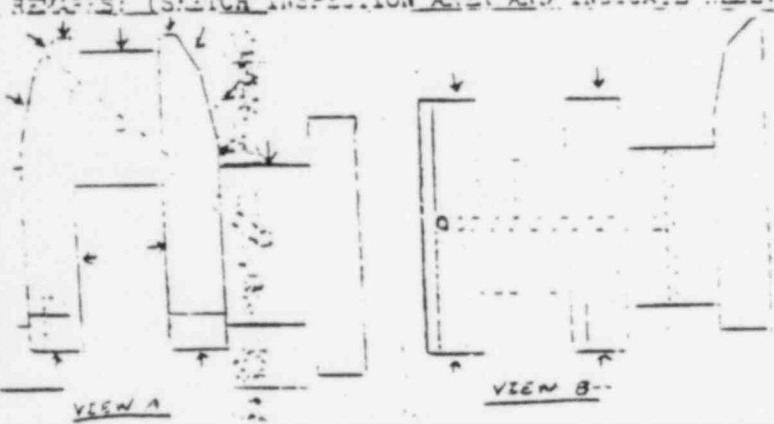


ULTRASONIC EXAMINATION REPORT

Pg 1 of 1

A. MATERIAL		TYPE CARBON STEEL	FABRICATED PROCESS	<input type="checkbox"/> WELDED <input type="checkbox"/> CAST <input checked="" type="checkbox"/> FORGED WORKED	UT COMPONENT I.D. 1R43 NEW CRANKSHAFT 9/1/83
CROSS SECTION THICKNESS		MAX 24.6 INCH	MIN 4.5 INCH	SURFACE CONDITION	
				<input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUND <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER	
J. Test Procedure No. 86-1		H/W/HK No. PO#310552-26		SURFACE THERMOMETER No. 366 Due 10-22-83	
TRANSDUCER		INSTRUMENT		CALIBRATION STANDARD	
TYPE HARTSON C09271		MAKE KRAUTKRAMER		ASTM 1275N (BLOCK)	
SIZE 0.75" ROUND		MODEL USL-38		SN 11002-83	
FREQ. 2.25 MHz		N/A			
BEAM ANGLE 0°		N/A			
OTHER N/A		COUPLANT ULTRAGEL II BATH #8330			
REMARKS: (SKETCH INSPECTION AREA AND INDICATE RELEVANT INDICATIONS)					
 <p>NOTE: ARROWS IN VIEW A+B INDICATE ACCESSIBLE SURFACES SCANNED 100% WITH UT SEARCH UNIT. DOTTED LINES SHOW THE LOCATIONS OF DRILLED HOLES (GEOMETRIES) OBSERVED IN CRANKSHAFT DURING UT EXAMINATION</p>					
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.			
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT, REWORK, REJECT, AND COMMENT AS NECESSARY)		
1 SEE SKETCH	4.5 - 24.6"	ENTIRE CRANKSHAFT	ACCEPTED - ONLY GEOMETRIC		
2 N/A	N/A	N/A	INDICATIONS WERE DISCOVERED		
3 N/A	N/A	N/A	AND CONFIRMED		
4 N/A	N/A	N/A			
J. Acceptance CRITERIA	NDT 86-1 PARA 6.2.1, 6.2.2, 6.2.3				

SYSTEM

1R43

PLANT/LOCATION

7B-65-C

E. TEST

8503280425 840920
PDR ADOCK 05000322
G PDR



ULTRASONIC EXAMINATION REPORT CALIBRATION DATA SHEET

pg 1 of 2

A. MATERIAL		TYPE <u>CARBON</u> STEEL	FABRICATED PROCESS	<input type="checkbox"/> WELDED	<input type="checkbox"/> CAST	<input checked="" type="checkbox"/> <u>FORGING</u> WORKED
		GEOMETRY	<input type="checkbox"/> PIPE	<input type="checkbox"/> PLATE	<input type="checkbox"/> ROD	<input checked="" type="checkbox"/> OTHER: <u>FLAT BAR</u>
CROSS SECTION THICKNESS	MAX 24.6" INCH	MIN 4.5" INCH	SURFACE CONDITION	<input checked="" type="checkbox"/> MACHISED	<input type="checkbox"/> GROUND	
				<input type="checkbox"/> AS FABRICATED	<input type="checkbox"/> OTHER	
B. NDE Procedure NO. <u>8.6-1</u>		Equipment ID S/N NO. <u>10-310552-26</u>		SURFACE THERMOMETER NO. <u>366</u> DUS <u>10-22-83</u>		

