

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER								
شماره پیمان: 053 - 073 - 9184	پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تسهیلات 120	رشته IN	نوع مدرک DT	سریال 0006	نسخه D04	شماره صفحه: 1 از 28

طرح نگهداشت و افزایش تولید 27 مخزن

DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER

نگهداشت و افزایش تولید میدان نفتی بینک

D04	JUL.2024	AFC	P.Hajisadeghi	M.Fakharian	M.Sadeghian	
D03	FEB.2024	AFC	P.Hajisadeghi	M.Fakharian	S.Faramarzpour	
D02	MAY.2023	AFC	P.Hajisadeghi	M.Fakharian	A.M.Mohseni	
D01	DEC.2022	IFA	P.Hajisadeghi	M.Fakharian	M.Mehrshad	
D00	MAR.2022	IFC	P.Hajisadeghi	M.Fakharian	M.Mehrshad	
Rev.	Date	Purpose of Issue / Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval

Class: 1

CLIENT Doc. Number: F9Z-708927

status:

IDC: Inter-Discipline Check

IFC: Issued For Comment

IFA: Issued For Approval

AFD: Approved For Design

AFC: Approved For Construction

AFP: Approved For Purchase

AFQ: Approved For Quotation

IFI: Issued For Information

AB-R: As-Built for CLIENT Review

AB-A: As-Built -Approved



NISOC

نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER

شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 2 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D04	

REVISION RECORD SHEET

Page	D00	D01	D02	D03	D04	Page	D05	D06	D07	D08	D09
1	X	X	X	X	X	1					
2	X	X	X	X	X	2					
3	X	X		X	X	3					
4	X	X				4					
5	X	X	X	X	X	5					
6	X	X	X	X	X	6					
7	X	X	X	X	X	7					
8	X	X	X	X	X	8					
9	X	X	X	X	X	9					
10	X	X	X	X	X	10					
11	X	X	X	X	X	11					
12	X	X	X	X	X	12					
13	X	X	X	X	X	13					
14	X	X	X	X	X	14					
15	X	X	X	X	X	15					
16	X	X	X	X	X	16					
17	X	X	X	X	X	17					
18	X	X	X	X	X	18					
19	X	X	X	X	X	19					
20	X	X	X	X	X	20					
21	X	X	X	X	X	21					
22	X	X	X	X	X	22					
23	X	X	X	X	X	23					
24	X	X	X	X	X	24					
25	X	X	X	X	X	25					
26	X	X	X	X	X	26					
27	X	X	X	X	X	27					
28	X	X		X		28					
29	X	X				29					
30	X	X				30					
31	X	X				31					
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	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER								
	شماره پیمان:	پروژه	بسته کاری	صادرکننده	تجهیزات	رشته	نوع مدرک	سریال	نسخه
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D04	

REFERENCE DOCUMENTS :

D04

REV.

Specification For Instrumentation	BK-GNRAL-PEDCO-000-IN-SP-0001	D04
Process Basis Of Design	BK-GNRAL-PEDCO-000-PR-DB-0001	D08
Piping Material Specification	BK-GCS-PEDCO-120-PI-SP-0001	D06
Hazardous Area Classification Layout	BK-GCS-PEDCO-120-SA-PY-0002	D01
Instrument & Control System Design Criteria	BK-GCS-PEDCO-120-IN-DC-0002	D02
Symbol & Legend For PFD and P&ID	BK-GCS-PEDCO-120-PR-PI-0001	D04
P&ID - Gas Compression Inlet Gas Pipeline (Binak)	BK-GCS-PEDCO-120-PR-PI-0002	D08
P&ID - Gas Compression Inlet Gas Pipeline (Golkhari)	BK-GCS-PEDCO-120-PR-PI-0003	D08
P&ID - Slug Catcher System	BK-GCS-PEDCO-120-PR-PI-0004	D08
P&ID - Gas Compression Inlet Knock Out Drum	BK-GCS-PEDCO-120-PR-PI-0005	D08
P&ID - 1st Stage Gas Compression Suction Drums	BK-GCS-PEDCO-120-PR-PI-0006	D08
P&ID - 1st Stage Gas Compression Compressors	BK-GCS-PEDCO-120-PR-PI-0007	D08
P&ID - 1st Stage Gas Compression Air Coolers	BK-GCS-PEDCO-120-PR-PI-0008	D08
P&ID - 2nd Stage Gas Compression Suction Drums	BK-GCS-PEDCO-120-PR-PI-0009	D08
P&ID - 2nd Stage Gas Compression Compressors	BK-GCS-PEDCO-120-PR-PI-0010	D07
P&ID - 2nd Stage Gas Compression Air Coolers	BK-GCS-PEDCO-120-PR-PI-0011	D08
P&ID - 2nd Stage Gas Compression Discharge Drum	BK-GCS-PEDCO-120-PR-PI-0012	D08
P&ID - Gas Compression Dehydration Package	BK-GCS-PEDCO-120-PR-PI-0013	D08
P&ID - Lean Glycol Storage Tank	BK-GCS-PEDCO-120-PR-PI-0014	D08
P&ID - Instrument & Plant Air System	BK-GCS-PEDCO-120-PR-PI-0015	D08
P&ID - Nitrogen Generation System	BK-GCS-PEDCO-120-PR-PI-0016	D08
P&ID - Close Drain System	BK-GCS-PEDCO-120-PR-PI-0017	D08
P&ID - Corrosion Inhibitor Package	BK-GCS-PEDCO-120-PR-PI-0018	D09
P&ID - Methanol Injection Package	BK-GCS-PEDCO-120-PR-PI-0019	D07
P&ID - LP Flare System	BK-GCS-PEDCO-120-PR-PI-0020	D08
P&ID - Oily Water Sewer	BK-GCS-PEDCO-120-PR-PI-0021	D05
P&ID - Fuel Gas System	BK-GCS-PEDCO-120-PR-PI-0022	D08
P&ID - Diesel Oil System	BK-GCS-PEDCO-120-PR-PI-0023	D08
P&ID - Potable Water System	BK-GCS-PEDCO-120-PR-PI-0024	D07
P&ID - Glycol Sump Drum	BK-GCS-PEDCO-120-PR-PI-0025	D08
P&ID - Fire Water Network	BK-GCS-PEDCO-120-SA-PI-0001	D05
P&ID - Total Flooding System For Extension of Existing Elect. Building	BK-GCS-PEDCO-120-SA-PI-0002	D03

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک									
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER									
	شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 4 از 28
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GENERAL NOTES:

