## ASME

107606

(Corr. allow.)

368

(Number)

U

(Type (Straight or Ui)

National Board Number: 2066
Mir, Representative: VAN ENT Date: APR. 19/2015

PAGE FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1 Ilsung Coporation #74 Daejeong-Ro, Onsan-Eub, Ulju-Gun, Ulsan 689-892, Republic Korea. 1. Manufactured and certified by \_\_\_\_ (Name and address of Manufacturer) SHELL CANADA ENERGY 400 4AVE. S.W., BOX 100, STATION M, CALGARY, ALBERTA T2P 0J4 2. Manufactured for \_\_\_\_\_ (Name and address of Purchaser) CARMON CREEK EXPANSION IN PEACE RIVER COMPLEX, ALBERTA, CANADA 3. Location of installation (Name and address) 4. Type (Horizontal, vertical, or sphere) Heat Exchanger 14-HE-076 (Manufacturer's serial number) (Tank, separator, jkt. vessel, heat exch., etc.) (+16) 2060 2015 W8068.2 (redmua breo8 lancitals) (Drawing number) 5. ASVE Code, Section VIII, Div. 1 2010 ED, 2011 ADD (July.01,2011) N/A (Coda Case number) [Edition and Addenda, if applicable (date)] (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 multichamber vessels. 7585mm \_\_\_\_\_(b) Overall length \_\_\_ 6. Shell: (a) Number of course(s) Thickness Long. Joint (Cat. A) Material Circum, Joint (Cat. A, B & C) Heat Treatmont Non. Corr. Type Full, Spot, None Eff. Full, Spot, None Spec/Grade or Type Temp. 15mm 1.5mm Full 2 I,D 860mm 2600mm SA516-70(-1) 1.0 1.0 1.1Hr. Full 1.0 Full SA518-7C(+1) 1.0 1.1Hr. 1.D 860mm 2385mm 15mm 1.5mm (BLANK) Body Flanges on Shells Washer Bolting Material (OD,ID,thk) Flange Thk Min Hub Thk Washer Material 48,1 1/8"-8UN×420L SA320-L7M 58, 32, 6mm Single, butt weld End 860mm | 1054mm 97mm 15mm (+3) 1 (-2) (BLANK) SA516-70(+1) / H.T-1.1Hr&625°C (+13) 7. Heads: (a) (Material spec, number, grade or type) (If.T.-time and temp.) (Material spec. number, grade or type) (H.T.-time and temp.) Side to Pressure Category A Radius Location (Top. Effotical Conkat Hemispherical Flat Corr. Bottom, Ends) Convex Concave Full, Spot, None FIE YES YES End (BLANK) Body Flanges on Heads Min Hub Thk How Attached Num 8 Size Bolting Material Washer Material OD Flange Thk Material (OD, ID, thk) Location (BLANK) (6) Jacket closure 8. Type of Jacket \_\_\_\_ (Describe as ogce and wold, bar, etc.) N/A \_If bolted, describe or sketch. If bar, give dimensions F.V 200°C Min. design metal temp. \_\_45°C at \_\_2551kPa . 2551kPa\_\_\_ \_\_ at max, temp. \_\_ (Infernal) (External) (Internati (External) YES(SHELL-A02) at test temperature of \_\_\_\_\_-45°C 10. Impact test (Indicate yes of no and the component(s) impact tested) Proof test \_\_\_ 11. Hydro., preus, or combi test pressure \_\_\_ Items 12 and 13 to be completed for tube sections. SA765-II(\*1) 106mm **Bolted** 860mm 12. Tubesheet [Stationary (material spec. no.)] (Diameter (subject to press.)) [Attachment (welded or boiled)] (Nominal thickness) (Corr. allow.)

(Diameter)

2.03mm

(Nominal thickness)

19.05mm

(Floating (material spec. no.))

SA179

Tubes SA179
(Material spec, no., grade or type)



National Board Number: 3-066

Mir. Representative: \(\sum{\fix}\)\/\(\sum{\fix

## FORM U-1 (Cont'd)

PAGE 2

14. S	nell: (a) No	o. of co	ourse(s)		1			(b) O	verall lo	ngth			540r	nm ·					
	Course(s)				Material			Thickness		Long, Joint (Cat. A)				Circum. Joint (Cat. A, B & C)				Heat Treatment	
No.	Diameter	Nameter Length		Spec j	Specificado or Typo			Corr.	Туро	ype Full, Spot, Nor		ne Eif.	Туре	Full, Spot, None		EH.	Temp.	Time	
1	I.D 860mm		40mm	SA	516-70(*1)		14mm	1.5mm	1	Full		1.0	1	Ful		1.0	624°C	1.1Hr.	
	(ELANK)																		
							-	Body Flan	jes on She	ll3									
		T				Т		I						В	oiting		- 1		
					l					**********		******				Washe	1		
No.	(+2) 86	io 1	00 1054mm	1	Min Hob Ti 14mm 14mm		Material (+3)		ached utt weld	Location	-		& Size -8UN×3101	SA320-L7 (+15)		(00,10,0 58, 32, 6		ner Materia TM-F436	
1			1054mm				(+3)	-	outt weld	End			15)			(*15)		(+15)	
BLAN	()																		
5. H	eads: (a)			SA765-II(*1	i)/H.T-62	4°C 1.	1Hr		(t	)			12/4 0/2	-			20		
	,dao. (a)			peo. number, g				mol				(Materia		ber, grade or t	ype) (H.	Ttime ar	nd temp.)		
	Location (Top,	Thickness		Radk		Ellotte		Contral		herical		Flat	Side to P				tegory A		
4	Bottom, Ends)	Min.	Corr.	-	Knuckle	Ratio	, As	ex Angla	-	fus	Skowi	Diameter	Conyex	Concave -	Тура	Full	, Spot, None		
(a)	End	95mm	1,5mm	-		1-		-	-		105/	4mm	-		-	-			
														1					
								Body Flan	jes on Hea	ds									
			1								_			8	olting				
	Location	Тура	aD l	OD	Flange Thi	, M	in Hub Thi	. Ma	erial I	low Attach	ed N	Num & Si	ze Boltk	ng Material		Washer D. ID, thk	) Wast	her Materio	
(a)	(BLANK)	7,00		30	1 22 32 11		27.73.22.21.11				Ed Rom d C					21 104 010	, ,,,,,,	ist makers	
ib)			Ì				7											_	
6. M	AWP 2515	kPa .	F,V (Extern	at ma	ax. temp.	1	160°C		60°C terrat)	Min. d	Lesign	metal	temp.	-45°C	a	at2	515 kPa		
7. In	AWP 2515 (Interpretation of the control of the cont			lindicat	YES a yes or no	(CHA)	NNEL-A	01) (e) impact t	ested]					-45°C mperature					
7. In	pact test _	n-comb	ē. test p	lindicat pressure	YES a yes or no	(CHA)	NNEL-A	01) (e) impact t	ested]										
7. In	pact test	n-comb	ē. test p	lindicat pressure	YES a yes or no	(CHA)	NNEL-A componen 0 kPa	01) (e) impact t	ested) Proof t				t test ter	mperature -			45°C	· ·	
7. In 8. H 9. N	pact test dro., <del>parro., -</del> ozzles, inspec	r comt	ē. test p	lindicat pressure y valve ope	YES a yes or no	(CHA)	NNEL-A componen 0 kPa	O1) (e) impact t	ested) Proof t	est zie Thickox			it test ter	mperature -	of		45°C	· ·	
7. In 8. H 9. N	pact test	tion, ar	. test p	lindkat pressure y valve ope	YES o yes or no enings:	(CHA) and the 390	NNEL-A componen 0 kPa Mas	O1) (o) impact (	Proof I	est	e33	Pein W	t test ter	nperature –	of	talls	45°C	· ·	
17. In 18. H 19. N	pact test  dro., prove  ozzles, inspec  Purpose  et, Outlet, Drain, (	tion, ar	e. test produced to the safet	I'ndicat pressure y valve ope Diameter or Size	YES a yes or no enings:	(CHA) and the 380	NNEL-A componen 0 kPa Mate Nozzla (+6)	01) (a) impact t erial Flange (+6)	Proof to Noz Nom 28.15n	zie Thickos . Comm 3.0	ess esr.	Pein M	t fest fer	Attachin Nozzle (*4)	nent De	tails tange (+5)	45°C	(ign Open.)	
