



# INSERVICE INSPECTION (ISI) PROGRAM

Revision **1**  
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## INSERVICE INSPECTION (ISI) PROGRAM

Effective Date: 30 June 1997

Prepared by: Frank A. Klepacki

Date: 6/18/97

Reviewed by: R D Davis

Date: 6-18-97

Approved by: Michael J. [Signature]

Date: 6-20-97

Record Category: 15.22.3





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### SUPPLEMENT 1 TO THE INSERVICE INSPECTION PROGRAM

"Inservice Inspection Program Plan"

(Separate Document controlled by Laboratory & Inspection Services -  
available upon request. )



## ADDITIONAL PROGRAMS

SECTION 11

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### 1.0 General:

1.1 The purpose of this section is to provide information and clarification on additional inspection programs being performed at R. E. Ginna Nuclear Power Plant. These inspection programs may be due in part to ASME Section XI program requirements or to other commitments made by Rochester Gas and Electric.

The following list identifies additional inspection programs being performed at R. E. Ginna Nuclear Power Plant:

- \* Steam Generator Tube Inspection Program
- \* Reactor Coolant Pump Flywheel Program
- \* Reactor Vessel Augmented Program, Category B-A

### 2.0 Steam Generator Tube Inspection Program:

#### 2.1 General:

2.1.1 The Steam Generator Tube Inspection Program incorporates the requirements of ASME Section XI Code, under Category B-Q, Item Number B16.20. The Code requires that Steam Generator tubing in U-Tube Design be volumetrically (Eddy Current) examined to the extent and frequency governed by the plant Technical Specifications. In accordance with this Code requirement and R. E. Ginna Station Technical Specifications, eddy current examinations shall be performed. Steam Generator Tubing shall be examined their full length, at least once every 60 effective full power months.







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2.1.2 The Steam Generator Tube Inspection Program also incorporates the requirements of USNRC Regulatory Guide 1.83, Revision 1, dated July, 1975, "Inservice Inspection of Pressurized Water Reactor Steam Generator Tubes" and the recommendations of the Electric Power Research Institute (EPRI) PWR Steam Generator Inspection Guidelines, Revision 4, or latest approved revision.

### 2.2 Inspection Program:

2.2.1 The program for each inspection shall include, as a minimum, the following requirements:

1. 100% of tubes shall be inspected within 60 effective full power months. When an inspection is performed, no less than a 20% sample of all tubes for their full length will be examined using a general purpose bobbin coil probe.
2. 100% of Repaired tubes shall be inspected to the extent possible within 60 effective full power months. When an inspection is performed, no less than a 20% sample of each type of Repaired tube will be examined.
3. Diagnostic examinations utilizing specialized probes shall be performed on specific areas of interest, such as: Expansion Transitions, Mechanical Buff Marks (MBM's) or Small Radius U-Bends.
4. All operational tubes that had a previously identified service induced degradation of greater than 20% through wall to the extent of previously identified degradation. However, if after two (2) consecutive inspections these tubes have not had greater than 10% further penetration, the inspection frequency on these tubes may be extended to 40 months.





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2.2.2 Other tubes may be added to the program each inspection cycle as necessary to meet other concerns and are classified as "owner elected". "Owner Elected" examinations are not mandatory and may be performed as determined by the owner.

2.2.3 The Ginna Steam Generator Reliability Committee may change the aforementioned plan to meet outage schedules, provided that the changes meet the requirement of Regulatory Guide 1.83 and Supplement 1 the Inservice Inspection Program Plan.

### 2.3 Examination Method:

2.3.1 Eddy Current (Volumetric) Examination techniques shall be employed to perform the required examinations on Steam Generator tubes.

### 2.4 Frequency of Examinations:

2.4.1 Examinations shall be performed every inspection cycle to the extent required and specified within 2.2, as a minimum.

### 2.5 Examination Evaluation:

2.5.1 Eddy Current evaluation shall be performed in accordance with approved procedures.





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### 2.6. Repair, Replacement and Testing Requirements

2.6.1 Repair criteria for steam generator tubes is based on the requirements of Regulatory Guide 1.121, "Bases for Plugging Degraded PWR Steam Generator Tubes".

2.6.1.1 Steam generator tubes that have imperfections greater than 40 percent through-wall as indicated by eddy current, shall be repaired by plugging or sleeving.

2.6.1.2 Steam generator sleeves that have imperfections greater than 30 percent through wall as indicated by eddy current shall be repaired by plugging.

2.6.2 Repairs by welded plugs and sleeves shall be performed in accordance with Section 12.

### 2.7 Scheduling:

2.7.1 Eddy Current examination schedules of Steam Generator Tubes shall be established within Supplement 1, the Inservice Inspection Program Plan.

### 2.8 Reports and Records:

2.8.1 Applicable records shall be maintained as specified within Section 1 and Section 12.

2.8.2 Within 15 days following the completion of the evaluation of each inservice inspection of steam generator tubes, the number of tubes required by Paragraph 2.6.1 above to be plugged or sleeved in each steam generator shall be reported to the NRC in a Special Report.

01



2.8.3 The complete results of the steam generator tube inservice inspection shall be submitted to the NRC in a Special Report within 12 months following the completion of the inspection. This Special Report shall include:

- (a) Number of tubes inspected and extent to which inspected.
- (b) Location and percent of wall-thickness penetration for each indication of an imperfection, and
- (c) Identification of tubes plugged or sleeved.

2.8.4 If the number of tubes in a generator falling into categories (a) or (b) below exceeds the criteria, then results of the inspection shall be considered a Reportable Event pursuant to 10 CFR 50.73. Oral notification to the NRC Staff shall be accomplished within 48 hours, but no sooner than the next normal working day after the final review of the eddy current results. A written follow-up report shall provide a description of investigations conducted to determine the cause of the tube degradation and corrective measures taken to preclude recurrence. Categories (a) and (b) are:

- (a) More than 10 percent of the total tubes inspected are degraded (imperfections greater than 20 percent of the nominal wall thickness). However, previously degraded tubes must exhibit at least 10 percent further wall penetration to be included in this calculation.
- (b) More than 1 percent of the total tubes inspected are degraded (imperfections greater than the repair limit).







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### 3.0 Reactor Coolant Pump Flywheel Program:

#### 3.1 General:

The original augmented inservice inspection program for Reactor Coolant Pump (RCP) Flywheels incorporated the requirements of the USNRC Regulatory Guide 1.14, Revision 1, dated August 1975, entitled "Reactor Coolant Pump Flywheel Integrity".

Currently, RGE letter to the Commission dated 18 March 1997 incorporates Westinghouse WCAP-14535A, "Topical Report on Reactor Coolant Pump Flywheel Inspection Elimination" into our Reactor Coolant Pump Flywheel Program. This change is consistent with the rationale discussed in the WCAP and as adopted by the Commission via their SER dated 12 September 1996, as being in accordance with the criteria of Regulatory Guide 1.14.

#### 3.2 Examination Requirements:

3.2.1 Examinations shall be performed on all installed Reactor Coolant Pump (RCP) Flywheels. Installed RCP Flywheels shall either have a Ultrasonic (UT) examination over the volume from the inner bore of the Flywheel to the circle of one-half the outer radius or conduct a Ultrasonic (UT) and a Surface (MT and/or PT) examination of exposed surfaces defined by the volume of the disassembled Flywheels once every 10 years.

#### 3.3 Examination Method:

3.3.1 Reactor Coolant Pump Flywheels shall be examined using Ultrasonic or Ultrasonic and Surface examination techniques.

3.3.2 Examinations defined in Step 3.3.1 shall conform to and be performed in accordance with Section 1 of this program.



## ADDITIONAL PROGRAMS

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### 3.4 Frequency of Examinations:

3.4.1 Examinations shall be performed on all installed Reactor Coolant Pump Flywheels once every 10-year interval.

### 3.5 Examination Evaluation:

3.5.1 Examination evaluations shall be performed in accordance with Section 1 of this program.

3.5.2 Unacceptable examinations shall be reported for evaluation and appropriate corrective action.

### 3.6 Repair, Replacement and Testing Requirements

3.6.1 Repairs and Replacements shall be performed in accordance with Section 12, as applicable.

### 3.7 Scheduling:

3.7.1 Examination schedules shall be established within Supplement 1, the Inservice Inspection Program Plan.

### 3.8 Reports and Records:

3.8.1 Applicable records shall be maintained as specified in Section 1 and Section 12.





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4.0 Reactor Vessel Augmented Program, Category B-A:

4.1 General:

As specified within the Federal Register, 10 CFR Part 50, Vol. 57, No. 152 dated August 6, 1992, a specific augmented examination program is required for ASME Section XI Category B-A, Shell Welds of "Pressure Retaining Welds in Reactor Vessel".

4.2 Examination Requirements:

4.2.1 Examinations shall be performed on all ASME Section XI Category B-A, Item B1.0, Shell Welds of "Pressure Retaining Welds in Reactor Vessel" that are not required by the Code.

