

FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1 (5/0# 45391-1)

1. Manufactured and certified by The DUPPS Company, 548 N. Cherry St., Germantown, OH 45327
(Name and address of Manufacturer)

2. Manufactured for Arus-Andritz, 1010 Commercial Blvd. S., Arlington, TX 76017
(Name and address of Purchaser)

3. Location of installation Stone-Consolidated Corp., Div. Laurentide, Grand Mere, Quebec, Canada G9T 5L2
(Name and address)

4. Type: Horizontal Rotating Screw Press Shaft 94-1044 C9063.6 SEE ITEM 22.3 2184 1995
(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 1992, A93 -- --
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): 5 (b) Overall length (ft & in.): 25 ft. 6-1/2 in.

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	25-5/16 I.D.	3 ft 8-1/2 in	SA-240-316L	1-1/2"	**	1	None	70%	2	None	65%	SEE ITEM 21	
5	19-1/4 I.D.	4 ft 0-3/4 in	SA-240-316L	1-1/2"	**	1	None	70%	2	None	65%	SEE ITEM 21	
(Continued, See Remarks, Section 22.1)				--	--	--	--	--	--	--	--	--	--

7. Heads: (a) SA-105 (Drive End) (b) SA-105 (Feed End)
(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 Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full, Spot, None	Eff.
(a)	End	2.99	--	--	--	--	--	--	25-5/16"	--	--	Seamless		85%
(b)	End	3.44	--	--	--	--	--	--	19-1/4"	--	--	Seamless		85%

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

8. -- of jacket -- Jacket Closure --
(describe as ogee & weld, bar, etc)

If bar, give dimensions -- If bolted, describe or sketch:
9. MAWP 100 N/A psi at max. temp. 340 N/A °F. Min. design metal temp. 35 °F. at 100 psi.
(internal) (external) (internal) (external)

10. Impact test None, Impact Test Exempt per UCS-66(A)(1) & UHA-51(A)
(Indicate yes or no and the component(s) impact tested)

11. Hydro., pneu., or comb. test press. 170 Proof test --
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)
-- -- -- -- --
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)

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): -- (b) Overall length (ft & in.): --

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
--	--	--	--		--	--	--	--	--	--	--	--	--	--
--	--	--	--		--	--	--	--	--	--	--	--	--	--
--	--	--	--		--	--	--	--	--	--	--	--	--	--

15. Heads: (a) -- (b) --
(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 Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full, Spot, None	Eff.
(a)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
(b)	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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

16. MAWP (internal) (external) psi at max. temp. (internal) (external) °F. Min. design metal temp. °F. at psi.

17. Impact test (Indicate yes or no and the component(s) impact tested)

18. Hydro., pneu., or comb. test press. Proof test

19. Nozzles, 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	
Steam Inlet	1	3-1/2" NPTF	--	SA-106-B	--	5/8"	--	Inherent	Wld	--	Head 7(b)
Steam Outlet	1	1-1/2" NPTF	--	SA-105	--	3MCPLG	--	--	Thrd	--	Thru Head 7(c)
Safety Valve	1	1-1/4"	--	--	--	--	--	--	--	--	Outside Piping

20. Supports: Skirt No Lugs -- Legs -- Others -- Roller Bearings Attached End Journals, Items 7(a)/7(b)
(Yes or No) (No.) (No.) (Describe) (Where and How)

21. 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)

21.) Shell Course No. 1: S/N 6392A-2, Course No. 2: S/N 6397A-3, Course No. 3: S/N 6397A-5, Course No. 4: S/N 6397A-6
Shell Course No. 5: S/N 5901A-18. Mfg. By "Halvorsen Boiler & Engineering Company."

22. Remarks: 22.1) Item 6 (Cont):

22.1.1) No.2, 2 ft 1.55 in to 1 ft 11.50 in I.D., 5 ft 4.75 in Iq, SA-240-316L, 7/8" Nom, ** in. CA, 1, None, 70%, 2, None, 65%, See Item 2

22.1.2) No.3, 1 ft 11.72 in to 1 ft 9.44 in I.D., 5 ft 11.63 in Iq, SA-240-316L, 5/8" Nom, ** in. CA, 1, None, 70%, 2, None, 65%. See Item 21.

