

三、投标要求

- 1、 承揽商需具有独立法人资格和履行合同能力，有良好的信誉和售后服务能力；
- 2、 参选单位与我司合作项目不存在技术或者商务纠纷，供给我司产品无质量问题；
- 3、 参选单位必须有近五年石油化工行业的5套以上管壳式换热器制造业绩，需要有合同复印件证明；
- 4、 应具备固定式压力容器制造及设计许可（D级以上）；
- 5、 要求交货期为合同订单签订后 4 个月内。

四、交货地点

福建福海创石油化工有限公司PTA厂区。

五、技术及相关要求：

- 1、 投标商根据福海创提供的询价简图及数据表，完成施工图纸设计，施工图需经福海创确认。
- 2、 设备本体及内件（询价简图内所有内容）；
- 3、 设备附件：一切与设备焊接或不相焊接之构件包含且不仅限于补强圈、支（鞍）座、支（鞍）座地脚螺栓、吊耳、接地板、铭牌及铭牌支架、盲法兰（含垫片、紧固件）、与管口法兰配套之盲板，连接管等部件，本案所有的联接件/内件/支承圈等均由投标商负责设计、采购、制作，并经福海创确认。
- 4、 包装、运输用的临时部件应包括：用于运输的管口盲板、紧固件、垫片、临时固定装置、保护装置；

5、 备品备件：按我司的要求提供不低于 200%金属缠绕垫及 10% 紧固件等一年运行备件；

6、 设备检验和试验；

量

质量保证期为交货 18 个月或者运行 12 个月，以先到为准。

PTA 团队

经办：江云斌
2023.04.19

审核：杨喜东
2023.04.19

核准：杜俊 4/19.23

设备管理部

经办：姜士华
2023.4.20

审核：任建建
2023.4.20

核准：潘晓军

2023.4.26

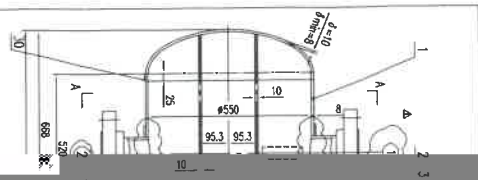
1	XLP	HEAT EXCHANGER PROCESS DATA SHEET	Project	XLP2
2			Spec. No.	
3			Sheet No.	1 OF 1
4			Job No.	
5	Customer	XLP	Reference No.	
6	Address		Proposal No.	
7	Plant Location	7 km from D.D. Office	Date	Dec 1

9	Size	Type	BEM	Horz.	Connected In	1 Parallel	1 Series
10	Surf/Unit	Gross/Eff	543.17 / 534.17 m2	Shell/Unit	1		
11	PERFORMANCE OF ONE UNIT						
12	Fluid Allocation		Shell Side			Tube Side	
13	Fluid Name		CW			BW	
14	Fluid Quantit , Total	k /hr	1950427			250000	
15	Vapor In/Out						
16	Li uid		1950427		1950427	250000	250000
17	Steam						
18	Water		1950427		1950427	250000	250000
19	Noncondensables						
20	Temperature In/Out	C	34.00		45.00	135.00	50.00
21	Specific Gravit		0.9938		0.9897	0.9305	0.9878
22	Viscosit	cP	0.8390		0.6852	0.2060	0.6069
23	Molecular Wei ht, Vapor						
24	Molecular Wei ht, Noncondensables						
25	Specific Heat	kcal/kc -C	1.0026		1.0027	1.0216	1.0021
26	Thermal Conductivi	kcal/hr-m-C	0.5326		0.5455	0.5866	0.5518
27	Latent Heat	kcal/k				513.879	513.879
28	Inlet Pressure	kcaf/cm2A		5.533		.53	
29	Velocit	m/s		1.35			
30	Pressure Drop, Allow/Calc	kcaf/cm2			1.753		0.409
31	Foulin Resistance min	m2-hr-C/kcal	0.000400			0.000100	
32	Heat Exchan ed kcal/hr	21410814		MTD Corrected	38.0 C		
33	Transfer Rate, Service	1054.21 kcal/m2-hr-C	Clean	3022.81 kcal/m2-hr-C	Actual	1173.45 kcal/m2-hr-C	

