

Experience List (2015 ~ 2020)



UBEC Inc.

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2020 YEAR PROJECT

NO.	CLIENT	PROJECT	END USER	DESTINATION	ITEM	ITEM NO.	TYPE	MATERIAL	SIZE (Th'k x I.D x TL-TL. / TUBE S.T.L.)			Design		SERVICE OR SPECIAL SPEC.	WEIGHT (Ton/Unit)	Q'ty	PO issue Date	Delivery Date	
												Pressure	Temp						
1	GS E&C	HMC PP4	HMC Polymers	Thailand	Heat Exchanger	E4210	BEM	SA334 GR.6 SA516-70N+S5	t	15	ø 440	L 3050	58 barG	150 °C	-	2.4	1	Feb-2020	Dec-2020
						E4231	BEM	SA179 SA516-70	t	10	ø 330	L 1830	10 barG	200 °C	-	1.0	1		
						E4240	BEM	SA334 GR.6 SA516-70N+S5	t	20	ø 1010	L 3050	42 barG	150 °C	-	9.6	1		
						E4242	BEM	SA334 GR.6 SA516-70N+S5	t	19	ø 840	L 2440	42 barG	200 °C	-	6.8	1		
						E4243	BEM	SA334 GR.6 SA516-70N+S5	t	19	ø 590	L 3660	43 barG	150 °C	-	4.2	1		
						E4244	BEU	SA334 GR.6 SA516-70N+S5	t	23	ø 850/1200	L 5597	42 barG	150 °C	-	8.7	1		
						E4320	BEU	SA334 GR.6 SA516-70N+S5	t	10	ø 570	L 3660	25 barG	225 °C	-	3.3	1		
						E4330	BEM	SA334 GR.6 SA516-70N+S5	t	10	ø 450	L 2440	25 barG	235 °C	-	1.7	1		
						E4331	BKU	SA334 GR.6 SA516-70N+S5	t	10	ø 303/550	L 1830	25 barG	200 °C	-	1.1	1		
						E4360	BEM	SA179 SA516-70	t	10	ø 580	L 3660	10 barG	190 °C	-	2.9	1		
						E4431	BEM	SA334 GR.6 SA333 GR.6	t	9.5	ø 336.6	L 3660	25 barG	150 °C	-	1.2	1		
						E4432	BEM	SA334 GR.6 SA516-70N+S5	t	12	ø 820	L 2440	25 barG	150 °C	-	4.7	1		
						E4433	BEM	SA334 GR.6 SA516-70N+S5	t	10	ø 460	L 3050	25 barG	200 °C	-	2.4	1		
						E4501	BEU	SA179 SA516-70	t	13	ø 1170	L 4880	10 barG	200 °C	-	12.8	1		
						E4520	BXU	SA179+AL FIN SA516-70	t	12	ø 910	L 1830	7 barG	200 °C	-	3.3	1		
						E4710	BEM	SA334 GR.6 SA516-70N+S5	t	11	ø 450	L 2440	45 barG	150 °C	-	1.9	1		
						E4711	BEM	SA334 GR.6 SA333 GR.6	t	15.1	ø 242.9	L 1830	45 barG	200 °C	-	0.8	1		
						E4712	BEM	SA334 GR.6 SA516-70N+S5	t	10	ø 360	L 3658	45 barG	150 °C	-	1.6	1		
						E4760	BEM	SA179 SA516-70	t	10	ø 350	L 2000	9 barG	200 °C	-	1.0	1		
						E4761	BEM	SA179 SA106-B	t	10.3	ø 198.5	L 1500	9 barG	200 °C	-	0.5	1		
E4762	BEU	SA179 SA516-70	t	10	ø 610	L 3660	10 barG	190 °C	-	3.4	1								
E4763	BEM	SA179 SA106-B	t	14.3	ø 295.3	L 3050	10 barG	190 °C	-	1.3	1								
2					E4230	BEM	SA516-70 SA213-TP304	t	13	ø 1400	L 12192	42/- barG	150/-45 °C	Orbital Welding	40.4	1			
					E4401	BEM	SA516-70 SA213-TP304	t	13	ø 1520	L 7500	20/- kg/m ² g	150/-45 °C	Orbital Welding	28.7	1			
3	Hyosung Chem.	PP-1 Plant	HYOSUNG CHEM.	Korea	Heat Exchanger	E-203	V-BEM	SA213-TP304 SA240-304	t	12	ø 910	L 7200	22 kg/m ² g	150 °C	-	8.5	1	Jun-2020	Sep-2020
4	CTCI	SAFFRON-B	SABIC Singapore	Singapore	Heat Exchanger	C-5011A/B	V-AEU	SA213-TP316 SA312-TP316	t	8.2	ø 202.7	L 1200	10 barG	190 °C	-	0.5	2	May-2020	Jan-2021
						C-5111	V-AEL	SA213-TP316 SA240-316	t	10	ø 400	L 5000	10 barG	210 °C	-	2.5	1		
						C-5222	H-AEL	SA213-TP316 SA516-70	t	10	ø 500	L 4500	13 barG	215 °C	-	2.7	1		
						C-5322	H-AEL	SA213-TP316 SA106-B	t	8.2	ø 202.7	L 4000	13 barG	215 °C	-	0.8	1		
						C-5420A/B	H-BEM	SA213-TP304 SA240-304	t	10	ø 550	L 2500	10 barG	100 °C	-	2.0	2		
						C-5621	V-AEL	SA213-TP304L SA106-B	t	9.3	ø 254.4	L 3500	10 barG	155 °C	-	1.1	1		
						C-5710	H-AEL	SA179 SA106-B	t	9.52	ø 304.8	L 1900	10 barG	160 °C	-	1.3	1		
						C-5711	H-BEM	SA179 SA106-B	t	10.31	ø 303.2	L 1900	10 barG	155 °C	-	1.2	1		
						C-5712	H-AEL	SA213-TP304L SA516-70	t	11	ø 350	L 1600	10 barG	165 °C	-	1.1	1		

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4	CTCI	SAFFRON-B	SABIC Singapore	Singapore	Heat Exchanger	C-5751	H-BEU	SA213-TP304L SA106-B	t	8.2	∅ 202.7	L 3500	13 barG	185 °C	-	0.6	1	May-2020	Jan-2021
						H-5120	H-AEL	SA213-TP304 SA240-304	t	5	∅ 500	L 3000	10 barG	360 °C	-	2.0			
						H-5712	V-AEL	SA213-TP304L SA516-70	t	12	∅ 750	L 4500	10 barG	225 °C	-	6.3			
						H-5752	H-BEU	SA213-TP304L SA516-70	t	10	∅ 350	L 5000	13 barG	225 °C	-	1.6			
5	SEONGHWA	VAN PHONG PHASE 1	Van Phong Power Company	Vietnam	Pressure Vessel	10LCQ10BB001 20LCQ10BB001	V-LEG	SA516-70	t	16	∅ 1500	L 3776	7.6 barG	183 °C	-	4.9	2	Jun-2020	Oct-2021
6	TOYO Eng.	KDFPK Gas Expansion	Kanto Denka Finde Products	Korea	Column	CTW-3101	V-LUG	SUS 304L TP-S	t	7.1	∅ 151	L 11000	9.993 kg/m ² g	-196/50 °C	OIL & WATER FREE CLEANING	0.6	1	Jul-2020	Dec-2020
						CVE-3101	V-LUG	A240-304	t	6	∅ 550	L 900	9.993 kg/m ² g	-196/50 °C	OIL & WATER FREE CLEANING	0.4			
						CTW-3104	V-LUG	SUS 304L TP-S	t	7.1	∅ 151	L 11000	9.993 kg/m ² g	-196/50 °C	OIL & WATER FREE CLEANING	0.6			
						CVE-3104	V-LUG	A240-304	t	6	∅ 550	L 900	9.993 kg/m ² g	-196/50 °C	OIL & WATER FREE CLEANING	0.4			
						LTW-2101 & 2201	V-LUG	SUS 304L TP-S	t	6	∅ 102.3	L 2150	1.94 kg/m ² g	-80/50 °C	OIL & WATER FREE CLEANING	0.1			
						LVE-2101 & 2201	V-LUG	A240-304	t	9	∅ 600	L 800	1.937 kg/m ² g	-70/-25 °C	OIL & WATER FREE CLEANING	0.6			
9	Paz Ashdod	-	Paz Ashdod	Israel	Tube Bundle	171-C-13A	H-AEU	SA179	t	2.77	∅ 25.4	L 6100	23 barG	120 °C	-	4.3	1	Aug-2020	Jan-2021
11	TOYO Eng.	KDFPK Gas Expansion	Kanto Denka Finde Products	Korea	Heat Exchanger	LHE-3402	H-BEM	A179 A106-B	t	8.2	∅ 202.7	L 1300	6.11 kg/m ² g	250 °C	OIL & WATER FREE CLEANING	0.3	1	Nov-2020	Feb-2021
13	GS Caltex	MTPX	GS Caltex	Korea	Pressure Vessel	309C-121	H-SADDLE	SA516-60	t	10	∅ 1300	L 3300	7.7 kg/m ² g	202 °C	BELZONA Lining	2.9	1	Dec-2020	Nov-2021

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												Pressure	Temp							
1	SKEC	Ulsan PP	Ulsan PP	Korea	Pressure Vessel	D0301	V-SKIRT	SA516-70	t	12	∅ 2000	L 6000	9.4 BarG	66 °C	-	12.6	1	Jan-2019	Jan-2020	
						D1605	V-SKIRT	SA516-70N	t	31	∅ 2600	L 7800	28.0 BarG	120 °C	-	27.9	1			
						D1611	V-SKIRT	SA516-70	t	17	∅ 2500	L 5400	0.5 BarG	170 °C	-	11.5	1			
						D1810	V-LEG	SA516-70 SA240-316	t	8	∅ 700	L 1000	0.5 BarG	200 °C	Toxic	0.7	1			
2					Heat Exchanger	E1304	V-BEU	SA516-70	t	10	∅ 490	L 2800	5.0 BarG	120 °C	-	1.5	1			
						E1501	V-BEU	SA516-70	t	13	∅ 1050	L 3800	5.0 BarG	220 °C	-	5.5	1			
						Tower	T1302	V-SKIRT	SA516-70	t	11	∅ 1200	L 8400	5.0 BarG	120 °C	-	15.5			1
							T1401	V-LUG	SA516-70N+S5	t	11	∅ 800	L 20900	25.0 BarG	130 °C	-	11.0			1
							T1501	V-SKIRT	SA516-70	t	14	∅ 1300	L 16480	5.0 BarG	220 °C	-	31.1			1
							T1502	V-SKIRT	SA516-70 SA240-304	t	16	∅ 2100	L 10800	0.5 BarG	130 °C	-	29.0			1
T1701	V-LUG	SA516-70N+S5	t	21	∅ 1500	L 16400	34.0 BarG	150 °C	-	24.0	1									
3	TTSJV (TechnipFMC, Tecnicas Reunidas, Samsung Engineering)	BAPCO Modernization Plan	BAPCO	Bahrain	Pressure Vessel	012V0002	H-SADDLE	SA516-60N+HIC	t	17	∅ 1800	L 4200	204/10 psig	165/300 °F	WET H2S	6.4	1	Feb-2019	Mar-2020	
						012V0004	H-SADDLE	SA516-60N+HIC	t	28	∅ 2800	L 7250	215/10 psig	251/300 °F	WET H2S	21.7	1			
						012V0006	H-SADDLE	SA516-60N+HIC	t	27	∅ 2700	L 7800	233/10 psig	165/300 °F	WET H2S	22.5	1			
						012V0007	H-SADDLE	SA516-70	t	13	∅ 2400	L 6000	65/F.V psig	178/300 °F	-	8.9	1			
						012V0013	V-LEG	SA516-70	t	12	∅ 1500	L 4220	162/F.V psig	550/550 °F	-	4.1	1			
						012V0019	V-SKIRT	SA516-70	t	12	∅ 2100	L 5700	105/F.V psig	400/400 °F	-	6.6	1			
						012V0023	H-SADDLE	SA516-60N+HIC	t	16	∅ 2300	L 6000	50/10 psig	460/300 °F	WET H2S	11.0	1			
						012V0024	H-SADDLE	SA516-60N+HIC	t	15	∅ 2100	L 5000	50/10 psig	165/300 °F	ANIME, WET H2S	9.3	1			
						012V0025	H-SADDLE	SA516-60N+HIC	t	25	∅ 4450	L 11600	50/10 psig	500/300 °F	ANIME, WET H2S	48.3	1			
						017V0002	H-SADDLE	SA516-60N+HIC	t	17	∅ 1800	L 4200	204/10 psig	165/300 °F	WET H2S	6.4	1			
						017V0004	H-SADDLE	SA516-60N+HIC	t	28	∅ 2800	L 7250	215/10 psig	251/300 °F	WET H2S	21.7	1			
						017V0006	H-SADDLE	SA516-60N+HIC	t	27	∅ 2700	L 7800	233/10 psig	165/300 °F	WET H2S	22.5	1			
						017V0007	H-SADDLE	SA516-70	t	13	∅ 2400	L 6000	65/F.V psig	178/300 °F	-	8.9	1			
						017V0013	V-LEG	SA516-70	t	12	∅ 1500	L 4220	162/F.V psig	550/550 °F	-	4.1	1			
						017V0019	V-SKIRT	SA516-70	t	12	∅ 2100	L 5700	105/F.V psig	400/400 °F	-	6.6	1			
						017V0023	H-SADDLE	SA516-60N+HIC	t	16	∅ 2300	L 6000	50/10 psig	460/300 °F	-	11.0	1			
						017V0024	H-SADDLE	SA516-60N+HIC	t	15	∅ 2100	L 5000	50/10 psig	165/300 °F	-	9.3	1			
017V0025	H-SADDLE	SA516-60N+HIC	t	25	∅ 4450	L 11600	50/10 psig	500/300 °F	-	48.3	1									
5	TOYO	IPP 650 KTA Polyethylene Plant	Irkutsk Polymer Plant (IPP)	Russia	Column	2C-1008	Vertical	SA516-70N+S5	t	10	∅ 610	L 7848	931/F.V kPag	180/110 °C	-	2.0	1	Apr-2019	Apr-2020	
						2C-1421	Vertical	SA516-70N+S5	t	10	∅ 500	L 7163	931/F.V kPag	180/70 °C	-	1.3	1			

