







DOC NUMBER:

569-DB7A-AIC-711-003

CLIENT NUMBER:

PRD-AIC-DSH-027

CLIENT:

TAKEDA/BAXALTA

PROJECT:

BURITI EPCVM PROJECT

DRUG PRODUCT -PCS - DATA SHEET **TEMPERATURE GAUGE**

2	26JAN2022	ISSUED FOR CONSTRUCTION UPDATED AS PER NOTES	MAB	MAF	RSP
1	17NOV2021	ISSUED FOR CONSTRUCTION UPDATED AS PER NOTES	MAB	MAF	RSP
0	13SEP2021	ISSUED FOR CONSTRUCTION	JHA	MAF	RSP
Α	31MAR2021	60% DD ISSUE	JHA	MAF	RSP
REV	DATE	DESCRIPTION	EXEC	CHECK	APPROV









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TITLE

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TEMPERATURE GAUGE

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Revision	Α	0	1	2	3	4	Revision	Α	0	1	2	3	4	Revision	Α	В	0	1	2	3
Page							Page							Page						
1	Х	Х	Х	Χ			26	Х	Х	Χ	Х			51						
2	Х	Х	Х	Χ			27	Х	Х	Х	Х			52						
3	Х	Х	Х	Χ			28	Х	Х	Χ	Х			53						
4	Х	Х	Х	Χ			29	Х	Χ	Χ	Х			54						
5	Х	Х	Х	Χ			30	Х	Х	Х	Х			55						
6	Х	Χ	Х	Χ			31	Х	Χ	Χ	Х			56						
7	Х	Х	Х	Χ			32	Х	Х	Χ	Х			57						
8	Х	Х	Х	Χ			33	Х	Х	Х	Х			58						
9	Х	Х	Х	Х			34	Х	Х	Х	Х			59						
10	Х	Х	Х	Х			35	Х	Х	Х	Х			60						
11	Х	Х	Х	Х			36	Х	Х	Х	Х			61						
12	Х	Х	Х	Х			37	Х	Х	Χ	Х			62						
13	Х	Х	Х	Χ			38	Х	Х	Х				63						
14	Х	Х	Х	Х			39	Х	Х					64						
15	Х	Х	Х	Χ			40							65						
16	Х	Х	Х	Х			41							66						
17	Х	Х	Х	Х			42							67						
18	Х	Х	Х	Х			43							68						
19	Х	Х	Х	Χ			44							69						
20	Х	Х	Х	Х			45							70						
21	Х	Х	Х	Χ			46							71						
22	Х	Х	Х	Х			47							72						
23	Х	Х	Х	Х			48							73						
24	Х	Х	Х	Х			49							74						

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TEMPERATURE GAUGE

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REFERENCE DOCUMENTS

7A-Z-0-2-01	P&I DIAGRAM - DRUG PRODUCT - BUFFER PREP
7A-Z-0-2-02	P&I DIAGRAM - DRUG PRODUCT - FORMULATION
7A-Z-0-2-04	P&I DIAGRAM - DRUG PRODUCT - FILLING LINE, LE-1100 - (WASH, DEPY, FILL, LYO, CAP)
7A-Z-0-2-05	P&I DIAGRAM - DRUG PRODUCT - DECONTAMINATION - AUTOCLAVE, AT-9002
7A-Z-0-2-06	P&I DIAGRAM - DRUG PRODUCT - AUTOCLAVE, AT-9001
7A-Z-0-2-08	P&I DIAGRAM - DRUG PRODUCT - LYOPHILIZER №1, LYO-1105
7A-Z-0-2-09	P&I DIAGRAM - DRUG PRODUCT - LYOPHILIZER №2, LYO-1106
7A-Z-0-2-24	P&I DIAGRAM - DRUG PRODUCT - WFI STILL - MES-6401
7A-Z-0-2-27	P&I DIAGRAM - DRUG PRODUCT - CLEAN STEAM GENERATOR - CSG-6501
PRD-AIC-LIS-009	DRUG PRODUCT - PCS - 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- Provide calibration certificate issued by INMETRO or by organ accredited by it.
- 2- The manufacturer shall provide "Calculation Memorial" of the resonance frequency according to "ASME PTC19.3 Part 3".
- 3- 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.
- 4- A revision of this document should be provided upon receipt of certified documents from suppliers.

1- REVISED AS PER INSTRUMENT LIST NUMBER PRD-AIC-LIS-010_B_PCS_INSTRUMENT_INDEX AND BACKLOG NUMBER 99000-184.0 2021.03.30 - A&IC DOCUMENTS - COMMENTS_REV.01

REVISION 1 - NOTES

1 - ACCORDING NEW ARQUITECTURE UPDATED

REVISION 2 - NOTES

- 1 ACCORDING TO LINE SPECIFICATION SS3 TO SS10
- 2 CANCELED INSTRUMENT: TI-110501
- 3 ADEQUATE TAG INSTRUMENT: TI-390203 TO TI-110203 / TI-640101 TO TI-640102









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REV.:

1 -		LIVATORE GAUGE						2		
	1	INSTRUMENT TAG NUMBER				7A-7	TI-110201			
1	2	SERVIÇE			C	CHILLED WAT	TER LOOP SUPPLY			
1	3	P&ID				7A-	-Z-0-2-04			
7	4	PIPE LINE	EQUIPMENT NUM	1BER	2"-GW0S-110202-CS1-CC -					
GENERAL		EQUIPMENT MATERIAL / PIPE	1		CARBON STEEL ASTM-A106 Gr.B					
3EN		AREA CLASSIFICATION			NOT CLASSIFIED					
•		ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CONF. NBR IEC 60529					
1	8	CERTIFICATES			(SEE GENERAL NOTES 1)					
1	9				(**************************************					
	10	TYPE			BIMETALLIC					
1	11	MOUNTING				L	.OCAL			
		DIAL DIAMETER			114 mm					
	13	SCALE COLOR	BACKGROUND CO	OLOR	BLACK		WHI	ΓΕ		
		PRECISION	1		1%	6 OF THE FIN	I IAL VALUE "RANGE"			
		MATERIAL CASE				304SS	POLISHED			
∃NT		RING TYPE	RING MATERIAL		BAYONE		3045	SS		
INSTRUMENT	_	ROD MATERIAL	DIAMETER		316SS		6 mi			
STR		STEM CONNECTION TO WELL		SITION	1/2" NPT (M)	ВОТТ			
Ž		MINIMUM SCALE	MAXIMUM		0 °C 300 °C					
		MICROMETRIC ADJUSTMENT C					YES			
		FRONT TYPE	WINDOWS		SOLID		GLASS SEG. TRA	NSP. MIN. 75%		
		ROD LENGTH "U"				BY MAN	IUFACTURER			
		FILLING	FLUID		NOT REQUI	RED	NOT REQ	UIRED		
	24	-			,.					
	25	SUPPLY					YES			
		MATERIAL				S	S1016			
	27	TYPE OF CONSTRUCTION			C	ONICAL MAC	HINED FROM A BAR			
		CONNECTION TO THE PROCES	SS			1.1/2", 150#,	FR, ASME B16.5			
1	29	CONNECTION TO THERMOMET	ER		1/2" NPT(F)					
1	30	FLANGE FACE FINISH			MSS SP-6					
	31	INSERTION LENGTH "U"			212 mm					
7	32	EXTENSION LENGTH "T"					35 mm			
WELL	33									
1	34									
1	35									
	36		82	77777777						
	37					74				
	38		T	U						
	39				U	Т				
_	40									
	41	FLUID	PHYSICAL STATU	<i>I</i> S	PROPYLENE G	GLYCOL	LIQU	ID		
NS	42	MINIMUM PRESSURE	MAXIMUM	,			bar-g			
0E/	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM				°C		
DNC	44	DESIGN PRESSURE	DESIGN TEMPER	ATURE	b	par-g		°C		
300	45	VISCOSITY @ OPERATING CON	IDITION				сР			
Ĭ	46	DENSITY @ OPERATING COND	ITION		kg/m³					
OPERATING CONDITIONS	47	SUSPENDED SOLIDS (%)			NOT					
OP	48	SOLIDIFIES AT ROOM TEMPERA	ATURE		NOT					
	49	MAXIMUM FLUID SPEED			m/s					
					ASCHCROFT OR SIMILAR					
	50	MANUFACTURER				ASCHCRO	FT OR SIMILAR			









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TEMPERATURE GAUGE

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16	IVIP	ERATURE GAUGE						2		
	1	INSTRUMENT TAG NUMBER				7A-	TI-110203	_		
	2	SERVIÇE			C	HILLED WAT	TER LOOP RETURN			
		P&ID				7A-	-Z-0-2-04			
1 /	4	PIPE LINE	EQUIPMENT NUM	IBER	2"-GW0R-110203-CS1-CC -					
ER/		EQUIPMENT MATERIAL / PIPE	<u> </u>		CARBON STEEL ASTM-A106 Gr.B					
GENERAL		AREA CLASSIFICATION			NOT CLASSIFIED					
		ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CONF. NBR IEC 60529					
	-	CERTIFICATES				. ,	ERAL NOTES 1)			
	9				(SEE GENERAL NOTES 1)					
		TYPE				BIN	IETALLIC			
		MOUNTING					OCAL			
		DIAL DIAMETER					14 mm			
		SCALE COLOR	BACKGROUND CO	OLOR	BLACK		WHI	TE		
		PRECISION				OF THE FIN	I VAL VALUE "RANGE"			
		MATERIAL CASE					POLISHED			
∃N7		RING TYPE	RING MATERIAL		BAYONE		3048	SS		
INSTRUMENT		ROD MATERIAL	DIAMETER		316SS		6 mi			
STR		STEM CONNECTION TO WELL		SITION	1/2" NPT (I					
N		MINIMUM SCALE	MAXIMUM		1/2" NPT (M) BOTTOM 0 °C 300 °C					
		MICROMETRIC ADJUSTMENT C			YES					
		FRONT TYPE	WINDOWS		SOLID GLASS SEG. TRANSP. MIN					
		ROD LENGTH "U"	1		002.2	BY MAN	IUFACTURER			
		FILLING	FLUID		NOT REQUIF		NOT REQ	IJIRED		
	24	7722770			71077124011		77077124			
		SUPPLY					YES			
		MATERIAL					SS1016			
	_	TYPE OF CONSTRUCTION			cc		HINED FROM A BAR			
		CONNECTION TO THE PROCES	:S				, FR, ASME B16.5			
		CONNECTION TO THERMOMET			1/2" NPT(F)					
		FLANGE FACE FINISH			MSS SP-6					
		INSERTION LENGTH "U"			212 mm					
7		EXTENSION LENGTH "T"			35 mm					
WELL	33									
_	34				<u> </u>					
	35									
	36		Q-	·						
	37				Anna Anna Inni	4				
	38		T	U						
	39					т				
	40					•				
	41	FLUID	PHYSICAL STATU	/S	PROPYLENE G	LYCOL	LIQU	ID		
S	_	MINIMUM PRESSURE	NORMAL	MAXIMUM	,			bar-g		
10/	43	MINIMUM TEMPERATURE	MAXIMUM				°C			
ION	44	DESIGN PRESSURE	DESIGN TEMPER	ATURE	bi	ar-g		C		
00	45	VISCOSITY @ OPERATING CON	IDITION				cР			
OPERATING CONDITIONS	46	DENSITY @ OPERATING COND	ITION				kg/m³			
RA.	47	SUSPENDED SOLIDS (%)			NOT					
OPE	48	SOLIDIFIES AT ROOM TEMPERA	ATURE				NOT			
	49	MAXIMUM FLUID SPEED			m/s					
	50	MANUFACTURER			ASCHCROFT OR SIMILAR					
	51	MODEL								
					<u> </u>					









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TEMPERATURE GAUGE

REV.:

	IVIP	ERATURE GAUGE						2		
	1	INSTRUMENT TAG NUMBER				7A-	TI-110502	_		
	2	SERVIÇE			CHILLED WATER LOOP SUPPLY FRON FREEZE DRYER					
		P&ID				7A-	-Z-0-2-08			
7		PIPE LINE	EQUIPMENT NUM	IBER	1/2"-GW0S-110518-CS1-CC -					
ERA	-	EQUIPMENT MATERIAL / PIPE			CARBON STEEL ASTM-A106 Gr.B					
GENERAL		AREA CLASSIFICATION			NOT CLASSIFIED					
0		ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CONF. NBR IEC 60529					
	-	CERTIFICATES			(SEE GENERAL NOTES 1)					
	9				(SEE GENERAL NOTES 1)					
		TYPE				BIN	METALLIC			
		MOUNTING					OCAL			
		DIAL DIAMETER					14 mm			
		SCALE COLOR	BACKGROUND CO	OI OR	BLACK		WHI			
		PRECISION	BACKOKOND O	<u> </u>		OF THE FIN	 NAL VALUE "RANGE"			
		MATERIAL CASE			176		S POLISHED			
INT		RING TYPE	RING MATERIAL		BAYONET		3045			
INSTRUMENT		ROD MATERIAL	DIAMETER		316SS		6 mi			
TRL		STEM CONNECTION TO WELL		NOTION		<i>A</i>)				
INS				SITION	1/2" NPT (M) BOTTOM					
		MINIMUM SCALE	MAXIMUM		0 °C 300 °C					
		MICROMETRIC ADJUSTMENT C			YES SOLID GLASS SEG. TRANSP. MIN.					
		FRONT TYPE	WINDOWS		SOLID	DV MAA		NSP. WIIN. 75%		
		ROD LENGTH "U"	I EL LUID		NOT DECLU		IUFACTURER	UDED.		
		FILLING	FLUID		NOT REQUIF	KED	NOT REQ	UIRED		
	24	OUDDLY.					\/F0			
		SUPPLY					YES			
	_	MATERIAL					SS1016			
		TYPE OF CONSTRUCTION	20				HINED FROM A BAR			
		CONNECTION TO THE PROCES					, FR, ASME B16.5			
		CONNECTION TO THERMOMET	EK		1/2" NPT(F) MSS SP-6					
		FLANGE FACE FINISH			MSS SP-6					
١. ا		INSERTION LENGTH "U"			212 mm 35 mm					
WELL		EXTENSION LENGTH "T"					35 mm			
2	33									
	34				П					
	35		_							
	36			77777777						
	37		T	U	Attended					
	38									
	39				U	Τ				
$\vdash\vdash$	40	ELUD	DHYSICAL STATI	18	BBODY THE O	I VCCI		1 D		
ا ي		FLUID MINIMUM PRESSURE	PHYSICAL STATU		PROPYLENE GI	LTCUL	LIQU			
Ιον			NORMAL	MAXIMUM	,			bar-g °C		
,TIO		MINIMUM TEMPERATURE	NORMAL	MAXIMUM			<u> </u>	-		
OPERATING CONDITIONS		DESIGN PRESSURE	DESIGN TEMPER	AIUKE	Da	ar-g		°C		
19/		VISCOSITY @ OPERATING COND					cP			
A TII		DENSITY @ OPERATING COND	IIION				kg/m³			
7ER.		SUSPENDED SOLIDS (%)	ATUDE		NOT					
Õ		SOLIDIFIES AT ROOM TEMPER	4 I UKE		NOT					
		MAXIMUM FLUID SPEED			m/s					
		MANUFACTURER			ASCHCROFT OR SIMILAR					
	51	MODEL								









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TEMPERATURE GAUGE

REV.:

'=	IVIP	ERATURE GAUGE						2	
	1	INSTRUMENT TAG NUMBER				7A-	TI-110503		
	2	SERVIÇE			CHILLED W		SUPPLY FRON FREE	ZE DRYER	
		P&ID					-Z-0-2-08		
71		PIPE LINE	EQUIPMENT NUM	IBER	3/4"-GW0S-110519-CS1-CC -				
GENERAL		EQUIPMENT MATERIAL / PIPE			CARBON STEEL ASTM-A106 Gr.B				
3EN		AREA CLASSIFICATION			NOT CLASSIFIED				
		ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CONF. NBR IEC 60529				
	8	CERTIFICATES			(SEE GENERAL NOTES 1)				
	9								
	<u> </u>	TYPE			BIMETALLIC				
		MOUNTING					LOCAL		
		DIAL DIAMETER					114 mm		
		SCALE COLOR	BACKGROUND C	OLOR	BLACK		WHI	TE	
	-	PRECISION					I NAL VALUE "RANGE		
		MATERIAL CASE					S POLISHED		
ΞΝΤ		RING TYPE	RING MATERIAL		BAYONE	 ≣T	304	SS	
INSTRUMENT		ROD MATERIAL	DIAMETER						
STR			CONNECTION PC	SITION	316SS 6 mm 1/2" NPT (M) BOTTOM				
Ž	_	MINIMUM SCALE	MAXIMUM		0 °C 300 °C				
	20	MICROMETRIC ADJUSTMENT O	I DF ZERO		YES				
		FRONT TYPE	WINDOWS		SOLID GLASS SEG. TRANSP. MIN.				
							NUFACTURER		
		FILLING	FLUID		NOT REQU	IRED	NOT REC	QUIRED	
	24		l					·	
	25	SUPPLY					YES		
	26	MATERIAL					SS1016		
	27	TYPE OF CONSTRUCTION			С	ONICAL MAC	CHINED FROM A BAR	?	
	28	CONNECTION TO THE PROCES	:S			1.1/2", 150#	t, FR, ASME B16.5		
	29	CONNECTION TO THERMOMET	ER		1/2" NPT(F)				
	30	FLANGE FACE FINISH			MSS SP-6				
	31	INSERTION LENGTH "U"			212 mm				
7.7	32	EXTENSION LENGTH "T"			35 mm				
WELL	33								
	34				_				
	35								
	36			777777777		_			
	37					-W-			
	38		Т	U					
	39				U	Т.			
	40								
	41	FLUID	PHYSICAL STATU	JS	PROPYLENE (GLYCOL	LIQI	JID	
SNC	42	MINIMUM PRESSURE	NORMAL	MAXIMUM	,			bar-g	
JITIC	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM				°C	
ONE	44	DESIGN PRESSURE	DESIGN TEMPER	ATURE		bar-g		°C	
S S	_	VISCOSITY @ OPERATING CON					сP		
OPERATING CONDITIONS	46	DENSITY @ OPERATING COND	ITION				kg/m³		
ERA	_	SUSPENDED SOLIDS (%)					NOT		
O O		SOLIDIFIES AT ROOM TEMPERA	ATURE				NOT		
	49	MAXIMUM FLUID SPEED			m/s				
		MANUFACTURER				ASCHCRO	OFT OR SIMILAR		
	51	MODEL							









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TEMPERATURE GAUGE

								2		
	1	INSTRUMENT TAG NUMBER				7A-7	TI-110504			
	2	SERVIÇE			CHILLED WATER LOOP RETURN					
	3	P&ID				7A-	Z-0-2-08			
¥	4	PIPE LINE	EQUIPMENT NUM	BER	2"-GW0R-110520-CS1-CC -					
SEIVENAL	5	EQUIPMENT MATERIAL / PIPE				CARBON STE	EL ASTM-A106 Gr.B			
	6	AREA CLASSIFICATION			NOT CLASSIFIED					
ı	7	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CONF. NBR IEC 60529					
	8	CERTIFICATES			(SEE GENERAL NOTES 1)					
ľ	9				1022 02					
	10	TYPE				BIM	ETALLIC			
	11	MOUNTING				L	OCAL			
ľ	12	DIAL DIAMETER				1	14 mm			
ľ	13	SCALE COLOR	BACKGROUND CO	OLOR	BLAC	K	WHITE			
ľ	14	PRECISION	•		1	1% OF THE FIN	IAL VALUE "RANGE"			
ľ	15	MATERIAL CASE				304SS	POLISHED			
İ	16	RING TYPE	RING MATERIAL		BAYON	ET	304SS			
1	17	ROD MATERIAL	DIAMETER		3168	S	6 mm			
	18	STEM CONNECTION TO WELL	CONNECTION PO	SITION	1/2" NPT	(M)	ВОТТОІ	И		
1	19	MINIMUM SCALE	MAXIMUM		0	°C	300 °C			
ľ	20	MICROMETRIC ADJUSTMENT C)F ZERO				YES			
ŀ	21	FRONT TYPE	WINDOWS		SOLID GLASS SEG. TRANSP. MIN. 7					
ŀ	22	ROD LENGTH "U"	1			BY MAN	UFACTURER			
ŀ	23	FILLING	FLUID		NOT REQU	JIRED	NOT REQU	IRED		
ŀ	24		1							
1	25	SUPPLY					YES			
ľ	26	MATERIAL				S	S1016			
ŀ	27	TYPE OF CONSTRUCTION			(CONICAL MAC	HINED FROM A BAR			
ŀ	28	CONNECTION TO THE PROCES	SS			1.1/2", 150#,	FR, ASME B16.5			
ŀ	29	CONNECTION TO THERMOMET	ER		1/2" NPT(F)					
ŀ	30	FLANGE FACE FINISH					SS SP-6			
ŀ	31	INSERTION LENGTH "U"					212 mm			
ا ب	32	EXTENSION LENGTH "T"					35 mm			
	33									
ŀ	34									
ŀ	35									
ŀ	36		877							
ŀ	37									
ľ	38		T	U						
ŀ	39				u	Т				
ľ	40									
1	41	FLUID	PHYSICAL STATU	'S	PROPYLENE	GLYCOL	LIQUID			
ŀ	42	MINIMUM PRESSURE	NORMAL	MAXIMUM	,			bar-g		
ŀ	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM				°C		
ŀ	44	DESIGN PRESSURE	DESIGN TEMPERA	ATURE	bar-g °C					
=	45	VISCOSITY @ OPERATING CON	NDITION				cP			
ŀ		DENSITY @ OPERATING COND					kg/m³			
ŀ		SUSPENDED SOLIDS (%)					NOT			
ŀ		SOLIDIFIES AT ROOM TEMPER	ATURE		NOT					
ŀ		MAXIMUM FLUID SPEED			m/s					
†	_	MANUFACTURER			ASCHCROFT OR SIMILAR					
- 1										

51 MODEL









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							2			
	1	INSTRUMENT TAG NUMBER			7A-7	TI-110507				
	2	SERVIÇE			CHILLED WATER LOOP	RETURN BY FREEZE L	DRYER			
	3	P&ID			7A-	Z-0-2-08				
AL A	4	PIPE LINE	EQUIPMENT NUM	MBER	3/4"-GW0R-110522-CS1-CC	-				
GENERAL	5	EQUIPMENT MATERIAL / PIPE			CARBON STEEL ASTM-A106 Gr.B					
GE	6	AREA CLASSIFICATION			NOT C	LASSIFIED				
	7	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CC	NF. NBR IEC 60529				
	8	CERTIFICATES			(SEE GENERAL NOTES 1)					
	9									
	10	TYPE			BIM	ETALLIC				
	11	MOUNTING			L	OCAL				
	12	DIAL DIAMETER			1	14 mm				
	13	SCALE COLOR	BACKGROUND C	OLOR	BLACK	WHITE				
	14	PRECISION			1% OF THE FIN	AL VALUE "RANGE"				
	15	MATERIAL CASE			304SS	POLISHED				
INSTRUMENT		RING TYPE	RING MATERIAL		BAYONET	304SS				
S		ROD MATERIAL	DIAMETER		316SS					
STR		STEM CONNECTION TO WELL		DSITION	1/2" NPT (M)	BOTTON	1			
Ž		MINIMUM SCALE	MAXIMUM		0 °C	300 °C				
	-	MICROMETRIC ADJUSTMENT O			0 °C 300 °C					
		FRONT TYPE	WINDOWS		SOLID GLASS SEG. TRANSP. MIN. 7					
		ROD LENGTH "U"				UFACTURER				
		FILLING	FLUID		NOT REQUIRED	NOT REQUI	RFD			
	24	I ILLINO	1 2010		NOTTEGOINED	NOTILEGO	T L D			
\dashv		SUPPLY				YES				
		MATERIAL				S1016				
		TYPE OF CONSTRUCTION				HINED FROM A BAR				
		CONNECTION TO THE PROCES	9			FR, ASME B16.5				
		CONNECTION TO THERMOMET			1/2" NPT(F)					
		FLANGE FACE FINISH			MSS SP-6					
		INSERTION LENGTH "U"			MSS SP-6 212 mm					
ار	-	EXTENSION LENGTH "T"			35 mm					
WELL	33	EXTENSION LENGTH T				00 111111				
_	34				<u> </u>					
	35									
	36			_						
	37			7777777						
	38		H	U						
	39									
	40				U					
\dashv		FLUID	PHYSICAL STATU	IS	PROPYLENE GLYCOL	LIQUID				
S		MINIMUM PRESSURE	NORMAL	MAXIMUM		2,400	bar-g			
OPERATING CONDITIONS		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	,		°C			
<u>ב</u>		DESIGN PRESSURE	DESIGN TEMPER		bar-g	I				
S S		VISCOSITY @ OPERATING CON			ļI	cP				
ა გ		DENSITY @ OPERATING COND				kg/m³				
\$		-	IIION							
担		SUSPENDED SOLIDS (%) SOLIDIFIES AT ROOM TEMPERA	ATLIDE		NOT					
0			TIUNL			NOT m/s				
\dashv	_	MAXIMUM FLUID SPEED			m/s ASCHCROFT OR SIMILAR					
		MANUFACTURER			ASCHURO	FI UK SIWILAK				
	51	MODEL								









TITLE

10 de 37 REV:

ΤE	MP	ERATURE GAUGE						10 de 37		
	1	INSTRUMENT TAG NUMBER			<u> </u>	74-	TI-110508	2		
		SERVIÇE			CHILLED WATER LOOP SUPPLY FRON FREEZE DRYER					
		P&ID			OFFICEED VI		-Z-0-2-08	ZE DIVIEN		
7		PIPE LINE	EQUIPMENT NUN	/RER	3/4"-GW0S-110523-CS1-CC -					
GENERAL		EQUIPMENT MATERIAL / PIPE	Laon MENT Non	MBER .	CARBON STEEL ASTM-A106 Gr.B					
EN		AREA CLASSIFICATION								
9		ENCLOSURE CLASSIFICATION			NOT CLASSIFIED					
		CERTIFICATES			IP 65 (MİN.) CONF. NBR IEC 60529					
	8	CERTIFICATES			(SEE GENERAL NOTES 1)					
	9	TYPE				DIA	METALLIC			
		MOUNTING					LOCAL			
	-									
		DIAL DIAMETER	I.,.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				114 mm			
		SCALE COLOR	BACKGROUND C	OLOR	BLAC		WHI			
		PRECISION					VAL VALUE "RANGE			
<u> </u>		MATERIAL CASE	1				S POLISHED			
MEN		RING TYPE	RING MATERIAL		BAYON		304			
INSTRUMENT		ROD MATERIAL	DIAMETER		316S	S	6 m	nm		
NS1		STEM CONNECTION TO WELL	CONNECTION PO	DSITION	1/2" NP1	. ,	ВОТТ			
_	19	MINIMUM SCALE	MAXIMUM		0	°C	300	°C		
	20	MICROMETRIC ADJUSTMENT C	F ZERO		YES					
	21	FRONT TYPE	WINDOWS		SOLI	D	GLASS SEG. TRA	ANSP. MIN. 75%		
	22	ROD LENGTH "U"				BY MAN	IUFACTURER			
	23	FILLING	FLUID		NOT REQ	UIRED	NOT REC	QUIRED		
	24									
	25	SUPPLY					YES			
	26	MATERIAL				5	SS1016			
	27	TYPE OF CONSTRUCTION			(CONICAL MAC	HINED FROM A BAF	?		
	28	CONNECTION TO THE PROCES	SS		1.1/2", 150#, FR, ASME B16.5					
	29	CONNECTION TO THERMOMET	ER		1/2" NPT(F)					
	30	FLANGE FACE FINISH			MSS SP-6					
	31	INSERTION LENGTH "U"			212 mm					
77	32	EXTENSION LENGTH "T"			35 mm					
WELL	33									
	34				П					
	35									
	36			777777777						
	37				Time mann					
	38		T	U						
	39				U	т				
	40				-					
	41	FLUID	PHYSICAL STATE	JS .	PROPYLENE	GLYCOL	LIQU	JID		
\S	42	MINIMUM PRESSURE	NORMAL	MAXIMUM	,			bar-g		
OPERATING CONDITIONS	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM				°C		
ND	44	DESIGN PRESSURE	DESIGN TEMPER	RATURE		bar-g	<u> </u>	°C		
S	45	VISCOSITY @ OPERATING COI			cP					
NG.		DENSITY @ OPERATING COND					kg/m³			
RA1		SUSPENDED SOLIDS (%)					NOT			
)PE		SOLIDIFIES AT ROOM TEMPER	ATURE				NOT			
_		MAXIMUM FLUID SPEED			nO1					
	_	MANUFACTURER			m/s ASCHCROFT OR SIMILAR					
		MODEL								
					l					









TITLE

SHEET:

TEMPERATURE GAUGE 11 de 37 REV.: 2

								2		
	1	INSTRUMENT TAG NUMBER				7A-	TI-110509			
	2	SERVIÇE			CHILLED	WATER LOOP	RETURN BY FREEZ	E DRYER		
	3	P&ID				7A-	-Z-0-2-08			
4/	4	PIPE LINE	EQUIPMENT NUM	IBER	1/2"-GW0R-110521-CS1-CC -					
ER	5	EQUIPMENT MATERIAL / PIPE	I		CARBON STEEL ASTM-A106 Gr.B					
GENERAL	6	AREA CLASSIFICATION			NOT CLASSIFIED					
	7	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CONF. NBR IEC 60529					
	8	CERTIFICATES			(SEE GENERAL NOTES 1)					
	9				(OLL OLNE NOTES 1)					
	10	TYPE				BIN	METALLIC			
	11	MOUNTING				I	OCAL			
	12	DIAL DIAMETER					14 mm			
	13	SCALE COLOR	BACKGROUND C	OLOR	BLAC	K	WHI	 ΓΕ		
	14	PRECISION			1	1% OF THE FII	I NAL VALUE "RANGE"	,		
	15	MATERIAL CASE								
ENT	16	RING TYPE	RING MATERIAL		BAYON	304SS POLISHED BAYONET 304SS				
UME	17	ROD MATERIAL	DIAMETER		316S	S	6 mi	m		
INSTRUMENT		STEM CONNECTION TO WELL	CONNECTION PC	SITION	1/2" NPT	(M)	ВОТТ	OM		
Ž		MINIMUM SCALE	MAXIMUM		0 °C 300 °C					
	20	MICROMETRIC ADJUSTMENT C	I OF ZERO		YES					
	21	FRONT TYPE	WINDOWS		SOLID GLASS SEG. TRANSP. MIN. :					
	22	ROD LENGTH "U"			BY MANUFACTURER					
	23	FILLING	FLUID		NOT REQU	JIRED	NOT REQ	UIRED		
	24									
	25	SUPPLY					YES			
	26	MATERIAL					SS1016			
	27	TYPE OF CONSTRUCTION			(CONICAL MAC	HINED FROM A BAR			
	28	CONNECTION TO THE PROCES	SS			1.1/2", 150#	, FR, ASME B16.5			
	29	CONNECTION TO THERMOMET	ER			1/2	?" NPT(F)			
	30	FLANGE FACE FINISH			MSS SP-6					
	31	INSERTION LENGTH "U"			212 mm					
17.	32	EXTENSION LENGTH "T"					35 mm			
WELL	33									
	34									
	35				-					
	36				,					
	37									
	38		T	U						
	39				U	Т				
	40					1				
	41	FLUID	PHYSICAL STATU	/S	PROPYLENE	GLYCOL	LIQU	'ID		
SN	42	MINIMUM PRESSURE	NORMAL	MAXIMUM	,			bar-g		
OPERATING CONDITIONS	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM				°C		
DNC	44	DESIGN PRESSURE	DESIGN TEMPER	ATURE		bar-g		°C		
305	45	VISCOSITY @ OPERATING COM				сP				
TINC	46	DENSITY @ OPERATING COND	ITION				kg/m³			
ERA.	47	SUSPENDED SOLIDS (%)			NOT					
OPE	48	SOLIDIFIES AT ROOM TEMPER.	ATURE				NOT			
	49	MAXIMUM FLUID SPEED					m/s			
	50	MANUFACTURER				ASCHCRO	OFT OR SIMILAR			
	51	MODEL								
NOT		•			-					









TITLE

SHEET:

12 de 37

TEMPERATURE GAUGE

REV.:

					2		
	1	INSTRUMENT TAG NUMBER		7A-	TI-110510		
	2	SERVIÇE		CHILLED WATER LOOP	RETURN BY FREEZE DRYER		
	3	P&ID		7A	-Z-0-2-08		
AL	4	PIPE LINE	EQUIPMENT NUMBER	3/4"-GW0R-110524-CS1-CC	-		
GENERAL	5	EQUIPMENT MATERIAL / PIPE		CARBON STEEL ASTM-A106 Gr.B			
GEN	6	AREA CLASSIFICATION		NOT CLASSIFIED			
	7	ENCLOSURE CLASSIFICATION		IP 65 (MÍN.) CONF. NBR IEC 60529			
	8	CERTIFICATES		(SEE GENERAL NOTES 1)			
	9						
	10	TYPE		BIMETALLIC			
	11	MOUNTING			LOCAL		
	12	DIAL DIAMETER		1	14 mm		
	13	SCALE COLOR	BACKGROUND COLOR	BLACK	WHITE		
	14	PRECISION		1% OF THE FI	NAL VALUE "RANGE"		
	15	MATERIAL CASE		304SS	S POLISHED		
ENT	16	RING TYPE	RING MATERIAL	BAYONET	304SS		
INSTRUMENT		ROD MATERIAL	DIAMETER	316SS	6 mm		
STR		STEM CONNECTION TO WELL	CONNECTION POSITION	1/2" NPT (M)	ВОТТОМ		
Ŋ		MINIMUM SCALE	MAXIMUM	0 ℃	300 °C		
	20	MICROMETRIC ADJUSTMENT C	I DF ZERO	YES			
	21	FRONT TYPE	WINDOWS	SOLID	GLASS SEG. TRANSP. MIN. 75%		
		ROD LENGTH "U"		BY MAN	I IUFACTURER		
		FILLING	FLUID	NOT REQUIRED	NOT REQUIRED		
	24	-					
	<u> </u>	SUPPLY			YES		
		MATERIAL		5	SS1016		
		TYPE OF CONSTRUCTION			HINED FROM A BAR		
		CONNECTION TO THE PROCES	SS	1.1/2", 150#	, FR, ASME B16.5		
	29	CONNECTION TO THERMOMET	ER	1/2	"NPT(F)		
	30	FLANGE FACE FINISH			SS SP-6		
	31	INSERTION LENGTH "U"			212 mm		
7	32	EXTENSION LENGTH "T"			35 mm		
WELL	33						
	34						
	35			-			
	36						
	37						
	38		T				
	39			U			
	40						
	41	FLUID	PHYSICAL STATUS	PROPYLENE GLYCOL	LIQUID		
NS	42	MINIMUM PRESSURE	NORMAL MAXIMUM	,	bar-g		
.0IT	43	MINIMUM TEMPERATURE	NORMAL MAXIMUM		℃		
ND	44	DESIGN PRESSURE	DESIGN TEMPERATURE	bar-g	°C		
300	45	VISCOSITY @ OPERATING CON	NDITION		cP		
TING	46	DENSITY @ OPERATING COND	ITION		kg/m³		
OPERATING CONDITIONS	47	SUSPENDED SOLIDS (%)			NOT		
OPE	48	SOLIDIFIES AT ROOM TEMPERA	ATURE		NOT		
	49	MAXIMUM FLUID SPEED			m/s		
	50	MANUFACTURER		ASCHCRO	DFT OR SIMILAR		
	51	MODEL					
NOT							









TITLE

ISHEET:

13 de 37

TEMPERATURE GAUGE

REV.:

16	IVIE	ERATURE GAUGE						2
	1	INSTRUMENT TAG NUMBER		7A-	TI-110601			
	<u> </u>	SERVIÇE			CHILLED WATER LOOP SUPPLY FRON LYO FREEZE DRYER			EEZE DRYER
		P&ID			0222		-Z-0-2-09	
7		PIPE LINE	EQUIPMENT NUM	MBER	2"-GW0S-110617-CS1-CC -			
ERA		EQUIPMENT MATERIAL / PIPE	<u> </u>				l EL ASTM-A106 Gr.B	
GENERAL		AREA CLASSIFICATION					CLASSIFIED	
"	<u> </u>	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CONF. NBR IEC 60529)
	8	CERTIFICATES			(SEE GENERAL NOTES 1)			
	9	OE/ (7/1/ 70/ (7/20				(022 027	2701271072077	
		TYPE				BIN	METALLIC	
	_	MOUNTING					LOCAL	
		DIAL DIAMETER					14 mm	
		SCALE COLOR	BACKGROUND C	OI OR	BLACI		 Г <u>w</u> ні	TF
		PRECISION	BACKOKOONDO	OLON			l NAL VALUE "RANGE	
		MATERIAL CASE			,		POLISHED	
INT		RING TYPE	BAYON		304	cc		
JME		ROD MATERIAL	RING MATERIAL DIAMETER		316SS		6 m	
INSTRUMENT		STEM CONNECTION TO WELL		DOLTION	1/2" NPT		BOTT	
INS		MINIMUM SCALE	MAXIMUM	JSITION	1/2 NF1	°C	300	
		MICROMETRIC ADJUSTMENT C	0					
					YES			ANIOD MINI 750/
		FRONT TYPE ROD LENGTH "U"	WINDOWS		SOLIE		GLASS SEG. TRA	ANSP. WIIN. 75%
							IUFACTURER	
		FILLING	FLUID		NOT REQU	IIKEU	NOT REC	ZUIKED
	24	SUPPLY					YES	
		MATERIAL TYPE OF CONSTRUCTION					SS1016	
		TYPE OF CONSTRUCTION CONNECTION TO THE PROCESS					HINED FROM A BAF	(
		CONNECTION TO THE PROCESS					, FR, ASME B16.5	
		CONNECTION TO THERMOMET	ER				?" NPT(F)	
		FLANGE FACE FINISH				IVI	SS SP-6 212 mm	
١.		INSERTION LENGTH "U" EXTENSION LENGTH "T"			35 mm			
WELL		EXTENSION LENGTH T			35 min			
Z	33							
	34 35							
	36		O+					
	37				Yana amam			
	38		T	U				
	39					_		
	40							
	_	FLUID	PHYSICAL STATU	JS	PROPYLENE	GLYCOL	LIQI	JID
S)		MINIMUM PRESSURE	NORMAL	MAXIMUM	,			bar-g
70/7		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	· · · · · · · · · · · · · · · · · · ·			.€
NDI		DESIGN PRESSURE	DESIGN TEMPER	l	<u> </u>	bar-g		°C
S		VISCOSITY @ OPERATING COM				<u>-</u>	l cP	
9NI.		DENSITY @ OPERATING COND					kg/m³	
RAT		SUSPENDED SOLIDS (%)					NOT	
OPERATING CONDITIONS		SOLIDIFIES AT ROOM TEMPERA	ATURE				NOT	
]		MAXIMUM FLUID SPEED					m/s	
		MANUFACTURER				ASCHCRC	OFT OR SIMILAR	
		MODEL						
ш		I						









TITLE

14 de 37

MΡ	PERATURE GAUGE						14 de 37 REV.: 2
1	INSTRUMENT TAG NUMBER			7A-TI-110602			_
	SERVICE			CHILLED WATER LOOP SUPPLY FRON LYO FREEZE DRYER			REEZE DRYER
	-						
		EQUIPMENT NUM	MBER				
				,,,			<u>'</u>
-	CERTIFICATES			(SEE GENERAL NOTES 1)			
	TVDE				DIM	IETALLIC	
-							
		Interconcues	0/ 00	B. 40			
		BACKGROUND C	OLOR				
				1			: "
						6 m	nm
		CONNECTION PC	DSITION			ВОТТ	ГОМ
19	MINIMUM SCALE	MAXIMUM		0	℃	300	°C
20	MICROMETRIC ADJUSTMENT C	OF ZERO		YES			
21	FRONT TYPE	SOLIE)	GLASS SEG. TRA	ANSP. MIN. 75%		
22	ROD LENGTH "U"		BY MAN	UFACTURER			
23	FILLING	NOT REQU	IIRED	NOT REC	QUIRED		
24							
25	SUPPLY					YES	
26	MATERIAL				S	S1016	
27	TYPE OF CONSTRUCTION			C	ONICAL MAC	HINED FROM A BAF	?
28	CONNECTION TO THE PROCES	SS			1.1/2", 150#,	FR, ASME B16.5	
29	CONNECTION TO THERMOMET	ER			1/2	" NPT(F)	
30	FLANGE FACE FINISH				MS	SS SP-6	
31	INSERTION LENGTH "U"			212 mm			
32	EXTENSION LENGTH "T"					35 mm	
33							
34							
35				-			
36	-		7777777				
37	-						
38	-	T	U				
39	-			u l	т		
40	-						
41	FLUID	PHYSICAL STATU	JS	PROPYLENE	GLYCOL	LIQI	UID
	MINIMUM PRESSURE	NORMAL	MAXIMUM	,			bar-g
42		1	1.443/11/11/4				°C
	MINIMUM TEMPERATURE	NORMAL	MAXIMUM				C
43		NORMAL DESIGN TEMPER			bar-g		°C
43 44	MINIMUM TEMPERATURE	DESIGN TEMPER			bar-g	cP	
43 44 45	MINIMUM TEMPERATURE DESIGN PRESSURE	DESIGN TEMPER			bar-g	cP kg/m³	
43 44 45 46	MINIMUM TEMPERATURE DESIGN PRESSURE VISCOSITY @ OPERATING CON	DESIGN TEMPER			bar-g		
43 44 45 46 47	MINIMUM TEMPERATURE DESIGN PRESSURE VISCOSITY @ OPERATING COND	DESIGN TEMPER NDITION DITION			bar-g	kg/m³	
43 44 45 46 47 48	MINIMUM TEMPERATURE DESIGN PRESSURE VISCOSITY @ OPERATING COND DENSITY @ OPERATING COND SUSPENDED SOLIDS (%)	DESIGN TEMPER NDITION DITION			bar-g	kg/m³ NOT	
43 44 45 46 47 48 49	MINIMUM TEMPERATURE DESIGN PRESSURE VISCOSITY @ OPERATING COND DENSITY @ OPERATING COND SUSPENDED SOLIDS (%) SOLIDIFIES AT ROOM TEMPER	DESIGN TEMPER NDITION DITION				kg/m³ NOT	
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 33 33 34 35 36 37 37 37 37 37 37 37 37 37 37 37 37 37	2 SERVIÇE 3 P&ID 4 PIPE LINE 5 EQUIPMENT MATERIAL / PIPE 6 AREA CLASSIFICATION 7 ENCLOSURE CLASSIFICATION 8 CERTIFICATES 9 10 TYPE 11 MOUNTING 12 DIAL DIAMETER 13 SCALE COLOR 14 PRECISION 15 MATERIAL CASE 16 RING TYPE 17 ROD MATERIAL 18 STEM CONNECTION TO WELL 19 MINIMUM SCALE 20 MICROMETRIC ADJUSTMENT OF 21 FRONT TYPE 22 ROD LENGTH "U" 23 FILLING 24 25 SUPPLY 26 MATERIAL 27 TYPE OF CONSTRUCTION 28 CONNECTION TO THE PROCES 29 CONNECTION TO THERMOMET 30 FLANGE FACE FINISH 31 INSERTION LENGTH "U" 32 EXTENSION LENGTH "U" 33 34 35 36 37 38 39 40	1	1	INISTRUMENT TAG NUMBER CHILLED WAT	INSTRUMENT TAG NUMBER	INSTRUMENT TAG NUMBER









TITLE

ISHEET:

15 de 37

TEMPERATURE GAUGE

REV.: **2**

					2		
	1	INSTRUMENT TAG NUMBER		7A-	TI-110603		
	2	SERVIÇE		CHILLED WATER LOOP SUI	PPLY FRON LYO FREEZE DRYER		
	3	P&ID		7A	-Z-0-2-09		
AL	4	PIPE LINE	EQUIPMENT NUMBER	3/4"-GW0S-110619-CS1-CC	-		
GENERAL	5	EQUIPMENT MATERIAL / PIPE		CARBON STEEL ASTM-A106 Gr.B			
GEN	6	AREA CLASSIFICATION		NOT CLASSIFIED			
	7	ENCLOSURE CLASSIFICATION		IP 65 (MÍN.) CONF. NBR IEC 60529			
	8	CERTIFICATES		(SEE GENERAL NOTES 1)			
	9						
	10	TYPE		BIMETALLIC			
	11	MOUNTING			OCAL		
	12	DIAL DIAMETER		1	14 mm		
	13	SCALE COLOR	BACKGROUND COLOR	BLACK	WHITE		
	14	PRECISION		1% OF THE FI	NAL VALUE "RANGE"		
	15	MATERIAL CASE		304\$\$	S POLISHED		
≡NT	16	16 RING TYPE RING MATERIAL		BAYONET	304SS		
INSTRUMENT		ROD MATERIAL	DIAMETER	316SS	6 mm		
STR		STEM CONNECTION TO WELL	CONNECTION POSITION	1/2" NPT (M)	ВОТТОМ		
Ŋ		MINIMUM SCALE	MAXIMUM	0 ℃	300 °C		
	20	MICROMETRIC ADJUSTMENT C	I DF ZERO	YES			
	21	FRONT TYPE	WINDOWS	SOLID	GLASS SEG. TRANSP. MIN. 75%		
		ROD LENGTH "U"		BY MAN	I IUFACTURER		
		FILLING	FLUID	NOT REQUIRED	NOT REQUIRED		
	24	-	-		, , , , , , , , , , , , , , , , , , ,		
		SUPPLY			YES		
		MATERIAL			SS1016		
		TYPE OF CONSTRUCTION			HINED FROM A BAR		
		CONNECTION TO THE PROCES	SS	1.1/2", 150#	, FR, ASME B16.5		
		CONNECTION TO THERMOMET			"NPT(F)		
	30	FLANGE FACE FINISH			SS SP-6		
		INSERTION LENGTH "U"			212 mm		
7:	32	EXTENSION LENGTH "T"			35 mm		
WELL	33						
	34			ı			
	35						
	36						
	37						
	38		T				
	39			U			
	40						
	41	FLUID	PHYSICAL STATUS	PROPYLENE GLYCOL	LIQUID		
۸S	42	MINIMUM PRESSURE	NORMAL MAXIMUM	,	bar-g		
710	43	MINIMUM TEMPERATURE	NORMAL MAXIMUM		°C		
INDI	44	DESIGN PRESSURE	DESIGN TEMPERATURE	bar-g	°C		
00 (VISCOSITY @ OPERATING COM	NDITION		cP		
JNG	46	DENSITY @ OPERATING COND	ITION		kg/m³		
RAI	47	SUSPENDED SOLIDS (%)			NOT		
OPERATING CONDITIONS		SOLIDIFIES AT ROOM TEMPER	ATURE		NOT		
		MAXIMUM FLUID SPEED			m/s		
	50	MANUFACTURER		ASCHCRO	PFT OR SIMILAR		
		MODEL					
NOT		l .		<u> </u>			









TITLE

SHEET:

TEMPERATURE GAUGE

REV.: **2**

16 de 37

-	••••	ENATORE GADGE			2	
	1	INSTRUMENT TAG NUMBER		7A-	TI-110604	
	2	SERVIÇE		CHILLED WATER LOOP RETURN BY LYO FREEZE DRYER		
	3	P&ID		7A	-Z-0-2-09	
7	4	PIPE LINE	EQUIPMENT NUMBER	2"-GW0R-110620-CS1-CC -		
GENERAL	5	EQUIPMENT MATERIAL / PIPE	I	CARBON STE	I EL ASTM-A106 Gr.B	
3EN		AREA CLASSIFICATION		NOT	CLASSIFIED	
		ENCLOSURE CLASSIFICATION		ļ	ONF. NBR IEC 60529	
	8	CERTIFICATES		(SEE GENERAL NOTES 1)		
	9			(5-2-5-)		
	_	TYPE		BIN	METALLIC	
		MOUNTING			LOCAL	
		DIAL DIAMETER			14 mm	
		SCALE COLOR	BACKGROUND COLOR	BLACK	WHITE	
		PRECISION	Briorieria de Corre		 NAL VALUE "RANGE"	
		MATERIAL CASE			S POLISHED	
۲		RING TYPE	RING MATERIAL	BAYONET	304SS	
INSTRUMENT		ROD MATERIAL	DIAMETER	316SS	6 mm	
TR		STEM CONNECTION TO WELL		1/2" NPT (M)	BOTTOM	
NS.		MINIMUM SCALE		0 °C	300 °C	
			MAXIMUM	0 0		
		MICROMETRIC ADJUSTMENT C		20112	YES	
		FRONT TYPE	WINDOWS	SOLID	GLASS SEG. TRANSP. MIN. 75%	
		ROD LENGTH "U"	Lee		IUFACTURER	
	_	FILLING	FLUID	NOT REQUIRED	NOT REQUIRED	
	24					
		SUPPLY			YES	
		MATERIAL			SS1016	
		TYPE OF CONSTRUCTION			HINED FROM A BAR	
	28	CONNECTION TO THE PROCES	SS	1.1/2", 150#	, FR, ASME B16.5	
		CONNECTION TO THERMOMET	ER		" NPT(F)	
		FLANGE FACE FINISH		M-	SS SP-6	
		INSERTION LENGTH "U"		212 mm		
WELL	32	EXTENSION LENGTH "T"		35 mm		
×	33					
	34					
	35					
	36					
	37			Manney Annual Ma		
	38		1 0			
	39					
	40		ı			
1	41	FLUID	PHYSICAL STATUS	PROPYLENE GLYCOL	LIQUID	
SNC		MINIMUM PRESSURE	NORMAL MAXIMUM	,	bar-g	
ĮĘ.		MINIMUM TEMPERATURE	NORMAL MAXIMUM		℃	
ONE		DESIGN PRESSURE	DESIGN TEMPERATURE	bar-g	°C	
G C		VISCOSITY @ OPERATING CON			cP	
N.	46	DENSITY @ OPERATING COND	ITION		kg/m³	
OPERATING CONDITIONS		SUSPENDED SOLIDS (%)			NOT	
9	48	SOLIDIFIES AT ROOM TEMPER.	ATURE		NOT	
	49	MAXIMUM FLUID SPEED			m/s	
	50	MANUFACTURER		ASCHCRO	PFT OR SIMILAR	
	51	MODEL				









TITLE

17 de 37

TEMPERATURE GAUGE

							2
	1	INSTRUMENT TAG NUMBER			7A-TI-110607		
	2	SERVIÇE			CHILLED WATER LOOP RETURN BY LYO FREEZE DRYER		
	3	P&ID			7/	A-Z-0-2-09	
ΆL	4	PIPE LINE	EQUIPMENT NUM	1BER	3/4"-GW0R-110622-CS1-CC -		
GENERAL	5	EQUIPMENT MATERIAL / PIPE	•		CARBON STEEL ASTM-A106 Gr.B		
GEI	6	AREA CLASSIFICATION			NOT	CLASSIFIED	
	7	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) C	ONF. NBR IEC 60529	
	8	CERTIFICATES			(SEE GEI	NERAL NOTES 1)	
	9						
	10	TYPE			Bli	METALLIC	
	11	MOUNTING				LOCAL	
	12	DIAL DIAMETER				114 mm	
	13	SCALE COLOR	BACKGROUND C	OLOR	BLACK	WHITE	E
	14	PRECISION			1% OF THE FI	NAL VALUE "RANGE"	
	15	MATERIAL CASE			304S	S POLISHED	
ENT	16	RING TYPE	RING MATERIAL		BAYONET	304\$3	S
INSTRUMENT	17	ROD MATERIAL	DIAMETER		316SS	6 mm	1
STR	18	STEM CONNECTION TO WELL	CONNECTION PC	SITION	1/2" NPT (M)	ВОТТС	DM .
×	19 MINIMUM SCALE MAXIMUM				0 °C	300 °C	
	20	MICROMETRIC ADJUSTMENT C	I DF ZERO			YES	
	21	FRONT TYPE	WINDOWS		SOLID GLASS SEG. TRANSP. MIN. 759		
	22	ROD LENGTH "U"			BY MA	NUFACTURER	
	23	FILLING	FLUID		NOT REQUIRED	NOT REQU	JIRED
	24						
	25	SUPPLY				YES	
	26	MATERIAL				SS1016	
	27	TYPE OF CONSTRUCTION			CONICAL MAG	CHINED FROM A BAR	
	28	CONNECTION TO THE PROCESS			1.1/2", 150	#, FR, ASME B16.5	
	29	CONNECTION TO THE TROCESS CONNECTION TO THE TROCESS			1/	'2" NPT(F)	
	30	FLANGE FACE FINISH			Λ	ISS SP-6	
	31	INSERTION LENGTH "U"				212 mm	
7	32	EXTENSION LENGTH "T"				35 mm	
WELL	33						
	34						
	35						
	36			777777			
	37						
	38		T	U			
	39				u T		
	40						
	41	FLUID	PHYSICAL STATU	JS	PROPYLENE GLYCOL	LIQUII	D
NS	42	MINIMUM PRESSURE	NORMAL	MAXIMUM	,		bar-g
.0IT	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM		1	°C
ND	44	DESIGN PRESSURE	DESIGN TEMPER	ATURE	bar-g	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
300	45	VISCOSITY @ OPERATING CON	IDITION			cР	
OPERATING CONDITIONS	46	DENSITY @ OPERATING COND	ITION			kg/m³	
RA.	47	SUSPENDED SOLIDS (%)				NOT	
OPE	48	SOLIDIFIES AT ROOM TEMPERA	ATURE			NOT	
<u> </u>	49	MAXIMUM FLUID SPEED				m/s	
	50	MANUFACTURER			ASCHCR	OFT OR SIMILAR	
	51	MODEL					
		<u> </u>			ļ		









TITLE

18 de 37

TEMPERATURE GAUGE

								2
	1	INSTRUMENT TAG NUMBER				7A-T	T-110608	
	2	SERVIÇE			CHILLED WATER	LOOP SUF	PPLY FRON LYO FRE	EZE DRYER
	3	P&ID				7A-2	Z-0-2-09	
ΑΓ	4	PIPE LINE	EQUIPMENT NUN	MBER	3/4"-GW0S-110623-0	CS1-CC	-	
SENERAL	5	EQUIPMENT MATERIAL / PIPE			CARBON STEEL ASTM-A106 Gr.B			
GE/	6	AREA CLASSIFICATION				NOT C	LASSIFIED	
	7	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CONF. NBR IEC 60529			
	8	CERTIFICATES			(SEE GENERAL NOTES 1)			
	9							
	10	TYPE			BIMETALLIC			
	11	MOUNTING				L	OCAL	
	12	DIAL DIAMETER				1:	14 mm	
	13	SCALE COLOR	BACKGROUND C	OLOR	BLACK		WHIT	Έ
	14	PRECISION	<u> </u>		1% O	F THE FIN	AL VALUE "RANGE"	
	15	MATERIAL CASE		304SS	POLISHED			
≡NT	16	RING TYPE	RING MATERIAL		BAYONET		304S	S
UME		ROD MATERIAL	DIAMETER		316SS		6 mn	า
INSTRUMENT		STEM CONNECTION TO WELL	CONNECTION PC	DSITION	1/2" NPT (M)		ВОТТО	
ž		MINIMUM SCALE	MAXIMUM		0	I	300 °	
		MICROMETRIC ADJUSTMENT C			<u> </u>		YES	
		FRONT TYPE	windows		SOLID GLASS SEG. TRANSP. MIN. 75%			
		ROD LENGTH "U"	BY MANUFACTURER			VOI . IVIII V. 1070		
		FILLING	FLUID		NOT REQUIRE		NOT REQ	IIIREN
	24	I ILLING	I LOID		NOT KEQUIKE		NOTALQ	UINLD
	\vdash	SUPPLY					YES	
		MATERIAL			\$1016			
		TYPE OF CONSTRUCTION			COM		HINED FROM A BAR	
							FR, ASME B16.5	
		CONNECTION TO THE PROCESS CONNECTION TO THERMOMETER			1.		•	
		FLANGE FACE FINISH	LN				" NPT(F) SS SP-6	
		INSERTION LENGTH "U"					212 mm	
		EXTENSION LENGTH "T"					35 mm	
WELL	32	LXTENSION LENGTH T					33 111111	
_								
	34 35				П			
			_					
	36			777777777]		
	37		T	U	A	2		
	38							
	39					-		
	40	ELLID	DUVOICAL OTAT	10	DDODY/ ENE OLY	/CO/ I	110111	ID.
S		FLUID	PHYSICAL STATU		PROPYLENE GLY	COL	LIQUI	
OPERATING CONDITIONS		MINIMUM PRESSURE	NORMAL	MAXIMUM	,			bar-g
T/O	_	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	<u> </u>			°C
ő		DESIGN PRESSURE	DESIGN TEMPER	AIUKE	bar-			С
9		VISCOSITY @ OPERATING CON					cP	
47//		DENSITY @ OPERATING COND	ITION				kg/m³	
ZER,		SUSPENDED SOLIDS (%)					NOT	
9		SOLIDIFIES AT ROOM TEMPER	ATURE				NOT	
		MAXIMUM FLUID SPEED					m/s	
	50	MANUFACTURER			,	ASCHCRO	FT OR SIMILAR	
	51	MODEL						









TITLE

19 de 37

REV.: **TEMPERATURE GAUGE** 2 INSTRUMENT TAG NUMBER 7A-TI-110609 SERVIÇE CHILLED WATER LOOP RETURN BY LYO FREEZE DRYER 3 P&ID 7A-Z-0-2-09 PIPE LINE **EQUIPMENT NUMBER** 1/2"-GW0R-110621-CS1-CC GENERAL EQUIPMENT MATERIAL / PIPE CARBON STEEL ASTM-A106 Gr.B AREA CLASSIFICATION NOT CLASSIFIED IP 65 (MÍN.) CONF. NBR IEC 60529 **ENCLOSURE CLASSIFICATION** CERTIFICATES (SEE GENERAL NOTES 1) TYPE **BIMETALLIC** 10 MOUNTING I OCAL 11 DIAL DIAMETER 114 mm SCALE COLOR BACKGROUND COLOR BLACK WHITE 13 14 PRECISION 1% OF THE FINAL VALUE "RANGE" MATERIAL CASE 304SS POLISHED 15 NSTRUMENT RING TYPE RING MATERIAL **BAYONET** 304SS 16 ROD MATERIAL DIAMETER 316SS 6 mm 17 18 STEM CONNECTION TO WELL CONNECTION POSITION 1/2" NPT (M) воттом MINIMUM SCALE MAXIMUM 300 °C 19 0 MICROMETRIC ADJUSTMENT OF ZERO YES FRONT TYPE WINDOWS GLASS SEG. TRANSP. MIN. 75% SOLID 21 22 ROD LENGTH "U" BY MANUFACTURER FILLING FLUID NOT REQUIRED NOT REQUIRED 23 25 SUPPLY YES 26 MATERIAL SS1016 27 TYPE OF CONSTRUCTION CONICAL MACHINED FROM A BAR 28 CONNECTION TO THE PROCESS 1.1/2", 150#, FR, ASME B16.5 CONNECTION TO THERMOMETER 1/2" NPT(F) 29 30 FLANGE FACE FINISH MSS SP-6 INSERTION LENGTH "U" 212 mm 31 EXTENSION LENGTH "T" 32 35 mm NELL 33 34 35 36 37 38 39 40 PHYSICAL STATUS PROPYLENE GLYCOL LIQUID 41 MINIMUM PRESSURE NORMAL MAXIMUM 42 bar-g *OPERATING CONDITIONS* MINIMUM TEMPERATURE NORMAL MAXIMUM 43 °C DESIGN TEMPERATURE 44 DESIGN PRESSURE bar-g °C 45 VISCOSITY @ OPERATING CONDITION сР 46 DENSITY @ OPERATING CONDITION kg/m³ SUSPENDED SOLIDS (%) NOT 47 SOLIDIFIES AT ROOM TEMPERATURE NOT 48 MAXIMUM FLUID SPEED m/s MANUFACTURER ASCHCROFT OR SIMILAR 50

NOTES:

51

MODEL









TITLE

20 de 37

TEMPERATURE GAUGE

							2
	1	INSTRUMENT TAG NUMBER			7.	A-TI-110610	
	2	SERVIÇE			CHILLED WATER LOOP	RETURN BY LYO FREEZ	E DRYER
	3	P&ID			7	7A-Z-0-2-09	
AL	4	PIPE LINE	EQUIPMENT NUM	BER	3/4"-GW0R-110624-CS1-CC -		
GENERAL	5	EQUIPMENT MATERIAL / PIPE			CARBON STEEL ASTM-A106 Gr.B		
ЗE	6	AREA CLASSIFICATION			NOT CLASSIFIED		
	7	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CONF. NBR IEC 60529		
	8	CERTIFICATES			(SEE GENERAL NOTES 1)		
	9						
	10	TYPE			Е	BIMETALLIC	
	11	MOUNTING				LOCAL	
	12	DIAL DIAMETER				114 mm	
	13	SCALE COLOR	BACKGROUND CO	OLOR	BLACK	WHITE	
	14	PRECISION	•		1% OF THE	FINAL VALUE "RANGE"	
L	15	MATERIAL CASE			304	SS POLISHED	
ENJ	16	RING TYPE	RING MATERIAL		BAYONET	304SS	
Ž	17	ROD MATERIAL	DIAMETER		316SS	6 mm	
INSTRUMENT	18	STEM CONNECTION TO WELL	CONNECTION PO	SITION	1/2" NPT (M)	BOTTON	1
<	19	MINIMUM SCALE	MAXIMUM		0 °C	300 °C	
	20	MICROMETRIC ADJUSTMENT C	F ZERO			YES	
	21	FRONT TYPE	WINDOWS		SOLID GLASS SEG. TRANSP. MIN. 75		
	22	ROD LENGTH "U"	•		BY M.	ANUFACTURER	
	23	FILLING	FLUID		NOT REQUIRED	NOT REQUI	RED
	24						
	25	SUPPLY				YES	
	26	MATERIAL				SS1016	
	27	TYPE OF CONSTRUCTION			CONICAL MA	ACHINED FROM A BAR	
	28	CONNECTION TO THE PROCESS			1.1/2", 15	0#, FR, ASME B16.5	
	29	CONNECTION TO THERMOMET	ER			1/2" NPT(F)	
	30	FLANGE FACE FINISH				MSS SP-6	
	31	INSERTION LENGTH "U"				212 mm	
77:	32	EXTENSION LENGTH "T"				35 mm	
WELL	33						
	34						
	35						
	36			77777777			
	37						
	38		Т	U			
	39	-					
	40						
		FLUID	PHYSICAL STATU		PROPYLENE GLYCOL	LIQUID	
SNC		MINIMUM PRESSURE	NORMAL	MAXIMUM	,		bar-g
JITI		MINIMUM TEMPERATURE	NORMAL	MAXIMUM			°C
ONE		DESIGN PRESSURE	DESIGN TEMPERA	ATURE	bar-g	°C	
<i>16 C</i>		VISCOSITY @ OPERATING CON				cP	
4 <i>TI</i> N		DENSITY @ OPERATING COND	ITION			kg/m³	
OPERATING CONDITIONS		SUSPENDED SOLIDS (%)				NOT	
9		SOLIDIFIES AT ROOM TEMPER	ATURE			NOT	
	_	MAXIMUM FLUID SPEED				m/s	
	50	MANUFACTURER			ASCHCROFT OR SIMILAR		
		MODEL					









TITLE

21 de 37 REV.:

TEMPERATURE GAUGE

2 INSTRUMENT TAG NUMBER 7A-TI-380202 SERVIÇE CHILLED WATER LOOP SUPPLY 3 P&ID 7A-Z-0-2-01 PIPE LINE **EQUIPMENT NUMBER** 1"-GW0S-9800188-CS1-CC GENERAL EQUIPMENT MATERIAL / PIPE CARBON STEEL ASTM-A106 Gr.B AREA CLASSIFICATION NOT CLASSIFIED **ENCLOSURE CLASSIFICATION** IP 65 (MÍN.) CONF. NBR IEC 60529 CERTIFICATES (SEE GENERAL NOTES 1) TYPE **BIMETALLIC** 10 MOUNTING I OCAL 11 DIAL DIAMETER 114 mm SCALE COLOR BACKGROUND COLOR BLACK WHITE 13 14 PRECISION 1% OF THE FINAL VALUE "RANGE" MATERIAL CASE 304SS POLISHED 15 NSTRUMENT RING TYPE RING MATERIAL **BAYONET** 304SS 16 ROD MATERIAL DIAMETER 316SS 6 mm 17 18 STEM CONNECTION TO WELL CONNECTION POSITION 1/2" NPT (M) воттом MINIMUM SCALE MAXIMUM 300 °C 19 0 MICROMETRIC ADJUSTMENT OF ZERO YES FRONT TYPE WINDOWS GLASS SEG. TRANSP. MIN. 75% SOLID 21 22 ROD LENGTH "U" BY MANUFACTURER FILLING FLUID NOT REQUIRED NOT REQUIRED 23 25 SUPPLY YES 26 MATERIAL SS1016 27 TYPE OF CONSTRUCTION CONICAL MACHINED FROM A BAR 28 CONNECTION TO THE PROCESS 1.1/2", 150#, FR, ASME B16.5 CONNECTION TO THERMOMETER 1/2" NPT(F) 29 30 FLANGE FACE FINISH MSS SP-6 INSERTION LENGTH "U" 212 mm 31 EXTENSION LENGTH "T" 32 35 mm NELL 33 34 35 36 37 38 39 40 PHYSICAL STATUS PROPYLENE GLYCOL LIQUID 41 MINIMUM PRESSURE NORMAL MAXIMUM 42 bar-g *OPERATING CONDITIONS* MINIMUM TEMPERATURE NORMAL MAXIMUM 43 °C DESIGN TEMPERATURE 44 DESIGN PRESSURE bar-g °C 45 VISCOSITY @ OPERATING CONDITION сР 46 DENSITY @ OPERATING CONDITION kg/m³ SUSPENDED SOLIDS (%) NOT 47 SOLIDIFIES AT ROOM TEMPERATURE NOT 48 MAXIMUM FLUID SPEED m/s MANUFACTURER ASCHCROFT OR SIMILAR 50

51 NOTES:

MODEL









TITLE

ISHEET

22 de 37

TEMPERATURE GAUGE

2 ···

							2
	1	INSTRUMENT TAG NUMBER			7A-TI-380203		
	2	SERVIÇE			CHILLED WATER LOOP RETURN		
	3	P&ID			7A-Z-0-2-01		
AL	4	PIPE LINE	EQUIPMENT NUN	1BER	1"-GW0R-9800189-CS1-CC -		
GENERAL	5	EQUIPMENT MATERIAL / PIPE			CARBON ST	EEL ASTM-A106 Gr.B	
GEI	6	AREA CLASSIFICATION			NO7	CLASSIFIED	
	7	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) (CONF. NBR IEC 60529	
	8	CERTIFICATES			(SEE GE	NERAL NOTES 1)	
	9						
	10	TYPE			В	IMETALLIC	
	11	MOUNTING				LOCAL	
	12	DIAL DIAMETER				114 mm	
	13	SCALE COLOR	BACKGROUND C	OLOR	BLACK	WHITE	
	14	PRECISION	I		1% OF THE F	INAL VALUE "RANGE"	
	15	MATERIAL CASE			3048	SS POLISHED	
ENT	16	RING TYPE	RING MATERIAL		BAYONET	304SS	
INSTRUMENT	17	ROD MATERIAL	DIAMETER		316SS	6 mm	
STR	18	STEM CONNECTION TO WELL	CONNECTION PC	SITION	1/2" NPT (M)	ВОТТО	M
Z	19	MINIMUM SCALE	MAXIMUM		0 °C	300 °C	
	20	MICROMETRIC ADJUSTMENT C)F ZERO			YES	
	21	FRONT TYPE	WINDOWS		SOLID GLASS SEG. TRANSP. MIN. 75%		
	22	ROD LENGTH "U"	I		BY MA	NUFACTURER	
	23	FILLING	FLUID		NOT REQUIRED	NOT REQU	IRED
	24		I				
	25	SUPPLY				YES	
	26	MATERIAL				SS1016	
	27	TYPE OF CONSTRUCTION			CONICAL MA	CHINED FROM A BAR	
	28	CONNECTION TO THE PROCESS			1.1/2", 150	0#, FR, ASME B16.5	
	29	CONNECTION TO THERMOMETER			1	/2" NPT(F)	
	30	FLANGE FACE FINISH			ı	MSS SP-6	
	31	INSERTION LENGTH "U"				212 mm	
77	32	EXTENSION LENGTH "T"				35 mm	
WELL	33						
	34				_		
	35						
	36			77777777			
	37						
	38		Т	U			
	39				U		
	40				, , , , , , , , , , , , , , , , , , , ,		
	41	FLUID	PHYSICAL STATU	JS	PROPYLENE GLYCOL	LIQUID)
NS	42	MINIMUM PRESSURE	NORMAL	MAXIMUM	,		bar-g
ITIC	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM			°C
OPERATING CONDITIONS	44	DESIGN PRESSURE	DESIGN TEMPER	ATURE	bar-g	°C	
300	45	VISCOSITY @ OPERATING CON	NDITION			сР	
TINC	46	DENSITY @ OPERATING COND	ITION			kg/m³	
ERA.	47	SUSPENDED SOLIDS (%)				NOT	
OPE	48	SOLIDIFIES AT ROOM TEMPERA	ATURE			NOT	
	49	MAXIMUM FLUID SPEED				m/s	
	50	MANUFACTURER			ASCHCF	OFT OR SIMILAR	
	51	MODEL					
	-						









TITLE

23 de 37

TEMPERATURE GAUGE

							2
	1	INSTRUMENT TAG NUMBER			7,4	A-TI-380302	
	2	SERVIÇE			CHILLED W.	ATER LOOP SUPPLY	
	3	P&ID			7	A-Z-0-2-01	
AL	4	PIPE LINE	EQUIPMENT NUMBER		1"-GW0S-9800225-CS1-CC -		
GENERAL	5	EQUIPMENT MATERIAL / PIPE			CARBON STEEL ASTM-A106 Gr.B		
GEI	6	AREA CLASSIFICATION			NOT CLASSIFIED		
	7	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) (CONF. NBR IEC 60529	
	8	CERTIFICATES			(SEE GE	NERAL NOTES 1)	
	9						
	10	TYPE			В	IMETALLIC	
	11	MOUNTING				LOCAL	
	12	DIAL DIAMETER				114 mm	
	13	SCALE COLOR	BACKGROUND COLOR		BLACK	WHIT	E
	14	PRECISION			1% OF THE F	INAL VALUE "RANGE"	
_	15	MATERIAL CASE			3045	SS POLISHED	
IEN.	16	RING TYPE	RING MATERIAL		BAYONET	304S	S
INSTRUMENT	17	ROD MATERIAL	DIAMETER		316SS	6 mn	n
VST!	18	STEM CONNECTION TO WELL	CONNECTION POSITION		1/2" NPT (M)	ВОТТО	ЭM
*	19	MINIMUM SCALE	MAXIMUM		0 ℃	300 °	С
	20	MICROMETRIC ADJUSTMENT C)F ZERO		YES		
	21	FRONT TYPE	WINDOWS	SOLID GLASS SEG. TRANSP. MIN. 75%			
	22	ROD LENGTH "U"			BY MA	NUFACTURER	
	23	FILLING	FLUID	NOT REQUIRED	NOT REQ	UIRED	
	24						
	25	SUPPLY				YES	
	26	MATERIAL				SS1016	
	27	TYPE OF CONSTRUCTION			CONICAL MA	CHINED FROM A BAR	
	28	CONNECTION TO THE PROCESS			1.1/2", 150	0#, FR, ASME B16.5	
		CONNECTION TO THERMOMET	ER			/2" NPT(F)	
	-	FLANGE FACE FINISH			,	MSS SP-6	
		INSERTION LENGTH "U"				212 mm	
WELL		EXTENSION LENGTH "T"				35 mm	
3	33						
	34				П		
	35						
	36						
	37		T U		A		
	38						
	40				U		
\vdash	41	FLUID	PHYSICAL STATUS		PROPYLENE GLYCOL	LIQUI	ID
SI		MINIMUM PRESSURE	NORMAL MAXIMUM	,	,	1	bar-g
10/	_	MINIMUM TEMPERATURE	NORMAL MAXIMUM		<u> </u>		°C
NDI		DESIGN PRESSURE	DESIGN TEMPERATURE		bar-g	•	С
0 0		VISCOSITY @ OPERATING CON				cP	
OPERATING CONDITIONS		DENSITY @ OPERATING COND				kg/m³	
RAT		SUSPENDED SOLIDS (%)				NOT	
3PE		SOLIDIFIES AT ROOM TEMPER	ATURE			NOT	
$ \tilde{\ } $		MAXIMUM FLUID SPEED				m/s	
П	50	MANUFACTURER			ASCHCF	ROFT OR SIMILAR	
	51	MODEL					
-							









TITLE

24 de 37

TEMPERATURE GAUGE

								2
	1	INSTRUMENT TAG NUMBER			7A-TI-380303			
	2	SERVIÇE			CHILLED WATER LOOP RETURN			
	3	P&ID			7A-Z-0-2-01			
ΑL	4	PIPE LINE	EQUIPMENT NUN	MBER .	1"-GW0R-9800226-CS1-CC -			
SENERAL	5	EQUIPMENT MATERIAL / PIPE			(CARBON STE	EL ASTM-A106 Gr.B	
GEI	6	AREA CLASSIFICATION				NOT	CLASSIFIED	
	7	ENCLOSURE CLASSIFICATION			II.	P 65 (MÍN.) C	ONF. NBR IEC 60529	
	8	CERTIFICATES				(SEE GEN	ERAL NOTES 1)	
	9							
	10	TYPE			BIMETALLIC			
	11	MOUNTING				I	LOCAL	
	12	DIAL DIAMETER				1	14 mm	
	13	SCALE COLOR	BLACE	(WHIT	E		
	14	PRECISION	•		1'	% OF THE FII	VAL VALUE "RANGE"	
L	15	MATERIAL CASE				30488	S POLISHED	
INSTRUMENT	16	RING TYPE	RING MATERIAL		BAYONI	ΞT	304S	S
SUM	17	ROD MATERIAL	DIAMETER		316SS	}	6 mn	n
IST	18	STEM CONNECTION TO WELL	CONNECTION PC	SITION	1/2" NPT	(M)	ВОТТО	ЭМ
<u> </u>	19	MINIMUM SCALE	MAXIMUM		0	°C	300 °	С
	20	MICROMETRIC ADJUSTMENT C			YES			
	21	FRONT TYPE	SOLID GLASS SEG. TRANSP. MIN. 75%			VSP. MIN. 75%		
	22	ROD LENGTH "U"		BY MAN	IUFACTURER			
	23	FILLING	FLUID		NOT REQU	IRED	NOT REQ	UIRED
	24		•					
	25	SUPPLY					YES	
	26	MATERIAL		5	SS1016			
	27	TYPE OF CONSTRUCTION			C	ONICAL MAC	HINED FROM A BAR	
	28	CONNECTION TO THE PROCESS				1.1/2", 150#	, FR, ASME B16.5	
	29	CONNECTION TO THERMOMETER				1/2	?" NPT(F)	
	30	FLANGE FACE FINISH				M	SS SP-6	
		INSERTION LENGTH "U"					212 mm	
WELL	32	EXTENSION LENGTH "T"					35 mm	
M	33							
	34				П			
	35				11			
	36			77777777				
	37		Ţ	U	A			
	38			ŭ				
	39				U	Т.		
\vdash	40	ELLID	DUVOICAL OTAT	10	DDODY EVE	01.7001	1.101	
S		FLUID	PHYSICAL STATU	1	PROPYLENE	JL Y C O L	LIQUI	
ION		MINIMUM PRESSURE	NORMAL	MAXIMUM	,			bar-g °C
IDIT		MINIMUM TEMPERATURE DESIGN PRESSURE	NORMAL	MAXIMUM		har a		C
\OS		VISCOSITY @ OPERATING CON	DESIGN TEMPER	ATUNE		bar-g	cP	
NG (_	DENSITY @ OPERATING COND						
ATI		-	, , , O N				kg/m³ NOT	
OPERATING CONDITIONS		SUSPENDED SOLIDS (%) SOLIDIFIES AT ROOM TEMPERA	ATLIDE				NOT	
O		MAXIMUM FLUID SPEED	n i UNE					
\vdash	-	MANUFACTURER				ASCHOR	m/s DFT OR SIMILAR	
		MODEL				ASUNUKU	I ON SIMILAR	
	57	INIODEL						









TITLE

ISHEET

25 de 37

TEMPERATURE GAUGE

2 **2**

							2
	1	INSTRUMENT TAG NUMBER			7A-TI-390102		
	2	SERVIÇE			CHILLED W	ATER LOOP SUPPLY	
	3	P&ID			7	A-Z-0-2-02	
AL	4	PIPE LINE	EQUIPMENT NUN	MBER	1"-GW0S-9800184-CS1-CC -		
SENERAL	5	EQUIPMENT MATERIAL / PIPE			CARBON ST	EEL ASTM-A106 Gr.B	
GEI	6	AREA CLASSIFICATION			NO	CLASSIFIED	
	7	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.)	CONF. NBR IEC 60529	
	8	CERTIFICATES			(SEE GE	NERAL NOTES 1)	
	9						
	10	TYPE			В	IMETALLIC	
	11	MOUNTING				LOCAL	
	12	DIAL DIAMETER				114 mm	
	13	SCALE COLOR	BACKGROUND C	OLOR	BLACK	WHITE	=
	14	PRECISION	•		1% OF THE F	INAL VALUE "RANGE"	
L	15	MATERIAL CASE			304	SS POLISHED	
ENI	16	RING TYPE	RING MATERIAL		BAYONET	30483	5
INSTRUMENT	17	ROD MATERIAL	DIAMETER		316SS	6 mm	1
ISTF	18	STEM CONNECTION TO WELL	CONNECTION PC	SITION	1/2" NPT (M)	ВОТТС	М
<	19	MINIMUM SCALE	MAXIMUM		0 °C	300 °C	>
	20	MICROMETRIC ADJUSTMENT C	F ZERO			YES	
	21	FRONT TYPE	WINDOWS		SOLID GLASS SEG. TRANSP. MIN. 75%		
	22	ROD LENGTH "U"			BY M/	ANUFACTURER	
	23	FILLING	FLUID		NOT REQUIRED	NOT REQU	JIRED
	24						
	25	SUPPLY				YES	
	26	MATERIAL				SS1016	
	27	TYPE OF CONSTRUCTION			CONICAL MA	CHINED FROM A BAR	
	28	CONNECTION TO THE PROCESS			1.1/2", 150	0#, FR, ASME B16.5	
	29	CONNECTION TO THERMOMETER			1	/2" NPT(F)	
	30	FLANGE FACE FINISH				MSS SP-6	
		INSERTION LENGTH "U"				212 mm	
WELL	32	EXTENSION LENGTH "T"				35 mm	
M	33						
	34				П		
	35						
	36			77777777			
	37		<u> </u>	U	Anna Anna Anna Anna Anna Anna Anna Anna		
	38			Ü			
	39				U		
\vdash	40	ELLID	DUVO/OAL OTAT	10	DDODY ENE OLYGO:	110.00	
S		FLUID	PHYSICAL STATU	1	PROPYLENE GLYCOL	LIQUII	
ΝO		MINIMUM PRESSURE	NORMAL	MAXIMUM	,		bar-g °C
,TIQI		MINIMUM TEMPERATURE DESIGN PRESSURE	NORMAL	MAXIMUM	har a		
SON			DESIGN TEMPER	AIURE	bar-g	cP	,
NG (VISCOSITY @ OPERATING COND					
ATI		DENSITY @ OPERATING COND	TTON			kg/m³	
OPERATING CONDITIONS		SUSPENDED SOLIDS (%)	ATLIDE			NOT	
Õ		SOLIDIFIES AT ROOM TEMPER	HI UKE			NOT m/s	
\vdash	49 MAXIMUM FLUID SPEED				4001101	m/s	
		MANUFACTURER			ASCHO	ROFT OR SIMILAR	
$ldsymbol{ld}}}}}}$	57	MODEL					









TITLE

ISHEET:

26 de 37

TEMPERATURE GAUGE

REV.:

-	IVIE	ERATURE GAUGE						2		
	1	INSTRUMENT TAG NUMBER				7A-1	TI-390103	_		
		SERVIÇE			CH	ILLED WAT	TER LOOP RETURN			
		P&ID					-Z-0-2-02			
1,4		PIPE LINE	EQUIPMENT NUM	1BER	1"-GW0S-9800185-CS1-CC -					
ER/		EQUIPMENT MATERIAL / PIPE			CARBON STEEL ASTM-A106 Gr.B					
SENERAL		AREA CLASSIFICATION			NOT CLASSIFIED					
"	<u> </u>	ENCLOSURE CLASSIFICATION			IP 6		ONF. NBR IEC 60529			
	8	CERTIFICATES			•	·				
	9	OE/ (7/1/ 70/ (7/20			(SEE GENERAL NOTES 1)					
\vdash		TYPE				BIM	METALLIC			
	_	MOUNTING			BIMETALLIC LOCAL					
		DIAL DIAMETER					14 mm			
		SCALE COLOR	BACKGROUND C	OI OR	BLACK		 	TE		
		PRECISION	BACKOKOONDO	OLOR		OF THE FIN	 VAL VALUE "RANGE			
		MATERIAL CASE	170		POLISHED					
IN		RING TYPE RING MATERIAL			BAYONET		304	00		
INSTRUMENT		ROD MATERIAL	DIAMETER		316SS		6 m			
TRL		STEM CONNECTION TO WELL		CITION		n	BOTT			
INS		MINIMUM SCALE		SITION	1/2" NPT (M ₎ 0	°C	300			
		MICROMETRIC ADJUSTMENT C	MAXIMUM		U					
							YES	NAOD MIN 750/		
		FRONT TYPE	WINDOWS		SOLID GLASS SE BY MANUFACTUREF			ANSP. MIN. 75%		
		ROD LENGTH "U"	FLUID		NOT DECLUD			N. WDED		
		FILLING		NOT REQUIR	Eυ	NOT REC	QUIRED			
	24	OLIDBI V					VES			
		SUPPLY MATERIAL TYPE OF CONSTRUCTION CONNECTION TO THE PROCESS					YES			
							SS1016			
							HINED FROM A BAF	?		
					1		, FR, ASME B16.5			
		CONNECTION TO THERMOMET	ER				" NPT(F)			
		FLANGE FACE FINISH					SS SP-6			
		INSERTION LENGTH "U"			212 mm 35 mm					
WELL		EXTENSION LENGTH "T"			35 mm					
3	33									
	34				П					
	35									
	36			77777777		.				
	37				Anna					
	38		,	Ü						
	39				U					
\vdash	40	5	Inches			\(\frac{1}{2}\)				
,,		FLUID	PHYSICAL STATU		PROPYLENE GL	YCOL	LIQU			
ONS		MINIMUM PRESSURE	NORMAL	MAXIMUM	,			bar-g		
DITI		MINIMUM TEMPERATURE	NORMAL	MAXIMUM				°C		
ΝΟ		DESIGN PRESSURE	DESIGN TEMPER	AIURE	bai	r-g		°C		
7 9/		VISCOSITY @ OPERATING COM					cP			
ATIN		DENSITY @ OPERATING COND	ITION				kg/m³			
OPERATING CONDITIONS		SUSPENDED SOLIDS (%)	4.7.4.0.5				NOT			
ģ		SOLIDIFIES AT ROOM TEMPERA	ATURE				NOT			
igspace		MAXIMUM FLUID SPEED				100::-	m/s			
		MANUFACTURER				ASCHCRO	OFT OR SIMILAR			
	51	MODEL								









TITLE

27 de 37

TE	MP	PERATURE GAUGE						27 de 3 REV.:
	1	INSTRUMENT TAG NUMBER				7A-	TI-390202	
	2	SERVIÇE				CHILLED WA	TER LOOP SUPPLY	
		P&ID				7 <i>A</i>	-Z-0-2-02	
7		PIPE LINE	EQUIPMENT NUN	MBER	1"-GW0S-98001		-	
GENERAL		EQUIPMENT MATERIAL / PIPE					I EL ASTM-A106 Gr.B	<u> </u>
3EN		AREA CLASSIFICATION					CLASSIFIED	
0		ENCLOSURE CLASSIFICATION					ONF. NBR IEC 60529	
	8	CERTIFICATES			(SEE GENERAL NOTES 1)			
	9	OLIVIII IOIVILLO						
		TYPE				RIA	METALLIC	
	_	MOUNTING					LOCAL	
		DIAL DIAMETER			114 mm			
		SCALE COLOR	BACKCBOUND C	COLOR	BLAC		т4 ппп 	ITE
			BACKGROUND C	OLOR				
		PRECISION			'		NAL VALUE "RANGE	
4		MATERIAL CASE	Inno Materia		541/04		S POLISHED	100
ME		RING TYPE	RING MATERIAL		BAYON		304	
INSTRUMENT		ROD MATERIAL	DIAMETER		316S		6 n	
NS.		STEM CONNECTION TO WELL		DSITION	1/2" NPT		BOT	
		MINIMUM SCALE	MAXIMUM		0	°C	300	°C
		MICROMETRIC ADJUSTMENT C					YES	
		FRONT TYPE WINDOWS		SOLII		GLASS SEG. TR.	ANSP. MIN. 75%	
						IUFACTURER		
	23	FILLING	FLUID		NOT REQU	JIRED	NOT RE	QUIRED
	24							
	25	SUPPLY					YES	
	26	MATERIAL					SS1016	
	27	TYPE OF CONSTRUCTION			(CONICAL MAC	HINED FROM A BAI	₹
	28	CONNECTION TO THE PROCES	SS			1.1/2", 150#	, FR, ASME B16.5	
	29	CONNECTION TO THERMOMET	TER			1/2	?" NPT(F)	
	30	FLANGE FACE FINISH				M	SS SP-6	
	31	INSERTION LENGTH "U"			212 mm			
WELL	32	EXTENSION LENGTH "T"			35 mm			
WE	33							
	34					6		
	35							
	36			7777777				
	37				Action Times			
	38		Т	U	<u> </u>			
	39					т.		
	40				,			
	41	FLUID	PHYSICAL STATU	us	PROPYLENE	GLYCOL	LIQ	UID
SNS	42	MINIMUM PRESSURE	NORMAL	MAXIMUM	,			bar-g
2//	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM				°C
ONE	44	DESIGN PRESSURE	DESIGN TEMPER	RATURE		bar-g		°C
3 5	45	VISCOSITY @ OPERATING COI	NDITION				сP	
OPERATING CONDITIONS	46	DENSITY @ OPERATING COND	DITION				kg/m³	
Y.	47	SUSPENDED SOLIDS (%)					NOT	
OPE	48	SOLIDIFIES AT ROOM TEMPER	ATURE				NOT	
	49	MAXIMUM FLUID SPEED					m/s	
	50	MANUFACTURER				ASCHCRO	OFT OR SIMILAR	
	51	MODEL						
		i						









TITLE

28 de 37 REV.:

TE	MP	ERATURE GAUGE						28 de 37 REV.:
	1	INSTRUMENT TAG NUMBER				7A-	TI-390203	
	-	SERVIÇE				CHILLED WAT	TER LOOP RETURN	
		P&ID			7A-Z-0-2-02			
7		PIPE LINE	EQUIPMENT NUN	MBER	1"-GW0R-9800183-CS1-CC		· · ·	
ER/		EQUIPMENT MATERIAL / PIPE	<u>l </u>		CARBON STEEL ASTM-A106 Gr.B			
GENERAL		AREA CLASSIFICATION					CLASSIFIED	
		ENCLOSURE CLASSIFICATION					ONF. NBR IEC 60529	9
	8	CERTIFICATES			(SEE GENERAL NOTES 1)			
	9							
	10	TYPE				BIN	METALLIC	
	11	MOUNTING				L	LOCAL	
	12	DIAL DIAMETER					114 mm	
	13	SCALE COLOR	BACKGROUND C	COLOR	BLAC	K	WH	ITE
		PRECISION	1		1	1% OF THE FII	I VAL VALUE "RANGE	
	15	MATERIAL CASE				304SS	S POLISHED	
ΞΝΞ	16	RING TYPE	RING MATERIAL		BAYON	IET	304	SS
INSTRUMENT	17	ROD MATERIAL	DIAMETER		316S	S	6 n	nm
STR		STEM CONNECTION TO WELL	CONNECTION PO	OSITION	1/2" NP7	- (M)	ВОТ	ТОМ
≧	19	MINIMUM SCALE	MAXIMUM		0	°C	300	°C
	20	MICROMETRIC ADJUSTMENT ()F ZERO				YES	
	21	FRONT TYPE	WINDOWS		SOLII	D	GLASS SEG. TR	ANSP. MIN. 75%
	22	ROD LENGTH "U"			BY MAN	I IUFACTURER		
	23	3 FILLING FLUID			NOT REQU	JIRED	NOT RE	QUIRED
	24							
	25	SUPPLY					YES	
	26	MATERIAL				5	SS1016	
	27	TYPE OF CONSTRUCTION			(CONICAL MAC	HINED FROM A BAI	₹
	28	CONNECTION TO THE PROCES	SS			1.1/2", 150#	, FR, ASME B16.5	
	29	CONNECTION TO THERMOMET	TER			1/2	?" NPT(F)	
	30	FLANGE FACE FINISH				M	SS SP-6	
	31	INSERTION LENGTH "U"			212 mm			
77	32	EXTENSION LENGTH "T"			35 mm			
WELL	33							
	34				_			
	35				+			
	36			77777777				
	37				Manual Ma			
	38		Т	U				
	39				. U	т.		
	40							
	41	FLUID	PHYSICAL STATE	US	PROPYLENE	GLYCOL	LIQ	UID
SNC		MINIMUM PRESSURE	NORMAL	MAXIMUM	,			bar-g
Ĭ,		MINIMUM TEMPERATURE	NORMAL	MAXIMUM				℃
OPERATING CONDITIONS		DESIGN PRESSURE	DESIGN TEMPER	RATURE		bar-g		°C
9		VISCOSITY @ OPERATING COI					cP	
NIT	_	DENSITY @ OPERATING COND	DITION				kg/m³	
ER/		SUSPENDED SOLIDS (%)					NOT	
9		SOLIDIFIES AT ROOM TEMPER	ATURE				NOT	
	_	MAXIMUM FLUID SPEED					m/s	
		MANUFACTURER				ASCHCRO	OFT OR SIMILAR	
	51	MODEL						









TITLE

29 de 37

TEMPERATURE GAUGE

REV.:

-	••••	LITATORE GAGGE					2	
	1	INSTRUMENT TAG NUMBER			7A-	-TI-390302		
	2	SERVIÇE			TEMPEREL	O WATER SUPPLY		
	3	P&ID			7.4	N-Z-0-2-02		
14	4	PIPE LINE	EQUIPMENT NUM	1BER	1"-TEWS-390301-SS10-CC	_		
ER/	5	EQUIPMENT MATERIAL / PIPE			CARBON STE	EEL ASTM-A106 Gr.B		
SENERAL		AREA CLASSIFICATION			NOT	CLASSIFIED		
	_	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CONF. NBR IEC 60529			
	8	CERTIFICATES			, ,	NERAL NOTES 1)		
	9							
		TYPE			BII	METALLIC		
		MOUNTING				LOCAL		
		DIAL DIAMETER				114 mm		
		SCALE COLOR	BACKGROUND CO	OI OR	BLACK	WHIT	F	
		PRECISION	Briorier (30/12 of	02071		l NAL VALUE "RANGE"		
		MATERIAL CASE				S POLISHED		
TN:		RING TYPE	RING MATERIAL		BAYONET	3048	\$	
JME		ROD MATERIAL	DIAMETER		316SS	6 mn		
INSTRUMENT		STEM CONNECTION TO WELL		ISITION	1/2" NPT (M)	BOTTO		
INS		MINIMUM SCALE	MAXIMUM	SITION	0 °C	300 °		
		MICROMETRIC ADJUSTMENT C			0 0	YES	<u> </u>	
		FRONT TYPE	WINDOWS		SOLID	GLASS SEG. TRAI	NSD MINI 75%	
		ROD LENGTH "U"	IWWDOW3			NUFACTURER	VOI . IVIIIV. 1076	
		FILLING	FLUID		NOT REQUIRED	NOT REQ	IIDED	
		FILLING	FLOID		NOT REQUIRED	NOT REQ	JIKED	
	24	SUDDI V				YES		
		SUPPLY MATERIAL				SS1016		
						CHINED FROM A BAR		
		TYPE OF CONSTRUCTION CONNECTION TO THE PROCESS				#, FR, ASME B16.5		
		CONNECTION TO THE PROCES				2" NPT(F)		
		FLANGE FACE FINISH	LN			ISS SP-6		
		INSERTION LENGTH "U"			IV	212 mm		
		EXTENSION LENGTH "T"			35 mm			
WELL	33	EXTENSION LENGTH T			35 mm			
7	34							
	35 36							
	37			77777777				
	38		T	U				
	39							
	40							
	41	FLUID	PHYSICAL STATU	IS	PROPYLENE GLYCOL	LIQUI	D	
S		MINIMUM PRESSURE	NORMAL	MAXIMUM			bar-g	
707		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	,		°C	
VDI		DESIGN PRESSURE	DESIGN TEMPERA		bar-g		c	
CO		VISCOSITY @ OPERATING CON		·	y	cP		
ING		DENSITY @ OPERATING COND				kg/m³		
RAT		SUSPENDED SOLIDS (%)				NOT		
OPERATING CONDITIONS		SOLIDIFIES AT ROOM TEMPERA	ATURE			NOT		
		MAXIMUM FLUID SPEED				m/s		
		MANUFACTURER			ASCHCR	OFT OR SIMILAR		
		MODEL						
ш	<u> </u>							









TITLE

30 de 37 REV :

TE	MP	ERATURE GAUGE						30 de 37 REV.:	
	1	INSTRUMENT TAG NUMBER			<u> </u>	7 <i>A</i> -	TI-390303		
		SERVIÇE					TER LOOP RETURN		
		P&ID					-Z-0-2-02		
7		PIPE LINE	EQUIPMENT NUM	/RFR	1"-TEWR-39030				
GENERAL	-	EQUIPMENT MATERIAL / PIPE	1		CARBON STEEL ASTM-A106 Gr.B				
ËN		AREA CLASSIFICATION					CLASSIFIED		
١		ENCLOSURE CLASSIFICATION					ONF. NBR IEC 60529		
	8	CERTIFICATES				, ,	ERAL NOTES 1)		
	9	OLIVIII TOTVILO			(OLL GLIVE NOTES 1)				
\dashv		TYPE				BIN	METALLIC		
	_	MOUNTING					LOCAL		
		DIAL DIAMETER					114 mm		
		SCALE COLOR	BACKGROUND C	OLOR	BLAC		 wн	ITE	
		PRECISION	BACKGROONDC	OLON			 VAL VALUE "RANGE		
			MATERIAL CASE				S POLISHED	•	
١		RING TYPE			BAYON		304	00	
WE		ROD MATERIAL	DIAMETER		316S		6 n		
INSTRUMENT		STEM CONNECTION TO WELL		OSITION			BOT		
NS		MINIMUM SCALE		DSITION	1/2" NP1 0	. ,	300		
			MAXIMUM		-				
		MICROMETRIC ADJUSTMENT C			YES SOLID GLASS SEG. TRANSP. MIN. 75%				
					SOLI			4NSP. MIN. 75%	
					NOT DEC		IUFACTURER	0,410,50	
		FILLING	FLUID		NOT REQ	JIRED	NOT RE	QUIRED	
-	24	OUDDLY.					\(\(\)		
		SUPPLY					YES		
		MATERIAL TYPE OF CONSTRUCTION					SS1016	<u> </u>	
		TYPE OF CONSTRUCTION	20		(HINED FROM A BAR	τ	
		CONNECTION TO THE PROCES					FR, ASME B16.5		
		CONNECTION TO THERMOMET	ER				?" NPT(F)		
		FLANGE FACE FINISH				IM	SS SP-6		
		INSERTION LENGTH "U"			212 mm				
WELL		EXTENSION LENGTH "T"				35 mm			
Š	33								
	34				Г	1			
	35								
	36				E I				
	37				A				
	38			· ·		-			
	39				. U	т.			
_	40		T		1		1		
,		FLUID	PHYSICAL STATU		PROPYLENE	GLYCOL	LIQ		
SN		MINIMUM PRESSURE	NORMAL	MAXIMUM	,			bar-g	
TIO		MINIMUM TEMPERATURE	NORMAL	MAXIMUM		<u> </u>		℃	
Ν̈́		DESIGN PRESSURE	DESIGN TEMPER	RATURE		bar-g	L	°C	
) <i>9</i>		VISCOSITY @ OPERATING CON					cP		
₹		DENSITY @ OPERATING COND	ITION				kg/m³		
OPERATING CONDITIONS		SUSPENDED SOLIDS (%)					NOT		
9		SOLIDIFIES AT ROOM TEMPER	ATURE				NOT		
		MAXIMUM FLUID SPEED					m/s		
		MANUFACTURER				ASCHCRO	OFT OR SIMILAR		
	51	MODEL							









TITLE

ISHEE

31 de 37

TEMPERATURE GAUGE

2

							2	
	1	INSTRUMENT TAG NUMBER			7A-TI-640101			
	2	SERVIÇE			CHILLED WA	TER LOOP RETURN		
	3	P&ID			7.	4-Z-0-2-24		
ΆL	4	PIPE LINE	EQUIPMENT NUM	MBER .	1"-GW0R-640121-CS1-CC -			
SENERAL	5	EQUIPMENT MATERIAL / PIPE			CARBON ST	EEL ASTM-A106 Gr.B		
GEI	6	AREA CLASSIFICATION			NOT CLASSIFIED			
	7	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) (CONF. NBR IEC 60529		
	8	CERTIFICATES			(SEE GE	NERAL NOTES 1)		
	9							
	10	TYPE			BIMETALLIC			
	11	MOUNTING				LOCAL		
	12	DIAL DIAMETER				114 mm		
	13	SCALE COLOR BACKGROUND COLOR			BLACK	WHITE		
	14	PRECISION			1% OF THE F	INAL VALUE "RANGE"		
	15	MATERIAL CASE			3048	S POLISHED		
EN1	16	RING TYPE	RING MATERIAL		BAYONET	304SS		
INSTRUMENT	17	ROD MATERIAL	DIAMETER		316SS	6 mm		
STF	18	STEM CONNECTION TO WELL	CONNECTION PC	SITION	1/2" NPT (M)	ВОТТОМ		
×	19	MINIMUM SCALE	MAXIMUM		0 °C	300 °C		
	20	MICROMETRIC ADJUSTMENT C)F ZERO			YES		
	21	FRONT TYPE WINDOWS			SOLID GLASS SEG. TRANSP. MIN. 75%			
	22	ROD LENGTH "U"			BY MA	NUFACTURER		
	23	FILLING	FLUID		NOT REQUIRED	NOT REQUIR	RED	
	24							
	25	SUPPLY				YES		
	26	MATERIAL				SS1016		
	27	TYPE OF CONSTRUCTION			CONICAL MA	CHINED FROM A BAR		
	28	CONNECTION TO THE PROCESS			1.1/2", 150	#, FR, ASME B16.5		
	29	CONNECTION TO THERMOMET	ER		1.	′2" NPT(F)		
	30	FLANGE FACE FINISH			I	NSS SP-6		
	31	INSERTION LENGTH "U"			212 mm			
77.	32	EXTENSION LENGTH "T"			35 mm			
WELL	33							
	34							
	35				}-			
	36			777777777				
	37							
	38		Т	U				
	39				U			
	40							
	41	FLUID	PHYSICAL STATU	JS	PROPYLENE GLYCOL	LIQUID		
SNC	42	MINIMUM PRESSURE	NORMAL	MAXIMUM	,		bar-g	
JITIC	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM			°C	
OPERATING CONDITIONS	44	DESIGN PRESSURE	DESIGN TEMPER	ATURE	bar-g	°C		
G C	45	VISCOSITY @ OPERATING CON	NDITION			сР		
TIN	46	DENSITY @ OPERATING COND	ITION			kg/m³		
ERA	47	SUSPENDED SOLIDS (%)				NOT		
OP.	48	SOLIDIFIES AT ROOM TEMPER	ATURE			NOT		
	49	MAXIMUM FLUID SPEED				m/s		
	_	0 MANUFACTURER			ASCHCROFT OR SIMILAR			
	50	MANUFACTURER			ASCHCR	OFT OR SIMILAR		









TITLE

TEMPERATURE GAUGE

SHEET: 32 de 37

REV.:

	WPERATURE GAUGE					2	
Τ,	1 INSTRUMENT TAG NUMBER			7.	A-TI-640102		
	2 SERVIÇE				ATER LOOP SUPPLY		
	3 P&ID				7A-Z-0-2-24		
-	4 PIPE LINE	EQUIPMENT NUMB	BFR	1"-GW0S-640120-CS1-CC			
⊸l ہ	5 EQUIPMENT MATERIAL / PIPE	Lacii iiizivi ivoiiiz			I 「EEL ASTM-A106 Gr.B		
	6 AREA CLASSIFICATION				T CLASSIFIED		
~ -		<u> </u>		IP 65 (MÍN.) CONF. NBR IEC 60529			
					ENERAL NOTES 1)		
-				(SEE GE	ENERAL NOTES I)		
- '	9			DWETALLO			
-	10 TYPE				METALLIC		
-	11 MOUNTING				LOCAL		
- 1-	12 DIAL DIAMETER	1		BLACK	114 mm		
	13 SCALE COLOR				WHI		
	PRECISION				FINAL VALUE "RANGE		
	MATERIAL CASE			304	SS POLISHED		
	16 RING TYPE	RING MATERIAL		BAYONET	3048	SS	
<u> </u>	17 ROD MATERIAL	DIAMETER		316SS	6 m	m	
INSTRUMENT 1	18 STEM CONNECTION TO WELL	CONNECTION POS	SITION	1/2" NPT (M)	ВОТТ	ОМ	
= 1	19 MINIMUM SCALE	MAXIMUM		0 °C	300	°C	
2	20 MICROMETRIC ADJUSTMENT	OF ZERO			YES		
2	21 FRONT TYPE	WINDOWS		SOLID	GLASS SEG. TRA	NSP. MIN. 75%	
2	22 ROD LENGTH "U"	•		BYM	ANUFACTURER		
2	23 FILLING	FLUID		NOT REQUIRED	NOT REG	UIRED	
2	24				I		
2	25 SUPPLY				YES		
2	MATERIAL				SS1016		
2	TYPE OF CONSTRUCTION			CONICAL MA	ACHINED FROM A BAR	1	
2	CONNECTION TO THE PROCESS			1.1/2", 15	0#, FR, ASME B16.5		
2	29 CONNECTION TO THERMOME	TER			1/2" NPT(F)		
3	30 FLANGE FACE FINISH				MSS SP-6		
3	31 INSERTION LENGTH "U"			212 mm			
	32 EXTENSION LENGTH "T"			35 mm			
ũi ⊢	33						
	34						
3	35						
3 3	36 37 38 39 40	T	U	U			
3 3 3 4	37 38 39	PHYSICAL STATUS		PROPYLENE GLYCOL	LIQU	IID	
3 3 3 4	37 38 39 40			PROPYLENE GLYCOL	LIQL	IID bar-g	
3 3 3 4	37 38 39 40 41 FLUID	NORMAL	S		LIQU		
3 3 3 4	37 38 39 40 41 FLUID 42 MINIMUM PRESSURE	NORMAL	S MAXIMUM MAXIMUM			bar-g	
3 3 3 4 4	37 38 39 40 41 FLUID 42 MINIMUM PRESSURE 43 MINIMUM TEMPERATURE	NORMAL I NORMAL I DESIGN TEMPERA	S MAXIMUM MAXIMUM	,		bar-g °C	
3 3 3 4 4	37 38 39 40 41 FLUID 42 MINIMUM PRESSURE 43 MINIMUM TEMPERATURE 44 DESIGN PRESSURE	NORMAL I NORMAL I DESIGN TEMPERA NDITION	S MAXIMUM MAXIMUM	,		bar-g ℃	
3 3 3 4 4	37 38 39 40 41 FLUID 42 MINIMUM PRESSURE 43 MINIMUM TEMPERATURE 44 DESIGN PRESSURE 45 VISCOSITY @ OPERATING CO	NORMAL I NORMAL I DESIGN TEMPERA NDITION	S MAXIMUM MAXIMUM	,	cP	bar-g °C	
3 3 3 4	37 38 39 40 41 FLUID 42 MINIMUM PRESSURE 43 MINIMUM TEMPERATURE 44 DESIGN PRESSURE 45 VISCOSITY @ OPERATING COM 46 DENSITY @ OPERATING COM	NORMAL I NORMAL I DESIGN TEMPERA NDITION	S MAXIMUM MAXIMUM	,	cP kg/m³	bar-g °C	
3 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	37 38 39 40 41 FLUID 42 MINIMUM PRESSURE 43 MINIMUM TEMPERATURE 44 DESIGN PRESSURE 45 VISCOSITY @ OPERATING COND 46 DENSITY @ OPERATING COND 47 SUSPENDED SOLIDS (%)	NORMAL I NORMAL I DESIGN TEMPERA NDITION	S MAXIMUM MAXIMUM	,	cP kg/m³ NOT	bar-g °C	
3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	37 38 39 40 41 FLUID 42 MINIMUM PRESSURE 43 MINIMUM TEMPERATURE 44 DESIGN PRESSURE 45 VISCOSITY @ OPERATING CONI 46 DENSITY @ OPERATING CONI 47 SUSPENDED SOLIDS (%) 48 SOLIDIFIES AT ROOM TEMPER	NORMAL I NORMAL I DESIGN TEMPERA NDITION	S MAXIMUM MAXIMUM	, bar-g	cP kg/m³ NOT	bar-g °C	

¹⁻ PROVIDE REAR PROTECTION DISC IN NEOPRENE.







