



Reference List



Equipment oriented

A. Carbon Steel

<u>Jobnr</u>	<u>Country</u>	<u>Description</u>	<u>Material</u>	<u>Max.Size</u>	<u>Thickness</u>	<u>Weight in tons</u>	<u>Code</u>	<u>Year</u>
8039	Netherlands	3 Columns	CS	4900 x 31200	12	177	Stoomwezen	1994
8053	Belgium	2 Reactors	CS	3700 x 31000	20	91	ASME	1994
8092	Belgium	Vessel	CS	4500 x 20300	17	39	ASME	1994
8113	Belgium	Heat Exchanger	CS	1200 x 3005	11	1.7	AD-Merkblatt	1994
8135	Belgium	Vessel	CS	2500 x 4182	14	7.6	ASME	1994
8151	Netherlands	4 Vessels	CS	3500 x 11000	48	18	Stoomwezen	1995
8168	Netherlands	Vessel	CS	2550 x 8500	30	26.5	ASME	1995
8180	France	2 Reactors	CS	2743 x 14000	60	254	ASME	1996
8214	Belgium	8 Heat Exchangers	CS	1050 x 3050	22	9.5	ASME	1996
8215	France	Vessel	CS	3300 x 3500	8	5.5	API650	1996
8273	Belgium	Maquette (Nuclear)	CS	2000 x 5000	58	18.4	ASME	1996
8292	Netherlands	8 Columns	CS	2900 x 54600	40	436.7	AD-Merkblatt	1997
8398	Germany	7 Columns	CS	2900x 61200	20	399	---	1998
8421	France	2 Reactors and Coolers	CS	5200 x 8800	74	253	---	1998
8430	Germany	Reactor	CS	3048 x 17070	66	198	---	1998
8475	Argentina	5 Pressure vessels	CS	4000 x 24000	38	105	ASME	1999
8515	Germany	Reactor	CS	4800 x 27000	28	160	ASME	1999
8618	China	2 Reactors with agitators	CS	4200 x 16000	80	110	ASME	2001
8646	Tjech Republic	2 Reactors with agitators	CS	4200 x 16000	80	110	ASME	2001
8676	Netherlands	1 Reactor with agitator	CS	4200 x 16000	80	110	ASME	2001
		1 Reactor with agitator		5000 x 18000	80	180	PED	2001
8916	Iran	11 Heat Exchangers	CS				ASME	2003
8914	Iran	2 Heat Exchangers	CS				ASME	2003
8854	Trinidad	9 Pressure Vessels	CS				ASME	2003
8878	China	1 Reactor with agitator	CS	4200 x 16000	80		ASME	2003
8912	South Africa	2 Reactors with agitators	CS	4200 x 16000	80	110	ASME	2003
8942	China	1 Reactor with agitator	CS	4200 x 16000	80	110	ASME	2003
9189	Belgium	1 Reactor with agitator	CS	4200 x 16000	80	110	ASME	2008
9542	Russia	2 Reactor with agitator	CS	5000 x 18000	80	180	ASME	2009
9169	Trinidad	4 Reactors	CS		90		ASME	2008
9170	Belgium	Reactor	CS				ASME	2008
9529	Trinidad	4 Reactors	CS				ASME	2008
9778	China	2 Reactors with agitators Yulin	CS	4200 x 16000	80	220	ASME	2011
9878	China	1 9' Reactor with agitator Yanshan	CS	4200x 16000	80	110	ASME	2011
9880	India	2 10' Reactors with agitator OPAL	CS	5000 x 18000	80	360	ASME	2011
9991	China	2 x 9' Reactors with agitator Maoming	CS	4200x 16000	80	220	ASME	2011
9993	China	2 x 9' Reactors with agitator Baofeng	CS	4200x 16000	80	220	ASME	2012
10042	China	2 x 9' Reactors with agitator Shenhua	CS	4200x 16000	80	220	ASME	2012
10071	China	2 x 10' Reactors with agitator Shenhua	CS	5000 x 18000	80	360	ASME	2013
10212	China	2 10' Reactors with agitator Oriental	CS	5000 x 18000	80	360	ASME	2013