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												Pressure	Temp							
6	TOYO	IPP 650 KTA Polyethylene Plant	Irkutsk Polymer Plant (IPP)	Russia	Reactor	2C-1004/2C-1005	V-SKIRT	SA240-304	t	24	∅ 1500	L 7836	4068/F.V	kPag	110/40 °C	-	13.7	2	Apr-2019	Apr-2020
						2C-1109	V-LUG	SA516-70N+S5	t	16	∅ 900	L 2632	3800/F.V	kPag	340/40 °C	-	3.5	1		
						2C-1112	V-LUG	SA516-70N+S5	t	16	∅ 900	L 2373	3800/F.V	kPag	340/40 °C	-	3.3	1		
						2C-1419/2C-1420	V-SKIRT	SA516-70N+S5	t	18	∅ 1000	L 4937	4068/F.V	kPag	110/40 °C	-	6.4	2		
						2C-2108	V-SKIRT	SA516-70N+S5	t	38	∅ 2300	L 5436	4100/F.V	kPag	130/130 °C	-	24.1	1		
						2C-2112/2C-2113	V-SKIRT	SA516-70N+S5	t	51	∅ 3200	L 9144	4100/F.V	kPag	130/130 °C	-	62.7	2		
7					Chamber	2C-4103/2C-4108	V-LUG	SA516-70N+S5	t	39	∅ 1600	L 2551	2910/-	kPag	170/- °C	-	10.7	4		
						Tank	2C-4101/2C-4105	V-LUG	SA516-70N+S5	t	39	∅ 1500	L 2441	2910/-	kPag	170/- °C	-	8.7		
8					Drum	2C-1007	H-SADDLE	SA516-70N+S5	t	17	∅ 3000	L 5791	931/F.V	kPag	180/110 °C	-	12.0	1		
						2C-1406	H-SADDLE	SA516-70N+S5	t	15	∅ 2600	L 5030	931/F.V	kPag	180/70 °C	-	8.7	1		
						2C-5202	V-LUG	SA516-70N+S5	t	13	∅ 1300	L 4602	345/F.V	kPag	220/220 °C	-	4.0	1		
						2C-5210	V-LUG	SA516-70N+S5	t	21	∅ 2600	L 8001	1931/F.V	kPag	220/220 °C	-	17.6	1		
						2C-5220	H-SADDLE	SA516-70N+S5	t	8	∅ 2100	L 4100	FL/-	kPag	200/- °C	-	4.7	1		
						2C-6212	V-SKIRT	SA240-304	t	8	∅ 1500	L 2900	103/F.V	kPag	180/180 °C	-	4.4	1		
						2C-9102	H-SADDLE	SA516-70N	t	11	∅ 1500	L 4000	550/F.V	kPag	180/180 °C	-	6.9	1		
						2C-9301	V-LEG	SA240-304	t	34	∅ 2000	L 4400	4500/-	kPag	60/- °C	-	15.4	1		
						2C-9700	H-SADDLE	SA240-304	t	10	∅ 4000	L 6000	350/-	kPag	200/- °C	-	145.6	1		
						2C-9710	H-SADDLE	SA240-304	t	6	∅ 1400	L 3600	350/-	kPag	65/- °C	-	5.1	1		
						2C-9801	H-SADDLE	SA516-70N+S5	t	16	∅ 3000	L 6000	588/F.V	kPag	60/60 °C	-	12.8	1		
						2D-9001	H-SADDLE	SA516-70N+S5	t	17	∅ 3300	L 11000	517/-	kPag	340/- °C	-	22.2	1		
						2D-9002	H-SADDLE	SA516-70N+S5	t	15	∅ 2000	L 5000	517/-	kPag	220/- °C	-	7.2	1		
						Tank	2D-9411	V-Cone Roof	SA240-304	t	6	∅ 2200	L 3488	F.W+15	kPag	75 °C	-	2.2		
Heat Exchanger					2E-1009	V-BE-	SA2516-70N+S5	t	12	∅ 750	L 1650	1000/F.V	kPag	180/40 °C	-	2.2	1			
					2E-1010	H-B-U	SA333-6+UG84	t	Sch 40	∅ DN300	L 3600	720/F.V	kPag	180/180 °C	-	0.4	1			
	2E-1415	H-B-U	SA333-6+UG84	t	Sch 40	∅ DN250	L 1500	720/F.V	kPag	180/180 °C	-	0.2	1							
	2E-1422	V-BE-	SA516-70N+S5	t	10	∅ 500	L 1050	1000/F.V	kPag	180/40 °C	-	0.8	1							
9	SKEC	S-PJT	SK Energy	Korea	MIXING INJECTION DEVICE	SN-41001	-	SA182-F321	t	46	∅ 365	L 2464	202.8	kg/m ³ g	454 °C	-	2.0	1	Apr-2019	Oct-2019
						SN-41002	-	SA182-F321	t	46	∅ 365	L 2464	203.2	kg/m ³ g	454 °C	-	2.0	1		
						SN-41003	-	SA182-F321	t	46	∅ 365	L 2464	198.9	kg/m ³ g	454 °C	-	2.0	1		
						SN-41015	-	SA106-B	t	10	∅ 304.9	L 1867	38.0	kg/m ³ g	250 °C	-	0.4	1		
						SN-42001	-	SA182-F321	t	46	∅ 365	L 2464	202.8	kg/m ³ g	454 °C	-	2.0	1		
						SN-42002	-	SA182-F321	t	46	∅ 365	L 2464	203.2	kg/m ³ g	454 °C	-	2.0	1		
						SN-42003	-	SA182-F321	t	46	∅ 365	L 2464	198.9	kg/m ³ g	454 °C	-	2.0	1		
						SN-42015	-	SA106-B	t	10	∅ 304.9	L 1867	38.0	kg/m ³ g	250 °C	-	0.4	1		

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9	SKEC	S-PJT	SK Energy	Korea	MIXING INJECTION DEVICE	SN-43002	-	SA312-TP321	t	10	ø 304.9	L 1867	30.0 kg/m ² g	425 °C	-	0.4	1	Apr-2019	Oct-2019
						SN-43003	-	SA106-B	t	18	ø 289.1	L 1867	70.0 kg/m ² g	371 °C	-	0.4	1		
10	GSEC	MFC	GS Caltex	Korea	Heat Exchanger	712-E-104A/B	H-AET	SA516-70N SA179	t	16	ø 1600	L 7000	21.5/HV kg/m ² g	200/177 °C	-	37.1	2	May-2019	May-2020
						712-E-202A/B	H-AES	SA516-70 SA179	t	10	ø 610	L 3000	17.5/HV kg/m ² g	245/177 °C	-	4.3	2		
						712-E-212	H-AES	SA516-70 SA179	t	13	ø 830	L 6100	21.0/HV kg/m ² g	190/190 °C	-	11.4	1		
						712-E-230	H-BEM	SA516-70N SA179	t	18	ø 1040	L 3000	20.0/FV kg/m ² g	350/350 °C	-	9.8	1		
						712-E-307	H-AEM	SA516-70 SA179	t	13	ø 530	L 6000	42.0/HV kg/m ² g	140/177 °C	-	4.8	1		
						712-E-309	H-AES	SA516-70 SA179	t	11	ø 500	L 7100	17.4/HV kg/m ² g	100/177 °C	CAUSTIC	4.3	1		
						712-E-312	H-AJT	SA516-70 SA179	t	13	ø 1450	L 7000	8.5/HV kg/m ² g	250/177 °C	-	28.8	1		
						712-E410	H-NKN	SA516-70N+S5 SA334-6	t	17	ø 1150/1600	L 5500	18.0/HV kg/m ² g	65/177 °C	LTCS	21.1	1		
						712-E-411A/B	V-BEM	SA516-70N+S5 SA334-6	t	12	ø 760	L 3000	25.9/HV kg/m ² g	175/175 °C	LTCS	5.2	2		
						712-E-412	H-NEN	SA516-70N SA179	t	26	ø 1250	L 4800	48.0/HV kg/m ² g	80/177 °C	-	21.8	1		
						712-E-417	H-NKN	SA516-70N+S5 SA334-6	t	23	ø 930/1400	L 5000	48.0/HV kg/m ² g	150/177 °C	LTCS	19.1	1		
						712-E-421A/B	V-BEM	SA516-70 SA179	t	13	ø 1200	L 3000	7.0/HV kg/m ² g	205/205 °C	-	12.5	2		
						712-E-431A/B	V-BEM	SA516-70 SA179	t	12	ø 860	L 3000	9.2/HV kg/m ² g	205/205 °C	-	5.8	2		
						712-E-711	H-AET	SA516-70N+S5 SA334-6	t	20	ø 1500	L 6000	30.0/HV kg/m ² g	250/177 °C	LTCS	35.9	1		
						712-E-722	H-NEN	SA516-70 SA179	t	17	ø 1180	L 5000	17.4/HV kg/m ² g	205/205 °C	-	17.8	1		
						712-E-726	H-AES	SA516-70N+S5 SA334-6	t	13	ø 610	L 5000	29.0/HV kg/m ² g	65/177 °C	LTCS	5.4	1		
						712-E-901	H-NEN	SA516-70 SA179	t	13	ø 1450	L 6500	13.8/HV kg/m ² g	276/177 °C	-	26.1	1		
						714-E-104	H-AET	SA516-60N SA179	t	18	ø 1050	L 4000	37.0/HV kg/m ² g	220/177 °C	HYDROGEN SOUR	12.7	1		
714-E-108A/B	V-NEN	SA516-70 SA179	t	15	ø 1100	L 4000	20.0/FV kg/m ² g	350/100 °C	-	12.5	1								
714-E-116	V-NEN	SA516-70 SA179	t	12	ø 600	L 2700	20.0/FV kg/m ² g	350/100 °C	-	3.1	1								
12	BAZAN	GADIV	BAZAN	Israel	Tube Bundle	121-3406A/B	-	SA213-TP316L	t	2.41	ø 19.05	L 7315	- kg/m ² g	- °C	-	10.0	1	Jun-2019	Oct-2019
						223-3428	-	SA179	t	2.41	ø 19.05	L 6096	- kg/m ² g	- °C	-	0.9	1		
						227-3406	-	SA179	t	2.41	ø 19.05	L 6096	- kg/m ² g	- °C	-	10.5	1		
14	SKEC	No.2 PX PSA	SK Global Chemical	Korea	Heat Exchanger	P-E3522	H-AES	SA516-70N SA179	t	12	ø 600	L 2500	10.2/FV kg/m ² g	124/124 °C	-	3.0	1	Sep-2019	Apr-2020
15	SK Energy	No.2 VRDS	SK Energy	Korea	Heat Exchanger	YE-E1081	H-AES	SA516-70 SA179	t	14	ø 680	L 6000	14.1/HV kg/m ² g	177/180 °C	-	6.0	1	Oct-2019	May-2020
						YE-E1082	H-AES	SA516-70N+HIC SA179	t	14	ø 680	L 6000	10.9/HV kg/m ² g	177/150 °C	SEVERE WET H2S AMINE	5.9	1		
16	BAZAN	-	BAZAN	Israel	Tube Bundle	104-C-400-2	-	SA789-S32205	t	2.41	ø 19.05	L 6096	34.5/FV kg/m ² g	130 °C	-	12.8	1	Oct-2019	Apr-2020
18	Gardner Denver Korea	Thai Oil Clean Fuel Project (CFP)	Thai Oil Public Company	Thailand	Pressure Vessel	V-14001/14002/14003	V-SKIRT	SA516-70	t	12	ø 2160	L 5580	10 kg/m ² g	70 °C	-	5.4	3	Nov-2019	Jul-2020
20	Hyundai Power Systems				Pressure Vessel	V-14012/14022/14032	V-LEG	SA516-70	t	12	ø 1600	L 2630	3.5 kg/m ² g	150 °C	-	3.5	3	Dec-2019	Nov-2020

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												Pressure	Temp							
7	E-TEC	YANSAB	SABIC	SAUDI	Pressure Vessel	V-2315	V-LEG	SA240-304	t	6	∅ 1900	L 3900	350/F.V	KPaG	120/120 °C	-	3.4	1	Apr-2018	May-2018
						V-2730	V-LEG	SA240-304	t	10	∅ 1800	L 2450	1200/F.V	KPaG	90/90 °C	-	4.0	1		
						V-2740	V-LEG	SA240-304	t	6	∅ 500	L 2430	1200/F.V	KPaG	90/90 °C	-	1.2	1		
						V-2532	H-SADDLE	SA516-70N+304L	t	11+3	∅ 1800	L 4200	1200/F.V	KPaG	218/218 °C	-	5.6	1		
						V-2533	H-SADDLE	SA516-70N+304L	t	21+3	∅ 2200	L 5500	950/F.V	KPaG	215/215 °C	-	11.6	1		
						V-2534	H-SADDLE	SA516-70N+304L	t	13+3	∅ 2500	L 6200	720/F.V	KPaG	196/196 °C	-	11.7	1		
						V-2535	H-SADDLE	SA516-70N+304L	t	14+3	∅ 2700	L 6800	500/F.V	KPaG	182/182 °C	-	14.2	1		
						V-2536	V-SADDLE	SA516-70N+304L	t	15+3	∅ 3100	L 9300	350/F.V	KPaG	166/166 °C	-	21.8	1		
					Reactor	R-2960	V-SKIRT	SA516-70N	t	23	∅ 1300	L 2400	3880/F.V	KPaG	90/90 °C	-	6.3	1		
					Heat Exchanger	E-2316	H-NEM	SA516-70N SA213-TP304	t	12	∅ 900	L 1500	1400/F.V	KPaG	182/182 °C	-	3.5	1		
						E-2521	H-BEM	SA240-304 SA213-TP304L	t	15	∅ 1100	L 9000	2700/F.V	KPaG	157/157 °C	-	18.9	1		
						E-2533	V-BEN	SA516-70 Cu-Ni (High Flux)	t	15	∅ 2600	L 5000	0.95/F.V	MPaG	207 °C	-	50.1	1		
						E-2534	V-BEN	SA516-70 Cu-Ni (High Flux)	t	21+3	∅ 3000	L 4000	0.72/F.V	MPaG	196 °C	-	56.8	1		
						E-2535	V-BEN	SA516-70 Cu-Ni (High Flux)	t	21+3	∅ 2900	L 3500	0.5/F.V	MPaG	182 °C	-	50.6	1		
						E-2613	H-AFM	SA240-304L SA213-TP304L	t	7	∅ 700	L 12000	944/-	KPaG	170/- °C	-	10.5	1		
						E-2722A/B	H-AEM	SA312-TP304L SA213-304L	"	6	SCH40S	L 5000	1200/-	KPaG	197/-5 °C	-	1.5	1		
						E-2730	H-AEM	SA516-70N SA213-TP304L	t	10	∅ 550	L 2500	2500/F.V	KPaG	250/250 °C	-	2.5	1		
E-2731	V-BEU	SA240-304 SA213-TP304L	t	7		∅ 900	L 1900	175/F.V	KPaG	182/182 °C	-	1.7	1							
E-2315	H-NEM	SA240-304L SA213-TP304L	t	21	∅ 3150	L 5000	1400/F.V	KPaG	129/129 °C	-	82.5	1								
E-2537	H-AGM	SA240-304 SA213-TP304L	t	16	∅ 3700	L 6000	175/F.V	KPaG	89/89 °C	-	184.0	1								
8	HEC	ASC Phase-VI (VCM-3 Stabilization) Project	P.T. Asahimas Chemical	Indonesia	Heat Exchanger	HE-C302B	V-BEM	SA516-60 SB111-C71500	t	13	∅ 1500	L 6000	7/F.V	kg/m ² g	70/70 °C	-	21.4	1	Nov-2018	
						HE-C601B	V-BEL	SA516-60 SA789-S32205	t	9	∅ 591	L 4000	7/F.V	kg/m ² g	115/115 °C	-	2.7	1	Mar-2018	Sep-2018
						HE-C603B	H-BEM	SA516-60 SA789-S32205	t	10	∅ 900	L 6000	10.2/F.V	kg/m ² g	120 °C	-	6.0	1		
9	e-TEC E&C	ALK Y4 HYCO	Air Liquid Korea	Korea	Pressure Vessel	122001V04	H-SADDLE	SA516-70	t	13	∅ 2000	L 4000	3.5/F.V	BarG	120/-15 °C	AMINE	7.0	1	Apr-2018	Feb-2019
						011201V02	H-SADDLE	SA516-70	t	11	∅ 1400	L 4100	3.5/F.V	BarG	80/-15 °C	-	4.8	1		
						011201V03	H-SADDLE	SA516-70	t	13	∅ 1600	L 5000	11/F.V	BarG	80/80 °C	-	9.3	1		
						121001V06	V-LEG	SA516-70N	t	19	∅ 1200	L 2600	29.4	BarG	100/-15 °C	-	5.7	1		
						014001V02	V-LEG	SA240-304L	t	22	∅ 1300	L 3500	32	BarG	190/190 °C	-	5.6	1		
						014001V04	V-LEG	SA240-304L	t	20	∅ 1200	L 2510	32	BarG	100/100 °C	-	3.9	1		
						121001V02	V-LEG	SA240-304L	t	8	∅ 1200	L 2700	3.5/F.V	BarG	120/- 15/120 °C	-	2.0	1		
						619501V80	H-SADDLE	SA240-304L	t	6	∅ 2150	L 7410	3.5	BarG	-196/160 °C	-	4.4	1		
						613601D31	V-SKIRT	SA516-70N	t	29	∅ 2200	L 6100	29.4	BarG	270/-15 °C	HYDROGEN	42.6	1		
613601D32	V-SKIRT	SA516-70N	t	29	∅ 2200	L 6100	29.4	BarG	270/-15 °C	HYDROGEN	42.6	1								

