Date:

Sep. 28, 2023

Authorized Inspector:

Date:

at. 11. 7023

of

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

Page 1

			A	s Rec	quired b	y the I	Provisions	of th	e ASME	Boiler a	nd	Press	ure Ves	sel Co	de R	ules,	Secti	on VIII, D	ivision	1			
1.	Manuf	actu	red a	and ce	rtified b	у	Wuxi Cher	nical F	Equipme	ent Co. I	td										1000		
							36 Huayi Ro					Jianas	u Provinc	ce 2141	131.	P. R.	China						
												3000	and addres		- 50					-			_
2.	Manuf	actu	red f	or			Air Prod	ucts N	/lanufact	uring LL0	C., ·	1940 <i>A</i>	ir Produ	cts Blv	d., A	llento	wn PA	18106-5	500. U	SA.			
													ddress of P						•				
3.	Location	on o	f inst	allatio	n —								Not Kn										
4.	Туре				Но	rizonta	I					Heat	Name and a	address)				١٨	/HA22-	165	1		
	71	-		(Ho	rizontal, v	9.00	50 60		_	(Tank, sep	arate		essel, heat e	exch etc	.)			100000000000000000000000000000000000000	acturer's s				
				NA			W	XCE7	069-00	Rev. 03		18		54	19			(23		
_				(CRN)				(Dra	wing numb	oer)			(Na	itional Bo	ard n	umber)		- 10	35.7	(Yea	r built)		
5. <i>F</i>	ASME C	Code	Sec	tion V	III, Div.	1			2021					- Common		IA		-			NA		
Iter	ns 6–11	l inc	l. to l	be con	npleted	for sinc	lEdition gle wall ves			pplicable (d	100		shell of			se numb		namhar a	[Special	l Ser	vice per L	G-120	(d)]
	Shell:				course		yro rran roo	<i>3010,</i> j	3	n jaonoto	u vi		(b) Overa			rigers	, or cr		18.20"	Iam	ber ves	seis.	
			ourse(s)			Material		Т	hickness			1 (1		8-		Naa			T		920 0	
No	Di	amete			ength.	9	pec./Grade or T	vno.	Nom.			Tuno	Long. Joint		г#			Joint (Cat. A,		+	Heat Tre	30.000.000	_
2	+	15.25		_	78.74"	- 3	SA-516 Gr.70		0.630		(a)	Type 1	Full, Spot		Eff.	Туре	Fu	II, Spot, None	-	+	Temp.	Tim	
1	-	15.25			60.72"		SA-516 Gr.701		0.630		-	1	Spot Spot		0.85			Spot RT Spot RT	0.85	_	None None	Non Non	
									Е	Body Flan	ges	on Sh									110110	11011	_
																		Bolting					
No.	Туре		D	OD	Flan	ge Thk	Min Hub Thk	М	aterial	How Attac	hed	Locatio	n	Num & Si	ze		Bolting	Material	Washe (OD, ID,T		Washer	Materi	al
1	Integral	15.	250"	22.44	1" 3.	071"	0.630"	SA-2	66 Gr.2N	Welded	i	Left	24Nos 1"	'-8UN-2A,	L=14	.173"	SA-19	3 Gr.B7	1.968" 1.063", 0	9000		PCC-1	