- 1- Wetted part shall be in according to NACE MR-0175/ISO 15156.
- 2- The torque tube connection with the displacer chamber shall be flanged.
- 3- All transmitters shall be equipped with internal diagnostics software.
- 4- Vendor to follow materials indicated in the Data Sheets, related wetted parts, these materials can be as the minimum and shall be verified by vendor.
- 5- A material certificate to EN 10204: 2004 type 3.1 shall be provided for each process wetted part.
- 6- Any pressure bearing welds shall be subject to 100% radiography inspection by qualified welding NDT inspectors.
- 7- All transmitters shall have output short circuit & reverse polarity protection.
- 8- The transmitter digital electronics shall have a non-volatile EEPROM memory to be used for storing the configuration data of sensor.
- 9- Material Test Certificates and Calibration shall submit for each Level Transmitter by vendor.
- 10- Sunshade to be considered for all electronic parts.
- 11- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer.
- 12- Environmental condition for field instrumentation of Binak oilfield shall be considered as per the following (According to "BK-GNRL-PEDCO-000-PR-DB-0001: Process Basis Of Design":

Maximum ambient temperature: 50 (°C)
 Minimum ambient temperature: 5 (°C)
 Maximum steel surface exposed to sun: 85 (°C)
 Maximum summer dry bulb: - (°C)
 DB/RH for Summer HVAC Design: 41 °C / 61 %
 DB FOR Winter HVAC Design: 6 °C

Relative Humidity:

- Maximum Design relative humidity (%): 100
- Minimum Design relative humidity (%): 0

- 13- Tag plate as per Specification for Instrumentation, shall be stainless steel 304 SS (VTC). Following details shall be engraved on them:

- Tag Number
- Range Limit
- Service
- Manufacture Model

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	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER								
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 5 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D04	

DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)										
GENERAL	1	Tag Number				LIT-2117				
	2	Service				Gas Compression Inlet Knock Out Drum				
	3	Location				V-2105				
	4	Mounting Type				External				
	5	Application				Level Control				
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0005-D08				
	7	RFI Protection				Tropicalisation		NEEDED		NEEDED
PROCESS CONDITIONS	8	Upper Fluid				Process Gas				
	9	Lower Fluid				Hydrocarbon Drain				
	10	Density Lower		Density Upper		842.6 Kg/m3		6.165 Kg/m3		
	11	Design Pressure		Normal Pressure		Fv/9 barg		5.3 barg		
	12	Design Temp.		Normal Temp.		85 °C		37.17 °C		
	13	Viscosity Low.		Viscosity Up		0.69 cp		0.011 cp		
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)				
	15	Body/Cage Rating				300#				
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side				
	17	-				-				
	18	Flange Material				C.S. A105 NACE				
	19	Length of Center To Center				813 mm (32")				
	20	Case Mounting				VTA				
	21	Rotatable Head				Yes				
	22	Orientation				Side, Side with vent/drain connection				
23	Cooling Extension				N.A.					
DISPLACER	24	Sensor Type				Displacer				
	25	Sensor Quantity				1				
	26	Sensor Dimention				VTA				
	27	Selected Standard Span				VTA				
	28	Insertion Depth				N/A				
	29	Displacer Extension Material				N/A				
	30	Displacer or Float Material				S.S. 316L				
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel		
	32	Trim Material				S.S. 316L				
	TRANSMITTER	33	Function				Level Transmitter			
34		Output				4~20 mA, SMART, HART				
35		Set Range		Min.	Max.	0		100%		
36		Calibration Range				0-700 mm				
37		Ingress Protection				IP65				
38		Mounting Location				Side Mounted				
39		Connection Size & Location				VTA				
40		Ex Protection				Zone 2, EEx ia IIB T4				
41		Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5		
42		Accuracy				±0.1% of calibrated span				
43		Integral Indicator		Write Protection		Digital LCD		Yes		
44		Zero/Span Adjustment				VTA				
45		Termination Type				Screw terminal				
46		Case Material				Low Copper Die-Cast Aluminum				
47		SIL Rating				SIL 1				
OPTIONS		48	Cable Gland				M20x1.5 , EExd			
		49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50	Compliance Code				-				
PURCHASE	51	Custom Tag				S.S. permanent attached				
	52	Manufacturer				Will be finalized later				
	53	Model				Will be finalized later				

Notes:

VTA: Vendor to advice

1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

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	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER								
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 6 از 28
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DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)										
GENERAL	1	Tag Number				LIT-2118				
	2	Service				Gas Compression Inlet Knock Out Drum				
	3	Location				V-2105				
	4	Mounting Type				External				
	5	Application				Level Control				
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0005-D08				
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED		D04
PROCESS CONDITIONS	8	Upper Fluid		Process Gas						
	9	Lower Fluid		Hydrocarbon Drain						
	10	Density Lower		Density Upper		842.6 Kg/m3		6.165 Kg/m3		
	11	Design Pressure		Normal Pressure		Fv/9 barg		5.3 barg		
	12	Design Temp.		Normal Temp.		85 °C		37.17 °C		
	13	Viscosity Low.		Viscosity Up		0.69 cp		0.011 cp		
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)				
	15	Body/Cage Rating				300#				
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side				
	17									
	18	Flange Material				C.S. A105 NACE				
	19	Length of Center To Center				356 mm (14")				
	20	Case Mounting				VTA				
	21	Rotatable Head				Yes				
	22	Orientation				Side, Side with vent/drain connection				
23	Torque Tube Type				Yes					
DISPLACER	24	Sensor Type				Displacer				
	25	Sensor Quantity				1				
	26	Sensor Dimention				VTA				
	27	Selected Standard Span				VTA				
	28	Insertion Depth				N/A				
	29	Displacer Extension Material				N/A				
	30	Displacer or Float Material				S.S. 316L				
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel		
	32	Trim Material				S.S. 316L				
	TRANSMITTER	33	Function				Level Transmitter			
34		Output				4~20 mA, SMART, HART				
35		Set Range		Min.	Max.	0		100%		
36		Calibration Range				0-250 mm				
37		Ingress Protection				IP65				
38		Mounting Location				Side Mounted				
39		Connection Size & Location				VTA				
40		Ex Protection				Zone 2, EEx ia IIB T4				
41		Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5		
42		Accuracy				±0.1% of calibrated span				
43		Integral Indicator		Write Protection		Digital LCD		Yes		
44		Zero/Span Adjustment				Required				
45		Termination Type				Screw terminal				
46		Case Material				Low Copper Die-Cast Aluminum				
47		SIL Rating				SIL a				
OPTIONS		48	Cable Gland				M20x1.5 , EExd			
		49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50									
PURCHASE	51	Custom Tag				S.S. permanent attached				
	52	Manufacturer				Will be finalized later				
	53	Model				Will be finalized later				
Notes: VTA: Vendor to advice 1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.										

