

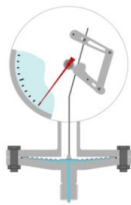
		Southern Adish Gas Condensate Refinery Project						 ADISH Southern Adish Gas Condensate Refinery company	
		INSTRUMENT DATA SHEETS FOR PRESSURE & DIFFERENTIAL PRESSURE							
		TRANSMITTER - WWT							
		Project	Phase	Unit	Disc	Type	Seq.No	Rev.	
Class : 1		SACR	DE	WWT	IN	DSH	5201	00	Page : 1 of 1
Level Transmitter - DP Type									
GENERAL	1	Item Number		Tag Number		QTY		LZT-526-083 1	
	2	Service						Sulfuric Acid Storage Tank	
	3	P & ID No.		Hazardous Area Classification		SACR-325-WWT-PR-PID-1203		Safe	
	4	Line/Equipment No.		Piping Class		PK-526-10-V02		BIF3	
PROCESS CONDITIONS	5	Upper Fluid		Lower Fluid		Air (Atmosphere)		Sulfuric Acid 98%	
	6	Upper Phase		Lower Phase		Vapor		Liquid	
	7	Oper. Pressure		Design Press.(Min/Max)		Unit	Atm	ATM	Barg
	8	Oper. Temp.		Design Temp.(Min/Max)		Unit	Ambient	55	°C
	9	Operating Density		Upper	Lower	Unit	-	1836	Kg/m3
	10	Operating Viscosity		Upper	Lower	Unit	-	22	cP
	11	Solid in Suspension		Wet Gas		No		No	
	12	Corrosive Service		Nace Requirement (MR 0175)		Yes		No	
	13	Toxic Service		Super Heat		Yes		No	
	14	Hydrogen Ion		Humidity		No		80%	
TRANSMITTER	15	Instrument Type		Model		Smart-HART protocol		*	
	16	Calibration Range				Unit	0 ~ 2000		mmH2O
	17	Instrument Range				Unit	*		mmH2O
	18	Zero Adj.		Span Adj.		Yes		Yes	
	19	Accuracy		Repeatability		±0.5% of Calibrated Span		±0.5% of Calibrated Span	
	20	Integral Indicator		Scale Factor		Yes (LCD Display)		Configurable	
	21	RFI Protection		Write Protection		Yes		Yes	
	22	Power Supply		Power Consumption		24V DC Loop Powered		*	
	23	Output Signal		Electrical Connection		4-20mADC+HART		ISO M20 x 1.5	
	24	Failure/ Diagnostic Alarm						*	
	25	Housing Material		Mounting type		Die-Cast Aluminum		2" Pipe	
	26	Ex Certificate		Ingress Protection		-		IP65	
	27	Tropicalized						Yes	
	SENSING & BODY	28	Element Type		Element Material		Diaphragm		SS316L as min.
29		Body Material				AISI 316 Stainless Steel			
30		O-Rings Material		Bolts Material		*		*	
31		Instrument Connection				1/2" NPTF			
32		Fill Fluid				*			
33		Over range protection		Max static Press. bar(g)		1.3 maximum pressure		4.5/FV	
34		Ambient Temp. Effect		Operating Temp. Limits		*		*	
35		Gold plated Diaphragm						Yes	
DIAPHRAGM SEAL	36	Type				Remote			
	37	Process Connection				2" 150# RF			
	38	Connection Material				*			
	39	Diaphragm Material				AISI 316 Stainless Steel			
	40	Extended Length				-			
	41	Bottom Housing Material				*			
	42	Top Housing Material				*			
	43	Flushing Connection				-			
	44	Fill Connection				-			
	45	Fill Fluid				*			
	46	Capillary Length				6m			
	47	Capillary Bleeder				-			
MANIFOLD	48	Capillary Material				AISI 316 Stainless Steel			
	49								
	50	Valve Type							
	51	Body Material							
	52	Instrument Connection							
ACCESSORIES	53	Vent / Drain Plug							
	54								
	55								
	56	Lightning Protection				Required			
PURCHASE	57	Mounting Brackets				Yes			
	58	Name / Tag Plate				Yes			
	59	Local Indicator		Tag Number		No			
PURCHASE	60	Manufacturer				*			
	61	Model				*			
	62	Requisition Number				*			
Notes: * : To be defined by Vendor - Mounting Bracket & U-bolt/Nuts shall be supplied by Vendor - The stainless steel name plate shall be provided.									

