

**CÔNG TY CỔ PHẦN
DAP SỐ 2 -VINACHEM**

**CỘNG HOÀ XÃ HỘI CHỦ NGHĨA VIỆT NAM
Độc lập - Tự do - Hạnh phúc**

Số: *1272* /DAP2-VT

Lào Cai, ngày *20* tháng *7* năm 2021

V/v báo giá cạnh tranh
Bộ làm kín bơm, gioăng làm kín

Kính gửi:

Công ty Cổ phần DAP số 2 –Vinachem xin gửi tới quý Công ty lời chào trân trọng và cảm ơn sự hợp tác của quý Công ty.

Công ty chúng tôi có nhu cầu mua vật tư như sau.

1. Chỉ tiêu kỹ thuật:

Stt	Tên vật tư	Quy cách kỹ thuật	ĐVT	SL
1	Bộ làm kín bơm 20P501A	Gồm 6 chi tiết: 01 lò xo, 01 vành tĩnh, 01 vành động, 02 Oring, 01 vòng cổ giữ lò xo. Model Type: Allpac S043. Hàng sản xuất Friatec (Có tài liệu kèm theo) hoặc tương đương	Bộ	1
2	Bộ làm kín bơm bánh răng Model 2CYSS 3.0/25	Chịu nhiệt lớn hơn hoặc bằng 100 ⁰ C	Bộ	4
3	Gioăng làm kín Thiết bị làm mát 20E402	Hãng HISAKA. Model: WX - 536 - TNHP - 55; SIZE: 1313*820*2223 mm	Bộ	1

2. Nội dung và yêu cầu báo giá:

2.1.Thư báo giá bao gồm những nội dung sau:

- Thời gian cung cấp hàng: Không quá 12 tuần sau khi kí hợp đồng.
- Bảo hành hàng hoá: 06 tháng kể từ ngày bàn giao hàng hoá (trừ mục 3).
- Thời hạn của báo giá: Trong vòng 45 ngày kể từ ngày báo giá.
- Địa điểm giao hàng: Tại kho Công ty cổ phần DAP số 2 –Vinachem.
- Hàng mới 100%, nêu rõ hãng sx, xuất xứ, cung cấp chứng chỉ chất lượng, xuất xứ hàng hoá.

- Thời gian thanh toán: 95% giá trị hợp đồng trong vòng 45 ngày kể từ ngày hai bên nghiệm thu bàn giao, 5% giá trị hợp đồng còn lại thanh toán sau khi hết thời gian bảo hành.

- Phương thức lựa chọn đơn vị cung cấp: Lựa chọn nhà cung cấp chào đủ danh mục hàng hoá trên có tổng giá trị thấp nhất và đáp ứng đầy đủ các tiêu chí trên.

2.2. Hình thức và thời gian gửi thư báo giá:

- Đề nghị quý Công ty gửi thư báo giá bằng phong bì kín có niêm phong và gửi trực tiếp hoặc qua đường chuyển phát cho Công ty chúng tôi theo địa chỉ: Phòng Vật tư, Công ty Cổ phần DAP số 2 -Vinachem – KCN Tầng loong, thị trấn Tầng Loong, huyện Bảo Thắng, tỉnh Lào Cai, bên ngoài bì thư ghi rõ: “**Báo giá cạnh tranh Bộ làm kín bơm, gioăng làm kín theo thư/DAP2-VT**”.

- Thời gian nhận báo giá chậm nhất là ~~10~~¹⁰ ngày ~~27~~³⁰ tháng ~~7~~ năm 2021. Các báo giá đến sau thời điểm trên sẽ được trả lại nguyên trạng.

2.3. Thời gian mở thư báo giá: Công ty sẽ mở thư báo giá công khai tại văn phòng Công ty cổ phần DAP số 2 - Vinachem vào hồi ~~10~~¹⁰ giờ ~~27~~³⁰ ngày ~~7~~ tháng ~~7~~ năm 2021. Khách hàng tham gia báo giá có thể tham dự buổi mở thư báo giá.

Mọi thông tin xin liên hệ với phòng Phòng Vật tư - Công ty Cổ phần DAP số 2 - Vinachem. Điện thoại: 02143.767.048, Fax: 02143.767.047.

Rất mong sự quan tâm hợp tác của Quý Công ty.


Nơi nhận:

- Như trên;
- Hội đồng giá mua.
- Lưu VT


**PHÓ TỔNG GIÁM ĐỐC
PHỤ TRÁCH**



Vũ Việt Tiến

		Technical Pump Data Sheet				VK	TBA
FRIATEC AG Division Rheinhütte Pumpen 65203 Wiesbaden, Rheingustraße 96-98		RN	50/160	CS	1.4136S	R	TBA
		Pump Type	Size	Shaft Sealing	Main Material	PR	TBA
Type of Installation:	Horizontal (1y)	No. of stages:	1.0	Rotation-direct:	CW	Agent	Intech
Customer:	Chemical Industry Engineering Joint Stock Company			Date of Order	2013/04/22	TDPB/Rev	
End-User:	DAP No.2 - Vinachem JSC			Receipt of Order	2013/04/22	Pump No. of	
				Previous Delivery			
Project name	DAP No.2 Project			Item Number		Unit (s)	
Order-no.	4x1205-CECO/INTECH-2000-P-00011			Project no. customer		2	
Customer's Pump Designation	20P501A/B			Inventory no.			
Ex-requirements and pump classification according to 94/9/EG							
1	Customer's Specifications			4	Specifications, Vessel		
2	Specifications, Inside the Pump			5	Ambient Temp. min/max		°C
3	Pump Classification acc. To 94/9/EC						
6	Remarks ATEX						
Operating Conditions							
7	Fluid			30	Max. Working Pressure (MAWP)		bar(g)
8	Sulfuric Acid 98.5%			31	Max. Working Temp. (MAWT)		°C
				32	NPSHA (avail.)		4.57
				33	NPSHR (req.)		3.9
9	Operating temp. to			24	Speed n		2900
	43.0		°C	25	nmin/nmax		min-1
10	Worktemp. Tmin/max			26	Rated power P		10.4
			°C	27	Efficiency		66.8
11	Ambient Temperature tmin			28	Sound Pressure Level		
	0.0		°C	29	Starting of pump		Direct (1y)
12	Ambient Temperature tmax			30	Solids		No
	40.0		°C	31	Solid-size from / to value		n.a.
13	Specific gravity at to			32	Quantity of solids / Solid-size up to		n.a.
	1.8		kg/dm³	33	Suction press. norm.		bar(g)
14	Density at tmin/tmax			34	Suction press. Min.		bar(g)
			kg/dm³	35	Suction press. max		bar(g)
15	Index of pH min.			36	Discharge pressure		bar(g)
				37	Differential pressure		bar
16	Index of pH max						
17	Flow Rate Qrated						
	50.0		m³/h				
18	Flow Rate Qnorm						
			m³/h				
19	Q Bypass						
			m³/h				
20	Qmin (allow.)						
	5.0		m³/h				
21	Qmax (allow.)						
	58.0		m³/h				
22	Diff. Head Hrated						
	27.2		m				
23	Shutoff Head H0						
			m				
38	Hints for Customer						
Materials							
39	Casing			47	Shaft		1.0503
40	Impeller			<i>Vertical Pumps</i>			
	1.4136S			48	Shaft - / Suspension Pipe		
41	Shaft Sleeve			49	Bearing sleeve		
	1.0503			50	Bearing bushing		
42	Packing			<i>Magnetic drive</i>			
43	Gaskets			51	Spacer can		
	RF46			52	Bearing bushing		
44	O-rings						
45	Pump shaf / Top shaft						
46	Bearing bracket / pedestal						
Drawings							
53	Dim. arrang. draw.			54	Cross sect. draw.		
Design							
<i>Bearing bracket</i>				<i>Mechanical Seal</i>			
55	Bearing bracket / pedestal			97	Manufacturer		Friatec AG
56	Bearing			98	Arrangement		Single-Acting
57	Power Pmax. (at nmax)			99	Type prod.		Allpac S
			kw	100	Size prod.		
58	Speed nmax			101	Material prod.		Q1Q1MG1
	2900		min-1	102	Type atm.		
59	Lubrication			103	Size atm.		
	Grease			104	Material atm.		
60	Lubrication device			105	delivered by		
	Grease Nipple			106	Execution		
61	Lubricant			107	Design		Normal
	Standard grease			108	Operating mode		
62	Lubricant Class Grease			109	Sealing pressure		bar(g)
	KP2K-30			110	Bypass line		
63	Lubric. Amount: 1st filling			111	Supply (ext./int.)		
			g	112	Flushing		
64	Lubric. Amount: regreasing			113	Quench		
			g				
65	Initial Lubrication Product						
	Yes						
66	Lubric. Interval grease						
	3000.0						
67	Lubricant Class Oil						
68	Filling capacity						
			ml				
69	1st filling						
70	Lubricating - interval						
			h				
71	Initial Lubrication Interval						
			h				
<i>Vertical / horizontal pump</i>				<i>Magnetic Drive</i>			
72	Submerg. depth			114	Type / Size		
			mm	115	Rated Torque		0.0 Nm
73	Intermediate bearing (s)						
	0.0		Stück				
74	Suction pipe			<i>Impeller</i>			
			mm	116	Impeller design		Closed
75	Suction strainer			117	Ø customer requirement		
			mm				
76	Total submergence depth						
			mm				
77	Gas tight stuffing box			<i>Shaft seal</i>			
	No			118	Shaft sealing system		Mechanical Seal
78	O-Ring Design			119	Stationary sealing		Mechanical Seal
	No						
79	Elongating bolts						
	No						

