

FORM NIS-1 OWNERS' DATA REPORT FOR INSERVICE INSPECTIONS

As required by the Provisions of the ASME Code Rules PAGE 1 OF 26

Florida Power and Light Co. 9250 W. Flagler, Miami, Fla.

1. Owner

(Name and address of Owner)

Turkey Point Nuclear Power Plant  
P.O. Box 3088, FLORIDA CITY, FL 33034

2. Plant

(Name and address of Plant)

3. Plant Unit 4

4. Owner Certificate of Authorization (if required) N/A

5. Commercial service date 7 SEPTEMBER 1973

6. National Board Number for Unit N/A

7. Components Inspected

| Component or Appurtenance | Manufacturer or Installer | Manufacturer or Installer Serial No. | State or Province Number | National Board Number |
|---------------------------|---------------------------|--------------------------------------|--------------------------|-----------------------|
| RPV VESSEL                | B & W                     | N/A                                  | N/A                      | N/A                   |
| RCS PIPING                | BECHTEL                   | N/A                                  | N/A                      | N/A                   |
| AUX SPRAY                 | BECHTEL                   | N/A                                  | N/A                      | N/A                   |
| SIS PIPING                | BECHTEL                   | N/A                                  | N/A                      | N/A                   |
| RHR PIPING                | BECHTEL                   | N/A                                  | N/A                      | N/A                   |
| BORON INJECTION           | BECHTEL                   | N/A                                  | N/A                      | N/A                   |
| STEAM GENERATOR           | WESTINGHOUSE              | 16A-6341-1                           | N/A                      | 772                   |
| STEAM GENERATOR           | WESTINGHOUSE              | 16A-6341-2                           | N/A                      | 774                   |
| STEAM GENERATOR           | WESTINGHOUSE              | 16A-6341-3                           | N/A                      | 776                   |
| FEEDWATER PIPING          | BECHTEL                   | N/A                                  | N/A                      | N/A                   |
| MAIN STEAM                | BECHTEL                   | N/A                                  | N/A                      | N/A                   |
| BLOWDOWN                  | BECHTEL                   | N/A                                  | N/A                      | N/A                   |

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this data report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

SECRET

8. Examination Dates 10-1-82 to 5-16-83
9. Inspection Interval from 6 2/3 YEARS to 10 YEARS
10. Abstract of Examination. Include a list of examinations and a statement concerning status of work required for current interval.  
SEE ATTACHED SUPPLEMENT
11. Abstract of Conditions Noted.  
SAME AS ITEM 10 ABOVE
12. Abstract of Corrective Measures Recommended and Taken.  
SAME AS ITEM 10 ABOVE

We certify that the statements made in this report are correct and the examinations and corrective measures taken conform to the rules of the ASME Code, Section XI.

Date August 10 1983 Signed Ala. P. Wright Co. By George B. Borden  
Owner

Certificate of Authorization no. (if applicable) N/A Expiration-date N/A

### CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of DADE CTY., FL and employed by \*\* of NORWOOD, MASS have inspected the components described in this Owners' Data Report during the period OCT 1982 to MAY 1983, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owners' Data Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owners' Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date Aug 10 1983

FACTORY MUTUAL SYSTEM

D. E. Boyer

Commissions COMM NO. 4956

Inspector's Signature National Board, state, Province and No.

\*\* ARKWRIGHT BOSTON MFG'S MUTUAL INSURANCE COMPANY

1. Owner: Florida Power & Light Co.  
9250 West Flagler  
Miami, Florida 33152
2. Plant: TURKEY POINT  
P.O. Box 3088  
FLORIDA CITY, Florida 33034
3. Plant Unit : 4
4. Owner Certificate of Authorization : N/A
5. Commercial Service Date: 7 SEPTEMBER 1973
6. National Board Number for Unit: N/A

| 10. REPORT NUMBER | ORGANIZATION | DESCRIPTION OF SERVICE                                   |
|-------------------|--------------|--|
| CIG-PTP-83-001    | FPL          | INSERVICE INSPECTION VOLUME I<br>THROUGH VOLUME 5        |
| 17-4520           | SWRI         | MECHANIZED EXAMINATION VOLUME I<br>THROUGH VOLUME 3      |
| N/A               | WESTINGHOUSE | EDDY CURRENT EXAMINATION OF<br>STEAM GENERATORS BASELINE |
| N/A               | WESTINGHOUSE | REACTOR VESSEL INTERNAL REPORT                           |
| N/A               | WESTINGHOUSE | RPV CLOSURE HEAD MODIFICATIONS                           |

**FORM NIS-2 OWNER'S DATA REPORT OF REPAIRS OR REPLACEMENT**  
As required by the Provisions of ASME Code Section XI

1. Owner Florida Power & Light Co.  
(Name)  
P. O. Box 529100  
Miami, Florida 33152  
(Address)

Date August 10, 1983

Sheet 1 of 2

2. Plant Turkey Point  
(Name)  
P. O. Box 3088  
Florida City, Florida 33034  
(Address)

Unit 4

3. Work Performed by Bechtel Power Corporation Job Number 12987  
(Name) Repair Organization P.O. No.  
15740 Shady Grove Road Job No.  
Gaithersburg, Maryland 20760  
(Address)

4. Identification of System Reactor Coolant, Main Steam,  
Feedwater and Blowdown Systems

5. (a) Applicable Construction Code Sec. III 19 77 Edition S78 Addenda N/A Code Cases  
ANSI B31.1 Edition 1977  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements - 19 77 Edition  
S78 Addenda, Code Cases N-308

6. Identification of Components Repaired or Replaced and Replacement Components

| Name of Component | Name of Mfr.  | Mfrs. Ser. No | Nat'l Bd. No. | CRN No. | Other Identification | Year Built | Repaired Replaced, or Replacement | ASME Code Stamped (Yes, No) |
|-------------------|---------------|---------------|---------------|---------|----------------------|------------|-----------------------------------|-----------------------------|
| STM GEN           | Westing-house | 16A<br>6341-1 | 772           |         | A                    | 1969       | Replacement                       | Yes                         |
| STM GEN           | Westing-house | 16A<br>6341-2 | 774           |         | B                    | 1969       | "                                 | Yes                         |
| STM GEN           | Westing-house | 16A<br>6341-3 | 776           |         | C                    | 1970       | "                                 | Yes                         |
|                   |               |               |               |         |                      |            |                                   |                             |
|                   |               |               |               |         |                      |            |                                   |                             |
|                   |               |               |               |         |                      |            |                                   |                             |
|                   |               |               |               |         |                      |            |                                   |                             |

7. Description of Work Attachment 1

## FORM NIS-2 (page 2)

8. Tests Conducted: Hydrostatic X Pneumatic      Nominal Operating Pressure       
 Other      Pressure \* psi Test Temp. \* F

Remarks Applicable Manufacturers Data Reports are attached  
(Applicable Manufacturer's Data Reports to be attached)

\*Primary System 2335 psig @ 547°F; Secondary.

System 1356 psig @ 70°F; Blowdown System 1675 psig @ 60°F

Major modifications are covered by Steam Generator  
Repair Report Docket No. 50-250 and 50-251

## CERTIFICATE OF COMPLIANCE

To certify that the statements made in this report are correct and this replacement  
(Repair or Replacement)  
 conforms to Section XI of the ASME Code.

Signed *James G. Smith* *PNS Supt. Supv* *8/10* *1983*  
 (Owner or Owner's Designee) (Title) (Date)

## CERTIFICATE OF INSPECTION

I, the Undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Dade Cty. FL employed by \*\* of Norwood, MA have inspected the replacement  
 (Repair(s) or Replacement (s))

described in this Report on Aug 10, 1983 and state that to the best of my knowledge and belief, this repair or replacement has been constructed in accordance with Section XI of the ASME Code. By signing this certificate, neither the Inspector nor his employer takes any warranty, expressed or implied, concerning the repair or replacement described in this Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date *Aug 10, 1983* *D. E. Boyer* Commissions Dade Cty. Comm. No. 4956  
 (Inspector) (State or Province, National Board)  
Factory Mutual System

\*\*Arkwright Boston Mfg's Mutual Ins. Co.



NIS-2 DATA REPORT  
ATTACHMENT 1

1. Owner: Florida Power & Light Company Date:  
P. O. Box 529100  
Miami, Florida 33152
2. Plant: Turkey Point Unit: 4  
P. O. Box 3088  
Florida City, Florida 33034
3. Work Performed by: Bechtel Power Corporation Job No. 12987  
15740 Shady Grove Road  
Gaithersburg, Maryland 20760
4. Identification of System: Reactor Coolant, Main Steam,  
Feedwater and Blowdown Systems.
7. Description of Work: The steam generators were  
repaired by the replacement  
of the lower assemblies  
(excluding channel heads)  
identified as FSGT 2991; FSGT  
2992, and FSGT 2993 and  
installation of new Feedwater  
Nozzle extensions.
- Cutting and reinstallation of the  
Mainsteam and Feedwater piping.
- Installation of a redesigned  
Blowdown System.
- Miscellaneous tieins and reconnections of existing systems to new or reworked systems (i.e., reactor vent, wet layup tieins to feedwater and blowdown systems, instrument sensing lines to the Steam Generator, Aux. Feedwater System).





## FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES

As required by the Provision of the ASME Code Rules, Section III, Div. 1

Corrected Report  
R. J. L. 3/8/81

1. (a) Manufactured by Westinghouse Electric Corp., Tampa Division, Tampa, Florida  
(Name and address of NPT Certificate Holder)
- (b) Manufactured for Florida Power & Light Company - Turkey Point Unit 4  
(Name and address of N Certificate Holder for completed nuclear component)
2. Identification-Certificate Holder's Serial No. of Part FSGT 2991 Nat'l Bd. No. None
- (a) Constructed According to Drawing No. 1105J53 Drawing Prepared by WTD
- (b) Description of Part Inspected Tube Bundle Assembly
- (c) Applicable ASME Code: Section III, Edition 74\*\*, Addenda date S 76\*\*, Case No. 1484 Class 1
3. Remarks: Steam generator tube assembly fabricated per ASME Code; Section III Class 1 Nuclear  
(Brief description of service for which component was designed)
- Vessel Component. Includes 100% radiograph and post weld heat treatment. Shop hydrotest on  
primary side at 3106 psig.
- \*\*Stress Report to be in accordance with the 1965 ASME Boiler and Pressure Vessel Code  
Section III plus Addenda through Summer 1965. Stress Report will be completed by  
January 1982. Corrected Sections 2(c), 4 and 13.

We certify that the statements made in this report are correct and this vessel part or appurtenance as defined in the Code conforms to the rules of construction of the ASME Code Section III.  
(The applicable Design Specification and Stress Report are not the responsibility of the NPT Certificate Holder for parts. An NPT Certificate Holder for appurtenances is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report.)

Date June 7, 19 79 Signed WESTINGHOUSE ELECTRIC By J. A. Krul  
(NPT Certificate Holder)

Certificate of Authorization Expires 6/16/81 Certificate of Authorization No. N-1155

## CERTIFICATION OF DESIGN FOR APPURTENANCE (when applicable)

Design information on file at Westinghouse Electric Corp., Tampa Division, Tampa, Florida.

\*\*Stress analysis report on file at Westinghouse Electric Corp., Tampa Division, Tampa, Florida.

Design specifications certified by Nuclear Energy Systems Prof. Eng. State Penn. Reg. No. 22584-E  
L. Conway

\*\*Stress analysis report certified by Westinghouse Tampa Division Prof. Eng. State Fla. Reg. No. 18684

## CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Pennsylvania and employed by Lumbermens Mutual Casualty Co. of Long Grove, Illinois have inspected the part of a pressure vessel described in this Partial Data Report on July 2, 19 79 and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date July 2, 19 79

Inspector's Signature

Commissions

Pennsylvania WC 2231

National Board, State, Province and No.

## FORM N-2 (back)

Items 4-8 Incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers.

4. Shell: Material SA-533 Gr A Cl 7.5.90,000 Nominal Thickness \*\*\* in. Corrosion Allowance .06 in. Dia. \*\*\* ft. \*\*\* in. Length \*\*\* ft. \*\*\* in.  
(Kind & Spec. No.) (Min. of Range Specified)

5. Seams: Long Weld-Db1 But H.T. Yes R.T. Complete Efficiency 100 %

Girth Weld-Db1 But H.T. Yes R.T. Complete No. of Courses \*\*\*

6. Heads: (a) Material T.S. (b) Material T.S.  
Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Press. (Conv. or Conc.)

(a) \_\_\_\_\_

(b) \_\_\_\_\_

If removable, bolts used \_\_\_\_\_ Other fastening \_\_\_\_\_  
(Material, Spec. No., T.S., Size, Number) (Describe or attach sketch)

7. Jacket Closure: \_\_\_\_\_  
(Describe as ogee and weld, bar, etc. If bar give dimensions, if bolted, describe or sketch)

8. Design pressure 1085 psi at 556 °F Drop Weight \_\_\_\_\_  
Charpy Impact \_\_\_\_\_ ft-lb  
at temp. of \_\_\_\_\_ °F

Items 9 and 10 to be completed for tube sections

9. Tube Sheets: Stationary. Material SA508 CL-2a Dia. 118.25 Thickness 21.81 in. Attachment See Item 12  
(Kind & Spec. No.) (Subject to pressure) (Welded, Bolted)

Floating. Material \_\_\_\_\_ Dia. \_\_\_\_\_ Thickness \_\_\_\_\_ in. Attachment \_\_\_\_\_  
10. Tubes: Material SB-163 O.D. .875 in. Thickness .050 inches or less Number 3213 Type U  
(One Other Tube Plugged) (Str. or U)

Items 11-14 incl. to be completed for ~~XX~~ Primary Chamber.

11. Shell: Material \_\_\_\_\_ T.S. \_\_\_\_\_ Nominal Thickness \_\_\_\_\_ in. Corrosion Allowance \_\_\_\_\_ in. Dia. \_\_\_\_\_ ft. \_\_\_\_\_ in. Length \_\_\_\_\_ ft. \_\_\_\_\_ in.  
(Kind & Spec. No.) (Min. of Range Specified)

12. Seams: Long \_\_\_\_\_ H.T. \_\_\_\_\_ R.T. \_\_\_\_\_ Efficiency \_\_\_\_\_ %

Girth Weld-Db1. But H.T. Yes R.T. Complete No. of Courses \*\*\*

13. Heads (a) Material \_\_\_\_\_ T.S. \_\_\_\_\_ (b) Material SA-216 Gr WCC T.S. 70,000

Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Press. (Conv. or Conc.)

(a) Top, bottom, ends \_\_\_\_\_

(b) Channel 5.22 Min. \_\_\_\_\_ 59.41 \_\_\_\_\_ Concave

If removable, bolts used (a) \_\_\_\_\_ (b) \_\_\_\_\_ (c) \_\_\_\_\_ Other fastening \_\_\_\_\_  
(Describe or attach sketch)

Meets Fracture Toughness RT<sub>NDT</sub> = 60°F Max. Hydrostatic Test Pressure 3106 psig. Drop Weight \_\_\_\_\_  
Charpy Impact \_\_\_\_\_ ft-lb

14. Design pressure 2485 psi at 650 °F at temp. of \_\_\_\_\_ °F

Items below to be completed for all vessels where applicable.

15. Safety Valve Outlets: Number \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_

16. Nozzles:

| Purpose (Inlet, Outlet, Drain) | Number | Dia. or Size | Type   | Material | Thickness | Reinforcement Material | How Attached |
|--------------------------------|--------|--------------|--------|----------|-----------|------------------------|--------------|
| Primary Inlet                  | 1      | 31" ID       | (Weld) | (SA-216) | 1.5"      | (SA-216)               | (Integrally) |
| Primary Outlet                 | 1      | 31" ID       | (End)  | (Gr WCC) | 1.5"      | (Gr WCC)               | (Cast)       |

17. Inspection Manholes, No. 2 Size 16" ID Location Channel Head  
Openings: Handholes, No. 6 Size 6" ID Location (4) Stub Barrel, (2) Lower Shell  
Threaded, No. 3 Size 2" & 3" ID Location (2) Lower Shell 2" ID, (1) Transition C.  
18. Supports: Skirt No Lugs (Number) Lugs (Number) Other X Attached See Below 3" ID  
(Yes or No) (Number) (Number) (Describe) (Where & How)

Four main supports are cast integral with the chamber.

If Postweld Heat-Treated,

Test under internal or external pressure with coincident temperature when applicable.

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES

As required by the Provision of the ASME Code Rules, Section III, Div. 1

Corrected Report

RPT 3/1/82

1. (a) Manufactured by Westinghouse Electric Corp., Tampa Division, Tampa, Florida  
(Name and address of NPT Certificate Holder)
  - (b) Manufactured for Florida Power & Light Company - Turkey Point Unit 4  
(Name and address of N Certificate Holder for completed nuclear component)
  2. Identification-Certificate Holder's Serial No. of Part FSGT 2992 Nat'l Bd. No. None
  - (a) Constructed According to Drawing No. 1105J53 Drawing Prepared by WTD
  - (b) Description of Part Inspected Tube Bundle Assembly
  - (c) Applicable ASME Code: Section III, Edition 74\*\*, Addenda date S 76\*\*, Case No. 1484 Class 1
  3. Remarks: Steam generator tube assembly fabricated per ASME Code, Section III Class 1 Nuclear  
(Brief description of service for which component was designed)
- Vessel Component. Includes 100% radiograph and post weld heat treatment. Shop hydrotest on primary side at 3106 psig.
- \*\*Stress Report to be in accordance with the 1965 ASME Boiler and Pressure Vessel Code Section III plus Addenda through Summer 1965. Stress Report will be completed by January 1982. Corrected Sections 2(c), 4 and 13.

We certify that the statements made in this report are correct and this vessel part or appurtenance as defined in the Code conforms to the rules of construction of the ASME Code Section III.  
(The applicable Design Specification and Stress Report are not the responsibility of the NPT Certificate Holder for parts. An NPT Certificate Holder for appurtenances is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report.)

