

 LUOYANG PETROCHEMICAL ENGINEERING CORP./SINOPEC		CONTROL VALVE INSTRUMENT SPECIFICATION				Proj.Doc.No.		Discipline Doc.No.		Rev.		
						LPEC's		413091D1267		50-00/R701		
						Client's						
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General	1	Tag Number		Quantity	PID	41-FV-715		1	41-T4031-022			
	2	Line No.		Class		41-24"-PL-16004		A53F				
	3	Pipe Size mm		Pipe Mat'l		600		ASTM A106 Gr.B				
Process Condition	4	Fluid		Phase		HC C8						
	5	Flow Rate	Liquid kg/h Gas Nm ³ /h STM kg/h	MaxFlow		3764		m3/h				
				NorFlow				m3/h				
				MinFlow		1686		m3/h				
	6	Inlet Pressure MPa(G)		Outlet Pressure MPa(G)		1.82		1.416/1.313/1.024				
	7	Max DP for Shut-off MPa(G)				3.24		MPa				
	8	Oper. Temp.		Molecular WT		175						
	9	Oper.Density		Std.Density kg/Nm ³		720						
	10	Oper.Viscosity		Visc Unit		0.25/0.2/0.2		mPa . s				
	11	CP/CV		Com. Factor								
	12	Vapor PressMpa(a)		Critical Press.Mpa(a)		0.24/0.08/0.08		3.58				
	13	Solid Mass Cont		Mass Vap								
	Control Valve	14	Body Type				Single Seat Globe					
15		Body Size mm		Trim Size mm		500						
16		Character		Proc.Conn				ASME Class 300 RF 20"				
17		Body/Bonnet Mat'l				A216GR.WCB						
18		Trim Mat'l		Seat Mat'l		316SS+ST		316SS+ST				
19		Packing Mat'l		Gasket Material		PTFE						
20		Cv	Sizing Cv	Max.	Nor.	Min.	1873.909514	956.91/1544.78/1216.36/1433.681433.672871	597.985592			
21		Cv	Selected Cv			3660						
22		Valve Opening		Max.	Nor.	Min.	49.52	23.6/40.21/30.93/37.07	13.45			
23		Actuator Type		Spring Range MPa								
24		Bonnet Type										
25		Failure Action to Open/Colse				F.L						
26		Val. Posn. when Sol. Val. De-energized										
27		DBA		Leakage Class		≤ 85dBA		ANSI Class IV				
28		Action										
Transducer/Positioner	29	Name										
	30	Input Singal		Output Singal		4~20mA+HART						
	31	Explosion Proof		Enclosure Protection		Exia IICT4		IP65				
	32	Air Supply(kPa)		Power Supply		400						
	33	Pneu.Conn.		Eelec.Conn.		1/4"NPT(F)		1/2"NPT(F)				
	34											
	35											
Accessories	36	Filter-Regulator W/gauge										
	37	Solenoid Valve		Power Supply								
	38	Position Switch		Hand Wheel								
	39	Explosion Proof										
	40											
Miscell	41	Manufacturer										
	42	Model										
	43											
Note: Balanced/Unbalanced:Balanced Stem Material:13CR												



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Tag number : 41-FV-715

1. The sizing calculation shall be carried out based on ISA S75.01 and the Manufacturer's standard equations. The sizing calculations result shall be provided with valve specification.
2. The control valve packing glands shall be of the bolted type.
3. Miscellaneous accessories such as booster relay, spring exhaust valves, lock/unlock valve, accumulation (air pressure tanks), signal limit, blow-off valve shall be considered to maintain proper operation during Detailed Engineering Stage.
4. Maximum time to open and close the valve from 0% to 100% = 20 seconds.
5. In addition to the control signals from SCS/PLC or DCS to the valve actuator, another signal to the SCS/PLC will also be provided to monitor the correct valve position on site.
6. Hand Switch to select which controller, SCS/PLC or DCS, pilots the valve. SCS in normal operation or DCS during start-up.
7. Accuracy of the flow control loop = 0.2% maximum - Linear characteristic required. Double acting actuator recommended
8. Valve data sheet and characteristic curve (Cv/opening) to be submitted to AXENS for approval
9. Fail Lock position is ensured by the positioner only. No other failure lock arrangement is required. Refer to typical instrumentation diagram for pumparound valves.
10. Estimated shut-off pressure of 41-P-202 B/C, (Design Pressure) shall be confirmed by DEC
11. For Valve calculation and size selection DEC need to be rechecked during Detailed Engineering
12. Trim size and Rated CV are based on Fisher.
13. Please refer to attachment# 2 for addition requirements.