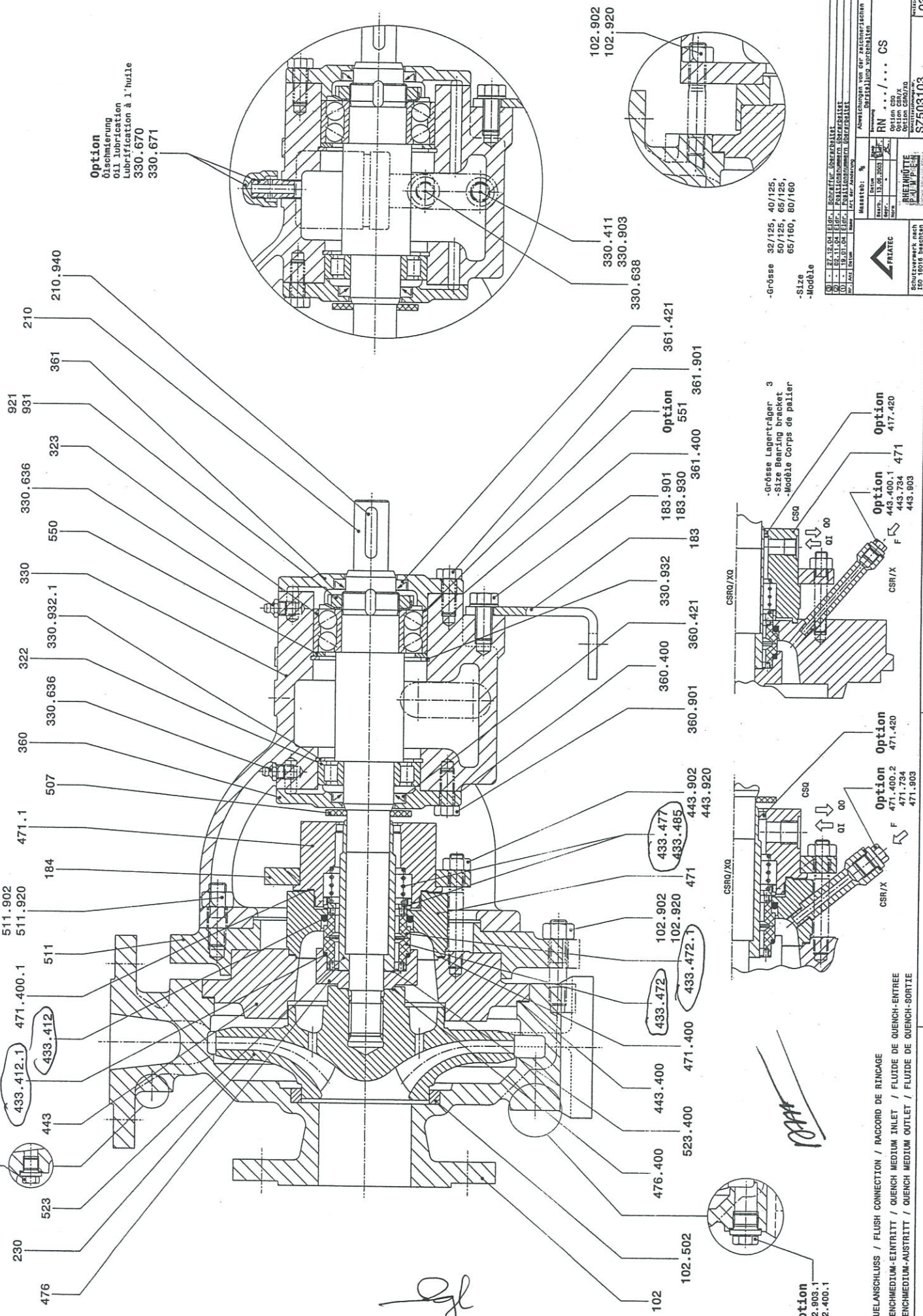


 FRIATEC AG Division Rheinhütte Pumpen 65203 Wiesbaden, Rheingustraße 96-98	Technical Pump Data Sheet				VK	TBA
	RN	50/160	CS	1.4136S	R	TBA
	Pump Type	Size	Shaft Sealing	Main Material	PR	TBA

