Item No.	Valve Number (KKS)									Valve Description	Manufacturer / Country of Origin	Design Condition		Fluid Medium	Valve Type	Nominal Valve Size	Valve Rating	Body Material	End Connection	Valve Operation	Reference P&ID	Remarks
	Level 0 (Total Plant)	Level 1 (System Code)			Level 2 (Equipment Code)			Level 3 (Component Code)				Press	Temp									
	G	F_0	$F_1F_2F_3$	F_N	A_1A_2	A_3	A_4	B_1B_2	B_N			(barg)	(^{0}C)	(-)	(See Item 2.6 of Instrn Sht)	(DN)	(LB)	(-)	(See Item 2.10 of Instrn Sht)	(See Item 2.11 of Instrn Sht)		
2815	0	0	GCB	10	AA	313	N/A	N/A	N/A	CATION EXCHANGER A INLET ORIFICE FLOW METER ROOT VALVE	CEPEX/CHINA	5,5	30	CATION OUTLET WATER	BALL VALVE	15	PN10	SS316	BUTT WELDED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0019	
2816	0	0	GCB	10	AA	120	N/A	N/A	N/A	CATION EXCHANGER B INLET VALVE 1	TIANJIN JINGTONG/CHINA	5,5	30	BWRO PERMEATE WATER	DIAPHRAGM VALVE	125	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0020	
2817	0	0	GCB	10	AA	220	N/A	N/A	N/A	CATION EXCHANGER B INLET VALVE 2	GEMU/CHINA	5,5	30	BWRO PERMEATE WATER	DIAPHRAGM VALVE	125	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0020	
2818	0	0	GCB	10	AA	221	N/A	N/A	N/A	CATION EXCHANGER B FLUSHING WATER INLET VALVE	GEMU/CHINA	5,5	30	DEMINERALISED WATER	DIAPHRAGM VALVE	100	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0020	
2819	0	0	GCB	10	AA	222	N/A	N/A	N/A	CATION EXCHANGER B SUBSUFACE BACKWASH WATER INLET VALVE	GEMU/CHINA	5,5	30	DEMINERALISED WATER	DIAPHRAGM VALVE	100	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0020	
2820	0	0	GCB	10	AA	223	N/A	N/A	N/A	CATION EXCHANGER B BACKWASH WATER INLET VALVE 2	GEMU/CHINA	5,5	30	DEMINERALISED WATER	DIAPHRAGM VALVE	100	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0020	
2821	0	0	GCB	10	AA	121	N/A	N/A	N/A	CATION EXCHANGER B BACKWASH WATER INLET VALVE 1	TIANJIN JINGTONG/CHINA	5,5	30	DEMINERALISED WATER	DIAPHRAGM VALVE	100	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0020	
2822	0	0	GCB	10	AA	224	N/A	N/A	N/A	CATION EXCHANGER B OUTET VALVE	GEMU/CHINA	5,5	30	CATION OUTLET WATER	DIAPHRAGM VALVE	125	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0020	
2823	0	0	GCB	10	AA	225	N/A	N/A	N/A	CATION EXCHANGER B DILUTE ACID INLET VALVE	GEMU/CHINA	5,5	30	DILUTE ACID	DIAPHRAGM VALVE	80	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0020	
2824	0	0	GCB	10	AA	821	N/A	N/A	N/A	CATION EXCHANGER B DRAIN VALVE	GEMU/CHINA	5,5	30	CHEMICAL WASTE WATER	DIAPHRAGM VALVE	100	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0020	
2825	0	0	GCB	10	AA	822	N/A	N/A	N/A	CATION EXCHANGER B BACKWASH WATER OUTLET VALVE	GEMU/CHINA	5,5	30	CHEMICAL WASTE WATER	DIAPHRAGM VALVE	100	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0020	
2826	0	0	GCB	10	AA	823	N/A	N/A	N/A	CATION EXCHANGER B FLUSHING WATER OUTET VALVE 1	GEMU/CHINA	5,5	30	CHEMICAL WASTE WATER	DIAPHRAGM VALVE	80	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0020	