22.1.3) No.4, 1 ft 9.67 in to 1 ft 7.26 in I.D., 6 ft 3.44 in Iq, SA-240-316L, 1/2" Nom, ** in. CA, 1, None, 70%, 2, None, 65%, See Item 2

22.2) ** Min. Wall Thk. .375 in., typ. all shell sections Item 6.

22.3) Final Assy per Drawing No. C-90729-9.

Shaft Body Weldment per Drawing No. D-90098-4.

Final Machining per Drawing No. D-90728-6.

22.4) Fab. under UW-12(c) 22.5) Safety Valve by others: .27 Sq. In. Min. Orifice Area (@ 1500 lbs/hr Max Steam)

22.6) DUPPS 3624B Press Shaft

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. 2,733

Expires December 28

19 95

Date 3/7/95 Name The DUPPS Company

(Manufacturer)

Signed

(Representative) John P. Simmons

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 OHIO and employed by The Hartford Steam Boiler Inspection and Insurance Co. of Hartford, Connecticut have inspected the pressure vessel described in this Manufacturer's Data Report on 2-28, 19 95, 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 inspection.

Date 3-9-95

Signed

(Authorized Inspector)

Commissions

NBKRCHA; Ohio Comm.

(Nat'l. Board incl. endorsement, State, Province and No.)

CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the statements made in this report are correct and that the field assembly construction 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 have compared the statements in this Manufacturer's Data Report with the described pressure vessel and state that parts referred to as data items 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.)

FORM U-2 MANUFACTURER'S PARTIAL DATA REPORT
A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

Manufactured and certified by Halvorsen Boiler & Engineering Co. 7500 Grand Division Avenue, Cleveland, Ohio 44125
(Name and address of Manufacturer)

2. Manufactured for The Dupps Co., 548 N. Cherry Street, Germantown, Ohio 45327-0189
(Name and address of Purchaser)

3. Location of Installation Un-known
(Name and address)

4. Type: Rolled & welded cylinder 6392A-2 & 3
(Description of vessel part (shell, two-piece head, tube bundle)) (Mfg's serial No.) (CRN)
1814-94 Halvorsen Boiler & Engrg. Co. 1995
(Nat'l Bd. No.) (Drawing No.) (Drawing prepared by) (Year built)

5. ASME Code, Section VIII, Div. 1 1992 1993 Addenda
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): 1 (b) Overall length ft & in.: 3'8.5"

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	28.31"OD	3'8.5"	SA-240Tp.316L	1 1/2"	—	1	None	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

7. Heads: (a) (Mat'l Spec. No., Grade or Type) H.T.-Time & Temp (b) (Mat'l Spec. No., Grade or Type) H.T.-Time & Temp

	Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full.	Spot, None
(a)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(b)	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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

If bar, give dimensions — If bolted, describe or sketch —

9. MAWP — psi at max. temp. — °F Min. design metal temp. — °F at —
(internal) (external) (Internal) (external)

10. Impact test —
(Indicate yes or no and the component(s) impact tested)

11. Hydro., pneu., or comb. test press. — Proof test —

Items 12 and 13 to be completed for tube section.

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

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)

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): — (b) Overall length (ft & in.): —

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
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

[illegible]

If removable, bolts used (describe other fastening)

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

16. MAWP psi at max. temp. °F Min. design metal temp. °F at
(internal) (external) (internal) (external)

17. Impact test _____
(Indicate yes or no and the component(s) impact tested)

18. Hydro., pneu., or comb. test press. _____ Proof test _____

19. Nozzles, inspection, and safety valve openings: _____

[illegible]

20. Supports: Skirt Lugs Legs Others Attached
(Yes or No) (No.) (No.) (Describe) (Where and How)

21. Remarks: 1.) All SA-240T316L material supplied by customer.
2.) All design calculations and hydrostatic testing by customer.
3.) Butt joint 100% P.T. Inspected.
4.) Dupps P/N 130690 (P.O.#25568)

CERTIFICATE OF SHOP/FIELD COMPLIANCE

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

U Certificate of Authorization No. 3415 Expires 1/31, 19 97
Date 1-12-95 Name Halvorsen Boiler & Engineering Co.
(Manufacturer) Signed [Signature]
(Representative)

CERTIFICATE OF SHOP/FIELD 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 Ohio and employed by Hartford Steam Boiler Inspection & Insurance of Hartford, Ct. have inspected the pressure vessel described in this Manufacturer's Data Report on 4/12/95, 19 95, 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 part 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 1/12/95 Signed Raymond N. Acorn Commissions OHIO COMM.
(Authorized Inspector) (Nat'l Board incl. endorsement, State, Province and No.)

FORM U-2 MANUFACTURER'S PARTIAL DATA REPORT
A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

Manufactured and certified by Halvorsen Boiler & Engineering Co. 7500 Grand Division Avenue, Cleveland, Ohio 44125
(Name and address of Manufacturer)

2. Manufactured for The Dupps Co., 548 N. Cherry Street, Germantown, OH 45327
(Name and address of Purchaser)

3. Location of Installation Un-known
(Name and address)

4. Type: Rolled & welded cone 6397A-3 & 4
(Description of vessel part (shell, two-piece head, tube bundle)) (Mfg's serial No.) (CRN)

1815-94 Halvorsen Boiler & Engrg. Co. 1994
(Nat'l. Bd. No.) (Drawing No.) (Drawing prepared by) (Year built)

5. ASME Code, Section VIII, Div. 1 1992 1993 Addenda ----- -----
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): 1 (b) Overall length ft & in.: 5'4.75"

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	27.30OD	5'4.75"	SA-240Tp.316L	.875"	---	1	None	---	---	---	---	---	---	---	---	---	---
2	25.25OD	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

7. Heads: (a) ----- (b) -----
(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)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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

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

If bar, give dimensions ----- If bolted, describe or sketch -----

9. MAWP ----- ----- psi at max. temp. ----- ----- °F Min. design metal temp. ----- ----- °F at -----
(internal) (external) (internal) (external)

10. Impact test -----
(Indicate yes or no and the component(s) impact tested)

11. Hydro., pneu., or comb. test press. ----- Proof test -----
Items 12 and 13 to be completed for tube section.

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

----- ----- ----- ----- -----
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)

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): ----- (b) Overall length (ft & in.): -----

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
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

[illegible]

				(Mat'l Spec. No., Grade, Size, No.)			
16. MAWP	<u> </u>	<u> </u>	psi at max. temp.	<u> </u>	<u> </u>	°F Min. design metal temp.	<u> </u> °F at <u> </u>
	(internal)	(external)		(internal)	(external)		

18. Hydro., pneu., or comb. test press. _____ Proof test _____

19. Nozzles, 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. Op.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Water Inlet	1	24"	RF	SS316	SS316	0.3125"	0.3125"	SS316 Plate	Welded	Welded	Water Tank
Steam Inlet	2	24"	RF	SS316	SS316	0.3125"	0.3125"	SS316 Plate	Welded	Welded	Steam Tank
Drain Outlet	3	24"	RF	SS316	SS316	0.3125"	0.3125"	SS316 Plate	Welded	Welded	Drain Tank
Water Inlet	4	24"	RF	SS316	SS316	0.3125"	0.3125"	SS316 Plate	Welded	Welded	Water Tank
Steam Inlet	5	24"	RF	SS316	SS316	0.3125"	0.3125"	SS316 Plate	Welded	Welded	Steam Tank
Drain Outlet	6	24"	RF	SS316	SS316	0.3125"	0.3125"	SS316 Plate	Welded	Welded	Drain Tank
Water Inlet	7	24"	RF	SS316	SS316	0.3125"	0.3125"	SS316 Plate	Welded	Welded	Water Tank
Steam Inlet	8	24"	RF	SS316	SS316	0.3125"	0.3125"	SS316 Plate	Welded	Welded	Steam Tank
Drain Outlet	9	24"	RF	SS316	SS316	0.3125"	0.3125"	SS316 Plate	Welded	Welded	Drain Tank
Water Inlet	10	24"	RF	SS316	SS316	0.3125"	0.3125"	SS316 Plate	Welded	Welded	Water Tank
Steam Inlet	11	24"	RF	SS316	SS316	0.3125"	0.3125"	SS316 Plate	Welded	Welded	Steam Tank
Drain Outlet	12	24"	RF	SS316	SS316	0.3125"	0.3125"	SS316 Plate	Welded	Welded	Drain Tank

21. Remarks: 1.) All SA240T316L material supplied by customer.
2.) All design calculations and hydrostatic testing by customer.
3.) Part has one (1) 1/2" thk. SA240T316L stiffener ring.
4.) Butt joint 100% P.T. inspected.
5.) Dupps P/N 130692 (P.O.#25568).

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

U Certificate of Authorization No. 3415 Expires 1/30, 19 97

Date 12.19.94 Name Halvorsen Boiler & Engineering Co. Signed [Signature]
(Manufacturer) (Representative)

I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Ohio and employed by Hartford Steam Boiler Inspection & Insurance of Hartford, Ct. have inspected the pressure vessel described in this Manufacturer's Data Report on 12/1/, 19 94, 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 part 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 12/1/94 Signed Raymond N. Acorn Commissions NB-9557-A CHIO
(Authorized Inspector) Marl Board incl endorsement State, Province and No

FORM U-2 MANUFACTURER'S PARTIAL DATA REPORT
A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

Manufactured and certified by Halvorsen Boiler & Engineering Co. 7500 Grand Division Avenue, Cleveland, Ohio 44125
(Name and address of Manufacturer)

2. Manufactured for The Dupps Co., 548 N. Cherry Street, Germantown, OH 45327
(Name and address of Purchaser)

3. Location of installation Un-known
(Name and address)

4. Type: Rolled & welded cone 6397A-5 & 6 1994
(Description of vessel part (shell, two-piece head, tube bundle)) (Mfg's serial No.) (CRN)
1815-94 Halvorsen Boiler & Engrg. Co.
(Nat'l. Bd. No.) (Drawing No.) (Drawing prepared by) (Year built)

5. ASME Code, Section VIII, Div. 1 1992 1993 Addenda
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): 1 (b) Overall length ft & in.: 5'11.63"

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.	Tirr
1	24.97OD	5'11.63"	SA-240Tp.316L	.625"	---	1	None	---	---	---	---	---	---	---	---	---	---
2	22.69OD	---	----	---	---	---	---	---	---	---	---	---	---	---	---	---	---
---	---	---	----	---	---	---	---	---	---	---	---	---	---	---	---	---	---

7. Heads: (a) --- (b) ---
(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 Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A			
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full.	Spot.	None
(a)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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

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

If bar, give dimensions --- If bolted, describe or sketch
9. MAWP --- --- psi at max. temp. --- --- °F Min. design metal temp. --- --- °F at ---
(internal) (external) (internal) (external)

10. Impact test ---
(Indicate yes or no and the component(s) impact tested)

11. Hydro., pneu., or comb. test press. --- Proof test ---
Items 12 and 13 to be completed for tube section.

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

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): --- (b) Overall length (ft & in.): ---

Course(s)			Material	Thickness		Long Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatme	
No.	Diameter, in.	Length ft. & in.	Spec./Grade or Type	Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Tirr
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

[illegible]

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

17. Impact test _____
(Indicate yes or no and the component(s) impact tested)

18. Hydro., pneu., or comb. test press. _____ Proof test _____

19. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material		Nozzle Thickness		Reinforcement	How Attached		Location (Insp.)
				Nozzle	Flange	Nom.	Corr.		Material	Nozzle	
Water Inlet	001	12" NPS	RF	Carbon Steel	Carbon Steel	0.50"	0.125"	None	Welded	Welded	Water Tank
Steam Inlet	002	8" NPS	RF	Stainless Steel	Stainless Steel	0.375"	0.080"	None	Welded	Welded	Boiler
Drain Outlet	003	4" NPS	RF	Carbon Steel	Carbon Steel	0.250"	0.060"	None	Welded	Welded	Drainage
Gas Inlet	004	10" NPS	RF	Carbon Steel	Carbon Steel	0.4375"	0.100"	None	Welded	Welded	Gas Line
Water Inlet	005	14" NPS	RF	Carbon Steel	Carbon Steel	0.625"	0.150"	None	Welded	Welded	Water Tank
Steam Inlet	006	6" NPS	RF	Stainless Steel	Stainless Steel	0.3125"	0.070"	None	Welded	Welded	Boiler
Drain Outlet	007	3" NPS	RF	Carbon Steel	Carbon Steel	0.1875"	0.040"	None	Welded	Welded	Drainage
Gas Inlet	008	16" NPS	RF	Carbon Steel	Carbon Steel	0.750"	0.180"	None	Welded	Welded	Gas Line
Water Inlet	009	18" NPS	RF	Carbon Steel	Carbon Steel	0.875"	0.200"	None	Welded	Welded	Water Tank
Steam Inlet	010	5" NPS	RF	Stainless Steel	Stainless Steel	0.2812"	0.060"	None	Welded	Welded	Boiler
Drain Outlet	011	2" NPS	RF	Carbon Steel	Carbon Steel	0.1562"	0.030"	None	Welded	Welded	Drainage
Gas Inlet	012	20" NPS	RF	Carbon Steel	Carbon Steel	1.000"	0.250"	None	Welded	Welded	Gas Line
Water Inlet	013	24" NPS	RF	Carbon Steel	Carbon Steel	1.125"	0.300"	None	Welded	Welded	Water Tank

20. Supports: Skirt Lugs Legs Others Attached
(Yes or No) (No.) (No.) (Describe) (Where and How)

21. Remarks:

- 1.) All SA240T316L material supplied by customer.
- 2.) All design calculations and hydrostatic testing by customer.
- 3.) Part has one (1) 1/2" thk. SA240T316L stiffener ring.
- 4.) Butt joint 100% P.T. inspected.
- 5.) Dupps P/N 130693 (P.O.#25568).

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

U Certificate of Authorization No. 3415 Expires 1/30, 19 97

Date 12-1-94 Name Halvorsen Boiler & Engineering Co. Signed [Signature]
(Manufacturer) (Representative)

I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Ohio and employed by Hartford Steam Boiler Inspection & Insurance of Hartford, Ct. have inspected the pressure vessel described in this Manufacturer's Data Report on 12/1, 19 84, and state that, to the best of my knowledge and belief, the same conforms to the requirements of the applicable ASME Code.

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 part 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 12/1/94 Signed Ramond N. Acorn Commissions OHIO COMM-A
(Authorized Inspector) (Nat'l Board incl. endorsement, State, Province and M...)

FORM U-2 MANUFACTURER'S PARTIAL DATA REPORT
A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

Manufactured and certified by Halvorsen Boiler & Engineering Co. 7500 Grand Division Avenue, Cleveland, Ohio 44125
(Name and address of Manufacturer)

2. Manufactured for The Dupps Co., 548 N. Cherry Street, Germantown, OH 45327
(Name and address of Purchaser)

3. Location of installation Un-known
(Name and address)

4. Type: Rolled & welded cone 6397A-7 & 8 _____
(Description of vessel part (shell, two-piece head, tube bundle)) (Mfg's serial No.) (CRN)

(Nat'l. Bd. No.) 1815-94 Halvorsen Boiler & Engrg. Co. 1994
(Drawing No.) (Drawing prepared by) (Year built)

5. ASME Code, Section VIII, Div. 1 1992 1993 Addenda _____
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): 1 (b) Overall length ft & in.: 6'3.44"

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	22.67OD	6'3.44"	SA-240Tp.316L	1/2"	---	1	None	---	---	---	---	---	---	---	---	---	---
2	20.26OD	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

7. Heads: (a) _____ (b) _____
(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 Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A			
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full.	Spot.	None
(a)	_____	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	_____	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	_____	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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

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

If bar, give dimensions _____ If bolted, describe or sketch _____
9. MAWP _____ psi at max. temp. _____ °F Min. design metal temp. _____ °F at _____
(internal) (external) (internal) (external)

10. Impact test _____
(Indicate yes or no and the component(s) impact tested)

11. Hydro., pneu., or comb. test press. _____ Proof test _____
Items 12 and 13 to be completed for tube section.

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

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): _____ (b) Overall length (ft & in.): _____