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
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شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 7 از 28
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DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)									
GENERAL	1	Tag Number				LIT-2121A			
	2	Service				1st Stage Gas Compression Suction Drums			
	3	Location				V-2101-A			
	4	Mounting Type				External			
	5	Application				Level Control			
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0006-D08 (1 of 3)			
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED	
PROCESS CONDITIONS	8	Upper Fluid		Process Gas					
	9	Lower Fluid		Hydrocarbon Drain					
	10	Density Lower		Density Upper		842.7 Kg/m3		5.97 Kg/m3	
	11	Design Pressure		Normal Pressure		F.V/22 barg		4.9 barg	
	12	Design Temp.		Normal Temp.		85 °C		36.92 °C	
	13	Viscosity Low.		Viscosity Up		0.69 cp		0.01 cp	
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)			
	15	Body/Cage Rating				300#			
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side			
	17								
	18	Flange Material				C.S. A105 NACE			
	19	Length of Center To Center				813 mm (32")			
	20	Case Mounting				VTA			
	21	Rotatable Head				Yes			
	22	Orientation				Side, Side with vent/drain connection			
DISPLACER	23	Torque Tube Type				Yes			
	24	Sensor Type				Displacer			
	25	Sensor Quantity				1			
	26	Sensor Dimention				VTA			
	27	Selected Standard Span				VTA			
	28	Insertion Depth				N/A			
	29	Displacer Extension Material				N/A			
	30	Displacer or Float Material				S.S. 316L			
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel	
	32	Trim Material				S.S. 316L			
TRANSMITTER	33	Function				Level Transmitter			
	34	Output				4~20 mA, SMART, HART			
	35	Set Range		Min.	Max.	0		100%	
	36	Calibration Range				0-700 mm			
	37	Ingress Protection				IP65			
	38	Mounting Location				Side Mounted			
	39	Connection Size & Location				VTA			
	40	Ex Protection				Zone 2, EEx ia IIB T4			
	41	Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5	
	42	Accuracy				±0.1% of calibrated span			
	43	Integral Indicator		Write Protection		Digital LCD		No	
	44	Zero/Span Adjustment				Required			
	45	Termination Type				Screw terminal			
	46	Case Material				Low Copper Die-Cast Aluminum			
	47	SIL Rating				N/A			
OPTIONS	48	Cable Gland				M20x1.5 , EExd			
	49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50								
PURCHASE	51	Custom Tag				S.S. permanent attached			
	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			

Notes:

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1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

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شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 8 از 28
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DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)									
GENERAL	1	Tag Number				LIT-2122A			
	2	Service				1st Stage Gas Compression Suction Drums			
	3	Location				V-2101-A			
	4	Mounting Type				External			
	5	Application				Level Control			
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0006-D08 (1 of 3) D04			
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED	
PROCESS CONDITIONS	8	Upper Fluid		Process Gas					
	9	Lower Fluid		Hydrocarbon Drain					
	10	Density Lower		Density Upper		842.7 Kg/m3		5.97 Kg/m3	
	11	Design Pressure		Normal Pressure		F.V/22 barg		4.9 barg	
	12	Design Temp.		Normal Temp.		85 °C		36.92 °C	
	13	Viscosity Low.		Viscosity Up		0.69 cp		0.01 cp	
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)			
	15	Body/Cage Rating				300#			
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side			
	17	-				-			
	18	Flange Material				C.S. A105 NACE D04			
	19	Length of Center To Center				1219 mm (48")			
	20	Case Mounting				VTA			
	21	Rotatable Head				Yes			
	22	Orientation				Side, Side with vent/drain connection			
DISPLACER	23	Torque Tube Type				Yes			
	24	Sensor Type				Displacer			
	25	Sensor Quantity				1			
	26	Sensor Dimention				VTA			
	27	Selected Standard Span				VTA			
	28	Insertion Depth				N/A			
	29	Displacer Extension Material				N/A			
	30	Displacer or Float Material				S.S. 316L			
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel	
	32	Trim Material				S.S. 316L			
TRANSMITTER	33	Function				Level Transmitter			
	34	Output				4~20 mA, SMART, HART			
	35	Set Range	Min.	Max.	0		100%		
	36	Calibration Range				0-1100 mm			
	37	Ingress Protection				IP65			
	38	Mounting Location				Side Mounted			
	39	Connection Size & Location				VTA			
	40	Ex Protection				Zone 2, EEx ia IIB T4			
	41	Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5	
	42	Accuracy				±0.1% of calibrated span			
	43	Integral Indicator		Write Protection		Digital LCD		Yes	
	44	Zero/Span Adjustment				Required			
	45	Termination Type				Screw terminal			
	46	Case Material				Low Copper Die-Cast Aluminum			
	47	SIL Rating				SIL 2			
OPTIONS	48	Cable Gland				M20x1.5 , EExd			
	49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50	-				-			
PURCHASE	51	Custom Tag				S.S. permanent attached			
	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			
Notes: VTA: Vendor to advice 1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.									

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 	
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER								
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهيلات	رشته	نوع مدرک	سريال	نسخه	شماره صفحه: 9 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D04	

DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)										
GENERAL	1	Tag Number				LIT-2121B				
	2	Service				1st Stage Gas Compression Suction Drums				
	3	Location				V-2101-B				
	4	Mounting Type				External				
	5	Application				Level Control				
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0006-D08 (2 of 3) D04				
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED		
PROCESS CONDITIONS	8	Upper Fluid		Process Gas						
	9	Lower Fluid		Hydrocarbon Drain						
	10	Density Lower		Density Upper		842.7 Kg/m3		5.97 Kg/m3		
	11	Design Pressure		Normal Pressure		F.V/22 barg		4.9 barg		
	12	Design Temp.		Normal Temp.		85 °C		36.92 °C		
	13	Viscosity Low.		Viscosity Up		0.69 cp		0.01 cp		
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)				
	15	Body/Cage Rating				300#				
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side				
	17	-				-				
	18	Flange Material				C.S. A105 NACE D04				
	19	Length of Center To Center				813 mm (32")				
	20	Case Mounting				VTA				
	21	Rotatable Head				Yes				
	22	Orientation				Side, Side with vent/drain connection				
	23	Torque Tube Type				Yes				
DISPLACER	24	Sensor Type				Displacer				
	25	Sensor Quantity				1				
	26	Sensor Dimention				VTA				
	27	Selected Standard Span				VTA				
	28	Insertion Depth				N/A				
	29	Displacer Extension Material				N/A				
	30	Displacer or Float Material				S.S. 316L				
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel		
	32	Trim Material				S.S. 316L				
	TRANSMITTER	33	Function				Level Transmitter			
34		Output				4~20 mA, SMART, HART				
35		Set Range	Min.	Max.	0		100%			
36		Calibration Range				0-700 mm				
37		Ingress Protection				IP65				
38		Mounting Location				Side Mounted				
39		Connection Size & Location				VTA				
40		Ex Protection				Zone 2, EEx ia IIB T4				
41		Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5		
42		Accuracy				±0.1% of calibrated span				
43		Integral Indicator		Write Protection		Digital LCD		No		
44		Zero/Span Adjustment				Required				
45		Termination Type				Screw terminal				
46		Case Material				Low Copper Die-Cast Aluminum				
47		SIL Rating				N/A				
OPTIONS		48	Cable Gland				M20x1.5 , EExd			
		49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50	-				-				
PURCHASE	51	Custom Tag				S.S. permanent attached				
	52	Manufacturer				Will be finalized later				
	53	Model				Will be finalized later				
Notes: VTA: Vendor to advice 1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.										

