

S/O 677965
PLT#110

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

1/4

1. Manufactured and certified by TRINITY INDUSTRIES, INC. 202 PROGRESS BLVD. LONGVIEW, TEXAS 75604
(NAME AND ADDRESS OF MANUFACTURER)
2. Manufactured for KLEESPIE TANK & PETROLEUM 3521 MEMORIAL HIGHWAY MANDAN, N.D. 58554
(NAME AND ADDRESS OF PURCHASER)
3. Location of installation SAME AS ABOVE
(NAME AND ADDRESS)
4. Type HORIZ 123088 S-40057 REV-A 646 1997
(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
- to A95
ADDENDA (DATE)
6. Shell: SA516-70 0.777" 0" 8'-11.792" 57'-0"
MATH (SPEC. NO., GRADE) NOM. THK. (IN.) CORR. ALLOW. (IN.) DIAM. I.D. (FT. & IN.) LENGTH (OVERALL) (FT. & IN.)
7. Seams: WELD, DBL FULL 100% 1100 47 MIN WELD, DBL UW11(a)(5)(b) 6
LONG (WELDED, DBL, SNGL. LAP, BUTT) R.T. (SPOT OR FULL) L.T. (%) H.T. TEMP. (F) TIME (HR.) GIRTH (WELDED, DBL, SNGL. LAP, BUTT) R.T. (SPOT, PARTIAL, OR FULL) NO. OF COURSES
8. Heads: (a) Matl. SA516-70 HOT FORMED NORM. (b) Matl. _____
(SPEC. NO., GRADE) (SPEC. NO., GRADE)

Seg. Seams: WELD, DBL H.T.: _____ 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)	ENDS	0.457"	0"					54.673"		CONCAVE
(B)								O.D.		

If removable, bolts used (describe other fastenings) _____

(MATH., 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 (INLET, OUTLET, DRAIN)	NO.	DIAM. OR SIZE	TYPE	MATL.	NOM THK.	REINFORCEMENT MATL.	HOW ATTACHED	LOCATION
MANWAY	1	15"	PTFLG	SA516-70N	2.50"	INTERGRAL	(i)	HEAD
FLOAT, ROT.	1,1	2.5", 2"	CPLG	SA105	3000#		(y-2)	
TW, LL/PG	1,1	.75"	CPLG	SA105	6000#		(y-2)	
LIQ, OUT	1	3"	CPLG	SA105	6000#		(z-1)	
VAP, RELIEF	1,2	2"	CPLG	SA105	3000#		(y-1)(z-1)	
FILL, VAPOR	1,1	2"	CPLG	SA105	3000#		(z-1)	

11. Supports: Skirt NO Lugs NO Legs NO Other Attached
(YES OR NO) (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 PLT#22 PREFAB BARREL SER#297046 WITH ATTACHED HEAD SER#980-63 AND PLT# 29
(NAME OF PART, ITEM NUMBER, MFGR'S. NAME AND IDENTIFYING STAMP)

CLOSING HEAD SER# 973-53

TANK, HORIZONTAL NH3 STORAGE: 109.346" O.D. X 30,000 NOM WG.

TO BE USED IN A NON-CORROSIVE SERVICE.

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. 24,832 which expires 5-24, 19 99.
Date 6-17-97 Co. Na. TRINITY INDUSTRIES, INC. PLT#110 Signed James Coppedge
MANUFACTURER REPRESENTATIVE

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by TRINITY INDUSTRIES, INC. PLT# 110 at LONGVIEW, TEXAS 75604
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 CO. DALLAS,
have inspected the component described in this Manufacturer's Data Report on 6-17, 19 97, 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 6-17-97 Signed ASZ Commissions NB 8934 : "A"
THI 437 CON (R 10/93) (AUTHORIZED INSPECTOR) (NAT'L BOARD (INCL. ENDORSEMENTS), STATE, PROV. AND NO.)

FORM U-2A MANUFACTURER'S PARTIAL DATA REPORT (ALTERNATIVE FORM)
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

SPECIAL 2/4
S/O H-1973
109" Fitted

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 973-53
(Description of vessel part (shell, two-piece head, tube bundle)) (Mfg's. serial No.)
S-40262-01 Trinity Industries, Inc. 1997
(Nat'l. Brl. No.) (Drawing No.) (Drawing prepared by) (Year built)
5. ASME Code, Section VIII, Div. 1. 1995 A-95
(Edition and Addenda (date)) (Code Case No.) (Special Service per UG-120(a))
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-516-70 (b) _____
(Mat'l Spec. No., Grade or Type) (M.T. - Time & Temp.) (Mat'l Spec. No., Grade or Type) (M.T. - Time & Temp.)

	Location (Top, Bottom, End)	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)		.457"						54.673"			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	
Thermo.	1	3/4"	Cplg.	SA-105	6000#			UW16.1Y2			Top
PG. LL.	1	3/4"	Cplg.	SA-105	6000#			UW16.1Y2			Top
Float Ga.	1	2 1/2"	Cplg.	SA-105	3000#			UW16.1Y2			Top
Manway	1	15"	Flg.	SA-516-70	250#			Inherent	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%
.457" min. x 109.346" 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 99
Date 5-27-97 Name Trinity Industries, Inc. Signed J. Stanford
(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 5-27-97 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 5-27-97 Signed [Signature] Commissions 9441-A Texas 1066
(Authorized Inspector) (Nat'l. Board incl. endorsement, State, Province and No.)