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												Pressure	Temp							
9	e-TEC E&C	ALK Y4 HYCO	Air Liquid Korea	Korea	Pressure Vessel	613601V31	V-LEG	SA516-70N	t	13	ø 750	L 1815	29	BarG	65/-15 °C	HYDROGEN	0.9	1	Apr-2018	Feb-2019
						551001V11	V-LEG	SA516-70	t	17	ø 3500	L 10000	9.9	BarG	60, -15 °C	-	22.1	1		
					Heat Exchanger	011001E01	H-NXU	SA387-11 CL2 SA213-T11	t	12	ø 750	L 3000	32/41	BarG	450/450 °C	HYDROGEN	5.5	1		
						011201E01A/B	H-BXU	SA516-70 SA213-T11	t	22	ø 600	L 4000	50/41	BarG	400/400 °C	HYDROGEN	4.5	2		
						121001E03	H-BKU	SA516-70 SA213-TP316L	t	15	ø 1000	L 4877	3.5/F.V	BarG	155/-15 °C	HYDROGEN	13.8	1		
						011201E03	H-BFU	SA106-B/SA234-WPB SA179	t	SCH80	" 12	L 2000	41/10.3	BarG	400/65 °C	-	0.8	1		
						014001E03	H-BEM	SA240-304L SA213-TP304L	t	13	ø 450	L 2500	25/32	BarG	190/190 °C	-	1.9	1		
						551001E41	H-BEM	SA516-70 SA179	t	10	ø 390	L 3000	9.5/9.5	BarG	100/100 °C	-	1.2	1		
						013001E02	H-BEM	SA335-P11 SA213-T11	t	SCH80	" 10	L 2000	41/10.3	BarG	450/65 °C	HYDROGEN	0.7	1		
						613601E31	H-BEU	SA516-70N SA179	t	11	ø 355.6	L 3658	29.4/50	BarG	270/-15 °C	HYDROGEN	1.3	1		
						613601E32	H-BEU	SA516-70N SA179	t	10	ø 685.8	L 3658	29.4/10.3	BarG	270/-15 °C	HYDROGEN	4.0	1		
						013001E01A/B	H-BEM	SA335-P11 SA213-T11	t	SCH80	" 10	L 6000	41/41	BarG	480/480 °C	HYDROGEN	2.2	2		
014001E01	H-BFU	SA516-70 SA213-TP304L	t	18	ø 700	L 5000	62.5/32	BarG	270/425 °C	HYDROGEN	8.9	1								
15					Reactor	SR-R7501&R7502	H-SADDLE	SA516-70	t	24	ø 3800	L 10800	3.5/F.V	kg/m ² g	343/150 °C	-	60.4	1	Jun-2018	Apr-2019
						SR-R7601&R7602	H-SADDLE	SA516-70	t	24	ø 3800	L 10800	3.5/F.V	kg/m ² g	343/150 °C	-	60.4	1		
						TG-R7701	H-SADDLE	SA516-70	t	19	ø 2800	L 7500	3.5/F.V	kg/m ² g	343/150 °C	-	33.3	1		
						TG-R7801	H-SADDLE	SA516-70	t	19	ø 2800	L 7500	3.5/F.V	kg/m ² g	343/150 °C	-	33.3	1		
18						YE-D1011	V-SKIRT	SA516-70	t	15	ø 2200	L 4400	5.3/F.V	kg/m ² g	150/150 °C	-	9.8	1	Jun-2018	Apr-2019
						YE-D1040	H-SADDLE	SA516-70N(HIC)	t	23	ø 4500	L 12000	3.5/F.V	kg/m ² g	290/150 °C	SEVERE WET H2S	47.4	1		
						YE-D1050	V-LEG	SA516-70N	t	12	ø 1500	L 2800	5.3/F.V	kg/m ² g	80/150 °C	SIMPLE WET H2S ANMIE	2.9	1		
						YE-D1060	V-SKIRT	SA516-70	t	16	ø 2700	L 8100	9.8/-	kg/m ² g	80/- °C	-	14.3	1		
16	SKEC	S-Project	SKE	Korea	Pressure Vessel	AR-D7101	H-SADDLE	SA516-70N(HIC)	t	24	ø 5700	L 16500	3.5/H.V	kg/m ² g	177/150 °C	AMINE/HYDROGEN	106.5	1	Jul-2018	May-2019
						AR-D7102	H-SADDLE	SA516-70N(HIC)	t	25	ø 1500	L 3800	5.3/F.V	kg/m ² g	177/150 °C	AMINE/WET H2S	6.3	1		
						AR-D7103	H-SADDLE	SA516-70N(HIC)	t	14	ø 3500	L 9000	3.5/H.V	kg/m ² g	177/150 °C	AMINE/WET H2S	18.5	1		
						AR-D7105	H-SADDLE	SA516-70N(HIC)	t	14	ø 1900	L 4700	3.5/F.V	kg/m ² g	177/150 °C	AMINE/WET H2S	7.8	1		
						AR-D7106	H-SADDLE	SA516-70N(HIC)	t	15	ø 2600	L 7500	3.5/F.V	kg/m ² g	120/150 °C	AMINE/WET H2S	14.1	1		
						AR-D7202	H-SADDLE	SA516-70N(HIC)	t	25	ø 1500	L 3800	5.3/F.V	kg/m ² g	177/150 °C	AMINE/WET H2S	6.3	1		
						AR-D7203	H-SADDLE	SA516-70N(HIC)	t	14	ø 3500	L 9000	3.5/H.V	kg/m ² g	177/150 °C	AMINE/WET H2S	18.5	1		
						SW-D7301	H-SADDLE	SA516-70+304L	t	14+3	ø 3050	L 8400	3.5/H.V	kg/m ² g	155/150 °C	WET H2S	19.5	1		
						SW-D7303	H-SADDLE	SA516-70	t	12	ø 1700	L 5200	3.5/H.V	kg/m ² g	150/150 °C	-	6.9	1		
						SR-D7501	V-SKIRT	SA516-70N(HIC)	t	17	ø 1200	L 3300	5.3/H.V	kg/m ² g	177/150 °C	AMINE/WET H2S	3.7	1		
						SR-D7502	V-SKIRT	SA516-70N(HIC)	t	12	ø 1100	L 2900	5.3/H.V	kg/m ² g	177/150 °C	WET H2S	2.6	1		
						TG-D7701	H-SADDLE	SA516-70N(HIC)	t	14	ø 1200	L 3200	5.3/F.V	kg/m ² g	177/150 °C	AMINE/WET H2S	2.7	1		

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												Pressure	Temp							
16	SKEC	S-Project	SKE	Korea	Pressure Vessel	TG-D7703	H-SADDLE	SA516-70N(HIC)	t	14	∅ 1900	L 4700	3.5/F.V	kg/m ² g	177/150 °C	AMINE/WET H2S	7.9	1	Jul-2018 May-2019	Mar-2019
						TG-D7801	H-SADDLE	SA516-70N(HIC)	t	14	∅ 1200	L 3200	5.3/F.V	kg/m ² g	177/150 °C	AMINE/WET H2S	2.7	1		
						AR-F7102	V-SKIRT	SA516-70N(HIC)	t	21	∅ 2500	L 5700	14.9/H.V	kg/m ² g	177/150 °C	AMINE/WET H2S	16.4	1		
						AR-F7202	V-SKIRT	SA516-70N(HIC)	t	21	∅ 2500	L 5700	14.9/H.V	kg/m ² g	177/150 °C	AMINE/WET H2S	16.4	1		
						TG-F7703	V-SKIRT	SA516-70N(HIC)	t	13	∅ 1300	L 4800	14.9/F.V	kg/m ² g	177/150 °C	AMINE/WET H2S	4.6	1		
						TG-F7803	V-SKIRT	SA516-70N(HIC)	t	13	∅ 1300	L 4800	14.9/F.V	kg/m ² g	177/150 °C	AMINE/WET H2S	4.6	1		
19	Lotte E&C	MeX3 Project	Lotte Chemical	Korea	Heat Exchanger	EA-5303	V-NEN	SA516-70 / SA179 (HIGH FLUX)	t	18	∅ 1975	L 6100	8.2/F.V	kg/m ² g	220/188 °C	-	41.9	1	Aug-2018	Jul-2019
22	HEC	TACE	State Concern	Korea	Pressure Vessel	350-D-12A/B/C	V-SKIRT	SA516-70N+S5	t	54	∅ 2500	L 6800	55/ -	kg/m ² g	150/ - °C	-	50.7	3	Oct-2018	Apr-2019
23	SKEC	FLEXIBILTY	SKIPC	Korea	Pressure Vessel	V-730-09	H-SADDLE	SA516-60N+S5	t	57	∅ 3400	L 9970	34.5/F.V	kg/m ² g	196/168 °C	-	74.5	1	Nov-2018	Jul-2019
24	SKI	PI 1st Plant	SKI	Korea	Heat Exchanger	FC-E-1891	H-BEM	SA516-70	t	16	∅ 380	L 1300	1.9	kg/m ² g	7 °C	-	1.0	1	Oct-2018	Feb-2019
25	SKEC	열원활용	SKIPC	Korea	Pressure Vessel	V-402-10	V-SKIRT	SA516-70	t	11	∅ 2200	L 6100	3.5/F.V	kg/m ² g	150/150 °C	-	23.1	1	Nov-2018	Jul-2019
28	TTSJV (TechnipFMC, Tecnicas Reunidas, Samsung Engineering)	BAPCO Modernization Plan	BAPCO	Bahrain	Pressure Vessel	036V0008	H-SADDLE	SA516-60N	t	16	∅ 1600	L 4800	344/68	KPaG	160/148 °C	AMINE/WET H2S	7.1	1	Nov-2018	Nov-2019
						041V0001	V-SKIRT	SA516-60N(HIC)	t	17	∅ 2286	L 5839	345/69	KPaG	90/148 °C	HIGH SEVERITY WET H2S	12.1	1		
						041V0002	V-SKIRT	SA516-60N(HIC)	t	14	∅ 1676	L 3706	344/68	KPaG	125/149 °C	HIGH SEVERITY WET H2S	5.8	1		
						044V0007	V-SKIRT	SA516-70	t	9	∅ 1219	L 1981	448/F.V	KPaG	73/73 °C	CAUSTIC	2.4	1		
						044V0008	V-LEG	SA516-60N	t	9	∅ 762	L 2639	723/68	KPaG	73/148 °C	LOW SEVERITY WET H2S	1.4	1		
						044V0009	V-LEG	SA516-60N(HIC)	t	10	∅ 610	L 2639	344/68	KPaG	93/148 °C	HIGH SEVERITY WET H2S	1.2	1		
						044V0011	H-SADDLE	SA516-60N(HIC)	t	16	∅ 2000	L 6000	344/68	KPaG	16/148 °C	HIGH SEVERITY WET H2S	9.7	1		
						044V0015	V-SKIRT	SA516-70	t	15	∅ 3200	L 9400	344.7/F.V	KPaG	148/148 °C	-	24.0	1		
						044V0016	V-LEG	SA516-70	t	11	∅ 1500	L 3800	723/F.V	KPaG	287/287 °C	-	3.1	1		
						045V0007	V-SKIRT	SA516-70	t	9	∅ 1219	L 1981	488/F.V	KPaG	78/78 °C	CAUSTIC	2.4	2		
						046V0001	H-SADDLE	SA516-60N(HIC)	t	18	∅ 3000	L 12600	413/F.V	KPaG	100/148 °C	-	28.5	1		
						046V0004	V-SKIRT	516-60N	t	13	∅ 2134	L 3200	344/68	KPaG	85/148 °C	LOW SEVERITY WET H2S	6.6	1		
						046V0005	H-SADDLE	SA516-60N(HIC)	t	16	∅ 1600	L 4800	344/68	KPaG	160/148 °C	HIGH SEVERITY WET H2S	7.7	1		
						047V0001	H-SADDLE	SA516-60N(HIC)	t	18	∅ 3000	L 12600	413/F.V	KPaG	100/148 °C	HIGH SEVERITY WET H2S	28.5	1		
						048V0007	H-SADDLE	SA516-60N(HIC)	t	16	∅ 2450	L 7300	344/68	KPaG	160/148 °C	AMINE/WET H2S	13.6	1		
						049V0009	H-SADDLE	SA516-60N	t	19	∅ 1500	L 4500	344/68	KPaG	105/148 °C	LOW SEVERITY WET H2S	7.6	1		
						048V0010	V-SKIRT	SA516-70	t	12	∅ 1800	L 6000	344/F.V	KPaG	148/148 °C	-	8.0	1		
						098V0005	V-SKIRT	SA516-70	t	11	∅ 2134	L 4826	689/F.V	KPaG	187/187 °C	-	7.2	1		
						098V0012	V-LEG	SA516-70	t	26	∅ 1219	L 2438	4412/68	KPaG	93/48 °C	-	6.9	1		
						099V0005	V-SKIRT	SA516-70	t	11	∅ 2134	L 4826	689/F.V	KPaG	187/187 °C	-	7.2	1		
099V0012	V-LEG	SA516-70	t	26	∅ 1219	L 2438	4412/68	KPaG	93/148 °C	-	6.8	1								
310V0001	V-SKIRT	SA516-70	t	10	∅ 1500	L 3600	723/68	KPaG	73/148 °C	-	4.1	1								
310V0003	V-SKIRT	SA516-70	t	11	∅ 1300	L 3800	344/68	KPaG	115/148 °C	-	5.4	1								

