





CLIENT NUMBER:



DOC NUMBER:

569-DB7B-AIC-731-005

PRD-AIC-DSH-070

CLIENT:

TAKEDA/BAXALTA

PROJECT:

BURITI EPCVM PROJECT

DRUG SUBSTANCE - BMS – DATA SHEET CONTROL VALVE

					·
0	30AUG2021	ISSUE FOR CONSTRUCTION	JHA	MAF	RSP
Α	24MAR2021	60% DD ISSUE	JHA	MAF	RSP
REV	DATE	DESCRIPTION	EXEC	CHECK	APPROV









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TITLE

2 de 6 CONTROL VALVE REV.:

DOCUMENT REVIEW CONTROL

Revision	Α	0	1	2	3	4	Revision	Α	0	1	2	3	4	Revision	Α	0	1	2	3	4
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REVISION 0 NOTES:

- 1- UPDATE ACCORDING TO P&ID (HVAC AND PROCESS).
- 2- INSERTION OF PROCESS DATA.
- 3- INSERTION OF INSTRUMENT REFERENCE MODELS.

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NUMBER: 569-DB7B-AIC-731-005 CLIENT NR: PRD-AIC-DSH-070

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CONTROL VALVE

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REFERENCE DOCUMENTS

7B-M-0-5-53 7B-M-0-5-61 PRD-AIC-LIS-015 PRD-PIP-TSP-501 PRD-AIC-LIS-046 P&I DIAGRAM - DRUG SUBSTANCE - CHILLED WATER DISTRIBUTION SYSTEM LOOP 2 PROCESS
P&I DIAGRAM - DRUG SUBSTANCE - PLANT STEAM DISTRIBUTION SYSTEM (PROCESS + HVAC)
DRUG SUBSTANCE - BMS - INSTRUMENT INDEX

PIPE CLASS AND SPECIFICATION - TECHNICAL SPECIFICATION

INTEGRATED PROJECT SERVICES - INSTRUMENT SUGGESTED SUPPLIER LIST

GENERAL NOTES

- 1- The identification plates must be supplied in AISI 304 stainless steel, permanently attached to the valve body, with engraving of the respective "TAGs", model, body material, manufacturer, diameter, type, pressure class, Cv and serial number. The serial number of the instrument, when possible, can be recorded on the body itself.
- 2- The regulator filter is a mandatory accessory and its material must be suitable for fluid and local environmental conditions. The regulator filter must be provided with a manometer and coalescing filter.
- 3- For all valves must be presented type and degree of protection certificates, both proofs must be explained in the same certificate. Certificates must be issued by INMETRO or accredited body.
- 4- The shutter guides must be made of material of greater hardness than those of the shutters.
- 5- The maximum permissible noise level is 82 dM to 1 m from the valve and must comply with ISA 75.17 and IEC 60534-8-4.
- 6- The manufacturer must send the valve calculation memory.
- 7- The maximum and minimum flow rates to be controlled should be limited to 20% and 85%, respectively, of the available stroke of the control valve.
- 8- The PV-790212A valve is sized for 1/3 of the maximum flow, while the PV-790212B valv is sized for 2/3 of maximum flow.