10147	China	2 10' Reactors with agitator ZTHC	CS	5000 x 18000	80	360	ASME	2013
10310	China	2 9' Reactors with agitator Full Tech	CS	4200x 16000	80	220	ASME	2014
10405	China	4 x reactors with Agitator Shenhua Ningxia (Novolen)	CS	4150 x 7500	50/82	96	AD-Merkblatt	2015
1073	China	2 x 9' Reactors with agitator Shaanxi Yanchang Petroleum	CS	4200x 16000	80	220	ASME	2016
10651	China	4 x 12' Reactors with agitator Zhejiang Petrochemical	CS			1466	ASME	2016
10465	Nigeria	3 x 10' Reactors with agitator Zhejiang Petrochemical	CS	5000 x 18000	80	540	ASME	2017
10890-91	China	2 x 10' Reactors with agitator Hengli (JPP)	CS	5000 x 18000	80	540	ASME	2018
10987	China/Kazachstan	3 x PP reactors with agitator KPI (Novolen)	CS	4150 x 7500	50/82	96	AD-Merkblatt	2018



Reference List



B. Stainless Steel

<u>Jobnr</u>	<u>Country</u>	<u>Description</u>	<u>Material</u>	<u>Max.Size</u>	<u>Thickness</u>	<u>Weight in tons</u>	<u>Code</u>	<u>Year</u>
8055	---	1 Reactor	SS-Clad	< 4000	---	---	---	---
8080	Belgium	Heat Exchanger	SS	508 x 3056	5	0.8	ASME	1994
8081	Netherlands	Column	SS	2000 x 9200	4	4.7	AD-Merkblatt	1994
8093	Netherlands	Condensor	SS	2000 x 3000	12	5.7	AD-Merkblatt	1994
8098	Belgium	Reactor	SS	3000 x 3500	15	9	ASME	1994
8151	Netherlands	4 Vessels	SS	3500 x 7000	21	81.5	Stoomwezen	1995
8152	UK	Heat Exchangers	SS	1550 x 7200	13	24	ASME	1995
8163	---	3 Reactors and Christallizers	SS-Clad	< 4000	---	202	---	---
8179	Belgium	Heat Exchanger	SS	438 x 1500	8	0.6	ASME	1995
8185	Japan	2 Columns	SS	4400 x 55320	25	210	ASME	1996
8217	UK	Column	SS	4850 x 68000	35	191	ASME	1996
8222	UK	4 Vessels	SS	4115 x 7000	12	72.5	ASME	1996
8247	Belgium	2 Pre-Heaters	SS	500 x 12000	8	---	ASME	1996
8263	Belgium	Column	SS	1400 x 31259	10	23.7	AD-Merkblatt	1996
8267	Italy	6 Christallizers	SS-Clad	4200 x 11600	93	537.6	ASME	1997
8272	Italy	Heat Exchanger	SS	3100 x 9144	14	33.6	ASME	1997
8290	Belgium	7 Heat Exchangers	SS	3200 x 14450	40	103.2	AD-Merkblatt	1997
8300	Japan	8 Columns	SS	2750 x 21860	26	175.4	ASME	1997
8408	Netherlands	Vessel	SS	3200 x 6400	---	41.2	---	1998
8414	Germany	2 Reactors	SS	4564 x 11740	25	210	---	1998
8445	UK	2 Reactors	SS	3700 x 10400	40	127	---	1998
8445	UK	2 Reactors	SS	4100 x 10600	22	40	ASME	1999
8476	Netherlands	6 Vessels	SS	3900 x 6700	14	108	---	1999
8476	Netherlands	6 Reactors	SS	3600 x 10200	18	22	ASME	1999
8506	France	2 Reactors	SS-clad	4300 x 13000	35	82	---	1999
8521	Spain	2 Reactors	SS-clad	4000 x 12000	32	78	---	1999
8528	Iran	5 Reactors	SS-clad	---	---	---	ASME	2000
8685	Canada	2 Vessels	SS-clad	6200 x 13700	98	270	ASME	2001
		1 Reactor	SS-clad	3600 x 13000	110	105	ASME	2001
8721	China	1 Reactor	SS-clad	3500 x 16800	133	200	ASME	2001
8704	Spain	1 Reactor	SS-clad	2600 x 10200	80	58	ASME	2001
