



# TURBINE BYPASS SYSTEMS

Worldwide Installations Representing Decades of Steam Conditioning Experience

Purchaser User Job No.	Qty	Size	Model	Rating	Mat'l	Flow T/H	P1/P2 Kg/cm <sup>2</sup> a	T1/T2 °C	Service
SNC Lavalin South Central Power Station Alaska TBA	1	0/6 (6" x 12")	DSCV-SA	ANSI 600	A217 WC6	36	53/ 4	427	HP Steam Dump to Condenser (30%)
	1	3/8 (8" x 24")	DSCV-SA	ANSI 600	A217 WC6	142	53/ 4	427	HP Steam Large Dump (20% - 80%)
	1	3/6 (12" x 16")	DSCV-SA	ANSI 150	A216 WCB	39	5.2/ 0.35	205	LP Steam Dump DSCV-SA
Florida Crystals Corporation Okeelanta Cogeneration Plant, Florida USA 1287157	1	1/7 (8" x 16")	DSCV-SA	ANSI 2500/ 1500	A217 WC9	192	108/ 29	510	HP Turbine Bypass
Formosa Heavy Industries Corp Petron Bataan Refinery, Philippines 1265681/ 2	2	0/6 (4" x 10")	DSCV-SA	ANSI 2500/ 600	A217 C12A	35	129/ 14	541	Main Steam to MP Process Header
	2	0/6 (8" x 10")	DSCV-SA	ANSI 2500/ 1500	A217 C12A	110	129/ 47	541	Main Steam to HP Process Header
Dresser Rand PDM Group, UK 1255220	1	0/7 (8" x 26")	DSCV-SA	ANSI 600/ 300	A216 WCB	64	45/ 4	350	Bypass to Condenser
Keppel Seghers Greater Manchester 120MW CHP EFW Plant Runcorn, UK 1245485	1	1/7 (10" x 16")	DSCV-SA	PN100/ PN40	EN 10213-2 G20Mo5	136	52/ 16.2	397	HP-MP Letdown Station
	1	1/6 (8" x 12")	DSCV-SA	PN40/ PN16	EN 10213-2 GP240GH	38	16.2/ 7	235	MP-LP Letdown Station
Technoedif Repsol Polimeras LDA Spain 1239789	1	3/7 (10" x 20")	DSCV-SA	ANSI 600/ 300	A217 WC6	200	46/ 19.5	300	46 Bar Aux Steam Station
	1	2/6 (10" x 24")	DSCV-SA	ANSI 300/ 150	A216 WCB	80	21/ 5	320	21 bar Aux Steam Station



# TURBINE BYPASS SYSTEMS

Worldwide Installations Representing Decades of Steam Conditioning Experience

Purchaser User Job No.	Qty	Size	Model	Rating	Mat'l	Flow T/H	P1/P2 Kg/cm <sup>2</sup> a	T1/T2 °C	Service
Keppel Seghers Greater Manchester 120MW CHP EFW Plant Runcorn, UK 1228645	1	3/9 (14" x 28")	DSCV-SA	PN100/ PN16	A217 WC6	233.8	52/ 0.47	410/ 90	HP Bypass to Condenser 28" Single Stage Dump Tube
	1	3/6 (12" x 20")	DSCV-SA	PN40/ PN16	A216 WCB	65	14.6/ 0.08	250/ 52	Secondary Stage Bypass to Condenser 20" Single Stage Dump Tube
ABON LPEC FCC Project China 1225355	1	2/7 (12" x 16")	DSCV-SA	ANSI 600	A217 WC6	125	40 / 12	440 / 290	MP Steam Letdown Station
Florida Crystals Corporation Okeelanta 80MW Biomass Cogen Plant Florida, USA 1206428	1	1/7 (8" x 16")	DSCV-SA	ANSI 2500	A217 WC9	192	106 / 28	510 / 349	HP Turbine Bypass
Formosa Chemical & Fibre Corporation Long Der Co-gen Plant Taiwan 1182245	1	0/8 (8" x 20")	DSCV-SA	ANSI 2500	A217 C12A	106.6	126 / 8	538 / 183	Main Steam Letdown Station
Formosa Heavy Industries Corporation Nhon Trach Zone 3 Dong Nai Province, Vietnam 1169370	1	0/7 (4" x 10")	DSCV-SA	ANSI 2500	A217 WC9	47.39	126 / 27	538 / 250	27ata Main Steam Converting Valve
SNEC Chuanwei Project China 1166244	2	2/8 (12" x 24")	DSCV-SA	ANSI 2500	A217 WC9	431	103 / 42	545 / 450	HP to CRH Steam Bypass Valve
Saipem SpA QAFCO 5 Qatar 1151886	2	0/5 (6" x 8")	DSCV-SA	ANSI 2500	A217 WC9	55	108 / 45	510 / 380	Fast Letdown Station for SX Steam
	2	0/5 (8" x 18")	DSCV-SA	ANSI 600	A216 WCB	30	46 / 4	380 / 220	Letdown Station for SY Steam
	4	2/8 (20" x 20")	DSCV-SA	ANSI 2500	A217 WC9	370	108 / 45	515 / 385	Fast Letdown for SX Steam Hydraulic HPU Actuation
Heilongjiang Project, China 1145940	1	0/6 (6" x 40")	DSCV-SA	ANSI 600	A217 WC6	43.5	57.8/ 2	440	Letdown Station



