

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

(Alternative Form for Single Chamber, Completely Shop-Fabricated Vessels Only)

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

1/2

1. Manufactured and certified by TRINITY INDUSTRIES, INC., 1549 VANCE STREET, ROCKY MOUNT, NC PLANT #04
(NAME AND ADDRESS OF MANUFACTURER)

2. Manufactured for SYSTEMS CORP., 18TH & HOOD, FT. GILLEM, GA 30050
(NAME AND ADDRESS OF PURCHASER)

3. Location of installation SAME
(NAME AND ADDRESS)

4. Type HORIZ 122337 654431 88650 1996
(HORIZ OR VERT TANK) (MFGR'S SERIAL NO) (CRN) (DRAWING NO) (NAT'L BD NO) (YEAR BUILT)

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 1995
YEAR

6. Shell: SA612 .8125" 0" 10'-10.25" 36"-0"
(MAT'L SPEC NO GRADE) (NOM THK (IN)) (CORR ALLOW (IN)) (DIAM ID (FT & IN)) (LENGTH OVERALL (FT & IN))

7. Seams: WELD, DBL FULL 100% WELD, DBL FULL 4
(LONG WELDED DBL SNGL LAP BUTT) (RT (SPOT OR FULL)) (EFF (%)) (HT TEMP (F)) (TIME (HR)) (GIRTH WELDED DBL SNGL LAP BUTT) (RT (SPOT PARTIAL OR FULL)) (NO OF COURSES)

8. Heads: (a) Mat'l. SA612 HOT FORMED, NORM. (b) Mat'l. SA612 HOT FORMED, NORM.
(SPEC NO GRADE) (SPEC NO GRADE)

Seg. Seams: WELD, DBL H.T.: SPOT R.T.: SPOT Eff: 85%

LOCATION (TOP, BOTTOM ENDS)	MINIMUM THICKNESS	CORROSION ALLOWANCE	CROWN RADIUS	KNUCKLE RADIUS	ELLIPTICAL RATIO	CONICAL APEX ANGLE	HEMISPHERICAL RADIUS	FLAT DIAMETER	SIDE TO PRESSURE (CONVEX OR CONCAVE)
A END	0.466"	0"					654715		CONCAVE
B END	0.466"	0"					654715		CONCAVE

If removable, bolts used (describe other fastenings) _____
(MATERIAL SPEC NO. GR. SIZE NO)

9. MAWP 250 psi at max. temp. 125 °F
 Min. design metal temp. 20 °F at 250 psi. Hydrostatic test pressure 375 psi.

10. Nozzles, inspection and safety valve openings: UW-16.1

PURPOSE (LET OUTLET DRAIN)	NO	DIAM OR SIZE	TYPE	MAT'L	NOM THK	REINFORCEMENT MAT'L	HOW ATTACHED	LOCATION
MANWAY	1	15"	PTFLG	SA516-70N	2.5"	INTEGRAL	(i)	HEAD
LEVEL GA	1,1	2.5", 2"	CPLG	SA105	3000#		(y-2)	
TW, LI-PG	1,1	.75"	CPLG	SA105	6000#		(y-2)	
FILL, VAP	1,2	2"	PTFLG	SA516-70N	2.15"		(d)	
LIQUID OUT	1	3"	PTFLG	SA516-70N	2.53"	INTEGRAL	(d)	
RELIEF	1	4"	PTFLG	SA516-70N	3.0"	INTEGRAL	(d)	

11. Supports: Skirt NO Lugs NO Legs NO Other Attached
(YES OR NO) (NO) (DESCRIBE) (WHERE AND HOW)

12. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: TRINITY HEAD #1: 968-02 #2: 955-92
(NAME OF PART ITEM NUMBER MFGR'S NAME AND IDENTIFYING STAMP)

**TANK, HORIZONTAL LPG STORAGE: 131.875" OD x 30,000 WG
 TO BE USED IN A NON-CORROSIVE SERVICE. MDMT -20F AT 150 PSI.
 LINE 9: MDMT/PSI BASED ON UCS-66 (a), UCS-66 (b) AND UG-20 (f).**

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. 10,829 which expires JULY 18, 19 97
 Date 1-17-96 Co. Na. TRINITY INDUSTRIES, INC PLANT #04 Signed [Signature]
MANUFACTURER REPRESENTATIVE

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by TRINITY INDUSTRIES, INC PLANT #04 at ROCKY MOUNT, NC

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 NORTH CAROLINA and employed by OLD REPUBLIC INSURANCE COMPANY

have inspected the component described in this Manufacturer's Data Report on JANUARY 17, 19 96, 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.

Date 1-19-96 Signed [Signature] Commissions NC 1332 NAT'L BD 10867 A
(AUTHORIZED INSPECTOR) (NAT'L BOARD (INCL. ENDORSEMENTS), STATE, PROV. AND NO.)

