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

. Ma				DADV DDIVE	UNITETAL T	EVAC 770	42 E2DE									
	anufactured for	No.				EARS 770	(Name	and address of I	urchas	er)	S.	ready to	s yre ca	101 - 1	99	
. Lo	cation of install	ation GIANT IN	DUSTRIES	, GRAFTON, \	IRGINIA	Japan (174)	Lifecult F	(Name and ad	deana)		. 04	1	Legal		<u> </u>	0.00
Tv	Type: HORIZONTAL			HEAT EXCHANGER				(Name and address) X-7262-B			X-7262-A2 REV. 2		2	5264		2007
. ıy	Type: HORIZONTAL (Horiz., vert., or sphere)			(Tank, separator, jkt. vessel, heat exh., etc.)				(Mfg's serial No.) (CRN)				(Drawing No.)	- 11-	(Nat'l. Bd. No.)		ar bui
AS	SME Code, Sec	tion VIII, Div. 1		2004	EDITION, 200	OS ADDENE)A	1 10 10	251	-		1200				
	V5.1,400				on and Adde		Am the Till		ode Ca		174			vice per U	IG-120(d)
	6 - 11 incl. to be				ckets of jac	keted ves						namber vessels 22'-7				
Sh		f course(s):						length (ft & in.):								
No.	Course(s) No. Diameter, in. Length (ft & in.)) Spec	Material Spec./Grade or Type		Thickness Nom. Co		Long. Joint		Eff.	Circum, Joint (Cat. A Type Full, Spot, Non				eat Treat	ment Time
2 59" I.D.		8,.0,	1 (1)	SA-516-70	1	•	1/8"	The second second	1.0		1	FULL		.0		
1	59" I.D.	6'-7 1/2"		SA-516-70	1	-	1/8"	FULL		1.0	1	FULL	+-1	.0		- 17
A TOTAL	<u> </u>		1	DA E10.7				n.v								
He	eads: (a)	(Mat'l Sr	ec. No., C	SA-516-7 Grade or Typ		ne & Tem	D	(b)	N	(Mat'l S	pec. No.	, Grade or Type	e) H.T.	Time & T	emp	
	Location (Top				dius	Elliptica	100	Hemispherica		at I		to Pressure		Cateo		
	Bottom, Ends) Min.	Corr.	Crown	Knuckle	Ratio	Apex Angle			neter	Conve	Concave	Type	Full, Sp	ot None	_
a) o)	END	15/16"	1/8*	-		2:1	-	1.6.1.1.8	-	-	NC 11977	1 11 1 X 3 4 4	S	NU	ONE	1
Ty If b	ovable, bolls us ope of jacket ar, give dimens	ions	her faster	psi at max.	temp.	500	36	Jacket clo	sure _		(C	o.) Describe as oge np. 0	e & we	f bolted, d	escribe o	
Ty If b √ω	pe of jacket ar, give dimens	ions	15 ternal)	psi at max.)(g) & UG-20((internal) (f)	(exter	Jacket clo	sure _		(C	Describe as oge	ee & we	f bolted, d	escribe o	-
Ty If b V/	ope of jacket ear, give dimens AWP 49 (inter	ions 17 mal) (ex SHELL SIDE DES	15 ternal) IGNED PEI	psi at max.)(g) & UG-20(e yes or no	(internal) f) and the co	(exter	Jacket clo	sure _		(C	Describe as oge	ee & we	f bolted, d	escribe o	-
Ty If b W	ope of jacket ear, give dimens AWP 49 (interpretate NO;	ions 77 mai) (ex SHELL SIDE DES	15 lemal) GIGNED PEI	psi at max. R UCS-66(a)(c (Indicat)(g) & UG-20(e yes or no	(internal) f) and the co	(exter	Jacket clo	sure _		(C	Describe as oge	ee & we	f bolted, d	escribe o	-
Ty If b W . Im . H . H	rpe of jacket ar, give dimens AWP 49 (interpact test NO; lydro., prett, 5: 12 and 13 to be ubesheel:	ions 77 mal) (ex SHELL SIDE DES FARMING. test pre- 9 completed for SA-350-LF	15 lemal) SIGNED PEI	psi at max. R UCS-66(a)(c (Indicat 729 ions.)(g) & UG-20(e yes or no PSIG 60 :	(internal) (ii) and the compression Proceedings	(exter	Jacket clo 6 °F nal) impact tested) 6 3/4*	Min.		(C	Describe as ogenper. 0 at tes	ee & we	f bolted, do	497 	- fan , f , carr , carr , carr