# TURBINE BYPASS SYSTEMS

Worldwide Installations Representing Decades of Steam Conditioning Experience

Purchaser User Job No.	Qty	Size	Model	Rating	Mat'l	Flow T/H	P1/P2 Kg/cm <sup>2</sup> a	T1/T2 °C	Service
Abener Hassi R'Mel ThermoSolar Power Plant 158MW, Algeria 1144488	1	1/7 (10" x 26")	DSCV-SA	ANSI 1500	A216 WCC	162	148 / 0.09	405 / 80	Solar Steam Bypass to Condenser 26" 2 Stage Dump Tube with 1.5m Cap
Siemens Power Generation Bioflame 4, Twinwoods 2.5MWe EFW Plant Bedfordshire, UK	1	4x8"	PRDS	ANSI 600	A217 WC6	17	41 / 0.3	400/107	Turbine Bypass to Condenser 12" Single Stage Dump Tube
Siemens Power Generation Bioflame 3, Sandfields 2.5Mwe EFW Plant Brandesburton, UK	1	4x8"	PRDS	ANSI 600	A217 WC6	17	41 / 0.3	400/107	Turbine Bypass to Condenser 12" Single Stage Dump Tube
Petrochine GXPC Company Ltd Qinzhou, Guangxi 1118851	1	2/6 (16" x 18")	DSCV-SA	ANSI 600	A216 WCB	56	10 / 4	250 / 158	LP Process Steam Letdown
	1	2/7 (16" x 20")	DSCV-SA	ANSI 600	A217 WC6	150	36 / 10	410 / 250	MP Process Steam Letdown
SNC Lavalin Thermal Power Astoria Energy II 500MW CCGT New York, USA 1102111	2	2/8 (10" x 16")	DSCV-SA	ANSI 2500	A217 C12A	208	86/ 24	562/ 371	MSS Bypass
	2	5/9 (20" x 30")	DSCV-SA	ANSI 600	A217 C12A	248	19/ 3	556/ 144	HRS Dump to ACC Inlet Duct 30" Dump Tube
	2	3/5 (16" x 16")	DSCV-SA	ANSI 300	A216 WCB	29.8	3.23/ 0.7	291/ 126	LPS Dump to ACC Inlet Duct 16" Dump Tube
Pro Energy USA 1098994	1	1/8	DSCV-SA	ANSI 900/ 300	A217 WC9	100	59/ 3.37	485/ 147	HP Bypass to Condensor
Klinger Sogefiltres Keppel Seghers Amotfors Energi 18MW Waste to Energy Amotfors, Sweden 1083434	1	6x12	PRDS	ANSI 600	A216 WCB	37.4	41/ 6	399/ 170	Turbine Bypass to Process Steam
Daff Trading & Oil Services Sheikh Khalifa Energy Complex 1073081	1	2/7 12" x 20"	DSCV-SA	ANSI 900	A217 WC6	250	64/20	449.5/ 320	HP-MP Letdown Station
	1	2/6	DSCV-SA	ANSI 300	A216 WCB	120	20/ 5.49	320/ 220	MP-LP Letdown Station
Shaw Stone & Webster Dominion Energy Virginia City 585MW Power Plant 1057661	2	2c/9 12" x 24"	DSCV-SA	ANSI 2500/ 900	A217 C12A	787	170/11	567/ 266	HP Steam Bypass Station
	2	5f/9 24" x 30"	DSCV-SA	ANSI 650/ 300	A217 C12A	445	24/3	552/ 163	LP Steam Bypass Station to Condensor 30" Dump Tube



# TURBINE BYPASS SYSTEMS

Worldwide Installations Representing Decades of Steam Conditioning Experience

Purchaser User Job No.	Qty	Size	Model	Rating	Mat'l	Flow T/H	P1/P2 Kg/cm <sup>2</sup> a	T1/T2 °C	Service
Sinopec Tianjin Ethylene Project China 1057302	1	3e/6 18" x 24"	DSCV-SA	ANSI 300	A216 WCB	88	10/4.2	310/200	LP to LLP Steam Letdown Station
		1c/6 10" x 16"	DSCV-SA	ANSI 600/300	A217 WC6	104	35/10	410/270	MP to LP Steam Letdown Station
Zhenhai Petroleum Co Ltd China 1056413	1	1c/7 10" x 14"	DSCV-SA	ANSI 2500	A217 WC9	200	110/42	510/385	SHP to MP Steam Letdown Station
Siemens Turbomachinery Scotgen Dargavel Energy from Waste Scotland, 1048664	1	0b/6 8" x 24"	DSCV-SA	ANSI 600/ 300	A216 WCB	48	40/0.3	400/110	Turbine Bypass to Condenser 22" 2 Stage Dump Tube
Flotech Controls Pty Ltd Visy Pulp & Paper Tumut Site, Australia	1	1c/7	DSCV-SA	ANSI 900/ 300	A217 WC6	130	64/ 14.5	460/280	Turbine Bypass to Process Steam
	1	1c/4	DSCV-SA	ANSI 300/ 150	A216 WCB	43	12.5/ 4.5	220/ 155	LP Steam Letdown
Fagerberg Denmark Aalborg Industries Petrobas FPSO 1046292	3	2d/8 12" x 30"	DSCV-SA	ANSI 600/ 300	A216 WC6	129	42/3	427/SAT	Turbine Bypass to Condenser 3 Stage Hush 28" Dump Tube
		1c/7 10" x 14"	DSCV-SA	ANSI 600/ 300	A217 WC6	90	43/19	425/220	Process Steam Letdown Valve
Repsol Polimeras LDA Sines Refinery, Portugal 1043334	1	2d/8 12" x 20"	DSCV-SA	ANSI 2500/ 600	A217 WC9	330	121/ 45	525/ 380	HP to MP Letdown Valve
BSTO Developments Zonguldak, Turkey Coal Fired 160MW (Phase 1) 1037568	1	2d/8 12" x 20"	DSCV-SA	ANSI 2500/900	A217-C12A	465	160 / 20	561 / 370	HP to MP Turbine Bypass Valve CV = 417.3
Cerrey S.A CCC Baja California, Mexico 252MW Combined Cycle WH/00751	1	1c/8 10" x 16"	DSCV-SA	ANSI 2500/900	A217-C12A	200	130 / 26	566 / 320	HP Bypass to Cold Reheat CV = 227.5
Formosa Petrochemical Industry FPCC Utility Plant WH/00735	1	5s/4 16" x 18"	DSCV-SA	ANSI 600	A216-WCB	200	61 / 43	399 / 375	Process Steam Letdown CV = 3187
	1	4d/7 12" x 14"	DSCV-SA	ANSI 600	A216-WCB	110	61 / 43	399 / 270	Process Steam Letdown CV = 1748
	1	2d/7 14" x 18"	DSCV-SA	ANSI 600	A216-WCB	150	61 / 23	399 / 230	Process Steam Letdown CV = 446