2018 YEAR PROJECT

NO.	CLIENT	PROJECT	END USER	DESTINATION	ITEM	ITEM NO.	TYPE	MATERIAL	SIZE (Th'k x I.D x TL-TL. / TUBE S.T.L.)			Design		SERVICE OR SPECIAL SPEC.	WEIGHT (Ton/Unit)	Q'ty	PO issue Date	Delivery Date		
												Pressure	Temp							
28					Pressure Vessel	311V0001	V-SKIRT	SA516-70	t	10	∅ 1500	L 3600	723/68	KPaG	73/148 °C	-	4.1	1	Nov-2018	Nov-2019
						311V0003	V-SKIRT	SA516-70	t	11	∅ 1300	L 3800	344/68	KPaG	115/148 °C	-	5.4	1		
						370D0006	H-SADDLE	SA516-70	t	15	∅ 2400	L 6000	344/68	KPaG	73/148 °C	SULPHURIC ACID	10.0	1		
						370D0007	H-SADDLE	SA516-70	t	13	∅ 2700	L 6700	344/68	KPaG	73/148 °C	CAUSTIC	11.4	1		
						371V0006	V-SKIRT	SA516-70	t	12	∅ 2200	L 6000	344/F.V	KPaG	192/192 °C	-	11.2	1		
30	TTSJV (TechnipFMC, Tecnicas Reunidas, Samsung Engineering)	BAPCO Modernization Plan	BAPCO	Bahrain	Pressure Vessel	010V0010	V-SKIRT	SA516-60N(HIC)	t	11	∅ 1100	L 2500	517/68	KPaG	73/148 °C	HIGH SEVERITY WET H2S	2.9	1	Nov-2018	Dec-2019
						010V0011A/B	V-SKIRT	SA516-60N(HIC)	t	10	∅ 1000	L 3100	517/68	KPaG	113/148 °C	HIGH SEVERITY WET H2S	2.9	2		
						010V0014	V-SKIRT	SA516-70	t	12	∅ 2300	L 5000	655/68	KPaG	121/148 °C	-	7.4	1		
						010V0018	V-SKIRT	SA516-60N	t	12	∅ 1300	L 2600	723/68	KPaG	73/148 °C	LOW SEVERITY WET H2S	4.0	1		
						010V0013	H-SADDLE	SA516-70	t	13	∅ 2400	L 6300	517/68	KPaG	73/148 °C	-	9.6	1		
						010V0015	H-SADDLE	SA516-60N(HIC)	t	16	∅ 2400	L 6700	344/68	KPaG	123/148 °C	HIGH SEVERITY WET H2S	12.8	1		
						010V0016	H-SADDLE	SA516-60N(HIC)	t	17	∅ 3200	L 8500	344/68	KPaG	360/148 °C	HIGH SEVERITY WET H2S	20.5	1		
						010V0017	H-SADDLE	SA516-60N(HIC)	t	20	∅ 4200	L 10500	344/68	KPaG	398/148 °C	AMINE/WET H2S	15.3	1		
						011V0001	H-SADDLE	SA516-60N(HIC)	t	13	∅ 2800	L 9000	344/101	KPaG	226/226 °C	HIGH SEVERITY WET H2S	15.3	1		
						011V0009	H-SADDLE	SA516-70	t	15	∅ 3000	L 9000	689/F.V	KPaG	287/287 °C	-	11.9	1		
						011V0006	V-LEG	SA516-60N(HIC)	t	13	∅ 736	L 1900	344/101	KPaG	226/226 °C	HIGH SEVERITY WET H2S	1.5	1		
						011V0007	V-LEG	SA516-60N	t	10	∅ 590	L 2100	344/68	KPaG	73/148 °C	LOW SEVERITY WET H2S	1.4	1		
						011V0008	V-LEG	SA516-70	t	9	∅ 1770	L 3840	344/68	KPaG	90/90 °C	-	5.9	1		
						019V0002	V-SKIRT	SA516-70	t	18	∅ 3950	L 13200	689/89	KPaG	259/148 °C	-	34.6	1		
						019V0026	V-SKIRT	SA516-60N	t	15	∅ 2900	L 9400	655/68	KPaG	79/148 °C	AMINE/WET H2S	17.5	1		
						019V0027	V-SKIRT	SA516-60N	t	11	∅ 1700	L 5600	620/68	KPaG	232/148 °C	LOW SEVERITY WET H2S	6.1	1		
						019V0030	V-SKIRT	SA516-70	t	12	∅ 2350	L 7300	344/68	KPaG	232/148 °C	-	10.6	1		
						019C0011	V-SKIRT	SA516-70	t	11	∅ 1450	L 8100	344/F.V	KPaG	176/176 °C	-	8.3	1		
						019V0013	H-SADDLE	SA516-60N(HIC)	t	16	∅ 2450	L 13800	496/F.V	KPaG	175/175 °C	HIGH SEVERITY WET H2S	22.6	1		
						019V0015	H-SADDLE	SA516-60N	t	12	∅ 2000	L 4600	475/68	KPaG	82/148 °C	LOW SEVERITY WET H2S	8.4	1		
						019V0017	H-SADDLE	SA516-70	t	10	∅ 1000	L 3100	344/F.V	KPaG	226/226 °C	-	3.0	1		
						019V0025	H-SADDLE	SA516-70	t	13	∅ 2600	L 7000	792/F.V	KPaG	287/287 °C	-	11.9	1		
						019V0036	H-SADDLE	SA516-60N(HIC)	t	18	∅ 3000	L 6000	344/68	KPaG	260/148 °C	HIGH SEVERITY WET H2S	15.8	1		
019V0037	H-SADDLE	SA516-60N(HIC)	t	14	∅ 1700	L 4500	344/68	KPaG	79/148 °C	AMINE/WET H2S	6.1	1								
019V0038	H-SADDLE	SA516-60N(HIC)	t	14	∅ 1700	L 5000	344/68	KPaG	79/148 °C	HIGH SEVERITY WET H2S	6.0	1								
019V0033	V-LEG	SA516-60N	t	10	∅ 1000	L 2000	723/68	KPaG	73/148 °C	LOW SEVERITY WET H2S	1.6	1								
32	SKEC	No.2 CDU	SKE	Korea	Pressure Vessel	C-V507A	H-SADDLE	SA516-70N	t	18	∅ 3600	L 10200	0.34/F.V	MPaG	121/150 °C	-	33.7	1	Nov-2018	May-2019

2018 YEAR PROJECT

NO.	CLIENT	PROJECT	END USER	DESTINATION	ITEM	ITEM NO.	TYPE	MATERIAL	SIZE (Th'k x I.D x TL-TL. / TUBE S.T.L.)			Design		SERVICE OR SPECIAL SPEC.	WEIGHT (Ton/Unit)	Q'ty	PO issue Date	Delivery Date		
												Pressure	Temp							
33	SECL	UAE ADNOC Refining CFP	ADNOC	U.A.E	Pressure Vessel	3021-D-001	V-SKIRT	SA516-65N	t	15	∅ 3200	L 4800	8/H.V	kg/m ² g	110/150 °C	-	13.8	1	Dec-2018	Feb-2020
						3021-D-003	V-SKIRT	SA516-65N	t	12	∅ 2200	L 5500	3.5/F.V	kg/m ² g	150/105 °C	-	7.4	1		
						3029-D-001	V-SKIRT	SA516-65N	t	18	∅ 4000	L 6500	8/H.V	kg/m ² g	110/150 °C	-	20.9	1		
						3110-D-002	H-SADDLE	SA516-65N(HIC)	t	26	∅ 3250	L 13000	15.4/H.V	kg/m ² g	150/150 °C	SOUR/WET H2S/ HSS	40.7	1		
						3110-D-007	H-SADDLE	SA516-65N(HIC)	t	17	∅ 2200	L 7200	15.2/F.V	kg/m ² g	165/165 °C	SOUR/WET H2S/ HSS	12.8	1		
						3110-D-104	H-SADDLE	SA516-65N(HIC)	t	22	∅ 3400	L 17000	7/F.V	kg/m ² g	340/150 °C	SOUR/WET H2S/ HSS/LETHAL	43.2	1		
						3110-D-105	H-SADDLE	SA516-65N(HIC)	t	16	∅ 2100	L 10500	3.5/H.V	kg/m ² g	340/150 °C	SOUR/WET H2S/ HSS/LETHAL	15.8	1		
						3300-D-009	H-SADDLE	SA516-65N+304L	t	18+3	∅ 3000	L 10000	7/H.V	kg/m ² g	340/150 °C	SOUR/WET H2S/ HSS/CO2	27.7	1		
						3300-D-012	H-SADDLE	SA516-65N	t	11	∅ 2800	L 9000	3.5/H.V	kg/m ² g	340/150 °C	-	14.2	1		
						3300-D-017	H-SADDLE	SA516-65N+304L	t	16+3	∅ 2800	L 8000	3.5/H.V	kg/m ² g	340/150 °C	SOUR/WET H2S/ HSS/CO2	18.0	1		
						3300-D-007/107	H-SADDLE	SA516-65N+304L	t	31+3	∅ 2400	L 5700	32/H.V	kg/m ² g	100/150 °C	LETHAL/HYDROGEN TOXIC	18.1	2		
						3300-D-021	V-SKIRT	SA516-65N	t	26	∅ 2300	L 10400	24/H.V	kg/m ² g	87/150 °C	-	25.1	1		
						3700-D-001	H-SADDLE	SA516-65N	t	19	∅ 4500	L 13500	4.5/F.V	kg/m ² g	150/150 °C	SOUR/WET H2S/ LETHAL/HSS	53.1	1		
						3700-D-101	H-SADDLE	SA516-65N	t	17	∅ 2800	L 8400	3.5/H.V	kg/m ² g	200/150 °C	SOUR/WET H2S/ LETHAL/HSS	15.8	1		
						3800-D-101	H-SADDLE	SA516-65N+316L	t	8+3.5	∅ 1800	L 5400	3.5/H.V	kg/m ² g	150/150 °C	SOUR/WET H2S/ LETHAL/LSS/AMINE	10.0	1		
						3800-D-102	H-SADDLE	SA516-65N+316L	t	8+3.5	∅ 1500	L 4500	3.5/H.V	kg/m ² g	150/150 °C	SOUR/WET H2S/ LETHAL/LSS	5.7	1		
						3800-D-103	H-SADDLE	SA516-65N+316L	t	15+3.5	∅ 4300	L 12900	3.5/H.V	kg/m ² g	200/150 °C	SOUR/WET H2S/ LETHAL/LSS	36.5	1		
						3800-D-104	H-SADDLE	SA516-65N	t	14	∅ 2900	L 8100	6.2/F.V	kg/m ² g	176/176 °C	-	14.6	1		
						3800-D-011/021	H-SADDLE	SA516-65+316L	t	18+3	∅ 6000	L 20000	4/F.V	kg/m ² g	150/150 °C	SOUR/WET H2S/LSS HYDROGEN/AMINE	95.9	2		
						3800-D-012/022	V-SKIRT	SA516-65N	t	18	∅ 1500	L 4000	9.3/F.V	kg/m ² g	125/150 °C	SOUR/WET H2S/ LETHAL/LSS	5.7	2		
3900-D-010	H-SADDLE	SA516-65N(HIC)	t	11	∅ 1220	L 5800	3.5/H.V	kg/m ² g	177/150 °C	SOUR/WET H2S/ AMINE/LSS	10.3	1								
3045-D-301	H-SADDLE	SA516-65N	t	24	∅ 3200	L 12000	3.5/H.V	kg/m ² g	340/150 °C	SOUR/WET H2S/ LSS	34.6	1								
3045-D-302	H-SADDLE	SA516-65N	t	24	∅ 3400	L 14500	7/H.V	kg/m ² g	340/150 °C	SOUR/WET H2S/ LSS	40.9	1								
34					Pressure Vessel	3021-D-002	V-SKIRT	SA516-65N	t	10	∅ 1500	L 4500	6.2/F.V	kg/m ² g	360/156 °C	-	4.3	1	Dec-2018	Dec-2019
						3041-D-301	H-SADDLE	SA516-65N	t	12	∅ 1400	L 6000	3.5/H.V	kg/m ² g	150/150 °C	-	6.7	1		
						3045-D-001	V-LEG	SA516-65N	t	9	∅ 610	L 1900	8.0/F.V	kg/m ² g	110/150 °C	-	0.8	1		
						3045-D-002	H-SADDLE	SA516-65N	t	16	∅ 1800	L 5400	3.5/H.V	kg/m ² g	200/150 °C	SOUR/WET H2S/LSS /AMINE	6.5	1		
						3045-D-003	H-SADDLE	SA516-65N	t	12	∅ 1500	L 4500	3.5/H.V	kg/m ² g	200/150 °C	SOUR/WET H2S/LSS /AMINE	3.8	1		
						3110-D-001	V-SKIRT	SA516-65N(HIC)	t	13	∅ 1600	L 3050	8.0/F.V	kg/m ² g	150/150 °C	SOUR/WET H2S/ HSS	6.1	1		
						3110-D-004	V-LEG	SA516-65N(HIC)	t	12	∅ 1400	L 4150	15.0/H.V	kg/m ² g	105/150 °C	SOUR/WET H2S/ HSS	3.9	1		
						3110-D-005	V-LEG	SA516-65N(HIC)	t	11	∅ 1000	L 2425	18.0/H.V	kg/m ² g	195/150 °C	SOUR/WET H2S/ HSS	2.1	1		
						3110-D-009	V-LEG	SA516-65N(HIC)	t	13	∅ 1020	L 3425	6.7/H.V	kg/m ² g	87/150 °C	SOUR/WET H2S/ HSS	2.7	1		
						3110-D-010	V-SKIRT	SA516-65N(HIC)	t	13	∅ 1020	L 3275	6.7/H.V	kg/m ² g	87/150 °C	SOUR/WET H2S/ HSS/LETHAL	3.8	1		
						3110-D-101	H-SADDLE	SA516-65N	t	12	∅ 1800	L 5400	4.5/F.V	kg/m ² g	155/155 °C	-	6.2	1		

2018 YEAR PROJECT

NO.	CLIENT	PROJECT	END USER	DESTINATION	ITEM	ITEM NO.	TYPE	MATERIAL	SIZE (Th'k x I.D x TL-TL. / TUBE S.T.L.)			Design		SERVICE OR SPECIAL SPEC.	WEIGHT (Ton/Unit)	Q'ty	PO issue Date	Delivery Date		
												Pressure	Temp							
34	SECL	UAE ADNOC Refining CFP	ADNOC	U.A.E	Pressure Vessel	3110-D-102	H-SADDLE	SA516-65N(HIC)	t	15	∅ 1250	L 3920	3.5/H.V	kg/m ² g	340/150 °C	SOUR/WET H2S/ HSS	5.7	1	Dec-2018	Dec-2019
						3110-D-103	H-SADDLE	SA516-65N(HIC)	t	11	∅ 980	L 3920	3.5/H.V	kg/m ² g	340/150 °C	SOUR/WET H2S/ HSS	8.4	1		
						3110-D-106	V-SKIRT	SA516-65N	t	10	∅ 1700	L 4800	6.2/F.V	kg/m ² g	315/166 °C	-	4.9	1		
						3300-D-013/113	V-LEG	SA516-65N	t	20	∅ 1400	L 2800	30/H.V	kg/m ² g	150/150 °C	-	4.4	2		
						3700-D-002	H-SADDLE	SA516-65N	t	14	∅ 1850	L 5400	3.5/F.V	kg/m ² g	150/150 °C	SOUR/WET H2S/ LSS/LETHAL	10.9	1		
						3900-D-002/102	V-LEG	SA516-65N(HIC)	t	12	∅ 920	L 2500	30/H.V	kg/m ² g	150/150 °C	SOUR/WET H2S/LSS TOXIC/LETHAL	4.3	2		
						3900-D-007/107	H-SADDLE	SA516-65N(HIC)	t	14	∅ 1000	L 2100	3.5/H.V	kg/m ² g	150/150 °C	SOUR/WET H2S/LSS TOXIC/LETHAL	6.3	2		
						3900-D-014	H-SADDLE	SA516-65N	t	10	∅ 1800	L 3600	4.5/F.V	kg/m ² g	155/150 °C	-	3.8	1		
35	PAZ	Replacement	PAZ	Israel	Tube Bundle	165-C-6	-	SA179	t	2.77	∅ 19.05	L 6096	-	kg/m ² g	- °C	-	4.4	1	Dec-2018	Jun-2019
36	SKEC	Light Naphtha	SKIPEC	Korea	Reactor	R-830-1	V-SKIRT	SA387-11 CL.2+S3	t	28	∅ 1800	L 11810	37/F.V	kg/m ² g	438 °C	-	26.4	1	Dec-2018	Sep-2019