Date June 7, 19 79 Signed WESTINGHOUSE ELECTRIC By J. A. Krul  
(NPT Certificate Holder)

Certificate of Authorization Expires 6/16/81 Certificate of Authorization No. N-1155

CERTIFICATION OF DESIGN FOR APPURTENANCE (when applicable)

- Design information on file at Westinghouse Electric Corp., Tampa Division, Tampa, Florida.
- \*\* Stress analysis report on file at Westinghouse Electric Corp., Tampa Division, Tampa, Florida.  
J. A. Krul
- Design specifications certified by Nuclear Energy Systems Prof. Eng. State Penn. Reg. No. 22584-E  
L. Conway
- \*\* Stress analysis report certified by Westinghouse Tampa Division Prof. Eng. State Fla. Reg. No. 18684

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Pennsylvania and employed by Lumbermens Mutual Casualty Co. of Long Grove, Illinois have inspected the part of a pressure vessel described in this Partial Data Report on July 2 19 79, and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date July 2 19 79

[Signature]  
Inspector's Signature

Commissions Pennsylvania WC 2231  
National Board, State, Province and No.



Items 4-8 Incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers.

SA-533

4. Shell: Material Gr A Cl 2, S. 90000 Nominal Thickness \*\*\* in. Corrosion Allowance .06 in. Dia. \*\*\* ft. \*\*\* in. Length \*\*\* ft. \*\*\* in.  
(Kind & Spec. No.) (Min. of Range Specified)

5. Seams: Long Weld-Dbl Butth.T. Yes Yes R.T. Complete Efficiency 100 %

Girth Weld-Dbl Butth.T. Yes Yes R.T. Complete No. of Courses \*\*\*

6. Heads: (a) Material                      T.S.                      (b) Material                      T.S.                     

| Location<br>(Top, bottom, ends) | Thickness | Crown<br>Radius | Knuckle<br>Radius | Elliptical<br>Ratio | Conical<br>Apex Angle | Hemispherical<br>Radius | Flat<br>Diameter | Side to Press.<br>(Conv. or Conc.) |
|---------------------------------|-----------|-----------------|-------------------|---------------------|-----------------------|-------------------------|------------------|------------------------------------|
| (a)                             |           |                 |                   |                     |                       |                         |                  |                                    |
| (b)                             |           |                 |                   |                     |                       |                         |                  |                                    |

If removable, bolts used                      Other fastening                       
(Material, Spec. No., T.S., Size, Number) (Describe or attach sketch)

7. Jacket Closure:                       
(Describe as gage and weld, bar, etc. If bar give dimensions, if bolted, describe or sketch)

8. Design pressure 1085 psi at 556 °F Drop Weight                       
Charpy Impact                      ft-lb  
at temp. of                      °F

Items 9 and 10 to be completed for tube sections

9. Tube Sheets: Stationary. Material SA508 CL-2a Dia. 118.25 Thickness 21.81 Attachment See Item 12  
(Kind & Spec. No.) (Subject to pressure) (Welded, Bolted)

Floating. Material                      Dia.                      Thickness                      in. Attachment                     

10. Tubes: Material SB-163 O.D. .875 in. Thickness .050 inches or gage. Number 3214 Type U  
(Siv. or U)

Items 11-14 incl. to be completed for ~~single wall vessels, jackets of jacketed vessels, or shells of heat exchangers.~~ Primary Chamber.

11. Shell: Material                      T.S.                      Nominal Thickness                      in. Corrosion Allowance                      in. Dia.                      ft.                      in. Length                      ft.                      in.  
(Kind & Spec. No.) (Min. of Range Specified)

12. Seams: Long                      H.T.                      R.T.                      Efficiency                      %

Girth Weld-Dbl Butth.T. Yes Yes R.T. Complete No. of Courses \*\*\*

13. Heads (a) Material                      T.S.                      (b) Material SA-216 Gr WCC T.S. 70,000

| Location              | Thickness        | Crown<br>Radius | Knuckle<br>Radius | Elliptical<br>Ratio | Conical<br>Apex Angle | Hemispherical<br>Radius | Flat<br>Diameter | Side to Press.<br>(Conv. or Conc.) |
|-----------------------|------------------|-----------------|-------------------|---------------------|-----------------------|-------------------------|------------------|------------------------------------|
| (a) Top, bottom, ends |                  |                 |                   |                     |                       |                         |                  |                                    |
| (b) Channel           | <u>5.22 Min.</u> |                 |                   |                     |                       | <u>59.41</u>            |                  | <u>Concave</u>                     |

If removable, bolts used (a)                      (b)                      (c)                      Other fastening                       
(Describe or attach sketch)

Meets Fracture Toughness RT<sub>NDT</sub> = 60 °F Max. Hydrostatic Test Pressure 3106 psig

14. Design pressure 2485 psi at 650 °F Drop Weight                       
Charpy Impact                      ft-lb  
at temp. of                      °F

Items below to be completed for all vessels where applicable.

15. Safety Valve Outlets: Number                      Size                      Location                     

16. Nozzles:

| Purpose (Inlet, Outlet, Drain) | Number   | Dia. or Size  | Type          | Material      | Thickness   | Reinforcement Material | How Attached      |
|--------------------------------|----------|---------------|---------------|---------------|-------------|------------------------|-------------------|
| Primary Inlet                  | <u>1</u> | <u>31" ID</u> | <u>(Weld)</u> | <u>SA-216</u> | <u>1.5"</u> | <u>SA-216</u>          | <u>Integrally</u> |
| Primary Outlet                 | <u>1</u> | <u>31" ID</u> | <u>(End)</u>  | <u>GR WCC</u> | <u>1.5"</u> | <u>Gr WCC</u>          | <u>Cast</u>       |

17. Inspection Manholes, No. 2 Size 16" ID Location Channel Head

Openings: Handholes, No. 6 Size 6" ID Location (4) Stub Barrel, (2) Lower Shell

Threaded, No. 3 Size 2" & 3" ID Location (2) Lower Shell 2" ID, (1) Transition Co.

18. Supports: Skirt NO LUGS                      LUGS                      Other X Attached See Below  
(Yes or No) (Number) (Number) (Describe) (Where & How)

Four main supports are cast integral with the chamber.

If Postweld Heat-Treated.

Excess internal or external pressure with coincident temperature when applied.

1. (a) Manufactured by Westinghouse Electric Corp., Tampa Division, Tampa, Florida  
(Name and address of NPT Certificate Holder)(b) Manufactured for Florida Power & Light Company - Turkey Point Unit 4  
(Name and address of N Certificate Holder for completed nuclear component)2. Identification-Certificate Holder's Serial No. of Part FSGT 2993 Nat'l Bd. No. None(a) Constructed According to Drawing No. 1105J53 Drawing Prepared by WTD(b) Description of Part Inspected Tube Bundle Assembly(c) Applicable ASME Code: Section III, Edition 74\*\*, Addenda date S 76\*\*, Case No. 1484, Class 13. Remarks: Steam generator tube assembly fabricated per ASME Code, Section III Class 1 Nuclear  
(Brief description of service for which component was designed)Vessel Component. Includes 100% radiograph and post weld heat treatment. Shop hydrotest on primary side at 3106 psig.\*\*Stress Report to be in accordance with the 1965 ASME Boiler and Pressure Vessel Code Section III plus Addenda through Summer 1965. Stress Report will be completed by January 1982. Corrected Sections 2(c), 4 and 13.

We certify that the statements made in this report are correct and this vessel part or appurtenance as defined in the Code conforms to the rules of construction of the ASME Code Section III.  
(The applicable Design Specification and Stress Report are not the responsibility of the NPT Certificate Holder for parts. An NPT Certificate Holder for appurtenances is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report.)

Date June 27 19 79 Signed WESTINGHOUSE ELECTRIC By J. A. Krul  
(NPT Certificate Holder)Certificate of Authorization Expires 6/16/81 Certificate of Authorization No. N-1155

## CERTIFICATION OF DESIGN FOR APPURTENANCE (when applicable)

Design information on file at Westinghouse Electric Corp., Tampa Division, Tampa, Florida.\*\*Stress analysis report on file at Westinghouse Electric Corp., Tampa Division, Tampa, Florida.J. A. KrulDesign specifications certified by Nuclear Energy Systems Prof. Eng. State Penn. Reg. No. 22584-EL. Conway\*\*Stress analysis report certified by Westinghouse Tampa Division Prof. Eng. State Fla. Reg. No. 18684

## CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Pennsylvania and employed by Lumbermens Mutual Casualty Co. of Long Grove, Illinois have inspected the part of a pressure vessel described in this

Partial Data Report on July 2 19 79, and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date July 2 19 79Inspector's Signature A. M. LearyCommissions Pennsylvania WC 2231  
National Board, State, Province and No.





# FORM N-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR VESSELS As Required by the Provisions of the ASME Code Rules

1. Manufactured by Westinghouse Electric Corporation, Lester, Pa.

(Name and address of Manufacturer)

2. Manufactured for Atomic Power Division, Westinghouse Electric Corporation, Pittsburgh, Pa.

(Name and address of Purchaser)

3. Type Vertical Kind Steam (en Vessel No. 16A-6341-b) (Horiz. or Vert.) (Tank, Jacketed, Heat Ex.) Nat'l Bd. No. 772 Yr. Built 1969  
(Mfr. Serial No.) (State & State No.)

Items 4-8 incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers.

