DOC NUMBER: **569-DB7B-AIC-714-005**	CLIENT NUMBER: **PRD-AIC-DSH-080**
CLIENT: **TAKEDA/BAXALTA**	
PROJECT: **BURITI EPCVM PROJECT**	

DRUG SUBSTANCE - BMS - DATA SHEET
LEVEL GAUGE

REV	DATE	DESCRIPTION	EXEC	CHECK	APPROV
0	28SEP2021	ISSUE FOR CONSTRUCTION	JHA	MAF	RSP
A	27AUG2021	90% DD ISSUE	JHA	MAF	RSP

NUMBER: 569-DB7B-AIC-714-005	CLIENT NR: PRD-AIC-DSH-080
TITLE **LEVEL GAUGE**	SHEET: 2 de 5 REV.: **0**

DOCUMENT REVIEW CONTROL

Revision	A	0	1	2	3	4	Revision	A	0	1	2	3	4	Revision	A	0	1	2	3	4
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1	X	X					26							51						
2	X	X					27							52						
3	X	X					28							53						
4	X	X					29							54						
5	X	X					30							55						
6	/	/					31							56						
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REVISION 0 NOTES:

1- UPDATED TO REVISION 0

REFERENCE DOCUMENTS

7B-M-0-5-44	P&I DIAGRAM - DRUG SUBSTANCE - CHILLED GLYCOL GENERATION SYSTEM
PRD-AIC-LIS-015	DRUG SUBSTANCE - BMS - INSTRUMENT INDEX
PRD-MEC-DSH-021	DRUG SUBSTANCE - DATA SHEET - BUFFER TANK - BT-7B-1
PRD-PIP-TSP-501	PIPE CLASS AND SPECIFICATION - TECHNICAL SPECIFICATION
PRD-AIC-LIS-046	INTEGRATED PROJECT SERVICES - INSTRUMENT SUGGESTED SUPPLIER LIST

GENERAL NOTES

1- For all instruments, certificates of type of protection compatible with the respective classification of the area must be presented. If the wrapper requires certificates as to the type and degree of protection, both proofs must be explained in the same certificate. Certificates must be issued by INMETRO or accredited body.

2- All Instruments must have enclosures, the parts of which are exposed to the atmosphere are resistant to environmental conditions, including those produced by the process.

3- All Instruments must have a calibration certificate with traceability according to ISO 9000 standard.

4- The identification plates must be made of AISI 304 stainless steel permanently attached to the instruments with a tag and serial number. The serial number of the instrument, when possible, can be recorded on the body itself.

5- For all instruments must be presented type and degree of protection certificates, both proofs must be made explicit in the same certificate. Certificates must be issued by INMETRO or accredited body;

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NUMBER:	569-DB7B-AIC-714-005	CLIENT NR:	PRD-AIC-DSH-080

TITLE

LEVEL GAUGE

SHEET: 4 de 5

REV.: 0

GENERAL	1	INSTRUMENT TAG NUMBER			LG-9800250		
	2	SERVIÇE			LEVEL BT-7B-2 (HOT SIDE)		
	3	P&ID			7B-M-0-5-44		
	4	PIPE LINE	EQUIPMENT NUMBER		-	BT-7B-2	
	5	EQUIPMENT MATERIAL / PIPE			CARBON STEEL		
	6	AREA CLASSIFICATION			NOT CLASSIFIED		
	7	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CONF. NBR IEC 60529		
	8	CERTIFICATES			(SEE GENERAL NOTES 1, 5)		
	9						
DISPLAY	10	ASSEMBLY TYPE			MAGNETIC TRANSMISSION TYPE		
	11	CONNECTION MATERIAL			SS 316L		
	12	GUIDE TUBE MATERIAL			SS 316L		
	13	BUOY RESTING JOINT MATERIAL			HYDRAULIC CARDBOARD		
	14	BUOY MATERIAL			SS 316L		
	15	INDICATION TUBE MATERIAL			HERMEICALLY SEALED BOROSILICATE (IP68)		
	16	BUOY SCAN FIXERS MATERIAL			SCREWS ASTM A193 Gr.B8 / NUTS ASTM A 194 Gr. 8		
	17	TYPE INDICATION / COLOR			BICOLORES REEDS (YELLOW ANDBLACK)		
	18	INDICATION TUBE HOLDER MATERIAL			STAINLESS STEEL		
	19	DISTANCE BETWEEN PROCESS OUTLETS			4600 mm		
	20	VISIBLE DISTANCE			2500 mm		
	21	SCALE MATERIAL	GRADUATION		STAINLESS STEEL	METRIC (cm)	
	22	VISIBLE LOW LEVEL	VISIBLE HIGH LEVEL		1900 mm	4400 mm	
	23	CONNECTION PROCESS			FLG 1.1/2"		
	24	CLASS AND FACE			150# RF MSS-SP-6 (ASME B165)		
	25	PRECISION			± 10 mm		
	26	MOUNTING POSITION			HORIZONTAL	HORIZONTAL	
	27	HIGH LEVEL PERFORMANCE	LOW LEVEL PERFORMANCE		mm	mm	
	28						
ACCESSORIES	29	ELECTRICAL CONTACT	CONTACT CAPABILITY		NA	NA	
	30	CONTACT QUANTITY	ELECTRICAL CONNECTION		NA	NA	
	31	ENCLOSURE (IP)	TRANSMITTER		NA	NA	
	32	IDENTIFICATION PLATE			YES (SEE GENERAL NOTES 4)		
	33	DRAIN VALVE	VENT VALVE		NO	NO	
	34	HEATING / COOLING			NO		
	35	PAINTING			BY MANUFACTURER		
	36						
OPERATING CONDITIONS	37	FLUID	PHYSICAL STATUS		HOT WATER	LIQUID	
	38	MINIMUM PRESSURE	NORMAL	MAXIMUM	atm / atm	atm / bar-g	
	39	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	4,0 / 7,2	7,2 / °C	
	40	DESIGN PRESSURE	DESIGN TEMPERATURE		atm bar-g	-10 @ 40 °C	
	41	DENSITY @ OPERATING CONDITION			1000,1 kg/m³		
	42	VISCOSITY @ OPERATING CONDITION			1,57 Cp		
	43	FLUID CONDUCTIVITY			µS/cm²		
	44	INCRUSTATION			NO		
	45	SUSPENDED SOLIDS (%)			NO		
	46	MAXIMUM LOSS OF LOAD ALLOWED			- bar		
	47						
	48	MANUFACTURER			CONAULT		
	49	MODEL			810		