 UT
COMPONENT I.D. IR43
NEW CRANKSHAFT
4.693M

 SYSTEM
IR43

 PLANT/LOCATION
7B-63-C

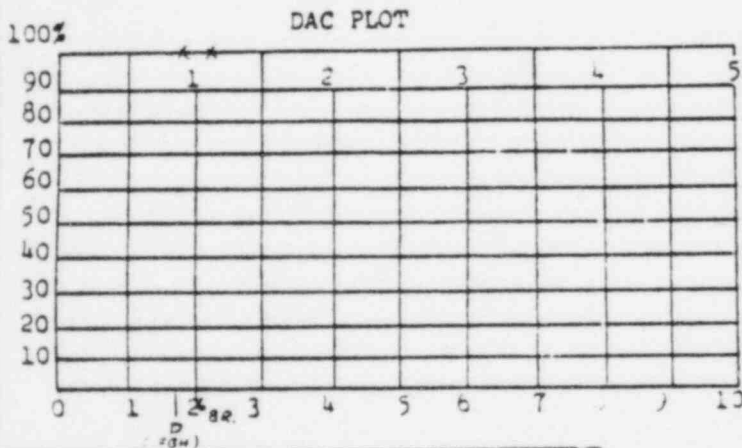
 CALIBRATION BLOCK(s) ASTM 1275N IN 11002-83
 BLOCK TEMP. 20° °F
 COMPONENT TEMP. 80° °F

 CRT CALIBRATED IN 30" OF
METAL PATH

CALIBRATION CHECKS	TIME
INITIAL CAL.	2350
VERIFICATION	0020
VERIFICATION	0050
VERIFICATION	0120
VERIFICATION	0150
VERIFICATION	0220
VERIFICATION	0250
FINAL CAL.	0315

SCAN AREA	
0° WRV	N/A
0° Mat'l	<input checked="" type="checkbox"/>
To Weld	N/A
⊥ To Weld	N/A
Calibration	
Axial	N/A
Circ	N/A

INSTRUMENT SETTINGS	
Mfg/Model No.:	KB USL-3B
Serial No.:	21182
Sweep Length:	8.42
Sweep Delay:	8.42
Pulse Length/Damping:	MEN
Freq.:	2.5
Rep. Rate:	1K
Filter:	FEED
Video:	1/4 Jack: T
DEC/Gate Switch:	OFF
Range:	10
Mode Select:	S ₀
Reject:	OFF
Gain (coarse):	40 (fine): 0
Scan Sensitivity:	+6dB



SEARCH UNIT	
Scan Angle:	0°
Mode:	LONG
Fixturing (if any):	N/A
Style or Type No.:	GAMMA HP
Size & Shape:	0.75" ROUND
Frequency:	2.25 MHz
Serial No/Brand:	607273 AEROTECH
Measured Angle:	N/A
Cable Type & Length:	126 3M
Couplant Brand:	ULTRAGEL II
Couplant Batch:	#2330

C. EVALUATION		EXAMINATION WELD/AREA	RECORDABLE INDICATIONS		ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)
EVALUATION REPORT REQ'D	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		YES	NO	
				GEOM	ACCEPTED
			N/A	<input checked="" type="checkbox"/>	ALL GEOMETRIES CONFORM TO GEOMETRIES, NONE RECORDABLE.
D. ACC C		E. ACC C			

E. A. C

 9/10/83
 11/10/83



ULTRASONIC EXAMINATION REPORT
CALIBRATION DATA SHEET

pg 2 of 2

A. MATERIAL		TYPE <u>CARBON STEEL</u>	FABRICATED PROCESS	FORGING <input type="checkbox"/> WELDED <input type="checkbox"/> CAST <input checked="" type="checkbox"/> WORKED	
		GEOMETRY <input type="checkbox"/> PIPE <input type="checkbox"/> PLATE <input type="checkbox"/> ROD <input checked="" type="checkbox"/> OTHER: <u>FRAGD CRANE</u>			
CROSS SECTION THICKNESS	MAX <u>24.6</u> INCH	MIN <u>4.5</u> INCH	SURFACE CONDITION	<input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUND	
			<input type="checkbox"/> AS FABRICATED	<input type="checkbox"/> OTHER	
B. WVE Procedure No. <u>B.6-1</u>		WAVELENGTH No. <u>10</u> # <u>310522-26</u>	Equipment ID S/N	SURFACE THERMOMETER	
			DATE No. <u>366</u>	Due <u>10-22-83</u>	

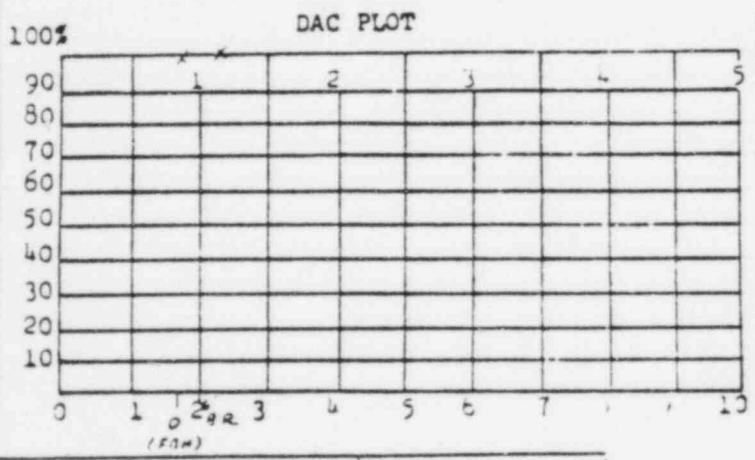
CALIBRATION BLOCK(s) ASTM 1275 3 11022-83
BLOCK TEMP. 80 °F
COMPONENT TEMP. 80 °F

CRT CALIBRATED IN 30" CF
METAL PATH

CALIBRATION CHECKS	TIME
INITIAL CAL.	<u>2310</u>
VERIFICATION	<u>N/A</u>
VERIFICATION	<u>N/A</u>
VERIFICATION	<u>N/A</u>
FINAL CAL.	<u>2340</u>

SCAN AREA	
0° WRV	<u>N/A</u>
0° Mat'l	<input checked="" type="checkbox"/>
To Weld	<u>N/A</u>
⊥ To Weld	<u>N/A</u>
Calibration	
Axial	<u>N/A</u>
Circ	<u>N/A</u>

INSTRUMENT SETTINGS	
Mfg/Model No.:	<u>KD-USL-38</u>
Serial No.:	<u>211182</u>
Sweep Length:	<u>8.42</u>
Sweep Delay:	<u>8.42</u>
Pulse Length/Damping:	<u>MEN</u>
Freq.:	<u>2.5</u> Rep. Rate: <u>1K</u>
Filter:	<u>Fixed</u> Video: <u>1/4</u> Jack: <u>T</u>
DEC/Gate Switch:	<u>FF</u> Range: <u>10</u>
Mode Select:	<u>SD</u> Reject: <u>OFF</u>
Gain (coarse):	<u>40</u> (fine): <u>0</u>
Scan Sensitivity	<u>+6db</u>



SEARCH UNIT	
Scan Angle:	<u>0°</u> Mode: <u>LONG</u>
Fixturing (if any):	<u>N/A</u>
Style or Type No.:	<u>GAMMA HP</u>
Size & Shape:	<u>0.75" ROUND</u>
Frequency:	<u>2.25 MHz</u>
Serial No/Brand:	<u>ARADTECH 09273</u>
Measured Angle:	<u>N/A</u>
Cable Type & Length:	<u>1x6' BNC</u>
Couplant Brand:	<u>ULTRAGEL II</u>
Couplant Batch:	<u>P330</u>

C. EVALUATION	EXAMINATION WELD/AREA	RECORDABLE INDICATIONS			ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)
		YES	NO	GEOM	
EVALUATION REPORT REQ'D					
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>CRANE SHAF</u>	<u>N/A</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>ACCEPTED</u> <u>ALL GEOMETRIES CONFORMED TO GEOMETRIES NONE REQUIRED</u>
PRANCE	DATE <u>10-22-83</u> TIME <u>11:00</u> OPERATOR <u>R. W. [Signature]</u> LEVEL <u>FLS</u>				