4. Shell: Material SA302 Gr B T.S. 80000 Thickness 2 5/8 in. Corrosion Allowance 0 in. Diam 10 ft. 3 in. Length 22 ft. 10 in.  
(Kind & Spec. No.) (Min. of range specified) \*3 13/16 in. \*\*13ft 3" \*2ft 3/16" \*\*19ft 2-7/16"

5. Seams: Long Weld-Dbl-Butt H.T.<sup>1</sup> Yes X.R. Complete Efficiency 100 %  
(If Class B)

Girth Weld-Dbl-Butt H.T.<sup>1</sup> Yes X.R. Complete No. of Courses 5

6. Heads (a) Material SA302 Gr B T.S. 80000 (b) Material SA 216 T.S. 70000

| Location<br>(Top, bottom, ends) | Thickness    | Crown<br>Radius | Knuckle<br>Radius | Elliptical<br>Ratio | Conical<br>Apex Angle | Hemispherical<br>Radius | Flat<br>Diameter | Side to Press.<br>(Convex or Concave) |
|---------------------------------|--------------|-----------------|-------------------|---------------------|-----------------------|-------------------------|------------------|---------------------------------------|
| (a) <u>Top</u>                  | <u>3 1/2</u> |                 |                   | <u>2:1</u>          |                       |                         |                  | <u>Concave</u>                        |
| (b) _____                       | _____        |                 |                   |                     |                       |                         |                  |                                       |

If removable, bolts used \_\_\_\_\_ Other fastening \_\_\_\_\_  
(Material, Spec. No., T.S., Size, Number) (Describe or attach sketch)

7. Assv. Closure Weld Thickness - 3 1/2: Diam. 13 ft. 3 in. Otherwise same as item 4.  
(Describe as ogee & weld, bar, etc. If bar give dimensions, describe or sketch)

8. Constructed for design press. 1085 psi at Max. temp 556 °F at temp. of -10 °F Charpy Impact 30 ft-lb Pneumatic Hydrostatic or Test Pressure 1356 psi  
Combination } @ 70 °F Min.

Items 9 and 10 to be completed for tube sections.

9. Tube Sheets: Stationary. Material SA-336 Diam. 118 1/4 in. Thickness 22 in. Attachment Welded  
(Kind & Spec. No.) (Subject to press.) (Welded, Bolted)

Floating. Material \_\_\_\_\_ Diam. \_\_\_\_\_ in. Thickness \_\_\_\_\_ in. Attachment \_\_\_\_\_  
(Kind & Spec. No.)

10. Tubes: Material SB-163 O.D. 7/8 in. Thickness .050 inches or gage \_\_\_\_\_ in. Number 3260 Type U  
(Kind & Spec. No.) (Straight or U)

Items 11 to 14 incl. to be completed for primary chamber

11. Shell: Material \_\_\_\_\_ T.S. \_\_\_\_\_ Nominal Thickness \_\_\_\_\_ in. Corrosion Allowance \_\_\_\_\_ in. Diam. \_\_\_\_\_ ft. \_\_\_\_\_ in. Length \_\_\_\_\_ ft. \_\_\_\_\_ in.  
(Kind & Spec. No.) (Min. of range specified)

12. Seams: Long \_\_\_\_\_ H.T.<sup>1</sup> \_\_\_\_\_ X.R. \_\_\_\_\_ Efficiency \_\_\_\_\_ %  
(Welded, Dbl., Single) (Yes or No) (If Class B)

Girth Weld-Dbl-Butt H.T.<sup>1</sup> Yes X.R. Complete No. of Courses \_\_\_\_\_

13. Heads: (a) Material \_\_\_\_\_ T.S. \_\_\_\_\_ (b) Material SA 216 T.S. 70000 (c) Material \_\_\_\_\_ T.S. \_\_\_\_\_

| Location              | Thickness         | Crown<br>Radius | Knuckle<br>Radius | Elliptical<br>Ratio | Conical<br>Apex Angle | Hemispherical<br>Radius | Flat<br>Diameter | Side to Press.<br>(Convex or Concave) |
|-----------------------|-------------------|-----------------|-------------------|---------------------|-----------------------|-------------------------|------------------|---------------------------------------|
| (a) Top, bottom, ends |                   |                 |                   |                     |                       |                         |                  |                                       |
| (b) Channel           | <u>5 1/4 min.</u> |                 |                   |                     |                       | <u>59 3/8</u>           |                  | <u>Concave</u>                        |
| (c) Floating          |                   |                 |                   |                     |                       |                         |                  |                                       |

If removable, bolts used (a) \_\_\_\_\_ (b) \_\_\_\_\_ (c) \_\_\_\_\_ Other fastening \_\_\_\_\_  
(Material, Spec. No., T.S., Size, Number) (Describe or attach sketch)

14. Constructed for specified design press. 2485 psi at Max. temp 650 °F at temp. of +10 °F Charpy Impact 20 ft-lb Pneumatic Hydrostatic or Test Pressure 3108 psi  
Combination } @ 70 °F Min.

<sup>1</sup> If Postweld Heat-Treated

<sup>2</sup> List other internal or external pressures with coincident temperature when applicable.

\* Stub Barrel (portion of lower shell)

\*\* Upper Shell



## FORM N-1 (back)

16A-6341-1

Items below to be completed for all vessels where applicable.

15. Safety Valve Outlets: Number \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_
16. Nozzles:
- | Purpose: (Inlet, Outlet, Drain) | Number | Diam. or Size | Type   | Material | Thickness | Reinforcement Material | How Attached |
|---------------------------------|--------|---------------|--------|----------|-----------|------------------------|--------------|
| Prim. Inlet                     | 1      | 30 1/2 I.D.   | (Weld) | (SA-216) | 2 3/4     | Steel                  | (Integrally) |
| Prim. Outlet                    | 1      | 30 1/2 I.D.   | (End)  | (Gr WCC) | 2 3/4     | Steel                  | (Cast)       |
| Steam Outlet                    | 1      | 28 I.D.       | (Weld) | SA-336   | 1 1/2     | Steel                  | Welded       |
| Feedwater                       | 1      | 16 3/8 I.D.   | (End)  | SA-336   | 13/16     | Steel                  | Welded       |
17. Inspection Manholes, No. 3 Size 16" I.D. Location (2) Primary Channel Head & (1) Upper Shell  
 Openings: Handholes, No. 2 Size 6" I.D. Location Stub Shell  
 Threaded, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_
18. Supports: Skirt No Lugs --- Legs --- Other X Attached integral with chamber  
 (Yes or No) (Number) (Number) (Describe) (Where & How)

19. Remarks: This multi-chamber steam generator was designed & constructed to meet requirements of ASME Code Nuclear Vessels Sect. III. This N-1 form is to be signed off by the Code Inspector under Certificate of Shop Inspection for everything listed except the Assy. closure, hydrostatic test and subsequent inspection. The Field Inspector must sign off for the latter items on Certificate of Field Assy. Insp. below. All other mfg. is specified on Manufacturers' Partial Data Forms N-2 filed at Westinghouse.

## CERTIFICATION OF DESIGN

Design information on file at Westinghouse Electric Heat Transfer Division, Lester, Pa.  
 Stress analysis report on file at Westinghouse Electric Heat Transfer Division, Lester, Pa.  
 Design specifications certified by (W) Atomic Power Division Prof. Eng. H. Jenkins State Pa. Reg. No. 4278F  
 Stress analysis report certified by (W) Heat Transfer Division Prof. Eng. J. Byerley State Pa. Reg. No. 14088

We certify that the statements made in this report are correct and that all details of material, design, construction, and workmanship of this pressure vessel conform to the ASME Code for Nuclear Vessels.

Date December 2 1969 Signed Westinghouse Electric Corp. By [Signature]  
 (Manufacturer)

Certificate of Authorization Expires No. 7580 Dec. 31, 1970

## CERTIFICATE OF SHOP INSPECTION

VESSEL MADE BY Westinghouse Electric Corporation at Lester, Pa.

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of \_\_\_\_\_ and employed by Lumberman's Mutual Casualty of Philadelphia, Pa.

have inspected the pressure vessel described in this manufacturer's data report on \_\_\_\_\_ 19\_\_\_\_, and state that to the best of my knowledge and belief, the manufacturer has constructed this pressure vessel in accordance with the ASME Code for Nuclear Vessels.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this manufacturer's data report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date December 2 1969 Inspector's Signature [Signature] Commissions N.B. 1699 National Board, State or Province No. \_\_\_\_\_

## CERTIFICATE OF FIELD ASSEMBLY INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of N.Y. and employed by Commercial Contracting Corp. of EDMUND HUNTER

have compared the statements in this manufacturer's data report with the described pressure vessel and state that parts referred to as data items 7, 8, 14 not included in the certificate of shop inspection have

been inspected by me and that to the best of my knowledge and belief the manufacturer has constructed and assembled this pressure vessel in accordance with the ASME Code for Nuclear Vessels. The described vessel was inspected and subjected to a hydrostatic test of 3108 psi, primary side & 1356 psi secondary side.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this manufacturer's data report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date March 5 1972 Inspector's Signature [Signature] Commissions N.B. 3951 National Board or State and No. \_\_\_\_\_



# FORM N-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR VESSELS

As required by the Provisions of the ASME Code Rules

Manufactured by Westinghouse Electric Corporation, Lester, Pa.

