and thermal bending stresses are conservatively combined with the worst case faulted dynamic bending stresses (without regard to the direction of the applied stress) to complete the evaluation of the maximum fracture stress intensity range. This methodology conservatively includes faulted dynamic stresses in the normal/upset evaluation and conservatively adds additional thermal stresses into the faulted evaluation. The number of dynamic loading cycles is based on the design basis main steam safety relief valve actuations which yield approximately 300 stress cycles per year. The peak dynamic loading also includes 300 cycles of the Safe Shutdown Earthquake event even though the plant design basis is 10 stress cycles.

Fatigue Stress: Dwt + P + TH + F = 11881 psi

....



**`** 

r

34

.

÷

z

k . .

• • •

× 1 0 0 1 3

The IGSCC evaluation was completed using the steady state deadweight pressure and bending stress and the normal plant operation thermal stress.

IGSCC Stress: Dwt + P + TH = 8606 psi

In each loading condition the above stress states were then superimposed on the weld residual stress distribution to complete the respective flaw evaluations. The resulting flaw sizes were then evaluated against the end of evaluation period depth-to-thickness ratios from Tables IWB-3641-5 and IWB-3641-6.