# TURBINE BYPASS SYSTEMS

Worldwide Installations Representing Decades of Steam Conditioning Experience

Purchaser User Job No.	Qty	Size	Model	Rating	Mat'l	Flow T/H	P1/P2 Kg/cm <sup>2</sup> a	T1/T2 °C	Service
	1	3d/8 16" x 24"	DSCV-SA	ANSI 600	A216-WCB	200	61 / 15	399 / 210	Process Steam Letdown CV = 637
	1	2d/7 12" x 24"	DSCV-SA	ANSI 600	A216-WCB	100	61 / 9	399 / 8	Process Steam Letdown CV = 320
	1	1c/7 14" x 16"	DSCV-SA	ANSI 600	A216-WCB	74	42 / 23	373 / 230	Process Steam Letdown CV = 299
Formosa Heavy Industries WH/00067	1	4d/4 24" x 24"	DSCV-SA	ANSI 300	A216-WCB	167	15 / 9	210 / 185	Process Steam Letdown CV = 1375
	1	0b/8 8" x 18"	DSCV-SA	ANSI 2500/600	A217-C12A	110	126 / 11	538 / 243	HP Turbine Bypass CV = 142.2
	1	0b/8 8" x 22"	DSCV-SA	ANSI 2500/600	A217-C12A	91	126 / 3.4	538 / 126	HP Bypass to Condenser CV = 124.2
Black & Veatch Indralaya No. 4 CC Addition Project WG/00582	1	1a/7 6" x 14"	DSCV-SA	ANSI 1500/300	A217-WC9	90	55 / 9.6	503 / 208	Main Steam Bypass Valve CV = 298.6
	1	0a/7 6" x 12"	DSCV-SA	ANSI 1500/300	A217-WC9	67	51 / 9.6	541 / 208	Main Steam Bypass Valve CV = 214
Formosa Heavy Industries WG/00573	1	0b/7 6" x 22"	DSCV-SA	ANSI 2500/900	A217-WC9	80	124 / 7	538 / 175	Main Steam Bypass Valve CV = 88.3
BSTO Developments PPC MWE Levice WG/00543	1	0a/7 6" x 30"	DSCV-SA	ANSI 900/300	A217-WC6	75	63 / 0.08	444 / 41	Bypass to Condenser CV = 160.1 28" Dump Tube - CV = 3233
R E Warner Mittal USA – Weirton Steel Corp WG/00351	1	2d/8 12" x 20"	DSCV-SA	ANSI 600/300	A217-WC6	295	56/13	440/287	CV=697.3
Jurong Engineering Ltd / Encord PTE Ltd Ajinomoto PTT Cogen Plant, Thailand WG/00250	1	0a/7 6" x 22"	DSCV-SA	ANSI 900	A217-WC6	55	59/3.3	450/150	Steam to Process System CV = 124
Bharat Heavy Electrical Limited NTPC – Sipat STPP Stage II – 2 x 500MW WG/00228	2	1b/7 8" x 14"	DSCV-SA	ANSI 2500	A217-C12A	137	170/14	537/310	HP Bypass to Aux Steam CV = 299
Bharat Heavy Electrical Limited NTPC – Kahalgaon STPP – 2 x 500MW WG/00199	2	1b/7 8" x 14"	DSCV-SA	ANSI 2500	A217-C12A	137	170/14	537/310	HP Bypass to Aux Steam CV = 299
NIS Jugopetrol NIS Rafinerija Nafte Pancevo, Serbia	1	8" x 16"	DSCV	ANSI 600	A216-WCB	53	27.2 / 6.6	295 / 170	Bypass to Process One Stage Hush – CV = 775