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER								
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 10 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D04	

DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)										
GENERAL	1	Tag Number				LIT-2122B				
	2	Service				1st Stage Gas Compression Suction Drums				
	3	Location				V-2101-B				
	4	Mounting Type				External				
	5	Application				Level Control				
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0006-D08 (2 of 3)				
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED		D04
PROCESS CONDITIONS	8	Upper Fluid		Process Gas						
	9	Lower Fluid		Hydrocarbon Drain						
	10	Density Lower		Density Upper		842.7 Kg/m3		5.97 Kg/m3		
	11	Design Pressure		Normal Pressure		F.V/22 barg		4.9 barg		
	12	Design Temp.		Normal Temp.		85 °C		36.92 °C		
	13	Viscosity Low.		Viscosity Up		0.69 cp		0.01 cp		
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)				
	15	Body/Cage Rating				300#				
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side				
	17									
	18	Flange Material				C.S. A105 NACE				
	19	Length of Center To Center				1219 mm (48")				
	20	Case Mounting				VTA				
	21	Rotatable Head				Yes				
	22	Orientation				Side, Side with vent/drain connection				
DISPLACER	23	Torque Tube Type				Yes				
	24	Sensor Type				Displacer				
	25	Sensor Quantity				1				
	26	Sensor Dimention				VTA				
	27	Selected Standard Span				VTA				
	28	Insertion Depth				N/A				
	29	Displacer Extension Material				N/A				
	30	Displacer or Float Material				S.S. 316L				
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel		
	32	Trim Material				S.S. 316L				
TRANSMITTER	33	Function				Level Transmitter				
	34	Output				4~20 mA, SMART, HART				
	35	Set Range		Min.		Max.		0		100%
	36	Calibration Range				0-1100mm				
	37	Ingress Protection				IP65				
	38	Mounting Location				Side Mounted				
	39	Connection Size & Location				VTA				
	40	Ex Protection				Zone 2, EEx ia IIB T4				
	41	Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5		
	42	Accuracy				±0.1% of calibrated span				
	43	Integral Indicator		Write Protection		Digital LCD		Yes		
	44	Zero/Span Adjustment				Required				
	45	Termination Type				Screw terminal				
	46	Case Material				Low Copper Die-Cast Aluminum				
	47	SIL Rating				SIL 2				
OPTIONS	48	Cable Gland				M20x1.5 , EExd				
	49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve				
	50									
PURCHASE	51	Custom Tag				S.S. permanent attached				
	52	Manufacturer				Will be finalized later				
	53	Model				Will be finalized later				
Notes: VTA: Vendor to advice 1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.										

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER								
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 11 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D04	

DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)										
GENERAL	1	Tag Number				LIT-2121C				
	2	Service				1st Stage Gas Compression Suction Drums				
	3	Location				V-2101-C				
	4	Mounting Type				External				
	5	Application				Level Control				
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0006-D08 (3 of 3)				
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED		D04
PROCESS CONDITIONS	8	Upper Fluid		Process Gas						
	9	Lower Fluid		Hydrocarbon Drain						
	10	Density Lower		Density Upper		842.7 Kg/m3		5.97 Kg/m3		
	11	Design Pressure		Normal Pressure		F.V/22 barg		4.9 barg		
	12	Design Temp.		Normal Temp.		85 °C		36.92 °C		
	13	Viscosity Low.		Viscosity Up		0.69 cp		0.01 cp		
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)				
	15	Body/Cage Rating				300#				
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side				
	17									
	18	Flange Material				C.S. A105 NACE				
	19	Length of Center To Center				813 mm (32")				
	20	Case Mounting				VTA				
	21	Rotatable Head				Yes				
	22	Orientation				Side, Side with vent/drain connection				
	23	Torque Tube Type				Yes				
DISPLACER	24	Sensor Type				Displacer				
	25	Sensor Quantity				1				
	26	Sensor Dimention				VTA				
	27	Selected Standard Span				VTA				
	28	Insertion Depth				N/A				
	29	Displacer Extension Material				N/A				
	30	Displacer or Float Material				S.S. 316L				
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel		
	32	Trim Material				S.S. 316L				
	TRANSMITTER	33	Function				Level Transmitter			
34		Output				4~20 mA, SMART, HART				
35		Set Range	Min.	Max.	0		100%			
36		Calibration Range				0-700 mm				
37		Ingress Protection				IP65				
38		Mounting Location				Side Mounted				
39		Connection Size & Location				VTA				
40		Ex Protection				Zone 2, EEx ia IIB T4				
41		Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5		
42		Accuracy				±0No.1% of calibrated span				
43		Integral Indicator		Write Protection		Digital LCD		No		
44		Zero/Span Adjustment				Required				
45		Termination Type				Screw terminal				
46		Case Material				Low Copper Die-Cast Aluminum				
47		SIL Rating				N/A				
OPTIONS		48	Cable Gland				M20x1.5 , EExd			
		49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50									
PURCHASE	51	Custom Tag				S.S. permanent attached				
	52	Manufacturer				Will be finalized later				
	53	Model				Will be finalized later				
Notes: VTA: Vendor to advice 1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.										

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 	
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER								
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 12 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D04	

DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)									
GENERAL	1	Tag Number				LIT-2122C			
	2	Service				1st Stage Gas Compression Suction Drums			
	3	Location				V-2101-C			
	4	Mounting Type				External			
	5	Application				Level Control			
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0006-D08 (3 of 3) D04			
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED	
PROCESS CONDITIONS	8	Upper Fluid D04		Process Gas					
	9	Lower Fluid		Hydrocarbon Drain					
	10	Density Lower		Density Upper		842.7 Kg/m3		5.97 Kg/m3	
	11	Design Pressure		Normal Pressure		F.V/22 barg D04		4.9 barg	
	12	Design Temp.		Normal Temp.		85 °C		36.92 °C	
	13	Viscosity Low.		Viscosity Up		0.69 cp		0.01 cp	
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)			
	15	Body/Cage Rating				300#			
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side			
	17	-				-			
	18	Flange Material				C.S. A105 NACE D04			
	19	Length of Center To Center				1219 mm (48")			
	20	Case Mounting				VTA			
	21	Rotatable Head				Yes			
	22	Orientation				Side, Side with vent/drain connection			
DISPLACER	23	Torque Tube Type				Yes			
	24	Sensor Type				Displacer			
	25	Sensor Quantity				1			
	26	Sensor Dimention				VTA			
	27	Selected Standard Span				VTA			
	28	Insertion Depth				N/A			
	29	Displacer Extension Material				N/A			
	30	Displacer or Float Material				S.S. 316L			
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel	
	32	Trim Material				S.S. 316L			
TRANSMITTER	33	Function				Level Transmitter			
	34	Output				4~20 mA, SMART, HART			
	35	Set Range	Min.	Max.	0		100%		
	36	Calibration Range				0-1100mm			
	37	Ingress Protection				IP65			
	38	Mounting Location				Side Mounted			
	39	Connection Size & Location				VTA			
	40	Ex Protection				Zone 2, EEx ia IIB T4			
	41	Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5	
	42	Accuracy				±0.1% of calibrated span			
	43	Integral Indicator		Write Protection		Digital LCD		Yes	
	44	Zero/Span Adjustment				Required			
	45	Termination Type				Screw terminal			
	46	Case Material				Low Copper Die-Cast Aluminum			
	OPTIONS	47	SIL Rating				SIL 2		
48		Cable Gland				M20x1.5 , EExd			
49		Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
PURCHASE	50	-				-			
	51	Custom Tag				S.S. permanent attached			
	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			
Notes: VTA: Vendor to advice 1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.									

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 	
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER								
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 13 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D04	

DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)									
GENERAL	1	Tag Number				LIT-2131A			
	2	Service				2nd Stage Gas Compression Suction Drums			
	3	Location				V-2102-A			
	4	Mounting Type				External			
	5	Application				Level Control			
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0009-D08 (1 of 3) D04			
	7	RFI Protection				Tropicalisation		NEEDED	
PROCESS CONDITIONS	8	Upper Fluid D04				Process Gas			
	9	Lower Fluid				Hydrocarbon Drain			
	10	Density Lower		Density Upper		829.1 Kg/m3		18.28 Kg/m3	
	11	Design Pressure		Normal Pressure		F.V/22 barg		18.3 barg	
	12	Design Temp.		Normal Temp.		115.4 °C		60 °C	
	13	Viscosity Low.		Viscosity Up		0.44 cp		0.01 cp	
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)			
	15	Body/Cage Rating				300#			
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side			
	17	-				-			
	18	Flange Material				C.S. A105 NACE D04			
	19	Length of Center To Center				813 mm (32")			
	20	Case Mounting				VTA			
	21	Rotatable Head				Yes			
	22	Orientation				Side, Side with vent/drain connection			
DISPLACER	23	Torque Tube Type				Yes			
	24	Sensor Type				Displacer			
	25	Sensor Quantity				1			
	26	Sensor Dimention				VTA			
	27	Selected Standard Span				VTA			
	28	Insertion Depth				N/A			
	29	Displacer Extension Material				N/A			
	30	Displacer or Float Material				S.S. 316L			
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel	
	32	Trim Material				S.S. 316L			
TRANSMITTER	33	Function				Level Transmitter			
	34	Output				4~20 mA, SMART, HART			
	35	Set Range	Min.	Max.	0		100%		
	36	Calibration Range				0-700mm			
	37	Ingress Protection				IP65			
	38	Mounting Location				Side Mounted			
	39	Connection Size & Location				VTA			
	40	Ex Protection				Zone 2, EEx ia IIB T4			
	41	Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5	
	42	Accuracy				±0.1% of calibrated span			
	43	Integral Indicator		Write Protection		Digital LCD		No	
	44	Zero/Span Adjustment				Required			
	45	Termination Type				Screw terminal			
	46	Case Material				Low Copper Die-Cast Aluminum			
	47	SIL Rating				N/A			
OPTIONS	48	Cable Gland				M20x1.5 , EExd			
	49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50	-				-			
PURCHASE	51	Custom Tag				S.S. permanent attached			
	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			

Notes:
 VTA: Vendor to advice

1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER							
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D04
								شماره صفحه: 14 از 28

DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)									
GENERAL	1	Tag Number				LIT-2132A			
	2	Service				2nd Stage Gas Compression Suction Drums			
	3	Location				V-2102-A			
	4	Mounting Type				External			
	5	Application				Level Control			
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0009-D08 (1 of 3)			
	7	RFI Protection			Tropicalisation		NEEDED		NEEDED
PROCESS CONDITIONS	8	Upper Fluid			Process Gas				
	9	Lower Fluid			Hydrocarbon Drain				
	10	Density Lower		Density Upper		829.1 Kg/m3		18.28 Kg/m3	
	11	Design Pressure		Normal Pressure		F.V/22 barg		18.3 barg	
	12	Design Temp.		Normal Temp.		115.4 °C		60 °C	
	13	Viscosity Low.		Viscosity Up		0.44 cp		0.01 cp	
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)			
	15	Body/Cage Rating				300#			
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side			
	17	-				-			
	18	Flange Material				C.S. A105 NACE			
	19	Length of Center To Center				1219 mm (48")			
	20	Case Mounting				VTA			
	21	Rotatable Head				Yes			
	22	Orientation				Side, Side with vent/drain connection			
DISPLACER	23	Torque Tube Type				Yes			
	24	Sensor Type				Displacer			
	25	Sensor Quantity				1			
	26	Sensor Dimention				VTA			
	27	Selected Standard Span				VTA			
	28	Insertion Depth				N/A			
	29	Displacer Extension Material				N/A			
	30	Displacer or Float Material				S.S. 316L			
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel	
	32	Trim Material				S.S. 316L			
TRANSMITTER	33	Function				Level Transmitter			
	34	Output				4~20 mA, SMART, HART			
	35	Set Range		Min.		Max.		0 100%	
	36	Calibration Range				0-1100mm			
	37	Ingress Protection				IP65			
	38	Mounting Location				Side Mounted			
	39	Connection Size & Location				VTA			
	40	Ex Protection				Zone 2, EEx ia IIB T4			
	41	Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5	
	42	Accuracy				±0.1% of calibrated span			
	43	Integral Indicator		Write Protection		Digital LCD		Yes	
	44	Zero/Span Adjustment				Required			
	45	Termination Type				Screw terminal			
	46	Case Material				Low Copper Die-Cast Aluminum			
	OPTIONS	47	SIL Rating				SIL 2		
48		Cable Gland				M20x1.5 , EExd			
49		Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
PURCHASE	50	-				-			
	51	Custom Tag				S.S. permanent attached			
	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			

Notes:

VTA: Vendor to advice

1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER							
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D04
								شماره صفحه: 15 از 28

DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)										
GENERAL	1	Tag Number				LIT-2131B				
	2	Service				2nd Stage Gas Compression Suction Drums				
	3	Location				V-2102-B				
	4	Mounting Type				External				
	5	Application				Level Control				
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0009-D08 (2 of 3) D04				
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED		
PROCESS CONDITIONS	8	Upper Fluid D04		Process Gas						
	9	Lower Fluid		Hydrocarbon Drain						
	10	Density Lower		Density Upper		829.1 Kg/m3		18.28 Kg/m3		
	11	Design Pressure		Normal Pressure		F.V/22 barg		18.3 barg		
	12	Design Temp.		Normal Temp.		115.4 °C		60 °C		
	13	Viscosity Low.		Viscosity Up		0.44 cp		0.01 cp		
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)				
	15	Body/Cage Rating				300#				
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side				
	17	-				-				
	18	Flange Material				C.S. A105 NACE D04				
	19	Length of Center To Center				813 mm (32")				
	20	Case Mounting				VTA				
	21	Rotatable Head				Yes				
	22	Orientation				Side, Side with vent/drain connection				
	23	Torque Tube Type				Yes				
DISPLACER	24	Sensor Type				Displacer				
	25	Sensor Quantity				1				
	26	Sensor Dimention				VTA				
	27	Selected Standard Span				VTA				
	28	Insertion Depth				N/A				
	29	Displacer Extension Material				N/A				
	30	Displacer or Float Material				S.S. 316L				
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel		
	32	Trim Material				S.S. 316L				
	TRANSMITTER	33	Function				Level Transmitter			
34		Output				4~20 mA, SMART, HART				
35		Set Range	Min.	Max.	0		100%			
36		Calibration Range				0-700mm				
37		Ingress Protection				IP65				
38		Mounting Location				Side Mounted				
39		Connection Size & Location				VTA				
40		Ex Protection				Zone 2, EEx ia IIB T4				
41		Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5		
42		Accuracy				±0.1% of calibrated span				
43		Integral Indicator		Write Protection		Digital LCD		No		
44		Zero/Span Adjustment				Required				
45		Termination Type				Screw terminal				
46		Case Material				Low Copper Die-Cast Aluminum				
47		SIL Rating				N/A				
OPTIONS		48	Cable Gland				M20x1.5 , EExd			
		49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50	-				-				
PURCHASE	51	Custom Tag				S.S. permanent attached				
	52	Manufacturer				Will be finalized later				
	53	Model				Will be finalized later				

Notes:

VTA: Vendor to advice

1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER							
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D04
								شماره صفحه: 16 از 28

DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)									
GENERAL	1	Tag Number				LIT-2132B			
	2	Service				2nd Stage Gas Compression Suction Drums			
	3	Location				V-2102-B			
	4	Mounting Type				External			
	5	Application				Level Control			
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0009-D08 (2 of 3) D04			
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED	
PROCESS CONDITIONS	8	Upper Fluid		Process Gas					
	9	Lower Fluid		Hydrocarbon Drain					
	10	Density Lower		Density Upper		829.1 Kg/m3		18.28 Kg/m3	
	11	Design Pressure		Normal Pressure		F.V/22 barg		18.3 barg	
	12	Design Temp.		Normal Temp.		115.4 °C		60 °C	
	13	Viscosity Low.		Viscosity Up		0.44 cp		0.01 cp	
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)			
	15	Body/Cage Rating				300#			
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side			
	17	-				-			
	18	Flange Material				C.S. A105 NACE D04			
	19	Length of Center To Center				1219 mm (48")			
	20	Case Mounting				VTA			
	21	Rotatable Head				Yes			
	22	Orientation				Side, Side with vent/drain connection			
DISPLACER	23	Torque Tube Type				Yes			
	24	Sensor Type				Displacer			
	25	Sensor Quantity				1			
	26	Sensor Dimention				VTA			
	27	Selected Standard Span				VTA			
	28	Insertion Depth				N/A			
	29	Displacer Extension Material				N/A			
	30	Displacer or Float Material				S.S. 316L			
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel	
	32	Trim Material				S.S. 316L			
TRANSMITTER	33	Function				Level Transmitter			
	34	Output				4~20 mA, SMART, HART			
	35	Set Range	Min.	Max.	0		100%		
	36	Calibration Range				0-1100mm			
	37	Ingress Protection				IP65			
	38	Mounting Location				Side Mounted			
	39	Connection Size & Location				VTA			
	40	Ex Protection				Zone 1, EEx ia IIB T4			
	41	Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5	
	42	Accuracy				±0.1% of calibrated span			
	43	Integral Indicator		Write Protection		Digital LCD		Yes	
	44	Zero/Span Adjustment				Required			
	45	Termination Type				Screw terminal			
	46	Case Material				Low Copper Die-Cast Aluminum			
	47	SIL Rating				SIL 2			
OPTIONS	48	Cable Gland				M20x1.5 , EExd			
	49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50	-				-			
PURCHASE	51	Custom Tag				S.S. permanent attached			
	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			
Notes: VTA: Vendor to advice 1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.									

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER							
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D04
شماره صفحه: 17 از 28								

DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)									
GENERAL	1	Tag Number				LIT-2131C			
	2	Service				2nd Stage Gas Compression Suction Drums			
	3	Location				V-2102-C			
	4	Mounting Type				External			
	5	Application				Level Control			
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0009-D08 (3 of 3)			
	7	RFI Protection				Tropicalisation		NEEDED	
PROCESS CONDITIONS	8	Upper Fluid				Process Gas			
	9	Lower Fluid				Hydrocarbon Drain			
	10	Density Lower		Density Upper		829.1 Kg/m3		18.28 Kg/m3	
	11	Design Pressure		Normal Pressure		F.V/22 barg		18.3 barg	
	12	Design Temp.		Normal Temp.		115.4 °C		60 °C	
	13	Viscosity Low.		Viscosity Up		0.44 cp		0.01 cp	
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)			
	15	Body/Cage Rating				300#			
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side			
	17								
	18	Flange Material				C.S. A105 NACE			
	19	Length of Center To Center				813 mm (32")			
	20	Case Mounting				VTA			
	21	Rotatable Head				Yes			
	22	Orientation				Side, Side with vent/drain connection			
DISPLACER	23	Torque Tube Type				Yes			
	24	Sensor Type				Displacer			
	25	Sensor Quantity				1			
	26	Sensor Dimention				VTA			
	27	Selected Standard Span				VTA			
	28	Insertion Depth				N/A			
	29	Displacer Extension Material				N/A			
	30	Displacer or Float Material				S.S. 316L			
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel	
	32	Trim Material				S.S. 316L			
TRANSMITTER	33	Function				Level Transmitter			
	34	Output				4~20 mA, SMART, HART			
	35	Set Range	Min.	Max.	0		100%		
	36	Calibration Range				0-700mm			
	37	Ingress Protection				IP65			
	38	Mounting Location				Side Mounted			
	39	Connection Size & Location				VTA			
	40	Ex Protection				Zone 2, EEx ia IIB T4			
	41	Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5	
	42	Accuracy				±0.1% of calibrated span			
	43	Integral Indicator		Write Protection		Digital LCD		No	
	44	Zero/Span Adjustment				Required			
	45	Termination Type				Screw terminal			
	46	Case Material				Low Copper Die-Cast Aluminum			
	47	SIL Rating				N/A			
OPTIONS	48	Cable Gland				M20x1.5 , EExd			
	49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50								
PURCHASE	51	Custom Tag				S.S. permanent attached			
	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			