TEST	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>
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UT COMPONENT I.D. 1R43
546934 NEW (ANALYST)
SYSTEM 1R43
PLANT/LOCATION TR-C3-E

A. MATERIAL		TYPE <u>CARBON</u> <u>STEEL</u>	FABRICATED PROCESS	<input type="checkbox"/> WELDED	<input type="checkbox"/> CAST	<input checked="" type="checkbox"/> <u>FORGED</u> WORKED
		GEOMETRY	<input type="checkbox"/> PIPE	<input type="checkbox"/> PLATE	<input type="checkbox"/> ROD	<input checked="" type="checkbox"/> OTHER: <u>CRANK SHAFT</u>
CROSS SECTION THICKNESS	MAX <u>24.6</u> INCH	MIN <u>4.5</u> INCH	SURFACE CONDITION	<input checked="" type="checkbox"/> MACHINED	<input type="checkbox"/> GROUND	
				<input type="checkbox"/> AS FABRICATED	<input type="checkbox"/> OTHER	
B. NDE Procedure No. <u>86-1</u>		Equipment ID S/N <u>310552-27</u>	Equipment ID S/N <u>366-10-22-83</u>			
TRANSducer		INSTRUMENT		CALIBRATION STANDARD		
TYPE <u>AEROTECH</u> <u>C09273, GAMMA</u>		MAKE <u>KRAUTKRAMER</u>		<u>ASTM 1275N (BLOCK)</u> <u>% 11002-83</u>		
SIZE <u>0.75" ROUND</u>		MODEL <u>USL-38</u>				
FREQ. <u>2.25 MHz</u>		<u>N/A</u>				
BEAM ANGLE <u>0°</u>		<u>N/A</u>				
OTHER <u>N/A</u>		COUPLANT <u>ULTRAGEL II</u> <u>BATCH # 8330</u>				
REMARKS: (SKETCH INSPECTION AREA AND INDICATE RELEVANT INDICATIONS)						
				<p>NOTE: ARROWS IN VIEW A+B INDICATE ACCESSIBLE SURFACES SCANNED 100% WITH ULTRASONIC SEARCH JNET</p> <p>DOTTED LINES SHOW TYP. LOCATIONS OF DRILLED HOLES (GEOMETRIES) OBSERVED IN CRANKSHAFT DURING U.T. EXAMINATION.</p>		
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.				
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT, REWORK, REJECT, AND COMMENT AS NECESSARY)			
1 <u>ENTIRE</u> <u>CRANKSHAFT</u>	<u>4.5 - 27.0</u>	<u>CRANKSHAFT</u>	<u>ACCEPTED - ONLY GEOMETRIES</u>			
2 <u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>INDICATIONS WERE OBSERVED AND</u>			
3 <u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>CONFIRMED</u>			
4 <u>N/A</u>	<u>N/A</u>	<u>N/A</u>				
ACCEPTANCE CRITERIA	<u>AS PER 86-1 PARA 6.2, 6.2.1, 6.2.2, 6.2.3</u> <u>APPROVED BY: [Signature] DATE: 9/1/83</u>					
TEST	<u>[Signature]</u> LEVEL <u>III</u> DATE <u>9/1/83</u>					

COMPONENT I.D. NEW CRANKSHAFT SYSTEM

1843

PLANT/LOCATION

T.B. - 63 - 1

C-33-5



ULTRASONIC EXAMINATION REPORT CALIBRATION DATA SHEET

A. MATERIAL		TYPE <u>CARBON STEEL</u>	FABRICATED PROCESS	<input type="checkbox"/> WELDED	<input type="checkbox"/> CAST	<input checked="" type="checkbox"/> <u>FORGED WORKED</u>
		GEOMETRY	<input type="checkbox"/> PIPE	<input type="checkbox"/> PLATE	<input type="checkbox"/> ROD	<input checked="" type="checkbox"/> OTHER: <u>CRANK SHAFT</u>
CROSS SECTION THICKNESS	MAX <u>24.6 INCH</u>	MIN <u>4.5 INCH</u>	SURFACE CONDITION	<input checked="" type="checkbox"/> MACHINED	<input type="checkbox"/> GROUND	<input type="checkbox"/> OTHER
B. NDE Procedure No. <u>8.6-1</u>		<u>WAVELENGTH</u> <u>NO. 10</u> <u>#310552-27</u>	Equipment ID S/II	SURFACE THERMOMETER		