(In SH	pact test  /dro., process  purpose et, Outlet, Drain, of  HELL SIDE INL  ELL SIDE OUT  ELL SIDE VEN	etc.) ET LET	No.	Endicatoressure y valve operor Size DN 200 DN 200 DN 100	YES e yes or ne enings: Type Cl. 300 f Cl. 300 lv	(CHAI and the 390 g.	NNEL-A componen O kPa  Mate Nozzle (+6) (+6) (+6)	01) (a) impact t  erial  Flange (+6) (+6) (+6)	Proof 1  Noz  Nom  28.15rr  28.25rr	est Flickock Grant 3.0 mm 3.0 mm 3.0 mm 3.0 mm	eaa korr. Omm Omm	Peint W	forcement laterial ERENT ERENT ERENT	Attachin Nozzla (*4) (*4)	of	tails lange (+5)	45°C Local (Insp. C	(ign Open.)	
7. In 18. H 19. N (In SH SH	pact test  dro., process  purpose et, Outlet, Drain, of  HELL SIDE INI.  ELL SIDE OUT  ELL SIDE VEN  ELL SIDE DRAI	etc.) ET LET T(•7) N(•7)	No.	Indicatoressure y valve operation size DN 200 DN 200 DN 100 DN 100	YES o yes or no enings:  Type Cl. 300 f Cl. 300 f Cl. 300 f	GHAI and the 380 g. g.	NNEL-A componen 0 kPa Mat Nozzia (+6) (+6) (+6) (+8)	(a) impact to im	Noz Nom 23.15r 29.15r 2.25r 8.56r	est	eaa korr. Omm Omm Omm	Pein M NH INH INH INH	forcement saterial ERENT ERENT ERENT ERENT	Attachn Nozzle (*4) (*4) (*4) (*4)	nent De	tails itails (-5) (-5) - (-5)	45°C Local (Insp. C	(ign Open.)	
17. In 18. H 19. N (In SH SH	pact test  dro., process  purpose et, Outlet, Drain, of  HELL SIDE INL  ELL SIDE VEN  ELL SIDE DRAI  UBE SIDE INLE	etc.)  ET  LET  I(•7)  N(•7)	No.	Indicatoressure  y valve operation size  DN 200  DN 200  DN 100  DN 100  DN 150	YES e yes or no enings:  Type Cl. 300 f	G. G	NNEL-A componen O kPa Mat Nozzla (+6) (+6) (+6) (+8) SA333-6	(a) impact to read (b) impact to read (c) impact to read (c)	Noz Nom 28.15rr 28.25rr 8.56rr 10.97r	est	eaa karr. Omm Omm Omm	Pein M INH INH INH INH SA5	forcement sterial ERENT ERENT ERENT ERENT ERENT ERENT	Attachin Nozzle (*4) (*4) (*4) (*4) (*4)	nent De	tails  lange (+5) (+5) - (+5) (+5)	Local (Insp. C	(ion Open.)	
7. In 18. H 19. N 19. SH SH TT	pact test	tion, ar	No.	Indicatoressure  y valve operation size  DN 200  DN 200  DN 100  DN 100  DN 150  DN 150	YES en yes or no enings:  Type Cl. 300 f	g. g	NNEL-A component O kPa  Mate Nozzla (+6) (+6) (+8) SA333-6 SA333-6	(6) mpact !  Flanga (6) (6) (6) (6) (6) (6) (6) (6) (6)	Noz Nom 23.15rr 28.15rr 22.25rr 8.56m 10.97rr	est	eaa John Omm Omm Omm Omm	Pein M INH INH INH SA5 SA5	forcement sterial ERENT ERENT ERENT ERENT ERENT ERENT 16-70(-1) 16-70(-1)	Attachin Nozzle (*4) (*4) (*4) (*4) (*4) (*4)	nent De	tails  lange (+5) (+5) - (+5) (+5) (+5)	Local (Insp. C	(ion Open.)	
7. In 188. H 199. N (In 189. SH) SH) TU	pact test  dro., process purpose et, Outlet, Drain, of HELL SIDE INIL ELL SIDE VEN ELL SIDE DRAI UBE SIDE INIL BE SIDE OUTL BE SIDE VENT	tion, ar  ET  LET  I(•7)  N(•7)  ET  ET	No.	Indicatoressure  y valve operation size  DN 200  DN 200  DN 100  DN 100  DN 150  DN 150  DN 50	YES e yes or no enings:  Type Cl. 300 h Cl. 300 h Cl. 300 f	G. S.	NNEL-A component O kPa  Material Nozzla (+6) (+6) (+8) SA333-6 SA333-6 (+6)	(c) meact (c) meact (c) meact (c)	Noz Nom 23.15r 28.15r 22.25r 8.56r 10.97r 10.97r	226 Thickness	eas forr. Omm Omm Omm Omm	Pein M INH INH INH SA5 SA5 INH	forcement interfal ERENT ERENT ERENT ERENT ERENT 16-70(-1) 16-70(-1) ERENT	Attachin Nozzle (*4) (*4) (*4) (*4) (*4) (*4) (*4)	of	tails  Stange (+5) (+5) - (+5) (+5) (+5)	Local (Insp. C	(ion Open.)	