4.3 Examination Method:

4.3.1 Ultrasonic examinations shall conform and be performed in accordance with Section 1 of this program.

4.4 Frequency of Examinations:

4.4.1 Examinations shall be performed once during the Inspection Interval.

4.5 Examination Evaluation:

4.5.1 Examination Evaluations shall be performed in accordance with Section 1 of this program.

4.5.2 Unacceptable examinations shall be reported for evaluation and appropriate corrective action.



## ADDITIONAL PROGRAMS

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### 4.6 Repair, Replacement and Testing Requirements

4.6.1 Repairs and Replacements shall be performed in accordance with Section 12, as applicable.

### 4.7 Scheduling:

4.7.1 Examination schedules shall be established within Supplement 1, the Inservice Inspection Program Plan.

### 4.8 Reports and Records:

4.8.1 Applicable records shall be maintained as specified within Section 1 and Section 12.





MATERIALS ENGINEERING AND INSPECTION SERVICES  
RG&E EXAMINATION SUMMARY RECORD

Sheet # 93058100

45-134

Examination for: IST: ☒ Maint: ☐ Other: ☐

Site: GINNA STATION System: REACTOR COOLANT PUMP B

ID: FLYWHEEL # 212

Description: 212-3D19156-G01-02

Results

Exam Type	Exam Rec. #	Examiner	Date	N o r e c	I n d i c a t i o n s	G e o m e t r i c	D e f e c t s	R e m a r k s
PT	932015	DGG	4/5/93	X				No RECORDABLE INDICATIONS IN BORE OR KEYWAYS ACCEPTABLE
UTLAM	936175	DGG	4/6/93	X				No RECORDABLE INDICATIONS TOP - ACCEPTABLE
UTLAM	936129	DGG	4/6/93	X				No RECORDABLE INDICATIONS BOTTOM - ACCEPTABLE
UT45	936131	DGG	4/6/93	X				No RECORDABLE INDICATIONS CW/CCW TOP - ACCEPTABLE
UT45	936174	DGG	4/6/93	X				No RECORDABLE INDICATIONS CW/CCW TOP - ACCEPTABLE
UT45	936139	DGG	4/6/93	X				No RECORDABLE INDICATIONS CW/CCW BOTTOM - ACCEPTABLE
UT45	936135	DGG	4/6/93	X				No RECORDABLE INDICATIONS CW/CCW BOTTOM - ACCEPTABLE

Summarized By:

*J. L. Sadowsky*

SNT Level

*II/NA*

Date

*4/8/93*

Reviewed By:

*G. P. Piller*

SNT Level

*II/NA*

Date

*4/20/93*





Sheet # 932015

MATERIALS ENGINEERING AND INSPECTION SERVICES  
LIQUID PENETRANT EXAMINATION RECORD

GINNA STATION

Summary Sheet # 93058100

Applicable Code SECTION XI CLASS 1

Date 4-5-93

Time 1315

System Id FLYWHEEL

Id FLYWHEEL

Description 212-3D19156-G01-02

PT Procedure NDE200-1R6

PDR # N/A

Drawing No. \*\*\*\*\* Location 230, S221 Surface Condition MACHINED

Surface Temperature: 72 °F Temp. Meter MFG/Ser # Testoterm # L 749

## EXAMINATION FOR:

ISI ☒ Maintenance N/A Construction N/A R/R Mod N/A Other N/A

Examiner (Print) DAVID GARCIA Level II

Examiner (Print) DEE CLARK Level II

Light Meter MFG/Ser # GE # 168

Illumination Used 100 + FT/CDS

View Card 1/32" Direct ☒ Lo Location Top of Flywheel (Large Diameter)

Cleaner Brand

Dabl Check

Type:

DR 60

Batch#

118F4

Time Exam Started

1315

Evap Time

5

Penetrant Brand

Dabl Check

Type:

DR 40

Batch#

OIKI

Dwell Time

15

Remover Brand

Dabl Check

Type:

DR 60

Batch#

118F4

Evap Time

5

Developer Brand

Dabl Check

Type:

D 100

Batch#

11366

Developing Time

7

Time Exam Comple

1422

Loc L	Loc W	Loc U/D	Type R/L	Size D/L	Remarks
No Recordable Indications noted in bore or keyways					

DISPOSITION: Acceptable

EXAMINER'S SIGNATURE [Signature]

DATE 4-5-93

EXAMINER'S SIGNATURE [Signature]

DATE 4-5-93

REVIEWED BY: [Signature]

SNT LEVEL III

DATE 4/7/93



## MATERIALS ENGINEERING AND INSPECTION SERVICES FLYWHEEL STRAIGHT BEAM LAMINATION RECORD

Sheet # 936175

Summary Sheet # 93058100

ce GINNA STATION

Procedure NDE 600-6R

Date: 4-6-93

Time: 125600

212-3D19156-G01-02

Flywheel No.: 212

Side: TOP

Surface Temperature 70

F Surface Condition Machined AND Painted

Cal. Sht. #: 938171

LAMINATED: YES ☒ NO

THICKNESS: Top 7.5"  
Measured

If Yes, Describe: 7" TOP, 5" BOTTOM

(If Laminated) Bottom: 5"

Remarks:

Limitations: *NONE*

Lo Location: Inline with Etched ID MARK Wo Location: Edge of bore

Examiner: DAVID GARCIA

SNT Level: II

Examiner: DEE CLARK

SNT Level: II R

[illegible]

POSITION: ACCEPTABLE

EXAMINER'S SIGNATURE

Samuel Davis

DATE 4-6-93

EXAMINER'S SIGNATURE

Spencer

DATE 4-6-93

REVIEWED BY:

Barbara L. Lenz

SNT LEVEL

25

DATE 4/7/93



MATERIALS ENGINEERING AND INSPECTION SERVICES  
FLYWHEEL STRAIGHT BEAM LAMINATION RECORD

Sheet # 936129

Summary Sheet # 93058100

the Ginna Station Procedure *NDE 600-6*

Date: 4-6-93 Time: 1315

Disc: 212-3D19156-G01-02 Flywheel No.: 212 Side: BOTTOM

Surface Temperature 70° F. Surface Condition MACHINED AND PAINTED

Cal. Sht. #: 938171

LAMINATED: YES ✓ NO       

THICKNESS: Top 7.5  
Measured

If Yes, Describe: 7" Top, 5" Bottom

(If Laminated) Bottom: 5

Remarks:

Limitations: *NONE*

Lo Location: IN LINE WITH ETCH ID. MARK. Wo Location: EDGE OF BORE

Examiner: DAVID G. GARCIA

SNT Level: II

Examiner: DEE CLARK

SNT Level: II

[illegible]

POSITION: Acceptable

EXAMINER'S SIGNATURE

EXAMINER'S SIGNATURE

DATE 4-6-93

DATE 4-6-93

REVIEWED BY:

SNT LEVEL

DATE 4/7/93

Summary Sheet # 93058100

Date: 4-6-93 Time: 1355

Surface Temperature 70°F Surface Condition MACHINED AND PAINTED

0	45
<del>N</del> A	80.48 *

BORE KEYWAY REFLECTORS WERE OBSERVED.

Limitations: *NONE*

Lo Location: IN LINE WITH ETCHED ID MARK Wo Location: EDGE OF BORE

Examiner: DAVID C. GARCIA

SNT LEVEL: II

iner: DEE CLARK

SNT LEVEL: II

[illegible]

POSITION: ACCEPTABLE

EXAMINER'S SIGNATURE N. J. [Signature]  
EXAMINER'S SIGNATURE [Signature]

DATE 4-6-93

EXAMINER'S SIGNATURE *[Signature]*

DATE: 4-6-93

REVIEWED BY: John O. Kunk

SNT LEVEL IM

DATE 4/7/93

Summary Sheet # 93058100

REVIEWED BY: Gene A. Lewis SNT LEVEL: III DATE 4/7/93





MATERIALS ENGINEERING AND INSPECTION SERVICES  
FLY-WHEEL ULTRASONIC EXAMINATION RECORD

Summary Sheet # 93058100

the Ginna Station Procedure NDE-600-6 R3

Date: 4-6-93 Time: 1405

Desc: 212-3D19156-G01-02 Flywheel No.: 212 Side: BOTTOM

Surface Temperature 70° F Surface Condition Machined and Painted

Cal. Sht. #: 938209

### Ang le Used

0	45
N/A	* 55.4

Scanning dB

Remarks: \*+6 dB for SCANNING. Bare keyway reflectors were observed.

Limitations: None

Lo Location: In line with etched I.D. MARK Wo Location: Edge of bore

Examiner: DAVID GARCIA

SNT LEVEL: II

iner: DEE CLARK

SNT LEVEL: II R

[illegible]POSITION: Acceptable

EXAMINER'S SIGNATURE

EXAMINER'S SIGNATURE

DATE 4-6-93

DATE 4-6-93

REVIEWED BY:

SNT LEVEL

DATE 4/2/93

Summary Sheet # 93058100

REVIEWED BY: Paul A Lewis SNT LEVEL III DATE 4/7/93



MATERIALS ENGINEERING AND INSPECTION SERVICES  
LAMINATION CALIBRATION RECORD

Sheet # 938171

Summary Sheet # 93058100

Site GINNA STATION Sys ID FLYWHEEL

Date: 4-6-93 Time: 1250

Inspector: DAVID GARCIA

SNT Level: II

Examiner: DEE CLARK

SNT Level: II R

Instrument Type: SONIC MK 136

Calibration Verification

Serial Number: 203A

Time

Initials

1500					
10					

UT Procedure: NDE600-6R 3

PDR #: N/A

Couplant: Sonotech

Batch #: 92220

Verification Block S/N: ITW 9240

Search Units

Manufacturer  
Ser. Number  
Size  
Nom Freq MHz

0 (L.S.)
Aerotech
D 17921
1.0"
2.25 MHz

Signal Ampl  
Screen Div.  
Signal Dist  
Screen Div.  
Coarse Rng  
dB In

0 (L.S.)
80%
8
4"
4
9.51
32.4

Instrument Settings

Reject  
Fine dB  
Coarse dB  
Frequency  
Delay  
Matl Cal  
Range  
Damping  
Rep Rate  
Video  
Filter

OFF
N/A
16.8
2.25
18"
220
9.51
500
2 K
N/A
N/A

S.U. CABLE

Length  
Type

72"
BNC-BNC

Basic Calibration Block Number: 7-CSCL-16-RGE, 5-CSCL-17-RGE

Surface Temperature 70 °F

Exam. Sheet Nos.

