

FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

99764 **EVP23501**
Pos #213E0385
CORRECTED COPY

1. Manufactured and certified by **Buffalo Technologies Corporation, 750 East Ferry Street, Buffalo, NY 14211**

(Name and address of Manufacturer)

2. Manufactured for **Flour Daniel Inc., P.O. Box 950, Marlton, NJ 08053**

(Name and address of Purchaser)

3. Location of Installation **Flour Daniel Inc., 206 Roche Dr., Belvidere, NJ 07923-1113**

(Name and address)

4. Type: **Horizontal** **Steamchest** **18665** **55119-01** **9373** **1997**
(Horiz., vert., or sphere) (Tank separator, jkt. vessel, heat exch., etc.) (Mfg's serial No.) (CRN) (Drawing No.) (Nat'l. Bd. No.) (Year built)

5. ASME Code, Section VIII, Div. 1 **Edition 1995, Addenda 1995**

Edition and Addenda (date)

Code Case No.

Special Service per UG-120(d)

Items 6 - 11 Incl. to be completed for single wall vessels, jackets of jacketed vessels, shell of heat exchangers, or chamber of multi-chamber vessels.

6. Shell (a) No. of course(s): **FIVE** (b) Overall length (ft & in.): **119'**

| Course(s) | | | Material | | Thickness | | Long. Joint (Cat. A) | | | Circum. Joint (Cat. A, B & C) | | | Heat Treatment | |
|-----------|---------------|-------------------|---------------------|--|-----------|-------|----------------------|------------------|------|-------------------------------|------------------|------|----------------|------|
| No. | Diameter, in. | Length (ft & in.) | Spec./Grade or Type | | Nom. | Corr. | Type | Full, Spot, None | Eff. | Type | Full, Spot, None | Eff. | Temp. | Time |
| 1 | 40" | 48.250" | SA-516 Gr 70 | | .375" | .062" | 1 | None | 70 | — | — | — | — | — |
| 1 | 50" | 16.750" | SA-516 Gr 70 | | .375" | .062" | 1 | None | 70 | 1 | None | 70 | — | — |
| 1 | 40" | 48' | SA-516 Gr 70 | | .375" | .062" | 1 | None | 70 | — | — | — | — | — |

7. Heads: (a) **NA NA** (b) **NA NA**

| (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp. | | | | | | | | | | (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp. | | | | |
|--|--|-----------|-------|--------|---------|------------|------------|---------------|----------|--|---------|------------|------------------|------|
| Location (Top, Bottom, Ends) | | Thickness | | Radius | | Elliptical | Conical | Hemispherical | Flat | Side to Pressure | | Category A | | |
| | | Min. | Corr. | Crown | Knuckle | Ratio | Apex Angle | Radius | Diameter | Convex | Concave | Type | Full, Spot, None | Eff. |
| (a) | | — | — | — | — | — | — | — | — | — | — | — | — | — |
| (b) | | — | — | — | — | — | — | — | — | — | — | — | — | — |

8. Removable, bolts used (describe other fastening) **NA**

(Mat'l Spec. No., Grade, Size, No.)

9. Type of jacket **NA** Jacket closure **NA**

(Describe as ogee & weld, bar, etc.)

If bolted, give dimensions **NA** If bolted, describe or sketch.

10. MAWP **150/FV** **—** psi at max. temp. **300** **—** ° F Min. design metal temp. **-20** ° F at **150/FV** psi.
(internal) (external) (internal) (external)

11. Impact test **NO PER UCS-66 (a)**

(indicate yes or no and the component(s) impact tested)

12. Hydro., ~~proof~~, or ~~burst~~ test press **225 PSI** Proof test **NA**

Items 12 and 13 to be completed for tube sections.

13. Tubesheet: **SA-240 Ty 304L** **40"** **1"** **0** **WELDED**

Stationary (Mat'l Spec. No.) Dia., in (subject to press.) Nom. thk., in. Corr. Allow., in. Attachment (welded or bolted)

14. Tubes: **SA-249 Ty TP304L** **1.250"** **.065"** **404** **STRAIGHT**

Mat'l Spec. No., Grade or Type O. D., in. Nom. thk., in. or gauge Number Type (Straight or U)

Items 14 - 18 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers.

15. Shell (a) No. of course(s): **TWO** (b) Overall length (ft & in.): **47 1/4'**

| Course(s) | | | Material | | Thickness | | Long. Joint (Cat. A) | | | Circum. Joint (Cat. A, B & C) | | | Heat Treatment | |
|-----------|---------------|-------------------|---------------------|--|-----------|-------|----------------------|------------------|------|-------------------------------|------------------|------|----------------|------|
| No. | Diameter, in. | Length (ft & in.) | Spec./Grade or Type | | Nom. | Corr. | Type | Full, Spot, None | Eff. | Type | Full, Spot, None | Eff. | Temp. | Time |
| 1 | 40" | 38 1/8" | SA-240 Ty 304L | | .375" | 0 | 1 | None | 70 | — | — | — | — | — |
| 1 | 40" | 9 1/8" | SA-240 Ty 304L | | .375" | 0 | 1 | None | 70 | — | — | — | — | — |