2017 YEAR PROJECT

NO.	CLIENT	PROJECT	END USER	DESTINATION	ITEM	ITEM NO.	TYPE	MATERIAL	SIZE (Th'k x I.D x TL-TL. / TUBE S.T.L.)			Design		SERVICE OR SPECIAL SPEC.	WEIGHT (Ton/Unit)	Q'ty	PO issue Date	Delivery Date		
												Pressure	Temp							
2	Linde Eng. North America	S-OIL RUC Incineration PKG 2	S-OIL	Korea	Particulate Scrubber	M-205973	V-CHAIR	SA240-TP316L	t	11	ø 4089	L 14783	0.05 MPaG	112 °C	-	29.6	1	Mar-2017	Aug-2017	
5	PCC				Thermal Oxidizer	D-205951, D-205961	V-CHAIR	SA516-70	t	16	ø 5130	L 23699	0.05 MPaG	112 °C	-	118.6	2	Mar-2017	Aug-2017	
9	GS E&C	LPIC-3	ORPIC	OMAN	Pressure Vessel	V-11003	V-SKIRT	SA240-TP316L	t	38	ø 1067	L 3200	75/F.V	BarG	90/-28.9 °C	-	15.0	1	Mar-2017	Apr-2018
						V-12003	H-SADDLE	SA516-70	t	12	ø 1750	L 3750	7/F.V	BarG	340/5 °C	-	6.1	1		
						V-51002	H-SADDLE	SA516-70	t	23	ø 2300	L 7000	21.5/F.V	BarG	340/5 °C	-	18.9	1		
						V-51501	H-SADDLE	SA516-70	t	14	ø 2100	L 5300	7/F.V	BarG	90/5 °C	-	9.9	1		
						V-55001	V-SKIRT	SA516-70N	t	30	ø 1700	L 5000	40/F.V	BarG	90/-29 °C	-	16.7	1		
						V-56001A/B	V-SKIRT	SA516-70	t	21	ø 3700	L 13200	11	BarG	120/5 °C	-	41.2	2		
						V-58001	V-SKIRT	SA516-70	t	16	ø 2500	L 6500	7/F.V	BarG	90/5 °C	-	21.7	1		
						V-59001	V-SKIRT	SA516-70	t	20	ø 4600	L 10300	7	BarG	340/5 °C	-	73.3	1		
						V-59002	H-SADDLE	SA516-70	t	15	ø 2650	L 5200	7/F.V	BarG	340/5 °C	-	12.6	1		
						V-61001	H-SADDLE	SA516-70	t	17	ø 2500	L 8000	7/F.V	BarG	90/29 °C	-	24.7	1		
						V-61001	V-SKIRT	SA516-70	t	11	ø 1600	L 3200	7/F.V	BarG	90/5 °C	-	5.8	1		
11	E-TEC	YANSAB	SABIC	SAUDI	Column	C-2531	V-SKIRT	SA516-70N+304L	t	45+3	ø 5400	L 15800	1.2/F.V	MPaG	218 °C	CLAD	142.4	1	Mar-2017	Apr-2018
						C-2532	V-SKIRT	SA516-70N+304L	t	19+3	ø 4000	L 11650	0.95/F.V	MPaG	207 °C	CLAD	71.2	1		
						C-2533	V-SKIRT	SA516-70N+304L	t	18+3	ø 4400	L 10350	0.72/F.V	MPaG	196 °C	CLAD	71.2	1		
						C-2534	V-SKIRT	SA516-70N+304L	t	18+3	ø 4400	L 12350	0.5/F.V	MPaG	183 °C	CLAD	69.8	1		
						C-2535	V-SKIRT	SA516-70N+304L	t	19+3	ø 4300	L 11950	0.3/F.V	MPaG	167 °C	CLAD	69.6	1		
						C-2536	V-SKIRT	SA516-70N+304L	t	20+3	ø 5500	L 16800	0.175/F.V	MPaG	126 °C	CLAD	162.0	1		
						C-2560	VERTICAL	SA516-70N+304L	t	10+3	ø 1600	L 7850	0.95/F.V	MPaG	215 °C	CLAD	11.5	1		
						C-2730	V-SKIRT	SA240-304/SA516-70N+304L	t	20+3	ø 2000	L 22120	0.175/F.V	MPaG	220 °C	CLAD	67.1	1		
12	SEGWANG GLOBAL	Northfrican PJT	Sonartrach	Algeria	Bundle	3-72-04-35960	-	A249-TP304	t	1.65	ø 19.05	L 6096	N/A	N/A	N/A °C	-	3.1	1	Jul-2017	Dec-2017
						3-72-04-35961	-	A249-TP304	t	1.65	ø 19.05	L 6096	N/A	N/A	N/A °C	-	1.9	1		
						3-93-04-40508	-	SB-111-C715	t	1.24	ø 19.05	L 4876	N/A	N/A	N/A °C	-	0.9	1		
14	HYUNDAI Engineering	Uzbekistan Gas-to-Liquids PJT	Oltin Yo'l GTL	Uzbekistan	Pressure Vessel	130-VD-013	V-LUG	SA516-60	t	16	ø 4500	L 11000	3.5/F.V	BarG	270/120 °C	-	44.8	1	Mar-2017	Jun-2018
						130-VD-116	V-LUG	SA516-70N	t	57	ø 3500	L 10700	40/F.V	BarG	75/120 °C	-	78.6	1		
						130-VD-216	V-LUG	SA516-70N	t	57	ø 3500	L 10700	40/F.V	BarG	75/120 °C	-	78.6	1		
						145-VD-050	H-SADDLE	SA516-60+316L	t	12+3	ø 2500	L 3400	3.5/F.V	BarG	204/120 °C	CLAD	8.7	1		
						175-VD-001	V-SKIRT	SA516-70N	t	30	ø 5000	L 15500	12	BarG	75 °C	-	98.5	1		
15	HYUNDAI E&C	Uzbekistan Gas-to-Liquids PJT	Oltin Yo'l GTL	Uzbekistan	Pressure Vessel	130-VD-018	V-LUG	SA516-60	t	14	ø 3300	L 10000	3.5/F.V	BarG	245/120 °C	-	26.4	1	Mar-2017	Jun-2018
						130-VD-040	H-SADDLE	SA516-60	t	13	ø 2700	L 4000	3.5/F.V	BarG	270/120 °C	-	10.8	1		
						130-VD-106	V-LUG	SA516-70N	t	31	ø 2700	L 8100	26.6/F.V	BarG	270/120 °C	-	32.3	1		
						130-VD-206	V-LUG	SA516-70N	t	31	ø 2700	L 8100	26.6/F.V	BarG	270/120 °C	-	32.3	1		
						130-VH-002	V-LUG	SA516-70N	t	58	ø 2700	L 5700	30/F.V	BarG	270/120 °C	CYCLIC	49.5	1		

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NO.	CLIENT	PROJECT	END USER	DESTINATION	ITEM	ITEM NO.	TYPE	MATERIAL	SIZE (Th'k x I.D x TL-TL. / TUBE S.T.L.)			Design		SERVICE OR SPECIAL SPEC.	WEIGHT (Ton/Unit)	Q'ty	PO issue Date	Delivery Date		
												Pressure	Temp							
15	HYUNDAI E&C	Uzbekistan Gas-to-Liquids PJT	Oltin Yo'l GTL	Uzbekistan	Pressure Vessel	130-VH-004	V-LUG	SA516-70N	t	33	∅ 3000	L 9900	25/F.V	BarG	270/245 °C	HYDROGEN	42.1	1	Mar-2017	Jun-2018
						145-VD-008	V-SKIRT	SA516-60	t	12	∅ 2600	L 8400	3.5/F.V	BarG	204/120 °C	-	35.8	1		
						145-VD-015	V-LUG	SA516-60	t	13	∅ 3000	L 3400	3.5/F.V	BarG	204/120 °C	-	13.3	1		
						145-VD-016	V-LUG	SA516-60	t	16	∅ 4200	L 4400	3.5/F.V	BarG	204/120 °C	-	31.9	1		
						145-VD-017	V-SKIRT	SA516-60	t	15	∅ 4000	L 11600	3.5/F.V	BarG	204/120 °C	-	63.7	1		
						150-VD-001	V-SKIRT	SA516-70N+316L	t	15+3	∅ 3200	L 9800	6.2/F.V	BarG	326/232 °C	CLAD	57.7	1		
						150-VD-002	V-SKIRT	SA516-70N+316L	t	24+3	∅ 2900	L 9000	19.8/F.V	BarG	285/232 °C	CLAD	53.9	1		
						150-VD-006	V-SKIRT	SA516-70N+304L	t	60+3	∅ 2150	L 9650	71.8/H.V	BarG	158/232 °C	HYDROGEN WET H2S, CLAD	56.6	1		
						150-VD-007	V-SKIRT	SA516-70N	t	29	∅ 2600	L 10400	24.9/H.V	BarG	288/232 °C	HYDROGEN	51.0	1		
						150-VD-008	V-SKIRT	SA516-70N (HIC)	t	25	∅ 2200	L 8600	23.8/H.V	BarG	198/232 °C	HYDROGEN WET H2S	34.7	1		
						150-VD-015	H-SADDLE	SA516-70N	t	11	∅ 2600	L 5400	4.1/H.V	BarG	115/232 °C	WET H2S	10.0	1		
						150-VD-020	H-SADDLE	SA516-70N	t	18	∅ 3100	L 7700	10.4/H.V	BarG	317/232 °C	-	22.6	1		
						150-VD-022	V-SKIRT	SA516-70N	t	41	∅ 2800	L 9600	34.4/H.V	BarG	143/232 °C	HYDROGEN	52.6	1		
						150-VD-050	V-SKIRT	SA516-60	t	11	∅ 2900	L 5800	3.5/H.V	BarG	326/120 °C	-	19.8	1		
						150-VD-051	V-SKIRT	SA516-60N	t	13	∅ 2700	L 5400	7/H.V	BarG	117/120 °C	WET H2S	19.2	1		
						172-VD-001	V-LUG	SA516-60	t	13	∅ 3000	L 9000	1/F.V	BarG	190 °C	-	26.2	1		
						173-VD-001A/B	V-SKIRT	SA516-70N	t	32	∅ 5550	L 6000	14/F.V	BarG	241 °C	-	80.2	2		
						178-VD-002	V-SKIRT	SA516-60N+316L	t	13+3	∅ 2600	L 9000	7/H.V	BarG	165/120 °C	CLAD	27.7	1		
17	SK E&C	MEROX	SKIPC	Korea	Storage Tank	TK-352-4	CRT	SA516-60	t	6	∅ 4500	L 3600	F.L+250 /-25	mmH2O	77 °C	-	9.2	1	Jun-2017	Oct-2017
						TK-485-15	CRT	SA516-60+TEFLON	t	6+3	∅ 2500	L 4500	F.L+250 /-50	mmH2O	80 °C	-	4.4	1		Nov-2017
						TK-481-40	CRT	SA516-60	t	6	∅ 2800	L 3250	F.L+250 /-25	mmH2O	90 °C	-	3.2	1		
22	HYUNDAI E&C	Uzbekistan Gas-to-Liquids PJT	Oltin Yo'l GTL	Uzbekistan	Heat Exchanger	120-ES-101	H-BEM	SA516-70N SA789-S31803	t	19	∅ 500	L 4000	77/F.V	BarG	-18/316 °C	HYDROGEN	3.4	1	Sep-2017	Oct-2018
						120-ES-103	H-BEM	SA516-70N SA789-S31803	t	20	∅ 550	L 5400	77/F.V	BarG	-18/316 °C	HYDROGEN	5.0	1		
						120-ES-113	H-AEM	SA516-70N+304L SA789-S31803	t	13+3	∅ 1100	L 6100	22.2/F.V	BarG	-18/200 °C	HYDROGEN CLAD	13.4	1		
						120-ES-201	H-BEM	SA516-70N SA789-S31803	t	19	∅ 500	L 4000	77/F.V	BarG	-18/316 °C	HYDROGEN	3.4	1		
						120-ES-203	H-BEM	SA516-70N SA789-S31803	t	20	∅ 550	L 5400	77/F.V	BarG	-18/316 °C	HYDROGEN	5.0	1		
						120-ES-213	H-AEM	SA516-70N+304L SA789-S31803	t	13+3	∅ 1100	L 6100	22.2/H.V	BarG	-18/200 °C	HYDROGEN CLAD	13.4	1		
						130-ES-006	H-AEM	SA240-317L SA789-S32205	t	10	∅ 448	L 4500	7.0/F.V	BarG	245/120 °C	-	2.0	1		
						135-ES-001	H-BJ21M	SA240-317L SA213-TP317L	t	14	∅ 1244	L 6100	22.2	BarG	145 °C	HYDROGEN	19.1	1		
						135-ES-004	H-AJ21M	SA516-60+317L SA789-S32205	t	16+3	∅ 1500	L 6100	22.2	BarG	145 °C	HYDROGEN CLAD	29.3	1		
						135-ES-012	H-CKU	SA516-60+317L SA213-TP317L	t	17+3 / 34	∅ 940/2108	L 6100	13.2/F.V	BarG	285/285 °C	CLAD	21.2	1		
						135-EX-002	H-BKU	SA516-70N+S5 SA213-TP317L	t	25	∅ 1320/2110	L 4880	21.8/F.V	BarG	75/75 °C	HYDROGEN	23.0	1		
						135-ES-014	H-AEU	SA240-317L SA789-S32205	t	10	∅ 1030	L 4880	14.7/F.V	BarG	175/120 °C	-	9.6	1		
						135-EX-005	H-AKU	SA516-60N+S5 SA213-TP317L	t	16	∅ 456/940	L 4880	25.2/F.V	BarG	75/75 °C	-	3.8	1		