# TURBINE BYPASS SYSTEMS

Worldwide Installations Representing Decades of Steam Conditioning Experience

Purchaser User Job No.	Qty	Size	Model	Rating	Mat'l	Flow T/H	P1/P2 Kg/cm <sup>2</sup> a	T1/T2 °C	Service
WF/00656									
Bharat Heavy Electrical Limited NTPC – Vindhyachal STPP – 2 x 500MW WF/00563	2	1b/7 8" x 14"	DSCV-SA	ANSI 2500	A217-C12A	137	170/14	537/310	HP Bypass to Aux Steam CV = 299
Peter Brotherhoods Limited Biomass Power Project, Spain WF/00167	1	0a/6 6" x 18"	DSCV-SA	DIN PN64	A217-WC6	35	41/ 0.1	400 / 105	Turbine Bypass to Condenser 16" Dump Tube – Cv = 1115
JGC Corporation Dolphin Project Upstream and Compression Facilities, Qatar WF/00025	2	4d/8 12" x 28"	DSCV-SA RAVEN	ANSI 600 / 300	A217-WC6	217	43.5 / 6.0	390 / 187	HP Bypass to Process 10 Turn RAVEN – CV = 597
WIGG d.o.o NIS Rafinerija Nafte Pancevo, Serbia WE/01124	1	8" x 16"	DSCV	ANSI 600	A216-WCB	53	27.2 / 6.6	295 / 170	Bypass to Process One Stage Hush – Cv = 775
Peter Brotherhoods Limited Wkyes Biomass Power Plant, UK WE/00636	1	0b / 7 8" x 26"	DSCV-SA	ANSI 600 / 300	A216-WCB	65	45 / 0.1	380 / 75	Bypass to Condenser 24" Dump Tube – Stage 1 CV = 3206 – Stage 2 CV = 7620
KK & K Turbo UK Limited Granox Widness WE/00397	2	6" x 12"	PRDS	ANSI 600	A216-WCB	17.5	6 / 0.15	200 / 75	LP Bypass to Condenser 14" Dump Tube – CV = 1045
Electricite de France (EDF) EDF Cordemais Unit 4 WE/00167	4	10 x 10"	Z Form RAVEN	ANSI 2500	A217-C12A	360	200 / 49	548	HP Turbine Bypass – 16 TURN RAVEN Hydraulic Actuator. Cv = 217
	8	24"	MA-III	ANSI 2500	SA-182 F91	360 / 420	49	482 / 330	HP Bypass Separate Desuperheater Section
	4	4"	SD-RAVEN	ANSI 2500	A216-WCB	60	279 / 61.1	182	HP Spray Water Control Valves
AIR PRODUCTS PLC Oryx GTL Project, Qatar 03TW26128	2	4d/9 12" x 36"	DSCV-SA RAVEN	ANSI 900 / 300	A217 WC6	347	64 / 0.44	410 / 80	Bypass to Condenser 10 TURN RAVEN – Cv = 616 52" Three Stage Dump Tube Hydraulic HPU Actuated
SNAMPROGETTI S.r.L MELLITAH PLANT, LIBYA GAS PROJECT 03CW26072	1	2C/7 10" x 24"	DSCV-SA RAVEN	ANSI 600	A216 WCB	132	40 / 5	345 / 184	HP/LP Letdown Station – 10 TURN RAVEN Flanged RTJ Connections. Cv = 350
	2	4d/5 12" x 28"	DSCV-SA RAVEN	ANSI 600	A216 WCB	300	40 / 5	345 / 184	HP/LP Letdown Station – 10 TURN RAVEN Flanged RTJ Connections. Cv = 797
UBE Chemicals Europe, S.A.									



# TURBINE BYPASS SYSTEMS

Worldwide Installations Representing Decades of Steam Conditioning Experience

Purchaser User Job No.	Qty	Size	Model	Rating	Mat'l	Flow T/H	P1/P2 Kg/cm <sup>2</sup> a	T1/T2 °C	Service
Proquimed / UBE Caprolactam Process Plant 03CW25201	1	8"	SD - RAVEN	ANSI 1500	A217-WC11	75	80/8	420	HP Bypass to Process 14 Turn RAVEN, Tandem
ALSTOM POWER ITALIA, S.p.a Sulcis Power Plant, Portoscuso, Sardinia 03CW25221	1	8"	SD-Globe	ANSI 2500	A217-C12A	55	169.3 / 1	565	Superheater Vent to Atmosphere
PETER BROTERHOODS LIMITED New Lincs Development – Grimsby EFW 02TW24531	1	0Z/5 4" x 14"	DSCV-SA	600	A216-WCB	19	35/0.1	355/80	Bypass to Condenser. 2 Stage Dump Tube Cv = 76
TATE & LYLE EUROPE Silvertown Refinery Expansion – UK 02CW24339	1	0b/7 8" x 24"	DSCV-SA	600	A216-WCB	104	56/4.4	377/155	Cv = 158.3
GE ENERGY PRODUCTS EUROPE Meyer Werft – S655 Vantage Class 02TW24170	1	0b/7 8" x 24"	DSCV-SA	600	A216-WCB	104	56/4.4	377/155	Cv = 158.3
	1	8"X16"	DSCV	600	A217-WC6	76	33.65/1.02	410/99.6	Cv = 280
PETER BROTHERHOOD LIMITED Becosa BioMass Power Plant, Spain 03CW25542	1	16"x24"	DSCV	150	A105	76	3.06/1.02	240/99.6	Cv = 2655
	1	0A/6 6"X18"	DSCV-SA	ANSI 900 / 300	A216-WCB	35	65/0.1	400/80	HP Bypass to Condenser. Dump Tube Cv = 88
OY TECALEMIT IRU, Talin, Estonia 02CW24392	1	0B/7 8"X16"	DSCV-SA	ANSI 2500 / 300	A217-C12A	81	140/15	560/250	HP Bypass Valve. Cv = 125
NU-SDI UNION LTD Hai-Fong Co-Gen, Yunlin County, Taiwan Formosa Heavy Industries 02CW24150	1	0B/7 8" x 12"	DSCV-SA	ANSI 2500/900	A217-WC9	115	126/43	538/391	Steam Letdown to Process – Cv = 142.2
	1	2"	SD-GLOBE	ANSI 900	A216-WCB	10	66/43	172	Spray Water Control Valve
	1	1c/8 10" x 22"	DSCV-SA	ANSI 2500/300	A217-WC9	188	126/23	538/334	Steam Letdown to Process – Cv = 224
	1	2.5"	SD-GLOBE	ANSI 900	A216-WCB	28	66/23.2	172	Spray Water Control Valve
	1	1c/8 14" x 34"	DSCV-SA	ANSI 2500 / 900	A217-WC9	331	126/14.5	538/261	Steam Letdown to Process – Cv = 373
	1	4"	SD-GLOBE	ANSI 900	A216-WCB	74	66/14.5	172	Spray Water Control Valve
	DZCV-SDC MP-6, Mailaia, Yun-Lin, Taiwan Formosa Heavy Industries 01CW23911	1	1C/7 12" x 24"	DSCV-SA	600/300	WC6	134	42/7.4	340/186
1	2D/7 12" x 20"	DSCV-SA	600/300	WC6	171	42/13.5	340/211	Cv = 511.1	
1	1C/8 10" x 14"	DSCV-SA	2500SPL/900	WC9	158	128/42	540/340	Cv = 224	