936175  
93058100

936129

Examination Area/Remarks:

Flywheel Top and Bottom

EXAMINER'S SIGNATURE

David Garcia

DATE 4-6-93

EXAMINER'S SIGNATURE

Dee Clark

DATE 4-6-93

REVIEWED BY:

Paul A. Lewis

SNT LEVEL

II

DATE 4/7/93

MATERIALS ENGINEERING AND INSPECTION SERVICES  
INSTRUMENT CALIBRATION RECORD

Summary Sheet # 93058100

Ginna Station Sys Id FLYWHEEL

Date: 4-6-93 Time: 1100

Examiner: DAVID G. GARCIA

SNT Level: II

Examiner: DEE CLARK

SNT Level: IIR

Instrument Type: SONIC 136

Calibration Verification

Serial Number: 203A

Time

Initials

1430					
1430					

UT Procedure: NDE 600-6

Rev 3

PDR #: N/A

Couplant: SONOTECH

Batch #: 92220

## Search Units

Nom Angle  
Meas Angle  
Manufacture  
Serial  
Size  
Nom Freq. M HZ

45°	
45°	
SONIC	N
00828T	A
1/2 X 1	
2.25 MHz	

## Verification Block S/N: N/A

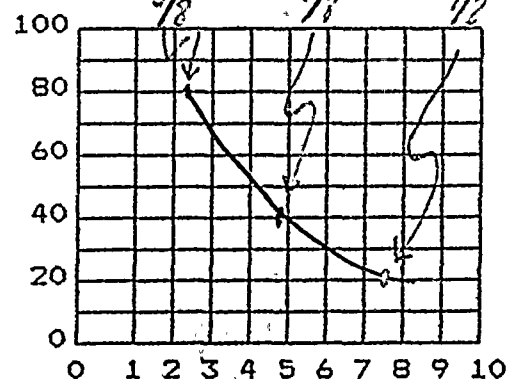
Meas Angle  
Sig Ampl  
Screen Div.  
Sig Dist in  
Screen Div.  
Coarse Rng  
dB Coarse  
dB Fine

N	A

## Instrument Settings

Subject  
Fine dB  
Coarse dB  
Frequency  
Delay  
Matl Cal/Vel.  
Range  
Damping  
Rep Rate  
Video  
Filter

OFF	
N/A	
80.48	
2.25	
14.5	N
.220	A
32.11	
500	
2K	
N/A	
N/A	



## S.U. Cable

Length  
Type

72"	N
BNC TO BNC	A

10 Screen Div = 10 in of Metal

Longitudinal N/A Shear V

Basic Cal Blk#: 7-C5CL-16-REG.

Surface Temperature 70 °F

Full VEE Calibration

Remarks: SCREEN 10" delayed 10" CALIBRATION REFLECTORS HAVE BEEN VERIFIED AT 70 °F

Form. Sheet Nos. 126121

OWNER'S SIGNATURE [Signature]

DATE 4-6-93

EXAMINER'S SIGNATURE [Signature]

DATE 4-6-93

REVIEWED BY: [Signature]

SNT LEVEL IIR

DATE 4/7/93



MATERIALS ENGINEERING AND INSPECTION SERVICES  
INSTRUMENT CALIBRATION RECORD

Summary Sheet # 93058100

Site GINNA STATION Sys Id FLYWHEELDate: 4-6-93 Time: 1030Examiner: DAVID GARCIASNT Level: IIExaminer: DEE CLARKSNT Level: II RInstrument Type: SONIC MK 136

Calibration Verification

Serial Number: 203A

Time

Initials

1430		FINAL		
AB				

UT Procedure: NDE600-6R3PDR #: N/ACouplant: Sonotech ~~Sonotech~~ Batch #: 92220

## Search Units

Nom Angle  
Meas Angle  
Manufacture  
Serial  
Size  
Nom Freq M HZ

45°	
45°	
SONIC	N
00828T	A
1/2 X 1	
2.25 MHz	

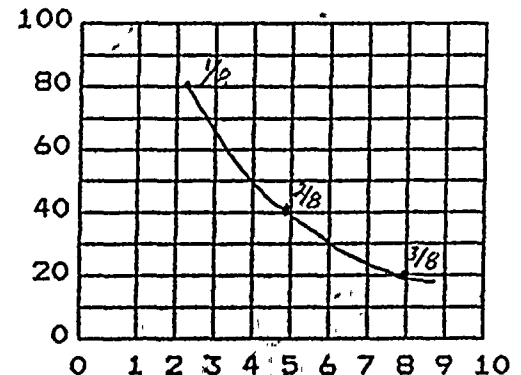
Verification Block S/N: N/AMeas Angle  
Sig Ampl  
Screen Div.  
Sig Dist in  
Screen Div.  
Coarse Rng  
dB Coarse  
dB Fine

N	A

## Instrument Settings

Reject  
Fine dB  
Coarse dB  
Frequency  
Delay  
Matl Cal/Vel.  
Range  
Damping  
Rep Rate  
Video  
Filter

OFF	
N/A	
56.2	
2.25	
1.78	
.220	N
16.81	A
500	
2K	
N/A	
N/A	



## S.U. Cable

Length  
Type

72"	N/A
BNC - BNC	N/A

10 Screen Div = 10 in of Metal

Longitudinal N/A Shear ✓Basic Cal Blk#: 7-CSCL-16-RGESurface Temperature 70 °FRemarks: Calibration reflectors verified at scanning speed. Half V calibration.Form Sheet Nos. 936174EXAMINER'S SIGNATURE David GarciaDATE 4-6-93EXAMINER'S SIGNATURE Dee ClarkDATE 4-6-93REVIEWED BY: Paul A. PearsSNT LEVEL IIIDATE 4/7/93





MATERIALS ENGINEERING AND INSPECTION SERVICES  
INSTRUMENT CALIBRATION RECORD

Sheet # 938209

Summary Sheet # 93058100

Ginna Station Sys Id Flywheel

Date: 4-6-93 Time: 1115

Examiner: DAVID GARCIA

SNT Level: II

Examiner: DEE CLARK

SNT Level: II R

Instrument Type: SONIC MK 136

Calibration Verification

Serial Number: 203A

Time

Initials

1445					
M					

UT Procedure: NDE 600-6

Rev. 3

PDR #: N/A

Couplant: Sonotech

Batch #: 92223

Search Units

Verification Block S/N: N/A

Nom Angle  
Meas Angle  
Manufacture  
Serial  
Size  
Nom Freq M HZ

45°	
45°	
SONIC	N
00828T11	A
1/2 X 1	
2.25	

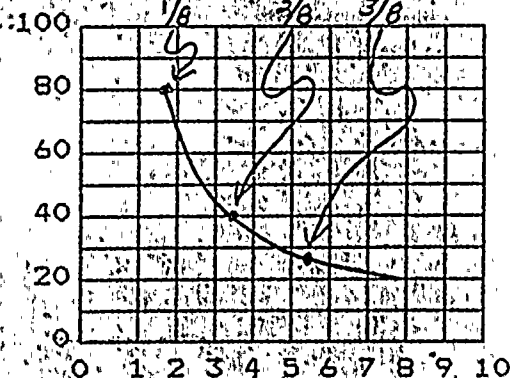
Meas Angle  
Sig Ampl  
Screen Div.  
Sig Dist in  
Screen Div.  
Coarse Rng  
dB Coarse  
dB Fine

N	
	A

Instrument Settings

Subject  
Fine dB  
Coarse dB  
Frequency  
Delay  
Matl Cal/Vel.  
Range  
Damping  
Rep. Rate  
Video  
Filter

OFF	
N/A	
55.4	
2.25	
1.78	
.220	N
16.81	A
500	
2K	
N/A	
N/A	



S.U. Cable

Length  
Type

72"	N/A
BNC-BNC	N/A

10 Screen Div = 10 in of Metal

Longitudinal N/A Shear ✓

Basic Cal Blk#: 5-C5CL-17-REG

Surface Temperature 70 °F

Remarks: Calibration Reflectors verified at scanning spread. Half Vec exam

Exam. Sheet Nos. 936134

INSPECTOR'S SIGNATURE David Garcia

DATE 4-6-93

EXAMINER'S SIGNATURE Dee Clark

DATE 4-6-93

REVIEWED BY: Paul A Lewis

SNT LEVEL II

DATE 4/7/93





MATERIALS ENGINEERING AND INSPECTION SERVICES  
INSTRUMENT CALIBRATION RECORD

Summary Sheet # 93058100

Ginna Station Sys ID FlywheelDate: 4-6-93 Time: 1230Examiner: DAVID G. GARCIASNT Level: IIExaminer: DEE CLARKSNT Level: IIInstrument Type: SONIC 136