7. In 18. H	pact test  dro., process purpose et, Outlet, Drain, of HELL SIDE INIL ELL SIDE OUT ELL SIDE DRAI UBE SIDE INLE BE SIDE OUT BE SIDE VENT BE SIDE VENT BE SIDE DRAIN BE SIDE VENT	tion, ar  tion, ar  ET  LET  (*7)  N(*7)  ET  ET  (*12)	No. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Indicatoressure  y valve operative or Size  DN 200  DN 200  DN 100  DN 100  DN 150  DN 150  DN 50  DN 50	YES en yes or no enings:  Type Cl. 300 f	G. S.	MAL-A COMPONENT COMPONENT MAT MAT MAT MAT MAT MAT MAT MAT MAT MA	(%) mpset (%) Flange (%) (%) (%) (%) (%) (%) (%) (%) (%) (%)	Noz Nom 23.15rr 28.15rr 22.25rr 8.56rr 10.97r 10.97r 16.65r 8.74rr	22ic Thickness	eas karr. Omm Omm Omm Omm Omm	Pein M INH INH INH SA5 SA5 INH	forcement sterior ERENT ERENT ERENT ERENT ERENT 16-70(-1) ERENT ERENT	Attachin Nozzle (+4) (+4) (+4) (+4) (+4) (+4) (+4) (+4)	of	tails  lange (-5) (-5) (-5) (-5) (-5) (-5) (-5)	Local (Insp. C	(ion Open.)	
7. In 88. H 99. N (In 88. H 58 SH 58 SH TU TUU TUU CO. S	pact test  dro., propose et, Outet, Drain, et HELL SIDE INIL ELL SIDE OUT ELL SIDE DRAIN UBE SIDE INIL BE SIDE OUT BE SIDE VENT BE SIDE VENT BE SIDE VENT BE SIDE DRAIN Upports: Skirt	tion, ar etc.) ET LET T(•7) N(•7) E1 ET (•12) S(•12)	No.		YES en yes or no enings:  Type Cl. 300 f	(CHA) 3800  9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Material N/A (Number)	01)   Flange   (+6)   (	Noz Nom 28.15n 28.25n 8.56n 10.97n 16.65n 8.74n	zie Thicknown 3.0 mm 3.0 MDDLE	eess Omm Omm Omm Omm Omm Omm Omm	Pein M M M M M M M M M M M M M M M M M M M	forcement interfal ERENT	Attachn Nozzla (+4) (+4) (+4) (+4) (+4) (+4) (+4) (+4)	of	talls  tange (*5) (*5) - (*5) (*5) (*5) (*5)  D TO ere and h	Local (Insp. C	(vin Open.)	
7. In 88. H 99. N (In 88. SH SH TU TUU TUU SEO. S 21. M	pact test  dro., process purpose et, Outlet, Drain, of HELL SIDE INIL ELL SIDE OUT ELL SIDE DRAI UBE SIDE INLE BE SIDE OUT BE SIDE VENT BE SIDE VENT BE SIDE DRAIN BE SIDE VENT	tion, ar  ET  LET  (•7)  N(•7)  EI  ET  (•12)  (ves c  Partia	No. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Indicatoressure  y valve operative or Size  DN 200  DN 200  DN 100  DN 100  DN 150  DN 150  DN 50  DN 50  Lugs N/G	YES en yes or no enings:  Type Cl. 300 f	GCHAI and the 3800	Material Mat	01)   Flange   (+6)   (	Noz Nom 28.15n 22.25n 8.56m 10.97r 16.65r 8.74m 3 Command Ider	zie Thickoo  . Comm 3.0  m 3.0	eess derr. Omm Omm Omm Omm Omm Omm Omm Omm Omm S	Pein M INH INH INH INH INH INH INH INH Atta	forcement interfal ERENT	Attachn Nozzla (+4) (+4) (+4) (+4) (+4) (+4) (+4) (+4)	of	talls  tange (*5) (*5) - (*5) (*5) (*5) (*5)  D TO ere and h	Local (Insp. C	(vin Open.)	
