	
DOC NUMBER: 569-DB7A-AIC-741-002		CLIENT NUMBER: PRD-AIC-DSH-061	
CLIENT: TAKEDA/BAXALTA			
PROJECT: BURITI EPCVM PROJECT			

DRUG PRODUCT - BMS - DATA SHEET SAFETY VALVE

0	31AUG2021	ISSUE FOR CONSTRUCTION	JHA	MAF	RSP
A	24MAR2021	60% DD ISSUE	JHA	MAF	RSP
REV	DATE	DESCRIPTION	EXEC	CHECK	APPROV

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TITLE

SAFETY VALVE

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DOCUMENT REVIEW CONTROL

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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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REFERENCE DOCUMENTS			

7A-M-0-5-41	P&I DIAGRAM - DRUG PRODUCT - INDUSTRIAL WATER DISTRIBUTION SYSTEM
7A-M-0-5-61	P&I DIAGRAM - DRUG PRODUCT - PLANT STEAM DISTRIBUTION SYSTEM (PROCESS + HVAC)
PRD-AIC-LIS-014	DRUG PRODUCT - BMS - INSTRUMENT INDEX
PRD-PIP-TSP-501	PIPE CLASS AND SPECIFICATION - TECHNICAL SPECIFICATION
PRD-AIC-LIS-046	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- In the certified drawings of the relief and safety valves, the spring pressure range shall be included. The valve shall allow adjustments of: $\pm 10\%$ at the specified relief pressure, for pressures $\leq 18 \text{ kgf/cm}^2$, and $\pm 5\%$ at the specified relief pressure, for pressures $> 18 \text{ kgf/cm}^2$.
- 3- The spring adjustment screw must be protected by a (threaded) hood.
- 4- The sizing of relief and safety valves will be in accordance with ASME section I and section VIII for industrial valve and ASME BPE for sanitary valves in its latest edition.
- 5- The manufacturer must send the valve calculation memory.

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SAFETY VALVE

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GENERAL	1	INSTRUMENT TAG NUMBER		PSV-610001	
	2	SERVICE		INDUSTRIAL WATER - DISTRIBUTION SYSTEM	
	3	P&ID		7A-M-0-5-41	
	4	PIPE LINE	EQUIPMENT NUMBER	4"-DW-610019-PP1-NI	-
	5	SAFETY / RELIEF		SAFETY	
	6	NOZZLE (TOTAL / REDUCED)		TOTAL	
	7	TYPE		ANGLE	
	8	CASTLE (OPEN / CLOSED)		OPEN	
	9	CERTIFICATES		(SEE GENERAL NOTES 4)	
	10				
CONNECTIONS	11	INLET DIAMETER	CLASS	BY MANUFACTURER (NOTE GER. 4, 5)	150# FR, ASME B.16.5
	12	OUTLET DIAMETER	CLASS	BY MANUFACTURER (NOTE GER. 4, 5)	150# FR, ASME B.16.5
	13	FLANGE FACE FINISH		SLOTTED ACCORDING TO MSS SP-6.	
	14				
	15				
MATERIALS	16	BODY	CASTLE	AC ASTM A216 Gr. WCB	AC ASTM A216 Gr. WCB
	17	SEAT	DISC	ASTM A182 F304	ASTM A182 F304
	18	GUIDES	RING	ASTM A182 F304	ASTM A182 F304
	19	SPRING	BELLOWS	BY MANUFACTURER (NOTE GER. 2)	NOT
	20	ROD		ASTM A182 F304	
	21				
ACCESSORIES	22	HOOD (THREADED / SCREWED)		THREADED	
	23	LEVER: SIMPLE / EASED		SIMPLE	
	24	LOCK FOR HYDROSTATIC TEST		YES	
	25	IDENTIFICATION PLATE		YES (SEE GENERAL NOTES 1)	
	26				
BASE	27	SIZING CRITERIA		(SEE GENERAL NOTES 4)	
	28	SIZING CRITERION		LOCK	
	29				
OPERATING CONDITIONS	30	FLUID	PHYSICAL STATE	INDUSTRIAL WATER	LIQUID
	31	FLOW CAPACITY		50 m³/h	(NOTE 1)
	32	OPERATING PRESSURE	RELIEF PRESSURE	1,9 bar-g	2,8 bar-g
	33	NORMAL TEMPERATURE	RELIEF TEMPERATURE	25,0 °C	25,0 °C
	34	DESIGN PRESSURE	DESIGN TEMPERATURE	5,1 bar-g	55,0 °C
	35	BACK PRESSURE: CONSTANT		0 bar-g	
	36	BACK PRESSURE: VARIABLE		- bar-g	
	37	SUPERIMPOSED BACK PRESSURE		- bar-g	
	38	OVERPRESSURE		10 %	
	39	DENSITY @ RELIEF CONDITIONS	VISCOSITY @ RELIEF CONDITIONS	997,2 kg/m³	0,89 cP
	40	MOLECULAR WEIGHT			
	41	Cp/Cv	FACTOR Z		
	42	ATMOSPHERIC PRESSURE		1 atm	
	43				
VALVE	44	SPRING SETTING PRESSURE		BY MANUFACTURER (SEE GENERAL NOTES 2)	
	45	SPRING BAND		BY MANUFACTURER (SEE GENERAL NOTES 2)	
	46	CALC. AREA sq. In	SELECTED AREA	BY MANUFACTURER in²	BY MANUFACTURER
	47	ORIFICE DESIGNATION		BY MANUFACTURER	
	48				
	49	MANUFACTURER		CROSBY OR SIMILAR	
	50	MODEL		SV80H (CROSBY)	