Ty If b Vu Im	rpe of jacket ar, give dimens AWP 49 (interpact test NO; lydro., prett, 5: 12 and 13 to be ubesheel:	ions 77 mal) (ex: SHELL SIDE DES	15 lemal) SIGNED PEI	psi at max. R UCS-66(a)(c (Indicat 729 ions.	l(g) & UG-20(e yes or no PSIG 60 (Dia., in. (sub)	(internal) (ii) and the compression Proceedings	(exter	Jacket clo 6 . °F nal) impact tested) 6 3/4* Nom. thk., ir	Min.	design	(Emetal ten	Describe as ogennp. 0 at tes	ee & we	f bolted, do *F at rature of BC achment (v	497 DLTED welded o	
Ty If b W . Im . H . H	rpe of jacket ar, give dimens AWP 49 (interpact test NO; lydro., prett, 5: 12 and 13 to be ubesheel:	ions 77 mai) (ex SHELL SIDE DES FRACTIVE. test pre e completed for SA-350-LF Stationary (Mat	15 lemal) SIGNED PEI	psi at max. R UCS-66(a)(c (Indicat 729 ions.	l(g) & UG-20(e yes or no PSIG 60 (bia., In. (sub)	(internal) (ii) and the compression Procession 9/16 ject to pre	(exter	Jacket clo 6 °F nal) impact tested) 6 3/4* Nom. thk., in.	Min.	design	(C	Describe as ogennp. 0 at tes 3/8 Allow., in.	ee & we	f bolted, do	497 DLTED welded o	
Ty If b Im Im Ty	rpe of jacket ar, give dimens AWP 49 (interpret test NO; dydro., prett, 5: 12 and 13 to be ubesheet:	ions 77 mai) (ex. SHELL SIDE DES. SHELL SIDE	lemal) IGNED PER Itube sect 2,CL1 I Spec. N	psi at max. R UCS-66(a)(c (Indicat 729 ions. c.) Dia., ir	l(g) & UG-20(e yes or no PSIG 60 (bia., in. (sub)	(internal) (ii) and the co Proc 9/16 ject to pre	(exter	Jacket clo 6 °F impact tested) 6 3/4" Nom. thk., ir. 0.083	Min.	design	(Emetal ten	Describe as ogenne. 0 at tes 3/8 Allow., in. in. 785	ee & we	f bolted, do *F at rature of BC achment (v	497 DLTED welded o	r bolt
Tylif b	rpe of jacket ar, give dimens AWP 49 (interpret test NO; lydro., protest, 6; 12 and 13 to be ubesheet: Floating (Mat'il ubes: Mat'il	ions 77 mal) (ex: SHELL SIDE DES EXECUTED. test pre e completed for SA-350-LF Stationary (Mathematical Spec. No.) SA-179 Spec. No., Green	iemal) isigned PEI iss tube sect 2,CL1 i Spec. N	psi at max. R UCS-66(a)(c (Indicat 729 ions. o.) Dia., ir	l(g) & UG-20(e yes or no PSIG 60 ! Dia., in. (sub)	(internal) (if) and the compression Proceedings 9/16 ject to preserved.	(exter	Jacket clo 6 . *F nal) impact tested) 6 3/4* Nom. thk., in 0.083 Nom. thk., i	Min.	design	(Emetal ten	Describe as ogennp. 0 at tes 3/8 Allow., in.	ee & we	f bolted, do *F at rature of BC achment (v	497 DLTED welded o	r bolt