1/2 Design							
80	Lock Washer	No		<i>Piping connections</i>			
81	Type of Installation (vertical pump)			120	Suction flange: DN,/PN	80/150	
82	Discharge bend	Norm		121	Suction Flange: Norm	ANSI	
83		DN		122	Suction Flange: Form:	RF	
84		PN		123	Suction Flange: Facing:	Default	
85		Form		124	Discharge flange DN / PN	50/150	
86		Facing		125	Disc. Flange: Norm:	ANSI	
87	Pressure equipment directive	No		126	Discharge Flange: Form:	RF	
88	Design Pressure			127	Discharge Flange: Facing:	Default	
89	Design Temperature			128	Casing drain	No	
<i>Heating / Cooling</i>				<i>Clearances to be set (during pump installation)</i>			
90	Electric	heatable	coolable	129	Total imp. Play		mm
91	Casing/suct. Cover	No	-	130	Gap front "Impeller-Housing"		mm
92	Bearing bracket/pedestal	No	No	131	Gap impeller-seal insert/stuffingbox housing		mm
93	Sealing Insert	No	No	132	Gap aux. Impeller-seal/stuffingbox housing		mm
94	Pipe columns	No	-	133	Gap impeller-Housing (GVSO)		mm
95	Mounting flange	No	-	134	Gap S1 in front impeller		mm
96	Working Pressure / Ref. temp.	/	bar/°C	135	Gap "s2" behind impeller (GVSO)		mm
136	Remarks Flushing						
Accessories							
137	Mounting	Foundation Screws		143	Base plate / frame	Yes	
138	Coupling	Yes		144	Base plate / frame size	5	
139	Coupling guard	Yes		145	<i>Tags</i>		
140	Belt Drive	No		146	Customer Name Plate	No	
141	Universal Drive	No		147	Name Plate	RH	
142	Gearing	No		148	Plate Language	EN	
Periphery							
149	Devices for mounting on pump	Yes					
150	Temperature monitoring	No		150a	Dry Running Protection	No	
Driver							
151	Motor from			168	Rated frequency	50	Hz
152	Motor delivered to RH	Will be done		169	Rated speed	2900	min-1
153	Manufacturer	German Brand		170	Rated power	15	kW
154	Type	IEC		171	Rated voltage		V
155	Execution	B3		172	Rated current		A
156	Size	160M		173	Power supply voltage	380	V
157	Execution VIK	No		174	Designed ambient temp.		°C
158	Standstill Heating	No		175	Class of efficiency		
159	Protection class	IP55		<i>Frequency Converter</i>			
160	Motor protection			176	Frequency Converter of		
161	Type of protection			177	Manufacturer		
162	Insulation Class			178	Type		
163	Circuit			179	Degree of Protection		
164	PTB-Certificate	No		180	Line Filter		
165	High Shearing Forces Design	No		181	Line Reactor		
166	Painting (RAL colour)	RAL 7030		182	Rated Power		
167	Designed for VSD	No		183	Rated voltage		
Transmission Elements							
<i>Magnetic Drive</i>				<i>Belt Drive</i>			
184	Type / Size			197	Manufacturer		
185	Rated Torque	Nm		198	Type		
186	Secondary Seal			199	Description		
187	Exec. Secondary seal			200	Arrangement		
<i>Gearing</i>				201	Rated Power		
188	Manufacturer			202	Drive Disk		
189	Type			203	Output Disk		
190	Size			204	No. of Belts		
191	Rated Torque	Nm		205	Conversion I		
192	Conversion i			<i>Coupling</i>			
193	Cooling			206	Manufacturer	Flender	
<i>Universal Drive</i>				207	Type	N-EUPEX H	
194	Manufacturer			208	Size	100	
195	Type			209	Expansion Length		
196	Rated Torque	Nm		210	Rated Torque		
Lubrication of the intermediate bearings							
211	Sleeve bearing lubrication			213	Lubricate piping		
212	Flushflow per bearing	l/h		214	Flushing Pressure	bar	
215	Lubrication medium	= product harmonic, clean and in line with the operating conditions = 120 l/h $= ((H/30)^{\rho} + ps) \cdot (0,5 \text{ up to } 1,0)$ H = differential head rho = Density of the conveyance fluid (kg/dm ³) ps = Submerge depth + pressure in the box (bar)					
Shipment							
216	Painting	Standard RAL 5009 <150 °C			217	Preservation	No



Option
102.903
102.400



Option
Ölschmierung
oil lubrication
Lubrification à l'huile
330.670
330.671

-Größe 32/125, 40/125,
50/125, 65/125,
65/160, 80/160
-Sätze
-Modelle

PROJEKT		OBJEKT		TITEL	
01	02	03	04	05	06
PRÄPARATIONSTECHNIK					
BILDUNG					
ANWENDUNG					
ZWECK					
STANDORT					
DIN					
GRUNDZUG					
DETAIL					
SCHAFFUNG					
REVISION					
ANMERKUNGEN					
REVISIONSNUMMERN					
ANMERKUNGEN ZUM ZEICHNUNGSVERFAHREN					
ZEICHNUNGSART					
ZEICHNUNG					
PROJEKT					
OBJEKT					
TITEL					
PROJEKT					
OBJEKT					
TITEL					
PROJEKT					
OBJEKT					
TITEL					
PROJEKT					
OBJEKT					
TITEL					
PROJEKT					
OBJEKT					
TITEL					

F = SPÜLANSCHLUSS / FLUSH CONNECTION / RACCORD DE RINÇAGE
OI = QUENCHMEDIUM-EINTRITT / QUENCH MEDIUM INLET / FLUIDE DE QUENCH-ENTREE
OO = QUENCHMEDIUM-AUSTRITT / QUENCH MEDIUM OUTLET / FLUIDE DE QUENCH-SORTIE



Date : 15.07.2013

CUSTOMERS PART LIST

Page : 2

Order no. : W101689 Prepared by : 04.06.13 Fritz, Sascha
 Project : 2005889 R 1305.1.302 Revised by : 04.06.13 Fritz, Sascha
 Type : RN50/160_CS Revision :
 Pump No. : 336817 / 336818 Reference :
 Customer : CHEMICAL INDUSTRY ENGINEERING JSC
 Cust. order number : 4X1205-CECO/INTECH-2000-P-00011

Production item : R 1305.1.302

RN50/160_CS
 Quantity : 2,0000, Unit : st

DIN item no.	Item code / DIN	Part	Material / Mat. comb.	Dimension / Material	Quantity	
					1 x	Total
330.636.0	RH34400	grease nipple	5.8A2F	A M 10X1	2	4
	DIN 71412					
330.913.0	RH34594	Vent plug	PA	GN 552-31-G1/4-A	1	2
330.932.0	RH35525	circlip	FEDST	72X2,5	1	2
	DIN 472					
330.932.1	RH34797	circlip	FEDST	80X2,5	1	2
	DIN 472					
360.000.0	1500305011000000	bearing cover	GG-20		1	2
360.901.0	RH14066	hexagon screw	A2-70	M 10X25	4	8
	ISO 4017					
361.000.0	1500305021000000	bearing end cover	GG-20		1	2
361.901.0	RH14066	hexagon screw	A2-70	M 10X25	4	8
	ISO 4017					
433.472.0	1087388048141500	seal ring	SIC		1	2
433.472.1	1087388048141500	seal ring	SIC		1	2
433.477.0	1087388030040100	spring ms	VA/KU		1	2
433.485.0	1087388065507300	rot.ring	2.4610	ALLPAC S 043	1	2
443.000.0	1201435011070300	seal insert	1.4136S		1	2
443.902.0	RH15506	stud	A2-70	M 10X75	4	8
	DIN 939					



Date : 15.07.2013

CUSTOMERS PART LIST

Page : 5

Order no. : W101689 Prepared by : 04.06.13 Fritz, Sascha
 Project : 2005889 R 1305.1.302 Revised by : 04.06.13 Fritz, Sascha
 Type : RN50/160_CS Revision :
 Pump No. : 336817 / 336818 Reference :
 Customer : CHEMICAL INDUSTRY ENGINEERING JSC
 Cust. order number : 4X1205-CECO/INTECH-2000-P-00011

Production item : R 1305.1.302

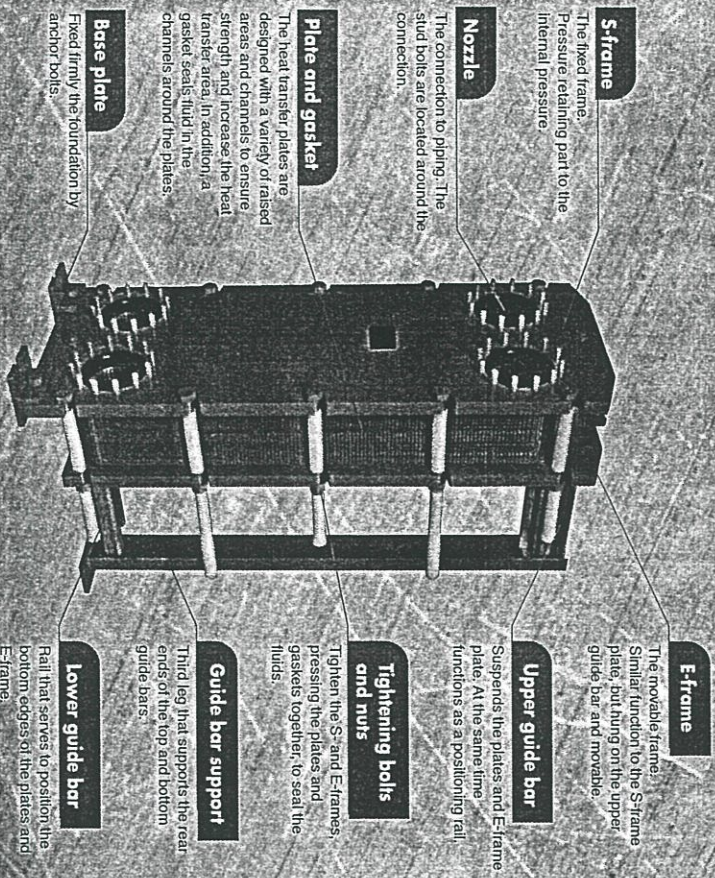
RN50/160_CS
 Quantity : 2,0000, Unit : st

DIN item no.	Item code / DIN	Part	Material /	Dimension /	Quantity	
			Mat. comb.	Material	1 x	Total
901.000.0	RH14055	hexagon screw	A2-70	M 10X14	1	2
	ISO 4017					
902.000.0	RH15727	stud	A2-70	M 16X50	4	8
	DIN 938					
920.000.0	RH12054	hexagon nut	1.1141A2	M 16; MAT 1.1141	4	8
	DIN 582					
920.000.1	RH12119	hexagon nut	A2-70	M 16	4	8
	ISO 4032					
921.000.0	RH12330	shaft nut	STAHL	KM 8	1	2
	DIN 981					
931.000.0	RH17252	locking washer	ST-A2F	MB 8	1	2
	DIN 5406					
360.400.0	3000367123342000	gasket	RF 20	D 130/72X0,5	1	2
360.421.0	RH33645	radial shaft sealing ring	NBR902	35X52X7 BAUSLX	1	2
361.400.0	3000367133342000	gasket	RF 20	D 130/80X0,5	1	2
361.421.0	RH33645	radial shaft sealing ring	NBR902	35X52X7 BAUSLX	1	2
433.412.0	1087388023327900	o-ring	PTFE/AR	55X5,5	1	2
433.412.1	1087388053327900	o-ring	PTFE/AR	55X3,5	1	2
443.400.0	3000012123344600	gasket	RF 46	D 190/173X0,8	1	2
471.400.0	3000010993344600	gasket	RF 46	D 110/100X0,8	1	2
471.400.1	3000010313344600	gasket	RF 46	D 85/75X0,8	1	2
476.400.0	3000027213343400	gasket	RF 34	D 40/24X0,25	1	2
523.400.0	3000027213343400	gasket	RF 34	D 40/24X0,25	1	2

PLATE HEAT EXCHANGER

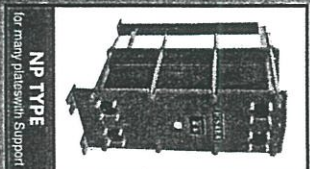
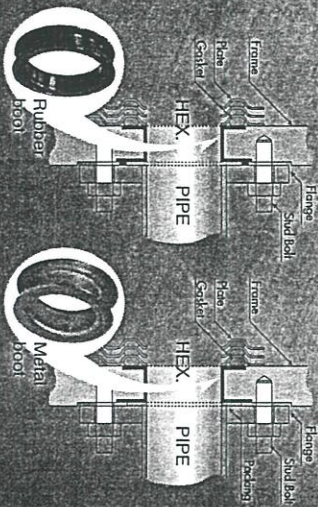
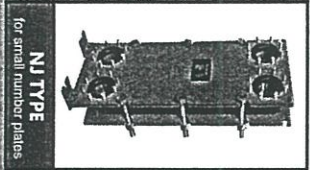
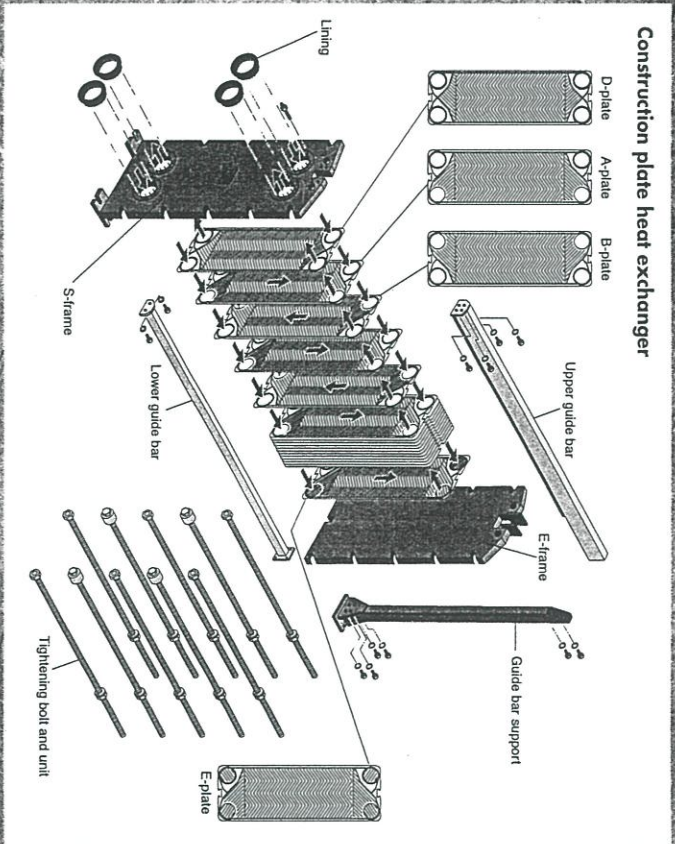
External Structure

The heat transfer plates are thin sheets of corrosion resistant metal such as stainless steel or titanium that are pressed formed with a corrugated pattern on the surface and sealed with synthetic rubber gaskets, which seals the flow channel and directs the fluid into alternate channels. Such plates are suspended, supported and aligned by guide bars and tightened by bolts between a fixed and a movable frame. The equipment can adjust the number of tubes so as to meet the heat duty.



Flow of Fluid and Heat Exchange Mechanism

Fluids in the A and B shells are of identical pattern. Consequently, fluid down becomes to the other so as to obtain a different flow direction. Further, by the start plate to guide having its porches with double seal gaskets and the end last plate to guide, the construction is such that the fluids do not directly contact the frame.





บริษัท ไทย-ไทย คอร์ปอเรชั่น จำกัด (มหาชน)
TOYO-THAI CORPORATION PUBLIC COMPANY LIMITED

DATA SHEET
FOR
PLATE AND FRAME HEAT EXCHANGER

(1/2)

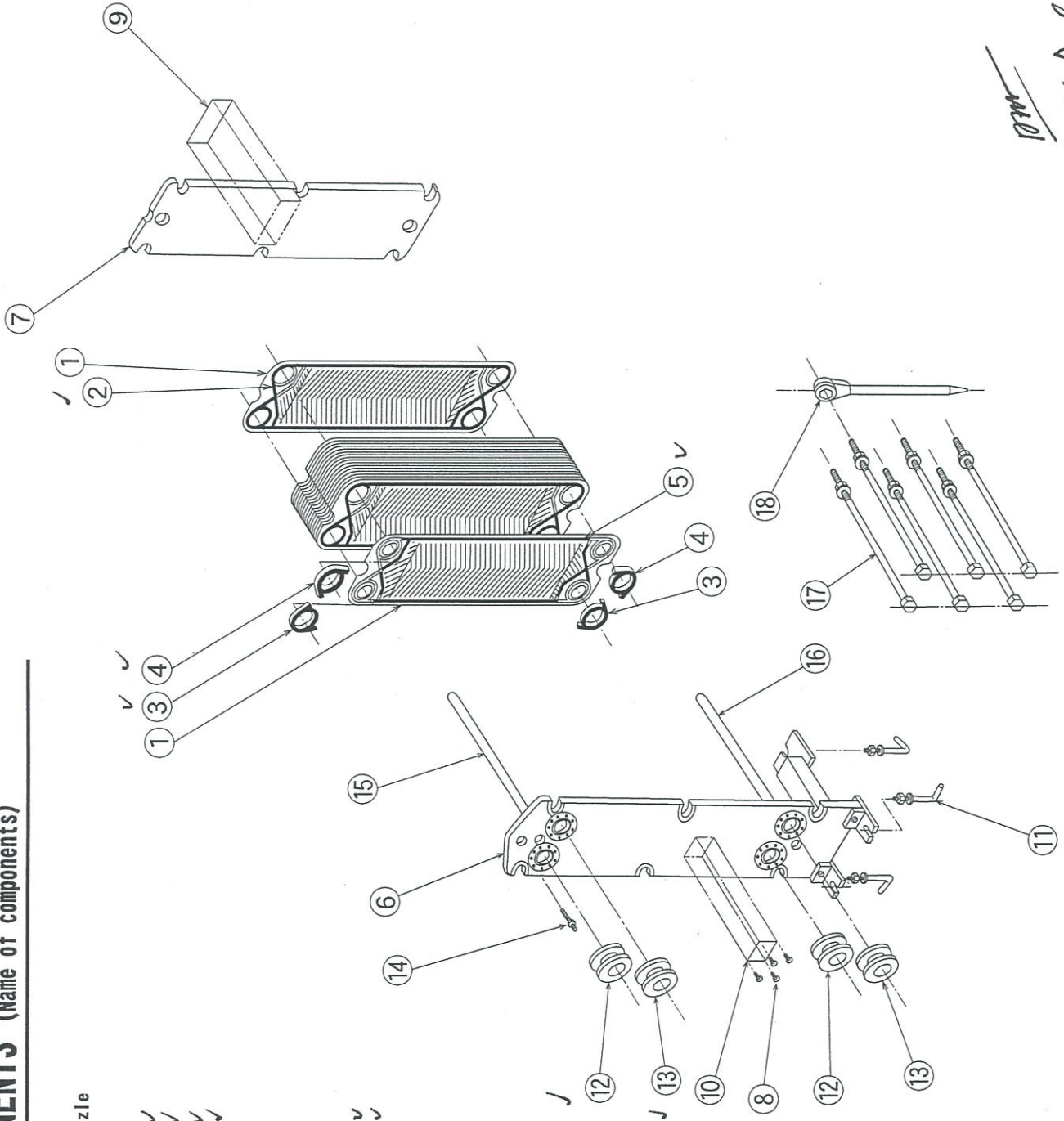
1	CUSTOMER	: DAP No.2-VINACHEM Joint Stock Company	REV.	DATE	AE	LE	MGR	PE	PEM	PM
2	LOCATION	: Lao Cai Province, Vietnam	0	04-Oct-12	P.Nuttakan					ORIGINAL SIGNED
3	PLANT	: DAP No.2-VINACHEM PROJECT	1	21-Mar-13	P.Nuttakan					
4	TTCL JOB NO.	: F-032	2							
5	ITEM NO.	: 20-E402 REQ'N NO. F032-1100-R004	3							
6	SERVICE	: Product Acid Cooler	4							
7	NO. REQ'D	(WORKING 1 STAND BY - TOTAL 1)	5							
MECHANICAL DATA OF ONE UNIT										
9	VENDOR MODEL	WX-536-TNHP-55	SIZE L x W x H		1313 x 820 x 2223 mm					
10	HEAT TRANSFER AREA (2)	- REQUIRED PER UNIT	41.27 m ²	ACTUAL	- PER PATE	0.9 m ²	- PER UNIT	49.82 m ²		
11	PLATES - NO.	55 - THK	0.6 mm	- MAT'L		HASTELLOY C-276				
PERFORMANCE OF ONE UNIT										
13	FLUID ALLOCATION	COLD SIDE			HOT SIDE					
14	FLUID NAME	Cooling Water			98.5% Sulfuric Acid					
15	TOTAL FLOW RATE	kg/hr	98,625 / 98,625			53,250 / 55,170				
16	FLOW RATE		IN	OUT	IN	OUT				
17	VAPOR AND/OR GAS	kg/hr	---	---	---	---				
18	LIQUID	kg/hr	98,625	98,625	53,250	55,170				
19	STEAM	kg/hr	---	---	---	---				
20	INERT GAS	kg/hr	---	---	---	---				
21	FLUID CONDENSED OR VAPORIZED	kg/hr	---	---	---	---				
22	STEAM CONDENSED OR WATER VAPORIZED	kg/hr	---	---	---	---				
23	TEMPERATURE	°C	34	44	90	40				
24	DENSITY (Vap./Liq.)	kg/m ³	--- / 994	--- / 994	--- / 1,775	--- / 1,839				
25	VISCOSITY (Vap./Liq.)	cPs	--- / 0.734	--- / 0.734	--- / 4.647	--- / 14.304				
26	THERMAL CONDUCTIVITY (Vap./Liq.)	W/m-K	--- / 0.430	--- / 0.430	--- / 0.344	--- / 0.318				
27	SPECIFIC HEAT (Vap./Liq.)	kJ/kg-K	--- / 4.179	--- / 4.179	--- / 1.573	--- / 1.469				
28	LATENT HEAT	kcal/kg	---	---	---	---				
29	OPERATING PRESSURE (Nor./Max.)	kPaG	--- / 550			--- / 490				
30	VELOCITY	m/sec	0.878			0.265				
31	PRESSURE DROP (Allow./Calc.)	kPa	70 / 66			70 / 25				
32	FOULING RESISTANCE	m ² K/W	0.00015			0.00015				
33	SENSIBLE HEAT DUTY	kJ/hr	---			---				
34	LATENT HEAT DUTY	kJ/hr	---			---				
35	TOTAL HEAT DUTY	kJ/hr	---			---				
36	DESIGN FACTOR	---								
37	HEAT EXCHANGED RATE (DIRTY CONDITION)	1145.19 kW	LMTD (CORRECTED)			19.64 °C				
38	OVERALL HEAT TRANSFER COEFF. SERVICE	1171 CLEAN	1413 ACTUAL (DIRTY)	1171 W/m ² .°C						
39	EXCESS AREA INSTALLED FOR FUTURE (3)	20 %								
CONSTRUCTION OF ONE UNIT										
41		COLD SIDE	HOT SIDE		MATERIAL					
42	DESIGN PRESSURE	kPaG	600	740	HEAT TRANSFER PLATE : Hastelloy C-276					
43	HYDROTEST PRESSURE	kPaG	AS PER CODE	AS PER CODE	FRAME : SS400					
44	DESIGN TEMPERATURE	°C	110	110	SHROUD (5) : SUS304					
45	PASSES PER PASS		---	---	GASKET (HOT/COLD) : Welding+N-TF,EPDM(O-Ring) / EPDM					
46	CORROSION ALLOWANCE	mm	---	---	NOZZLE HOT SIDE (4) : SS400 + Hastelloy C-276 lining					
47	NOZZLES	COLD: NO., SIZE & RATING	HOT NO., SIZE & RATING		NOZZLE COLD SIDE (4) : SS400 + SUS316L lining					
48	INLET	S1, 8" ASME150# RF, Studded type	T1, 8" ASME150# RF, Studded type		BOLT / NUT (TIGH.) : SNB7 / S45C					
49	OUTLET	S2, 8" ASME150# RF, Studded type	T2, 8" ASME150# RF, Studded type							
50	DRAIN	---	---							
51	VENT	---	---							
52	SPARE	---	---							
53	CODE REQUIREMENTS	ASME Sec. VIII DIV 1 2010 E, 2011 A								
54	WEIGHT -EMPTY	2460	kg	- OPERATING	2660	kg				

DM
Nguyễn Paul Hng

10 MAIN COMPONENTS (Name of components)

1. NJ Type without nozzle

Part No.	Part name	Qty
①	Plate	
②	Plate gasket	
③	D-plate gasket (B)	2
④	D-plate gasket (A)	2
⑤	Distance piece	1 set
⑥	S-frame	1
⑦	E-frame	1
⑧	Rivet	4
⑨	Hisaka Mark	1
⑩	Name plate	1
⑪	Anchor bolt with nut	3 pairs
⑫	Boot Nozzle	2
⑬	Boot Nozzle	2
⑭	Stud bolt with nut	1 set
⑮	Upper guide bar	1
⑯	Lower guide bar	1
⑰	Tightening bolt with nut	1 set
⑱	Ratchet spanner	1



PM
 Nguyễn Павел Hng



製造番号 MFG.No.		41-8294		パーツリスト (TCGリング) PARTS LIST (TCG RING)		Doc No.	
日版プレート式熱交換器 HISAKA PLATE HEAT EXCHANGER				機器番号 ITEM No.		20-E402	
型式 MODEL				WX-536-TNHP-55		1 UNIT(S)	
				機器名称 EQUIP. NAME		PRODUCT ACID COOLER	
No.	品名 PARTS NAME	略図 SKETCH (φ寸法は中心径を示す。 φ DIMENSION SHOWS CENTER OF DIAMETER.)	材質 MATERIAL	製作式数 QUANTITY 本製品 予備品 WORK IN STOCK SPARE 1台分 1台分 PER UNIT PER UNIT(S)	備考 REMARKS		
1	ガスケット(A) GASKET (A)		EPDM	27	プレートに貼付 SET ON PLATE		
2	D.プレートガスケット D.PLATE GASKET		EPDM	2	D.カセットに貼付 SET ON D.CASSETTE		
3	ガスケット(B) GASKET (B)		TCG/EPDM	2	D.カセットに貼付 SET ON D.CASSETTE		
4	ガスケット(B) GASKET (B)		TCG/EPDM	58	プレートに貼付 SET ON PLATE		
5	ディスタンスピース DISTANCE PIECE		NBR	1 SET	D.カセットに貼付 SET ON D.CASSETTE		
6	E.プレートガスケット E.PLATE GASKET		NBR	2	E.プレート裏面に貼付 SET ON E.PLATE BACK SIDE ※溶接レスプレート使用時 (F WELD-LESS PLATE IS USED)		
7	カセット CASSETTE		UNS No. N10276	27	WX-536		
8	E.プレート E.PLATE		UNS No. N10276	1	WX-536		
9							