Calibration Verification

Serial Number: 203ATime 1455  
Initials NG GCUT Procedure: NDE 600-6Rev 3PDR #: N/ACouplant: SONOTECHBatch #: 92220

Search Units

Verification Block S/N: N/ANom Angle  
Meas Angle  
Manufacture  
Serial  
Size  
Nom Freq M HZ

45°	
45°	
SONIC	N
00828T	A
1/2X1	
2.25 MHz	

Meas Angle  
Sig Ampl  
Screen Div.  
Sig Dist in  
Screen Div.  
Coarse Rng  
dB Coarse  
dB Fine

N	
	A

Instrument Settings

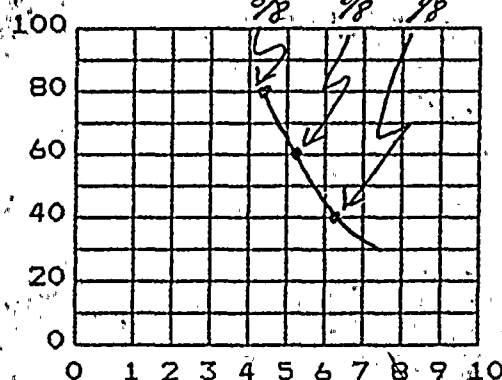
Subject  
Fine dB  
Coarse dB  
Frequency  
Delay  
Matl Cal/Vel.  
Range  
Damping  
Rep Rate  
Video  
Filter

OFF	
N/A	
82.8	
2.25	
2/4	N
230	A
33.11	
500	
2K	
N/A	
N/A	

S.U. Cable

Length  
Type

72"	N
BNC TO BNC	A



10 Screen Div = 20 in of Metal

Longitudinal N/A Shear ✓Basic Cal Blk#: 5-C566-17-REGSurface Temperature 70°FRemarks: CALIBRATION REFLECTORS HAVE BEEN VERIFIED AT SCANNING SPEED FULL VEE CALIBRATIONExam. Sheet Nos. 936135EXAMINER'S SIGNATURE David GarciaDATE 4-6-93EXAMINER'S SIGNATURE Dee ClarkDATE 4-6-93REVIEWED BY: Ronald A. LewisSNT LEVEL IIDATE 4/7/93





Sheet # 932016MATERIALS ENGINEERING AND INSPECTION SERVICES  
LIQUID PENETRANT EXAMINATION RECORD

GINNA STATION

Summary Sheet # 93058110Applicable Code SECTION XI CLASS 1 Date 4-5-93 Time 12:20System Id FLYWHEEL Id ANTI-ROTATION PAWLSDescription PAWLS #1 THRU #5 PT Procedure NDE200-1R6PDR #: N/ADrawing No. \*\*\*\*\* Location 230, D221 Surface Condition MACHINEDSurface Temperature: 72 °F Temp. Meter MFG/Ser # TECHNOTERM L-149

## EXAMINATION FOR:

ISI ✓ Maintenance \_\_\_\_\_ Construction \_\_\_\_\_ R/R Mod \_\_\_\_\_ Other \_\_\_\_\_Examiner (Print) DAVID G. GARCIA Level IIExaminer (Print) DEE CLARK Level IILight Meter MFG/Ser # GE L-168 Illumination Used >100 FT/CDSCard 1/32" Direct ✓ Lo Location N/A

Cleaner Brand <u>Dubl-Chek</u>	Penetrant Brand <u>Dubl-Chek</u>	Remover Brand <u>Dubl-Chek</u>	Developer Brand <u>Dubl-Chek</u>
Type: <u>DK-60</u>	Type: <u>DK-40</u>	Type: <u>DK-60</u>	Type: <u>D-100</u>
Batch# <u>118F4</u>	Batch# <u>OIK1</u>	Batch# <u>118F4</u>	Batch# <u>113G6</u>
Time Exam Started <u>1222</u>	Dwell Time <u>15</u>	Evap Time <u>5</u>	Developing Time <u>7</u>
Evap Time <u>5</u>			Time Exam Complete <u>1306</u>

Loc L	Loc W	Loc U/D	Type R/L	Size D/L	Remarks

DISPOSITION: ACCEPTABLEEXAMINER'S SIGNATURE [Signature] DATE 4-5-93EXAMINER'S SIGNATURE [Signature] DATE 4-5-93REVIEWED BY: [Signature] SNT LEVEL III DATE 4/7/93



MATERIALS ENGINEERING AND INSPECTION SERVICES  
RG&E EXAMINATION SUMMARY RECORD

95058105

45-1

Examination for: IST-X Maintenance Other: X 8-10-67

Site: GINNA STATION      System: REACTOR COOLANT PUMP B

ID: RCP-B FLYWHEEL EXPOSE AREAS Description: 212-SD19156-G01-02

EIN: FRC01B

## Results

22.2

81.195

REMARKS

[illegible]

EXAMINED ALL

## ACCESSIBLE AREAS

PT 952042 DG. A/G/95 X No RECORDABLE INDICATORS

ACCEPTABLE

۵۰۰

千一

EXAMINED PAULS

## 1, 2, 3, 4 & 5 CONCURRENTLY

FLAT O.D. SURFACE

EACH HALF

UTLAIN 956032 DG. 4/7/95 X NO RECORDABLE INDICATIONS

ACCEPTABLE

TOP & BOTTOM SIDES

1545 956031 DG. 4/7/95 X No RECURRABLE INDICATIONS

ACCEPTABLE

Summarized By: W. S. Ballard SNT Level II/NA Date 4/8/95

Reviewed By: J. A. Hirsch SNT Level: 1 Date: 4/8/95

ANIL R Miller 4/13/95



Sheet # 952042

MATERIALS ENGINEERING AND INSPECTION SERVICES  
LIQUID PENETRANT EXAMINATION RECORD

Site GINNA STATION

Summary Sheet # 95058105

Applicable Code SECTION XI CLASS 1

Date 4-6-95

Time 820

System Id. PLANT COMPONENT, IPRC01B

Id RGP-B FLYWHEEL, EXPOSE AREAS

Description 212-3D19156-B01-02

PT Procedure NDE200-1R 6

Drawing No. \*\*\*\*\* Location 230, S221

PDR #: 0927, 0893 Surface Condition MACHINED

Surface Temperature: 67°F Temp. Meter MFG/Ser # OMEGA L-180

## EXAMINATION FOR:

ISI ☒ Maintenance ☒ Construction ☒ R/R Mod ☒ Other ☒

Examiner (Print) DAVID G. GARCIA

Level II

Examiner (Print) TOMMY JACKSON

Level II

Light Meter MFG/Ser # GE-214 L-162

Illumination Used 100 FT/CD

Ray Card 1/32" Direct ☒

Lo Location

Cleaner Brand

DUBL-CHK

Type:

DR-60

Batch#

36A4

Time Exam Started

827

Evap Time

6

Penetrant Brand

DUBL-CHK

Type:

DP-40

Batch#

18D1

Dwell Time

11

Remover Brand

DUBL-CHK

Type:

DR-60

Batch#

36A4

Evap Time

5

Developer Brand

DUBL-CHK

Type:

D-100

Batch#

113G6

Developing Time

7

Time Exam Compl

9:45

Loc L	Loc W	Loc U/D	Type R/L	Size D/L	Remarks
NO RECORDABLE INDICATIONS					10 EXAMINER EXAMINED PAGES 1, 2, 3, 4, 15 CONCURRENTLY.

DISPOSITION: ACCEPTABLE

EXAMINER'S SIGNATURE [Signature]

DATE 4-6-95

EXAMINER'S SIGNATURE [Signature]

DATE 4-6-95

REVIEWED BY: [Signature]

SNT LEVEL [Signature]

DATE 4/6/95

ANTI RSH/11... 11/13/05





ANAL 2 Miller 4/13/95

MATERIALS ENGINEERING AND INSPECTION SERVICES  
FLYWHEEL ULTRASONIC EXAMINATION RECORD

Summary Sheet # 95058105

te GINNA STATION

Procedure NDE600-6R

Date: 4-7-95

Time: 1:30

Desc: 212-3D19156-G01-02

Flywheel No.: B

Side: Top / Bottom

Surface Temperature 67

F Surface Condition MACHINED

Cal. Sht. #: 95803

### Angle Used

Scanning: dB

Remarks: EXAMINED ALL APPROXIMATE AREAS

Limitations: *None*

Lo Location: N/A

Wo Location: *E OF BORE*

Examiner: DAVID GARCIA

SNT LEVEL: II

Examiner: TOMMY JACKSON

SNT LEVEL: II

[illegible]