8827	USA	Styrene Reactor	SS			140	ASME	2003
8855	Belgium	Double Pipe HE	Duplex				ASME	2003
							PED	
8884	Denmark	Fermenters	SS			120	ASME	2003
8914	Iran	4 Heat Exchangers	SS				ASME	2003
8985	Kuwait	2 Heat Exchangers	304 H			140	ASME	2004
9080	Kuwait	Reactor	304 H			200	ASME	2005
9137	Iran	6 heat exchangers	SS				ASME	2007
9509	Belgium	Double pipe heat exchanger	Duplex				ASME/PED	2008
9871	Canada	1 Butyl reactor Lanxess	SS				ASME	2011
9885	China	combustion heaters Hengli	SS				ASME	2011
9875	China	SS preheaters	SS				ASME	2011
10050	Taiwan	3 Butyl reactors FCFC	SS				ASME	2012
10224	Qatar	Oxychlorination reactor	CS/ Hastelloy	34000x5700x5700	35	330	ASME	2013
10410	Saudi Arabia	Duplex Vessel (Sadara)	Duplex				ASME	2015
10671	Iran	Falling Film heat exchangers	SS304				ASME	2016
10651	China	ZPC Ineos PP 12 ft	CS				ASME	2016
10890	China	JPP PP reactors Hengli	CS				ASME	2018
10987	Kazachstan	PP Novolen reactors 75m x3	CS				ASME	2018
11243	China	JPP PP reactors Sinopec Hainan	CS				ASME	2020
11345	China	Shandong Yulong PP reactors 4 x 125 m3 Novolen	CS				ASME	2021
11304	China	Shandong Yulong JPP PP reactors	CS				ASME	2021
11358	China	Petrochina Guangdong JPP PP reactor	CS				ASME	2021
11441	China	Petrochina Duchanzi Ineos PP reactor	CS				ASME	2023



Reference List



C. Exotic Materials

<u>Jobnr</u>	<u>Country</u>	<u>Description</u>	<u>Material</u>	<u>Max.Size</u>	<u>Thickness</u>	<u>Weight in tons</u>	<u>Code</u>	<u>Year</u>
5732	---	Condensor	Ti-Clad	< 2000	---	3.9	---	---
5862	---	2 Condensors	Ti-Clad	< 2000	---	6.5	---	---
5909	---	Heat Exchanger and Condensor	Ti-Clad	< 2000	---	3	---	---
6279	---	3 Vessels	Ti-Clad	> 4000	---	157	---	---
6333	Netherlands	Vessel	Titanium	1416 x 7900	---	2	Stoomwezen	1989
6912	---	Vessel	Ti-Clad	> 4000	---	120	---	---
6961	Belgium	Heat Exchanger	Titanium	1278 x 6096	---	3.8	ASME	1993
8017	---	Reactor and Christallizers	Titanium	> 4000	---	219	---	---
8022	Japan	Piping	Titanium	---	---	7.5	---	1993
8044	---	Reactor and Vessel	Ti-Clad	> 4000	---	174	---	---
8096	---	3 Reactors and Christallizers	Ti-Clad	> 4000	---	217	---	---
8106	---	5 Heat Exchangers	Ti-Clad	< 4000	---	109	---	---
8109	Germany	2 Reactors	Ti-Clad	6000 x 20000	15	55	AD-Merkblatt	1994
8153	UK	6 Vessels	Ti-Clad	4460 x 29400	60	314	ASME	1995
8166	---	3 Reactors and Christallizers	Ti-Clad	> 4000	---	219	---	---
8202	---	12 Heat Exchangers	Ti-Clad	< 2000	---	127	---	---
8220	UK	2 Reactors and Christallizers	Ti-Clad	6900 x 6400	77	303	ASME	1996
8242	UK	2 Heat Exchangers	Titanium	4800 x 15000	20	185	ASME	1996
8244	UK	2 Vessels	Ti-Clad	7600 x 11000	67	317	ASME	1996
8247	---	Column	Ti-Clad	> 4000	---	419	---	---
8246	---	3 Reactors and Christallizers	Ti-Clad	> 4000	---	399	---	---
8248	---	Reactor	Ti-Clad	> 4000	---	118	---	---
8248	---	Vessel	Ti-Clad	< 4000	---	36	---	---
8254	---	Christallizers	Ti-Clad	< 4000	---	37.5	---	---
8271	---	11 Heat Exchangers	Ti-Clad	< 2000	---	54.4	---	---
8334	---	2 Heat Exchangers	Ti-Clad	< 4000	---	50	---	---
8364	---	3 Vessels	Ti-Clad	> 4000	---	212	---	---
8366	---	11 Heat Exchangers	Ti-Clad	< 4000	---	165.5	---	---
8373	UK	Heat Exchangers	Titanium	1370 x 3000	10	14.6	---	1997
8371	Belgium	2 Vessels	Zirconium	2000 x 3000	---	4.2	---	1998
8380	Japan	5 Reactors Mitsubishi	Ti-Clad	2500 x 9500	116	392.6	---	1998
8418	Japan	Piping	Titanium	---	---	32	---	1998
8468	Belgium	Column PTA bp	Ti-clad	6000 x 61000	48	430	ASME	1999
8490	Netherlands	Vessel	Zirconium	2750 x 19200	---	20.8	---	1998
8506	Taiwan	Column PTA FCFC	Titanium	4300 x 38000	18	80	ASME	1999
8594	Taiwan	11 Heat Exchangers PTA FCFC	Ti-clad	---	---	---	ASME	2000
8629	Taiwan	1 Reactor PTA CAPCO	Ti-clad	8400 x 15250	80	280	ASME	2001
8629	Taiwan	1 Vessel	Ti-clad	3800 x 6000	32	25	ASME	2001
8673	Taiwan	1 Tower CAPCO 6	Ti-clad	5600 x 72700	---	455	ASME	2001
8684	Canada	2 Reactors PTA	Ti-clad	6500 x 11600	60	90	ASME	2001
8684	Canada	2 Vessels	Ti-clad	5500 x 10700	50	56	ASME	2001
8684	Canada	1 Vessel	Ti-clad	3500 x 12000	120	70	ASME	2001
8602	Taiwan	2 Reactors FCFC	Ti-clad	---	---	---	ASME	2000
8527	Iran	5 Reactors and Crystallizers PTA Daelim	Ti-clad	---	---	---	ASME	2000
8529	Iran	15 Heat Exchangers PTA Daelim	Ti-clad	---	---	---	ASME	2000
8628	China	1 Reactor CAPCO 6	Ti-clad	7600 x 14000	70	207	ASME	2001
8628	China	1 Vessel	Ti-clad	3600 x 6000	30	20	ASME	2001
8629	Taiwan	1 Reactor	Ti-clad	8400 x 15250	80	280	ASME	2001
8629	Taiwan	1 Vessel	Ti-clad	3800 x 6000	32	25	ASME	2001
8673	Taiwan	1 Tower PTA Capco 6	Ti-clad	5600 x 72700	---	455	ASME	2001
8684	Canada	2 Reactors	Ti-clad	6500 x 11600	60	90	ASME	2001
8684	Canada	2 Vessels	Ti-clad	5500 x 10700	50	56	ASME	2001
8684	Canada	1 Vessel	Ti-clad	3500 x 12000	120	70	ASME	2001
8602	Taiwan	1 Reactor PTA CAPCO 6	SS-clad +Ti-clad	3500 x 13500	120	114	ASME	2001
8594	Taiwan	18 Heat Exchangers PTA FCFC	Ti-clad	---	---	---	ASME	2001
8700	Spain	2 Reactors	Ti-clad	5200 x 10000	40	50	ASME	2001
8700	Spain	2 Vessels	Ti-clad	5100 x 9700	38	45	ASME	2001
8709	Spain	1 Vessel	Ti-clad	2500 x 9800	36	36	ASME	2001
8760	New Caledonia	3 Autoclaves Nickel Mining Vale	Ti-clad	4500 x 26000	118	530	ASME	2002
8820	New Caledonia	19 Heat Exchangers Nickel Mining Vale	Ti-clad	1600 x 12000	50	36	ASME	2002

8899	India	4 Condensers PTA Indian Oil	Ti-clad	---	---	---	ASME	2003
8900	UK	2 Condensers PTA Invista	Ti-clad	---	---	---	ASME	2003
8932	China	2 Crystallizers PTA Yizheng Ningbo	Ti-clad	4000 x 7000	24	120	ASME	2003
8929	Thailand	1 Reactor	Ti-clad	7600 x 11000	67	260	ASME	2003