2827	0	0	GCB	10	AA	824	N/A	N/A	N/A	CATION EXCHANGER B FLUSHING WATER OUTET VALVE 2	TIANJIN JINGTONG/CHINA	5,5	30	CHEMICAL WASTE WATER	DIAPHRAGM VALVE	80	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0020	
2828	0	0	GCB	10	AA	825	N/A	N/A	N/A	CATION RESIN TRAP B OUTLET DRAIN VALVE	BRAY/CHINA	5,5	30	CATION OUTLET WATER	BALL VALVE	25	PN10	SS316	FLANGED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0020	
2829	0	0	GCB	10	AA	921	N/A	N/A	N/A	CATION EXCHANGER B VENT VALVE	GEMU/CHINA	5,5	30	CATION OUTLET WATER	DIAPHRAGM VALVE	40	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0020	
2830	0	0	GCB	10	AA	125	N/A	N/A	N/A	CATION EXCHANGER B INLET SAMPLING VALVE	CEPEX/CHINA	5,5	30	CATION OUTLET WATER	BALL VALVE	15	PN10	SS316	BUTT WELDED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0020	
2831	0	0	GCB	10	AA	126	N/A	N/A	N/A	CATION EXCHANGER B OUTLET SAMPLING VALVE	CEPEX/CHINA	5,5	30	CATION OUTLET WATER	BALL VALVE	15	PN10	SS316	BUTT WELDED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0020	
2832	0	0	GCB	10	AA	320	N/A	N/A	N/A	CATION EXCHANGER B INLET PI ROOT VALVE	CEPEX/CHINA	5,5	30	CATION OUTLET WATER	BALL VALVE	15	PN10	SS316	BUTT WELDED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0020	
2833	0	0	GCB	10	AA	321	N/A	N/A	N/A	CATION EXCHANGER B OUTLET PI ROOT VALVE	CEPEX/CHINA	5,5	30	CATION OUTLET WATER	BALL VALVE	15	PN10	SS316	BUTT WELDED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0020	
2834	0	0	GCB	10	AA	322	N/A	N/A	N/A	CATION EXCHANGER B INLET ORIFICE FLOW METER ROOT VALVE	CEPEX/CHINA	5,5	30	CATION OUTLET WATER	BALL VALVE	15	PN10	SS316	BUTT WELDED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0020	
2835	0	0	GCB	10	AA	323	N/A	N/A	N/A	CATION EXCHANGER B INLET ORIFICE FLOW METER ROOT VALVE	CEPEX/CHINA	5,5	30	CATION OUTLET WATER	BALL VALVE	15	PN10	SS316	BUTT WELDED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0020	
2836	0	0	GCB	20	AA	210	N/A	N/A	N/A	ANION EXCHANGER A INLET VALVE	GEMU/CHINA	5,5	30	CATION OUTLET WATER	DIAPHRAGM VALVE	125	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0019	
2837	0	0	GCB	20	AA	211	N/A	N/A	N/A	ANION EXCHANGER A FLUSHING WATER INLET VALVE	GEMU/CHINA	5,5	30	DEMINERALISED WATER	DIAPHRAGM VALVE	100	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0019	
2838	0	0	GCB	20	AA	212	N/A	N/A	N/A	ANION EXCHANGER A SUBSUFACE BACKWASH WATER INLET VALVE	GEMU/CHINA	5,5	30	DEMINERALISED WATER	DIAPHRAGM VALVE	100	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0019	
2839	0	0	GCB	20	AA	213	N/A	N/A	N/A	ANION EXCHANGER A BACKWASH INLET VALVE 2	GEMU/CHINA	5,5	30	DEMINERALISED WATER	DIAPHRAGM VALVE	100	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0019	
2840	0	0	GCB	20	AA	110	N/A	N/A	N/A	ANION EXCHANGER A BACKWASH INLET VALVE 1	TIANJIN JINGTONG/CHINA	5,5	30	DEMINERALISED WATER	DIAPHRAGM VALVE	100	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0019	
2841	0	0	GCB	20	AA	214	N/A	N/A	N/A	ANION EXCHANGER A OUTLET VALVE 1	GEMU/CHINA	5,5	30	DEMINERALISED WATER	DIAPHRAGM VALVE	125	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0019	