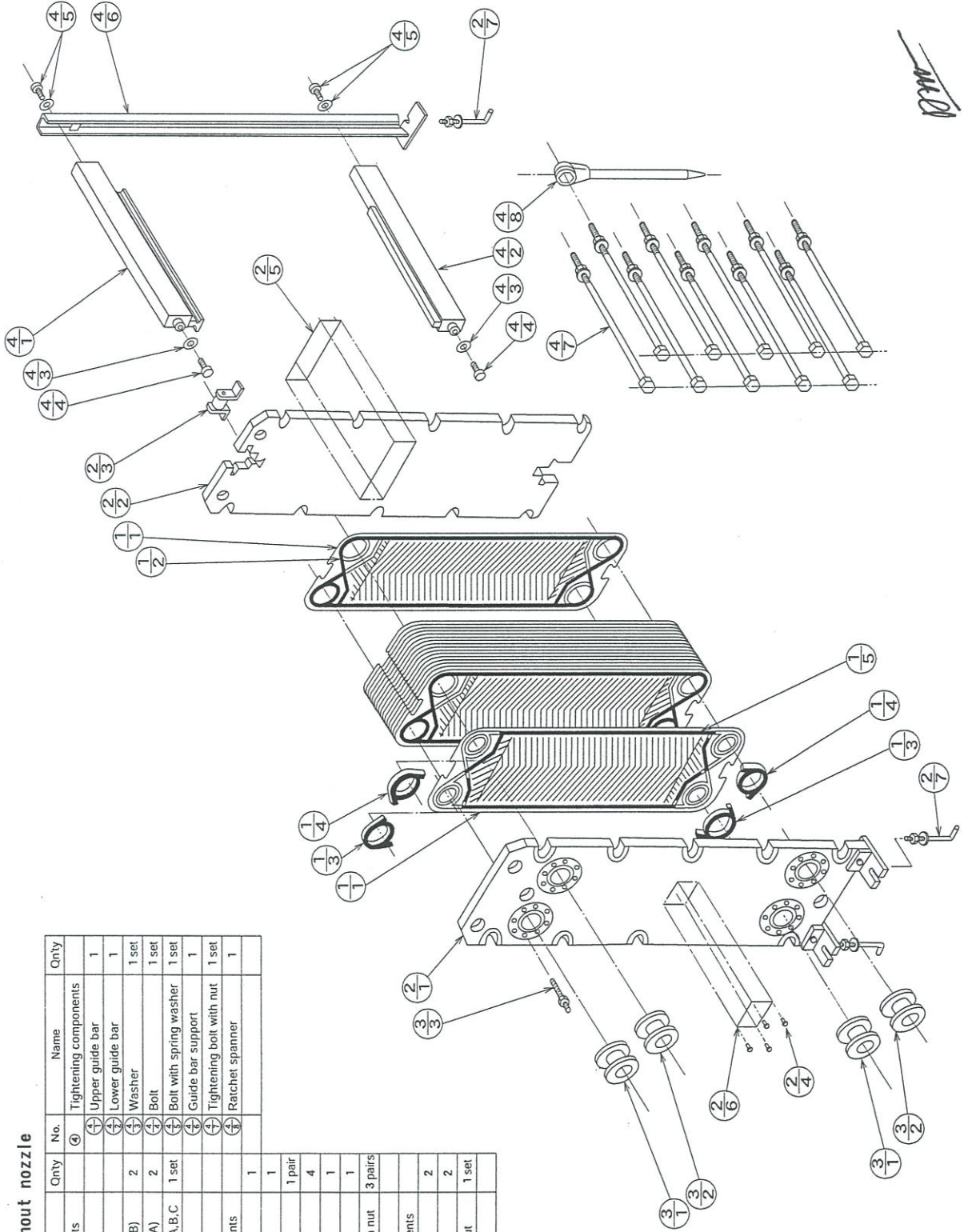
APPROVED BY
PREPARED BY

株式会社 日版製作所
HISAKA WORKS, LTD.
OSAKA, JAPAN

DAN
Nguyen Thanh Huy

2. NP Type without nozzle

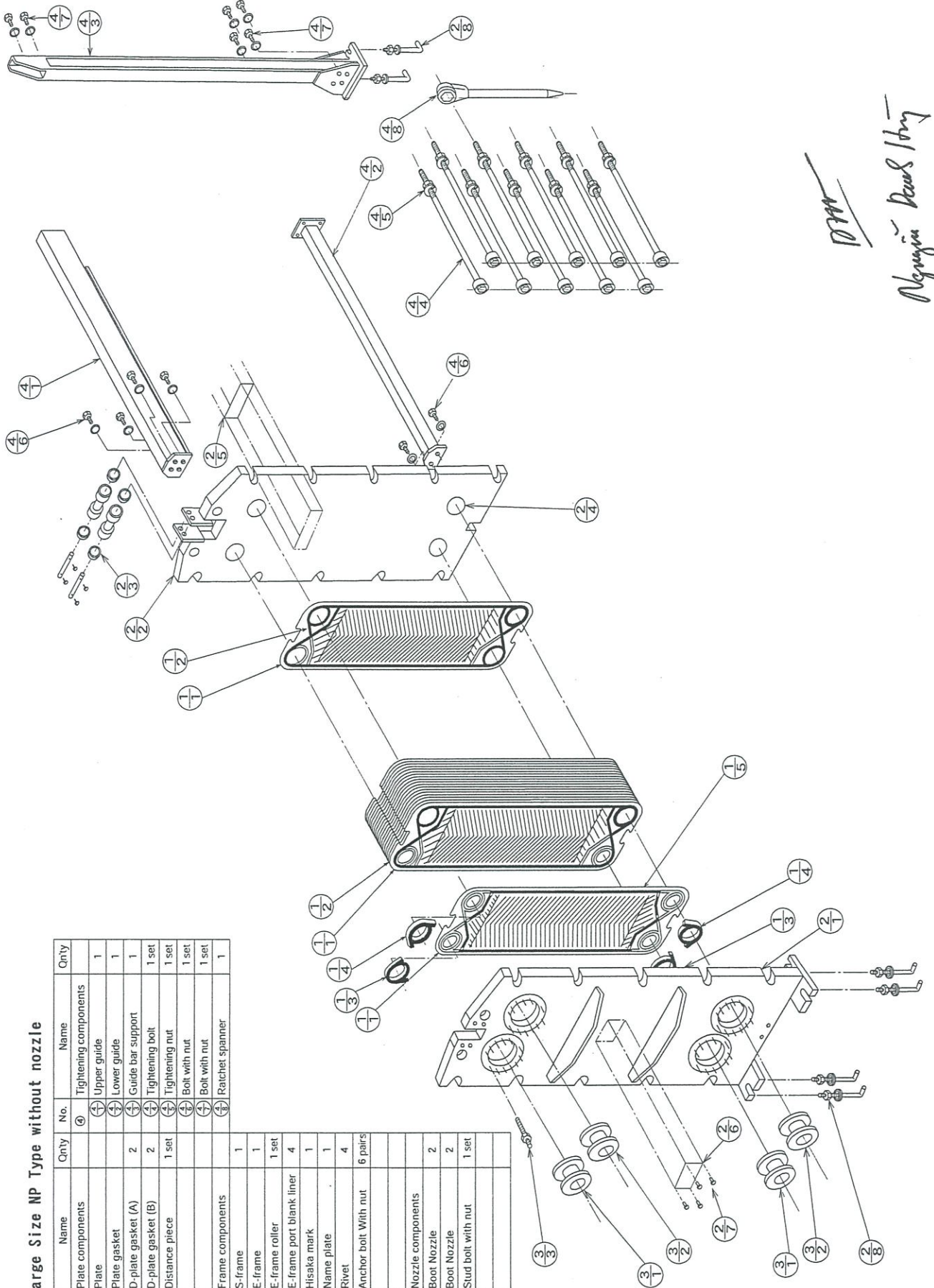
No.	Name	Qty	No.	Name	Qty
①	Plate components		④	Tightening components	
①	Plate	1	④	Upper guide bar	1
②	gasket for plate	1	④	Lower guide bar	1
③	D-plate gasket (B)	2	④	Washer	1 set
④	D-plate gasket (A)	2	④	Bolt	1 set
⑤	Distance piece A,B,C	1 set	④	Bolt with spring washer	1 set
			④	Guide bar support	1
			④	Tightening bolt with nut	1 set
			④	Ratchet spanner	1
②	Frame components				
③	S-frame	1			
④	E-frame	1			
⑤	E-frame roller	1 pair			
⑥	Rivet	4			
⑦	Hisaka Mark	1			
⑧	Name plate	1			
⑨	Anchor bolt With nut	3 pairs			
⑥	Nozzle components				
⑦	Boot Nozzle	2			
⑧	Boot Nozzle	2			
⑨	Stud bolt with nut	1 set			



