

Steam Conditioning Valve



1	Client	Valve&Automation	ARTES-no.	5501137		
2	Project	Sasol	Pos.	1		
3	Item		Units	2		
4	P&ID	BWM 106-136	Material:	3068351.1 & 3068351.2		
5	Pipe connection data		Inlet	Outlet		
6	Pipe	Ø D x s mm	323,9 x 10	914 x 16		
7	Pipe material		1.5415	1.0460		
8	Buttwelds	Ø D x s mm	323,9 x 10	914 x 16		
9	Flange connection					
10	Valve information		Inlet	Outlet		
11	Nominal size	DN	12"	36"		
12	Nominal pressure	PN	#600	#300		
12	Pressure	bar(g)	48,85	9		
13	Temperature	°C	442	410		
14						
15	Operation data		Point	Point	Point	Point
16	Fluid	Steam	1	2	3	5
17	Flowrate	kg/s	52,63	53,11	6,94	
18	Temperature	°C	435,00	435,00	435,00	
19	Pressure Inlet	bara	40,85	40,85	40,85	
20	Pressure outlet	bara	4,75	6,85	4,75	
21	noise level	dB(A)				
22	Kv value	m³/h	556,20	570,00	69,90	
23	Type of valve Steam Conversion Station					
24						
25	Material		Design of valve			
26						
27	Housing	1.5415	Ø Seat	200	mm	
28	Stem	1.4122	Ø Stem	60	mm	
29	Seat	1.5415 stellite	Pressure reduction steps	5		
30	Perforated Cage	1.4122 nitrated	Kvs-value	650	m³/h	
31			Charakteristik curve	linear		
32	Seal	Graphite	max. delta p actuator	22	bar	
33			Stroke	110	mm	
34			Length	480 * / 1400** mm		
35	Inspected acc. to		PED 97/23 EG CE marking			
36			requirement	AD-2000 / TRD		
37			leakage	0,5% from Kvs-value		
38	Special rools					
39						
40	Actuator		pneumatic			
41	Model	ARCA Type 811.47 UV-120.v-ATO-HV	material: 3068362			
42			Positioner ARCA Pro 827A.E2-A00-M10-G			
43			Filter and pressure reducing station Type 961			
44			Booster SMC EVEX1300-02F			
45			air pressure 6bar(a)			
46	Remarks		* : because of the heat affected zone of the welding the length is enlarged to 480 mm			
47			**: because of the heat affected zone of the welding the length is enlarged to 1400 mm			
48			Motive Steam Cooler: integrated design			
49						
50	Revision	0	1	2	3	5
51	Date	09.04.2009	18.02.2010	30.01.1900		
52	compiled	K. Ramadan	P. Schüler	P. Schüler		
53	checked	H. Jäkel	H. Jäkel	F. Exner		

Motive Steam Cooler



1	Client	Valve&Automation	ARTES-no.	5501137			
2	Project	Sasol	Pos.	1.1			
3	Item		Units	2			
4	P&ID	BWM 106-136					
5	Pipe connection data		Motive Steam	Cooling Water			
6	Pipe	Ø D x s	mm	internal	88,9 x 4		
7	Pipe material						
8	Connection		Motive Steam	Cooling Water			
9	Nominal size	DN			3"		
10	Nominal pressure	PN			#600		
11	Pressure	bar(g)			50		
12	Temperature	°C			250		
13	material				1.0460 / 1.0305		
14	Buttwelds	Ø D x s			88,9 x 4		
15	Flange connection						
16	Operation data						
17			case 1	case 2	case 3	case 4	case 5
18	Fluid	steam					
19	Flowrate	kg/s	52,63	53,11	6,94		
20	Temp. In	°C	435	435	435		
21	Temp. Out	°C	170	170	170		
22	Pressure	bara	4,75	6,85	4,75		
23	velocity	m/s	42,80	29,57	5,64		
24	Fluid	cooling water					
25	Flowrate	kg/s	10,25	10,65	1,35		
26	Temperature	°C	38	38	38		
27	Pressure Inlet	bara	22,49	26,00	5,06		
28	Pressure outlet	bara	4,75	6,85	4,75		
29	Kv value	m³/h	8,80	8,80	8,80		
30							
31	Fluid	Motive Steam					
32	Flowrate	kg/s	3,36	3,47	2,90		
33	Temperature	°C	426	427	424		
34	Pressure Inlet	bara	27,40	28,30	23,70		
35	Pressure outlet	bara	4,75	6,85	4,75		
36	Kv value	m³/h	50,0	50,0	50,0		
37							
38	Inspected acc. to	PED 97/23 EG CE marking					
39		requirement		AD-2000 / TRD			
40							
41	Special rools	Length of straight outflow pipe			8	m	
42		Min-Distance to the temperature sensor			15	m	
48	Remarks	Motive Steam Cooler: integrated design					
49							
50							
51							
52							
54							
55							
56	Revision	0	1	2	3	4	5
57	Date	09.04.2009	18.02.2010	30.01.1900			
58	compiled	K. Ramadan	P. Schüler	P. Schüler			
59	checked	H. Jäkel	H. jäkel	F. Exner			

Control Valve



1	Client	Valve&Automation	ARTES-no.	5501137		
2	Project	Sasol	Pos.	2		
3	Item		Units	2		
4	P&ID	BWM 106-136	material	3068478.1 & 3068478.2		
5	Pipe connection data		Inlet	Outlet		
6	Pipe	Ø D x s mm	88,9 x 4	88,9 x 4		
7	Pipe material		1.0460 / 1.0305	1.0460 / 1.0305		
8	Buttwelds	Ø D x s mm	88,9 x 4	88,9 x 4		
9	Flange connection					
10	Valve information		Inlet	Outlet		
11	Nominal size	DN	3"	3"		
12	Nominal pressure	PN	#600	#600		
12	Pressure	bara	50	50		
13	Temperature	°C	180	180		
14						
15	Operation data		Point	Point	Point	Point
16	Fluid	water	1	2	3	5
17	Flowrate	kg/s	10,25	10,65	1,35	
18	Temperature	°C	38,00	38,00	38,00	
19	Pressure Inlet	bara	40,00	40,00	40,00	
20	Pressure outlet	bara	22,49	26,00	5,06	
21						
22	Kv value	m³/h	12,51 / 12,51	14,54 / 14,54	1,17 / 1,17	
23	Type of valve		RKH G-W			
24						
25	Material		Design of valve			
26						
27	Housing	1.0460	Ø Seat	65	mm	
28	Stem	1.4122	Ø Stem	25	mm	
29	Seat	1.4122 metallic seat	Pressure reduction steps	2		
30	Ball	1.4122 metallic seat	Kvs-value	18	m³/h	
31			Charakteristik curve	equal percentage		
32	Seal	EPDM	max. delta p actuator	30	bar	
33			Length	280	mm	
34						
35	Inspected acc. to		PED 97/23 EG CE marking			
36			requirement	AD-2000 / TRD		
37			leakage	0,01% from Kvs-value		
38	Special rools					
39						
40	Actuator		pneumatic			
41	Model	NAF 791292-22 Turnex Pneumatic Actuator			material:	3068482
42	single acting, spring to close					
43	Positioner 4-20mA ; NAF Link IT					
44	air pressure 6bar(a)					
45						
46	Remarks					
47						
48						
49						
50	Revision	0	1	2	3	5
51	Date	09.04.2009	18.02.2010	30.01.1900		
52	compiled	K. Ramadan	P. Schüler	P. Schüler		
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