Ty If b Im	ar, give dimens AWP 49 (interpreted NO; dydro., protest, st. 12 and 13 to be subesheet: Floating (Mat'l ubes: Mat'l 14 - 18 incl. to be	ions 7 mal) (ex SHELL SIDE DES FRACIONO. test pre 9 completed for SA-350-LF Stationary (Mat' Spec. No.) SA-179 Spec. No., Gra be completed for	iemal) isigned PEI iss tube sect 2,CL1 i Spec. N	psi at max. R UCS-66(a)(c (Indicat 729 ions. c) Dia., ir	(g) & UG-20(e yes or no PSIG 60 s) ia., in. (sub)	(internal) (if) and the compression Proceedings 9/16 ject to preserved.	(exter	Jacket clo B *F nal) impact tested) 6 3/4* Nom. thk., in. 0.083 Nom. thk., i	Min.	design	(Emetal ten	np. 0 at tes 3/8 Allow., in. in. 785 Number	ee & we	f bolted, do *F at rature of BC achment (v	497 DLTED welded o	r boli
Ty If b Im	rpe of jacket ar, give dimens AWP 49 (inter pact test N0; lydro., prett, 6; 12 and 13 to be ubesheet: Floating (Mat'i ubes: Mat'i 14 - 18 incl. to be nell (a) No. o	ions 77 mal) (ex SHELL SIDE DES EXECUTED. test pre e completed for SA-350-LF Stationary (Mathematical Spec. No.) SA-179 Spec. No., Graphe completed for foourse(s):	iemal) isigned PEI iss tube sect 2,CL1 i Spec. N	psi at max. R UCS-66(a)(c (Indicat 729 ions. c.) Dia., ir	(g) & UG-20(e yes or no PSIG 60 s) ia., in. (sub)	(internal) (if) and the compression Proceedings 9/16 ject to preserve 3/4 D., in. sels or ch	(exter	Jacket clo 6 °F nal) 6 3/4* Nom. thk., in. 0.083 Nom. thk., i	Min.	Cor	Corr.	Describe as ogeonp. 0 at tes 3/8 Allow., in. 785 Number	Atta	f bolted, do "F at rature of BC achment (v Attach	497 DLTED welded o	r bolt
Ty If b Im	rpe of jacket ar, give dimens AWP 49 (interpreted No.) dydro., protest,	ions 77 mal) (ex SHELL SIDE DES FROM the second test pre 9 completed for SA-350-LF Stationary (Mat' Spec. No.) SA-179 Spec. No., Gra be completed for f course(s):	15 lernal) ISIGNED PEI sss tube sect 2,CL1 I Spec. No	psi at max. R UCS-66(a)(c (Indicat 729 ions. c) Dia., ir	l(g) & UG-20(e yes or no PSIG 60 ! Dia., in. (sub)	(internal) (if) and the co Proc 9/16 ject to pre 3/4 D., in. sels or ch	(exter	Jacket clo B *F nal) impact tested) 6 3/4* Nom. thk., in. 0.083 Nom. thk., i t exchangers. length (ft & in.) Long, Joint /pe Full, Spot	Min. of galactic (Cat. A, None	Coruge	Corr. Circ	Describe as oge np. 0 at tes 3/8 Allow., in. in. 785 Number 3'-6 um. Joint (Cat. Full, Spot. N	Atta	f bolted, do "F at rature of BC achment (v Attach	497 DUTED welded of the traight or eat Treat	r bolt
Ty If b Im	rpe of jacket ar, give dimens AWP 49 (inter pact test N0; lydro., prett, 6; 12 and 13 to be ubesheet: Floating (Mat'i ubes: Mat'i 14 - 18 incl. to be nell (a) No. o	ions 7 mal) (ex SHELL SIDE DES FRACIONE, test pre 9 completed for SA-350-LF Stationary (Mat' Spec. No.) SA-179 Spec. No., Gra the course (s): (a(s))	15 lemal) liGNED PEI less tube sect 2,CL1 I Spec. N lede or Type or inner ch	psi at max. R UCS-66[a](c (Indicat 729 ions. o.) Dia., ir	l(g) & UG-20(e yes or no PSIG 60 solia., in. (sub)	(internal) (if) and the co Proc 9/16 ject to pre 3/4 D., in. sels or ch	(exter	Jacket clo 6 *F nal) 6 3/4* Nom. thk., in. 0.083 Nom. thk., i at exchangers. Length (ft & in.)	Min. of galactic (Cat. A, None	Coruge	Corr.	Describe as ogennp. 0 at tes 3/8 Allow., in. in. 785 Number 3'-6	Atta	f bolted, de °F at	497 DUTED welded of the traight or eat Treat	r bolt
Ty If b V Im Th Th Th Th Th Th Th Th Th T	rpe of jacket ar, give dimens AWP 49 (interpreted No.) dydro., protest, fill 12 and 13 to be absence: Floating (Mat'll ubes: Mat'll 14 - 18 incl. to lead of the lead	ions 77 mal) (ex SHELL SIDE DES FROM the second test pre 9 completed for SA-350-LF Stationary (Mat' Spec. No.) SA-179 Spec. No., Gra be completed for f course(s):	15 lemal) liGNED PEI less tube sect 2,CL1 I Spec. N lede or Type or inner ch	psi at max. R UCS-66(a)(c (Indicat 729 ions. c) Dia., ir ce nambers of j Material /Grade or T	l(g) & UG-20(e yes or no PSIG 60 solia., in. (sub)	(internal) (if) and the compression of the compress	(exter	Jacket clo B *F nal) impact tested) 6 3/4* Nom. thk., in. 0.083 Nom. thk., i t exchangers. length (ft & in.) Long, Joint /pe Full, Spot	Min. of galactic (Cat. A, None	Coruge	Corr. Circ	Describe as oge np. 0 at tes 3/8 Allow., in. in. 785 Number 3'-6 um. Joint (Cat. Full, Spot. N	Atta	f bolted, de °F at	20LTED welded on the traight or traight or the traight or the traight or the traight or the trai	r boli U)
Ty If b Im Im S Ti Ti S No. 1	rpe of jacket ar, give dimens AWP 49 (inter pact test N0; lydro., prests, te 12 and 13 to be ubesheet: Mat'l ubes: Mat'l 14 - 18 incl. to 1 nell (a) No. o Course Diameter, in. 59" I.D.	ions 77 mal) (ex SHELL SIDE DES FROM the second test pre 9 completed for SA-350-LF Stationary (Mat' Spec. No.) SA-179 Spec. No., Gra be completed for f course(s):	15 lemal) liGNED PEI less tube sect 2,CL1 I Spec. N lede or Type or inner ch	psi at max. R UCS-66(a)(c (Indicat 729 ions. c.) Dia., ir De ambers of j Material /Grade or T SA-516-70N	l(g) & UG-20(e yes or no PSIG 60 solia., in. (sub)	(internal) (if) and the compression of the compress	(exter	Jacket clo 6 . *F nal) 6 3/4* Nom. thk., in. 0.083 Nom. thk., i at exchangers. length (ft & in.) Long. Joint roe Full. Spot 1 FUL	Min. of galactic (Cat. A, None	Coruge	Corr. Circ	Describe as oge np. 0 at tes 3/8 Allow., in. in. 785 Number 3'-6 um. Joint (Cat. Full, Spot. N	Atta	f bolted, de °F at	20LTED welded on the traight or traight or the traight or the traight or the traight or the trai	r boli U)
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Ty If b N Im Im Im Im Im Im Im Im Im	rpe of jacket ar, give dimens AWP 49 (inter pact test N0; lydro., prests, te 12 and 13 to be ubesheet: Mat'l ubes: Mat'l 14 - 18 incl. to 1 nell (a) No. o Course Diameter, in. 59" I.D.	ions 7 mal) (ex SHELL SIDE DES FRACIONE, test pre 9 completed for SA-350-LF Stationary (Mat' Spec. No.) SA-179 Spec. No., Gra be completed for f course(s): e(s) Length (ft & in 3'-6 7/16"	15 lemal) liGNED PEI