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

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1. Manufactured by Miller Exchangers. Inc., 111 East Hov. 64. Sand Springs, Okla. (Name and address of manufacturer)	74063
2. Manufactured for <u>Olin Corporation</u> , P.O. Box 2896, Lake Charles, Louisians 70603 (Name and address of purchaser)	بنينت
3. Location of installation Olin Corporation. Interstate 10. West of Lake Charles, Louisis (Name and address)	na 70602
4. Type Horiz, Vessel No. J-913-1 J-913-1 631 Yes (Heriz, er vert. tenk) (Migr's Seriel No.) (CRN) (Drawing) (Net'l Brd No.)	r Built 1081
5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Divis	
and Addenda to 12-80 and Code Case no	17 VARION
Special service per UG-120(d)	
Manufacturero' Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for	
Items of the report: (Name of part, Item number, inter's name and identifying stamp)	14 199
Items 6-11 Incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers 6. Shell: Material SA-516 Nom. Thickness 3/8 In. Corrosion Allowance 1/8 In. Diam. 2 ft. 1 3/4. Length	10 ft.9 1/
7. Seams: Longitudinal Db1. R.T. Spot Efficiency 85% H.T. Temp 1150F Timel HR Girth Db1. R.T. Spot No. of (Ob1., Sngt.) (Spot or Full) (Ob1., Sngt.) (Spot or Full)	Courses _2_
8. Heads: (a) Material	
(Spec. No., Grade) (Spec. No., Grade)	
Location (Top., Minimum Corrèbten Crawn Knuckle Elliptical Conical Hemispherical Flat Radius Ratio Apex Angle Radius Diameter (Side te Pressure Convex er Concave)
(d)	
If removable, bolts used (describe other fastenings)	i se Hanggio
(Material, Spec. No., Gr., Size, No.)	2,500 - 1.5
9. Type of JacketProof Test	Notes 1500
10. Jacket Closure If bar, give dimensions If bolted, describe is upon & weld, bar, etc.)	ribe or eketch.
11. Constructed for max, allowable working pressure50 psi at max, temp245_F Min. temp. (when less than	5. • CONSC.
Hydrostatio, pneumatic, or combination test pressure 75 psi.	Taken Control
	and the second
tems 12 and 13 to be completed for type sections 0. 12. Tubesheets: Stationary Material (Spec. No., Or.) (Subject to pressure) 13. Tubesheets: Stationary Material (Spec. No., Or.) (Subject to pressure)	ment : Welder (Welder, Beller)
Figating Material Diam. In. Nominal Thick. In. Corrosion Allow. In. Attach	ment
13. Tubes: Material SA-214 O.D. 3/4 in. Nominal Thickness 060 in. or gauge Number 531 Type	Straight et !'U"
items 14-17 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers	, 5 1/10
14. Shell: MaterialSA-516-70 Nominal Thickness3/8 in. Corrosion Allowance 716 in. Diam. 2 1t. 3/m. Length_	ftfn.
15. Seams:	courses 1
FA-516-70	32.23
16. Heads: (a) Material SA-310-70 (b) Material (spec. No., Grade) (spec. No., Grade)	
Lesation (Top. Alinimum Cerresian Crewn Knuckle Ellietical Cenical Hemispherical Flat Ballom, Ends) -: Thickness Altowance Radius Radius Ratio Apex Angle Radius Diameter (C	Side to Pressure Convex or Concave)
m CH.COV. 2 3/16" 1/16 29.7/8.0 1) a transfer (tax gere
if removable, bolts used (describe other fastenings) SA-193-B7 48 3/4" X 6" LG. STUDS	
17. Max. allowable working pressure pal at max temp 200 F. Min. temp. (when less than -20F)	F
Hydro, pneu, or comb. teet pressure 150 psi.	
Items below to be completed for all yearsels where applicable See UG 125, Note 34	
The same of the sa	ann eile
18. Safety Valve Outlets: Number Size Location See UG 123, NOTE 34	

Purpose (Inlet, Outlet, Drain)	Number	Diam. or Size	Type	Material	Nominal Thickness	Reinfercement Material	How Attached	
Shell In & Out	2	6"-138"	Pipe	SA-106-B	.4320	Weld	Welded	
Chan. In & Out	2	8 FRISH	Pipe	SA-106-B	500"	Weld	Welded	
T.W.	1	0元13出 1元-500年		SA-106-B	400"	Weld	Welded	
Drain	4	1"=150#	Pipe Pipe	SA-106-B	.358"	Weld	Welded	
	<u> </u>							
								