NOTES:

NUMBER:	569-DB7B-AIC-714-005	CLIENT NR:	PRD-AIC-DSH-080

TITLE

LEVEL GAUGE

SHEET: 5 de 5

REV.: 0

GENERAL	1	INSTRUMENT TAG NUMBER			LG-9800251		
	2	SERVIÇE			LEVEL BT-7B-2 (COLD SIDE)		
	3	P&ID			7B-M-0-5-44		
	4	PIPE LINE	EQUIPMENT NUMBER		-	BT-7B-2	
	5	EQUIPMENT MATERIAL / PIPE			CARBON STEEL		
	6	AREA CLASSIFICATION			NOT CLASSIFIED		
	7	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CONF. NBR IEC 60529		
	8	CERTIFICATES			(SEE GENERAL NOTES 1, 5)		
	9						
DISPLAY	10	ASSEMBLY TYPE			MAGNETIC TRANSMISSION TYPE		
	11	CONNECTION MATERIAL			SS 316L		
	12	GUIDE TUBE MATERIAL			SS 316L		
	13	BUOY RESTING JOINT MATERIAL			HYDRAULIC CARDBOARD		
	14	BUOY MATERIAL			SS 316L		
	15	INDICATION TUBE MATERIAL			HERMEICALLY SEALED BOROSILICATE (IP68)		
	16	BUOY SCAN FIXERS MATERIAL			SCREWS ASTM A193 Gr.B8 / NUTS ASTM A 194 Gr. 8		
	17	TYPE INDICATION / COLOR			BICOLORES REEDS (YELLOW ANDBLACK)		
	18	INDICATION TUBE HOLDER MATERIAL			STAINLESS STEEL		
	19	DISTANCE BETWEEN PROCESS OUTLETS			4600 mm		
	20	VISIBLE DISTANCE			2500 mm		
	21	SCALE MATERIAL	GRADUATION		STAINLESS STEEL	METRIC (cm)	
	22	VISIBLE LOW LEVEL	VISIBLE HIGH LEVEL		1900 mm	4400 mm	
	23	CONNECTION PROCESS			FLG 1.1/2"		
	24	CLASS AND FACE			150# RF MSS-SP-6 (ASME B165)		
	25	PRECISION			± 10 mm		
	26	MOUNTING POSITION			HORIZONTAL	HORIZONTAL	
	27	HIGH LEVEL PERFORMANCE	LOW LEVEL PERFORMANCE		mm	mm	
	28						
ACCESSORIES	29	ELECTRICAL CONTACT	CONTACT CAPABILITY		NA	NA	
	30	CONTACT QUANTITY	ELECTRICAL CONNECTION		NA	NA	
	31	ENCLOSURE (IP)	TRANSMITTER		NA	NA	
	32	IDENTIFICATION PLATE			YES (SEE GENERAL NOTES 4)		
	33	DRAIN VALVE	VENT VALVE		NO	NO	
	34	HEATING / COOLING			NO		
	35	PAINTING			BY MANUFACTURER		
	36						
OPERATING CONDITIONS	37	FLUID	PHYSICAL STATUS		COLD WATER	LIQUID	
	38	MINIMUM PRESSURE	NORMAL	MAXIMUM	atm / atm	atm	bar-g
	39	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	4,0 / 4,0	4,0	°C
	40	DESIGN PRESSURE	DESIGN TEMPERATURE		atm bar-g	-10 @ 40 °C	
	41	DENSITY @ OPERATING CONDITION			1000,1 kg/m³		
	42	VISCOSITY @ OPERATING CONDITION			1,57 Cp		
	43	FLUID CONDUCTIVITY			µS/cm²		
	44	INCRUSTATION			NO		
	45	SUSPENDED SOLIDS (%)			NO		
	46	MAXIMUM LOSS OF LOAD ALLOWED			- bar		
	47						
	48	MANUFACTURER			CONAULT		
	49	MODEL			810		

NOTES: