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

1. M	lanufactured an	d certified by																		
								CLIVALIA	(Name		oness of Ma		,							
2. M	lanufactured for		<u> 1 M.W.</u>	KELLO	<u> </u>	(PHI	LLIPS	SUMIK			JPYLEN dress of Pu		_				_	*		
			PASA	DENA,T	FXAS				(11411)	· u 20	0.000 0.1	21011030	'' .							
3. Lo	ocation of instal	ation	TUNK	177, 1						(Na	me and ad	dress)								
4 7.	Vertic	ลโ	Hea	at Exchar	iger			946	61	(a. 555,	9461						1995	
4. 1	ype: <u>Vertic</u> (Horiz., ve	nt., or sphere	e) (Tar	nk, separato		, heat exh.,	etc.)	(Mfg's se	erial No.)	(CRN)			wing N	No.)	(Na	ati. Bd	i. No.) ('ear built)	
5 A	SME Code, Se	rtion VIII Dis	. 1	992,INCI	LUDING	1993 AI	DDENI	DΑ					-							
				Editio	n and Adde	nda (date)					Case No.				Special	Serv	rice pe	r UG-120(d	l)	
Items	s 6 - 11 incl. to	be complete	d for singl	le wall vesse	ıls, jackets o	f jacketed	vessels, s	hell of hea	t exchan	gers, or	chamber o	of multi-	chambe	r vess	els.					
6. S	hell (a) No. of	course(s):	TH	REE				(b) Overa	ail length	(ft & in.)): <u>24</u>	· -7 3	/4"							
						_			٠.											
	Course(s)			Material			Thickness		_	Long Joint (Cat. A				Circum, Joint (Cat.				_	Heat Treatment	
No.		Diameter, in. Length (ft. & in.)			Grade or Ty		Norn. Corr.		+ **	Type Full, Spot, I				Type Full, Spot, No				Temp.	Time	
1	54"	10 ' -		SA-516Gr.70			1/2"	1/16"				85%	1 Spot				85%			
2	54"	9' -5 1		SA-516Gr.70			1/2" 1/16				pot	85%			Spot					
3	54"	3' -5 1	/2"	SA	516Gr.70)	1/2"	1/16	' 1	<u> </u>	pot	85%	l	;	Spot	1	85%			
7. H	eads: (a) _	/8.4.	ati Saac	No., Grade	or Type\ 📙 T	-Time & T	emn		(b) _		(Mari C	Snac N	0 Gm-	a or T	ype) H.T	·.T	ω <i>β</i> Τ-	mp		
Т.		· ·	'		dius			:,	Homis-1	horical		i —			-	ı ım	rd 0x 16		Α	
	Location (Top, Bottom, Ends)		cness		Knuckle	Elliptical Ratio	Con	Angle	Hemispl Rac		Flat Diameter		Side to F			Ties	E. II	Category		
	Dottom, Ends)	Min.	Corr.	Crown	Knuckie	Hallo	Apex	Angle	Hac	ius	- Lameton	<u> </u>	nvex	Cor	cave	ıype	Full,	Spot, None	<u> </u>	
(a) (b)																				
(0)																				
8. Ty	ype of jacket f bar, give dime				_				Jacket	•	Spec. No.				gee & w	If I	bolted,	c.) describe d	r sketch	
8. Ty	ype of jacket f bar, give dime	nsions		5 psi	at max. tem	p3	02		<u> </u>	closure	Spec. No.	(Describ		30	If I				
8. Ty 11 9. M	ype of jacket f bar, give dime IAWP (ir	nsions _ 229_ nternal)	1:	5 psi	at max. tem	p. <u>30</u>	02 mai)	(extern	nai)	closure		(Describ			If I	bolted,	describe o		
8. Ty 11 9. M	ype of jacket f bar, give dime IAWP	nsions	1:	5 psi	at max. tem	p. <u>3</u> (inte	02 mai) PER U((extern	 nal)	oF I	Min. desigr	n metal	Describ			If I	bolted,	describe o		
8. Ty 11 9. M 10. Ir	ype of jacket f bar, give dime LAWP (ir mpact test	nsions 229 nternal) NO, CHA	1: (exten	5 psi	at max. tem	p. <u>3</u> (inte (inte (Indica	02 mal) PER U((extern CS-66(b	 nal)	oF I	Min. desigr	n metal	Describ			If I	bolted,	describe o		
8. Ty 11 9. M 10. lr 11. H	ype of jacket f bar, give dime LAWP (ir mpact test Hydro., pneu., o	nsions	1: (extern ARPY I	5 psi nal) MPACT 408	at max. tem	p. <u>3</u> (inte (inte (Indica	02 mai) PER U((extern CS-66(b	 nal)	oF I	Min. desigr	n metal	Describ			If I	bolted,	describe o		
8. Ty 11 9. M 10. lr 11. H item	ype of jacket f bar, give dime LAWP (ir mpact test	nsions	1: (extern ARPY I	5 psi mal) MPACT 408 sections.	at max. tem	p. <u>3</u> (inte (inte (Indica	02 mal) PER U((extern CS-66(b	nai)) e compon	oF I	Min. desigr	n metal	Describ	e as o		If I	bolted, Fat	describe o		
8. Ty 11 9. M 10. lr 11. H item	ype of jacket f bar, give dime tAWP (ir mpact test	nsions	(extern ARPY I press. — d for tube SA-266	5 psi nal) MPACT 408 sections.	at max. tem	p. 30 (inte	02 mal) PER U(te yes or cof test	(extern CS-66(b	nal)) e compon	oF I	Min. design	n metal	Describ	e as o	30	If I	bolted, Fat	describe o	_ psi	
8. Ty 11 9. M 10. Ir 11. H item	ype of jacket f bar, give dime tAWP (ir mpact test	nsions	(extern ARPY I press. — d for tube SA-266	5 psi nal) MPACT 408 sections.	at max. tem	ip. 30 (inte	02 mal) PER U(te yes or cof test	(extern CS-66(b	nal)) e compon	°F Intention of the second of	Min. design	n metal	(Describ temp.	e as o	30	If I	bolted, Fat	describe of 302	_ psi	
8. Ty 11 9. M 10. Ir 11. H item	ype of jacket f bar, give dime tAWP (ir mpact test	nsions	1: (extern ARPY I press d for tube SA-266 fat'l Spec	5 psi nal) MPACT 408 sections.	at max. tem TEST EX Dia., in.	ip. 30 (inte	02 mal) PER U(te yes or cof test	(extern	nal)) e compon	oF Intention of the state of th	Min. design	n metal	(Describ temp.	e as o	30	If I	bolted, Fat	Welded	_ psi	
8. Ty 10. Ir 11. H item 12. T	ype of jacket f bar, give dime (ir mpact test dydro., pneu., o s 12 and 13 to	nsions	1: (extern ARPY I press d for tube SA-266 fat'l Spec	5 psi nal) 408 sections2 . No)	at max. tem TEST EX Dia., in.	ip. 30 (inte	D2 mal) PER U0 te yes or pof test	(extern	nai)) e compon	oF Intention of the state of th	Min. design	n metal	(Describ temp.	e as o	30	If I	bolted, F at	Welded	_ psi	
8. Ty 10. Ir 11. H item 12. T	ype of jacket f bar, give dime (ir mpact test dydro., pneu., o is 12 and 13 to ubesheet: Floating (Mat'l ubes: Mat'l 5	nsions	1: (extern ARPY I press d for tube SA-266 Mat'l Spec ERW rade or Ty	5 psi nal) MPACT 408 sections2 . No) Dia.,	at max. tem TEST EX Dia., in.	p. 30 (intex (Indica Pro 54") (Subject to ——————————————————————————————————	mai) PER U(te yes or oof test p press.) Nom. thi	(extern CS-66(b) no and the	Norr .110°	oF pent(s) in this, in this, in this, in this, in this, in this, in this or gau	Min. design	n metal	Describ temp. 1/8*	e as o	30	If I	chment	Welded	_ psi	
8. Ty 11 9. M 10. lr 11. H item 12. T	ype of jacket f bar, give dime (ir mpact test dydro., pneu., o s 12 and 13 to ubesheet: Floating (Mat'l ubes: Mat'l 8 ss 14 - 18 incl. to	nsions	l: (extern ARPY I pressd for tube SA-266 fat'l Spec. ERW rade or Tyled for inn	5 psi nal) MPACT 408 sections2 . No) Dia.,	at max. tem TEST EX Dia., in.	p. 30 (intex (Indica Pro 54") (Subject to ——————————————————————————————————	mai) PER U(te yes or oof test p press.) Nom. thi	(extern CS-66(b) no and the	Norr .110°	oF pent(s) in this, in this, in this, in this, in this, in this, in this or gau	mpact teste	co	1/8° rr. Allow	e as o	30	If If If operation of the operation of t	chment	Welded o	_ psi	
8. Ty 11 9. M 10. lr 11. H item 12. T	ype of jacket f bar, give dime (ir mpact test dydro., pneu., o is 12 and 13 to ubesheet: Floating (Mat'l ubes: Mat'l 5	nsions	l: (extern ARPY I pressd for tube SA-266 fat'l Spec. ERW rade or Tyled for inn	5 psi nal) MPACT 408 sections2 . No) Dia.,	at max. tem TEST EX Dia., in.	p. 30 (intex (Indica Pro 54") (Subject to ——————————————————————————————————	mai) PER U(te yes or oof test p press.) Nom. thi	(extern CS-66(b) no and the	Norr .110°	oF pent(s) in the hard of the	mpact teste	n metal	1/8° rr. Allow	e as o	30	If If If operation of the operation of t	chment	Welded o Charles of the Control of t	_ psi	
8. Ty 11 9. M 10. lr 11. H item 12. T	ype of jacket f bar, give dime (ir mpact test dydro., pneu., o 12 and 13 to ubesheet: Floating (Mat'l ubes: Mat'l S ss 14 - 18 incl. to Shell (a) No. of	nsions	l: (extern ARPY I pressd for tube SA-266 fat'l Spec. ERW rade or Tyled for inn	5 psi nal) MPACT 408 sections2 . No) Dia.,	at max. tem TEST EX Dia., in. in. O s of jacketed	p. 30 (intex (Indica Pro 54") (Subject to ——————————————————————————————————	mai) PER U(te yes or oof test p press.) Nom. thi	(externormal (exte	Norm. thk., in schangers	oF hent(s) in 4 3/8" n. thk., in (MW) n. or gaus. (ft & in.)	Min. design npact teste n. Corr. Allow) uge	Co	1/8° rr. Allow 950 Numbe	• • • • • • • • • • • • • • • • • • •	-7 1/4	Attac	chment	Welded (Welded o Straight (Straight o	psi r bolted)	
9. M 10. lr 11. H item 12. T 13.Tr Item 14. S	ype of jacket f bar, give dime (ir mpact test dydro., pneu., o s 12 and 13 to ubesheet: Floating (Mat'l ubes: Mat'l S ss 14 - 18 incl. to Shell (a) No. of	nsions	l: (extern ARPY I pressd for tube SA-266 fat'l Spec ERW rade or Tyled for inn TOW	5 psi nal) MPACT 408 sections2 . No) Dia., ype	at max. tem TEST EX Dia., in. O s of jacketed Material	p. 30 (intext	mai) PER U(te yes or oof test press.) Nom. thi	(exterr CS-66(b) no and the	Normthk., in schangers all length	elosure OF nent(s) in 4 3/8" n. thk., in (MW n. or gause s. (ft & in.)	Min. design npact teste n. Corr. Allow) uge cong Joint (6'	Cot. A)	1/8° rr. Allow 950 Numbe	e as o	30	Attac	Ehment	Welded Welded o Straight o C) Heat	psi r bolted)	