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TITLE

CONTROL VALVE

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								0			
	1	INSTRUMENT TAG NUMBER			PV-	790212A (SEE	GENERAL NOTE	:S 8)			
	2	SERVIÇE		PLANT STEAM DISTRIBUTION							
ı	3	P&ID			7B-M-0-5-61						
ا ہ	4	PIPE LINE INLET PIPE	E LINE OUTLET OF	R EQ. NUMBER	11/2"-IS8B-790321-CS2-HC 2"-IS4B-790212-CS1-HC						
GENERAL				C	ARBON STEE	L ASTM-A106 Gr.	В				
žEN		AREA CLASSIFICATION				LASSIFIED					
٦		ENCLOSURE CLASSIFICATION		IF		NF. NBR IEC 605	29				
ŀ	8	CERTIFICATES		"		ERAL NOTES 3)					
ŀ	9	OLIVIII IOATEO				(OLL OLIVE	TRAE NOTES S)				
\dashv		BODY TYPE			G	LOBE					
		BODY / CAP MATERIAL				216 Gr. WCB					
ŀ		CONNECTION TO PROCESS: DI	AMETER CLASS	FI ANGE	11/		SME B.16.5 (NOTE	= 1)			
į		FLANGE FACE FINISH	, IIII		1"	•	SS SP-6	- '/			
		CASTLE TYPE					UFACTURER				
<u> </u>		GASKET MATERIAL					PTFE				
5		LUBRICATION	VALVE. PLUG		NO			/ES			
}		CARACTERISTIC	VALVE. FLOG		110		=%				
BODY AND INTERNAL						(SEE OENI					
		GUIDE TYPE				· ·	ERAL NOTES 4)				
		FAILURE ACTION				C	LOSE				
ŀ		SEAL CLASS					IV				
4	20	TYPE OF ACTUATOR				DIADUDA	011 - 0000110				
ŀ		TYPE OF ACTUATOR			DIAPHRAGM + SPRING						
		OPENING /CLOSING			DIRECT ACTION						
		AIR FAILURE ACTION			CLOSE						
		PNEUMATIC CONNECTION	STEERING WHEE	EL / POSITION	1/4" NPT (F) NO						
۱ ٔ		AIR SUPPLY			3~15 PSI						
4	26										
L		TYPE			ELECTROPNEUMATIC (I/P)						
		INPUT SIGN	OUTPUT SIGNAL		4~20 mA + HART 3~15 PSI						
		OUTLINE		NO YES							
	22	AVAILABLE AIR SUPPLY			6.0 bar(g)						
۲	28	ELECTRICAL CONNECTION	PNEUMATIC CON	INECTION	1/2" NPT(F) 1/4" NPT (F)						
4	20	IDENTIFICATION PLATE				VEO (055 05	NEDAL NOTEO A	<u> </u>			
			IOMETER		YES (SEE GENERAL NOTES 1) YES (SEE GENERAL NOTES 2)						
;		REGULATOR FILTER WITH MAN	OWETER		' '						
		SOLENOID VALVE					NO				
ŀ		POSITION SWITCH					NO				
+	34	ELLID	DUVEICAL STATI	10	HICH BBESSUB	ESTEAM I	97	EAM			
ŀ	42	FLUID	PHYSICAL STATU NORMAL	1	HIGH PRESSUR			1			
ŀ	40	MINIMUM FLOW		MAXIMUM		384,0	384,0	kg/h °C			
ŀ		MINIMUM TEMPERATURE	NORMAL	MAXIMUM		179	179				
1		MINIMUM UPSTREAM PRESSURE		MAXIMUM		8,5	8,5	bar-g			
-		MINIMUM DOWNSTREAM PRESSURE	NORMAL DESIGN TEMPER	MAXIMUM	1, -	4,1	4,1	bar-g			
-		DESIGN PRESSURE	11,7 b			0 ℃					
ŀ		dP SHUT OFF	ATINIO 001151715:	,	17,6 bar-g						
ŀ		DENSITY / VISCOSITY @ OPER	ATING CONDITION	1	2,6 k	rg/m³		4 Cp			
		SUSPENDED SOLIDS (%)			NO						
ļ		SPECIAL FLUID CONDITIONS					NO				
		MAXIMUM NOISE ADMISSIVEL				<u> </u>	ERAL NOTES 5)				
		CV CALCULATED COND. MÍN / N	IOR / MAX		NOTE 2		OTE 2	NOTE 2			
1		CV SELECTED					OTE 2				
	51	MANUFACTURER				FI	SHER				
1	52	MODEL				easy-e	ED Control				

NOTES: 1- THE MANUFACTURER MUST CONFIRM THE NOMINAL DIAMETER OF THE VALVE.

²⁻ THE SELECTED CV AND THE OPENING PERCENTAGE MUST BE SUPPLIED BY THE VALVE MANUFACTURER.