1	XLP		HEAT EXCHANGER PROCESS DATA SHEET		Project	XLP2	
2					Spec. No.		
3					Sheet No.	1 OF 1	
4					Job No.		
5	Customer	XLP			Reference No.		
6	Address				Proposal No.		
7	Plant Location	ZhangZhou P.R.China			Date	Rev.	1
8	Service of Unit	CONDENSER COOLER			Item No.	E-290B	
9	Size		T e BEM	Horz.	Connected In	1 Parallel	1 Series
10	Surf/Unit Gross/Eff	59.69 / 58.48 m2		Shell/Unit	1		
11	PERFORMANCE OF ONE UNIT						
12	Fluid Allocation		Shell Side		Tube Side		
13	Fluid Name		CW		BW		
14	Fluid Quantit , Total		k /hr		25000.0		
15	Va or In/Out						
16	Li uid		139859		139859		25000.0
17	Steam						25000.0
18	Water		139859		139859		25000.0
19	Noncondensables						
20	T e BEM		24.00		45.00		111.00
21	Locit		0.40				0.73
22	Viscosit		cP		0.8390		0.6852
23	Molecular Wei ht, Vapor				0.2628		0.6069
24	Molecular Wei ht, Noncondensables						
25	S ecific Heat		kcal/k. -C		1.0026		1.0027
26	ermal Conductivit		kcal/hr-m-C		1.0138		1.0021
27	Latent Heat		kcal/k		0.5811		0.5518
28	et Pressure		kcf/cm2A		513.879		513.879
29	locit		m/s		1.533		0.73
30	Pressure Drop, Allow/Calc		kcf/cm2		0.160		0.147
31	Foulin Resistance min		m2-hr-C/kcal		0.000400		0.000100
32	Heat Exchan ed kcal/hr		1535305		MTD Corrected		31.2 C
33	Transfer Rate, Service		841.20 kcal/m2-hr-C Clean		1882.85 kcal/m2-hr-C		Actual
34	CONSTRUCTION OF ONE SHELL				Sketch		Bundle/Nozzle Orientation
35			Shell Side				
36	Desi n/Test Pressure		k f/cm2G		FV & 8.0		FV & 2
37	Desi n Temperature		C		75		133
38	No Passes er Shell		1				4
39	Corrosion Allowance		mm				
40	Connections In		B				
41	Size & Out		B				
42	Ratin		Intermediate				
43	Tube No.	200	OD	19.000 mm	Thk Av	1.650 mm	Len th 5000. mm
							Pitch 27.000 mm
							La out 45