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												Pressure	Temp							
22	HYUNDAI E&C	Uzbekistan Gas-to-Liquids PJT	Oltin Yo'l GTL	Uzbekistan	Heat Exchanger	135-ES-026	H-AEU	SA240-317L SA789-S32205	t	11	ø 813	L 6100	23.2/F.V	BarG	145/120 °C	-	7.5	1	Sep-2017	Oct-2018
						140-ES-002	V-BEN	SA516-60 SA213-TP317L	t	14	ø 1930	L 6100	14/F.V	BarG	225/225 °C	-	40.0	1		
						140-ES-005	H-AEU	SA516-60+317L SA213-TP317L	t	13+3	ø 1310	L 6100	16.79	BarG	175 °C	CLAD	19.8	1		
						145-ES-002	H-BEU	SA312-TP317 SA213-TP317L	t	21.4	ø 318.5	L 3600	3.5/F.V	BarG	204/120 °C	-	1.3	1		
						145-ES-003	H-AEU	SA240-317L SA789-S32205	t	8	ø 514	L 3600	3.5/F.V	BarG	198/120 °C	-	1.9	1		
						150-ES-001	H-AES	SA516-60 SA213-TP316L	t	17	ø 890	L 6096	21.8	BarG	317 °C	-	11.2	1		
						150-ES-009	H-AEU	SA516-60N (HIC) SA789-S31803	t	14	ø 675	L 4877	24.8	BarG	288 °C	WET H2S SEVERE HIC	5.7	1		
						150-ES-010	H-AES	SA516-60 SA213-TP316L	t	14	ø 910	L 7200	15.7	BarG	317 °C	-	11.8	1		
						150-ES-012	H-AJ21U	SA516-60N SA789-S31803	t	13	ø 1500	L 7200	5.4	BarG	137 °C	WET H2S MODERATE	28.0	1		
						150-ES-015	H-AEU	SA516-60 SA789-S31803	t	10	ø 720	L 7200	14.8	BarG	254 °C	-	6.2	1		
						150-ES-019	H-AEU	SA516-60N (HIC) SA789-S31803	t	10	ø 520	L 4880	10.8	BarG	147 °C	WET H2S SEVERE HIC	2.8	1		
						150-ES-021	H-AJ21U	SA516-60N SA789-S31803	t	13	ø 830	L 7200	11.1	BarG	94 °C	WET H2S MODERATE	9.3	1		
						150-ES-029	H-AEL	SA516-60N SA789-S31803	t	12	ø 760	L 4877	5.4	BarG	175 °C	-	7.0	1		
						150-ES-133	H-AEU	SA516-60 SA789-S31803	t	13	ø 400	L 3658	53.9	BarG	164 °C	HYDROGEN	1.8	1		
						150-ES-036	H-AEL	SA516-60 SA789-S31803	t	10	ø 490	L 6096	11.6	BarG	244 °C	-	3.3	1		
						150-ES-037	H-AEL	SA516-60 SA789-S31803	t	10	ø 500	L 6096	19.3	BarG	217 °C	-	4.9	1		
						150-ES-038	H-AES	SA516-60 SA213-TP316L	t	12	ø 740	L 4877	15.1	BarG	245 °C	-	6.1	1		
						150-ES-043	H-AEL	SA516-60 SA789-S31803	t	10	ø 560	L 4877	14.9	BarG	170 °C	-	3.6	1		
						150-ES-233	H-AEU	SA516-60 SA789-S31803	t	13	ø 400	L 3658	53.9	BarG	164 °C	HYDROGEN	1.8	1		
						150-ES-333	H-AEU	SA516-60 SA789-S31803	t	13	ø 400	L 3658	53.9	BarG	164 °C	HYDROGEN	1.8	1		
160-ES-007	H-AEL	SA516-70N+304L SA789-S31803	t	12+3	ø 700	L 4880	29.7	BarG	180 °C	HYDROGEN	5.5	1								
181-ES-001	H-AES	SA516-60 SA789-S32205	t	10	ø 590	L 6096	9.7/-	BarG	75/- °C	-	3.9	1								
23					Pressure Vessel	120-VD-111	V-SKIRT	SA516-70N+304L	t	24+3	ø 2600	L 3700	22.2/H.V	BarG	145/- °C	HYDROGEN	13.9	1	Sep-2017	Sep-2018
						120-VD-211	V-SKIRT	SA516-70N+304L	t	24+3	ø 2600	L 3700	22.2/H.V	BarG	145/ - °C	HYDROGEN	13.9	1		
						160-VD-004	V-LEG	SA516-70+304L	t	14+3	ø 1100	L 4750	29.7/H.V	BarG	180 °C	HYDROGEN	5.0	1		
						150-XF-001	V-SKIRT	SA516-70N	t	20	ø 1500	L 3500	25/H.V	BarG	198/232 °C	-	6.4	1		
						150-VD-010	V-SKIRT	SA516-70N	t	8	ø 950	L 3400	6.5/H.V	BarG	176/232 °C	WET H2S MODERATE	2.4	1		
						150-VD-016	V-LEG	SA516-70N	t	10	ø 1200	L 2600	4.0/H.V	BarG	115/232 °C	WET H2S MODERATE	2.8	1		
						150-VD-024	H-SADDLE	SA516-70	t	10	ø 2100	L 4200	3.5/H.V	BarG	150/232 °C	-	5.1	1		
						150-VD-025	V-LEG	SA516-70	t	12	ø 780	L 2750	27/H.V	BarG	136/232 °C	HYDROGEN	2.0	1		
						150-VD-126	V-LEG	SA516-70N	t	16	ø 580	L 2750	53.1/H.V	BarG	136/232 °C	HYDROGEN	1.8	1		
						150-VD-226	V-LEG	SA516-70N	t	16	ø 580	L 2750	53.1/H.V	BarG	136/232 °C	HYDROGEN	1.8	1		
						150-VD-326	V-LEG	SA516-70N	t	16	ø 580	L 2750	53.1/H.V	BarG	136/232 °C	HYDROGEN	1.8	1		

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												Pressure	Temp							
24	Toyo Eng.	NPE Project	Chandra Asri	Indonesia	Pressure Vessel	C21007	H-SADDLE	SA516-60	t	17	∅ 2700	L 5639	9.49	kg/m ³ g	180 °C	-	13.2	1	Sep-2017	Jun-2018
						C21406	H-SADDLE	SA516-60	t	13	∅ 2000	L 4270	9.49	kg/m ³ g	180 °C	-	8.1	1		
						C24101/C24106	V-LUG	SA516-70N	t	43	∅ 1500	L 2396	29.7	kg/m ³ g	170 °C	-	8.9	2		
						C24103/24108	V-LUG	SA516-70N	t	46	∅ 1600	L 2417	29.7	kg/m ³ g	170 °C	-	12.4	2		
						E-21009	V-BEM	SA266-4 SA179	t	12	∅ 900	L 3000	9.49	kg/m ³ g	180 °C	-	5.0	1		
						E-21010	H-B-U	SA266-4 SA179	t	12	∅ 331.6	L 3000	9.49	kg/m ³ g	180 °C	-	0.3	1		
						E-21415	H-B-U	SA266-4 SA179	t	12.7	∅ 247.7	L 700	7.3	kg/m ³ g	180 °C	-	0.2	1		
						E-21422	V-BE-	SA266-4 SA179	t	11.13	∅ 333.3	L 1000	9.49	kg/m ³ g	180 °C	-	0.5	1		

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												Pressure	Temp													
2-1	SK E&C	공정효율 개선사업	SK INCHEON PETROCHEM Co., Ltd.	KOREA	PRESSURE VESSEL	V-740-17	V-SKIRT	SA516-70N	t	15	ø 2300	L 5600	10 kg/m ²	178 °C	HYDROGEN	12.1	1	Jan-2016	Jul-2016							
2-2					HEAT EXCHANGER	E-735-7	H-AES	SA516-70 SA179	t	13	ø 1350	L 5850	10/F.V	kg/m ²	120/60 °C	-	23.2			1						
					HEAT EXCHANGER	E-740-20	H-AES	SA516-70N SA179	t	15	ø 1110	L 5860	10.5/F.V	kg/m ²	135/105 °C	HYDROGEN	14.1			1						
3-1					PRESSURE VESSEL	V-420-2	V-SKIRT	SA516-60	t	16	ø 2000	L 3000	12.5/H.V	kg/m ²	70/150 °C	-	6.8			1						
					PRESSURE VESSEL	V-792-7	V-SKIRT	SA516-70N	t	49	ø 3800	L 9000	32.5/F.V	kg/m ²	155/123 °C	HYDROGEN	67.2			1						
3-2	HEAT EXCHANGER	E-700-15	H-AXS	SA516-70 SA179	t	17	ø 1500	L 5768.5	21.1/H.V	kg/m ²	185/150 °C	-	29.5	1												
5	BURCKHARDT COMPRESSION ITALIA S.R.L.	LOTTE YEOSU 01/02	LOTTE VERSALIS ELASTOMERS	KOREA	HEAT EXCHANGER	Y-3301-E-1 Y-3351-E-1	H-BEM	SA537-CL.1 SA213-TP304	t	13	ø 490	L 5984	43.5 BarG	140/-55 °C	LOW TEMP. CS	3.2	2	Mar-2016	Oct-2016							
						Y-3401-E-1 Y-3451-E-1	H-BEM	SA516-70 SA213-TP304	t	12	ø 440	L 4484	27/- BarG	160/-15 °C	-	2.0	2									
						Y-3401-E-2 Y-3451-E-2	H-BEM	SA537-CL.1 SA213-TP304	t	12	ø 710	L 3948	8.5/20 BarG	115/-55 °C	LOW TEMP. CS	4.2	2									
						Y-3301-S-1 Y-3351-S-1	V-SKIRT	SA537-CL.1	t	19	ø 1400	L 2429	25/F.V	BarG	140/-55 °C	LOW TEMP. CS	6.0			2						
					Y-3401-S-1 Y-3451-S-1	V-SKIRT	SA516-70	t	11	ø 1800	L 2542	7/F.V	BarG	160/-15 °C	-	4.9	2									
					Y-3401-S-2 Y-3451-S-2	V-SKIRT	SA537-CL.1	t	13	ø 1100	L 2977	20/F.V	BarG	115/-55 °C	LOW TEMP. CS	3.1	2									
					Y-3301-V-1A Y-3351-V-1A	V-SKIRT	SA537-CL.1	t	16	ø 1100	L 4450	25/F.V	BarG	140/-55 °C	LOW TEMP. CS	4.0	2									
					Y-3301-V-1B Y-3351-V-1B	V-SKIRT	SA537-CL.1	t	16	ø 1100	L 4450	25/F.V	BarG	140/-55 °C	LOW TEMP. CS	4.0	2									
					Y-3301-V-2A Y-3351-V-2A	V-SKIRT	SA516-70N+S5	t	21	ø 900	L 3700	43.5 BarG	140/-45 °C	-	3.3	2										
					Y-3301-V-2B Y-3351-V-2B	V-SKIRT	SA516-70N+S5	t	21	ø 900	L 3700	43.5 BarG	140/-45 °C	-	3.3	2										
					Y-3301-V-3 Y-3351-V-3	V-LEG	SA537-CL.1	t	21	ø 900	L 700	43.5 BarG	140/-55 °C	LOW TEMP. CS	0.9	2										
					Y-3401-V-3 Y-3451-V-3	V-LEG	SA537-CL.1	t	14	ø 900	L 770	27 BarG	160/-55 °C	LOW TEMP. CS	0.8	2										
					6	DAEWOO E&C	RESIDUE UPGRADING COMPLEX	S-OIL	KOREA	PRESSURE VESSEL	D-103356 D-103456	V-SKIRT	SA516-70N	t	36	ø 1000	L 2450			5.102/FV MPaG	426/150 °C	-	5.1	2	Mar-2016	Apr-2017
											D-102532	V-SKIRT	SA516-70N	t	49	ø 1500	L 4320			4.76/F.V MPaG	426 °C	-	12.1	1		
D-102601	V-SKIRT	SA516-70N	t	10							ø 1500	L 3000	0.345/F.V MPaG	150 °C	-	3.2	1									
9	DAEWOO E&C	RESIDUE UPGRADING COMPLEX	S-OIL	KOREA	REACTOR	R-103302	H-SADDLE	SA516-70N	t	17	ø 3100	L 9200	0.35 MPaG	343/150 °C	TOXIC REFRACTORY	51.4	1	Mar-2016	Apr-2017							
						R-103303	H-SADDLE	SA516-70N	t	16	ø 3100	L 7500	0.35 MPaG	343/150 °C	TOXIC	42.2	1									
						R-103304	H-SADDLE	SA516-70N	t	16	ø 3100	L 7400	0.35 MPaG	343/150 °C	TOXIC	46.8	1									
						R-103351	H-SADDLE	SA516-70N	t	15	ø 2700	L 7900	0.35 MPaG	343/150 °C	-	43.9	1									
						R-103402	H-SADDLE	SA516-70N	t	17	ø 3100	L 9200	0.35 MPaG	343/150 °C	TOXIC REFRACTORY	51.4	1									
						R-103403	H-SADDLE	SA516-70N	t	16	ø 3100	L 7500	0.35 MPaG	343/150 °C	TOXIC	42.2	1									
						R-103404	H-SADDLE	SA516-70N	t	16	ø 3100	L 7400	0.35 MPaG	343/150 °C	TOXIC	47.8	1									
R-103451	H-SADDLE	SA516-70N	t	15	ø 2700	L 7900	0.35 MPaG	343/150 °C	-	43.9	1															
10	SAMSUNG C&T	R PROJECT PACK	S-OIL	KOREA	PRESSURE VESSEL	D-41122	V-SKIRT	SA516-70	t	13	ø 2100	L 7000	0.34 MPaG	250/250 °C	-	10.5	1	Apr-2016	Feb-2017							
						D-41204	H-SADDLE	SA516-70	t	15	ø 1371	L 3658	1.55 MPaG	80/150 °C	-	5.5	1									
						D-41207	H-SADDLE	SA516-70N(HIC)	t	25	ø 1371	L 3658	2.52 MPaG	80/150 °C	HIC	6.5	1									
						D-41251	H-SADDLE	SA516-70	t	23	ø 1676	L 6706	2.76 MPaG	80/150 °C	-	10.5	1									
						D-41252	V-SKIRT	SA516-70N	t	25	ø 1829	L 3353	2.76 MPaG	80/150 °C	-	10.7	1									