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
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

FORM U-2 MANUFACTURER'S PARTIAL DATA REPORT
A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured and certified by Halvorsen Boiler & Engineering Co. 7500 Grand Division Avenue, Cleveland, Ohio 44125
(Name and address of Manufacturer)

2. Manufactured for The Dupps Co., 548 N. Cherry Street, Germantown, Ohio 45327
(Name and address of Purchaser)

3. Location of installation Un-known

4. Type: Rolled & welded cylinder (Description of vessel part (shell, two-piece head, tube bundle))
5901A-17-18-20 (Mfg's serial No.)
Halvorsen Boiler & Engrg. Co. (Drawing prepared by)
1994 (Year built)
1791-94 (Drawing No.)
1992 1993 Addenda (Edition and Addenda (date))
1994 (Nat'l. Bd. No.)

5. ASME Code, Section VIII, Div. 1 1992 1993 Addenda
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): 1 (b) Overall length ft & in.: 4'0.75"

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	20.25"	4'0.75"	SA-240Tp.316L	.500"	---	1	None	---	---	---	---	---	---	---	---	---	---
2	OD	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

7. Heads: (a) _____ (b) _____
(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. Available, bolts used (describe other fastening) _____
(Mat'l Spec. No., Grade, Size, No.)

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

If bar, give dimensions _____ If bolted, describe or sketch.
9. MAWP _____ psi at max. temp. _____ °F Min. design metal temp. _____ °F at _____ psi
(Internal) (external) (internal) (external)

10. Impact test _____
(Indicate yes or no and the component(s) impact tested)

11. Hydro., pneu., or comb. test press. _____ Proof test _____
Items 12 and 13 to be completed for tube section.

12. Tubesheet: _____
Stationary (Mat'l Spec. No.) _____ Dia., in. (subject to press.) _____ Norm. thk., in. _____ Corr. Allow., in. _____ Attachment (welded or bolted)
Floating (Mat'l Spec. No.) _____ Dia., in. _____ Norm. thk., in. _____ Corr. Allow., in. _____ Attachment

13. Tubes: _____
Mat'l Spec. No., Grade or Type _____ O.D., in. _____ Norm. 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.

14. Shell (a) No. of course(s): _____ (b) Overall length (ft & in.): _____

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
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

[illegible]

If removable, bolts used (describe other fastening)

				(Mat'l Spec. No., Grade, Size, No.)	
16. MAWP	_____	_____	psi at max. temp.	_____	_____
	(Internal)	(external)		(Internal)	(external)
				°F Min. design metal temp.	_____
				°F at	_____

17. Impact test _____
(Indicate yes or no and the component(s) impact tested)

18. Hydro., pneu., or comb. test press. _____ Proof test _____

19. Nozzles, inspection, and safety valve openings: _____

[illegible]

20. Supports: Skirt ---- Lugs ---- Legs ---- Others ----- Attached -----
(Yes or No) (No.) (No.) (Describe) (Where and How)

21. Remarks: 1.) All SA240T316L material supplied by customer.
2.) All design calculations and hydrostatic testing by customer.
3.) Strt. seam butt joint 100% P.T. inspected.
4.) Part has one (1) 1/2" thk. SA240T316L internal stiffener ring.
5.) Dupps P/N 130691 (P.O.#23865).

CERTIFICATE OF SHOP/FIELD COMPLIANCE

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

U Certificate of Authorization No. 3415 Expires 1/31 19 97
Date 10-24-94 Name Halvorsen Boiler & Engineering Co. Signed [Signature]
(Manufacturer) (Representative)

CERTIFICATE OF SHOP/FIELD 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 Ohio, and employed by Hartford Steam Boiler Inspection & Insurance of Hartford, Ct., have inspected the pressure vessel described in this Manufacturer's Data Report on 10/19, 19 88, 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 employer makes any warranty, expressed or implied, concerning the pressure vessel part 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 4/24/94 Signed Raymond A. Acorn Commissions CHIC COA-A
(Authorized Inspector) (Nat'l Board incl. endorsement, State, Province and No.)