NA	NA	N	IA	NA		NA	NA		NA	NA		NA		NA			N	IA	NA	20		oe 4 IA	-
7. ⊦	leads: (a)			SA	-516 G	r.70N, Rem	ark 1	, 2		_	(b)						NA					
Т	Lacation	/T	1	Know myteur		umber, gr	rade or type) (F			T '	. 1			2011-0-0				ade or type)	(H.T. — t	ime a	nd temp.)		_
	Location (Bottom, E		N	Thickr lin.	Corr.	Crow	Radius vn Knuckl		Iliptical Ratio	Conica Apex Ano			spherical adius	Fla: Diame	21	Con	T	ressure Concave	Time		tegory A II, Spot, Nor	T	
(a)	Right E	End	0.5	551"	1/8"	NA			2:1	NA			NA	NA		Ye		Yes	Type S	ru	NA		£ff. .0
(b)	NA		١	NA	NA	NA	NA NA		NA	NA			NA	NA		N/	4	NA	NA		NA	1	١A
									В	ody Flang	jes	on Hea	ids			524 B E E		D. W.					
	Locatio	n T	уре	ID	OD	Flange T	Thk Min Hub	Thu	Mate	orial	Цо	w Attach	ad Nur	n & Size	1	Bolting N	Material		sher	,	Washer M	aterial	_
(a)			NA	NA	NA NA	NA NA	NA NA	THE	N		ПО	NA NA	eu	NA	+	N/		(OD, II	A		NA	atoriai	_
(b)	NA		NA	NA	NA	NA	NA		N	A		NA		NA		N/	1//	N			NA		
3. T	ype of ja	acke	et				NA			Ja	cke	t closu	ire					NA					2-1-1
ï	f har ai	vo d	imor	cione	If holto	d door	cribe or ske	ah									scribe a	s ogee and	weld, bar,	etc.)			
									0000		004					NA							_
). IV	IAWP -		1.45p		0.5-2	FV ternal)	at max. ten	ıp.	300°F	_	300		Min. desi	ign met	al te	mp.	3	32°F	at —	654	.45psig	<u> </u>	
0. 1	mpact t		Herric	",		\$15000 To JOSEO	npted per U	CS-6	(Interna 6(a), (c)	11) (ernal) at test	tempera	ture of					NA				
							o and the comp			sted]	_		tomporu.		-								
1. I	Hydro.,	pne	J., or	comb	. test pr	essure		ı	Hydro. a	t 961.6ps	sig		Pro	of test					NA				
tem	s 12 an	d 13	to b	e com	pleted t	or tube	sections.								-								
2.	Tubeshe	eet		S	4-266 G	r.2N			15.250)"			2.362	2"			1/4"			Clar	nped		
			[3	Stationa	ry (materia	al spec. no	0.)]	Diamet	26 024	to press.)]		(Nominal thic	ckness)	_	(C	orr. allo	w.) [Attachmer	it (we	lded or bo	lted)]	
					NA	vanishes a see			NA			n	NA		_		NA			٨	IA		_
3. ٦	Гubes				(material SA-179	331	.)]		(Diamete 0.75"	r)		(Nominal thic	200 COLOR DE CONTROL DE CO		(C	orr. allo	w.)	(hment)		
51 I	. 3230		(Material spec. no., grade or type)	(O.D.)					0.083"(min.)			(Number) IT			Tun	U (straight or UI)		-	