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NO.	CLIENT	PROJECT	END USER	DESTINATION	ITEM	ITEM NO.	TYPE	MATERIAL	SIZE (Th'k x I.D x TL-TL. / TUBE S.T.L.)			Design		SERVICE OR SPECIAL SPEC.	WEIGHT (Ton/Unit)	Q'ty	PO issue Date	Delivery Date
												Pressure	Temp					
10	SAMSUNG C&T	SUPER PROJECT PACKAGE - 3	S-OIL	KOREA	PRESSURE VESSEL	D-41255	H-SADDLE	SA240-304L	t	8	ø 1371	L 4878	0.52 MPaG	80/150 °C	-	4.3	Apr-2016	Feb-2017
						D-41255A	H-SADDLE	SA240-304L	t	10	ø 1371	L 4878	0.52 MPaG	80/250 °C	-	3.3		
						D-41259	H-SADDLE	SA516-70	t	12	ø 1500	L 3000	0.48 MPaG	80/150 °C	-	3.0		
						D-41260	H-SADDLE	SA516-70	t	12	ø 1500	L 2200	0.35 MPaG	80/150 °C	-	3.1		
						D-41270	V-SKIRT	SA516-70	t	11	ø 1200	L 3000	0.52 MPaG	115/250 °C	-	3.2		
						D-47502	H-SADDLE	SA516-70	t	13	ø 2400	L 6600	0.35 MPaG	85/150 °C	-	18.9		
						D-47503	H-SADDLE	SA516-70	t	15	ø 3100	L 7700	0.35 MPaG	80/250 °C	-	28.0		
						D-47504	H-SADDLE	SA516-60	t	13	ø 1500	L 3600	0.35 MPaG	240/250 °C	-	3.8		
						D-47508	V-LUG	SA516-70	t	13	ø 2600	L 5550	0.35 MPaG	250 °C	-	16.2		
					SHOP TANK					TK-41251	CR TANK	SA285-C	t	8	ø 3050	L 3660		
					TK-41253	CR TANK	SA285-C	t	6	ø 3850	L 4863	F.W+150 MPaG	121 °C	-	8.1			
11	SK Chem.	NO.2 EU SPENT CAUSTIC	SK Chem.	KOREA	PRESSURE VESSEL	5207-F	H-SADDLE	SA516-70	t	9	ø 1000	L 6955	4.5 kg/m ³	150 °C	CAUSTIC	2.4	Apr-2016	Sep-2016
13	DAELIM	RESIDUE UPGRADING COMPLEX	S-OIL	KOREA	HEAT EXCHANGER	E-101111	H-BEU	SA516-60N+INCOLOY 825 SB163-N08825	t	42	ø 1000	L 3658	8.7 MPaG	360 °C	CLAD, WET H2S FLAMMABLE	18.3	Apr-2016	May-2017
						E-101113	H-AEM	SA106-B SA179	t	12.7	ø 247.6	L 2438	1.18 MPaG	229 °C	WET H2S	0.8		
						E-101115	H-AES	SA516-60N(HIC) SA179	t	12	ø 650	L 6000	1.35 MPaG	137/150 °C	WET H2S FLAMMABLE	5.5		
						E-101118A/B	H-AET	SA516-70N + SS347 SA213-TP321	t	24	ø 1900	L 6000	3.21 MPaG	356/377 °C	CLAD	65.0		
						E-101118C	H-AET	SA516-70N + SS347 SA213-TP321	t	24	ø 1900	L 6000	3.21 MPaG	370/385 °C	CLAD	18.9		
						E-101124	H-AKT	SA516-70N + SS347 SA213-TP321	t	79	ø 2380	L 7070	4.99 MPaG	426/274 °C	CLAD	106.6		
						E-101127	H-BEU	SA516-70N + SS347 SA213-TP321	t	13	ø 600	L 3820	5.03 MPaG	355 °C	H2 FLAMMABLE	5.1		
						E-101131	H-AES	SA516-60N SA179	t	10	ø 400	L 5000	0.79 MPaG	123/80 °C	WET H2S	2.5		
14	DAELIM	E UPGRADING C	S-OIL	KOREA	PRESSURE VESSEL	CY-201201A	V-LUG	SA516-70N	t	26	ø 2000	L 9060	2.55 MPaG	150 °C	-	14.8	Apr-2016	May-2017
						CY-201201B	V-LUG	SA516-70N	t	26	ø 2500	L 11390	2.06 MPaG	150 °C	-	22.8		
						D-202135A/B	V-SKIRT	SA516-70N	t	8	ø 850	L 3500	0.59 MPaG	250 °C	-	4.1		
						D-202201	H-SADDLE	SA240-304L	t	10	ø 2500	L 11000	0.35 MPaG	150 °C	-	15.9		
						D-202202	H-SADDLE	SA240-304	t	29(SH) 14(UK)	ø 2000	L 5400	0.35 MPaG	150 °C	JACKET	19.3		
						D-202303	H-SADDLE	SA240-316L	t	13	ø 2800	L 4500	0.67 MPaG	149 °C	-	10.9		
						D-202304	V-SKIRT	SA240-304L	t	12	ø 3000	L 4300	0.57 MPaG	90 °C	-	18.2		
						D-202311	V-SKIRT	SA516-70N	t	10	ø 1000	L 4100	1.45 MPaG	288 °C	-	5.8		
						D-202312	V-SKIRT	SA516-70N	t	10	ø 950	L 3900	1.45 MPaG	288 °C	-	5.5		
						D-202404	H-SADDLE (STEAM TRACE)	SA240-316L	t	9	ø 1900	L 3400	0.67 MPaG	161 °C	-	4.9		
						D-202405	H-SADDLE (STEAM TRACE)	SA240-316L	t	9	ø 1700	L 4100	0.45 MPaG	90 °C	-	4.6		
						D-202408	V-SKIRT (AGITATOR)	SA240-316L	t	14	ø 2000	L 3100	1.24 MPaG	120 °C	-	16.6		
						D-202410	V-SKIRT (AGITATOR)	SA240-316L	t	14	ø 2000	L 3100	1.24 MPaG	120 °C	-	16.6		
						D-202416	V-LEG	SA240-316L	t	9	ø 750	L 1500	2.37 MPaG	200 °C	HYDROGEN	1.3		

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												Pressure	Temp					
14	DAELIM	RESIDUE UPGRADING COMPLEX	S-OIL	KOREA	PRESSURE VESSEL	D-202420	H-SADDLE	SA240-304	t	11	ø 2000	L 5400	0.35 MPaG	210 °C	-	5.2	Apr-2016	
						D-202503	H-SADDLE	SA240-304	t	10	ø 2150	L 3800	0.45 MPaG	149 °C	-	5.5		
						D-202506	H-SADDLE (STRAIGHT. PLATE)	SA240-304L	t	9	ø 1500	L 3800	1.01 MPaG	150 °C	-	4.9		
						D-202508	H-SADDLE	240-304	t	9	ø 1500	L 5000	0.35 MPaG	149 °C	-	4.8		
						D-202509	H-SADDLE (STEAM TRACE)	SA240-304	t	7	ø 1000	L 3900	0.35 MPaG	150 °C	-	3.6		
						D-202511	H-SADDLE	SA240-304	t	11	ø 2000	L 5400	0.35 MPaG	150 °C	-	6.6		
15	DAELIM	RESIDUE UPGRADING COMPLEX	S-OIL	KOREA	HEAT EXCHANGER	E-201201	DOUBLE PIPE	SA106-B	"	4/6	SCH.40	L 3490	0.91 MPaG	250 °C	-	0.7	May-2016	May-2017
						E-201212	H-AEU	SA516-70N SA179	t	12	ø 700	L 3400	0.79 MPaG	100 °C	-	3.4		
						E-202005	DOUBLE PIPE	SA106-B	"	2/4	SCH.80	L 6400	0.79 MPaG	250 °C	-	4.8		
						E-202007	H-AEM	SA516-70 SA179	t	13	ø 1050	L 3000	0.79 MPaG	115.3 °C	-	8.6		
						E-202507	H-AES	SA516-70 SA179	t	10	ø 550	L 3000	1.6 MPaG	165 °C	-	2.7		
						E-202509	H-AES	SA516-70 SA179	t	10	ø 500	L 6000	1.07 MPaG	165 °C	-	3.1		
						E-202512	V-BEL	SA516-70 SA179	t	13	ø 1450	L 3000	0.59 MPaG	250 °C	-	16.5		
16	LOTTE BP Chemical	H.EX REPLACEMENT	LOTTE BP Chemical	KOREA	HEAT EXCHANGER	E-0501	H-BKU	SA240-304L	t	8	ø 890/1200	L 5138	0.5 MPaG	170 °C	-	7.8	Jun-2016	Dec-2016
						E-1401-1	H-BKU	SA240-304L	t	7	ø 580/950	L 3000	0.98 MPaG	160 °C	-	3.4		
						E-1403-4	H-BEU	SA240-304L	t	6	ø 600	L 5486	2.41 MPaG	160 °C	-	3.9		
						E-1421	H-BEM	SA240-304L	t	8	ø 540	L 4000	2.35 MPaG	120 °C	-	2.2		
						E-2209	H-BEM	SA240-316L	t	6	ø 560	L 6096	0.76 MPaG	190 °C	EXP. JOINT	4.1		
17	ASIAN ACETYL	SEPARATOR REPLACEMENT	ASIAN ACETYL	KOREA	SEPARATOR	S-5401	V-SKIRT	SA240-316L	t	8	ø 1450	L 5800	0.34 MPaG	200 °C	-	5.0	Jun-2016	Dec-2016
19	S-OIL	2016.10 TA CW COOLER	S-OIL	KOREA	TUBE BUNDLE	E-1802A	-	B111 C68700	t	2.11	ø 19.05	L 6000	- MPaG	- °C	-	5.2	Jun-2016	Oct-2016
26	SK ENERGY	NO.1 FCC DEBOTTLENECK	SK ENERGY	KOREA	HEAT EXCHANGER	PR-E5710	H-AES	SA516-70 SA179	t	10	ø 337	L 4000	3.3 MPaG	150 °C	-	1.6	Oct-2016	May-2017
						RC-E4415A	H-AES	SA516-70 SA179	t	15	ø 1067	L 6000	2.12 MPaG	221 °C	-	15.7		
30					TOWER	LE-V4801R	V-SKIRT	SA516-70+S5	t	25	ø 2500	L 22800	1.657 MPaG	80 °C	-	49.0		
31	e-TEC E&C	RESIDUE UPGRADING COMPLEX	S-OIL	KOREA	STACK	STK-205911	V-CHAIR	A283-C	t	10/29	ø 3100	L 45000	0.001 MPaG	250 °C	-	67.1	Dec-2016	Aug-2017
						STK-205971	V-STACK	SA240-304	t	6	ø 1600	L 10000	0.097 MPaG	100 °C	-	3.4		
						D-205971	V-LUG	SA516-70	t	12	ø 3195	L 7315	0.097 MPaG	300 °C	-	15.5		
						D-205972	V-SKIRT	SA240-316L	t	6	ø 1800	L 3510	0.097 MPaG	100 °C	-	4.0		
						D-205973	V-CHAIR	SA240-316L	t	8	ø 2870	L 8760	0.097 MPaG	100 °C	-	8.9		
					HEAT EXCHANGER	E-205913	H-BEM	SA240-304	t	6	ø 420	L 2900	1.52 MPaG	220 °C	EXP. JOINT	1.3		
32	SKC	PG REVAMP	SKC	KOREA	TOWER	T-831	V-SKIRT	SA240-304L	t	9	ø 900	L 9800	0.696 MPaG	193 °C	-	5.4	Dec-2016	Jun-2017
						T-832N	V-SKIRT	SA240-304L	t	10	ø 900	L 9730	0.441 MPaG	177 °C	-	5.6		
						T-833N	V-SKIRT	SA240-304L	t	12	ø 1150	L 8100	0.343 MPaG	139 °C	-	7.6		
						T-850N	V-LUG	SA240-304L	t	7/9	ø 600/1100	L 16640	0.343 MPaG	228 °C	-	5.6		

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												Pressure	Temp							
32	SKC	PG REVAMP	SKC	KOREA	TOWER	T-860N	V-SKIRT	SA240-304L	t	18	∅ 1900	L 24300	0.343	MPaG	230 °C	-	34.1	1		Jun-2017
33	e-TEC E&C	IMC Efficiency Enhancement	IMC	K.S.A.	COLUMN	10-T1303	V-SKIRT	SA516-70N+340L	t	14	∅ 1000	L 6000	32	BarG	235 °C	CLAD	5.4	1	Dec-2016	Sep-2017
34					PRESSURE VESSEL	10-D1206	V-LUG	SA240-304L	t	14	∅ 1100	L 3000	21	BarG	250 °C	-	3.0	1		
34	e-TEC E&C	IMC Efficiency Enhancement	IMC	K.S.A.	PRESSURE VESSEL	10-D1412	V-SKIRT	SA516-70+304L	t	87	∅ 2500	L 6400	90	BarG	160 °C	CLAD	57.0	1	Dec-2016	Sep-2017
						10-D1507	H-SADDLE	SA516-70	t	20	∅ 2500	L 7500	15	BarG	150 °C	-	17.1	1		
						10-D1508	V-LEG	SA516-70	t	16	∅ 1800	L 3600	15	BarG	85 °C	-	5.7	1		
						10-D1509	H-SADDLE	SA516-70	t	12	∅ 1500	L 5400	10	BarG	185 °C	-	7.7	1		
						10-D1510	H-SADDLE	SA516-70	t	20	∅ 3500	L 7500	10	BarG	185 °C	-	24.1	1		