2842	0	0	GCB	20	AA	111	N/A	N/A	N/A	ANION EXCHANGER A OUTLET CHECK VALVE	TIANJIN JINGTONG/CHINA	5,5	30	DEMINERALISED WATER	CHECK VALVE	125	PN10	SS316	WAFER	-	TJB56-L3-OFF-C-GCA-M-PID-0019	
2843	0	0	GCB	20	AA	112	N/A	N/A	N/A	ANION EXCHANGER A OUTLET VALVE 2	TIANJIN JINGTONG/CHINA	5,5	30	DEMINERALISED WATER	DIAPHRAGM VALVE	125	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0019	
2844	0	0	GCB	20	AA	215	N/A	N/A	N/A	ANION EXCHANGER A DILUTE CAUSTIC INLET VALVE	GEMU/CHINA	5,5	30	DILUTE CAUSTIC	DIAPHRAGM VALVE	80	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0019	
2845	0	0	GCB	20	AA	801	N/A	N/A	N/A	ANION EXCHANGER A DRAIN VALVE	GEMU/CHINA	5,5	30	DEMINERALISED WATER	DIAPHRAGM VALVE	100	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0019	
2846	0	0	GCB	20	AA	802	N/A	N/A	N/A	ANION EXCHANGER A BACKWASH WATER OUTLET VALVE	GEMU/CHINA	5,5	30	DEMINERALISED WATER	DIAPHRAGM VALVE	100	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0019	
2847	0	0	GCB	20	AA	803	N/A	N/A	N/A	ANION EXCHANGER A FLUSHING WATER OUTET VALVE 1	GEMU/CHINA	5,5	30	DEMINERALISED WATER	DIAPHRAGM VALVE	80	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0019	
2848	0	0	GCB	20	AA	804	N/A	N/A	N/A	ANION EXCHANGER A FLUSHING WATER OUTET VALVE 2	TIANJIN JINGTONG/CHINA	5,5	30	DEMINERALISED WATER	DIAPHRAGM VALVE	80	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0019	
2849	0	0	GCB	20	AA	805	N/A	N/A	N/A	ANION RESIN TRAP A OUTLET DRAIN VALVE	BRAY/CHINA	5,5	30	DEMINERALISED WATER	BALL VALVE	25	PN10	SS316	FLANGED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0019	
2850	0	0	GCB	20	AA	901	N/A	N/A	N/A	ANION EXCHANGER A VENT VALVE	GEMU/CHINA	5,5	30	DEMINERALISED WATER	DIAPHRAGM VALVE	40	PN10	CARBON STEEL WITH RUBBER LINED	FLANGED	PNEUMATIC ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0019	
2851	0	0	GCB	20	AA	115	N/A	N/A	N/A	ANION EXCHANGER A INLET SAMPLING VALVE	CEPEX/CHINA	5,5	30	CATION OUTLET WATER	BALL VALVE	15	PN10	SS316	BUTT WELDED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0019	
2852	0	0	GCB	20	AA	116	N/A	N/A	N/A	ANION EXCHANGER A OUTLET SAMPLING VALVE	CEPEX/CHINA	5,5	30	CATION OUTLET WATER	BALL VALVE	15	PN10	SS316	BUTT WELDED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0019	
2853	0	0	GCB	20	AA	310	N/A	N/A	N/A	ANION EXCHANGER A INLET PI ROOT VALVE	CEPEX/CHINA	5,5	30	DEMINERALISED WATER	BALL VALVE	15	PN10	SS316	BUTT WELDED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0019	
2854	0	0	GCB	20	AA	311	N/A	N/A	N/A	ANION EXCHANGER A OUTLET PI ROOT VALVE	CEPEX/CHINA	5,5	30	DEMINERALISED WATER	BALL VALVE	15	PN10	SS316	BUTT WELDED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0019	
2855	0	0	GCB	20	AA	315	N/A	N/A	N/A	ANION EXCHANGER A ROOT VALVE	CEPEX/CHINA	5,5	30	DEMINERALISED WATER	BALL VALVE	15	PN10	SS316	BUTT WELDED	MANUALLY BY HANDLE	TJB56-L3-OFF-C-GCA-M-PID-0019	
2856	0	0	GCB	20	AA	312	N/A	N/A	N/A	ANION EXCHANGER A BOTTOM VALVE	CEPEX/CHINA	5,5	30	DEMINERALISED WATER	BALL VALVE	15	PN10	SS316	BUTT WELDED	AUTOMATIC BY ELECTRIC SOLENOID ACTUATOR	TJB56-L3-OFF-C-GCA-M-PID-0019	