8. Ty 11 9. M 10. lr 11. H item 12. T 13.Tr Item 14. S	ype of jacket f bar, give dime tAWP (ir mpact test dydro., pneu., o is 12 and 13 to ubesheet: Floating (Mat'l ubes: Mat'l S is 14 - 18 incl. to Shell (a) No. of Coo Diameter, in.	nsions 229 hternal) NO, CHA r comb. test be complete Stationary (N Spec. No.) SA214 Spec. No., Go be complete course(s): urse(s) Length (ft. &	l: (extern ARPY I press. — d for tube SA-266 fat'l Spec ERW rade or Tyted for inn TOW	5 psi nal) MPACT 408 sections2 . No) Dia., ype ler chambers	Dia., in. Os of jacketed Material	p. 30 (intext	D2 mai) PER U0 te yes or poof test press.) Nom. thi	(externormal (exte	Norn	oF hent(s) ir 4 3/8" h. thk., ir (MW h. or gaus) (ft & in.)	Min. design npact teste n. Corr. Allow y) uge ong Joint (Full, Spot	Cot. A) None	1/8' rr. Allow 950 Numbe	e as o	-7 1/4 ³	Attace Attace Attace Ot, No.	Echment Strape	Welded Welded (welded o Ctraight o C) Heat 1	psi r bolted)	
9. M 10. lr 11. H item 12. T 13.Tr Item 14. S	ype of jacket f bar, give dime (ir mpact test dydro., pneu., o s 12 and 13 to ubesheet: Floating (Mat'l ubes: Mat'l S ss 14 - 18 incl. to Shell (a) No. of	nsions	l: (extern ARPY I press. — d for tube SA-266 fat'l Spec ERW rade or Tyted for inn TOW	5 psi nal) MPACT 408 sections2 . No) Dia., ype ler chambers	at max. tem TEST EX Dia., in. O s of jacketed Material	p. 30 (intext	D2 mai) PER U0 te yes or poof test press.) Nom. thi	(exterr CS-66(b) no and the	Normthk., in schangers all length	elosure OF nent(s) in 4 3/8" n. thk., in (MW n. or gause s. (ft & in.)	Min. design npact teste n. Corr. Allow) uge cong Joint (6'	Cot. A) None	1/8° rr. Allow 950 Numbe	e as o	-7 1/4 ³	Attac	Echment Strape	Welded Welded o Straight o C) Heat	psi r bolted)	
8. Ty 11 9. M 10. lr 11. H item 12. T 13.Tr Item 14. S	ype of jacket f bar, give dime tAWP (ir mpact test dydro., pneu., o is 12 and 13 to ubesheet: Floating (Mat'l ubes: Mat'l S is 14 - 18 incl. to Shell (a) No. of Coo Diameter, in.	nsions 229 hternal) NO, CHA r comb. test be complete Stationary (N Spec. No.) SA214 Spec. No., Go be complete course(s): urse(s) Length (ft. &	l: (extern ARPY I press. — d for tube SA-266 fat'l Spec ERW rade or Tyted for inn TOW	5 psi nal) MPACT 408 sections2 . No) Dia., ype ler chambers	Dia., in. Os of jacketed Material	p. 30 (intext	D2 mai) PER U0 te yes or poof test press.) Nom. thi	(externormal (exte	Norn	oF hent(s) ir 4 3/8" h. thk., ir (MW h. or gaus) (ft & in.)	Min. design npact teste n. Corr. Allow y) uge ong Joint (Full, Spot	Cot. A) None	1/8' rr. Allow 950 Numbe	e as o	-7 1/4 ³	Attace Attace Attace Ot, No.	Echment Strape	Welded Welded (welded o Ctraight o C) Heat 1	psi r bolted)	
8. Ty 10 10. Ir 11. H item 12. T 13.Tr 14. S	ype of jacket f bar, give dime IAWP (ir mpact test Hydro., pneu., o is 12 and 13 to Tubesheet: Floating (Mat'l ubes: Mat'l 5 is 14 - 18 incl. to Shell (a) No. of Cot Diameter, in. 54"	nsions 229 nternal) NO, CHA r comb. test be complete Stationary (N Spec. No.) SA214 Spec. No., G o be complete course(s): urse(s) Length (ft. &	1: (extern ARPY I press d for tube SA-266 far! Spec TOW	5 psi nal) MPACT 408 