7. Inn 8. H 9. N (Inn SH SH) TU TU TU (20. S	pact test  dro., propose et, Outlet, Drain, outlet, Drain, outlet, Drain, outlet, Drain, outlet, SIDE INLE ELL SIDE OUT ELL SIDE DRAIN UBE SIDE OUTL BE SIDE VENT BE SIDE DRAIN Upports: Skirt tanufacturer's ne report (list	tion, areas.) ET LET T(*7) N(*7) ET ET (*12) N(*9) (Yes of Partia the na	No. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Indicatoressure by valve operation of Size  DN 200  DN 200  DN 100  DN 100  DN 150  DN 150  DN 50  DN 50  Lugs  N/(Number of Size of S	YES en yes or no enings:  Type  Cl. 300 f  C	GCHAI 390  g. g. g. g. s. g. g. s. g. s. g. g. s. g. s. g. g. g. s. g.	Mathematics (148) NNEL-A component (148) Nozzia (148) (148) (148) SA333-6 (148) N/A (Namber) ad and sacturer's	(6) meact to the property of t	Noz Nom 28.15rd 22.25r 8.56rd 10.97rd 16.65rd 8.74rd Command Ider N/A	est	eesa Omm Omm Omm Omm Omm Omm Omm S	Pein M M M M M M M M M M M M M M M M M M M	forcement interfal ERENT ERENT ERENT ERENT ERENT ERENT 16-70(-1) 16-70(-1) 16-RENT ERENT Ched have be	Attachn Nozzle (+4) (+4) (+4) (+4) (+4) (+4) (+4) (+4)	of	(*5) (*5) (*5) (*5) (*5) (*5) (*5) (*5)	Local (Insp. C	(vin Open.)	
7. Inn 8. H 9. N (Inn SH SH) TU TU TU (20. S	pact test  dro., proving purpose et, Outlet, Drain, of HELL SIDE INL ELL SIDE OUT ELL SIDE DRAIN UBE SIDE OUT BE SIDE VENT BE SIDE DRAIN Upports: Skirt tanufacturer's ne report (list	tion, ar	No. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Indicatoressure by valve operations of Size  DN 200  DN 200  DN 100  DN 100  DN 150  DN 150  DN 50  DN 50  Lugs  N/(Number of Size)  Reports principart, item residition.	YES enings:  Type CI. 300 f CI. 300	GCHAI and the 3900 g.	Mathematics (18) N/A (Number) sacturer's y App.2	(6) meact to the property of t	Proof t  Proof t  Noz  Nom  28.15n  22.25n  8.56m  10.97n  16.65n  8.74n  7 Command Ider N/A	zie Thicknown 3.0 mm 3.0 mm 3.0 mm 3.0 mm 3.0 mm 3.0 mm 3.0 sADDLE (Describe) issioned tifying r	ceas Domm Domm Domm Domm Domm S Insperiumbe	Pein M M M M M M M M M M M M M M M M M M M	forcement interfal ERENT ERENT ERENT [6-70(-1) 16-70(-1) 16-RENT ERENT IGENT IGNT IGNT IGNT IGNT IGNT IGNT IGNT IG	Attachn Nozzła (+4) (+4) (+4) (+4) (+4) (+4) (+4) (+4)	of	tails  itails  (*5)  (*5)  (*5)  (*5)  (*5)  (*5)  One of the form	Local (Insp. (	open.)	
7. In 17. In 18. H 19. N	pact test  dro., propose et, outlet, brain, et, outlet, brain, et, SIDE INIL ELL SIDE OUT ELL SIDE DRAI UBE SIDE OUT BE SIDE OUT BE SIDE OUT BE SIDE DRAIN upports: Skirt tanufacturer's ne report (list emarks *1. )	tion, ar  ET  LET  (*12)  (*12)  No  (Yes of Partia the na	No. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Indicatoressure y valve operation or Size DN 200 DN 200 DN 100 DN 150 DN 150 DN 50 DN 50 Ugs N/(Number of Size) Papart, item of the operation.	YES en yes or no enings:  Type Cl. 300 f Cl. 3	GCHAI 390  g. g. ym. g. s.	MAL-A componen O kPa  Mate Nozzla (+6) (+6) (+6) (+8) SA333-6 (+8) N/A (Number) ed and s acturer's	01) Plange (46) (46) (46) (46) (46) (46) (46) (46)	Proof t  Proof t  Noz  Nom  23.15r  28.15r  22.25r  8.56m  10.97r  16.65r  8.74r  Command ider N/A	est	eeaa Omm Omm Omm Omm Omm Omm S I Insp	Pein M INH	forcement interfal ERENT ERENT ERENT ERENT 16-70(-1) 16-70(-1) ERENT ERENT Ched have bear	Attachin Nozzle (+4) (+4) (+4) (+4) (+4) (+4) (+4) (+4)	ofF	tails  itails  (*5)  (*5)  (*5)  (*5)  (*5)  (*5)  One of the form	Local (Insp. (	open.)	