		Southern Adish Gas Condensate Refinery Project							 ADISH Southern Adish Gas Condensate Refinery Company			
		INSTRUMENT DATA SHEETS FOR PRESSURE AND DIFFERENTIAL PRESSURE GAUGES - WWT										
		Project	Phase	Unit	Disc	Type	Seq. No	Rev.				
Class : 1		SACR	DE	WWT	IN	DSH	5501	00	Page 1 of 2			
Pressure Gauges with Diaphragm Seal												
GENERAL	1	Item Number	Tag Number		QTY		(Note 1)					
	2	Service										
	3	P & ID No.										
	4	Line / Equipment No.	Piping Class		(Note 1)			(Note 1)				
PROCESS CONDITIONS	5	Fluid	Phase		Sulfuric Acid 98%			Liquid				
	6	Oper. Pressure	Min.	Nor.	Max.	Unit	-	(Note 1)	-	Bar(g)		
	7	Oper. Diff. Press.	Min.	Nor.	Max.	Unit				Bar		
	8	Oper. Temp.					(Note 1)			°C		
	9	Design Pressure	Min.	Max.		Unit	(Note 1)			Bar(g)		
	10	Design Temp.	Min.	Max.		Unit	(Note 1)			°C		
	11	Operating Viscosity					(Note 1)			cP		
	12	Pulsation	No									
	13	Corrosive Service	Super Heat		(Note 1)			(Note 1)				
	14	Toxic Service	Nace Requirement (MR 0175)		No			(Note 1)				
	GAUGE	15										
16		Instrument Type	Model		Direct			**				
17		Instrument Range			Unit	(Note 1)			Bar(g)			
18		Zero Adjustment	Yes									
19		Figure Interval	Minor Graduation		MFR. STD.			MFR. STD.				
20		Mounting	Local									
21		Dial Size (mm)	Dial Color		150			White with Black pointer				
22		Case Material	Window Material (Lens)		SS316			Safety Shatter Proof Glass				
23		Ring Construction	Ring Material		Screwed			SS316				
24		Pressure Element Type	Bourdon									
25		Pressure Element Material	SS316									
26		Socket Material	SS316									
27		Connection Size	Connection Location		N/A			Bottom				
28		Movement Material	Stainless steel									
29		Nominal Accuracy	+/- 1% of calibrated span as minimum									
30		Micrometer Pointer	No									
31		Blow-Out Protection	Yes									
32		Solid Front	Yes									
DIAPHRAGM SEAL		33	Over range Protection	1.3 maximum pressure								
		34	Ingress Protection	IP65								
	35											
	36	Model Number	**									
	37	Type	Direct (Note 4)									
	38	Process Connection	½" NPT-M									
	39	Connection Material	SS316									
	40	Extended Length	-									
	41	Diaphragm Material	**(minimum SS316)									
	42	Bottom Housing Material	SS316									
	43	Fill Fluid	**									
	44	Capillary Length	N/A									
	45	Capillary Bleeder	N/A									
	46	Capillary Material	N/A									
	OPTIONS	47	Flushing Connection	**								
48		Top Housing Material	Stainless steel									
49		Instrument Connection	-									
50		Fill Connection	-									
51												
MANIFOLD	52	Siphon	Type / Material		-			SS316				
	53	Pulsation Dampener	Material		(Note 1)			-				
	54	Over Range Protector	Material		(Note 1)			SS316				
	55	Oil Filled	Name Plate		Yes			SS316				
	56											
PURCHASE	57	Valve Type	Model		-			-				
	58	Body Material	Trim Material		-			-				
	59	Process Connection	Instrument Connection		-			-				
	60	Vent/Drain size	Valve Rating		-							
	61	Packing Material										
	62											
Notes: 1. Refer to the List sheet for information. 2. ** : To be defined by Vendor 3. Refer to the List sheet for general outline of the gauge. (process connection will be 1/2" NPT.M) 4. In case of capillary it should be remote type, refer to list sheet for information												

		Southern Adish Gas Condensate Refinery Project										 ADISH Southern Public Gas Condensate Refinery Company			
		INSTRUMENT DATA SHEETS FOR PRESSURE AND DIFFERENTIAL PRESSURE GAUGES - WWT													
		Project	Phase	Unit	Disc	Type	Seq. No	Rev.							
Class : 1		SACR	DE	WWT	IN	DSH	5501	00	Page 2 of 2						
Tag No.	Service	Line / Equipment No.		Temp.(°C) Oper. / Design		Press. (barg) Normal / Design		Viscosity (cP)	Instrument Range		Services	NACE Req. (MR 0175)	Over Range Protector	Remote/Ca pillary	Puls. Damp.
PG-526-121	PK-526-10-P02 INLET	SUA-1 1/2"-526-301-B1F3-PT		30	85	1.0	3.5	22	0	2.5	Corrosive	NO	**		
PG-526-120	PK-526-10-P02 OUTLET	SUA-1 1/2"-526-303-B1F3-PT		30	85	2.0	8	22	0	4	Corrosive	NO	**		Yes