sections2. No) Dia., ype ler chambers	Dia., in. Os of jacketed Material	p. 30 (intext	D2 mai) PER U0 te yes or poof test press.) Nom. thi	(externormal (exte	Norm. 110° m. 110° m. thk., ir kchanger all length ess Corr. 1/16"	of lent(s) in thk., in thk., in thk., in thy, in the first of the firs	Min. design mpact teste control control ge cong Joint (Full, Spot, Spot	Co., in	1/8' rr. Allow 950 Number ') &	e as o	-7 1/4 ³	Attace Attace Attace Ot, No.	Echment Strape	Welded Welded (welded o Ctraight o C) Heat 1	psi r bolted)	
8. Ty 10 10. Ir 11. H item 12. T 13.Tr 14. S	ype of jacket f bar, give dime IAWP (ir mpact test Hydro., pneu., o is 12 and 13 to Tubesheet: Floating (Mat'l ubes: Mat'l 5 is 14 - 18 incl. to Shell (a) No. of Cot Diameter, in. 54"	nsions 229 Internal) NO, CHA r comb. test be complete Stationary (N ————————————————————————————————————	press d for tube SA-266 darl Spec. ERW rade or Tyed for inn TOW	5 psi nal) MPACT 408 sections2 . No) Dia., ype ler chambers Spec. SA	Dia., in. Dia. in. Os of jacketed Material /Grade or Ty	p. 30 (intext	D2 mai) PER U0 te yes or poof test p press.) Nom. thi	(externormal (exte	Norm. 110° m. 110° m. thk., ir kchanger all length ess Corr. 1/16"	of lent(s) in thk., in thk., in thk., in thy, in the first of the firs	Min. design mpact teste n. Corr. Allow): (6' ong Joint (' Full, Spot, Spot	Co., in. None	1/8' rr. Allow 950 Number 2) &	e as o	-7 1/4 ³ n, Joint (() Full, Spo	Attace Attace Attace Ott, No	chment S Type	Welded of twelded of twell of twelded of twelded of twelded of twelded of twelded of twe	psi r bolted)	
8. Ty 11 9. M 10. lr 11. H item 12. T 13.Tr Item 14. S	rype of jacket f bar, give dime lAWP (ir mpact test dydro., pneu., o is 12 and 13 to ubesheet: Floating (Mat'l ubes: Mat'l 8 is 14 - 18 incl. to Shell (a) No. of Cot Diameter, in. 54" Heads: (a)	nsions 229 Internal) NO, CHA r comb. test be complete Stationary (N ————————————————————————————————————	pressd for tube SA-266 hart Spec	5 psi nal) MPACT 408 sections2. No) Dia., ype ler chambers	Dia., in. Dia., in. Os of jacketed Material /Grade or Ty -516Gr.70	p. 30 (intext	D2 mai) PER U0 te yes or portest press.) Nom. thi	(extern CS-66(b) no and the Norm.	Norm. thk., ir kchanger all length oss Corr.	oF lent(s) ir 4 3/8" n. thk., ir (MW n. or gauss (ft & in.) Type 1	Min. design npact teste n. Corr. Allow) ge ong Joint (Full, Spot Spo (Mart S	Co., NO.	1/8' rr. Allow 950 Number 2) &	e as o	-7 1/4³ n, Joint ((Full, Spo	Attace Attace Attace Ott, No	chment S Type	Welded of twelded of t	r bolted)	