2. Manufactured for Atomic Power Division, Westinghouse Electric Corporation, Pittsburgh, Pa.

3. Type Vertical Kind Stream Gen. Vessel No. (16A-6341)-2 ( ) Nat'l Bd. No. 774 Yr. Built 1969  
(Horiz. or Vert.) (Tank, Jacketed, Heat Ex.) (Mfr. Serial No.) (State & State No.)

Items 4-8 incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers.

4. Shell: Material SA302 Gr B T.S. 80000 \*3 13/16" Nominal Thickness 2 5/8 in. Corrosion Allowance 0.06 in. Diam. 10 1/2 ft. 10 5/16 ft. Length 22 ft. 10 5/16 ft. 13ft 3 in. 19ft 2-7/16"  
(Kind & Spec. No.) (Min. of range specified) (In. or ft.) (In. or ft.) (In. or ft.) (In. or ft.)

5. Seams: Long Weld-Dbl-Butt H.T.<sup>1</sup> Yes X.R. Complete Efficiency ~ (If Class B)  
Girth Weld-Dbl-Butt H.T.<sup>1</sup> Yes X.R. Complete No. of Courses 5

6. Heads (a) Material SA 302 Gr B T.S. 80000 (b) Material SA 216 T.S. 70000  
Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Press.  
(Top, bottom, ends) (In. or ft.) (In. or ft.) (In. or ft.) (In. or ft.) (In. or ft.) (In. or ft.) (In. or ft.) (In. or ft.) (In. or ft.) (In. or ft.) (In. or ft.)  
(a) Top 3 1/2 2:1 Concave  
(b) Bottom 3 1/2 2:1 Concave

If removable, bolts used SA 216 (Material, Spec. No., T.S., Size, Number) Other fastening SA 216 (Describe or attach sketch)

7. Assy Closure Weld Thickness - 3 1/2" Diam. 13 ft. 3 in. Otherwise same as item 4.  
(Describe as ogee & weld, bar, etc. If bar give dimensions, describe or sketch)

8. Constructed for design press. 1085 psi at Max. temp 556 °F at temp. of 10 °F Charpy Impact 30 ft-lb Pneumatic Hydrostatic or Test Pressure 1356 psi  
Combination } 670 °F Min.

Items 9 and 10 to be completed for tube sections.

9. Tube Sheets: Stationary. Material SA-336 Diam. 118 1/4 in. Thickness 22 in. Attachment Welded  
(Kind & Spec. No.) (Subject to press.) (Welded, Bolted)

Floating. Material SA-336 Diam. 118 1/4 in. Thickness 22 in. Attachment Welded  
(Kind & Spec. No.) (Welded, Bolted)

10. Tubes: Material SB-163 O.D. 7/8 in. Thickness .050 inches or gage in. Number 3260 Type U  
(Kind & Spec. No.) (Straight or U)

Items 11 to 14 incl. to be completed for primary chamber

11. Shell: Material SA 216 T.S. 70000 Nominal Thickness 2 5/8 in. Corrosion Allowance 0.06 in. Diam. 10 1/2 ft. 10 5/16 ft. Length 22 ft. 10 5/16 ft.  
(Kind & Spec. No.) (Min. of range specified) (In. or ft.) (In. or ft.) (In. or ft.) (In. or ft.)

12. Seams: Long Weld-Dbl-Butt H.T.<sup>1</sup> Yes X.R. Complete Efficiency ~ (If Class B)  
(Welded, Dbl., Single) (Yes or No)

Girth Weld-Dbl-Butt H.T.<sup>1</sup> Yes X.R. Complete No. of Courses 5

13. Heads: (a) Material SA 216 T.S. 70000 (b) Material Gr WCC T.S. 70000 (c) Material SA 216 T.S. 70000  
Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Press.  
(Top, bottom, ends) (In. or ft.) (In. or ft.) (In. or ft.) (In. or ft.) (In. or ft.) (In. or ft.) (In. or ft.) (In. or ft.) (In. or ft.) (In. or ft.) (In. or ft.)  
(a) Top, bottom, ends 5 1/4 min 59 3/8 Concave  
(b) Channel 5 1/4 min 59 3/8 Concave  
(c) Floating 5 1/4 min 59 3/8 Concave

If removable, bolts used (a) SA 216 (b) SA 216 (c) SA 216 Other fastening SA 216  
(Material, Spec. No., T.S., Size, Number) (Describe or attach sketch)

14. Constructed for specified design press. 2485 psi at Max. temp 650 °F at temp. of 10 °F Charpy Impact 20 ft-lb Pneumatic Hydrostatic or Test Pressure 3102 psi  
Combination } 670 °F Min.

<sup>1</sup> If Postweld Heat-Treated

<sup>2</sup> List other internal or external pressures with coincident temperature when applicable.

\* Stub Barrel (portion of lower shell)

\*\* Upper Shell



FORM N-1 (back)

16A-6341-2

Items Below to be completed for all vessels where applicable.

15. Safety Valve Outlets: Number \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_
16. Nozzles:
- | Purpose (Inlet, Outlet, Drain) | Number | Diam. or Size | Type   | Material | Thickness | Reinforcement Material | How Attached |
|--------------------------------|--------|---------------|--------|----------|-----------|------------------------|--------------|
| Prim. Inlet                    | 1      | 30 1/2 I.D.   | (Weld) | (SA-216) | 2 3/4     | Steel                  | (Integrally) |
| Prim. Outlet                   | 1      | 30 1/2 I.D.   | (End)  | (Gr Wcc) | 2 3/4     | Steel                  | Cast         |
| Steam Outlet                   | 2      | 28 I.D.       | (Weld) | SA-336   | 1 1/2     | Steel                  | Welded       |
| Feedwater                      | 1      | 16 3/8 I.D.   | (End)  | SA-336   | 13/16     | Steel                  | Welded       |
17. Inspection Manholes, No. 3 Size 16" I.D. Location (2) Primary Channel Head & (1) Upper Shell  
 Openings: Handholes, No. 2 Size 6" Location Stub Shell  
 Threaded, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_
18. Supports: Skirt No Lugs --- Legs --- Other X Attached Integral with chamber  
 (Yes or No) (Number) (Number) (Describe) (Where & How)
19. Remarks: This multi-chamber steam generator was designed & constructed to meet requirements of ASME Code Nuclear Vessels Sect. III. This N-1 form is to be signed off by the Code Inspector under Certificate of Shop Inspection for everything listed except the Assy. closure, hydrostatic test and subsequent inspection. The field inspector must sign off for the latter items on Certificate of Field Assy. Insp. below. All other mfg. is specified on Manufacturers Partial Data Forms N-2 filed at Westinghouse.

## CERTIFICATION OF DESIGN

Design Information on file at Westinghouse Electric Heat Transfer Division, Lester, Pa.  
 Stress analysis report on file at Westinghouse Electric Heat Transfer Division, Lester, Pa.  
 Design specifications certified by (W) Atomic Power Division Prof. Engr. Jenkins Pa. Reg. No. 4278E  
 Stress analysis report certified by (W) Heat Transfer Division Prof. Engr. Byerley Pa. Reg. No. 14088

We certify that the statements made in this report are correct and that all details of material design, construction, and workmanship of this pressure vessel conform to the ASME Code for Nuclear Vessels.  
 Date December 2 19 69 Signed Westinghouse Electric Corp. By R. L. [Signature]  
 (Manufacturer)

Certificate of Authorization Expires No. 7580 December 31, 1970

## CERTIFICATE OF SHOP INSPECTION

VESSEL MADE BY Westinghouse Electric Corporation at Lester, Pa.  
 I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of \_\_\_\_\_ and employed by Lumbermans' Mutual Casualty of Philadelphia, Pa.  
 have inspected the pressure vessel described in this manufacturer's data report on December 2 19 69, and state that to the best of my knowledge and belief, the manufacturer has constructed this pressure vessel in accordance with the ASME Code for Nuclear Vessels.  
 By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this manufacturer's data report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.  
 Date December 2 19 69  
 Inspector's Signature [Signature] Commission N.B. 1699  
 National Board

## CERTIFICATE OF FIELD ASSEMBLY INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of N.Y. and employed by Lumbermans' Mut. CAS of Long Beach  
 have compared the statements in this manufacturer's data report with the described pressure vessel and state that parts referred to as data items 7, 8, 14 not included in the certificate of shop inspection have been inspected by me and that to the best of my knowledge and belief the manufacturer has constructed and assembled this pressure vessel in accordance with the ASME Code for Nuclear Vessels. The described vessel was inspected and subjected to a hydrostatic test of 3108 psi. Primary side & 1356 psi Secondary side.  
 By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this manufacturer's data report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.  
 Date Dec. 5 19 72  
 Inspector's Signature [Signature] Commission N.B. 3951  
 National Board of State and No.





# FORM N-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR VESSELS As required by the Provisions of the ASME Code Rules

1. Manufactured by Westinghouse Electric Corporation, Lester, Pa.  
(Name and address of Manufacturer)

2. Manufactured for Atomic Power Division, Westinghouse Electric Corporation, Pittsburgh, Pa.  
(Name and address of Purchaser)

3. Type Vertical Kind Steam Gen Vessel No. 16A-6341-3 ( ) Nat'l Bd. No. 776 Yr. Built 1970  
(Horiz. or Vert.) (Tank, Jacketed, Heat Ex.) (Mfrs. Serial No.) (State & State No.)