8951	China	1 Absorber	Ti-clad	6650 x 50000	---	---	ASME	2003
8955	China	10 Heat Exchangers High Pressure FCFC Ningbo	Ti-clad	---	---	---	ASME	2003
8914	Iran	2 Heat Exchangers	Ti	---	---	---	ASME	2003
8967	China	2 Oxidation Reactor PTA Sunshine	Ti-clad	7600 x 11000	60	280	ASME	2004
8968	China	4 Condensers PTA Sunshine	Ti-clad	5100 x 6900	---	---	ASME	2004
8969	China	4 Preheaters PTA Sunshine	Ti-clad	650 x 15000	---	---	ASME	2004
8980	China	Oxidation Reactor PTA Liao Yang	Ti-clad	7900 x 11000	60	280	ASME	2004
8981	China	2 CTA Crystallizers PTA Yizheng Ningbo	Ti-clad	4400 x 7200	---	---	ASME	2004
8989	Thailand	2 CTA Crystallizers	Ti-clad	4400 x 7200	---	---	ASME	2004
8996	India	2 CTA Crystallizers	Ti-clad	4400 x 7200	---	---	ASME	2004
9002	China	2 Heat Exchangers (E-161) PTA Sunshine	Ti-clad	830 x 7500	---	---	ASME	2004
9004	India	4 Heat Exchangers PTA Reliance	Ti-clad	1550 x 6850	---	---	ASME	2004
				950 x 8600				
				700 x 3650				
				1530 x 2550				
9015	India	2 Heat Exchangers PTA Reliance	Ti-clad	630 x 5400	---	---	ASME	2004
				670 x 14500				
9016	India	1 Heat Exchanger	Ti-clad	500 x 6400	---	---	ASME	2004
		1 Vessel		1600 x 2400				
9019	China	Preheaters PTA Liao Yang	Ti-clad	---	---	---	ASME	2004
8994	India	2 Condensers PTA Indian Oil	Ti-clad	5000 x 7500	---	---	ASME	2004
				4750 x 8300				
8986	China	1 Reactor Yanzi Sinopec	Ti-clad	8050 x 10000	60 + 3	280	ASME	2004
9066	Brazil	2 Autoclaves Vale	Ti-clad	5800 x 34000	120 + 8	600	ASME	2005
9090	China	Oxidation Reactor bp Zhuhai	Ti-clad	7900 x 11000	61	320	ASME	2007
9119	Singapore	Ti-clad reactors and Heat exchangers	Ti-Clad	---	---	---	ASME	2007
9122	China	Oxidation Reactor PTA Jialong	Ti-clad	7900 x 11000	63 + 3	280	ASME	2008
9133	China	Acetic Acid Columns Byaco Nanjing	Hast	---	---	---	---	2008
9141	Saudi Arabia	Acetic Acid Reactors Sipchem	C2000-clad	---	80+5	---	ASME	2007
9143	Madagascar	2 PAL Autoclaves Dynatec	Ti-Clad	5300 x 37000	120 + 8	760	ASME	---
9182	Pakistan	Heat Exchanger Pta Dupont	Ti-Clad	---	---	---	ASME	2008
9173	China	Preheaters PTA Jialong	Ti-Clad	---	---	---	ASME	2008
9149	Saudi Arabia	Acetic Acid Columns Sipchem	Zr and Hastelloy	---	---	---	ASME	2008
9159	Saudi Arabia	Batch Autclave Sipchem	C2000 Clad	---	---	---	ASME	2008
9182	Pakistan	Heat Exchanger PTA Dupont	Ti-Clad	---	---	---	ASME	2008
9187	Poland	Oxidation Reactor PTA Orlen	Ti-Clad	8700 x 10000	66	360	ASME	2009
9500	Portugal	Oxidation Reactor PTA Artenius	T-clad	8050 x 11000	62	320	ASME	2009
9202	USA	Reactor Siemens	Ti-clad	---	---	---	ASME	2009
9501	Portugal	3 x Condensers PTA Artenius	Ti-clad	5100 x 6900	---	---	ASME	2009
9506	Portugal	2 CTA Crystallisers PTA Artenius	Ti-Clad	4400 x 7200	---	---	ASME	2009
9507	Brasil	2 CTA Crystallisers PTA Suape	Ti-Clad	4400 x 7200	---	---	ASME	2009