8. Ty	sype of jacket f bar, give dime taWP (ir mpact test dydro., pneu., o is 12 and 13 to ubesheet: Floating (Mat'l ubes: Mat'l S is 14 - 18 incl. t Shell (a) No. of Cor Diameter, in. 54" Heads: (a) Location (Top,	nsions 229 Internal) NO, CHA r comb. test be complete Stationary (N Spec. No.) SA214 Spec. No., Gi be complete course(s): Jrse(s) Length (ft. & 8' -5 5/1 SA-516G (Ma	lexion (external press. — do for tube SA-266 darl Spec. — ERW rade or Tyled for inn TOW — in.) in.70 ,1 arl Spec. uness	5 psi nal) MPACT 408 sections2 . No) Dia., ype er chambers Spec. SA	Dia., in. Dia., in. Os of jacketed Material /Grade or Ty -516Gr.70	p. 30 (interest for the content of t	D2 mai) PER U0 te yes or poof test p press.) Channels channels	(extern CS-66(b no and the look of heat extern CS-68"	Norm. thk., ir kchangers all length bess Corr. 1/16"	oF Interest of the second of t	mpact tester mp	Co., in. None ot	1/8' rr. Allow 950 Number 2) &	e as o	-7 1/4* n, Joint ((Full, Spongle) H.T. ressure	Attace Attace Attace Time	thment SType 10	Welded (Welded of the control of th	r bolted)	
8. Ty 10 lr 10. lr 11. H item 12. T 13.Tr ltem 14. S No. 1	rype of jacket f bar, give dime lAWP (ir mpact test dydro., pneu., o is 12 and 13 to ubesheet: Floating (Mat'l ubes: Mat'l 8 is 14 - 18 incl. to Shell (a) No. of Cot Diameter, in. 54" Heads: (a)	nsions 229 Internal) NO, CHA In comb. test be complete Stationary (No	lexion (external press. — do for tube SA-266 darl Spec. — ERW rade or Tyled for inn TOW — in.) in.70 ,1 arl Spec. uness — Corr.	5 psi nal) MPACT 408 sections2 . No) Dia., ype ler chambers Spec. SA	Dia., in. Dia., in. Os of jacketed Material /Grade or Ty -516Gr.70	p. 30 (interest for the content of t	D2 mai) PER U0 te yes or portest press.) Nom. thi	(extern CS-66(b no and the content of the content o	Norm. thk., ir kchangers all length bess Corr. 1/16"	oF lent(s) ir 4 3/8" n. thk., ir (MW n. or gauss (ft & in.) Type 1	mpact tester mp	Co., NO.	1/8' rr. Allow 950 Number 2) &	e as o	-7 1/4³ n, Joint ((Full, Spo	Attace Attace Attace Time	thment SType 10	Welded Welded o Company Company Category, Spot, Nor	r U)	
8. Ty	sype of jacket f bar, give dime taWP (ir mpact test dydro., pneu., o is 12 and 13 to ubesheet: Floating (Mat'l ubes: Mat'l S is 14 - 18 incl. t Shell (a) No. of Cor Diameter, in. 54" Heads: (a) Location (Top,	nsions 229 Internal) NO, CHA r comb. test be complete Stationary (N Spec. No.) SA214 Spec. No., Gi be complete course(s): Jrse(s) Length (ft. & 8' -5 5/1 SA-516G (Ma	lexion (external press. — do for tube SA-266 darl Spec. — ERW rade or Tyled for inn TOW — in.) in.70 ,1 arl Spec. uness	5 psi nal) MPACT 408 sections2 . No) Dia., ype er chambers Spec. SA	Dia., in. Dia., in. Os of jacketed Material /Grade or Ty -516Gr.70	p. 30 (interest for the content of t	D2 mai) PER U0 te yes or poof test p press.) Channels channels	(extern CS-66(b no and the look of heat extern CS-68"	Norm. thk., ir kchangers all length bess Corr. 1/16"	oF Interest of the second of t	mpact tester mp	Co., in. None ot	1/8' rr. Allow 950 Number 2) &	e as o	-7 1/4* n, Joint ((Full, Spongle) H.T. ressure	Attace Attace Attace Time	thment SType 10	Welded (Welded of the control of th	psi.	

RR 1026.10

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