POSITION: ACCEPTABLE

EXAMINER'S SIGNATURE

DATE 4-7-95

EXAMINER'S SIGNATURE

DATE 4-7-95

REVIEWED BY: Paul A. Lewis

SNT LEVEL *70*

DATE 4/7/95

ANAL R. Miller 4/13/95





MATERIALS ENGINEERING AND INSPECTION SERVICES  
LAMINATION CALIBRATION RECORD

Sheet # 958032

Summary Sheet # 95058105

Site GINNA STATION Sys Id PLANT COMPONENT: PRC01B Date: 4-7-95 Time: 1219

Examiner: DAVID GARCIA SNT Level: II

Examiner: TOMMY JACKSON SNT Level: II

Instrument Type: SONIC 136 Calibration Verification

Serial Number: 136T 1076M Time 408 Initials AG

UT Procedure: NDE600-6R 4

PDR #: 0.889 Couplant: SOUND SAFE Batch #: 92220

Verification Block S/N: 067 UT-35

Search Units

Manufacturer  
Ser. Number  
Size  
Nom Freq MHZ

0 (L.S.)
PEROTECH
K11249
1.0
2.25

Signal Ampl  
Screen Div.  
Signal Dist  
Screen Div.  
Coarse Rng  
dB In

0 (L.S.)
80%
8.0
4.0
4.0
9.81
16.8

Instrument Settings

Reject  
Fine dB  
Coarse dB  
Frequency  
Delay  
Matl Cal  
Range  
Damping  
Rep Rate  
Video  
Filter

OFF
.8
16
2.25
.110
1.233
9.81
500
2K
N/A
3

Length  
Type

S.U. CABLE

72
RG 58 A/U

Basic Calibration Block Number: 067 UT-35

Surface Temperature 72 °F Exam. Sheet Nos. 956032

Examination Area/Remarks: N/A

EXAMINER'S SIGNATURE David Garcia DATE 4-7-95

EXAMINER'S SIGNATURE Tommy E. Jackson DATE 4-7-95

REVIEWED BY: Paula SNT LEVEL III DATE 4/7/95





Sheet # 958031

MATERIALS ENGINEERING AND INSPECTION SERVICES  
INSTRUMENT CALIBRATION RECORD

Summary Sheet # 95058105

Site GINNA STATION Sys Id PLANT COMPONENT: PRG01B Date: 4-7-95 Time: 12:46Examiner: DAVID GARCIA SNT Level: IIExaminer: TOMMY JACKSON SNT Level: IIInstrument Type: SONIC 136 Calibration VerificationSerial Number: 136T 1076M Time Initials 405 12 46 95UT Procedure: NDE600-6R.4PDR #: 0889 Couplant: SOUND SAFE Batch #: 92.220

## Search Units

Nom Angle  
Meas Angle  
Manufacture  
Serial  
Size  
Nom Freq M HZ

45°	N/A
45°	
SONIC	
60828T	
1.5 X 1.0	
2.25	✓

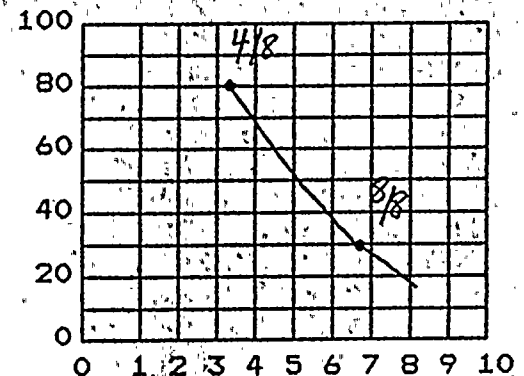
Verification Block S/N: 067 UT-35Meas Angle  
Sig Ampl  
Screen Div.  
Sig Dist in  
Screen Div.  
Coarse Rng  
dB Coarse  
dB Fine

45	N/A
80	
8	
4	
1.2	
53.2	
41	
.6	✓

## Instrument Settings

Reject  
Fine dB  
Coarse dB  
Frequency  
Delay  
Matl Cal/Vel  
Range  
Damping  
Rep Rate  
Video  
Filter

OFF	N/A
.4	
53	
2.25	
2.32	
.233	
53.2	
500	
1	
N/A	
2	✓



## S.U. Cable

Length  
Type

72	N/A
R658 Alu	

10 Screen Div = 30 in of Meta  
Longitudinal N/A Shear ✓Basic Cal Blk#: 7-CSCL-16-REGSurface Temperature 70Remarks: CALIBRATION REFLECTOR HAVE BEEN VERIFIED AT SCANNING SPEEDExam. Sheet Nos. 956031EXAMINER'S SIGNATURE David Garcia DATE 4-7-95EXAMINER'S SIGNATURE Tommy E. Jackson DATE 4-7-95REVIEWED BY: Paul A. Lewis SNT LEVEL III DATE 4/7/95

A-111 2,400,114, 4/13/95



MATERIALS ENGINEERING AND INSPECTION SERVICES  
RGE EXAMINATION SUMMARY RECORD

Sheet # 94057200

45-134

Examination form: ☒ DIT ☒ Marine ☐ Other

GINNA STATION

System: REACTOR COOLANT PUMP SPARE S/N 775  
SAK SAK SAK

FLYWHEEL S/N 775 Date + Keyway Description: SPARE S/N 775

Results

Exam Type	Exam Rec. #	Examiner	Date	N o r e c o r d i n g	I n s i m g	O n e s o m e r	R e s u l t s
							22.2 SAK Remarks 3/30/94
PT	932074	BG.	5/25/93	X			L=0, W=4.3 Linear PARTING LINE INDICATION BETWEEN TOP & BOTTOM SECTIONS 360° NOTE: MACHINING CHATTER MARKS ON KEYWAYS EXAM PERFORMED FROM BOTTOM (4.3" THICK SIDE) INNER BORE DIA. 8 3/8"  ACCEPTABLE.
UTLAM	936383	BG.	5/25/93	X			NO RECORDABLE INDICATIONS
UTLAM	936381	BG.	5/25/93				TOP & BOTTOM - ACCEPTABLE
UT45	936380	BG.	5/25/93	X			NO RECORDABLE INDICATIONS 5" BOTTOM C/W, CCW ACCEPTABLE.
UT45	936382	BG.	5/25/93	X			NO RECORDABLE INDICATIONS 7" TOP C/W, CCW ACCEPTABLE  SPARE HAS BEEN INSTALLED IN RCP-A!

Summarized By: *V.S. Sallaway Jr.*

SNT Level: *II/NA* Date: *6/1/93*

Reviewed By: *Renee A. Jones*

SNT Level: *III* Date: *6/1/93*

ANII- RM 3/31/94



Sheet # 932074MATERIALS ENGINEERING AND INSPECTION SERVICES  
LIQUID PENETRANT EXAMINATION RECORDWestinghouse, Cheswick, PA  
GINNA STATIONSummary Sheet # 94057200  
93058200 JAH

Applicable Code SECTION XI CLASS 1 Date May 25, 1993 Time 09:56  
System Id FLYWHEEL Id FLYWHEEL, R.C.P. S/N: 775  
Description RCP-A SPARE - Keyways & Bore PT Procedure NDE200-1R 6  
Drawing No. N/A Location N/A, N/A PDR #: N/A Surface Condition AS Machined  
Surface Temperature: 70° °F Temp. Meter MFG/Ser # Technoterm / L-148

## EXAMINATION FOR:

ISI X Maintenance \_\_\_\_\_ Construction \_\_\_\_\_ R/R Mod \_\_\_\_\_ Other \_\_\_\_\_Examiner (Print) Bruce Goranowski Level IIExaminer (Print) Chris Northington Level I (Ltd)Light Meter MFG/Ser # GE-214 / L-162 Illumination Used 100 + FT/CDSCard 1/32" Direct" X Lo Location Large Keyway & looking from bottom

Penetrant Brand	Penetrant Brand	Remover Brand	Developer Brand
<u>Dubl-Check</u>	<u>Dubl-Check</u>	<u>Dubl-Check</u>	<u>Dubl-Check</u>
Type: <u>DR-60</u>	Type: <u>DP-40</u>	Type: <u>DR-60</u>	Type: <u>D-100</u>
Batch# <u>118F4</u>	Batch# <u>18D1</u>	Batch# <u>118F4</u>	Batch# <u>113G6</u>
Time Exam Started <u>10:00</u>	Dwell Time <u>15 min</u>	Evap Time <u>5 min</u>	Developing Time <u>10 min</u>
Evap Time <u>15 min</u>			Time Exam Complete <u>11:15</u>

Loc L	Loc W	Loc U/D	Type R/L	Size D/L	Remarks
0	4.3"	N/A	L		Parting line indication between top and bottom sections 360°
					Noted: Machining chatter marks on Keyways
					Exam performed from bottom (4.3" thick side). Inner bore diameter: 8 3/8"

DISPOSITION: Acceptable

EXAMINER'S SIGNATURE

EXAMINER'S SIGNATURE

DATE 5-25-93DATE May 25, 1993REVIEWED BY: Paul A. LewisSNT LEVEL IIIDATE 6/1/93

ANIL-RUN 3/3/94

## MATERIALS ENGINEERING AND INSPECTION SERVICES FLYWHEEL STRAIGHT BEAM LAMINATION RECORD

Sheet # 936383

RECORD  
Summary Sheet # 94057200  
93058200

Westinghouse, Cheswick, PA

~~GINNA STATION~~

Procedure NDE600-6R 3

Date: 5-25-93 Time: 12:35

Part No.: RCP-A  
Description: SPARE (RCP # 775) Flywheel No.: N/A Side: Top & Bottom

Surface Temperature 70° (L-148) F Surface Condition Clean & Dry

Cal. Sht. #: 938337

LAMINATED: YES X NO

THICKNESS: Top 7.2", 7.6"  
Measured

If Yes, Describe: 7 1/2" Top Section

Bolted to 4 1/2" Bottom Section

(If Laminated) Bottom: 3.3", 3.5", 4.3", 4.5"

(Thicknesses Approximated)

Remarks: Top section - 80% FSH<sub>W</sub> @ 31.0 dB Bottom section - 80% F.S.H. BW @ 21.