9515	Taiwan	3 Acetic Acid Reactors CCP	2000-Clad	---	---	---	ASME	2009
9518	Pakistan	High pressure heat exchanger PTA Dupont	Ti-clad	---	---	---	ASME	2008
9521	Portugal	Pre heaters PTA Artenius	Ti-Clad	---	---	---	ASME	2009
9539	China	Pre heaters PTA (PTA Jiang Yin (HGCEC) Jiangsu Prov.)	Ti-Clad	---	---	---	ASME	2009
9554	Brasil	Pre heaters PTA Suape	Ti-Clad	---	---	---	ASME	2009
9561	Taiwan	Zirconium and Hastelloy Heat exchanger Acetic Acid CCP	Zirc / Hastelloy	---	---	---	ASME	2009
9582	Taiwan	Zirconium and Hastelloy columns Acetic Acid CCP	Zirc/Hastelloy	---	---	---	ASME	2010
9632	Brasil	Ti Clad Heat exchangers PTA Suape	Ti Clad /Ti GR2	---	---	---	ASME	2010
9801	Russia	Hastelloy heat exchanger Eurochem	C276	---	---	---	ASME	2010
9727	Netherlands	Ti heat exchangers DOW	Ti clad	---	---	---	ASME	2010
9822	China	Ti and 904L Preheaters CTIEI (Shaogxing Yandong Petro chemicals) (CTIEI)	Ti GR9, 904L	---	---	---	ASME	2011
9860	China	Ti preheaters PTA Hengli	Ti GR9/Duplex	---	---	---	ASME	2011
9857	Belgium	Ti heat exchangers PTA bp	Ti GR2	---	---	---	ASME	2011
9873	China	Ti preheaters Tongkun PTA (Jiaxing Petrochemicals)	Ti GR/ Duplex	---	---	---	ASME	2011
9862	Russia	Zirc Clad reactor Acetic Acid Eurochem	Zr-clad	---	---	---	ASME	2011
9888	China	Ti preheaters PTA Hainan	Ti GR9/ Duplex	---	---	---	ASME	2011
9960	India	Pre heaters PTA Reliance	Ti GR9/Duplex	---	---	---	ASME	2011
9959	India	Ti clad oxidation reactor Reliance	Ti Clad	---	---	---	ASME	2011
10009	China	2 preheaters Hong Gang PTA (CTIEI)	Ti GR9	---	---	---	ASME	2011
10083	Saudi Arabia	Hastelloy and Titanium drums ARAMCO/DOW	Hastelloy and Titanium	---	---	---	ASME	2012
10065	Belgium	Ti clad crystallizer bp	Ti Clad	---	---	---	ASME	2012
10067	Saudi Arabia	Drums with Hastelloy internals ARAMCO/DOW	CS + Hastelloy	---	---	---	ASME	2012
10128	Saudi Arabia	Floating head heat exchangers	Hastelloy and Titanium	---	---	---	ASME	2012

10150	China	Preheaters Sichuan project PTA	Ti GR9/ Duplex				ASME	2012
10156	China	Condensers Hengli PTA	Ti clad				ASME	2012
10157	China	Preheaters Hengli PTA	904L/ 204L				ASME	2012
10158	China	Preheaters Hengli PTA	Ti GR9/ Duplex				ASME	2012
10201	China	Preheaters Yihua PTA	Ti GR9/ Duplex				ASME	2013
10367	USA	Heat exchangers PTA	Ti GR9				ASME	2014
10304	Belgium	Oxidation reactor PTA bp	Ti GR1	8,9 m ID			ASME	2014
10338	China	Pre heaters PTA	Ti GR9				ASME	2014
10342	USA	Oxidation reactor PTA bp	Ti GR1	8,9 m ID			ASME	2014
10367	USA	Ti and SS heat exchangers PTA bp	Ti GR9				ASME	2014
10391	USA	Nock out drum PTA bp	Ti clad				ASME	2015
10521	Germany	Heads for SABIC USA	Tantalum clad	cooperation with Tantec			ASME	2015
10536	China	Tongkun Jiaying PTA	Ti GR9				ASME	2016