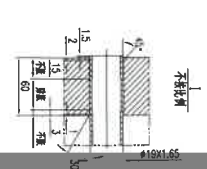
1	XLP		HEAT EXCHANGER PROCESS DATA SHEET		Project		XLP2 PTA PROJECT	
Spec. No.								
Sheet No.					1 OF 1			
4					Job No.			
5	Customer		XLP		Reference No.			
6	Address				Proposal No.			
7	Plant Location		ZhangZhou P.R.China		Date		Rev 1	
8	Service of Unit		High Pressure Acetic Acid Cooler		Item No.		E-254	
9	Size		950 x 7000 mm		Type	BEM	Horz.	Connected In 1 Parallel 1 Series
10	Surf/Unit (Gross/Eff)		418.66 / 412.28 m2		Shell/Unit	1		Surf/Shell (Gross/Eff) 418.66 / 412.28 m2
11	PERFORMANCE OF ONE UNIT							
12	Fluid Allocation		Shell Side			Tube Side		
13	Fluid Name		CW			RAC4		
14	Fluid Quantity, Total		kg/hr		525,000		120,000	
15	Vapor (In/Out)							
16	Liquid		525,000.00		525,000.00		120,000.00 120,000.00	
17	Steam							
18	Water		525,000.00		525,000.00		120,000.00 120,000.00	
19	Noncondensables							
20	Temperature In/Out		C		34.00 40.00		90.00 40.00	
21	Specific Gravit				0.9935 0.9913		0.9798 1.0307	
22	Viscosit		cP		0.7351 0.6538		0.4880 0.9056	
23	Molecular Weight, Vapor							
24	Molecular Weight, Noncondensables							
25	Sensible Heat		kcal/kJ-C		1.0065 1.0042		0.5390 0.5065	
26	Thermal Conductivity		kcal/hr-m-C		0.5346 0.5422		0.1378 0.1445	
27	Latent Heat		kcal/k					
28	Inlet Pressure		kgf/cm2A		5.53		10.03	
29	Velocity		m/s		0.71		1.00	
30	Pressure Drop, Allow/Calc		kgf/cm2		0.70 0.21		0.70 0.53	
31	Fouling Resistance min		m2-hr-C/kcal		0.000400		0.000200	
32	Heat Exchanged kcal/hr		3,160,315		MTD Corrected		18.4 C	
33	Transfer Rate, Service		416.65 kcal/m2-hr-C Clean		915.92 kcal/m2-hr-C		Actual 576.61 kcal/m2-hr-C	
34	CONSTRUCTION OF ONE SHELL							
35			Shell Side			Tube Side		
36	Design/Test Pressure		kgf/cm2G		FV & 8.000		10.00	
37	Design Temperature		C		75.00		120	
38	No Passes per Shell		1		6		1	
39	Corrosion Allowance		mm		1		7000. mm	
40	Connections In		B		1 @ 16"		1 @ 6"	
41	Size & Out		B		1 @ 16"		1 @ 6"	
42	Rating		Intermediate					
43	Tube No.		1002		OD	19. mm		Thk Av 1.650 mm
44	Tube Type		Plain		Length 7000. mm		Pitch 25.000 mm	
45	Shell		ID 950. mm		OD mm		La out 30	
46	Channel or Bonnet				Material 316L STAINLESS STEEL			
47	Tubesheet-Station				Shell Cover			
48	Floatin Head Cover				Channel Cover			
49	Baffles-Cross		Type DOUBLE-SEG.		Tubesheet-Floatin			
50	Baffles-Long				Im in ument Plate		None	
51	Supports-Tube				Inlet c/c 459.383		Inlet 690.356 mm	
52	Bypass Seal Arrangement				Seal Type			
53	Expansion Joint		YES		U-Bend		Type	
54	Rho-V2-Inlet Nozzle		kg/m-s2		Tube-Tubesheet Joint			
55	Gaskets-Shell Side				Type			
56					Bundle Entrance		Bundle Exit	
57	Code Requirements				Tube Side		kg/m-s2	
58	Weight/Shell		Filled with Water					
59	Remarks:							
60								
61								
62								
63								
64								
65								
66								
67								
68								
69								
70								
71								
72								
73								
74								
75								
76								
77								
78								
79								
80								
81								
82								
83								
84								
85								
86								
87								
88								
89								
90								
91								
92								
93								
94								
95								
96								
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
121								
122								
123								
124								
125								
126								
127								
128								
129								
130								
131								
132								
133								
134								
135								
136								
137								
138								
139								
140								
141								
142								
143								
144								
145								
146								
147								
148								
149								
150								
151								
152								
153								
154								
155								
156								
157								
158								
159								
160								
161								
162								
163								
164								
165								
166								
167								
168								
169								
170								
171								
172								
173								
174								
175								
176								
177								
178								
179								
180								
181								
182								
183								
184								
185								
186								
187								
188								
189								
190								
191								
192								
193								
194								
195								
196								
197								
198								
199								
200								
201								
202								
203								
204								
205								
206								
207								
208								
209								
210								
211								
212								
213								
214								
215								
216								
217								
218								
219								
220								
221								
222								
223								
224								
225								
226								
227								
228								
229								
230								
231								
232								
233								
234								
235								
236								
237								
238								
239								
240								
241								
242								
243								
244								
245								
246								
247								
248								
249								
250								
251								
252								
253								
254								
255								
256								
257								
258								
259								
260								
261								
262								
263								
264								
265								
266								
267								
268								
269								
270								
271								
272								
273								
274								
275								
276								
277								
278								
279								
280								
281								
282								
283								
284								
285								
286								
287								
288								
289								
2								



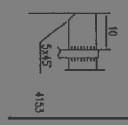


20-413
270
180
270
307
180

187
350
310
A



19X1.85
12
8
50



2 3 4 5 6 7 8 10 11 12 13 14 15 16 17 18 19

187
350
310
A

187
350
310
A

187
350
310
A

187
350
310
A

187
350
310
A

187
350
310
A