# TURBINE BYPASS SYSTEMS

Worldwide Installations Representing Decades of Steam Conditioning Experience

Purchaser User Job No.	Qty	Size	Model	Rating	Mat'l	Flow T/H	P1/P2 Kg/cm <sup>2</sup> a	T1/T2 °C	Service
MITSUI BABCOCK ENERGY LTD Taichung Power Units 9 & 10 01CW23936 / 01CW23947	2	0a/8 6" x 22"	DSCV-SA	2500/300	C12A/F91	229	182/4.6	547/148	Cv = 160
S&S ENERGY PRODUCTS Meyer Werft – S655 Vantage Class 01TW24018	1	8"X16"	DSCV	600	A217-WC6	76	33.65/1.02	410/99.6	Cv = 280
	1	16"x24"	DSCV	150	A105	76	3.06/1.02	240/99.6	Cv = 2655
Heilongjian Longdian Power Equipment Co. Daqing Thermal Power 01TW23661	3	0a/8	DSCV-SA	2500/600	WC9/F22	160	96.9/10	540/280	
PETER BROTHERHOOD LTD 00TW23200	1	0z/6 4" x 14"	DSCV-SA	600/150	WC6/F11	40	41/1.02	450/99.5	HP Steam To Condenser
ALSTOM POWER PLANTS LTD Shotton CHP Plant – 1 x 206FA 00TW23231	2	0a/4 6x12"	DSCV-SA	300/300	WCB/A105	15	11.2/0.61	215/85	LP Bypass Stations – Cv = 142.2
	2	1a/8 6" X 24"	DSCV-SA	2500/300	WC9/F22	106	117.3/2.96	541/131	HP Bypass Stations – Cv = 209
S.A. Klinger Marchal N.V. Seghers Engineering 00TW23247	1	12"X24"	DSCV	600	A105	94	40.79/0.41	400/80.7	
S&S ENERGY PRODUCTS Meyer Werft – S655 Vantage Class 99TW23039	1	8"X16"	DSCV	600	A217-WC6	76	33.65/1.02	410/99.6	Cv = 280
	1	16"x24"	DSCV	150	A105	76	3.06/1.02	240/99.6	Cv = 2655
ALLIANCE LINDE BECHTEL Borouge Petrochemicals – Abu Dhabi 00TW23061	1	12" X 20"	DSCV-SA	900	A217-WC6	250	64/20	450/320	HP – MP Letdown Station – Cv = 506
	1	16" x 20"	DSCV-SA	300	A216-WCB	120	20/5.5	320/220	MP – LP Letdown Station – Cv = 664 Hydraulic HPU Actuated.
S&S ENERGY PRODUCTS Meyer Werft – S656 Vantage Class 99TW23040	1	8"X16"	DSCV	600	A217-WC6	76	33.65/1.02	410/99.6	Cv = 280
	1	16"x24"	DSCV	150	A105	76	3.06/1.02	240/99.6	Cv = 2655
LARSEN & TOUBRO LIMITED Renusagar 1x77 MW CCP (Unit 8) 99TW21674	1	8"x24"	DSCV	2500/150	A182-F22	90	89/3.9	530/156	
GEC ALSTOM Smurfit Townsend Hook CHP Plant 99TW21843	2	10"x20"	DSCV	300	A106	46.5	4.95/2.92	234.5/141	
BECHTEL Reliance Jamnagar Complex Gujarat, India 99TW21919	2	8"x14"	DSCV	2500	A182-F22	186	117/44.2	510/391	Cv = 198 (3 Stage Hush)
	2	10"x18"	DSCV	600	A105	138	44.2/18.0	399/232	Cv = 420 (Single Stage Hush)





# TURBINE BYPASS SYSTEMS

Worldwide Installations Representing Decades of Steam Conditioning Experience

Purchaser User Job No.	Qty	Size	Model	Rating	Mat'l	Flow T/H	P1/P2 Kg/cm <sup>2</sup> a	T1/T2 °C	Service
	2	12"x30"	DSCV	300	A105	120	18/6	260/177	Cv = 733 (3 Stage Hush)
	1	4"x12"	DSCV	2500/900	A182-F22	25	116/6	510/177	Cv = 62 (6 Stage Hush)
ALSTOM POWER PLANTS LTD Winnington CHP Plant 99TW22908	1	8"x24"	DSCV	900	A182-F11	130	71/4.6	455/172.2	Cv = 203 (5 Stage Hush)
	2	12"x20"	DSCV	900	A182-F11	339	71/19	455/293	Cv = 591 (2 Stage Hush)
	1	12"x24"	DSCV	300	A105	130	18/4.5	293/172	Cv = 729 (3 Stage Hush)
	2	20"x20"	DSCV	300	A105	213	16/13.5	293/250	Cv = 2450 (Single Stage Hush)
	2	24"x24"	DSCV	150	A105	135	3/2.1	183/130	Cv = 5420 (Single Stage Hush)
RAYTHEON Salt End - Great Britain 1100 MW, CC Gas 9810-53219	3	6"x12"	PRDS	2500	WC9	309	108/23	538/384	HP Bypass
	3	18"	PRV/MA-II	600 SPL	WC9	411	19/7	538/180	Reheat Steam to Condenser
HAIFA CHEMICAL Baran Inbar Project 9810-52875	1	6"x12"	PRDS	600	WCB	75	43/4	400/157	HP to LP Steam
	1	3"x6"	PRDS	600/900	WCB	32	43/12	400/202	HP to MP Steam
GEC Alstom Smurfit Townsend Hook 97TW22101	2	8" x 16"	DSCV	600	WC6	87.4	40.5/5.5	478/234	HP Bypass
	2	10" X 20"	DSCV	300	A105	46.6	4.9/2.8	410/141	LP Bypass to Condenser
BLACK & VEATCH CONSTRUCTORS Central Wayne Recovery Facility 9810-52873	2	8" x 16"	DSCV	300	WCB	16.7	4.9/4.1	300/157	LP Bypass to Process
	1	6"x12"	PRDS	600	WCB	69	45/9	419/179	Main Bypass to Condenser
BIBB/GILBERT LS Power Mustang-Denver City, TX 500 MW CC 9810-52817	1	10" & 4/5	PRV/MNSD	2500	WC9	348	109/26	541/341	HP Bypass
	1	18"	PRV/MA-II	600	WC9	456	25/12	539/238	Reheat Bypass
	1	8"	PRV	150	WCB	30	6/3	232	LP Bypass (PRV only)
PARSONS BRICKER HOFF/TIC Sabine Cogen - Orange, TX 9810-52831	1	6"x12"	PRDS	1500	WC9	233	107/17	510/210	Main Steam Bypass