3/4

FORM U-2A MANUFACTURER'S PARTIAL DATA REPORT (ALTERNATIVE FORM)
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 Trinity Industries, Inc. Plant #22, 1000 N.E. 28th St. Ft. Worth, Texas
(Name and address of Manufacturer) 76106

2. Manufactured for Trinity Industries Inc.
(Name and address of Purchaser)

3. Location of installation Not Known

4. Type: * See Remarks 2297046
(Description of vessel part (shell, two-piece head, tube bundle)) (Mfg's serial No.)

PF00135 Trinity Industries Inc. 1997
(Mat'l. Bd. No.) (Drawing No.) (Drawing prepared by) (Year built)

5. ASME Code, Section VIII, Div. 1. 1995-A95 Code Case No. 57'-0"
(Edition and Addenda dates) (Special Service per UG-120(a))

6. Shell (a) No. of course(s): 6 (b) Overall length (ft & in.): 57'-0"

Course(s)			Material	Thickness		Temp. Joint H.T. A			Temp. Joint H.T. A, B, & C			Finest Treatment	
No.	Diameter, in.	Length, ft & in.	Spec. Grade or Type	Mat'l.	Corr.	Type	Full, Spot, None	HT.	Type	Full, Spot, None	HT.	Temp.	Time
6	109.346"	9'-6"	SA516-70	.777"		1	Full	100%	1	Spot	85%	N/A	

7. Heads: (a) SA516-70 (b)
(Mat'l Spec. No., Grade or Type) H.T. - Temp & Temp. (Mat'l Spec. No., Grade or Type) H.T. - Temp & Temp.

	Location (Top, Bottom, End)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Sub to Pressure		Category A		
		Min.	Corr.	Crown	Knuckle					Concave	Convex	Type	Full, Spot, None	HT.
(a)	End	.457"						54.67"			X	1	Spot	85%
(b)														

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 N/A
(Indicate yes or no and the component(s) to be 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 (Inp. Open.)
				Nozzle	Flange	Mat'l.	Corr.		Nozzle	Flange	

12. Supports: Skirt Legs Lugs Others Attached
(Yes or no) (Mat'l) (Mat'l) (Where and how)

13. Remarks: * Assembly consists of (6) rings and (1) hemispherical head. The head was manufactured by Trinity Ind. Inc. Plant #22. A copy of the U-2A data form is attached to this form. The head serial # is 980-63.

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. 11913 Expires May 14 2000
 Date 6-4-97 Name Trinity Industries Inc. Signed Willie L. Skinner
(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 6-4-97 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 6-4-97 Signed [Signature] Commissioner 94401-10106
(Inspector and Employer) (Mat'l Board seal, endorsement, State, Province and No.)

FORM U-2A MANUFACTURER'S PARTIAL DATA REPORT (ALTERNATIVE FORM)

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

S/O H-1980
109" blank
special

1. Manufactured and certified by Trinity Industries, Inc. 1901 Brennan, Ft. Worth, Texas 76106
2. Manufactured for Trinity Industries, Inc. Dallas, Texas (Name and address of Manufacturer)
3. Location of installation "Stock" (Name and address of Purchaser)
4. Type: Hemispherical Head (Name and address)
980-63 (Mfg's serial No.)
S-40318-01-RA Trinity Industries, Inc. (ICR) 1997
1995-A 95 (Drawing prepared by) (Year built)
5. ASME Code, Section VIII, Div. 1. 1995-A 95 Edition and Addenda (date) Code Case No. Special Service per UG-120(d)
6. Shell (a) No. of course(s): SA-516-70 (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp. (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-516-70 (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	Knurled					Convex	Concave	Type	Full. Spot. None	Eff.
(a)		<u>.457"</u>						<u>54.673"</u>			<u>X</u>	<u>WDB</u>	<u>SPOT</u>	<u>85%</u>
(b)														

- If removable, bolts used (describe other fastening): (Mat'l Spec. No., Grade, See, No.)
8. MAWP (Internal) (External) psi at max. temp. (Internal) (External) °F. Min. design metal temp. °F at psi.
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	
<u>Roto Ga 1</u>	<u>1</u>	<u>2"</u>	<u>Cplg.</u>	<u>sa-105</u>		<u>3000#</u>		<u>UW16.1Y2</u>			<u>TOP</u>

12. Supports: Skirt (Yes or no) Lugs (No.) Legs (No.) Others (Describe) Attached (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% .457" min. x .109-.346" 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 99
 Date 5-28-97 Name Trinity Industries, Inc. Signed J. Stanford
 (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 5-28-97, 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 5-28-97 Signed J. Stanford Commissions 9441-A Texas 1066
 (Authorized Inspector) (Mat'l Board incl. endorsement, State, Province and No.)