NOTES:

1- valve sized considering the maximum flowrate of PCV-610001 totally opened. This flowrate shall be confirmed with the PCV's supplier.

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TITLE

SAFETY VALVE

SHEET:

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REV:

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GENERAL	1	INSTRUMENT TAG NUMBER		PSV-790101	
	2	SERVICE		PLANT STEAM RE-HEATED WATER HX-7A-1	
	3	P&ID		7A-M-0-5-61	
	4	PIPE LINE	EQUIPMENT NUMBER	3"-IS1B-790101-CS1-HC	-
	5	SAFETY / RELIEF		SAFETY	
	6	NOZZLE (TOTAL / REDUCED)		TOTAL	
	7	TYPE		ANGLE	
	8	CASTLE (OPEN / CLOSED)		OPEN	
	9	CERTIFICATES		(SEE GENERAL NOTES 4)	
	10				
CONNECTIONS	11	INLET DIAMETER	CLASS	BY MANUFACTURER (NOTE GER. 4, 5)	150# FR, ASME B.16.5
	12	OUTLET DIAMETER	CLASS	BY MANUFACTURER (NOTE GER. 4, 5)	150# FR, ASME B.16.5
	13	FLANGE FACE FINISH		SLOTTED ACCORDING TO MSS SP-6.	
	14				
	15				
MATERIALS	16	BODY	CASTLE	AC ASTM A216 Gr. WCB	AC ASTM A216 Gr. WCB
	17	SEAT	DISC	ASTM A182 F304	ASTM A182 F304
	18	GUIDES	RING	ASTM A182 F304	ASTM A182 F304
	19	SPRING	BELLOWS	BY MANUFACTURER (NOTE GER. 2)	NOT
	20	ROD		ASTM A182 F304	
	21				
ACCESSORIES	22	HOOD (THREADED / SCREWED)		THREADED	
	23	LEVER: SIMPLE / EASED		SIMPLE	
	24	LOCK FOR HYDROSTATIC TEST		YES	
	25	IDENTIFICATION PLATE		YES (SEE GENERAL NOTES 1)	
	26				
BASE	27	SIZING CRITERIA		(SEE GENERAL NOTES 4)	
	28	SIZING CRITERION		LOCK	
	29				
OPERATING CONDITIONS	30	FLUID	PHYSICAL STATE	STEAM	STEAM
	31	FLOW CAPACITY		1261 kg/h (NOTE 1)	
	32	OPERATING PRESSURE	RELIEF PRESSURE	2,1 bar-g	6,0 bar-g
	33	NORMAL TEMPERATURE	RELIEF TEMPERATURE	165,0 °C	165,0 °C
	34	DESIGN PRESSURE	DESIGN TEMPERATURE	6,0 bar-g	192 °C
	35	BACK PRESSURE: CONSTANT		0 bar-g	
	36	BACK PRESSURE: VARIABLE		- bar-g	
	37	SUPERIMPOSED BACK PRESSURE		- bar-g	
	38	OVERPRESSURE		10 %	
	39	DENSITY @ RELIEF CONDITIONS	VISCOSITY @ RELIEF CONDITIONS	3,7 kg/m³	0,014 Cp
	40	MOLECULAR WEIGHT			
	41	Cp/Cv	FACTOR Z		
	42	ATMOSPHERIC PRESSURE		1 atm	
	43				
VALVE	44	SPRING SETTING PRESSURE		BY MANUFACTURER (SEE GENERAL NOTES 2)	
	45	SPRING BAND		BY MANUFACTURER (SEE GENERAL NOTES 2)	
	46	CALC. AREA sq. In	SELECTED AREA	BY MANUFACTURER in²	BY MANUFACTURER
	47	ORIFICE DESIGNATION		BY MANUFACTURER	
	48				
	49	MANUFACTURER		CROSBY OR SIMILAR	
	50	MODEL		SV80H (CROSBY)	

NOTES:

1- valve sized considering the maximum flowrate of PCV-790101 totally opened. This flowrate shall be confirmed with the PCV's supplier.