Items 4-8 incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers.

4. Shell: Material SA 302 Gr B T.S. 80000 Thickness 2 1/2 in. Corrosion Allowance 0 in. Diam. 13 ft. 3 in. Length 22 ft. 5 in. 16 in.  
(Kind & Spec. No.) (Min. of range specified) \*\* 3 1/2 \*\* 13 ft 3 in. \*\* 19 ft 2 - 7 / 16 in.  
\* 3 13/16 in. \* 2 ft 3 / 16 in.

5. Seams: Long Weld-Dbl-Butt H.T.<sup>1</sup> Yes X.R. Complete Efficiency        %  
(U Class B)

Girth Weld-Dbl-Butt H.T.<sup>1</sup> Yes X.R. Complete No. of Courses 5

6. Heads (a) Material SA 302 Gr B T.S. 80000 (b) Material        T.S.       

| Location<br>(Top, bottom, ends) | Thickness    | Crown<br>Radius | Knuckle<br>Radius | Elliptical<br>Ratio | Conical<br>Apex Angle | Hemispherical<br>Radius | Flat<br>Diameter | Side to Press.<br>(Convex or Concave) |
|---------------------------------|--------------|-----------------|-------------------|---------------------|-----------------------|-------------------------|------------------|---------------------------------------|
| (a) <u>Top</u>                  | <u>3 1/2</u> |                 |                   | <u>2:1</u>          |                       |                         |                  | <u>Concave</u>                        |
| (b) <u>      </u>               |              |                 |                   |                     |                       |                         |                  |                                       |

If removable, bolts used        (Material, Spec. No., T.S., Size, Number) Other fastening        (Describe or attach sketch)

7. Assy. Closure Thickness - 3 1/2 in Diam. 13 ft 3 in Otherwise same as item 4  
Weld (Describe as ogee & weld, bar, etc. If bar give dimensions, describe or sketch)

8. Constructed for design press 1085 psi at Max. temp 556 °F at temp. of 1- °F Charpy Impact 30 ft-lb Pneumatic Hydrostatic or Test Pressure 1356 psi  
Combination }  
@ 70 °F min.

Items 9 and 10 to be completed for tube sections.

9. Tube Sheets: Stationary. Material SA-336 Diam. 118 1/4 in. Thickness 22 in. Attachment Welded  
(Kind & Spec. No.) (Subject to press.) (Welded, Bolted)

Floating. Material        Diam.        in. Thickness        in. Attachment         
(Kind & Spec. No.)

10. Tubes: Material SB-163 O.D. 7/8 in. Thickness .050 inches or gage in Number 3260 Type U  
(Kind & Spec. No.) (Straight or U)

Items 11 to 14 incl. to be completed for primary chamber

11. Shell: Material        T.S.        Nominal Thickness        in. Corrosion Allowance        in. Diam.        ft.        in. Length        ft.        in.  
(Kind & Spec. No.) (Min. of range specified)

12. Seams: Long        H.T.<sup>1</sup>        X.R.        Efficiency        %  
(Welded, Dbl., Single) (Yes or No) (U Class B)

Girth Weld-Dbl-Butt H.T.<sup>1</sup> Yes X.R. Complete No. of Courses       

13. Heads: (a) Material        T.S.        (b) Material Gr WCC T.S. 70000 (c) Material        T.S.       

| Location              | Thickness         | Crown<br>Radius | Knuckle<br>Radius | Elliptical<br>Ratio | Conical<br>Apex Angle | Hemispherical<br>Radius | Flat<br>Diameter | Side to Press.<br>(Convex or Concave) |
|-----------------------|-------------------|-----------------|-------------------|---------------------|-----------------------|-------------------------|------------------|---------------------------------------|
| (a) Top, bottom, ends |                   |                 |                   |                     |                       |                         |                  |                                       |
| (b) Channel           | <u>5 1/4 min.</u> |                 |                   |                     |                       | <u>59 3/8</u>           |                  | <u>Concave</u>                        |
| (c) Floating          |                   |                 |                   |                     |                       |                         |                  |                                       |

If removable, bolts used (a)        (b)        (c)        Other fastening        (Describe or attach sketch)

14. Constructed for specified design press 2485 psi at Max. temp 650 °F at temp. of 10 °F Charpy Impact 20 ft-lb Pneumatic Hydrostatic or Test Pressure 3108 psi  
Combination }  
@ 70 °F min.

<sup>1</sup> If Postweld Heat-Treated  
<sup>2</sup> List other internal or external pressures with coincident temperature when applicable.

\* Stub Barrel (portion of lower shell)  
\*\* Upper Shell



## FORM N-1 (back)

16A-6341-3

Items below to be completed for all vessels where applicable.

15. Safety Valve Outlets: Number \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_

16. Nozzles:

| Purpose (Inlet, Outlet, Drain) | Number | Diam. or Size | Type   | Material | Thickness | Reinforcement Material | How Attached |
|--------------------------------|--------|---------------|--------|----------|-----------|------------------------|--------------|
| Prim. Inlet                    | 1      | 30 1/2 I.D.   | (Weld) | (SA-216) | 2 3/4     | Steel                  | (Integrally) |
| Prim. Outlet                   | 1      | 30 1/2 I.D.   | (End)  | Gr WCC   | 2 3/4     | Steel                  | Cast         |
| Steam Outlet                   | 1      | 28 I.D.       | (Weld) | SA-336   | 1 1/2     | Steel                  | Welded       |
| Feedwater                      | 1      | 16 3/8 I.D.   | (End)  | SA-336   | 13/16     | Steel                  | Welded       |

17. Inspection Manholes, No. 3 Size 16" I.D. Location (2) Primary Channel Head & (1) Upper Shell

Openings: Handholes, No. 2 Size 6" ID Location Stub Shell

Threaded, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_

18. Supports: Skirt No Lugs --- Legs --- Other X Attached integral with chamber

(Yes or No) (Number) (Number) (Describe) (Where & How)

Main supports are

19. Remarks: This multi-chamber steam generator was designed & constructed to meet requirements of ASME Code Nuclear Vessels Sect. III. This N-1 form is to be signed off by the Code Inspector under Certificate of Shop Inspection for everything listed except the assy. closure, hydrostatic test and subsequent inspection. The Field Inspector must sign off for the latter items on Certificate of Field Assy. Insp. below. All other mfg. is specified on Manufacturers' Partial Data Forms N-2 filed at Westinghouse.

## CERTIFICATION OF DESIGN

Design information on file at Westinghouse Electric Heat Transfer Division, Lester, Pa.

Stress analysis report on file at Westinghouse Electric Heat Transfer Division, Lester, Pa.

Design specifications certified by (W) Atomic Power Division Prof. Eng. H. Jenkins State Pa. Reg. No. 4278E

Stress analysis report certified by (W) Heat Transfer Division Prof. Eng. J. Byerley State Pa. Reg. No. 14088

We certify that the statements made in this report are correct and that all details of material, design, construction, and workmanship of this pressure vessel conform to the ASME Code for Nuclear Vessels.

Date February 9 19 70 Signed Westinghouse Electric Corp. (Manufacturer)

Certificate of Authorization Expires No. 7580 Dec. 31, 1970

## CERTIFICATE OF SHOP INSPECTION

VESSEL MADE BY Westinghouse Electric Corporation at Lester, Pa.

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Penna and employed by Lumberman's Mutual Casualty of Philadelphia, Pa.

have inspected the pressure vessel described in this manufacturer's data report on February 9 19 70, and state that to the best of my knowledge and belief, the manufacturer has constructed this pressure vessel in accordance with the ASME Code for Nuclear Vessels.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this manufacturer's data report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date February 9 19 70

Inspector's Signature J. M. White Commission N.B. 1699 National Board, State or Province No.

## CERTIFICATE OF FIELD ASSEMBLY INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of N.J. and employed by Commercial Contracting Corp. of Detroit, Mich.

have compared the statements in this manufacturer's data report with the described pressure vessel and state that parts referred to as data items 7, 8, 14, not included in the certificate of shop inspection have been inspected by me and that to the best of my knowledge and belief the manufacturer has constructed and assembled this pressure vessel in accordance with the ASME Code for Nuclear Vessels. The described vessel was inspected and subjected to a hydrostatic test of 3108 psi primary side & 1356 psi secondary side.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this manufacturer's data report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date March 5 19 72

Inspector's Signature T. J. G. 110102 Commission N.B. 3951 National Board or State and No.

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS  
As required by the provisions of the ASME Code Section XI

1. Owner FLORIDA POWER & LIGHT CO.

name  
P.O. BOX 529100 MIAMI, FLORIDA 33152

address

TURKEY POINT

2. Plant

name  
P.O. BOX 3008 FLORIDA CITY, FL. 33034

address

WESTINGHOUSE

3. Work Performed by

name  
P.O. BOX 2728  
PITTSBURGH, PENNSYLVANIA 15230

address

REACTOR PRESSURE VESSEL

4. Identification of system

5. (a) Applicable Construction Code SECTION III 1930 Edition 1930 Addenda,

1588 Code Case

(b) Applicable Edition of Section XI utilized for repairs or  
replacements 1974 EDITION

6. Identification of components repaired or replaced and replacement  
components

Date August 10, 1983

sheet 19 of 26

Unit

PC/M NO. 81-168

repair organization P.O. No.  
job No., etc.