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TITLE

SHEET:

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CONTROL VALVE

								U			
	1	INSTRUMENT TAG NUMBER			PV-790212B (SEE GENERAL NOTES 8)						
	2	SERVIÇE			PLANT STEAM DISTRIBUTION						
	3	P&ID			7B-M-0-5-61						
7	4	PIPE LINE INLET PIPE	E LINE OUTLET OF	R EQ. NUMBER	2"-IS8B-790306-CS2-HC 21/2"-IS4B-790206-CS1-HC						
ER/		EQUIPMENT MATERIAL / PIPE					EL ASTM-A106 Gr.				
SENERAL	-	·									
Ö	F -	AREA CLASSIFICATION					LASSIFIED	-			
	7	ENCLOSURE CLASSIFICATION			1	P 65 (MIN.) CO	NF. NBR IEC 6052	?9 			
	8	CERTIFICATES				(SEE GENE	ERAL NOTES 3)				
	9										
	9	BODY TYPE				G	LOBE				
	10	BODY / CAP MATERIAL				ASTM A-	216 Gr. WCB				
	11	CONNECTION TO PROCESS: DI	AMETER, CLASS, I	FLANGE	2	2" 300# FR, ASI	ME B.16.5 (NOTE	1)			
44	12	FLANGE FACE FINISH	<u> </u>				S SP-6	•			
BODY AND INTERNAL		CASTLE TYPE					UFACTURER				
ITE		GASKET MATERIAL					PTFE				
0 1/			LVALVE BLUG		NO			ES			
AN	_	LUBRICATION	VALVE. PLUG		NO						
ργ		CARACTERISTIC					=%				
BC		GUIDE TYPE					ERAL NOTES 4)				
	18	FAILURE ACTION				C	LOSE				
	19	SEAL CLASS					IV				
	20										
	21	TYPE OF ACTUATOR			DIAPHRAGM + SPRING						
œ	22	OPENING /CLOSING			DIRECT ACTION						
ACTUATOR	23	AIR FAILURE ACTION			CLOSE						
17	24	PNEUMATIC CONNECTION	STEERING WHEE	L / POSITION	1/4" NPT (F) NO						
AC		AIR SUPPLY	l		3~15 PSI						
	26										
	_	TYPE			ELECTROPNEUMATIC (VP)						
		INPUT SIGN	OUTPUT SIGNAL		4~20 mA + HART 3~15 PSI						
VEF											
101		OUTLINE	MANOMETER		NO YES						
POSITIONER		AVAILABLE AIR SUPPLY	1		6.0 bar(g)						
ď	28	ELECTRICAL CONNECTION	PNEUMATIC CON	NECTION	1/2" NPT(F) 1/4" NPT (F)						
Ŋ	29	IDENTIFICATION PLATE			YES (SEE GENERAL NOTES 1)						
SORIES	30	REGULATOR FILTER WITH MAN	IOMETER		YES (SEE GENERAL NOTES 2)						
SSO	31	SOLENOID VALVE			NO						
ACES	33	POSITION SWITCH					NO				
Ă	34										
	42	FLUID	PHYSICAL STATU	'S	HIGH PRESSUR	RE STEAM	ST	EAM			
		MINIMUM FLOW	NORMAL	MAXIMUM		769,0	769,0	kg/h			
	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM		179	179	°C			
ςγ			NORMAL	MAXIMUM		8,4	8,4	bar-g			
ĮQ.		MINIMUM DOWNSTREAM PRESSURE		MAXIMUM		4.0	4,0	bar-g			
[IQ]		DESIGN PRESSURE	DESIGN TEMPER		11 7						
lδ		dP SHUT OFF	11,7 bar-g 200 °C								
19/			ATIMO COMPITION	1	17,6 bar-g						
4711		DENSITY / VISCOSITY @ OPERA	ATING CONDITION		4,83 kg/m³ 0,015 Cp						
OPERATING CONDITIONS		SUSPENDED SOLIDS (%)			NO						
9	49	SPECIAL FLUID CONDITIONS					NO				
	40	MAXIMUM NOISE ADMISSIVEL			(SEE GENERAL NOTES 5)						
	41	CV CALCULATED COND. MÍN / N	NOR / MAX		NOTE 2	N	OTE 2	NOTE 2			
	50	CV SELECTED			NOTE 2						
	51	MANUFACTURER			FISHER						
	52	MODEL			easy-e ED Control						
		·									

NOTES: THE MANUFACTURER MUST CONFIRM THE NOMINAL DIAMETER OF THE VALVE. 1-

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TITLE

SHEET:

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CONTROL VALVE

								0			
	1	INSTRUMENT TAG NUMBER			TV-070001						
	2	SERVIÇE			CHILLED WATER - LOOP 1 - RETURN - EXIT FROM HX-7B-2						
	3	P&ID			7B-M-0-5-53						
7	4	PIPE LINE INLET PIPE	E LINE OUTLET OR	R EQ. NUMBER	6"-GW0R-070066-CS1-NI -						
ER/		EQUIPMENT MATERIAL / PIPE					I EL ASTM-A106 Gr.	R			
SENERAL		·						Б			
Ö	L-	AREA CLASSIFICATION					CLASSIFIED				
	7	ENCLOSURE CLASSIFICATION			,		ONF. NBR IEC 6052	29			
	8	CERTIFICATES				(SEE GEN	IERAL NOTES 3)				
	9										
	9	BODY TYPE				(GLOBE				
	10	BODY / CAP MATERIAL				ASTM A	-216 Gr. WCB				
	11	CONNECTION TO PROCESS: DI	AMETER, CLASS, I	FLANGE		6" 150# FR, AS	SME B.16.5 (NOTE	1)			
AL	12	FLANGE FACE FINISH				М	SS SP-6				
BODY AND INTERNAL		CASTLE TYPE				BY MAN	IUFACTURER				
VTE		GASKET MATERIAL					RAPHITE				
11 0		LUBRICATION	VALVE. PLUG		NO			ÆS			
AN			VALVE. FLOG		710						
ργ		CARACTERISTIC					=%				
BC		GUIDE TYPE				•	IERAL NOTES 4)				
		FAILURE ACTION					OPEN				
	19	SEAL CLASS					IV				
	20										
	21	TYPE OF ACTUATOR			DIAPHRAGM + SPRING						
œ	22	OPENING /CLOSING			DIRECT ACTION						
ACTUATOR	23	AIR FAILURE ACTION			OPEN						
Ď	24	PNEUMATIC CONNECTION	STEERING WHEE	L/POSITION	1/4" NPT (F) NO						
AC	25	AIR SUPPLY			3~15 PSI						
	26										
	-	TYPE			ELECTROPNEUMATIC (I/P)						
ا م		INPUT SIGN	OUTPUT SIGNAL		4~20 mA + HART 3~15 PSI						
NE		OUTLINE			NO YES						
70		AVAILABLE AIR SUPPLY	MANOMETER		6.0 bar(g)						
POSITIONER			Inversion con	NECTION	ļ						
٩	28	ELECTRICAL CONNECTION	PNEUMATIC CON	NECTION	1/2" NPT(F) 1/4" NPT (F)						
ပ္ပ		IDENTIFICATION PLATE			YES (SEE GENERAL NOTES 1)						
SORIES		REGULATOR FILTER WITH MAN	IOMETER		YES (SEE GENERAL NOTES 2)						
	31	SOLENOID VALVE			NO						
ACE	33	POSITION SWITCH					NO				
٨	34										
	42	FLUID	PHYSICAL STATU	'S	CHILLED W	/ATER	LIC	QUID			
		MINIMUM FLOW	NORMAL	MAXIMUM	0	81	81	m³/h			
	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	11	11	°C			
NS	44	MINIMUM UPSTREAM PRESSURE	NORMAL	MAXIMUM	-	1,4	1,4	bar-g			
10,		MINIMUM DOWNSTREAM PRESSURE		MAXIMUM	_	0,34	0,36	bar-g			
ND		DESIGN PRESSURE	DESIGN TEMPERA		34		· ·				
CÓ		dP SHUT OFF	1		3,4 bar-g 40,7 °C						
Ŋ		DENSITY / VISCOSITY @, OPERA	ATING CONDITION	1	3,4 bar-g						
OPERATING CONDITIONS			THIS CONDITION		1000,0 kg/m³ 1,57 Cp						
ER.		SUSPENDED SOLIDS (%)			NO NO						
9		SPECIAL FLUID CONDITIONS				/0F= 5=:	NO				
		MAXIMUM NOISE ADMISSIVEL			(SEE GENERAL NOTES 5)						
		CV CALCULATED COND. MÍN / N	IOR / MAX		NOTE 2 NOTE 2						
lacksquare		CV SELECTED			NOTE 2						
	51	MANUFACTURER			FISHER						
	52	MODEL			easy-e ED Control						

NOTES: THE MANUFACTURER MUST CONFIRM THE NOMINAL DIAMETER OF THE VALVE. 1-

²⁻THE SELECTED CV AND THE OPENING PERCENTAGE MUST BE SUPPLIED BY THE VALVE MANUFACTURER.