Mfr. Representative:

Authorized Inspector:

Sep. 28, 2023

-	DAA	U-1	
	IVI S	11-1	

Ma	nufactui	red by	Wuxi Cl	hemical E	quipment C	o., Ltd.			• .					ı aş			—		
Mai	nufactui	rer's Se	rial No.	-	WHA22-16	5-1		CRN		NA			Nation	nal Board No.			549		
Iter	ns 14–1	8 incl. t	o be con	npleted fo	r inner chai	nbers of j	ackete	d vessels o	r chani	nels of he	eat excl	hande	rs						
			of course				1) Overa				15.	748"			
Course(s) Material Thickness Long. Joint (Cat. A) Circum. Joint (Cat. A, B & C))	Heat Tre	eatment						
No	Diam	neter	Length	Spec./Gr							Full, Spot, Non			Temp.	Time				
1	ID 15	.250"	15.748"	SA-51	6 Gr.70N	0.551" 1/8" 1 Spot RT						0.85	1	Spot RT	_	.85	None	None	
NA	N.	A	NA	AND SHOP AND						NA	_	NA	NA NA	NA NA			CONTRACTOR AND	NA	
THE												INA							
								Body Flan	ges on	Shells				Bolting					
Na	Туре	ID	OD	Flange Thk	Min Hub Thk	Mater	rial	How Attached	Location	,	Num & :	Sizo		Bolting Material	Was	ner	147 1		
1	Integral					200 2000		20000000000000000000000000000000000000						Doiling Material		(OD, ID, Thk) Wa		Material PCC-1	
	integral	15.250"	22.441"	3.071"	0.551"	SA-266	Gr.2N	Welded	Left	24Nos	1"-8UN-2	A, L=11.	.024"	SA-193 Gr.B7	1.063",	0.25	Тур	oe 4	
1	Integral	15.250"	22.441"	3.071"	0.551"	SA-266 (Gr.2N	Welded	Right	24Nos	1"-8UN-2	A, L=14.	.173"	SA-193 Gr.B7	1.96 1.063",	5.0	ASME Tvr	PCC-1 be 4	
15.	Heads:	(a)		S	A-266 Gr.2	N, No H.T			(t	0)				NA		0.20	175	10 4	
		***************************************	(Mate	erial spec. nu	mber, grade or	type) (H.T	– time ar	nd temp.)			(M	aterial s	pec. numbe	er, grade or type) (H.T. — t	me and t	 emp.)		
	Location	on (Top,	Thic	ckness	Radi	us	Elliptic	al Conic	al	Hemispheric	All	Flat	0.000	to Pressure	Category			y A	
	Botton	n, Ends)	Min.	Corr.	Crown	Knuckle	Ratio	Apex Ar		Radius	Diameter		Convex	Concave	Туре	Full, S	pot, None	e Eff.	
(a)	Leff	End	2.362"	1/8"	NA	NA	NA	NA		NA	2	2.441"	NA	Yes	S		NA	0.85	
(b)	N	IA.	NA	NA NA NA N		NA	NA		NA		NA	NA	NA	NA NA			NA		
								Body Flang	noc on l	Jondo			10000					101	
							T	Bouy Flang	ges on r	neaus				Bolting					
	Locatio	ion Type ID OD Flange Thk Min Hub Thk Material			F	low Attache	d N	um & Si	ize E	Bolting Material	Wasi (OD, ID		Washer	Material					
(a)	NA	NA	NA	NA	NA	NA	NA NA			NA		NA		NA	N.A		N.	A	
(b)	NA	NA	NA	NA	NA	NA		NA		NA		NA		NA	NA		N,	——— А	
16. [MAWP	556.9	91psig	NA	at max. t	emp.	300°	F	NA	Min. de	esign m	etal te	emp.	32°F	at	556	6.91psi	a .	
		(Intern	al)	(External)	_	_	(Inter	nal)	(External)			30.000 M. 30.00		-				
17. l	mpact t	est		No, exe	mpted per	UCS-66(a	a), (c)		at t	est temp	erature	of			NA				
					no and the con	nponent(s) in		N STEELS ST.								20010			
				test press			Hydro	o. at 811.4p	sig		Proc	f test			NA				
19.1	Vozzles	, inspec	tion, and	safety va	lve openin	gs:													
	Purpos	se	No.	Diameter	Typo		١	Material		Nozzle Thickr		Reir	nforcement	Attachn	nent Deta	ils	10	cation	
(Inle	t, Outlet, D	rain, etc.)	INO.	or Size	Туре	No	ozzle	Flan	ge	Nom.	Corr.	-	Material	Nozzle	F	lange	- Company	o. Open.)	
	T1, TS I	nlet	1	NPS 3	CL.600 LWN/F	RF SA-	-105N	SA-10)5N	0.803"	1/8"	1	nherent	Fig. UW-16.1(c)		NA			
	T2, TS O	utlet	1	NPS 3	CL.600 LWN/F	F SA-	-105N	SA-10)5N	0.803"	1/8"		nherent	Fig. UW-16.1(c)		NA			
	S1, SS I	nlet	1	NPS 4	CL.600 WN/R		6 Gr.2N	SA-10)5N	0.531"	1/8"	SA-5	516 Gr.70N	Fig. UW-16.1(c)	None	RT, eff.0.8	35		
	S2, SS O		1	NPS 4	CL.600 WN/R		6 Gr.2N	SA-10)5N	0.531"	1/8"	SA-5	516 Gr.70N	Fig. UW-16.1(c)	None	RT, eff.0.8	35		
	V, Ver	(top)	1	NPS 2	CL.300 LWN/F		105N	SA-10		0.653"	1/8"	lı lı	nherent	Fig. UW-16.1(c)	NA				
P	ux.1~2, Au D, TS Dr		2	NPS 2 NPS 2	CL.300 LWN/R		105N	SA-10		0.653"	1/8"		nherent	Fig. UW-16.1(c)	NA		_		
20. 5	Supports		N		gs NA		105N egs	NA		0.653" thers	1/8"	s sado	nherent	Fig. UW-16.1(c)		NA (alalaal			
	арролю	0.1	(Yes		(Num		-	(Number)				escribe	1000	Attached _		elfolie	to shel	1	
21. N th	lanufac e repor	turer's F t (list the	Partial Da	ata Repor	ts properly m number,	identified	and sig urer's i	gned by Co name, and	mmiss	ioned Ins ving num	spectors	s have	e been fu	ırnished for th	e follo	Where a	nd how) ms of		
22 🗆	lemarks								,,,,,,										
see a	attached	Form	U-4.																

Date:

Date: Sep. 28, 2023

Authorized Inspector:

FORM U-1

Manufactured by		-					
Manufacturer's Seria	l No.	WHA22-165-1	CRN	NA	National Board No.	549	
					——————————————————————————————————————		

2000					OF SHOP COMP				
							I, construction, a	nd workmans	ship of this vessel
conform	to the ASME BO	DILER AND PRE	SSURE VESS	EL CODE, Sect	ion VIII, Division 1	1.			
U Certif	icate of Authoriza	ation Number		30,972	Expires	Ap	oril 16, 2026	A.	
Date	Sep. 2	28, 2023	Name	Wuxi Che	mical Equipment	Co., Ltd.	Signed	重相	ZZ
					(Manufacturer)			(Re	presentative)
			9	CERTIFICATE	OF SHOP INSPE	CTION			
I, the u	ndersigned, hold	ding a valid cor	nmission issue	ed by the Natio	nal Board of Bo	iler and Pr	essure Vessel In	spectors and	employed by
		Д	PAVE SA			of		1	
have ins	spected the press	sure vessel desc	ribed in this Ma	nufacturer's Da	ta Report on		Sep. 28, 2	2023	, and
state th	at, to the best of	my knowledge	and belief, the	Manufacturer l	has constructed t	this pressu	re vessel in accor	dance with A	SME BOILER AND
PRESSU	JRE VESSEL COI	DE, Section VIII, I	Division 1. By sig	ning this certifica	ate neither the Insp	ector nor hi	s/her employer mak	es any warrani	ty, expressed
or implie	ed, concerning the	e pressure vess	el described in t	his Manufacture	er's Data Report.	Furthermor	e, neither the Insp	ector nor his/h	er employer shall
							or connected with		
Date	Oct. 1	/ 202}	Signed	SE		Commis	ssions //A	15677	
	GW: 1		_	(Authorized	Inspector)	-			etor Commission number)
			CERTIF	ICATE OF FIE	LD ASSEMBLY C	COMPLIAN			
We certi	ify that the statem	nents in this repo	ort are correct a	nd that the field	assembly constru	uction of all	parts of this vesse	el conforms wi	th the requirements
of ASME	BOILER AND PR	RESSURE VESS	EL CODE, Secti	on VIII, Division	1. U Certificate of	Authorizatio	n Number	Exp	ires
Date			Name				Signed		1
			-		(Assembler)			(Rep	presentative)
			CERTIF	ICATE OF FIE	LD ASSEMBLY	INSPECTIO	ON		
I, the ur	ndersigned, hold	ling a valid con	nmission issue	d by the Natio	nal Board of Boi	ler and Pre	essure Vessel Ins	spectors and	employed by
of			, have co	mpared the stat	tements in this Ma	anufacturer	's Data Report with	n the describe	d pressure vessel
and state	e that parts referr	ed to as data ite	ms			, not includ	ed in the certificate	e of shop insp	ection, have been
inspecte	ed by me and to t	he best of my k	nowledge and b	pelief, the Manu			nd assembled this		
							ribed vessel was		
	tic test of						/her employer mak		AND A DECEMBER MEDICAL PROPERTY OF THE PROPERT
mplied,	concerning the	pressure vesse					ore, neither the I		6500 N
							from or connected		
Date	•		Signed			Commissio		and map	
				(Authorized			·	uthorized Inspector	Commission number)