# TURBINE BYPASS SYSTEMS

Worldwide Installations Representing Decades of Steam Conditioning Experience

Purchaser User Job No.	Qty	Size	Model	Rating	Mat'l	Flow T/H	P1/P2 Kg/cm <sup>2</sup> a	T1/T2 °C	Service
BLACK & VEATCH Nova Chemical Cogen - Alberta, Canada 465 MW CC 9816-52272/9814-52271	2	10" & 4/5	PRV/MNSD	1500	C12a	229	104/7	539/209	Main Stream Bypass to Condenser
Parsons Power Dighton Power - Dighton, Mass 169 MW, CC merchant plant 9808-51757	1	6"x24"	PRDS	1500	WC9	161	96/2	514/126	Main Steam Bypass
	1	8"x14"	PRDS	150	A105	44	7/0.3	241/121	LP Bypass
GE Power Systems Alabama Power/GE Plastics 14 MW CoGen - Burkville, AL 9808-51162	1	6"x12"	PRDS	1500	WC9	160	64/16	517/216	900# to LP Process
	1	4"x8"	PRDS	1500	WC9	56	64/33	516/277	900# to LP Process
Stone & Webster Eng. Ltd. Sutton Bridge Power - Lincolnshire 780 MW (2 x 390 MW) CC Plant 97TW22449	1	12"x42"	PRDS	2500	F91/F22	355	130/0.05	563/84	HP bypass to condenser
	1	6"x12"	PRDS	600	WCB	42	28/0.05	341/84	IP steam to condenser
Muscatine Power & Water Grain Processing Corp. - Muscatine Iowa 9808-50623	1	6"x12"	PRDS	600	WCB	23	8/0.05	267/84	LP steam to condenser
	1	6"x12"	PRDS	1500	WC6	159	88/20	510/227	Main Conditioning Valve
	1	2"x4"	PRDS	1500	WC6	16	88/1	510/207	Startup Conditioning Valve
Burns & Roe Merck Powerhouse - Rahway N.J. 9708-48785	3	4"x8"	PRDS	900	WC6	33	64/11	432/210	Steam Conditioning to various systems
Black & Veatch (UK) Limited Coco Phase III - Hybrid Blocks 1 & 2	2/4	10"/8-10	PRV/SA-35	1500/600	WC9/WC6	152	35/1	538/196	Hot Reheat to Condenser
Map Ta Phut Co Gen., 2x230MW 9708-48758	2	4"x8"	PRDS	2500	C12a	135	178/41	567/353	Main Steam Bypass to Cold Reheat
H.B. Zachry (B&V) Pasadena cogen, 230 MW CC 9708-43364	1	6"x12"	PRDS	2500/1500	WC9	186	102/14	541/241	Main Steam Bypass to Condenser
Florida Power Corporation (B&V) Hines Energy Complex, 500 MW CC 9716-43302	2	6"x12"	PRDS	2700 INT SPL	WC9	188	141/26	566/329	Main Steam to Cold Reheat
	2/6	14"/8-10	PRV/SA-35	900	WC9	259	23/6	565/187	Reheat Steam Bypass to Condenser
Black & Veatch Marmara Ereğlisi, 500 MW CCGT 9616-41423	2	8"/8-10	PRV/SA-35	2500/900	WC9	246	122/15	533/219	HP Bypass to Condenser
	2	4"/3/2	PRV/MNSD	300/600	WCB	37	34/8	315/204	IP Bypass to Condenser



# TURBINE BYPASS SYSTEMS

Worldwide Installations Representing Decades of Steam Conditioning Experience

Purchaser User Job No.	Qty	Size	Model	Rating	Mat'l	Flow T/H	P1/P2 Kg/cm <sup>2</sup> a	T1/T2 °C	Service
Westinghouse Electric Corp. Grays Ferry Cogen, 150 MW CC 9616-40224	1	10"x20"	PRDS	1500/300	WC9	450	106/17	510/282	HP Letdown to LP Process
	1	16"x24"	PRDS	1500	WC9	544	106/85	510/482	HP Letdown to HP Process
	1	10"x16"	PRDS/ SA-35	1500/300	WC9	190	107/2	507/191	HP Bypass to Condenser
ARB, Inc (Engineers-Constructors) University of California - Davis 9616-39401	1	4"x8"	PRDS	600	WCB	27	30/2	316/127	Steam Turbine Bypass
General Electric Georgia Gulf Cogen 9613-38188	1	6"x12"	PRDS	900	WC6	106	67/12	457/216	HP/LP Letdown
Oil Refineries Ltd ORL Haifa 9616-33931	1	6"/8"	PRV/VO	2500/600	WC9	91	126/39	525/360	Turbine Bypass
	1	10"/16"	PRV/VO	2500/300	WC9	183	126/54	525/280	Turbine Bypass
Black & Veatch TNB-Melaka CC Conversion 9616-31166 BVZ Power Partners Tenaska - Cleburne Cogen. 9516-26459	2	8"	PRV/MNSD	1500/2500	WC9	188	88/22	519/477	HP Bypass
	2	8"	PRV	150	WCB	42	10/7	235	LP Bypass (PRV Only)
	1	3"x6"	PRDS	1500	WC9	80	148/23	441/308	HP Steam Backup/Makeup
	1	6"x12"	PRDS	2500 SPL	WC9	252	135/36	539/325	HP Bypass to Cold Reheat
Bechtel Dabhol 690 MW CC 9516-26449	1	10"x16"	PRDS	2500	WC9	300	88/28	540/350	HP Steam Bypass
	1	10"x16"	PRDS	2500	WC9	300	88/28	540/350	HP Steam Bypass
BVZ Power Partners Port Kelang 2, 500 MW 9516-25245	1	18"/24"	PRV/VO	656/600	WC9	531	22/3	538/188	LP Bypass to Condenser
Black & Veatch Costenara GT-ST5 CC 9516-27241	1	10"	PRV/MNSD	1500	WC9	155	54/13	482/438	Main Steam bypass to Condenser
Schuykill Energy Resources St. Nicholas Cogen. 9516-27175	1	8"	PRV/MA-II	1500	WC6	227	109/4	510/218	Emergency Turbine Bypass
Black & Veatch Tambak Lorok CC 9516-23811	3	6"	PRV/MA-II	1500	WC9	173	94/37	524/39	HP Steam Bypass
	3	10"	PRV/MNSD	150	WCB	40	7/3	316/177	LP Steam Bypass

Caddell Construction/Burns & McDonnell



# TURBINE BYPASS SYSTEMS

Worldwide Installations Representing Decades of Steam Conditioning Experience

Purchaser User Job No.	Qty	Size	Model	Rating	Mat'l	Flow T/H	P1/P2 Kg/cm <sup>2</sup> a	T1/T2 °C	Service
Al. Electric-McWilliams Sta. 100 MW 9516-27834	1	6"x12"	PRDS	900	WC9	93	63/45	491/454	Steam Header 12 pressure control
Gilbert Com. (Parsons) TVA Johnsonville Cogen. 9416-18642	2	12"/14"	PRV/VO	1500 SPL	WC9	251	91/40	539/310	Main Steam Bypass
	1	14"	VO	1500	WC9	333	45/45	538/310	Turbine Exhaust
Black & Veatch Muara Karang, Indonesia 9310-08409	3	6"	PRV/MA-II	1500	WC9	173	89/18	518/213	HP Steam Bypass
	3	10"	PRV/MA-I	150	WCB	42	6/4	299/171	LP Steam Bypass
Aalborg Boilers Fagerberg Denmark 96CW43815	1	6"x12"	PRDS	2500	P91	122	209/10	542/280	Bio Mass
Mopsa Industrial S.A. Sidi Krir Power Station 96TW21006	4	4"x10"	PRDS	2700	F22	46	178/17	541/275	320 MW Turbines
S.A. Klinger Marchal N.V. Seghers Engineering Indaver B 96TW20601	1	12"x24"	PRDS	600	A105	96	41/0.3	416/174	60 MW Turbine
Indian Farmers Fert. CO-OP Phulp Iur Ammonia Expansion 96TW20706	2	12"x16"	PRDS	2500 SPECIAL	F22	284	107/39	515/395	
Wartsilla Finland (For Pakistan) Peter Brotherhood Ltd 95CW19616	1	8"x16"	PRDS	600		49	12/1	325/104	
Viborg Kraft Varmevaerk Allen Power Engr. 95CW19427	1	10"x20"	PRDS	1500	F11	64	72/2	510/140	
Aonla Expansion Project Indian Farmers Co-op. 95CW19070	2	6"x12"	PRDS	2500		174	109/40	515/395	
Vijaipur Expansion Project National Fertilizers Ltd 95CW19062	2	6"x12"	PRDS	2500		260	109/40	515/395	
Sonderborg KW Gustaf Fagerberg A/S 94CW18843	1	4"x8"	PRDS	900		65	62/2	438/125	
	1	1"x2"	PRDS	1500		2	62/2	420/166	
	1	8"x16"	PRDS	300		22	11/6	208/125	



# TURBINE BYPASS SYSTEMS

Worldwide Installations Representing Decades of Steam Conditioning Experience

Purchaser User Job No.	Qty	Size	Model	Rating	Mat'l	Flow T/H	P1/P2 Kg/cm <sup>2</sup> a	T1/T2 °C	Service
CHP Phase II	2	4"x8"	PRDS	600		61	64/31	480/380	
Aylesford Newsprint Ltd	3	4"x8"	PRDS	600		91	64/17	480/220	
94CW18591	2	6"x12"	PRDS	600		61	17/5	220/153	
	1	6"x12"	PRDS	600		71	17/5	202/80	
Tyseley EFW Birwelco Ltd 94CW18381 / 95CW19533	1	12"x24"	PRDS	600		146	39/0	405/51	30 MW Turbine (Air Cooled Condenser)
Shajahanpur Fertilizers	2	6"x12"	PRDS	2500		257	109/38	510/381	
Bindal Agro Chem.	2	6"x12"	PRDS	600		51	38/4	381/225	
93CW16681	1	3"x6"	PRDS	2500		30	109/38	510/381	
Fauji Fertilizer Co. Ltd O.R.I. SRL 91CW14699	2	6"x12"	PRDS	2500		182	109/40	510/385	
900 MTPO Ammonia Udyogamandal Ferts. & Chems Travan Core Ltd 90CW19125	2	6"x12"	PRDS	2500		174	114/41	510/380	
Ace Power Company Argus CoGen - Trona, CA 8910-31834	1	10"x16"	PRDS	2500/900	F22	275	105/33	538/377	
Flat Mirafiori-2 23	1	6"x12"	PRDS	600		77	47/18	343/213	
Franco Tosi Industriale	1	6"x12"	PRDS	600		72	37/3	487/132	
88CW11075	1	6"x12"	PRDS	600		16	4/1	238/109	
	1	6"x12"	PRDS	600		15	4/1	233/109	
Techmas Import Methanol Plant USSR 87CW10834	1	4"x8"	PRDS	2500	WC6	163	112	490/340	
B.P. Chemicals Baglan Bay 87CW10155	1	6"x12"	PRDS	900	WCB	181	45	398/235	
Consolidated Balhurst Boiler 10 87CW10245	1	6"x12"	PRDS	2500	WC9	169	132	540/323	
BSC General Steels Redcar Works 87CW10409	1	6"x12"	PRDS	1500	WC6	178	66	511,897	



# TURBINE BYPASS SYSTEMS

Worldwide Installations Representing Decades of Steam Conditioning Experience

Purchaser User Job No.	Qty	Size	Model	Rating	Mat'l	Flow T/H	P1/P2 Kg/cm <sup>2</sup> a	T1/T2 °C	Service
Franco Tosi CTE Enel, Ostiglia 87CW10447	2	6"x12"	PRDS	600	WCB	100	34	340/120	
S.A. Achille Marchal ACEG-Gent 87CW10533	1	8"x16"	PRDS	600	WC6	79	54	430/55	
B.P. Chemicals Baglan Bay 87CW10755	1	3"x6"	PRDS	2500	WC6	87	132	518/354	
POSCO Korea Feb. 87	2	18"x26"	PRDS	600		154	27/5	538/154	
Mitsubishi Hanias P.S. Jan. 87	2 2	10"x18" 22"x28"	PRDS PRDS	2500 900		284 322	144/38 35/5	540/353 538/180	
Syrian Arab Dec. 86	2 2	22"x28" 10"x18"	PRDS PRDS	900 2500		354 309	35/6 156/36	541/184 541/350	
Mitsubishi Paper Co. June 86	2	10"x18"	PRDS	1500		257	104/56	512/430	
PHIL, India IFFCO Ammonia Plant 86CW9325	2 2 1	6"x12" 6"x12" 3"x6"	PRDS PRDS PRDS	600 2500 2500	ASTM A182 F22	51 257 30	38/4 109/38 109/38	381/217 510/381 510/381	
Winpey Engineering ICI-Severnside 86CW9388	1	4"x8"	PRDS	900	WC6	59/21	476/362		
Babcock Ped Ltd Neip Rihand STPP 86CW9535	1	6"x12"	PRDS	600	WCB	42	46/17	343/213	
Franco Tosi, Italy Piaenza Italy 86C9538	2 2	6"x12" 3"x6"	PRDS PRDS	600 2500	WCB CF8M	100 30	37/0.5 176/37	340/120 540/340	
Consolidated Bathurst-Bridgewater Div. 85C7986	1	3"x6"	PRDS	1500	WC6	62	66/25	490/316	
Oy Kontram Ab Kymi-Strombert, Finland 85C7993	1	6"x12"	PRDS	1500	WC6	102	62/4	490/180	



# TURBINE BYPASS SYSTEMS

Worldwide Installations Representing Decades of Steam Conditioning Experience

Purchaser User Job No.	Qty	Size	Model	Rating	Mat'l	Flow T/H	P1/P2 Kg/cm <sup>2</sup> a	T1/T2 °C	Service
IFFCO Aonia ammonia Project PDIL 86CW9324	2	8"x16"	PRDS	900		122	21/4	540/143	
Assir P. ST Saudi Arabia Nov. 85	2	6"x12"	PRDS	900		235	55/1	491/122	
Oy Kontram Ab Ensodutzeit-Kotka, Finland 84C7820	1	3"x6"	PRDS	1500	WC6	41	87/26	500/350	
Oy Kontram Ab A. Ahlstrom, Finland 84C7872	1	3"x6"	PRDS	900	WC6	10	60/25	475/228	
Hathal A Otaibi Aramco - Qasim Refinery 84C7909	2 2	8"x12" 8"x16"	PRDS PRDS	600 300	WCB WCB	86 51	47/11 11/4	400/190 335/153	
Consolidated Bathurst Inc-Bridgewater Div. 84C7917	1	3"x6"	PRDS	1500	WC6	62	66/25	490/316	
Foster Wheeler Power Kribhco Hazaira, India 83C7725	1	6"x12"	PRDS	2500	WC6	94	102/13	520/270	
ACC Babcock, India Bokaro, India 83C7746	1	4"x8"	PRDS	2500	WC9	91	134/15	540/220	
BP Oil Llandarcy 82C7673	1	6"x12"	PRDS	600	WCB	174	40/13	393/249	
BP Oil Llandarcy 82C674	1	3"x6"	PRDS	2500	WC6	81	132/40	526/393	
Oil Refineries Ltd, Haifa, Israel 82C7678	1 1	3"x6" 6"x12"	PRDS PRDS	2500 2500	WC9	65 118	127/38 127/16	525/352 525/254	
Shell UK Material Services Shell Carrington 81C7467	1	4"x8"	PRDS	2500	WC6	122	107/18	537/325	
C.V.I. Tata For Trombay 500 MW P/STN, India 81C7472	1	4"x8"	PRDS	2500	CF8M	120	180/26	538/305	
Oy Kontram Ab	1	6"x12"	PRDS	600	WCB	142	34/6	400/200	



# TURBINE BYPASS SYSTEMS

Worldwide Installations Representing Decades of Steam Conditioning Experience

<b>Purchaser User Job No.</b>	<b>Qty</b>	<b>Size</b>	<b>Model</b>	<b>Rating</b>	<b>Mat'l</b>	<b>Flow T/H</b>	<b>P1/P2 Kg/cm<sup>2</sup>a</b>	<b>T1/T2 °C</b>	<b>Service</b>
Imatran Voima, Finland 81C7561									
ACC Vickers Babcock 80C7414	2	3"x6"	PRDS	2500	CF8M	36	162/17	540/210	
Bowater Mersey Mill 75C6611	1	4"x8"	PRDS	2500		170	125/26	540/324	
75C6619	1	4"x8"	PRDS	2500		170	125/26	540/324	