Limitations: None

Lo Location: Large Keyway G<sub>2</sub> Wo Location: Bore surface Edge

Examiner: Bruce Goranowski SNT Level: II

Examiner: Chris Northington SNT Level: II R

[illegible]POSITION: Acceptable

EXAMINER'S SIGNATURE Bruce Harrison

DATE 5-25-93

EXAMINER'S SIGNATURE *Charles W. Bittler*

DATE May 25, 1993

REVIEWED BY: Paul A. Kere

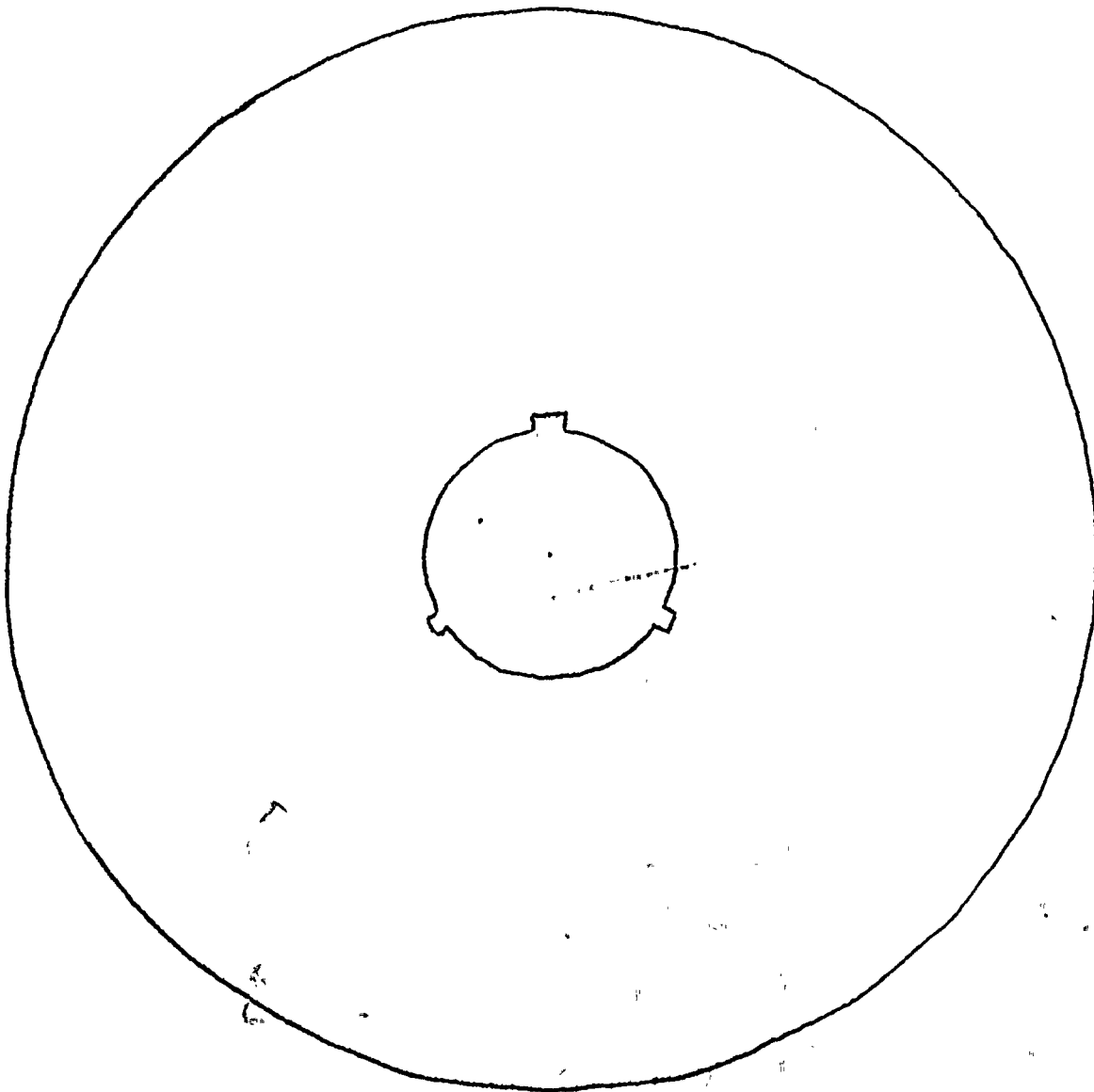
SNT LEVEL

DATE 6/1/93

ANIL-241 3/31/94

SHEET # 936381MATERIALS ENGINEERING DIVISION  
SUPPLEMENTAL REPORT FORMSUMMARY SHEET # 057200  
9358200Date 5-25-93COMPONENT IDENTIFICATION: (RCP-A FAK)  
Reactor Coolant Pump 775, Flywheel

SKETCH OR PHOTO:

COMMENTS: Bore-dia. 8.4" OD 72"  
Top Thickness = 7.2", 7.6" Bottom Thickness = 3.3, 3.5, 4.3, 4.5  
Cal. Sht 938337

## MATERIALS ENGINEERING AND INSPECTION SERVICES

### FLYWHEEL ULTRASONIC EXAMINATION RECORD

CORD  
Summary Sheet # 93058200 <sup>057200</sup>

Westinghouse  
Cheswick, PA  
~~GINNA STATION~~ 02

Procedure NDE600-6R.3

Date: 5-25-93 Time: 1128

Desc: <sup>RCP-A</sup> SPARE RCP 775 Flywheel No.: NA Side: 5" Bottom

Surface Temperature 70° L143 F Surface Condition as machined

Cal. Sht. #: 938338

### Angle Used

0	45
24	46.6 ----- 62.2

Scanning dB

Remarks: None

Limitations: None

Lo Location: Large Keweenaw Is. Wo Location: Bore edge

Examiner: Bruce Goranowski SNT LEVEL: II

Trainer: Chris Northington SNT LEVEL: III

[illegible]

POSITION: Accept

EXAMINER'S SIGNATURE

EXAMINER'S SIGNATURE

DATE 5-25-93

DATE 5.25.93

REVIEWED BY:

**SNT LEVEL**

DATE: 6/1/93

AN-11- RM 3/31/94



CORD  
Summary Sheet # 93058200 <sup>057200</sup>

Procedure NDE600-6R 3

Date: 5-25-93 Time: 1327

Desc: SPARE RCP # 775

Flywheel No.: NA Side: 7" Top

Surface Temperature 70° L148 F Surface Condition as-machined

Cal. Sht. #: 938336

### Angle Used

0	45
NA	46.4 70.2

Scanning dB

Remarks: None

Limitations: None

Lo Location: Large Keyway Q Wo Location: Bore edge

Examiner: Bruce Gorzowski SNT LEVEL: II

Examiner: Chris Northampton SNT LEVEL: \_\_\_\_\_

[illegible]POSITION: Accept

EXAMINER'S SIGNATURE

DATE 5-25-93

EXAMINER'S SIGNATURE

DATE 5-25-73

REVIEWED BY:

**SNT LEVEL**

DATE 6/1/93

AN-11- Run 3/31/94





MATERIALS ENGINEERING AND INSPECTION SERVICES  
LAMINATION CALIBRATION RECORD

Sheet # 938337

Summary Sheet # 057200  
93058300

West, Louise, Cheswick, PA  
SINNA STATION Sys ID FLYWHEEL (RCP-A) Date: 5-25-93 Time: 12:31

Examiner: Bruce Goranowski SNT Level: II

Examiner: Chris Northington SNT Level: II (R)

Instrument Type: Sonic 136 Calibration Verification

Serial Number: 340 D Time 14:10  
Initials m FINAL

UT Procedure: NDE600-6R 3

PDR #: N/A Couplant: Soundsafe Batch #: 92220

Verification Block S/N: II W Block #4615

Search Units

	0 (L.S.)
Manufacturer	K.B. Aerotech
Ser. Number	K15 439
Size	1.0
Nom Freq MHZ	2.25

Signal Ampl  
Screen Div.  
Signal Dist  
Screen Div.  
Coarse Rng  
dB In

0 (L.S.)
80
80
1.2
6 in
10
35.6

Instrument Settings

Reject	OFF
Fine dB	35.6
Coarse dB	N/A
Frequency	2.25 MHZ
Delay	0.070
Matl Cal	0.227
Range	10
Damping	500
Rep Rate	4
Video	N/A
Filter	N/A

Length  
Type

S.U.CABLE

6'
BNC/BNC

Basic Calibration Block Number: PL-CS-5.0-20-RGE

Surface Temperature 68° (L-148) °F Exam. Sheet Nos. 936383 936331

Examination Area/Remarks: Examination Performed on top

and bottom section of Flywheel. Reactor Coolant Pump

Serial Number 775

EXAMINER'S SIGNATURE Bruce Goranowski DATE 5-25-93

EXAMINER'S SIGNATURE Chris Northington DATE May 25, 1993

REVIEWED BY: Bruce Goranowski SNT LEVEL II DATE 6/1/93



MATERIALS ENGINEERING AND INSPECTION SERVICES  
INSTRUMENT CALIBRATION RECORDWestinghouse  
Cheswick, PA