Notes:

** : To be defined by Vendor



<Diaphragm Seal type Pressure Gauge>

		Southern Adish Gas Condensate Refinery Project						 ADISH Southern Adish Gas Condensate Refinery company		
		INSTRUMENT DATA SHEETS FOR PRESSURE & DIFFERENTIAL PRESSURE								
		TRANSMITTER - LPG/LPT								
Class : 1		Project	Phase	Unit	Disc	Type	Seq. No	Rev.	Page : 1 of 1	
		SACR	DE	LPT	IN	DSH	5201	00		
Integral Orifice Differential Pressure Transmitter										
GENERAL	1	Item Number	Tag Number		QTY		FT-517-070		1	
	2	Service		P-517-01A/B DISCHARGE						
	3	P & ID No.	Hazardous Area Classification		SACR-DE-LPT-PR-PID-1201		Zone 2, Group IIA, T3			
	4	Line/Equipment No.	Piping Class		PRO-1 1/2"-517-004-B3E3N-PT		B3E3N			
PROCESS CONDITIONS	5	Fluid	Phase		PRO		Liquid			
	6	Flow Rate	Min.	Nor.	Max.	Unit	1039	2078	4156 Kg/hr	
	7	Oper. Pressure	Min.	Nor.	Max.	Unit	-	18	Barg	
	8	Oper. Temp.			Unit	41		°C		
	9	Design Pressure	Min.	Max.	Unit	F.V		29.5	Barg	
	10	Design Temp.	Min.	Max.	Unit	-		90	°C	
	11	Operating Viscosity			Unit	0.78		cP		
	12	Solid in Suspension	Wet Gas		No		No			
	13	Corrosive Service	Nace Requirement (MR 0175)		Yes		Yes			
	14	Toxic Service	Super Heat		No		No			
	15	Hydrogen Ion	Humidity		Yes		80%			
	TRANSMITTER	16	Instrument Type	Model		Smart-HART protocol		*		
		17	Flow at Full Scale			Unit	4156		Kg/hr	
		18	Calibration Range			Unit	0 -250		mbar	
		19	Instrument Range			Unit	*		mbar	
20		Zero Adj.	Span Adj.		Yes		Yes			
21		Accuracy	Repeatability		±0.5% of Calibrated Span		±0.5% of Calibrated Span			
22		Integral Indicator	Scale Factor		Yes (LCD Display)		Configurable			
23		RFI Protection	Write Protection		Yes		No			
24		Power Supply	Power Consumption		24V DC Loop Powered		*			
25		Output Signal	Electrical Connection		4-20mADC+HART		ISO M20 x 1.5			
26		Failure/ Diagnostic Alarm			*					
27		Housing Material	Mounting type		Die-Cast Aluminum		2" Pipe			
28		Ex Certificate	Ingress Protection		EEx ia		IP65			
29		Tropicalized			Yes					
SENSING & BODY		30	Element Type	Element Material		Diaphragm		SS 316L as Min.		
	31	Body Material			AISI 316 Stainless Steel					
	32	O-Rings Material	Bolts Material		*		*			
	33	Instrument Connection			1/2" NPTF					
	34	Fill Fluid			*					
	35	Over range protection	Max static Press. bar(g)		1.3 maximum pressure		29.5			
	36	Ambient Temp. Effect	Operating Temp. Limits		*		*			
	37	Gold plated Diaphragm			-					
ORIFICE PLATE	38	Flow Element Type			Square Edge & Concentric Orifice					
	39	Material			ASTM A105N					
	40	Process Connection			1 1/2" 300# RF					
	41									
MANIFOLD	42	Valve Type			3-Way					
	43	Body Material			316SS					
	44	Instrument Connection			1/2" NPT					
	45	Vent / Drain Plug			Yes					
ACCESSORIES	46	Lightning Protection			Required					
	47	Mounting Brackets			Yes					
	48	Name / Tag Plate			Yes					
	49	Local Indicator	Tag Number		No					
PURCHASE	50	Manufacturer			*					
	51	Model			*					
	52	Requisition Number			*					
Note: * : To be defined by Vendor - Mounting Bracket & U-bolt/Nuts shall be supplied by Vendor - The stainless steel name plate shall be provided.										