16. Heads: (a) **SA-516 Gr 70** (b) **SA-515 Gr 70**

| (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp. | | | | | | | | | | (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp. | | | | |
|--|--|-----------|-------|--------|---------|------------|------------|---------------|----------|--|---------|------------|------------------|------|
| (Top, Bottom, Ends) | | Thickness | | Radius | | Elliptical | Conical | Hemispherical | Flat | Side to Pressure | | Category A | | |
| | | Min. | Corr. | Crown | Knuckle | Ratio | Apex Angle | Radius | Diameter | Convex | Concave | Type | Full, Spot, None | Eff. |
| (a) End | | 2" | 0 | — | — | — | — | — | 44.625" | — | — | S | None | 70 |
| (b) End | | 2" | 0 | — | — | — | — | — | 44.625" | — | — | S | None | 70 |

17. Removable, bolts used (describe other fastening) **STUD SA-193-B7 3/4"-10UNC 6 1/4"lg 64pcs / NUTS SA-193-2H 3/4"-10UNC 128pcs**

MAWP 100/FV 150 psi at max. temp. 300 300 ° F Min. design metal temp. -20 ° F at 100/FV psi.
(internal) (external) (internal) (external)
Impact test NO PER UHA-51

(Indicate yes or no and the component(s) impact tested)
3. Hydro., ~~pressure~~, or ~~vacuum~~ test pressure 150 Proof test NA
3. Inspection, and safety valve openings:

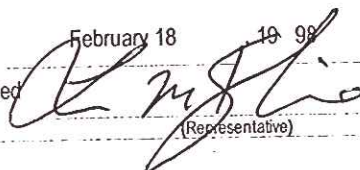
| Purpose (Inlet, Outlet, Drain, etc.) | No. | Diameter or Size | Flange Type | Material | | Nozzle Thickness | | Reinforcement Material | How Attached | | Location (Insp. Open.) |
|--------------------------------------|-----|------------------|-------------|------------------|----------------|------------------|-------|------------------------|-----------------|--------|------------------------|
| | | | | Nozzle | Flange | Nom. | Corr. | | Nozzle | Flange | |
| Inlet/Outlet | 2 | 10" | RFSO | SA-53 Gr B ERW | SA-105 cl 150# | .250" | .062" | None | WELDED | WELDED | SHELL |
| Inlet/Outlet | 2 | 24" | LAPJT | SA-240 Ty 304L | SA-105 cl 150# | .375" | 0 | None | WELDED | --- | BONNET |
| Relief | 2 | 1" | CPLG | SA-105 | NA | 3000# | 0 | None | WELDED | --- | SHELL |
| Outlet | 1 | 3" | RFSO | SA-53 Gr B ERW | SA-105 cl 150# | .216" | .062" | None | WELDED | WELDED | 10" NOZZLE |
| Gauge | 2 | 3/4" | CPLG | SA-182 Ty F304L | --- | 3000# | 0 | None | WELDED | --- | 24" NOZZLES |
| Gauge | 2 | 1 1/2" | RFSO | SA-106 Gr B SMLS | SA-105 cl 150# | .145" | .062" | None | WELDED | WELDED | 10" NOZZLE |
| Relief | 1 | 3/4" | CPLG | SA-182 Ty F304L | --- | 3000# | 0 | None | WELDED | --- | BONNET |
| 0. Supports: Skirt | NO | Lugs | --- | Legs | Others | SADDLES | | Attached | WELDED TO SHELL | | |
| | | (Yes or No.) | (No.) | (No.) | (Describe) | | | (Where and How) | | | |

11. Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report:
List the name of part, item number, mfg's. name and identifying number)
NA

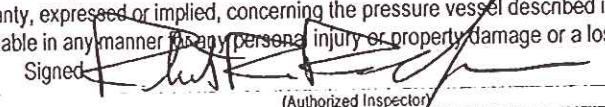
22. Remarks: Bonnet covers are lined for corrosion resistance per UCL-23 (a).
Shell course, 2, 50" x 40" dia, 3" lg, SA-516 gr70, .375thk, .062"cor, No weld seams 70%eff.
CORRECTED COPY DATED 2-3-98 : ADDED /FV TO SHELL MAWP

CERTIFICATE OF SHOP 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.

U Date of Authorization No. 10,968 Expires February 18, 19 98
Date 2/3/98 Name Buffalo Technologies Corporation Signed  (Representative)
(Manufacturer)

CERTIFICATE OF SHOP 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 N.Y. and employed by Hartford Steam Boiler Inspection & Insurance Co. of Hartford CT. have inspected the pressure vessel described in this Manufacturer's Data Report on 2/3, 19 98, 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 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 2/3/98 Signed  Commissions NB10009A NY3087
(Authorized Inspector) (Nat'l Board incl. endorsement, State, Province and No.)

CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the statements on this report are correct and that the field assembly construction of all parts of this vessel conforms with the requirements of ASME Code, Section VIII, Division 1.
U Certificate of Authorization No. Expires , 19
Date Signed

CERTIFICATE OF FIELD ASSEMBLY 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 and employed by have compared the statements in this Manufacturer's Data Report with the described pressure vessel and state that parts referred to as data items not included in the certificate of shop inspection, have been inspected by me and to the best of my knowledge and belief, the Manufacturer has constructed and assembled this pressure vessel in accordance with ASME Code, Section VIII, Division 1. The described vessel inspected and subjected to a hydrostatic test of psi. 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 Signed Commissions
(Authorized Inspector) (Nat'l Board incl. endorsement, State, Province and No.)