
		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 DN350				Equipment tag: FV 4-4C.2				
FILE NAME .: 333588-0000-60-107-0086 Date Printed: 06-Oct-10		Electronic version current Uncontrolled copy valid only at time of printing				Current Revision no.: 1 Number of pages: 1				
Usage: CONTROL Project No.: 333588 Plant Area: 1300 Equipment Description: ACTUATED VALVE		Internal Review Approved for Enquiry Approved for Use				Current Revision no.: 1 Number of pages: 1				
		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.2						1
	2	P&ID Number	WCP-10047							
	3	Service Description	Actuated Knife Gate valve							
	4	Operated Type	Pneumatic Actuated							
	5	Valve Type	VK3							
	6	Valve Code	VK3-43-350							
	7	Area	1300							
	8	Hazardous Area Classification	None							
	9	Installation Detail	#						1	
EQUIPMENT / LINE DATA	10	Equipment Number	404-V1623							
	11	Line Number	350-SL-4.04A-XS							
	12	Line Size and Schedule	DN350		Extra Strong					
	13	Pipe Material	Carbon Steel							
	14	Pipe Code	AS 4041							
	15	Jacket Material								
	16	Flange Rating	1400kPag							
SERVICE CONDITIONS	17	Fluid Medium	Slurry							
	18	Fluid State	% Solids (w/w)	Liquid	22%					
	19	Fail Action (Loss of Signal / Loss of Air)	Fail Close		Fail Last				1	
	20	Air Supply Pressure (Min / Nominal / Max) (kPag)	420 kPa		690 kPa		850 kPa			
	21		UNITS	OPERATING	MINIMUM		MAXIMUM			
	22	Slurry Flow	m³/h	45						
	23	Gas Flow	Am³/h	N/A						
	24	Inlet Pressure	kPag	30	0		30			
	25	Outlet Pressure	kPag	N/A						
	26	Pressure Drop	kPa	N/A						
	27	Inlet Temperature	°C	20	10		35			
	28	Inlet Specific Gravity		1.1						
	29	Inlet Compressibility Factor		N/A						
	30	Inlet Viscosity	cP	N/A						
	CALCULATED RESULTS	31	Inlet Critical Pressure	KPag	N/A					
32		Ambient Temperature °C Max shut-off pressure (kPag)	0 to 50 °C		30					
33		Inlet Vapour Pressure	kPa (estimated)	N/A						
VALVE BODY	34	Flow Coefficient (CV)	N/A							
	35	Travel	N/A							
	36	Manufacturer	Model No.	Keystone	Figure 952 (Note 1, 2, 3 & 4)				1	
	37	Body Type	Reference Std	Knife Gate Lugged, Uni-direct" & Deflect" Cone	#				1	
	38	Body Size	Face to Face Dim.	DN 350	85 mm # # (Including deflection cone & gasket)				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	H-LON					
	45	Seat Material	Stem Material	ASTM A351 CF8	Stainless Steel 304					
	46	Mass		93 kg # #					1	
	47	Plug / Ball / Disc Material		Stainless Steel 316						
	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 P8				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	#	85 kg # #				1	
	55	Mounting Orientation	Accessories	Top - perpendicular to pipe	Supporting bracket				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					
LIMIT SWITCHES	58	Coil Voltage	Power	24VDC						
	59	Electrical connection	Enclosure	M20 x 1.5	Anodized Aluminum IP65 (Note 5)				1	
	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 Switches				1	
	65	Type	Qty	Proximity	2					
	66	Contact type/rating	Electrical connection	PNP	24VDC		10m flying leads		1	
	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-NI-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	Deflection Cones							1	
83	Material	Gasket	Number Required	28% chrome iron	3mm rubber full face insertion	1 - located in the upstream side # #		1		
84	Valve Gasket			3mm rubber full face insertion				1		
85	Note 1 - To be read in conjunction with Specification H333588-0000-60-123-0011 (Specification for Automated Valves)								1	
86	Note 2 - Valve to be lockable									
87	Note 3 - Testing requirements to MSS SP-81									
88	Note 4 - Markings shall be in accordance with MSS SP-25. Equipment tag number shall be stamped on the nameplate for identification.								1	
89	Note 5 - Installation contractor to supply enclosures for solenoid & limit switch terminations								1	
90	# Supplier to complete	# # Supplier to confirm							1	