SINNA STATION &amp; FLYWHEEL, RCP 775

Summary Sheet # 93058200

Date: 5-25-93 Time: 1123

Inspector: Bruce G. [Signature]

SNT Level: II

Examiner: Chris [Signature]

SNT Level: II

Instrument Type: Sonic 136

Calibration Verification

Serial Number: 136 340 D

Time

Initials

1221	Final				
88					

UT Procedure: NDE600-6R 3

PDR #: [Blank]

Couplant: Sound safe

Batch #: 92220

## Search Units

Nom Angle  
Meas Angle  
Manufacture  
Serial  
Size  
Nom Freq M HZ

45	NA
45	
KB-Accotech	
B11134	
.5 x 1.0	
2.25	↓

## Verification Block S/N: 20 - RGE

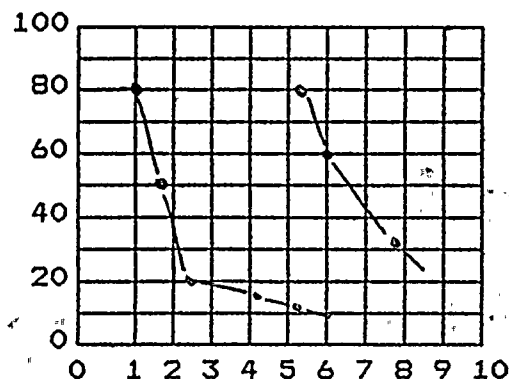
Meas Angle  
Sig Ampl  
Screen Div.  
Sig Dist in  
Screen Div.  
Coarse Rng  
dB Coarse  
dB Fine

45	NA
80	
80	
1.75	
4.5 in/dia	
20.0	
NA	
40.6	↓

## Instrument Settings

Subject  
Fine dB  
Coarse dB  
Frequency  
Delay  
Matl Cal/Vel.  
Range  
Damping  
Rep Rate  
Video  
Filter

OFF	NA
40.6 / 56.2	
NA	
2.25	
.513	
.126	
200	
500	
4	
NA	
1	↓



## S.U. Cable

Length  
Type

6'	NA
BNC to BNC	↓

10 Screen Div = 20 in of Metal  
Longitudinal Shear X

Basic Cal Blk#: PL-CS-5.0-20-RGE

Surface Temperature 68 LHS °F

Remarks: Calibration reflectors verified at scanning speed

5" Bottom

Exam. Sheet Nos. 936330

EXAMINER'S SIGNATURE

[Signature]

DATE 5-25-93

EXAMINER'S SIGNATURE

[Signature]

DATE 5-25-93

REVIEWED BY:

[Signature]

SNT LEVEL

II

DATE 6/1/93

ANIL RM 3/31/94





# MATERIALS ENGINEERING AND INSPECTION SERVICES INSTRUMENT CALIBRATION RECORD

Westinghouse  
Cheswick, PA

Summary sheet # 93058200

Site GINNA STATION Sys Id FLYWHEEL, RCP 775

Date: 5-25-93 Time: 1327

Examiner: Bruce Goranowski

SNT Level: II

Examiner: Chris Northington

SNT Level: IIA

Instrument Type: Sonic 136

Calibration Verification

Serial Number: 339 D

Time

Initials

1501	Final				
02					

UT Procedure: NDE600-6R 3

PDR #: None

Couplant: SoundGel

Batch #: 92220

## Search Units

Nom Angle  
Meas Angle  
Manufacture  
Serial  
Size  
Nom Freq M HZ

45	45
45	45
Agatech	Agatech
B11134	B11134
.5 x 1.0	.5 x 1.0
2.25	2.25

## Verification Block S/N: 7-CSC-16-REG

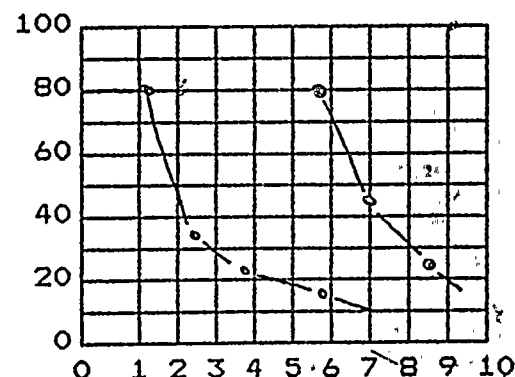
Meas Angle  
Sig Ampl  
Screen Div.  
Sig Dist in  
Screen Div.  
Coarse Rng  
dB Coarse  
dB Fine

45	NA
80	
8	
2.4	
6.14/1.0	
20	
NA	
40.4	↓

## Instrument Settings

Reject  
Fine dB  
Coarse dB  
Frequency  
Delay  
Matl Cal/Vel.  
Range  
Damping  
Rep Rate  
Video  
Filter

OFF	OFF
40.4	64.2
NA	NA
2.25	2.25
.505	.505
.129	.129
20	20
500	500
2	2
NA	NA
NA	NA



## S.U. Cable

Length  
Type

6'	6'
BAL to BAL	BAL to BAL

10 Screen Div = 20 in of Metal

Longitudinal Shear X

Calibration reflectors verified at scanning speed

4 dB clad comparison

DAC 5/8 to 7/8 T performed from clad side

Basic Cal Blk#: 7-CSC-16-REG

Surface Temperature 69 148 °F

Remarks: DAC 1/8 to 5/8 T from unclad side using DB comparison for 5/8 T position

7" Top

Sheet Nos. 936382

INSPECTOR'S SIGNATURE

DATE 5-25-93

EXAMINER'S SIGNATURE

DATE 5-25-93

REVIEWED BY: Paul A. Paul

SNT LEVEL IIA

DATE 6/1/93

RM 3/31/94



**MATERIALS ENGINEERING AND INSPECTION SERVICES  
FLYWHEEL ULTRASONIC EXAMINATION RECORD**

Summary Sheet # 94058205 <sup>057205 31</sup>

Site GINNA STATION Procedure NDE600-6R-4 Date: 18 Mar 94 Time: 0345

Desc: JAK 3/30/94 RCP-A S/N. 775 Flywheel No.: PRC01 Side: Top

Surface Temperature 70° F Surface Condition Machined & Painted

Cal. Sht. #: 948082 Angle Used 

--	--

0	45
N/A	* 59.4

Remarks: Calibration Reflectors verified at scanning speed.

\* + 6 dB for scanning.

Limitations: None

Lo Location: n/a Wo Location: E of Bore

Examiner: David Garcia SNT LEVEL: II

Miner: Doc Clark SNT LEVEL: II R

[illegible]

POSITION: Acceptable

EXAMINER'S SIGNATURE [Signature] DATE 18 MAY '94  
EXAMINER'S SIGNATURE [Signature] DATE 18 MAY '94

REVIEWED BY: M. T. Wally / P. J. [Signature] SNT LEVEL II / [Signature] DATE 3-18-94  
ANIL - RM 3/31/94 3/23/94



3/24/94







MATERIALS ENGINEERING AND INSPECTION SERVICES  
LAMINATION CALIBRATION RECORD

Sheet # 948083

JAK:stg

Summary Sheet # 94056205

057205

Site: GINNA STATION Sys Id: PLANT COMPONENT: PRC01(SPARB) Date: 18 Mar '94 Time: 0100

Examiner: David Garcia SNT Level: II

Examiner: Doc Clark SNT Level: II R

Instrument Type: Sonic 131 Calibration Verification

Serial Number: 212 A Time Initials: 

0224	0350			
<u>AB</u>	<u>AB</u>			

UT Procedure: NDE600-6R-4

PDR #: None Couplant: Sonotech Batch #: 92220

Verification Block S/N: N/A BCB used

Search Units

	0 (L.S.)
Manufacturer	<u>Aerotech</u>
Ser. Number	<u>K15439</u>
Size	<u>1"</u>
Nom Freq MHZ	<u>2.25 MHz</u>

Signal Ampl  
Screen Div.  
Signal Dist  
Screen Div.  
Coarse Rng  
dB In

0 (L.S.)
<u>N/A</u>

Instrument Settings

Reject	<u>OFF</u>
Fine dB	<u>N/A</u>
Coarse dB	<u>31.2</u>
Frequency	<u>2.25</u>
Delay	<u>.108</u>
Matl Cal	<u>.114</u>
Range	<u>4.89</u>
Damping	<u>MIN</u>
Rep Rate	<u>4</u>
Video	<u>N/A</u>
Filter	<u>2</u>

S.U.CABLE

Length  
Type

<u>60"</u>
<u>BNC-BNC</u>

Basic Calibration Block Number: IIW Type 2 SIN 1 RGE

Surface Temperature: 7.0 °F Exam. Sheet Nos. 946083

Examination Area/Remarks: N/A

EXAMINER'S SIGNATURE: David Garcia DATE: 18 Mar '94

EXAMINER'S SIGNATURE: Doc Clark DATE: 18 Mar '94

REVIEWED BY: M. T. W. / P. L. S. SNT LEVEL: II DATE: 3-18-94



MATERIALS ENGINEERING AND INSPECTION SERVICES  
INSTRUMENT CALIBRATION RECORD

Summary Sheet # 94058205

Site GINNA STATION Sys Id PLANT COMPONENT: PRC01 (SPAR) Date: 18 Mar '94 Time: 0120Examiner: David GarciaSNT Level: IIExaminer: Dee ClarkSNT Level: II RInstrument Type: Sonic 136

