



FOSTER WHEELER ENERGY CORPORATION

110 SOUTH ORANGE AVENUE · LIVINGSTON, NEW JERSEY 07039 · PHONE 201-533-1100

Date: 2/16/78
Letter No.:
File No.: 44⁶¹²

Subject: Inspection Documents

Gentlemen:

In accordance with the coordination procedure for the subject contract, we are enclosing three (3) copies of the Manufacturer's Data Reports, Mill Test Certificates, Nameplate Rubbings and/or pertinent data concerning the following items:

F.W.P.O.#
PP6-115-1776

ITEM
E-222 Carbonate Solution
Cooler

Very truly yours
FOSTER WHEELER ENERGY CORPORATION

A. E. Lambert for
C. Lambert A. L.
Project Manager

MEM/al

*Copies 2-2-78
202
105
108
109*

FORM U-1A MANUFACTURERS' DATA REPORT FOR PRESSURE VESSELS
 (Alternate Form for Single Chamber, Completely Shop-Fabricated Vessels Only)
 As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

R. E. KINGSLY
 INSPECTOR
 ARKANSAS PLANTS DIVISION
 NATIONAL BOARD OF BOILER AND PRESSURE VESSEL INSPECTORS

1. Manufactured by HAPPY DIVISION, THERMA TECHNOLOGY / TULSA, OKLAHOMA

2. Manufactured for _____

3. Location of Installation _____

4. Type HORIZONTAL 3416-7-2A --- C-17840 962 (Year Built) 1977
(Horiz. or vert. tank) (Mfr's Serial No.) (CRN) (Drawing No.) (Nat'l Brd No.)

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 1974 and Addenda to 12-31-77 and Code Case Nos. -----
(Year) (Date)

Special Service per UG-120(d) _____

Manufacturers' Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: _____

6. Shell: Matl. No Shell Nom. Thk. --- in. Allow. --- in. Diam. --- in. Lgth. --- ft --- in.
(Spec. No., Grade)

7. Seams: Long. Welded R.T. No Efficiency --- % H.T. Temp. 1100 F Time 1 hr
(Welded, Dbl, Sngl, Lap, Butt) (Spot or Full)

Girth Welded R.T. No No. of Courses ---
(Welded, Dbl, Sngl, Lap, Butt) (Spot, Partial, or Full)

8. Heads: (a) Material SA-515-70 (b) Material SA-515-70
(Spec. No., Grade) (Spec. No., Grade)

Location (Top, Bottom, Ends)	Min. Thk.	Corr. Allow.	Flat Diam.	Side to Pressure (Convex or Concave)
(a) T & P Sht	1	1/8"	Max Span = 8 3/8 (9 3/8"x9'10")	Flat
(b) Wrapper Sht	5/8"	1/8"	Max Span = 4 1/4 (3 3/4"x9'10")	Flat

If removable, bolts used (describe other fastenings) _____
(Material, Spec. No., Gr., Size, No.)

9. Constructed for max. allowable working pressure 475 psi at max. temp. 650 F. Min. temp. (when less than -20 F) _____ F. Hydrostatic ~~pressure~~ test pressure 715 psi.

10. Safety Valve Outlets: Number --- Size --- Location _____

11. Nozzles and Inspection Openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Matl.	Nom. Thk.	Reinforcement Matl.	How Attached	Location
Inlet	2	4"-300#	RFWN	SA-105 SCH 160	160	Weld	Welded @ Front	Head
Outlet	2	4"-300#	RFWN	SA-105 SCH 160	160	Weld	Welded @ Back	Head
Vent	1	3/4"	CPLG	SA-105 6000#		Weld	Welded @ Back	Head
Drain	1	3/4"	CPLG	SA-105 6000#		Weld	Welded @ Front	Head
Inlet	2	4" ø	PIPE	SA-106-B SCH 160	160	Weld	Welded @ Front	Head
Outlet	2	4" ø	PIPE	SA-106-B SCH 160	160	Weld	Welded @ Back	Head

12. Supports: Skirt --- Lugs 4 Legs --- Other --- Attached Welded to Tube Sht
(Yes or no) (No.) (No.) (Describe) (Where and how)

13. Remarks: Box Header at Tube Ends 4 Row, 3 Pass, Tubes; Mat'l SA-214
Qty 186 O.D. 1" X .085 MW X 32'0" Long.

Unit Service: CARBONATE SOLUTION COOLER

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.

Date DEC 20 1977 Signed Happy Div. Therma-Tech. by Charles P. Latvala
(Manufacturer) (Representative)

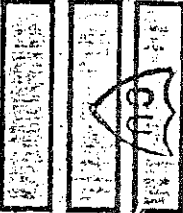
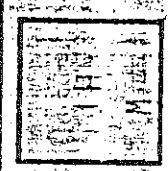
"U" Certificate of Authorization No. 10,491 expires May 11, 19 80

CERTIFICATE OF SHOP INSPECTION

Vessel made by Happy Div. Therma-Technology at Tulsa, Oklahoma

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 Arkansas and employed by Coml. Union Ins. Co have inspected the pressure vessel described in this Manufacturers' Data Report on 12-20 19 77, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in the Manufacturers' 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.

Signed Mark E. Knight Date 12-20-77 Commissions NB 7935
(Inspector) (Nat'l Board, State, Province and No.)



N. B. NO. 968

MANUFACTURED BY

HAPPY DIVISION-THERMA-TECHNOLOGY INC.

P.O. BOX 2739 TULSA, OKLA. 74101

MAX. DESIGN PRES. 147.5 P.S.I. @ 650' OF

TEST PRES. 71.5 P.S.I.

MFR. SER. NO. 3416-7-28 YR. BLT. 11977

CUST. P.O. PRG-115-1776 ITEM 2221

REQ. NO. 1776-1231

SERVICE EQUIP. CARBONATE SOLUTION COOLERS

PROCESS EQUIP. NO. 2-1154-10