Handwritten signature and name:
 Ngunjin David Hong

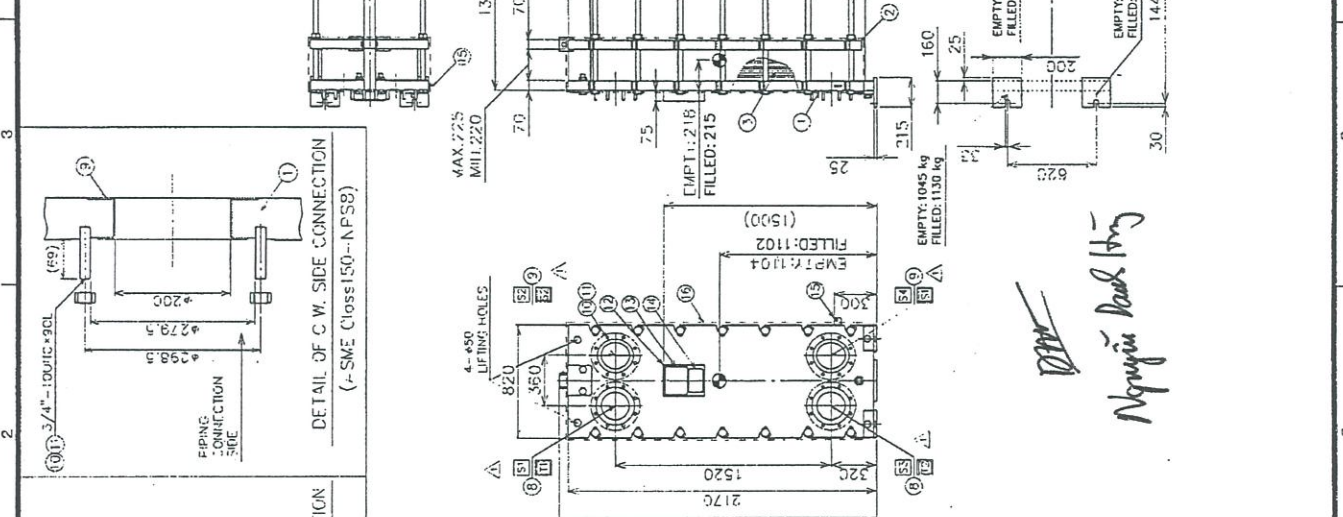
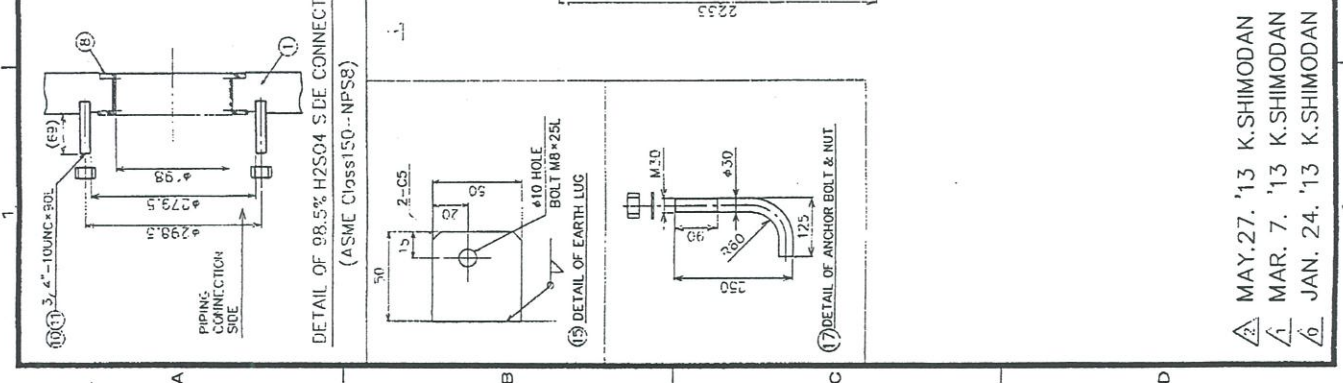
3. Large Size NP Type without nozzle

No.	Name	Qty	No.	Name	Qty
①	Plate components		①	Tightening components	
	Plate	1		Upper guide	1
	Plate gasket	1		Lower guide	1
	D-plate gasket (A)	2		Guide bar support	1
	D-plate gasket (B)	2		Tightening bolt	1 set
	Distance piece	1 set		Tightening nut	1 set
				Bolt with nut	1 set
				Bolt with nut	1 set
				Ratchet spanner	1
②	Frame components				
	S-frame	1			
	E-frame	1			
	E-frame roller	1 set			
	E-frame port blank liner	4			
	Hisaka mark	1			
	Name plate	1			
	Rivet	4			
	Anchor bolt With nut	6 pairs			
③	Nozzle components				
	Boot Nozzle	2			
	Boot Nozzle	2			
	Stud bolt with nut	1 set			



Handwritten signature: Nengjia David Hong

この図面は、本製品の製造に使用された技術資料、設計図、仕様書、およびその他の権利を侵害する権利を認めず、本製品の複製、改訂、転載、または他の目的での使用を禁じます。この図面は、本製品の製造に使用された技術資料、設計図、仕様書、およびその他の権利を侵害する権利を認めず、本製品の複製、改訂、転載、または他の目的での使用を禁じます。 HISAKA WORKS, LTD.



NOZZLE ORIENTATION		CONNECTION	
S1	98.5% H ₂ SO ₄ INLET	ASME CLASS150-NPS8 R.F.	△
S2	98.5% H ₂ SO ₄ OUTLET	INCLUDE STUD B&N	
S3	COOLING WATER INLET	ASME CLASS150-NPS8 R.F.	△
S4	COOLING WATER OUTLET	INCLUDE STUD B&N	
S5	MASS(EMPTY)	246C	19
S6	ATTACHMENT	RATCHET SPANNER	M36
S7	JOB NO.	F-032	
S8	ITEM NO.	20-E402	
S9	EQUIP. NAME	PRODUCT ACID COOLER	
S10	APPLICABLE CODE	ASME Sect.VIII Div.1 2010 E, 2011 A without U stamp	

ITEM NO.		DESCRIPTION	
17	ANCHOR BOLT & NUT	SS400	M30×250L L-TYPE △
16	PROTECTIVE SHROUD	SUS304	△ 11, TOP & BOTH SIDES
15	EARTH LUG	SUS304	△ 16, with M8×25L Bolt & Nut
14	NAME PLATE(HISAKA STD)	SUS304	
13	NAME PLATE(CUSTOMER REQ'D)	SUS304	
12	NAME PLATE BRACKET	SUS304	
11	NUT	S45C (Zn Galv.)	3/4"-10UNC HEAVY HEX, △
10	STUD BOLT	S45C (Zn Galv.)	3/4"-10UNC ×90L △
9	S1, S2 PORT CONNECTION LINING	SUS316L	
8	T1, T2 PORT CONNECTION LINING	UNS No.NI0276 (Equivalent to Hastelloy C-276)	△
7	TIGHTENING BOLT & NUT	SUS304	M36×670L (with Bolt Cover)
6	GUIDE BAR SUPPORT	SS400	
5	LOWER GUIDE BAR	SUS304/SS400	
4	UPPER GUIDE BAR	SUS304/SS400	
3	PLATE	55	UNS No.NI0276 (Equivalent to Hastelloy C-276) △
2	E.FRAME	1	SS400
1	S.FRAME	1	SS400

NO.	PART NAME	REQ'D	MATERIALS	REMARKS
PURCHASER TOYO-THAI CORPORATION PUBLIC COMPANY LIMITED				
CUSTOMER DAP No.2-Vinachem Joint Stock Company				
MFG. NO.	41-8294	QUANTITY	1	SHEET NO.
DESIGNED	K.SHIMODAN	SCALE	NONE	THIRD ANGLE PROJ.
DRAWN	K.SHIMODAN	ASSEMBLY DWG. OF PLATE TYPE HEAT EXCHANGER		
CHECKED	T.I.NOUE	MODEL :	WX-536-TNHHP-55	
APPROVED	K.KUSUNOKI	DWG. NO.	B418294	

FINAL

This item can contain up to 69 Plates.

1

2

3

4

5

6

△ MAY.27. '13 K.SHIMODAN
 △ MAR. 7. '13 K.SHIMODAN
 △ JAN. 24. '13 K.SHIMODAN

Handwritten signature: Nguyen Bao Hong