10604	Belgium	HE-506 A/B	Ti GR12				ASME	2016
10656	Australia	NONOX Autoclave OZ Minerals	Ti GR17 clad				ASME	2016
10672	Saudi Arabia	Reactor 14-R1110 Acetic Acid	C276 clad				ASME	2016
10771	Belgium	BP Heat exchangers HE506 A/B	Ti GR12				ASME	2017
10809	China	Preheaters Xinjiang Zhongtai Kunyu New Materials	Ti GR9/ 904L				ASME	2017
10822	USA	Hastelloy clad reactors Indorama	C276 clad				ASME	2017
10867	Germany	Dehydration evaporator reboiler for Monsanto USA	Tantalum clad	cooperation with Tantec			ASME	2017
10831	Russia	autoclave POX Polymetal	Ti GR17 clad	5730 x 45	100 + 12	1030	ASME	2017
10870	China	Preheater Xinjiang Zhongtai Kunyu New Materials	Ti GR9				ASME	2018
10903	China	10 preheaters Yisheng Petrochemical Co	904L+ Ti GR2 + Ti GR3				ASME	2018
10911	China	1 preheater Zhejiang Dushan Energy PTA	Ti GR9				AMSE	2017
10928	Saudi Arabia	2 knock out pots Alloy 276	Alloy 276				ASME	2018
10869	China	7 preheaters PIA FCFC	Ti GR2/3				ASME	2018
10942	China	Hydrogenation reactor R-7131 FCFC	CS/316/Ti GR1	2,0 m ID	96 + 5 + 3		ASME	2018
10943	China	Oxidation reactor R-3017	Ti GR1 clad				ASME	2018
10944	China	Absorber Column C-3101	Ti GR1 clad				ASME	2018
10963	Taiwan	Hydrogenation reactor R-7131 FCFC	CS/316/Ti GR1	2,0 m ID	90 + 5 + 3		ASME	2018
10967	Taiwan	Heater E-63502B	Alloy 625				ASME	2018
10954	China	5 Preheaters Hengli PTA line 4	Ti GR9/ 904L				ASME	2018
11001	China	5 Preheaters Hengli PTA line 5	Ti GR9/ 904L				ASME	2018
11002	China	3 heaters E-3515 - E-3265A/B	Alloy 625,276,Ti GR2				ASME	2018
11034	China	4 Preheaters Fusian PTA	Ti GR9/ 904L				ASME	2018
11041	China	10 preheaters Yisheng Petrochemical Co	904L+ Ti GR2 + Ti GR3				ASME	2018
11050	China	1 preheater Zhejiang Dushan Energy PTA	Ti GR9				ASME	2019
11179	China	9 preheaters PTA 6 FCFC Ningbo	Ti GR 3 and 12				ASME	2020
11178	China	Hydrogenation reactor R-7136 FCFC	Ti GR1 cladw ith 316 interlayer	4 m ID	99 + 5 + 3		ASME	2020
11228	China	Hastelloy heat exchangers PTA 6 Ningbo	Hastelloy heat exchangers				ASME	2020
11254	Russia	autoclave POX Polymetal	Ti GR17 clad	5730 x 45	100 + 12	1030	ASME	2020
11304	China	Preheaters Tongkun 2 lines E-1224, E-1225	Ti GR9				ASME	2020
11351	Turkey	Preheaters SASA	Ti GR9/ 904L				ASME	2021
11386	China	Preheaters E-512, E-515 Hainan yisheng	Ti				ASME	2021
11388	China	Preheaters E-1222, E-1224, E-1225 Sinopec	Ti GR9/ 904L				ASME	2021
11443	Netherlands	Ti clad reactor Avantium	Ti clad				ASME	2022
11442	Netherlands	Titanium vessels Avantium	Ti solid				ASME	2022
11502	Turkey	KVT Ti pressure vessels and heat exchangers	Ti clad,Ti solid, Zr solid				ASME	2022
11517	China	Dushan PTA 4 preheaters Ti GR9	Ti GR9				ASME	2022
11531	China	Honggang PTA preheaters Ti GR9, 2RK65	Ti GR9/904L				ASME	2023