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FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS

As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

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 exh., 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) ---	—	—	—	—	—	—	—	—	—	—	—	—	—

If removable, bolts used (describe other fastening) NA
(Mat'l Spec. No., Grade, Size, No.)

8. Type of jacket NA Jacket closure NA
(Describe as ogee & weld, bar, etc.)

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

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

10. Impact test NO PER UCS-66 (a)
(indicate yes or no and the component(s) impact tested)

11. Hydro., ~~pneu.~~, or ~~comb.~~ test press 225 PSI Proof test NA

Items 12 and 13 to be completed for tube sections.

12. Tubesheet:

Stationary (Mat'l Spec. No.)	Dia., in (subject to press.)	Nom. thk., in.	Corr. Allow., in.	Attachment (welded or bolted)
SA-240 Ty 304L	40"	1"	0	WELDED

Floating (Mat'l Spec. No.)	Dia., in.	Nom. thk., in.	Corr. Allow., in.	Attachment
—	—	—	—	—

13. Tubes:

Mat'l Spec. No., Grade or Type	O. D., in.	Nom. thk., in. or gauge	Number	Type (Straight or U)
SA-249 Ty TP304L	1.250"	.065"	404	STRAIGHT

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

14. 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	—	—	—	—	—

15. 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

If 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 (internal) 150 (external) psi at max. temp. 300 (internal) 300 (external) ° F Min. design metal temp. -20 ° F at 100/FV psi.

Impact test NO PER UHA-51 (Indicate yes or no and the component(s) impact tested)

Hydro., pneu., or comb. test pressure 150 Proof test NA

, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material Nozzle	Material Flange	Nozzle Thickness Nom.	Nozzle Thickness Corr.	Reinforcement Material	How Attached Nozzle	How Attached Flange	Location (Insp. Open.)
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

10. Supports: Skirt NO (Yes or No.) Lugs --- (No.) Legs --- (No.) Others SADDLES (Describe) Attached WELDED TO SHELL (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

12. 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 Certificate of Authorization No. 10,968 Expires February 18 19 98

Date 2/3/98 Name Buffalo Technologies Corporation (Manufacturer) Signed (Representative)

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, 1998, 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 (Authorized Inspector) Commissions NB10009A NY3087 (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 Name (Assembler) Signed (Representative)

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 of

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 was 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 (Authorized Inspector) Commissions (Nat'l Board incl. endorsement, State, Province and No.)