ING CORP.				INSTRUMENT SPECIFICATION		TOYO ENGINEER	
				Control Valve			
1	D.D	2/27/2007	FINAL (as FEED Package)				
0	D.D	12/15/2006	Preliminary				
Rev.: 1	No.	By	Date	Revision	Code: 170	Dwg. No.:	Sheet 2 of



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Process licensing

INSTRUMENT DATA SHEET : CONTROL VALVE

Job Number	Unit	Type	PAID	Page
05-2678b	41b	4VC	PID 16/27	2/5

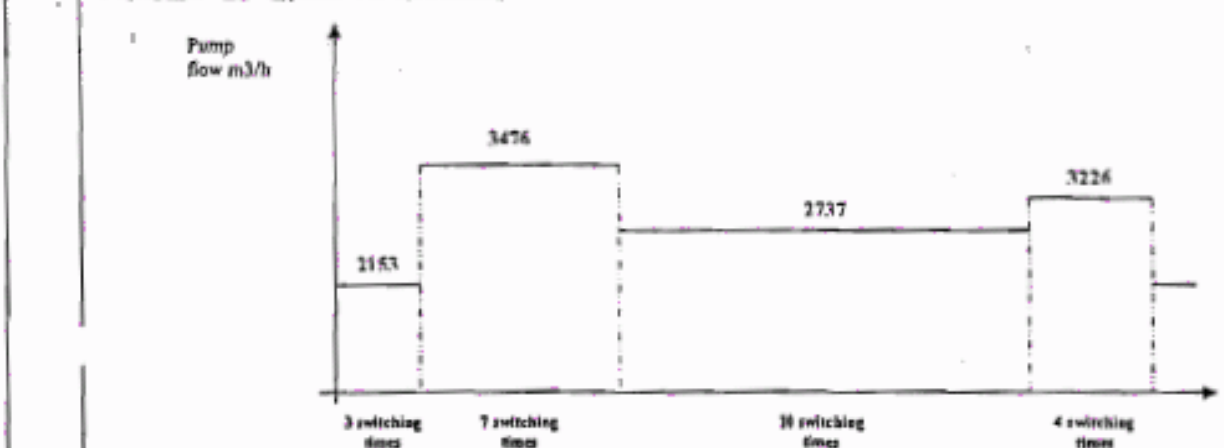
Client : DRAGON AROMATICS (XIAMEN) CO., LTD
DAC PX COMPLEX PROJECT - Xiamen (P.R. China)

Date	By	Check By	Rev
23/06/06	PAB	FLA	0

Unit : XYLENE SEPARATION - ELUXYL UNIT (Unit 41)

VALVE TYPE : Flow control Valves

(1) Pump flow varies this way for a typical operating case (average R/F. switching time is about 75 seconds):



- (2) Estimated shut-off pressure of pumps 41-P-202 A/C, to be checked by Engineering
- (3) Accuracy of the flow control loop = 0.2% maximum - Linear characteristic
-- required. 2-position acting Autostar recommended.
- (4) Maximum time to open and close the valve from 0 to 100% = 15 seconds.
- (5) Valve data sheet and characteristic curve (Cv / opening) to be submitted to AXENS for approval.

1 maximum operating Cv : 2385
SCS/PLC or DCS to the valve actuator,
be provided to monitor the correct valve
pk.
SCS/PLC or DCS, pilots the valve. SCS in
itioner only. No other failure lock
1 instrumentation diagram for pumparound

- (6) Estimated min. design Cv : 662, estimate
- (7) In addition to the control signal from SCS,
another signal to the SCS/PLC will also
position on site. See Automation Data Bo
- (8) Hand Switch to select which controller,
normal operation or DCS during start-up.
- (9) Fail Lock position is ensured by the pos
arrangement is required. Refer to typical
valves.

in or equivalent. Engineering Contractor to rectify during

type diagnostics including static and dynamic deviation trend
active maintenance based lifecycle diagnostic recommended compare

and 100% valve controller is recommended

and 100% valve controller is recommended

- (10) Valve shall be provided with Anti Cavitation A-Trim design
detail engineering.

actuator's load trends; valve diamond; real-time
to valve signature approach.

(11) Unique supplier for package valve actuator

and 100% valve controller is recommended