FORM U-2A MANUFACTURER'S PARTIAL DATA REPORT (ALTERNATIVE FORM) S/O H-19 68
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 1 131" Blank

1. Manufactured and certified by Trinity industries, Inc. 1901 Brennan, Ft. Worth, Tx 76106
(Name and address of Manufacturer)
2. Manufactured for Trinity Industries, Inc. Dallas, Texas
(Name and address of Purchaser)
3. Location of installation "Stock"
(Name and address)
4. Type: Hemispherical Head 9 68-02
(Description of vessel part (shell, top or bottom head, tube bundle) (Mfg's. Serial No.)
- S-40309-01 Trinity Industries, Inc. 1995
(Natl. Bd. No.) (Drawing No.) (Drawing prepared by) (Year built)
5. ASME Code, Section VIII, Div. 1 1992 A-93
(Edition and Appendix (if any)) Code Case No. Special Service per UG 120.0
6. Shell (a) No. of courses(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

7. Heads: (a) SA-612 (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	Stitch to Pressure		Category A		
	Min	Corr.	Crown	Knuckle					Concave	Convex	Type	Full	Spot
(a)	.466"						65.937"			X	WDB	Spot	85%
(b)							O.D.						

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

3. MAWP _____ psi at max. temp. _____ °F. Min. design metal temp. _____ °F at _____ psi.
(Internal) (External) (Internal) (External)

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

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

11. 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	
Roto Ga.	1	2"	Cplg.	SA-105	3000#			UW16.1Y2			Top

12. Supports: Skirt _____ Lugs _____ Legs _____ Others _____ Attached _____
(Yes or no) (No) (No) (Describe) (Where and how)

13. Remarks: Head segments are hot formed @ 1650 degrees F and air cooled, double butt welded. Spot X-Rayed seams with joint efficiency of 85% .466" min. x 131.875" O.D. segmental hemispherical head.

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. 11,454 Expires March 14, 19 96
 Date 3/2/95 Name Trinity Industries, Inc. 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 or the State or Province of Texas and employed by Old Republic Insurance Company Dallas, Texas have inspected

the pressure vessel part described in this Manufacturer's Data Report on 11-30, 19 98, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel part 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 11-30-98 Signed [Signature] Commissions 9441-A Texas 1066
(Authorized Inspector) (Natl. Board incl. endorsement, State, Province and No.)

FORM U-2A MANUFACTURER'S PARTIAL DATA REPORT (ALTERNATIVE FORM) S/O H-1955
A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer 131" Fitted
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured and certified by Trinity Industries, Inc. 1901 Brennan, Ft. Worth, Tx. 76106
(Name and address of Manufacturer)

2. Manufactured for Trinity Industries, Inc. Dallas, Texas
(Name and address of the user)

3. Location of installation "Stock"
(Name and address)

4. Type: Hemispherical Head 955-92
(Description of vessel part (shell, two piece head, tube bundle)) (MFG's serial No.) (CRN)

S-40292-01 Trinity Industries, Inc. 1995
(Mat'l Bld No.) (Drawing No.) (Drawing prepared by) (Year built)

5. ASME Code, Section VIII, Div. 1 1992 A-93
(Edition and Addenda (date)) (Code Case No.) (Special Service per UG 120(d))

6. 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	

7. Heads: (a) SA-612 (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)	.466"						65.937"		X	WDB	Spot	85%
(b)							O.D.					

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

8. MAWP _____ psi at max. temp. _____ °F. Min. design metal temp. _____ °F at _____ psi.
(Internal) (External) (Internal) (External)

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

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

11. 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	
Float Ga.	1	2 1/2"	Cplg.	SA-105	3000#	---	UW16.1Y2	---	UW16.1Y2	---	Top
LL. PG.	1	3/4"	Cplg.	SA-105	6000#	---	UW16.1Y2	---	UW16.1Y2	---	Top
Thermo.	1	3/4"	Cplg.	SA-105	6000#	---	UW16.1Y2	---	UW16.1Y2	---	Top
Manway	1	15"	Flg.	SA-516-70	250#	Inherent	UW16.1Y2	---	UW16.1Y2	---	Top

12. Supports: Skirt _____ Lugs _____ Legs _____ Others _____ Attached _____
(Yes or no) (No) (No) (Describe) (Where and how)

13. Remarks: Head segments are hot formed @ 1650 degrees F and air cooled, double butt welded. Spot X-Rayed seams with joint efficiency of 85% .466" min. x 131.875" O.D. segmental hemispherical head.

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. 11,454 Expires March 14, 19 96

Date 10/31/95 Name Trinity Industries, Inc. 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/or the State or Province of Texas and employed by Old Republic Insurance Company of Dallas, Texas have inspected the pressure vessel part described in this Manufacturer's Data Report on 11-1, 19 95, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel part 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 11-1-95 Signed [Signature] Commissions 9441-A Texas 1066
(Authorized Inspector) (Nat'l Board incl. endorsement, State, Province and No.)