Type Code Symbol Stamp

NONE

Authorization no.

N/A

Expiration Date

N/A

| Name of Component | Name of Mfr. | Mfrs. Ser. No. | Nat'l Bd. No. | Cmn No. | Other Ident-ification | Year Built | Repaired Replaced or repl-acement | ASME Code stamped (yes, no) |
|-------------------|--------------|----------------|---------------|---------|-----------------------|------------|-----------------------------------|-----------------------------|
| RFV               | BSW          | N/A            | N/A           | N/A     | N/A                   | 1968       | MODIFI-CATION                     | YES                         |
|                   |              |                |               |         |                       |            |                                   |                             |
|                   |              |                |               |         |                       |            |                                   |                             |
|                   |              |                |               |         |                       |            |                                   |                             |



11/11/11

## FORM NIS-2

SEE SUPPLEMENT SHEET, PAGE 21 OF 26

7. Description of work \_\_\_\_\_
8. Tests Conducted: Hydrostatic X Pneumatic \_\_\_\_\_ Nominal Operating Pressure \_\_\_\_\_  
Other \_\_\_\_\_ Pressure 2335 psi Test Temp. 547 F

ICCS MODIFICATION TO THE REACTOR PRESSURE VESSEL CLOSURE

9. Remarks \_\_\_\_\_  
(Applicable Manufacturer's Data Report to be attached)  
HEAD, N2 DATA REPORT FOR THE RVLMS FLANGE ASSEMBLIES ARE ATTACHED

## CERTIFICATE OF COMPLIANCE

To certify that the statements made in this report are correct and this MODIFICATION conforms to Section XI of the ASME Code.  
( Repair or Replacement )

Signed

George B. Sted PWS Sub. Supr 8/10 .1983  
(Owner or Owner's Designee) (Title) X (Date)

## CERTIFICATE OF INSPECTION

I, the Undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Dade Cty, Fl. employed by \*\* of NORWOOD, MASS have inspected the MODIFICATION described in this report on Aug 10, 1983 and state that to the best of my knowledge and belief, this repair or replacement has been constructed in accordance with Section XI of the ASME Code. By signing this certificate, neither the Inspector nor his employer takes any warranty. expressed or implied, concerning the repair or replacement described in this report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date Aug 10 1983 D. Boyer DADE CTY.COMM.NO.4956  
(Inspector) Commissions FACTORY MUTUAL SYSTEMS  
(State or Province, National Board)



23

1. OWNER: FLORIDA POWER & LIGHT  
P.O. BOX 529100  
MIAMI, FLORIDA 33152  
DATE: *Aug. 10, 1983*
2. PLANT: TURKEY POINT  
P.O. BOX 3088  
FLORIDA CITY, FLORIDA 33034  
UNIT: 4
3. WORK PERFORMED BY: WESTINGHOUSE ELECTRIC CORPORATION JOB NO. PC/M 81-168  
P.O. BOX 2728  
PITTSBURGH, PENNSYLVANIA
4. IDENTIFICATION OF SYSTEM: REACTOR PRESSURE VESSEL HEAD
7. DESCRIPTION OF WORK: COMBUSTION ENGINEERING PERFORMED THE DESIGN AND FABRICATION OF THE FLANGE ASSEMBLY.  
  
WESTINGHOUSE ELECTRIC PERFORMED THE INSTALLATION AND WELDING OF THE RVLMS FLANGE ASSEMBLY.  
  
COMBUSTION ENGINEERING PERFORMED THE INSTALLATION OF THE INSTRUMENTATION LINES.  
  
FPL PERFORMED THE HYDROSTATIC PRESSURE TESTS.



THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

page 22 of 26

*Certificate of Authorization*

Number N - 2089

This is to accredit

COMBUSTION ENGINEERING INC.  
NUCLEAR PRODUCTS MFG. - WINDSOR  
EAST WINDSOR INDUSTRIAL PARK  
EAST WINDSOR, CONNECTICUT 06088

as authorized to use the



symbol of The American Society of Mechanical Engineers for

CLASS 1 VESSEL PARTS & APPURTENANCES & COMPONENT SUPPORTS AT  
THE ABOVE LOCATION ONLY

in accordance with the applicable rules of the Boiler and Pressure Vessel  
Code of The American Society of Mechanical Engineers. The use of the  
Code symbol and the authority granted by this certificate of authorization  
are subject to the provisions of the agreement set forth in the application.  
Any construction stamped with this symbol shall have been built strictly in  
accordance with the provisions of the Boiler and Pressure Vessel Code of  
The American Society of Mechanical Engineers.

THIS AUTHORIZATION expires on APRIL 7, 1984

Authorized on APRIL 8, 1981 for

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS  
by the BOILER AND PRESSURE VESSEL COMMITTEE

Chairman *Walter L. Harding*

Secretary

*Bill Eversberg*

Director,  
Accreditation

*Glenn A. Spadafino*



## FORM N-2 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES\*

As required by the Provisions of the ASME Code Rules \* Revised 11/16/82

1. (a) Manufactured by Combustion Engineering - East Windsor Connecticut 3  
(Name and address of Manufacturer of part)
- (b) Manufactured for Florida Power & Light Turkey Point Units 3 & 4  
(Name and address of Manufacturer of completed nuclear component)
2. Identification-Manufacturer's Serial No. of Part 16081-3 Nat'l Bd. No. N/A
- (a) Constructed According to Drawing No. E-WEST-849-500 Drawing Prepared by Nuclear Products Manufacturing
- (b) Description of Part Inspected RVLMS Flange Assembly  
Winter
- (c) Applicable ASME Code: Section III, Edition 1980, Addenda date 1980, Case No. 1588 Class 1
3. Remarks: Final design information and stress reports to be provided by others  
(Brief description of service for which component was designed)
- \* To correct Certificate of Authorization date

We certify that the statements made in this report are correct and this vessel part or appurtenance as defined in the Code conforms to the rules of construction of the ASME Code Section III.  
(The applicable Design Specification and Stress Report are not the responsibility of the part Manufacturer. An appurtenance Manufacturer is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report.)

Date 19 Signed Combustion Eng. Inc. By K. C. Tolides 10/13/82  
(Manufacturer) 11/14/82 K. C. Tolides-Manager of Quality

Certificate of Authorization Expires April 7, 1982 1984 Certificate of Authorization No. N2084 Contr

## CERTIFICATION OF DESIGN FOR APPURTENANCE (when applicable)

Design information on file at Combustion Engineering Inc. - East Windsor Connecticut

Stress analysis report on file at See 3 remarks

Design specifications certified by D. J. McLaughlin Prof. Eng. State CT Reg. No. 07955

Stress analysis report certified by See 3 remarks Prof. Eng. State            Reg. No.           

## CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Connecticut and employed by Hartford Steam Boiler I & I of Hartford, Connecticut have inspected the part of a pressure vessel described in this Manufacturer's Partial Data Report on 10/13 1982 and state that to the best of my knowledge and belief, the Manufacturer has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Manufacturer's Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 10/13 1982  
Charles J. McLaughlin  
Inspector's Signature

Commissions NB 9221 CT 1126  
NB 9380 CT 1134  
National Board, State, Province and No.

\* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) Information in Items 1-2 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in Item 3, "Remarks".

Items 4-8 Incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers.

SA-479 Type 316 S.St. 76 KSI Nominal .600 Corrosion 0  
4. Shell: Material T.S. Thickness in. Allowance in. Dia. 3.760 ft. 6 1/2 in.  
(Kind & Spec. No.) (Min. of Range Specified)/A 5. Seams: Long H.T.<sup>1</sup> R.T. Efficiency %Girth 1 Butt Weld H.T.<sup>1</sup> R.T. No. of Courses/A 6. Heads: (a) Material T.S. (b) Material T.S.  
Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Press.  
(Top, bottom, ends) (Conv. or Conc.)  
(a) \_\_\_\_\_  
(b) \_\_\_\_\_  
If removable, bolts used \_\_\_\_\_ Other fastening \_\_\_\_\_  
(Material, Spec. No., T.S., Size, Number) (Describe or attach sketch)/A 7. Jacket Closure: \_\_\_\_\_  
(Describe as ogee and weld, bar, etc. If bar give dimensions, if bolted, describe or sketch)/A 8. Design pressure<sup>2</sup> \_\_\_\_\_ psi at \_\_\_\_\_ °F Drop Weight \_\_\_\_\_  
Charpy Impact \_\_\_\_\_ ft-lb  
at temp. of \_\_\_\_\_ °F

Items 9 and 10 to be completed for tube sections

/A 9. Tube Sheets: Stationary. Material Dia. Thickness in. Attachment \_\_\_\_\_  
(Kind & Spec. No.) (Subject to pressure) (Welded, Bolted)

Floating. Material Dia. Thickness in. Attachment \_\_\_\_\_

/A 10. Tubes: Material O.D. in. Thickness \_\_\_\_\_ inches or gage. Number \_\_\_\_\_ Type \_\_\_\_\_  
(Str. or U)

Items 11-14 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

11. Shell: Material T.S. Nominal Thickness in. Allowance in. Dia. ft. in. Length ft. in.  
(Kind & Spec. No.) (Min. of Range Specified)12. Seams: Long H.T.<sup>1</sup> R.T. Efficiency %Girth H.T.<sup>1</sup> R.T. No. of Courses/A 13. Heads (a) Material T.S. (b) Material T.S.  
Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Press.  
(Top, bottom, ends) (Conv. or Conc.)  
(b) Channel \_\_\_\_\_  
If removable, bolts used (a) \_\_\_\_\_ (b) \_\_\_\_\_ (c) \_\_\_\_\_ Other fastening \_\_\_\_\_  
(Describe or attach sketch)14. Design pressure<sup>2</sup> 2500 psi at 650 °F Drop Weight \_\_\_\_\_  
Charpy Impact \_\_\_\_\_ ft-lb  
at temp. of \_\_\_\_\_ °F

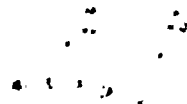
Items below to be completed for all vessels where applicable.