(07/17)

FORM U-4 MANUFACTURER'S DATA REPORT SUPPLEMENTARY SHEET As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

1.	Manufa	ctured and certified by		nical Equipm	ent Co., Ltd.									
	-		36 Huayi	Road, Binhu	District, Wuxi, Jian ime and address of Ma	gsu Province 214131	, P. R. China.							
2.	Manufa	ctured for	Air Pro	ducts Manufa	acturing LLC., 1940	Air Products Blvd., A	llentown PA 18106-5500, USA.							
3	Location	of installation			(Name ar	d address of Purchaser)								
٦.	Locatioi			100		Not Known (Name and address)								
4.	Type	Horizontal		<u> </u>	Heat exch.	PARTY TANKS IN CONTROL OF ANY AND ANALOGOUS STATE .	WHA22-165-1							
		(Horizontal, vertical, or	sphere)	(Tank,	separator, heat exch., e	etc.)	(Manufacturer's serial number)							
		NA		WXCE7069-		549	2023							
		(CRN)		(Drawing	number)	(National Board	number) (Year built)							
	Data Re Item Nur													
	Remarks		l side head is co	old formed by	others with cortifie	Remarks	relieving heat treatment after cold forming							
	rtomante	perform	ned at 1157~11	85.8°F holdi	na 60mins	ate indicating stress i	elleving heat treatment after cold forming	was						
						rding to UW-11(a)(5)	(-h)							
		3. Nozz	le(Aux.1/Aux.2	/V/D) blind fla	ange: 4Nos, SA-105	N. ASME B16.5-201	7 NPS 2 CL.300 BL/RF, fixed with full three	ead						
		studs S	A-193 Gr. B7, 5	5/8"-11 UNC-	2A, L=5.906", 8pcs	for each nozzle, and	heavy hex nuts SA-194 Gr. 2H, 5/8"-11U	NC-						
8 40		2B, 32	pcs for each no	zzle.				110						
		4. The	U-tube bends w	ere performe	ed stress relieving he	eat treatment at 1160	~1175°F, holding 30mins.							
		5. Body	flanges were u	ised as inspe	ction opening.									
		6. The o	6. The overpressure protection system not supplied by the vessel Manufacturer.											
-vallet														
			100000000000000000000000000000000000000											
		-												
		<u> </u>												
34-04														
Corti	ficate of	Authorization: Type	11	Na	20.070		2 Mary American							
Certi	iicate 01 /	Authorization: Type	U	No	30,972	Expires	April 16, 2026							
Date		Sep. 28, 2023	Name	Musi Ch	omical Equipment C	'a 144 - 01 '	# IDA							
Dale		OGP. 20, 2023	INdIIIE	vvuxi Cn	emical Equipment C (Manufacturer)	Co., Ltd. Signed	(Borosontalius)							
					((Reptesentative)							
Date		out. 11. 2023	Signed		3/3	Commission	NB 15677							
		,		(Author	ized Inspector)		(National Board Authorized Inspector Commission number	er)						