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CLIENT NR: PRD-AIC-DSH-061

TITLE

SAFETY VALVE

SHEET:

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GENERAL	1	INSTRUMENT TAG NUMBER		PSV-790201	
	2	SERVICE		PLANT STEAM	
	3	P&ID		7A-M-0-5-61	
	4	PIPE LINE	EQUIPMENT NUMBER	11/2"-IS4B-790201-CS1-HC	-
	5	SAFETY / RELIEF		SAFETY	
	6	NOZZLE (TOTAL / REDUCED)		TOTAL	
	7	TYPE		ANGLE	
	8	CASTLE (OPEN / CLOSED)		OPEN	
	9	CERTIFICATES		(SEE GENERAL NOTES 4)	
	10				
CONNECTIONS	11	INLET DIAMETER	CLASS	BY MANUFACTURER (NOTE GER. 4, 5)	150# FR, ASME B.16.5
	12	OUTLET DIAMETER	CLASS	BY MANUFACTURER (NOTE GER. 4, 5)	150# FR, ASME B.16.5
	13	FLANGE FACE FINISH		SLOTTED ACCORDING TO MSS SP-6.	
	14				
	15				
MATERIALS	16	BODY	CASTLE	AC ASTM A216 Gr. WCB	AC ASTM A216 Gr. WCB
	17	SEAT	DISC	ASTM A182 F304	ASTM A182 F304
	18	GUIDES	RING	ASTM A182 F304	ASTM A182 F304
	19	SPRING	BELLOWS	BY MANUFACTURER (NOTE GER. 2)	NOT
	20	ROD		ASTM A182 F304	
	21				
ACCESSORIES	22	HOOD (THREADED / SCREWED)		THREADED	
	23	LEVER: SIMPLE / EASED		SIMPLE	
	24	LOCK FOR HYDROSTATIC TEST		YES	
	25	IDENTIFICATION PLATE		YES (SEE GENERAL NOTES 1)	
	26				
BASE	27	SIZING CRITERIA		(SEE GENERAL NOTES 4)	
	28	SIZING CRITERION		LOCK	
	29				
OPERATING CONDITIONS	30	FLUID	PHYSICAL STATE	STEAM	STEAM
	31	FLOW CAPACITY		450 kg/h (NOTE 1)	
	32	OPERATING PRESSURE	RELIEF PRESSURE	4,0 bar-g	5,0 bar-g
	33	NORMAL TEMPERATURE	RELIEF TEMPERATURE	170,0 °C	170,0 °C
	34	DESIGN PRESSURE	DESIGN TEMPERATURE	(NOTE 2) bar-g	(NOTE 2) °C
	35	BACK PRESSURE: CONSTANT		0 bar-g	
	36	BACK PRESSURE: VARIABLE		- bar-g	
	37	SUPERIMPOSED BACK PRESSURE		- bar-g	
	38	OVERPRESSURE		10 %	
	39	DENSITY @ RELIEF CONDITIONS	VISCOSITY @ RELIEF CONDITIONS	3,1 kg/m³	0,014 Cp
	40	MOLECULAR WEIGHT			
	41	Cp/Cv	FACTOR Z		
	42	ATMOSPHERIC PRESSURE		1 atm	
	43				
VALVE	44	SPRING SETTING PRESSURE		BY MANUFACTURER (SEE GENERAL NOTES 2)	
	45	SPRING BAND		BY MANUFACTURER (SEE GENERAL NOTES 2)	
	46	CALC. AREA sq. In	SELECTED AREA	BY MANUFACTURER in²	BY MANUFACTURER
	47	ORIFICE DESIGNATION		BY MANUFACTURER	
	48				
	49	MANUFACTURER		CROSBY OR SIMILAR	
	50	MODEL		SV80H (CROSBY)	

NOTES:

- valve sized considering the maximum flowrate of PV-790201A/B totally opened.
- WAITING SUPPLIER INFORMATION FOR TEMPERATURE AND PRESSURE DESIGN.