0

SOLID

NOT REQUIRED

PROPYLENE GLYCOL

°C

YES

BY MANUFACTURER

YES

SS1016

CONICAL MACHINED FROM A BAR

1.1/2", 150#, FR, ASME B16.5

1/2" NPT(F)

MSS SP-6

212 mm

35 mm



300 °C

GLASS SEG. TRANSP. MIN. 75%

NOT REQUIRED

LIQUID

NUMBER: CLIENT NR: PRD-AIC-DSH-027 569-DB7A-AIC-711-003

TITLE

33 de 37

REV.:

TEMPERATURE GAUGE 2 INSTRUMENT TAG NUMBER 7A-TI-650106 SERVIÇE CHILLED WATER LOOP RETURN 2 P&ID 7A-Z-0-2-27 3 3/4"-GW0S-650105-CS1-CC 4 PIPE LINE EQUIPMENT NUMBER **GENERAL** EQUIPMENT MATERIAL / PIPE CARBON STEEL ASTM-A106 Gr.B 5 AREA CLASSIFICATION NOT CLASSIFIED ENCLOSURE CLASSIFICATION IP 65 (MÍN.) CONF. NBR IEC 60529 CERTIFICATES (SEE GENERAL NOTES 1) 8 9 TYPE BIMETALLIC 10 11 MOUNTING LOCAL 12 DIAL DIAMETER 114 mm 13 SCALE COLOR BLACK BACKGROUND COLOR WHITE 14 PRECISION 1% OF THE FINAL VALUE "RANGE" 15 MATERIAL CASE 304SS POLISHED **INSTRUMEN** 16 RING TYPE RING MATERIAL BAYONET 304SS 17 ROD MATERIAL DIAMETER 316SS 6 mm 18 STEM CONNECTION TO WELL CONNECTION POSITION 1/2" NPT (M) воттом

T U	U

PHYSICAL STATUS

MAXIMUM

WINDOWS

FLUID

- 1		-			1			
NS	42	MINIMUM PRESSURE	NORMAL	MAXIMUM	,			bar-g
15	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM				°C
CONDITIONS	44	DESIGN PRESSURE	DESIGN TEMPER		bar-g		°C	
	45	VISCOSITY @ OPERATING CON	сР					
TING	46	DENSITY @ OPERATING CONDITION					kg/m³	
ERA	47	SUSPENDED SOLIDS (%)			NOT			
OPI	48	SOLIDIFIES AT ROOM TEMPERATURE			NOT			
	49	MAXIMUM FLUID SPEED			m/s			
	50	MANUFACTURER			ASCHCROFT OR SIMILAR			
	51	MODEL						

NOTES:

19

22

23

24

25

27

28

29

30

32

41 FLUID

MINIMUM SCALE

ROD LENGTH "U"

TYPE OF CONSTRUCTION

FLANGE FACE FINISH

INSERTION LENGTH "U"

EXTENSION LENGTH "T"

CONNECTION TO THE PROCESS

CONNECTION TO THERMOMETER

FRONT TYPE

FILLING

SUPPLY

MATERIAL

20 MICROMETRIC ADJUSTMENT OF ZERO









TITLE

TEMPERATURE GAUGE

SHEET:

34 de 37

REV.:	
	2

-	••••	ENAIGHE GAGGE			2			
	1	INSTRUMENT TAG NUMBER		7A-	TI-900104			
	2	SERVIÇE		CHILLED WATER LOC	OP RETURN BY STERILIZER			
	3	P&ID		7A	-Z-0-2-06			
4		PIPE LINE	EQUIPMENT NUMBER	2"-GW0S-900104-CS1-CC	-			
GENERAL		EQUIPMENT MATERIAL / PIPE	· ·	CARBON STEEL ASTM-A106 Gr.B				
3EN		AREA CLASSIFICATION			CLASSIFIED			
ľ		ENCLOSURE CLASSIFICATION		·	ONF. NBR IEC 60529			
	8	CERTIFICATES		(SEE GENERAL NOTES 1)				
	9			(====:				
	_	TYPE		BIN	METALLIC			
		MOUNTING			LOCAL			
		DIAL DIAMETER			114 mm			
		SCALE COLOR	BACKGROUND COLOR	BLACK	WHITE			
		PRECISION	Briefice in Briefic		NAL VALUE "RANGE"			
		MATERIAL CASE			S POLISHED			
Ŋ		RING TYPE	RING MATERIAL	BAYONET	304SS			
INSTRUMENT		ROD MATERIAL	DIAMETER	316SS	6 mm			
TRL		STEM CONNECTION TO WELL			BOTTOM			
NS.		MINIMUM SCALE		1/2" NPT (M) 0 °C	300 °C			
			MAXIMUM	0 0				
		MICROMETRIC ADJUSTMENT C		001/10	YES			
		FRONT TYPE	WINDOWS	SOLID	GLASS SEG. TRANSP. MIN. 75%			
		ROD LENGTH "U"	Le		IUFACTURER			
	_	FILLING	FLUID	NOT REQUIRED	NOT REQUIRED			
	24							
		SUPPLY			YES			
		MATERIAL			SS1016			
		TYPE OF CONSTRUCTION			HINED FROM A BAR			
	28	CONNECTION TO THE PROCES	SS	1.1/2", 150#	, FR, ASME B16.5			
		CONNECTION TO THERMOMET	ER		?" NPT(F)			
		FLANGE FACE FINISH		M	MSS SP-6			
		INSERTION LENGTH "U"		212 mm				
WELL		EXTENSION LENGTH "T"		35 mm				
×	33							
	34			П				
	35							
	36		Commence of the Commence of th					
	37			Many Many				
	38		1 0	4				
	39			UT				
<u> </u>	40			<u> </u>	<u> </u>			
	41	FLUID	PHYSICAL STATUS	PROPYLENE GLYCOL	LIQUID			
SNC		MINIMUM PRESSURE	NORMAL MAXIMUM	,	bar-g			
ĮĘ.		MINIMUM TEMPERATURE	NORMAL MAXIMUM		℃			
OPERATING CONDITIONS		DESIGN PRESSURE	DESIGN TEMPERATURE	bar-g	°C			
Ĝ		VISCOSITY @ OPERATING CON			cP			
NL N	46	DENSITY @ OPERATING COND	ITION		kg/m³			
ERA		SUSPENDED SOLIDS (%)			NOT			
9	48	SOLIDIFIES AT ROOM TEMPER.	ATURE		NOT			
	49	MAXIMUM FLUID SPEED			m/s			
	50	MANUFACTURER		ASCHCRO	DFT OR SIMILAR			
L	51	MODEL						









TITLE

35 de 37 REV.:

TEMPERATURE GAUGE

2

<u> </u>		1			74.7/.000400			
	1	INSTRUMENT TAG NUMBER			7A-TI-900106			
	2	SERVIÇE			TEMPE	RED WATER	SUPPLY FOR STERIL	LIZER
	3	P&ID				7A	-Z-0-2-06	
'AL	4	PIPE LINE	EQUIPMENT NUN	MBER	2"-GW0S-90010	05-CS1-CC	-	
GENERAL	5	EQUIPMENT MATERIAL / PIPE			CARBON STEEL ASTM-A106 Gr.B			
GEI	6	AREA CLASSIFICATION			NOT CLASSIFIED			
	7	ENCLOSURE CLASSIFICATION			I.	P 65 (MÍN.) C	ONF. NBR IEC 60529	
	8	CERTIFICATES				(SEE GEN	ERAL NOTES 1)	
	9							
	10	TYPE			BIMETALLIC			
	11	MOUNTING			LOCAL			
	12	DIAL DIAMETER				1	114 mm	
	13	SCALE COLOR BACKGROUND COLOR			BLACI	K	WHIT	E
	14	PRECISION	<u> </u>		1	% OF THE FII	I NAL VALUE "RANGE"	
	15	MATERIAL CASE				30488	S POLISHED	
=N7	16	RING TYPE	RING MATERIAL		BAYON	ET	304S	S
INSTRUMENT	17	ROD MATERIAL	DIAMETER		316SS	3	6 mr	n
STR		STEM CONNECTION TO WELL	CONNECTION PO	DSITION	1/2" NPT	(M)	ВОТТ	OM
×		MINIMUM SCALE	MAXIMUM		0	°C	300 °	C
		MICROMETRIC ADJUSTMENT C					YES	
		FRONT TYPE	WINDOWS		SOLIE)	GLASS SEG. TRAI	NSP. MIN. 75%
		ROD LENGTH "U"			BY MANUFACTURER			
		FILLING	FLUID			IIRED	NOT REQ	UIRFD
	24							
	-	SUPPLY					YES	
		MATERIAL			SS1016			
		TYPE OF CONSTRUCTION					HINED FROM A BAR	
		CONNECTION TO THE PROCESS					FR, ASME B16.5	
		CONNECTION TO THE PROCESS CONNECTION TO THERMOMETER					?" NPT(F)	
		FLANGE FACE FINISH					SS SP-6	
		INSERTION LENGTH "U"				IVI	212 mm	
		EXTENSION LENGTH "T"			35 mm			
WELL	33	EXTENSION LENGTH 7						
_	34							
	35							
	36				1			
	37							
	38		H	U				
	39					_		
	40				U			
\vdash	-	FLUID	PHYSICAL STATE	JS	PROPYLENE	GLYCOL	LIQU	ID
S		MINIMUM PRESSURE	NORMAL	MAXIMUM		: - 		bar-g
701		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	,			°C
ſΙΟΝ		DESIGN PRESSURE	DESIGN TEMPER			bar-g		C
CO		VISCOSITY @ OPERATING CON		- · · · · · · · ·		3	CP	-
JNG		DENSITY @ OPERATING COND					kg/m³	
3A 7.1		SUSPENDED SOLIDS (%)					NOT	
OPERATING CONDITIONS			ATURE				NOT	
0		MAXIMUM FLUID SPEED	JIL					
		MANUFACTURER			m/s ASCHCROFT OR SIMILAR			
		MODEL				AGOITORG	A TON SIMILAR	
\Box	57	WODEL						

NOTES:

1- PROVIDE REAR PROTECTION DISC IN NEOPRENE.









ТПСЕ

TEMPERATURE GAUGE

SHEET:

REV.:

36 de 37

-	••••	ENAIGHE GAGGE			2			
	1	INSTRUMENT TAG NUMBER		7A-TI-900204				
	2	SERVIÇE		CHILLED WATER LOOP RETURN BY STERILIZER				
		P&ID		7A-Z-0-2-05				
14		PIPE LINE	EQUIPMENT NUMBER	2"-GW0S-900204-CS1-CC -				
GENERAL		EQUIPMENT MATERIAL / PIPE	<u> </u>	CARBON STEEL ASTM-A106 Gr.B				
3EN		AREA CLASSIFICATION		NOT CLASSIFIED				
		ENCLOSURE CLASSIFICATION		IP 65 (MÍN.) CONF. NBR IEC 60529				
	8	CERTIFICATES		(SEE GENERAL NOTES 1)				
	9			(OLL SERVER NOTES 1)				
	_	TYPE		BIMETALLIC				
		MOUNTING		LOCAL				
		DIAL DIAMETER			114 mm			
		SCALE COLOR	BACKGROUND COLOR	BLACK WHITE				
		PRECISION	Briefic Cons	1% OF THE FINAL VALUE "RANGE"				
		MATERIAL CASE						
TN:		RING TYPE	RING MATERIAL	BAYONET	304SS POLISHED BAYONET 304SS			
INSTRUMENT		ROD MATERIAL	DIAMETER	316SS	6 mm			
TRL		STEM CONNECTION TO WELL		1/2" NPT (M)	BOTTOM			
INS		MINIMUM SCALE		0 °C	300 °C			
			MAXIMUM	0 0				
		MICROMETRIC ADJUSTMENT C		00110	YES			
		FRONT TYPE	WINDOWS	SOLID	GLASS SEG. TRANSP. MIN. 75%			
		ROD LENGTH "U"	I = =		IUFACTURER			
	_	FILLING	FLUID	NOT REQUIRED	NOT REQUIRED			
	24							
		SUPPLY		YES				
		MATERIAL		SS1016				
		TYPE OF CONSTRUCTION		CONICAL MACHINED FROM A BAR				
	_	CONNECTION TO THE PROCES		1.1/2", 150#, FR, ASME B16.5				
		CONNECTION TO THERMOMET	ER	1/2" NPT(F)				
		FLANGE FACE FINISH		MSS SP-6				
		INSERTION LENGTH "U"		212 mm				
WELL		EXTENSION LENGTH "T"		35 mm				
M	33							
	34							
	35							
	36							
	37			Anna Anna Maria				
	38		1 0	U				
	39							
<u> </u>	40		T	T	T			
	41	FLUID	PHYSICAL STATUS	PROPYLENE GLYCOL	LIQUID			
ONS		MINIMUM PRESSURE	NORMAL MAXIMUM	,	bar-g			
)TIC		MINIMUM TEMPERATURE	NORMAL MAXIMUM		℃			
ONE		DESIGN PRESSURE	DESIGN TEMPERATURE	bar-g °C				
1G C		VISCOSITY @ OPERATING CON		сР				
OPERATING CONDITIONS		DENSITY @ OPERATING COND	ITION	kg/m³				
ER/		SUSPENDED SOLIDS (%)		NOT				
g	48	SOLIDIFIES AT ROOM TEMPER.	ATURE	NOT				
		MAXIMUM FLUID SPEED		m/s				
	50	MANUFACTURER		ASCHCROFT OR SIMILAR				
	51	MODEL						









TITLE

SHEET:

37 de 37

TEMPERATURE GAUGE				
		2		

								2
	1	INSTRUMENT TAG NUMBER				7A-	TI-900206	
	2	SERVIÇE			TEMPERED WATER SUPPLY FOR STERILIZER			
	3	P&ID				7A-	-Z-0-2-05	
4	4	PIPE LINE EQUIPMENT NUMBER			2"-GW0S-900205-CS1-CC -			
ER	5	EQUIPMENT MATERIAL / PIPE			CARBON STEEL ASTM-A106 Gr.B			
GENERAL	6	AREA CLASSIFICATION			NOT CLASSIFIED			
	7	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CONF. NBR IEC 60529			
1	8	CERTIFICATES				(SEE GEN	ERAL NOTES 1)	
1	9			<u> </u>	•			
П	10	TYPE	BIMETALLIC					
	11	MOUNTING	LOCAL					
	12	DIAL DIAMETER			114 mm			
	13	SCALE COLOR BACKGROUND COLOR			BLACK WHITE			
	14	PRECISION	1	1% OF THE FII	I NAL VALUE "RANGE	1		
1	15	MATERIAL CASE			304SS POLISHED			
	16	RING TYPE	RING MATERIAL		BAYON	IET	3043	SS
5	17	ROD MATERIAL	DIAMETER		316S	S	6 m	m
INSTRUMENT		STEM CONNECTION TO WELL	CONNECTION PO	OSITION	1/2" NP7	Г (M)	ВОТТ	ОМ
₹		MINIMUM SCALE	MAXIMUM		0	· ·	300	°C
	20	MICROMETRIC ADJUSTMENT C	I)F ZERO				YES	
	21	FRONT TYPE	WINDOWS		SOLI	D	GLASS SEG. TRA	NSP. MIN. 75%
	22	ROD LENGTH "U"	<u> </u>		BY MANUFACTURER			
	23	FILLING	FLUID		NOT REQ	UIRED	NOT REG	QUIRED
	24		l					
П	25	SUPPLY			YES			
	26	MATERIAL			SS1016			
1	27	TYPE OF CONSTRUCTION			CONICAL MACHINED FROM A BAR			
	28	CONNECTION TO THE PROCESS			1.1/2", 150#, FR, ASME B16.5			
1	29	CONNECTION TO THERMOMET	ER		1/2" NPT(F)			
	30	FLANGE FACE FINISH			MSS SP-6			
	31	INSERTION LENGTH "U"			212 mm			
ltl	32	EXTENSION LENGTH "T"			35 mm			
WELL	33							
	34					- 9		
	35							
	36							
	37		Anna Anna Maria					
	38		<u> </u>					
	39		U	_т_				
	40							
ıΤ	41	FLUID	PHYSICAL STATI	us <u> </u>	PROPYLENE	GLYCOL	LIQU	IID
SNS	42	MINIMUM PRESSURE	NORMAL	MAXIMUM	,			bar-g
) H	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM				°C
OPERATING CONDITIONS	44	DESIGN PRESSURE	GN PRESSURE DESIGN TEMPERATURE			bar-g °C		
Ο̈́ O	45	VISCOSITY @ OPERATING CONDITION			сР			
N.	46	DENSITY @ OPERATING CONDITION			kg/m³			
ERA	47	SUSPENDED SOLIDS (%)			NOT			
9	48	SOLIDIFIES AT ROOM TEMPERATURE			NOT			
Ш		MAXIMUM FLUID SPEED			m/s			
	50	MANUFACTURER		ASCHCRO	OFT OR SIMILAR			
	51	MODEL						