2015 YEAR PROJECT

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												Pressure	Temp									
1	S-OIL	#1 AROMATICS	S-OIL	KOREA	TUBE BUNDLE	E-7114	-	A179	t	2.11	∅ 19.05	L 6100	0	kg/m ² g	-	°C	-	5.7	1	Feb-2015	Jul-2015	
						E-7406	-	A179	t	2.11	∅ 19.05	L 6100	0	kg/m ² g	-	°C	-	8.1				1
						E-7527/7627	-	A179	t	2.11	∅ 19.05	L 6100	0	kg/m ² g	-	°C	-	1.6				2
						E-7529	-	A179	t	2.11	∅ 19.05	L 6100	0	kg/m ² g	-	°C	-	4.4				1
2	S-OIL	#2 CDU	S-OIL	KOREA	TUBE BUNDLE	E-11123	-	A179	t	2.77	∅ 25.4	L 6100	0	kg/m ² g	-	°C	-	11.5	1	Feb-2015	Jul-2015	
5	SK E&C	RUWAI'S REFINERY EXP.	TAKREER	U.A.E.	HEAT EXCHANGER	1400-E-003A/B	H-CJU	SA387-22 CL2 SA213-T12	t	30	∅ 650	L 2692	88 / F.V.	kg/m ² g	295/244	°C	HYDROGEN, WET H2S	7.3	2	Apr-2015	Dec-2015	
7	HYUNDAI ENG.	KANDYM	LUKOIL UZBEKEISTAN OPERATING COMPANY	UZBEKEISTAN	PRESSURE VESSEL	120-1-VA-101/201/401 120-2-VA-201/301/401	H-SADDLE (PUMP MOUNT)	SA516-60N(HIC)	t	11	∅ 1500	L 4100	3.5 / FV	BarG	85.0 / -25.0	°C	SOUR, LETHAL HIC	5.5	6	May-2015	Apr-2016	
						130-1/2-VA-001	H-SADDLE (PUMP MOUNT)	SA516-60N(HIC)	t	13	∅ 1700	L 5000	3.5 / FV	BarG	85.0 / -25.0	°C	SOUR, LETHAL HIC	6.9	2			
						130-1/2-VN-001	H-SADDLE	SA516-60N(HIC)	t	13	∅ 2500	L 8100	3.5 / FV	BarG	85.0 / -25.0	°C	SOUR, LETHAL HIC	10.5	2			
						211-0-VA-003	H-SADDLE (PUMP MOUNT)	SA516-60N(HIC)	t	14	∅ 2000	L 5300	3.5 / FV	BarG	85.0 / -25.0	°C	SOUR, LETHAL HIC	8.9	1			
						221-0-VA-010	H-SADDLE (PUMP MOUNT)	SA516-60N(HIC)	t	18	∅ 3000	L 7000	3.5 / FV	BarG	85.0 / -25.0	°C	SOUR, LETHAL HIC	19.2	1			
						241-1/2-VA-005	H-SADDLE (PUMP MOUNT)	SA516-60N(HIC)	t	17	∅ 3000	L 6000	3.5 / FV	BarG	85.0 / -25.0	°C	SOUR, LETHAL HIC	16.1	2			
						270-1/2-VA-009	H-SADDLE (PUMP MOUNT)	SA516-60N(HIC)	t	11	∅ 1500	L 4500	3.5 / FV	BarG	85.0 / -25.0	°C	SOUR, LETHAL HIC	5.3	2			
						314-0-VA-002	V-SKIRT	SA516-60	t	14	∅ 3000	L 7000	3.5 / FV	BarG	150.0 / -25.0	°C	-	17.0	1			
						314-0-VA-004	V-SKIRT	SA516-60	t	9	∅ 1700	L 3500	3.5	BarG	150.0 / -25.0	°C	-	3.8	1			
						322-0-VC-001	V-SKIRT	SA516-60N	t	15	∅ 2800	L 8400	11	BarG	85.0 / -25.0	°C	-	14.1	1			
						323-0-VC-001	V-SKIRT	SA516-60N	t	16	∅ 2700	L 8100	10.5	BarG	85.0 / -25.0	°C	-	13.9	1			
						350-0-VN-001	V-SKIRT	SA516-60N	t	26	∅ 1300	L 2800	39.0 / FV	BarG	85.0 / -25.0	°C	-	5.4	1			
						350-0-VN-002	V-SKIRT	SA516-60N	t	10	∅ 1100	L 2800	9.0 / FV	BarG	85.0 / -25.0	°C	-	2.4	1			
						353-0-VA-005	H-SADDLE	SA516-60N+S5	t	31	∅ 2600	L 13000	24.0 / FV	BarG	85.0 / -46.0	°C	-	33.5	1			
						410-0-VA-001	H-SADDLE (PUMP MOUNT)	SA516-60	t	19	∅ 3000	L 6000	3.5 / FV	BarG	85.0 / -25.0	°C	-	18.3	1			
						424-0-VA-002	H-SADDLE	SA516-60N(HIC) +316L (3mm)	t	16	∅ 4000	L 10000	3.5 / FV	BarG	240.0 / -25.0	°C	SOUR, LETHAL HIC, CLAD	28.3	1			
						484-0-VH-001	H-SADDLE	SA516-60N(HIC)	t	13	∅ 1800	L 5400	4.9 / FV	BarG	85.0 / -25.0	°C	SOUR, LETHAL HIC	5.7	1			
						484-0-VA-007	H-SADDLE	SA516-60N(HIC)	t	17	∅ 3000	L 6000	3.5 / FV	BarG	85.0 / -25.0	°C	SOUR, LETHAL HIC	16.5	1			
						624-1/2-VA-001	H-SADDLE	SA516-60N(HIC)	t	12	∅ 1550	L 4650	3.5 / FV	BarG	85.0 / -25.0	°C	SOUR, LETHAL HIC	4.8	2			
						625-0/1/2-VA-001	H-SADDLE	SA516-60N(HIC)	t	12	∅ 1550	L 4650	3.5 / FV	BarG	85.0 / -25.0	°C	SOUR, LETHAL HIC	5.0	3			
8	UTE - TSGI (JV of TR, SAIPEM, GS E&C, ITOCHU)	AEGEAN REFINERY	STAR (SOCAR TURCAS AEGEAN REFINERY)	TURKEY	PRESSURE VESSEL	120D-003	H-SADDLE (STEAM TRACE)	SA516-60N(HIC)	t	60	∅ 2850	L 9500	43.5	kg/m ² g	200	°C	VERY TOXIC, WET H2S, HYDROGEN, HIC	57.6	1	Aug-2015	Feb-2016	
						130D-004	H-SADDLE (STEAM TRACE)	SA516-60N(HIC)	t	48	∅ 2700	L 8700	36	kg/m ² g	170	°C	VERY TOXIC, WET H2S, HYDROGEN, HIC	47.5	1			
						160D-004	H-SADDLE	SA516-70N	t	42	∅ 2100	L 6000	49	kg/m ² g	290	°C	-	21.3	1			
						520D-003	V-SKIRT	SA516-70	t	58	∅ 3000	L 8200	50	kg/m ² g	80	°C	-	62.6	1			
						120D-002	H-SADDLE (STEAM TRACE)	SA516-70	t	16	∅ 3200	L 8700	4	kg/m ² g	80	°C	-	18.6	1			
						120D-101	H-SADDLE (STEAM TRACE)	SA516-60N(HIC)	t	18	∅ 1500	L 4700	17.5	kg/m ² g	140	°C	VERY TOXIC, WET H2S, HYDROGEN, HIC	6.2	1			
						120D-204	H-SADDLE (STEAM TRACE)	SA516-60N(HIC)	t	16	∅ 3200	L 9800	3.5	kg/m ² g	350	°C	VERY TOXIC, WET H2S, HIC	22.7	1			

2015 YEAR PROJECT

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												Pressure	Temp							
8	UTE - TSGI (JV of TR, SAIPEM, GS E&C, ITOCHU)	AEGEAN REFINERY	STAR (SOCAR TURCAS AEGEAN REFINERY)	TURKEY	PRESSURE VESSEL	120D-205	H-SADDLE (STEAM TRACE)	SA516-60N(HIC)	t	17	ø 3200	L 10000	3.8	kg/m ²	350 °C	VERY TOXIC, WET H2S, HIC	24.9	1	Aug-2015	Feb-2016
						130D-003	V-SKIRT	SA516-70	t	14	ø 3350	L 9950	4	kg/m ²	190 °C	-	32.2	1		
						130D-101	H-SADDLE (STEAM TRACE)	SA516-60N(HIC)	t	13	ø 1000	L 2900	6	kg/m ²	210 °C	VERY TOXIC, WET H2S, HIC	2.6	1		
						130D-201	H-SADDLE	SA516-60N(HIC)	t	12	ø 2000	L 7000	3.5	kg/m ²	230 °C	VERY TOXIC, WET H2S, HIC	8.5	1		
						130D-204	H-SADDLE (STEAM TRACE)	SA516-60N(HIC)	t	17	ø 3600	L 9800	3.5	kg/m ²	350 °C	VERY TOXIC, WET H2S, HIC	27.8	1		
						130D-205	H-SADDLE (STEAM TRACE)	SA516-60N(HIC)	t	17	ø 3600	L 9900	3.8	kg/m ²	350 °C	VERY TOXIC, WET H2S, HIC	27.9	1		
						150D-002	V-SKIRT	SA516-70	t	17	ø 4300	L 12900	5.8	kg/m ²	190 °C	-	53.2	1		
						150D-101	H-SADDLE (STEAM TRACE)	SA516-60N(HIC)	t	22	ø 3100	L 9300	12.5	kg/m ²	190 °C	VERY TOXIC, HYDROGEN, SEVERE WET H2S, HIC	31.3	1		
						150D-106A/B	V-SKIRT	SA516-70	t	19	ø 1800	L 11100	20.5	kg/m ²	210 °C	-	16.5	2		
						150D-301	H-SADDLE	SA516-60N	t	12	ø 2200	L 6600	3.5	kg/m ²	240 °C	VERY TOXIC, WET H2S, BENZENE, AMINE, HIC	9.3	1		
						150D-302	H-SADDLE	SA516-60N	t	14	ø 3000	L 10300	3.5	kg/m ²	350 °C	VERY TOXIC, WET H2S	17.7	1		
						150D-304A/B	H-SADDLE (STEAM TRACE)	SA516-60N(HIC)	t	17	ø 3500	L 15000	3.7	kg/m ²	350 °C	VERY TOXIC, BENZENE, SEVERE WET H2S, HIC	43.2	2		
						450D-001	H-SADDLE (ELECTRIC TRACE)	SA516-70N	t	11	ø 2600	L 7800	6	kg/m ²	190 °C	BENZENE	13.5	1		
						450D-401	H-SADDLE (ELECTRIC TRACE)	SA516-60N	t	18	ø 3100	L 10700	5.5	kg/m ²	430 °C	TOXIC, BENZENE, WET H2S	28.5	1		
						9	HYUNDAI ENG.	KANDYM	LUKOIL UZBEKEISTAN OPERATING COMPANY	UZBEKEISTAN	HEAT EXCHANGER	140E-004A/B	H-BEU	SA387-11 CL.2+321 SA213-TP321	t	33	ø 1175	L 4267		
450E-202A/B/C/D	H-BEU	SA387-11 CL.2 SA213-T11	t	31	ø 1200							L 3048	48.5	kg/m ²	430 °C	CO TOXIC, H2	16.3	4		
450E-203A/B	H-BEU	SA387-11 CL.2 SA213-T11	t	35	ø 1350							L 4877	52.5	kg/m ²	430 °C	CO TOXIC, H2	25.9	2		
450E-204	H-BEU	SA387-11 CL.2 SA213-T11	t	28	ø 1100							L 3658	52	kg/m ²	410 °C	CO TOXIC, H2	15.6	1		
450E-205A/B	H-BEU	SA387-11 CL.2 SA213-T11	t	33	ø 1200							L 4267	56	kg/m ²	410 °C	CO TOXIC, H2	20.0	2		
450E-206	H-BEU	SA387-11 CL.2+304L	t	26	ø 1400							L 6096	46.5	kg/m ²	365 °C	TOXIC, BENZENE, CLAD	24.5	1		
450E-207	H-BFU (LONGI. BAFFLE)	SA387-11 CL.2+304L	t	26	ø 1180							L 4877	52.5	kg/m ²	335 °C	CO TOXIC, H2, CLAD	17.7	1		
450E-208A/B	H-BFU (LONGI. BAFFLE)	SA387-11 CL.2+304L	t	33	ø 1400							L 4877	56.5	kg/m ²	335 °C	CO TOXIC, H2, CLAD	28.7	2		
9	HYUNDAI ENG.	KANDYM	LUKOIL UZBEKEISTAN OPERATING COMPANY	UZBEKEISTAN	HEAT EXCHANGER	211-0-HA-001	H-BEM	SA516-60N(HIC)+N08825 SB163-N08825	t	36	ø 1070	L 3000	72	Barg	190 °C	LETHAL, HIC, CLAD	17.2	1	Aug-2015	Jul-2016
						212-1/2-HA-001	H-BEM	SA516-60N+S5 SA334-6	t	44	ø 1400	L 9000	65.5	Barg	155 °C	-	58.7	2		
						212-1/2-HA-002	H-NKN	SA516-60N+S5 ALLOY 825	t	36	ø 1090 1750	L 7500	65.5	Barg	155 °C	-	30.8	2		
						221-0-HA-001	H-BEU	SA516-60N(HIC)+N08825 SB163-N08825	t	10	ø 450	L 4000	14.5	Barg	240 °C	LETHAL, HIC, CLAD	1.9	1		
						221-0-HA-002	H-BEU	SA106-B+S32750 SA789-S32750	t	10	ø 297.3	L 3000	9	Barg	240 °C	LETHAL, CLAD	0.9	1		
						221-0-HA-004	H-BKU	SA516-60 SA179	t	20	ø 530 980	L 3500	55	Barg	330 °C	-	3.5	1		
						241-1/2-HA-001 A/B	H-BKU	SA240-316L SA213-TP316L	t	16	ø 1450 2200	L 6096	8	Barg	190 °C	-	28.5	4		
						243-1/2-HA-001	V-NEM	SA516-60N+S5 SA334-6	t	34	ø 810	L 4900	83	Barg	155 °C	-	10.9	2		
						243-1/2-HA-003	H-BKU	SA240-304L SA213-TP304L	t	20	ø 450 1100	L 2000	65.5	Barg	155 °C	-	3.8	2		
						243-1/2-HA-004	H-BKU	SA240-316L SA213-TP316L	t	24	ø 650 1160	L 4900	55	Barg	330 °C	-	4.0	2		
243-1/2-HA-005	H-AEU	SA516-60+304L SA213-TP304L	t	24	ø 570	L 4000	65.5	Barg	155 °C	CLAD	5.4	2								

2015 YEAR PROJECT

NO.	CLIENT	PROJECT	END USER	DESTINATION	ITEM	ITEM NO.	TYPE	MATERIAL	SIZE (Th'k x I.D x TL-TL. / TUBE S.T.L.)			Design		SERVICE OR SPECIAL SPEC.	WEIGHT (Ton/Unit)	Q'ty	PO issue Date	Delivery Date		
												Pressure	Temp							
9	HYUNDAI ENG.	KANDYM	LUKOIL UZBEKEISTAN OPERATING COMPANY	UZBEKEISTAN	HEAT EXCHANGER	243-1/2-HA-006	H-BKU	SA240-304L SA213-TP304L	t	14	ø 440 1100	L 3000	18	Barg	185 °C	-	3.0	2	Aug-2015	Jul-2016
						247-1/2-HA-001	H-BEM	SA516-60 SA213-TP304L	t	55	ø 1600	L 9000	65.5	Barg	85 °C	-	81.9	2		
						270-1/2-HA-001	H-BXU	SA516-60N+S5 SA179	t	35	ø 1200	L 3048	55	Barg	330 °C	-	15.0	2		
						270-1/2-HA-002	H-BEU	SA516-60N(HIC) SA213-TP316L	t	42	ø 1500	L 4267	55	Barg	330 °C	LETHAL, HIC	22.5	2		
						270-1/2-HA-004	H-BXU	SA516-60N SA213-TP316L	t	45	ø 1600	L 3658	55	Barg	330 °C	LETHAL	28.0	2		
						270-1/2-HA-006	H-BXU	SA516-60N SA213-TP316L	t	43	ø 1500	L 4267	55	Barg	330 °C	-	24.5	2		
						270-1/2-HA-008	H-BXU	SA516-60N SA213-TP316L	t	43	ø 1500	L 4267	55	Barg	330 °C	LETHAL	25.1	2		
						270-1/2-HA-010	H-BXU	SA516-60N SA213-TP316L	t	43	ø 1500	L 4267	55	Barg	330 °C	LETHAL	25.7	2		
						270-1/2-HA-011	H-BEU	SA516-60N SA179	t	24	ø 650	L 2438	55	Barg	330 °C	-	3.0	2		
						313-0-HA-001 A/B	H-BEU	SA516-60 SA179	t	10	ø 630	L 3000	10	Barg	190 °C	-	2.8	2		
						314-0-HA-001	H-BEU	SA516-60 SA179	t	12	ø 780	L 6000	11	Barg	150 °C	-	7.4	1		
						484-0-HA-001 A/B	H-AES	SA516-60N(HIC)+S32750 SA789-S32750	t	10	ø 340	L 3500	7	Barg	155 °C	LETHAL, HIC, CLAD	1.7	2		
						484-0-HA-003	H-BKU	SA516-60+S32750 SA789-S32750	t	13	ø 550 1000	L 4900	8	Barg	190 °C	-	4.5	1		
						13	e-TEC E&C	SAFCO IV RELIABILITY IMPROVEMENT	SAFCO	SAUDI ARABIA	COLUMN	41-C-321	V-SKIRT	SA516-70N	t	42	ø 2770	L 22750		
41-C-323/324	V-SKIRT	SA240-304L SA516-70	t	19	ø 3470							L 47870	4	kg/m ² g	150 °C	-	91.3	2		