liss tube sect 2,CL1 I Spec. No.	psi at max. R UCS-65(a)(c (Indicat 729 ions. c.) Dia., ir De nambers of j 1 Material /Grade or T SA-516-70N SA-350-LF2 Grade or Tyr	l(g) & UG-20(e yes or no PSIG 60 : Dia., in. (sub) O.E acketed ves ype NG 1 1 ,CL1 pe) H.T Tindius	(internal) (if) and the compression of the compress	(exter	Jacket clo 6 . *F nal) 6 3/4* Nom. thk., ir. 0.083 Nom. thk., i at exchangers. length (ft & in.) Long. Joint //Pe Full. Spot 1 FUL (b) Hemispherica	Min. of Min. or ga	Cor uge	Corr. r. Allow., Type 1 Spec. No	Describe as oge np. 0 at tes 3/8 Allow., in. in. 785 Number 3'-6 um. Joint (Cat. Full. Spot. N FULL o., Grade or Type to Pressure	7/16" A.B.& (One E	f bolted, de "F at	escribe of 497 497 DLTED welded or himent U traight or mp. Femp gory A	r bolt
Ty If b No. Im If b	rpe of jacket ar, give dimens AWP 49 (interpretation of the pact test NO; lydro., protest, for 12 and 13 to be subsesheet: Floating (Mat'l to be subsesheet: Mat'l 14 - 18 incl. to let (a) No. o Course Diameter in. 59* I.D.	ions 77 mal) (ex SHELL SIDE DES EXAMPLE, test pre- 9 completed for SA-350-LF Stationary (Mat' Spec. No.) SA-179 Spec. No., Gra be completed for f course(s): (s) Length (ft & in 3'-6 7/16"	15 lemal) liGNED PEI liss tube sect 2,CL1 I Spec. No.	psi at max. R UCS-65(a)(c (Indicat 729 ions. c.) Dia., ir De nambers of j 1 Material /Grade or T SA-516-70N SA-350-LF2 Grade or Tyr	(g) & UG-20(e yes or no PSIG 60 : Oia., In. (sub) O.t. acketed ves yoe No 1 1	(internal) (if) and the compression of the compress	(exter	Jacket clo 6 "F nal) 6 3/4" Nom. thk., ir 1 exchangers. length (ft & in.) Long. Joint //pe Full. Spot 1 FUL (b) Hemispherica	Min. or ga	Cor uge	Corr. r. Allow.,	Describe as oge np. 0 at tes 3/8 Allow., in. in. 785 Number 3'-6 um. Joint (Cat. Full. Spot. N FULL o., Grade or Type to Pressure	7/116" A.B.& (One E	f bolted, de "F at	OLTED welded or traight or mp.	r bolt

If removable, bolts used (describe other fastening) [a] SA-193-B7, 1 1/2", 60,; CHAN-TO-SHELL: SA-193-B7, 1 1/2", 60

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

MAWP	625			at max. temp.		300 F	Mitt.	resign metal temp.		_ ' at _	023
2.	temal)		emal)			(external)			540		
Impact test NO; CHANNEL SIDE DESIGNED PER UCS-66(a)(c)(g) & UG-20(f)									at test temperature of		
			ō:	(Indicate yes or n	o and the compone	int(s) impact teste	ed)				
Hydro., poeta,	CHEUN	ib. test pres	s	813 PSIG	Proof test						
Nozzles, inspec			-	e.				32.37.22			
Purpose (Inlet,	Tuon, e	Diameter	Flange		Material	Nozzle T	hickness	Reinforcement	How A	ttached	Location
tlet, <u>Drain, etc.)</u>	No.	or Size	Type	Nozzle	Flange	Nom.	Corr.	Material	Nozzle	Flange	(Insp. Ope
NLET/OUTLET	1/1	12"-600#	RFWN	SA-106-B	SA-105-N	.688*	1/8"	SA-516-70N	WELDED	WELDED	CHANNE
PG/TW	212	1 1/2 "600#	RFLWN	SA-105-N	-	.630"	1/8"	WELD	WELDED	-	CH. NOZS