Notes:

VTA: Vendor to advice

1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER								
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 18 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D04	

DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)										
GENERAL	1	Tag Number				LIT-2132C				
	2	Service				2nd Stage Gas Compression Suction Drums				
	3	Location				V-2102-C				
	4	Mounting Type				External				
	5	Application				Level Control				
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0009-D08 (3 of 3)				
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED		D04
8	Upper Fluid		Process Gas							
PROCESS CONDITIONS	9	Lower Fluid		Hydrocarbon Drain						D04
	10	Density Lower		Density Upper		829.1 Kg/m3		18.28 Kg/m3		
	11	Design Pressure		Normal Pressure		F.V/22 barg		18.3 barg		
	12	Design Temp.		Normal Temp.		115.4 °C		60 °C		
	13	Viscosity Low.		Viscosity Up		0.44 cp		0.01 cp		
	BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)			
15		Body/Cage Rating				300#				
16		Connection Size & Location				2" , ANSI Flange, 300#RF side				
17										
18		Flange Material				C.S. A105 NACE				D04
19		Length of Center To Center				1219 mm (48")				
20		Case Mounting				VTA				
21		Rotatable Head				Yes				
22		Orientation				Side, Side with vent/drain connection				
23		Torque Tube Type				Yes				
DISPLACER	24	Sensor Type				Displacer				
	25	Sensor Quantity				1				
	26	Sensor Dimention				VTA				
	27	Selected Standard Span				VTA				
	28	Insertion Depth				N/A				
	29	Displacer Extension Material				N/A				
	30	Displacer or Float Material				S.S. 316L				
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel		
	32	Trim Material				S.S. 316L				
	TRANSMITTER	33	Function				Level Transmitter			
34		Output				4~20 mA, SMART, HART				
35		Set Range		Min.	Max.	0		100%		
36		Calibration Range				0-1100 mm				
37		Ingress Protection				IP65				
38		Mounting Location				Side Mounted				
39		Connection Size & Location				VTA				
40		Ex Protection				Zone 2, EEx ia IIB T4				
41		Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5		
42		Accuracy				±0.1% of calibrated span				
43		Integral Indicator		Write Protection		Digital LCD		Yes		
44		Zero/Span Adjustment				Required				
45		Termination Type				Screw terminal				
46		Case Material				Low Copper Die-Cast Aluminum				
47		SIL Rating				SIL 2				
OPTIONS		48	Cable Gland				M20x1.5 , EExd			
		49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50									
PURCHASE	51	Custom Tag				S.S. permanent attached				
	52	Manufacturer				Will be finalized later				
	53	Model				Will be finalized later				

Notes:

VTA: Vendor to advice

1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER							
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D04
								شماره صفحه: 19 از 28

DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)									
GENERAL	1	Tag Number				LIT-2141			
	2	Service				Gas Compression Discharge Drum			
	3	Location				V-2103			
	4	Mounting Type				External			
	5	Application				Level Control			
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0012-D08			
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED	
PROCESS CONDITIONS	8	Upper Fluid		Process Gas					
	9	Lower Fluid		Hydrocarbon Drain					
	10	Density Lower		Density Upper		982 Kg/m3		59.63 Kg/m3	
	11	Design Pressure		Normal Pressure		F.V/62 barg		53.90 barg	
	12	Design Temp.		Normal Temp.		130 °C		60 °C	
	13	Viscosity Low.		Viscosity Up		0.49 cp		0.01 cp	
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)			
	15	Body/Cage Rating				600#			
	16	Connection Size & Location				2" , ANSI Flange, 600#RF side			
	17								
	18	Flange Material				C.S. A105 NACE			
	19	Length of Center To Center				813 mm (32")			
	20	Case Mounting				VTA			
	21	Rotatable Head				Yes			
	22	Orientation				Side, Side with vent/drain connection			
DISPLACER	23	Torque Tube Type				Yes			
	24	Sensor Type				Displacer			
	25	Sensor Quantity				1			
	26	Sensor Dimention				VTA			
	27	Selected Standard Span				VTA			
	28	Insertion Depth				N/A			
	29	Displacer Extension Material				N/A			
	30	Displacer or Float Material				S.S. 316L			
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel	
	32	Trim Material				S.S. 316L			
TRANSMITTER	33	Function				Level Transmitter			
	34	Output				4~20 mA, SMART, HART			
	35	Set Range	Min.	Max.	0		100%		
	36	Calibration Range				0-700mm			
	37	Ingress Protection				IP65			
	38	Mounting Location				Side Mounted			
	39	Connection Size & Location				VTA			
	40	Ex Protection				Zone 2, EEx ia IIB T4			
	41	Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5	
	42	Accuracy				±0.1% of calibrated span			
	43	Integral Indicator		Write Protection		Digital LCD		No	
	44	Zero/Span Adjustment				Required			
	45	Termination Type				Screw terminal			
	46	Case Material				Low Copper Die-Cast Aluminum			
	OPTIONS	47	SIL Rating				N/A		
48		Cable Gland				M20x1.5 , EExd			
49		Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
PURCHASE	50								
	51	Custom Tag				S.S. permanent attached			
	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			

Notes:
 VTA: Vendor to advice

1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER							
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهيلات	رشته	نوع مدرک	سریال	نسخه
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D04