7. In 17. In 18. H 19. N	pact test  dro., propose et, outlet, Drain, et, Outlet, Drain, et, SIDE INIL ELL SIDE OUT ELL SIDE DRAI UBE SIDE OUT BE SIDE OUT BE SIDE OUT BE SIDE DRAIN upports: Skirt tanufacturer's te report (list emarks *1. f	tion, ar  ET  LET  (*12)  (*12)  Normaliz	No. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Indicatoressure y valve operations size DN 200 DN 200 DN 100 DN 150 DN 150 DN 50 DN 50 DN 50 Lugs N/(Number operations) Reports prepart, item of the ditionNone, 0.7	YES en yes or no enings:  Type Cl. 300 f Cl. 3	GCHAI and the 390 g. g. ym. g. g. sym. g. g. sym. g. g. sym. g. sym. g. sym. g. sym. g. sym. sym. sym. sym. sym. sym. sym. sym	Material Mat	01)   Flange   (-6)   (-6)   (-6)   (-6)   (-6)   (-6)   (-6)   (-6)   (-6)   (-6)   (-6)   (-7)   (	Noz Nom 28.15n 28.15n 22.25n 10.97n 16.65r 8.74n 20.97n 10.97n 10	zie Thickood Comm 3.0 mm 3.0 sissioned tiflying r  *3. SA etaining 10. Insi	eaa Omm Omm Omm Omm Omm Omm S I Insp numbe	Pern M INH	forcement stateful ERENT ERENT (6-70(-1) 16-70	Attachin Nozzle (+4) (+4) (+4) (+4) (+4) (+4) (+4) (+4)	of Francisco De Fr	(+5) (+5) (+5) (+5) (+5) (+5) (-7) (+5) (-8) (-9) (-10UNC	Local (Insp. C	open.)	
7. In 88. H 99. N (In 88. H 99. N ) (In 88. H 99	pact test  dro., propose et, outlet, brain, et, outlet, brain, et, side outlet, sid	tion, ar  ET  LET  (*12)  (*12)  Normalize  Normalize	No. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Diameter or Size  DN 200  DN 100  DN 150  DN 150  DN 50  DN 50  DN 50  Allegs N/A  Reports propart, item of the size of the si	PES o yes or no enings:  Type Cl. 300 f Cl. 30	GCHAI and the 390 g. g. m. g. g. s. g. s. g. s. g. s. datory datory d-LF2 locate hers.	Material Mat	01)   Flange   (-6)   (-6)   (-6)   (-6)   (-6)   (-6)   (-6)   (-6)   (-6)   (-6)   (-7)   (	Noz   Nom   23.15n   22.25n   8.56n   10.97r   16.65r   8.74n   5   7   Command Ider N/A   5   10.97r   10.97	zie Thickoo  Comm 3.0  m 3.0	eaa Omm Omm Omm Omm Omm Omm Omm S I Insp numbe	Pern M INH	torocment sterful ERENT ERENT ERENT ERENT ERENT ERENT IG-70(-1) IG	Attachin Nozzle (+4) (+4) (+4) (+4) (+4) (+4) (+4) (+4)	of Francisco De Fr	(+5) (+5) (+5) (+5) (+5) (+5) (-7) (+5) (-8) (-9) (-10UNC	Local (Insp. C	open.)	
7. In 88. H 88. H 99. N (In 18 SH) SH SH TU TU 18 CO. S 21. N 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	pact test  dro., propose et, outlet, Drain, et, Outlet, Drain, et, SIDE INIL ELL SIDE OUT ELL SIDE DRAI UBE SIDE OUT BE SIDE OUT BE SIDE OUT BE SIDE DRAIN upports: Skirt tanufacturer's te report (list emarks *1. f	tion, ar  ET  LET  (*12)  (*12)  Normalize  Normalize  Single B  6 + (*6)  we will be the parties	No. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Indicator surrespondent of Size of Siz	PES o yes or no enings:  Type Cl. 300 f Cl. 30	GCHAI and the 390 g. g. m. g. g. s. g. s. g. s. datory o-LF2 locate hers. I.T-88	Material Mat	01)   Flange (46) (46) (46) (46) (46) (46) (46) (46)	Noz   Nom   28.15n   28.15n   29.15n   10.97n   16.65n   8.74n   5   7   Command Ider N/A   5)   ressure i	zie Thickoo  Comm 3.0  m 3.0	eaa Omm Omm Omm Omm Omm Omm S I Insp inumbe	Pern M INH	forcement aterial ERENT	Attachin Nozzle (+4) (+4) (+4) (+4) (+4) (+4) (+4) (+4)	of Francisco De Fr	taits tange (+5) (+5) (+5) (+5) (+5) (+5) (-7) (+5) (-8) (-9) (-10UNC	Local (Insp. C	open.)	



National Board Number: 2000

Mfr. Representative: CSVIII Cate: MA.II Selfs

Authorized Inspector Date: App. 18.2015

## FORM U-1 (Cont'd)

PAGE 3

CERTIFICATE OF SHOP COMPLIANCE
We certify that the statements in this report are correct and that all details of design, material, construction, and workmanship of this vessel
conform to the ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1.
U Certificate of Authorization Number 32,997 Expires DEC. 04, 2016
Date AR M 2015 Name ILSUNG CORPORATION. Signed
Date AR No. 15 Name   ILSUNG CORPORATION.   Signed   Georgesantalve)
CERTIFICATE OF SHOP INSPECTION
i, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the employed by
HSB Global Standards of Hartford CT.
have inspected the pressure vessel described in this Manufacturer's Data Report on Apr., 18, 2015, and
state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME BOILER AND
PRESSURE VESSEL CODE, Section VIII, Division 1. By signing this certificate neither the Inspector nor his/her employer makes any warranty, expressed
or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his/her 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 Apr. 18.201 Signed S.JANG Commissions NB#14412(A,N)
(Authorities inspector) (Material Board (not, endorsemental)
CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE
We certify that the statements in this report are correct and that the field assembly construction of all parts of this vessel conforms with the requirements
of ASME BOLLER AND PRESSURE VESSEL CODE, Section VIII, Division 1. U Certificate of Authorization NumberExpires
Date Name Signed (Representative)
Consequence of the contract of
CERTIFICATE OF FIELD ASSEMBLY INSPECTION
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors 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 the ASME BOILER AND PRESSURE VESSEL CODE, Section W., Division 1. The described vessel was inspected and subjected to a hydrostatic test of . By signing this certificate neither the Inspector nor his/her employer makes any warranty, expressed or
implied, concerning the pressure vessel described in this Manulacturer's Data Report. Furthermore, neither the Inspector nor his/her employer
shall be liable in any manner for any personal injury or properly damage or a loss of any kind arising from or connected with this inspection,
Date Signed Commissions
(Authorized Inspector) [National Board (Incl. endorsements)]