OUTLET	1	14*-600#	RFWN	SA-106-B	SA-105-N	.750"	1/8"	SA-516-70	WELDED	WELDED	SHELL
INLET	1	16"-600#	-RF WN	SA-106-B	SA-105-N	.844*	1/8"	SA-516-70	WELDED	WELDED	SHELL
PG/TW	2/2	11/2* 600#	RFLWN	SA-105-N		.630*	1/8"	WELD	WELDED		SH. NOZS
									1		
Supports: Skirt	100	NO	Lugs	•••	Legs	Others	(2)	BELLY BANDS	Attached	SHELL;	WELDED
		es or No)		(No.)	Legs (No.))		(Describe)		(Where a	and How)
List the name o	f part,	item numbe	r, míg's. nan	ne and identifying	number)			ished for the following			
Remarks: SER	VICE: F	EACTOR FEE	D/EFFLUENT I	XCHANGER, P.O.	NO: 56603-P-12-04,	ITEM NO: E-641	B, SIZE: 5	9-264, TYPE: AFU		51 W. L. S. C.	
				DEVICES PROVIDED					,		
				/8" THK., SA-350-L		4					Đ
					-350-LF2,CL1, RING						
I, the understand employe the pressure Manufacture employer mainspector nor Date 4	igned, d by vesse r has co kes ar r his er /// eat the	holding a va I described in onstructed to ny warranty, nployer shal Signature Statements of Division 1,	n this Manuf his pressure expressed of Il be liable in gned	ion issued by The OneBeacon Americacturer's Data Revessel in accordant implied, concern any manner for a (Authoric	(Manufacturer) CERTIFICATE (National Board of B ca Insurance Company port on ance with ASME Co ning the pressure ve iny personal injury of ized Inspector) IFICATE OF FIE	Boiler and Presson A-//-07 Ide, Section VIII, essel described in property damage. Con LD ASSEMBL bly construction	Division 1. n this Manu ge or a loss mmissions Y COMPI of all parts of	nspectors and the Sta f BOST , and state that, to the By signing this certific facturer's Data Repor of any kind arising for N.B.# 11921 BA OK (Nat'l Board Incl. of	ON, MASS. be best of my kn cate neither the t. Furthermore, om or connecte LA.# 823 andorsement, S	of Ohe have been dependent of Arments of Arm	pection. and No.)
U Certificate	of Au	horization N	lo				Expires				
Date		Na	ame				Signed		(Representati		
					(Assembler)				(Representati	/e)	
have compare	ed by red the anufac	statements	in this Manu	on issued by The facturer's Data R , not in d assembled this	eport with the descr acluded in the certif pressure vessel in	Boiler and Press ribed pressure ve icate of shop ins accordance with	ure Vessel essel and st pection, have	Inspectors and the SI of Late that parts referred we been inspected by le, Section VIII, Divisi	d to as data iten me and to the l on 1. The descr	ns pest of my kno	vas .
inspected an	oncern	ing the pres	sure vessel	described in this !	Manufacturer's Data	Report. Further	more, neith	the Inspector nor his er the Inspector nor h	employer make is employer sha	s any warran Il be liable in	iy, expressed any
manner for a	ny per	sonal injury	or property o	damage or a loss	of any kind arising f	from or connecte	d with this i	nspection.			
manner for a		sonal injury Si		damage or a loss (Authori			d with this i		¥1		

