
		WEST CLIFF COAL PREPARATION PLANT RAW COAL CIRCUIT AND RELIABILITY IMPROVEMENT PROJECT ABN 91 760 798 210				 bhpbilliton resourcing the future Equipment tag:						
		Valve Datasheet ACTUATED ON/OFF KNIFE GATE VALVE DN350				FV 4-4C.4						
FILE NAME .: H33588-0000-60-107-0088 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.: H33588 Plant Area: 0600 Equipment Description: ACTUATED VALVE	A 31/03/2010 0 09/07/10 1 11/10/2010	Internal Review Approved for Enquiry Approved for Use	TD TD TD	NM TD TD	JW JW MR	NM JH JH	KW KW KW	MR 				
		REV	Date	Description of Issue	Originator	CHKD	INSTR LEAD	AREA PIPE ENG.	AREA PROCESS ENG.	AREA MECH ENG.	R E V	
IDENTITY	1	Equipment Tag	Old Tag	FV 4-4C.4							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		0600								
	8	Hazardous Area Classification		None								
	9	Installation Detail		#							1	
EQUIPMENT / LINE DATA	10	Equipment Number		404-V1625								
	11	Line Number		350-SL-4.04D-XS								
	12	Line Size and Schedule		DN350	Extra Strong							
	13	Pipe Material		Carbon Steel								
	14	Pipe Code		AS 4041								
	15	Jacket Material										
SERVICE CONDITIONS	16	Flange Rating		1400kPag								
	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							
	29	Inlet Compressibility Factor			N/A							
CALCULATED RESULTS	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	30							
	33	Inlet Vapour Pressure		kPa (estimated)	N/A							
	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, 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								
48		Break Torque (Nm)	Leakage	#	Tight Shutoff							
49		Estimated Sound Pressure Level (@ 1m)		N/A								
50	NACE Cert. Req'd - Yes or No		No									
VALVE ACTUATOR	51	Manufacturer	Model No.	Keystone	F738 Type P8						1	
	52	Type	Action	Double Acting Cylinder	Air to open and close							
	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	
SOLENOID	56	Manufacturer	Model No.	SMC	EVS7-10-FG-S-3-A04T MO with sub-base VS7-3-A02T						1	
	57	Type	Qty	5/2 way	1 solenoid							
	58	Coil Voltage	Power	24VDC								
	59	Electrical connection	Enclosure	M20 x 1.5	Anodized Aluminum IP65 (Note 5)						1	
	60	Exhaust port										
	61	Manual override										
	62	Connection type	Connection and Material	G 1/4	304 S/S							
LIMIT SWITCHES	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	
ACCESSORIES	67	Mounting / Enclosure			Proximity switches to be mounted on actuator assembly (Note 5)						1	
	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-NII-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		
NOTES	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 H33588-0000-60-123-0011 (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	