
		WEST CLIFF COAL PREPARATION PLANT RAW COAL CIRCUIT AND RELIABILITY IMPROVEMENT PROJECT								
		ABN 91 760 798 210								
		Valve Datasheet ACTUATED ON/OFF KNIFE GATE VALVE DN80				Equipment tag: FV 4-4C.1				
FILE NAME .: 333588-0000-60-107-0046 Date Printed: 26-Nov-10		Electronic version current Uncontrolled copy valid only at time of printing				Current Revision no.: 2 Number of pages: 1				
Usage: CONTROL Project No.: 333588 Plant Area: 0600 Equipment Description: ACTUATED VALVE		A 31/03/2010 0 09/07/2010 1 11/10/2010 2 28/11/2010		Internal Review Approved for Enquiry Approved for Use Line Number Updated		TD TD TD TD		NM JW NM KW MR NM JW JH KW DW MR JH KW CA MR JH KW		
		REV		Date		Description of Issue		Originator		
						CHKD		INSTR LEAD		
						AREA PIPE ENG.		AREA PROCESS ENG.		
						AREA MECH ENG.				
IDENTITY	1	Equipment Tag	Old Tag	FV 4-4C.1						1
	2	P&ID Number	WCP-10047							
	3	Service Description	Actuated Knife Gate valve							
	4	Operated Type	Pneumatic Actuated							
	5	Valve Type	VK1							
	6	Valve Code	VK1-43-80							
	7	Area	0600							
	8	Hazardous Area Classification	None							
	9	Installation Detail	#							1
EQUIPMENT / LINE DATA	10	Equipment Number	502-V0653							
	11	Line Number	80-CW-4.04V-XS						2	
	12	Line Size and Schedule	DN80						Extra Strong	
	13	Pipe Material	Carbon Steel							
	14	Pipe Code	AS 4041							
	15	Jacket Material	N/A							
	16	Flange Rating	1400kPag							
	17	Fluid Medium	Clarified water							
SERVICE CONDITIONS	18	Fluid State	% Solids (w/w)	Liquid						Zero
	19	Fail Action (Loss of Signal / Loss of Air)	Fail Close						Fail Last	
	20	Air Supply Pressure (Min / Nominal / Max) (kPag)	420 kPa		690 kPa		850 kPa		1	
	21		UNITS		OPERATING		MINIMUM		MAXIMUM	
	22	Slurry Flow	m³/h		N/A					
	23	Gas Flow	Am³/h		N/A					
	24	Inlet Pressure	kPag		400		500			
	25	Outlet Pressure	kPag		N/A					
	26	Pressure Drop	kPa		N/A					
	27	Inlet Temperature	°C		25		>0		45	
	28	Inlet Specific Gravity			1					
	29	Inlet Compressibility Factor			N/A					
	30	Inlet Viscosity	cP		N/A					
	31	Inlet Critical Pressure	KPag		N/A					
	32	Ambient Temperature °C	Max shut-off pressure (kPag)		0 to 50 °C		500			
	33	Inlet Vapour Pressure	kPa (estimated)		N/A					
	CALCULATED RESULTS	34	Flow Coefficient (CV)	N/A						
35		Travel	N/A							
VALVE BODY	36	Manufacturer	Model No.	Keystone				Figure 952 (Note 1, 2, 3 & 4)	1	
	37	Body Type	Reference Std	Knife Gate Lugged (Actuated)				#		
	38	Body Size	Face to Face Dim.	DN 80				52 mm #	1	
	39	Body Material	Flange Material	ASTM A351 CF8				N/A		
	40	Steam Jacket Type	Jacket Material	N/A				N/A		
	41	End Connection Type	Rating	Lugged to suit table E				1000kPag		
	42	Selected CV	Flow Characteristic	N/A				N/A		
	43	Bonnet Type	Bonnet Material	N/A				N/A		
	44	Trim Type / Size	Gland packing	N/A				K-LON		
	45	Seat Material	Stem Material	Viton				304 S/S		
	46	Mass		10 Kg #					1	
	47	Plug / Ball / Disc Material		316 S/S						
VALVE ACTUATOR	48	Break Torque (Nm)	Leakage	#				Tight Shutoff		
	49	Estimated Sound Pressure Level (@ 1m)		N/A						
	50	NACE Cert. Req'd - Yes or No		No						
	51	Manufacturer	Model No.	Keystone				F738 Type P1	1	
	52	Type	Action	Double Acting Cylinder				Air to open and close		
SOLENOID	53	Spring Size	End Cap Material	N/A				Anodised aluminum		
	54	Force / Torque	Mass	#				2.2 kg #	1	
	55	Mounting Orientation	Accessories	Top - perpendicular to pipe				None	1	
	56	Manufacturer	Model No.	SMC				EV57-10-FG-S-3-A04T MO with sub-base V57-3-A02T	1	
	57	Type	Qty	5/2 way				1 solenoid	1	
LIMIT SWITCHES	58	Coil Voltage	Power	24VDC						
	59	Electrical connection	Enclosure	M20 x 1.5				Anodised Aluminum IP65 (Note 5)		
	60	Exhaust port		With SMC Series ANA1-N04 muffler #						
	61	Manual override		Required without the use of a tool to operate						
	62	Connection type	Connection and Material	G 1/4				304 S/S		
ACCESSORIES	63	Hazardous Area Certification		None						
	64	Manufacturer	Model No.	Keystone				Proximity Switch	1	
	65	Type	Qty	Proximity				2		
	66	Contact type/rating	Electrical connection	PNP				24VDC	10m flying leads	
	67	Mounting / Enclosure		Proximity switches to be mounted on actuator assembly (Note 5)					1	
NOTES	68	Hazardous Area Cert.	NACE Cert. Req'd - Yes or No	None				No		
	69	Filter Regulator		Yes					1	
	70	Manufacturer	Model No.	SMC				AC40B-N04DE	1	
	71	Material	Size	Epoxy coated aluminum				1/2 inch NPT	1	
	72	Incoming Air Isolation Valve		Yes					1	
	73	Manufacturer	Model No.	SMC				VHS4500-N04-X116	1	
	74	Connection Size/Type		1/2 inch NPT				Suit SS tube	1	
	75	Material	Lockable	Epoxy coated aluminum				Yes	1	
	76	Speed Control		Yes					1	
	77	Manufacturer	Model No.	SMC				AS 4000-N-04	1	
78	Type	Qty	Speed controller				2	1		
79	Size	Material	1/2 inch NPT				Epoxy coated aluminum	1		
80	Mounting / Enclosure		Panel mounted					1		
81	Hazardous Area Cert.	NACE Cert. Req'd - Yes or No	None				No	1		
82	Note 1 - To be read in conjunction with Specification H333588-0000-60-123-0011 (Specification for Automated Valves)								1	
83	Note 2 - Valve to be lockable									
84	Note 3 - Testing requirement to MSS SP-81									
85	Note 4 - Markings shall be in accordance with MSS SP-25. Equipment tag number shall be stamped on the nameplate for identification.								1	
86	Note 5 - Installation contractor to supply enclosures for solenoid & limit switch terminations								1	
87	Note 6 -									
88	# Supplier to complete		# Supplier to confirm						1	