/A 15. Safety Valve Outlets: Number \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_

/A 16. Nozzles:  
Purpose (Inlet, Outlet, Drain) Number Dia. or Size Type Material Thickness Reinforcement Material How Attached  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_/A 17. Inspection Manholes, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_  
Openings: Handholes, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_  
Threaded, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_

/A 18. Supports: Skirt (Yes or No) Lugs (Number) Legs (Number) Other (Describe) Attached (Where &amp; How)

<sup>1</sup> If Postweld Heat-Treated.<sup>2</sup> List other internal or external pressure with coincident temperature when applicable.



As required by the Provisions of the ASME Code Rules \* Revised 11/16/82

1. (a) Manufactured by Combustion Engineering - East Windsor Connecticut 3  
(Name and address of Manufacturer of part)
- (b) Manufactured for Florida Power & Light Turkey Point Units 3 & 4  
(Name and address of Manufacturer of completed nuclear component)
2. Identification-Manufacturer's Serial No. of Part 16081-4 Nat'l Bd. No. N/A
- (a) Constructed According to Drawing No. E-WEST-849-500 Drawing Prepared by Nuclear Products Manufacturing
- (b) Description of Part Inspected RVLMS Flange Assembly  
Winter
- (c) Applicable ASME Code: Section III, Edition 1980, Addenda date 1980, Case No. 1588 Class 1
3. Remarks: Final design information and stress reports to be provided by others.  
(Brief description of service for which component was designed)
- \* To correct Certificate of Authorization date

We certify that the statements made in this report are correct and this vessel part or appurtenance as defined in the Code conforms to the rules of construction of the ASME Code Section III.  
(The applicable Design Specification and Stress Report are not the responsibility of the part Manufacturer. An appurtenance Manufacturer is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report.)

Date 10/13/82 Signed Combustion Eng. Inc. By H. C. Tolides 10/13/82  
(Manufacturer) C. Tolides-Manager of Quality

Certificate of Authorization Expires April 7, 1982 \* 1984 Certificate of Authorization No. N2084 Control

## CERTIFICATION OF DESIGN FOR APPURTENANCE (when applicable)

Design information on file at Combustion Engineering Inc. - East Windsor Connecticut

Stress analysis report on file at See 3 remarks

Design specifications certified by D. J. McLaughlin Prof. Eng. State CT Reg. No. 07955

Stress analysis report certified by See 3 remarks Prof. Eng. State CT Reg. No. 07955

## CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Connecticut and employed by Hartford Steam Boiler I & I of Hartford, Connecticut have inspected the part of a pressure vessel described in this

Manufacturer's Partial Data Report on 10/13/82 and state that to the best of my knowledge and belief, the Manufacturer has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Manufacturer's Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 10/13/82  
Inspector's Signature

Commissions NB 9221 CT 1126  
NB 9380 CT 1134  
National Board, State, Province and No.



## FORM N-2 (back)

Items 4-8 incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers.

SA-479 Type 316 S.S.T. 76 KSI Nominal .600 Corrosion 0  
 4. Shell: Material \_\_\_\_\_ T.S. \_\_\_\_\_ Thickness \_\_\_\_\_ in. Allowance \_\_\_\_\_ in. Dia. \_\_\_\_\_ ft. 3.750 Length \_\_\_\_\_ ft. 6 1/2 in.  
 (Kind & Spec. No.) (Min. of Range Specified)

N/A 5. Seams: Long \_\_\_\_\_ H.T.<sup>1</sup> \_\_\_\_\_ R.T. \_\_\_\_\_ Efficiency \_\_\_\_\_ %

N/A Girth 1 Butt Weld H.T.<sup>1</sup> \_\_\_\_\_ R.T. \_\_\_\_\_ No. of Courses \_\_\_\_\_

N/A 6. Heads: (a) Material \_\_\_\_\_ T.S. \_\_\_\_\_ (b) Material \_\_\_\_\_ T.S. \_\_\_\_\_  
 Location Thickness Crown Knuckle Elliptical Conical Hemispherical Flat Side to Press.  
 (Top, bottom, ends) Radius Radius Ratio Apex Angle Radius Diameter (Conv. or Conc.)  
 (a) \_\_\_\_\_  
 (b) \_\_\_\_\_  
 If removable, bolts used \_\_\_\_\_ Other fastening \_\_\_\_\_  
 (Material, Spec. No., T.S., Size, Number) (Describe or attach sketch)

N/A 7. Jacket Closure: \_\_\_\_\_  
 (Describe as ogee and weld, bar, etc. If bar give dimensions, if bolted, describe or sketch)

N/A 8. Design pressure<sup>2</sup> \_\_\_\_\_ psi at \_\_\_\_\_ °F Drop Weight \_\_\_\_\_  
 Charpy Impact \_\_\_\_\_ ft.-lb  
 at temp. of \_\_\_\_\_ °F

Items 9 and 10 to be completed for tube sections

N/A 9. Tube Sheets: Stationary. Material \_\_\_\_\_ Dia. \_\_\_\_\_ Thickness \_\_\_\_\_ in. Attachment \_\_\_\_\_  
 (Kind & Spec. No.) (Subject to pressure) (Welded, Bolted)

N/A Floating. Material \_\_\_\_\_ Dia. \_\_\_\_\_ Thickness \_\_\_\_\_ in. Attachment \_\_\_\_\_  
 10. Tubes: Material \_\_\_\_\_ O.D. \_\_\_\_\_ in. Thickness \_\_\_\_\_ inches or gage. Number \_\_\_\_\_ Type \_\_\_\_\_  
 (Str. or U)

Items 11-14 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

11. Shell: Material \_\_\_\_\_ T.S. \_\_\_\_\_ Nominal Thickness \_\_\_\_\_ in. Corrosion Allowance \_\_\_\_\_ in. Dia. \_\_\_\_\_ ft. \_\_\_\_\_ in. Length \_\_\_\_\_ ft. \_\_\_\_\_ in.  
 (Kind & Spec. No.) (Min. of Range Specified)

12. Seams: Long \_\_\_\_\_ H.T.<sup>1</sup> \_\_\_\_\_ R.T. \_\_\_\_\_ Efficiency \_\_\_\_\_ %

N/A Girth \_\_\_\_\_ H.T.<sup>1</sup> \_\_\_\_\_ R.T. \_\_\_\_\_ No. of Courses \_\_\_\_\_

N/A 13. Heads (a) Material \_\_\_\_\_ T.S. \_\_\_\_\_ (b) Material \_\_\_\_\_ T.S. \_\_\_\_\_  
 Location Thickness Crown Knuckle Elliptical Conical Hemispherical Flat Side to Press.  
 Radius Radius Ratio Apex Angle Radius Diameter (Conv. or Conc.)  
 (a) Top, bottom, ends \_\_\_\_\_  
 (b) Channel \_\_\_\_\_  
 If removable, bolts used (a) \_\_\_\_\_ (b) \_\_\_\_\_ (c) \_\_\_\_\_ Other fastening \_\_\_\_\_  
 (Describe or attach sketch)

14. Design pressure<sup>2</sup> \_\_\_\_\_ 2500 \_\_\_\_\_ psi at \_\_\_\_\_ 650 \_\_\_\_\_ °F Drop Weight \_\_\_\_\_  
 Charpy Impact \_\_\_\_\_ ft.-lb  
 at temp. of \_\_\_\_\_ °F

Items below to be completed for all vessels where applicable.

N/A 15. Safety Valve Outlets: Number \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_

N/A 16. Nozzles:  

| Purpose (Inlet, Outlet, Drain) | Number | Dia. or Size | Type | Material | Thickness | Reinforcement Material | How Attached |
|--------------------------------|--------|--------------|------|----------|-----------|------------------------|--------------|
|                                |        |              |      |          |           |                        |              |
|                                |        |              |      |          |           |                        |              |
|                                |        |              |      |          |           |                        |              |

N/A 17. Inspection Manholes, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_  
 Openings: Handholes, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_  
 Threaded, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_

N/A 18. Supports: Skirt \_\_\_\_\_ Lugs \_\_\_\_\_ Legs \_\_\_\_\_ Other \_\_\_\_\_ Attached \_\_\_\_\_  
 (Yes or No) (Number) (Number) (Describe) (Where & How)

<sup>1</sup> If Postweld Heat-Treated.<sup>2</sup> List other internal or external pressure with coincident temperature when applicable.

13