Calibration Verification

Serial Number: 212 A

Time	0200	340	460			
Initials	AB	NR	NR			

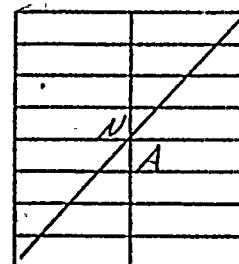
UT Procedure: NDE600-6R-4PDR #: NoneCouplant: SonotechBatch #: 92220

## Search Units

Nom Angle	45°	45°
Meas Angle	44°	44°
Manufacture	SONIC	SONIC
Serial	00828T	00828T
Size	1/2" x 1"	1/2" x 1"
Nom Freq M HZ	2.25 MHz	2.25 MHz

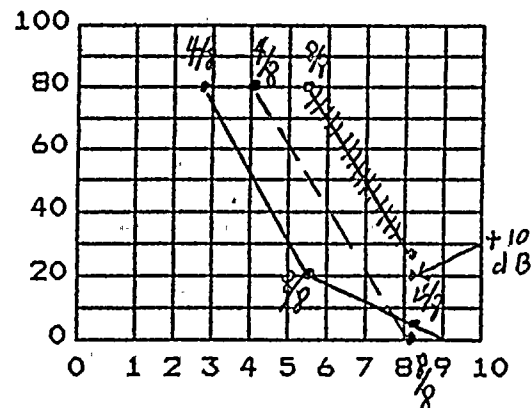
Verification Block S/N: N/A

Meas Angle  
Sig Ampl  
Screen Div.  
Sig Dist in  
Screen Div.  
Coarse Rng  
dB Coarse  
dB Fine



## Instrument Settings

Reject	OFF	OFF
Fine dB	N/A	N/A
Coarse dB	54.6 / 65.0	59.4
Frequency	2.25	2.25
Delay	1.06	1.06
Matl Cal/Vel.	.114	.114
Range	21.4	21.4
Damping	500	500
Rep Rate	2K	2K
Video	N/A	N/A
Filter	2	2



## S.U. Cable

Length  
Type

60"	60"
BNC-BNC	BNC-BNC

\*

⊗

10 Screen Div = 25 in of Metal

Longitudinal N/A Shear ✓\* Basic Cal Blk#: PL-CS-5.0-20-RGESurface Temperature 70 °FRemarks: 7" CAL = 0 --- 0 1/2, 3/8 ONLY CAL USED. FLY WHEEL IN PLACE.Exam. Sheet Nos. 946082

EXAMINER'S SIGNATURE

David Garcia

DATE

18 Mar '94

EXAMINER'S SIGNATURE

Dee Clark

DATE

18 Mar '94

REVIEWED BY:

Mike T. Wally / P. Rowe

SNT LEVEL

II / III

DATE

3/18/94  
3/26/94

AN11-RM 3/31/94



Sheet # \_\_\_\_\_

MATERIAL ENGINEERING  
INDICATION RESOLUTION RECORD

45-135

Site: GINNA STATION System / Component: FLYWHEEL s/n 775Procedure: NDP-600-6 Rev: 4 Date: 3/26/94 Time: 1300Desc: FLYWHEEL ID: PPC-1 Calibration Sheet (s) 144583 / 145082Examiner: D. CLARK SNT Level: III Examination Record Sheet#: \_\_\_\_\_Examiner: D. GARCIA SNT Level: II 946083, 946082EXAMINATION METHOD: VT \_\_\_\_\_ PT \_\_\_\_\_ MT \_\_\_\_\_ UT ☒ RT \_\_\_\_\_Weld Type: Circumferential \_\_\_\_\_ Longitudinal \_\_\_\_\_ Nozzle-to-Shell \_\_\_\_\_ Other ☒BALANCE OF FLYWHEEL EXAMINATION TO COMPLETE  
10 YR ISI COMMITMENT -0° Lam - No Recordable Indications45° - No Recordable Indications Towards Bore,  
Away From Bore, CW & CCW.Attachment: Yes ☒ No \_\_\_\_\_Resolution by: Paul A. LewisSNT Level: III Date: 3/26/94Reviewed by: Paul A. LewisSNT Level: III Date: 3/31/94

ANII-RM 3/31/94

AN11- RM 3/31/94

FAK 3/30/94

## RG&amp;E EXAMINATION SUMMARY RECORD

2 of 2

45-13

Examination for: ISI: X Maint: Other: AUG

Site: GINNA STATION System: REACTOR COOLANT PUMP SPACE # S/N 775

ID: RCP-~~5~~ ANTI-ROTATION PAWLS Description: PAWLS (11)-~~SPARE~~

[illegible]

Summarized By: R. Saraway SNT Level 4 Date 2/23/94

Reviewed By: J. H. Klapach SNT Level — Date 3/23/94

ANIT-LM 3/31/94



Sheet # 932075

MATERIALS ENGINEERING AND INSPECTION SERVICES  
LIQUID PENETRANT EXAMINATION RECORDWestinghouse, Cheswick, PA  
GINNA STATION

Summary Sheet # 93058210

Applicable Code SECTION XI CLASS 1 Date May 25, 1993 Time 10:10  
System Id FLYWHEEL "A" Id ANTI-ROTATION PAWLS  
Description PAWLS (11)-SPARE S/N 775 PT Procedure NDE200-1R 6  
Drawing No. N/A Location 260, N/A, A260m PDR #: N/A  
Surface Condition clean & dry  
Surface Temperature: 69 °F Temp. Meter MFG/Ser # Technoterm / L-148

## EXAMINATION FOR:

ISI X Maintenance \_\_\_\_\_ Construction \_\_\_\_\_ R/R Mod \_\_\_\_\_ Other \_\_\_\_\_Examiner (Print) Bruce Goranowski Level IIExaminer (Print) Chris Northington Level I (Ltd)Light Meter MFG/Ser # GE-214/L-162 Illumination Used 100+ FT/CDSCard 1/32" Direct" X Lo Location N/ACleaner Brand  
Dubl-ChekType:  
DR-60Batch#  
118F4Time Exam Started  
10:20Evap Time  
10 minPenetrant Brand  
Dubl-ChekType:  
DP-40Batch#  
18D1Dwell Time  
25 minRemover Brand  
Dubl-ChekType:  
DR-60Batch#  
118F4Evap Time  
10 minDeveloper Brand  
Dubl-ChekType:  
D-100Batch#  
113G6Developing Time  
20 minTime Exam Complet  
11:35

Loc L	Loc W	Loc U/D	Type R/L	Size D/L	Remarks
			L	0.35"	Paul #9 - Linear indication in previously excavated area on shaft surface shoulder.
					Pauls #1-8, 10, 11 - No Recordable Indications
					Noted: Peening of natchet wear surface

DISPOSITION: Pauls #1-8, 10, 11 - Acceptable

EXAMINER'S SIGNATURE

EXAMINER'S SIGNATURE

REVIEWED BY:

SNT LEVEL

DATE: 5-25-93DATE May 25, 1993DATE 6/1/93

A111 - R11 3/31/94

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MATERIALS ENGINEERING AND INSPECTION SERVICES  
LIQUID PENETRANT EXAMINATION RECORD

057210

GINNA STATION

Summary Sheet # 94058210

Applicable Code SECTION XI CLASS 1 Date 3/22/94 Time 1650  
System Id PLANT COMPONENT: PRC01 (SPARE) Id RCP-8 ANTI-ROTATION PAWLS  
Description PAWLS (11) - SPARE #9 <sup>original</sup> Exam. PT Procedure NDE200-1R6  
PDR #: N/A  
Drawing No. B-9 Location \*\*\*, \*\*\* Surface Condition As forged  
Surface Temperature: 67 °F Temp. Meter MFG/Ser # Technoterm 9200 L-151

EXAMINATION FOR:

ISI        Maintenance X Construction        R/R Mod        Other       

Examiner (Print) Joe Oliver Level II

Examiner (Print) N/A Level N/A

Light Meter MFG/Ser # GE 214 L-004 Illumination Used > 100 FT/CDS

Card 1/32" Direct ✓ Lo Location N/A

Container Brand Dohl check Penetrant Brand Dohl check Remover Brand Dohl check Developer Brand Dohl check

Type: DR-60 Type: DP-40 Type: DR-60 Type: D-100

Batch# 118F4 Batch# 61K1 Batch# 118F4 Batch# 113G6

Time Exam Started 1650 Dwell Time 10 min Evap Time 5 min Developing Time 10 min

Evap Time 5 min Time Exam Complet 1735

Loc L	Loc W	Loc U/D	Type R/L	Size D/L	Remarks
					No recordable indications

DISPOSITION: Acceptable Per NDE 200-5

EXAMINER'S SIGNATURE Joseph F. Oliver DATE 3/23/94

EXAMINER'S SIGNATURE N/A DATE 3/24

REVIEWED BY: Paul A. Oliver SNT LEVEL III DATE 3/23/94

