

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

1202-13

1. Manufactured and certified by J.D. COUSINS, INC., 667 TIFFY ST., BUFFALO, NY 14220

(Name and address of Manufacturer)

2. Manufactured for APV, 395 FILMORE AVE., TONAWANDA, NY 14150

(Name and address of Purchaser)

3. Location of Installation SAME

(Name and address)

4. Type: Vertical 18" OD EVAPORATOR 1202-13 E-5384 REV 1 7677 2003
 (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 2001, Addenda 2002

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.): 15'-0"

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	18"	15'-0"	SA-53 Gr B ERW		.375	.0625	ERW	None	85	UW13.2	None	70	---	---

7. Heads: (a) N/A (b) N/A

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) N/A

8. Type of jacket N/A Jacket closure N/A

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

If bar, give dimensions N/A

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

If bolted, describe or sketch.

9. MAWP 100 psi at max. temp. 350 ° F Min. design metal temp. -20 ° F at 100 psi.
 (internal) (external) (internal) (external)

10. Impact test NO PER UCS-66(a) AND UHA-51(d)

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

11. Hydro., ~~proof~~, or ~~stress~~ test press 150 Proof test N/A

Items 12 and 13 to be completed for tube sections.

12. Tubesheet: SA-240 Ty 304L 17.25" 1.25" 0 WELDED
 Stationary (Mat'l Spec. No.) Dia., in (subject to press.) Nom. thk., in. Corr. Allow., in. Attachment (welded or bolted)

N/A

13. Tubes: SA-249 Ty TP304 2" .065 30 STRAIGHT
 Floating (Mat'l Spec. No.) Dia., in. Nom. thk., in. Corr. Allow., in. Attachment
 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): 2 (b) Overall length (ft & in.): 6'-6"

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	18"	2'-0"	SA-312 Ty TP304 WLD		.188	0	W	None	85	TYP1	None	70	---	---
1	18"	4'-6"	SA-312 Ty TP304 WLD		.188	0	W	None	85	UW13.2	None	70	---	---

15. Heads: (a) SA-240 Ty 304 (b) SA-240 Ty 304

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)	Bottom	.077	0	18"	1.08	---	---	---	---	---	CONCAVE	SMLS	None	70
(b)	Top	.250	0	---	---	---	---	---	22"	---	---	SMLS	None	100

If removable, bolts used (describe other fastening) SA-193 B7 STUDS 5/8" (12) W/ SA-194 2H NUTS 5/8" (24)

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

16. MAWP 15/FV 100 psi at max. temp. 300 350 ° F Min. design metal temp. -20 ° F at 15/FV psi.
(internal) (external) (internal) (external)

17. Impact test NO PER UHA-51(d) AND UCS-66(a)

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

18. Hydro., ~~hydro.~~, or ~~hydro.~~ test pressure

25

Proof test

N/A

19. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material Nozzle	Flange	Nozzle Thickness Nom.	Corr.	Reinforcement Material	How Attached Nozzle	Flange	Location (Insp. Open.)
Inlet	1	3"	RFSO	SA-53 Gr B ERW	SA-105	.216	.0625	None	UW16.1E	APP2-4.3	SHELL
Outlet	1	1/12"	RFSO	SA-53 Gr B ERW	SA-105	.145	.0625	None	UW16.1E	APP2-4.3	SHELL
Inlet	1	2"	RFSO	SA-312 TP304 WLD	SA-182 Ty F304	.154	0	None	UW16.1E	APP2-4.3	COVER
OUT/LEVEL	2	3"	RFSO	SA-312 TP304 WLD	SA-182 Ty F304	.120	0	None	UW16.1E	APP2-4.3	BONNETS
Outlet	1	8"	RFSO	SA-312 TP304 WLD	SA-182 Ty F304	.148	0	None	UW16.1E	APP2-4.3	BONNET
GLASS	2	4"	RFSO	SA-312 TP304 WLD	SA-182 Ty F304	.120	0	None	UW16.1E	APP2-4.3	BONNET
VENT/DRAIN	2	3/4"	CPLG	SA-182 Ty F304	N/A	3000#	0	None	UW16.1E	N/A	BONNET

20. Supports: Skirt

NO

Lugs

4

Legs

Others

Attached

WELDED TO SHELL

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)

N/A

22. Remarks: VESSEL HYDRO TESTED IN THE HORIZONTAL POSITION

SAFTY RELIEF DEVICE BY OTHER

PO# 6600023902 PROJ # 112-00811

TAG# EV-01

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.

1219

Expires

1/31

Date 4/17/03 Name

J.D. COUSINS, INC.

(Manufacturer)

Signed

Ray Bailey 2005
(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 NY and employed by HSB CT of HARTFORD, CT. have inspected the pressure vessel described in this Manufacturer's Data Report on 4/17/03, 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 4/17/03

Signed

(Authorized Inspector)

Commissions

NB 10009A

(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

Signed

(Assembler)

(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.)