. Inspection Openings:	L	<u></u>			mir autorape or rei califolds, strates	THE PERSON NAMED IN PERSON NAMED IN	The state of the latest and the late	
Manholes No.	s	ize	Loce	itlon	'V 851	com State of the contract of t	and a self-of the spice of the	
Handholes No.						200 U	·	
Threaded No.	ST 10 10	ize		tion				
Supports: Skirt	Lugs p) (fio.)	Legs (No.)	ner4_Se	ddles Alli	achedWelc	ed to Chell	W)	
2. Remarks: P.O. #	526D_540	M1 The	m • 1721	5 81701	25_260	grand and and		
Type:	CEN	Servic	a: Amin	e Cooler	2 77 8 8 8 8 8			
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e certify that the stateme	nts made in					I. construction, and	workmanshin of the	
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11-23-81					by	Marca	ca .	
lg .			(Mañolacturé			The same	5	
" Certificate of Authoriz	zation No	11532		expires Ma	ly 22.	19 84	New Y	
sasel made by Mille	r Exchar	igers, Inc	TIFICATE	OF SHOP INSPEC Sand Springe	CHON S, Okla.	* - ** *		
						distriction appropriate season of the season		
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Oklahoma and employed by H.S.B. I & I. Co.								
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FORM R-1 REPORT OF WELDED REPAIR in accordance with provisions of the National Board Inspection Code

1	I. Work performed by METALF	ORMS, INC.	(name of repair org	ganization)		25 (Form R. No.)
	160 GARTH ROAD, CHEEK,	, TX 77705	(address)		*****************************	12685 Mi Job no.
2.	. Owner LYONDELL CHEMICA	AL COMPANY	(222125-)	(name)		nn joe ne.
	CENTRAL WAREHOUSE, I-	-10 WEST, LAKE CHARI	LES, LA 70602	address)		
3.	Location of installation LYON	NDELL CHEMICAL COM	1.**	(name)		
	CENTRAL WAREHOUSE, I-1	10 WEST, LAKE CHARL	ES, LA 70602	(address)		
4.	- Unit identification	HEAT EXCHANGER boller, pressure vessel)		•••••••••••••••••••••••••••••••••••••••	MILLER EXCHANG	ERS, INC.
5.	· Identifying nos.: J-9 (mfg s	313-1 serial no.) (Natio	631 onal Board No.)	(jurisdiction no.)	E-215 (other)	1981 (year built)
6.	. NBIC Edition/Addenda:	1998		_ Original Construction Code: (If known)	: ASME	VIII DIV 1 n and addenda)
7.	Description of work: (use sup STRIP AND RETUBE FIXED TUBES: RENEW TUBESHE PARTS.	TUBESHEET SHELL AI	ND TUBE BUNDLE	E WITH (531) 0.750" OD X 16(AV AL. SPOT RADIOGRAPH. REU	W) X 20'0"LG SA-789-S3	31803 WELDED NEW
8.	TUBESIDE TEST 150 Replacement Parts. Attached			orm R-3s properly completed for t		
	NONE					
9.	. Remarks:	(name or part, item i	number, data report	type, mir's name and identifying	stamp)	
	NONE					
	I. Down Id Popus and that all material, construction	ELARCZYK	6.00	he best of my knowledge and beli		report are correct
1	National Board "R" Certificate of			.0 the National board inspection of	Code. expires on <u>06/08</u>	2, 2001
1		etalforms, Inc. (name of repair organ		Signed	(authorized representa	1
	1. Lloyd Ash	ler	5 1	alid Commission issued by The N		
1	Inspectors and certificate of com	petency issued by the juri	risdiction of <u>Tex</u>			and employed by
	H.S.B.J. & I., Co. inspected the work described in t	this report on	5-	of <u>Hartford, CT.</u>		have
'n	belief this work complies with the	e applicable requirements of		d Inspection Code.	nd state that to the best of	
	By signing this certificate, neither report. Furthermore, neither the u					
a	arising from or connected with thi	nis inspection.	yer shall be hable in		10 100	oss of any kind
L	Date <u>5-4-99</u> Sign	ned Rayl	(Inspector)	Commissions		cl. endorsements),