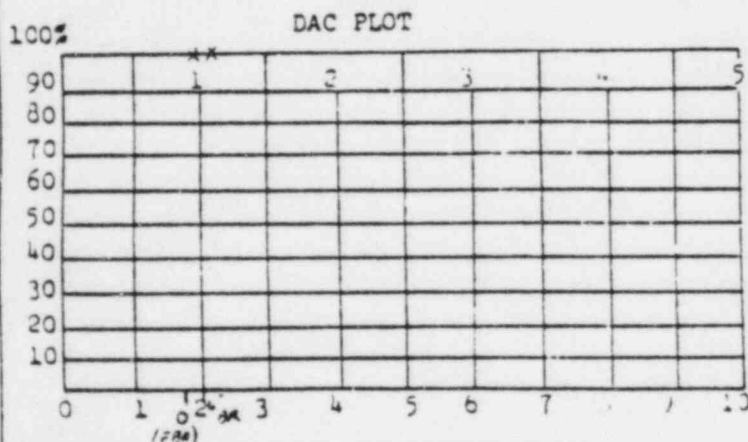
CALIBRATION BLOCK(s) ASTM 1275N 211002-83
 BLOCK TEMP. 78 °F
 COMPONENT TEMP. 75 °F

CRT CALIBRATED IN 30° OF METAL PATH

CALIBRATION CHECKS	TIME
INITIAL CAL.	0015
VERIFICATION 0045	
VERIFICATION 0055 (TEMP IN ST)	
VERIFICATION 0110 (CAL IN)	
VERIFICATION 0140	
VERIFICATION 0410	
VERIFICATION 0440	
VERIFICATION 0510	
FINAL CAL.	0530

SCAN AREA	
0° WRV	N/A
0° Mat'l	<input checked="" type="checkbox"/>
To Weld	N/A
⊥ To Weld	N/A
Calibration	
Axial	N/A
Circ	N/A

INSTRUMENT SETTINGS	
Mfg/Model No.:	KR USL-38
Serial No.:	211182
Sweep Length:	8.42
Sweep Delay:	8.42
Pulse Length/Damping:	MIN
Freq.:	2.5
Rep. Rate:	1K
Filter:	Free
Video:	1/4 Jack: T
DEC/Gate Switch:	OFF
Range:	10
Mode Select:	50
Reject:	OFF
Gain (coarse):	40 (fine): 0
Scan Sensitivity:	-6db



SEARCH UNIT	
Scan Angle:	0° Mode: LONG
Fixturing (if any):	N/A
Style or Type No.:	GAMMA HP
Size & Shape:	0.75" ROUND
Frequency:	2.25 MHz
Serial No/Brand:	AEROTECH C09273
Measured Angle:	N/A
Cable Type & Length:	1x6' BNC TO BNC
Couplant Brand:	ULTRAGEL II
Couplant Batch:	8330

C. EVALUATION		EXAMINATION WELD/AREA	RECORDABLE INDICATIONS			ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)
EVALUATION REPORT REQ'D			YES	NO	GEOM	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<u>CRANKSHAFT</u>	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ALL RECHARGE CO-ARMED AS RECHARGEABLES
D. ACCEPTANCE CRITERIA		NDE 8.6-1 PARA 6.2, 6.2.1, 6.2.2, 6.2.3. Operator: <u>James H. Brown</u> Date: <u>9/15/83</u>				

E. ATTEST

James H. Brown 3/1 9/15/83

COMPONENT I.D. NEW CRANKSHAFT
694

SYSTEM 1R413

PLANT/LOCATION

T.A-63-E

NUCLEAR REGULATORY COMMISSION

Docket No. 50-3220L Official Exh. No. C-34
 In the matter of LILCO-Shoreham
 Staff _____ IDENTIFIED ✓
 Applicant ✓ RECEIVED ✓
 Intervenor _____ REJECTED _____
 Cont'g Off'r _____
 Contractor _____ DATE 9-20-84
 Other _____ Witness Panel
 Reporter ACE