شماره صفحه: 20 از 28

DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)										
GENERAL	1	Tag Number				LIT-2142				
	2	Service				Compression Discharge Drum				
	3	Location				V-2103				
	4	Mounting Type				External				
	5	Application				Level Control				
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0012-D08				
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED		D04
PROCESS CONDITIONS	8	Upper Fluid		D04		Process Gas				
	9	Lower Fluid				Hydrocarbon Drain				
	10	Density Lower		Density Upper		982 Kg/m3		59.63 Kg/m3		
	11	Design Pressure		Normal Pressure		F.V/62 barg		53.90 barg		
	12	Design Temp.		Normal Temp.		130 °C		60 °C		
	13	Viscosity Low.		Viscosity Up		0.49 cp		0.01 cp		
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)				
	15	Body/Cage Rating				600#				
	16	Connection Size & Location				2" , ANSI Flange, 600#RF side				
	17									
	18	Flange Material				C.S. A105 NACE				D04
	19	Length of Center To Center				1219 mm (48")				
	20	Case Mounting				VTA				
	21	Rotatable Head				Yes				
	22	Orientation				Side, Side with vent/drain connection				
DISPLACER	23	Torque Tube Type				Yes				
	24	Sensor Type				Displacer				
	25	Sensor Quantity				1				
	26	Sensor Dimention				VTA				
	27	Selected Standard Span				VTA				
	28	Insertion Depth				N/A				
	29	Displacer Extension Material				N/A				
	30	Displacer or Float Material				S.S. 316L				
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel		
	32	Trim Material				S.S. 316L				
TRANSMITTER	33	Function				Level Transmitter				
	34	Output				4~20 mA, SMART, HART				
	35	Set Range	Min.	Max.	0		100%			
	36	Calibration Range				0-1100 mm				
	37	Ingress Protection				IP65				
	38	Mounting Location				Side Mounted				
	39	Connection Size & Location				VTA				
	40	Ex Protection				Zone 2, EEx ia IIB T4				
	41	Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5		
	42	Accuracy				±0.1% of calibrated span				
	43	Integral Indicator		Write Protection		Digital LCD		Yes		
	44	Zero/Span Adjustment				Required				
	45	Termination Type				Screw terminal				
	46	Case Material				Low Copper Die-Cast Aluminum				
	47	SIL Rating				SIL 1				
OPTIONS	48	Cable Gland				M20x1.5 , EExd				
	49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve				
	50									
PURCHASE	51	Custom Tag				S.S. permanent attached				
	52	Manufacturer				Will be finalized later				
	53	Model				Will be finalized later				

Notes:
 VTA: Vendor to advice
 1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER								
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 21 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D04	

DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)										
GENERAL	1	Tag Number				LIT-2223				
	2	Service				LP Flare K.O. Drum And Closed Drain Drum Sump				
	3	Location				SU-2201				
	4	Mounting Type				External				
	5	Application				Level Control				
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0017-D08 (2 of 2)				
	7	RFI Protection				Tropicalisation		NEEDED		NEEDED
PROCESS CONDITIONS	8	Upper Fluid		D04		Air				
	9	Lower Fluid				H ₂ O				
	10	Density Lower		Density Upper		997 Kg/m3		1.225		
	11	Design Pressure		Normal Pressure		3.5		ATM		
	12	Design Temp.		Normal Temp.		85		AMB		
	13	Viscosity Low.		Viscosity Up		0.89		0.01		
BODY / GAGE	14	Body/Cage Material				N/A				
	15	Body/Cage Rating				N/A				
	16	Connection Size & Location				TOP /PLATE MOUNTED				
	17	-				N/A				
	18	Flange Material				N/A				
	19	Length of Center To Center				N/A				
	20	Case Mounting				N/A				
	21	Rotatable Head				N/A				
	22	Orientation				N/A				
	23	Torque Tube Type				N/A				
DISPLACER	24	Sensor Type				Float Type				
	25	Sensor Quantity				1				
	26	Sensor Dimention				VTA				
	27	Selected Standard Span				VTA				
	28	Insertion Depth				2000 m				
	29	Float Extension Material				N/A				
	30	Displacer or Float Material				S.S. 316L				
	31	Spring Material		Torque Tube Mtrl.		VTA		S.S. 316L(VTC)		
	32	Trim Material				S.S. 316L(VTC)				
	TRANSMITTER	33	Function				Level Transmitter			
34		Output				4~20 mA, SMART, HART				
35		Set Range	Min.	Max.	0		100%			
36		Calibration Range				0-700 mm				
37		Ingress Protection				IP65				
38		Mounting Location				Side Mounted				
39		Connection Size & Location				VTA				
40		Ex Protection				Zone 2, EEx ia IIB T4				
41		Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5		
42		Accuracy				±0.1% of calibrated span				
43		Integral Indicator		Write Protection		Digital LCD		No		
44		Zero/Span Adjustment				Required				
45		Termination Type				Screw terminal				
46		Case Material				Low Copper Die-Cast Aluminum				
47		SIL Rating				N/A				
OPTIONS		48	Cable Gland				M20x1.5 , EExd			
		49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50	-				-				
PURCHASE	51	Custom Tag				S.S. permanent attached				
	52	Manufacturer				Will be finalized later				
	53	Model				Will be finalized later				

Notes:

VTA: Vendor to advice

1- Mounted on a plate as per Project Hook- up diagram (Required plate and accessories for connect to concrete wall of sump to be supplied by Civil department.)

2- Insertion depth is the length related to the hanger extension.

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER								
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 22 از 28
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DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)									
GENERAL	1	Tag Number				LIT-2252A			
	2	Service				LP Flare K.O. Drum			
	3	Location				V-2201			
	4	Mounting Type				External			
	5	Application				Level Control			
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0020-D08 (2 of 3)			
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED	
PROCESS CONDITIONS	8	Upper Fluid		Process Gas					
	9	Lower Fluid		Hydrocarbon Drain					
	10	Density Lower		Density Upper		844.4 Kg/m3		1.46 Kg/m3	
	11	Design Pressure		Normal Pressure		F.V/7.5 barg		0.5 barg	
	12	Design Temp.		Normal Temp.		85 °C		32 °C	
	13	Viscosity Low.		Viscosity Up		0.46 cp		0.01 cp	
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)			
	15	Body/Cage Rating				300#			
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side			
	17								
	18	Flange Material				C.S. A105 NACE			
	19	Length of Center To Center				356 mm (14")			
	20	Case Mounting				VTA			
	21	Rotatable Head				Yes			
	22	Orientation				Side, Side with vent/drain connection			
DISPLACER	23	Torque Tube Type				Yes			
	24	Sensor Type				Displacer			
	25	Sensor Quantity				1			
	26	Sensor Dimention				VTA			
	27	Selected Standard Span				VTA			
	28	Insertion Depth				N/A			
	29	Displacer Extension Material				N/A			
	30	Displacer or Float Material				S.S. 316L			
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel	
	32	Trim Material				S.S. 316L			
TRANSMITTER	33	Function				Level Transmitter			
	34	Output				4~20 mA, SMART, HART			
	35	Set Range		Min.		Max.		0 100%	
	36	Calibration Range				0-250 mm			
	37	Ingress Protection				IP65			
	38	Mounting Location				Side Mounted			
	39	Connection Size & Location				VTA			
	40	Ex Protection				Zone 2, EEx ia IIB T4			
	41	Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5	
	42	Accuracy				±0.1% of calibrated span			
	43	Integral Indicator		Write Protection		Digital LCD		Yes	
	44	Zero/Span Adjustment				Required			
	45	Termination Type				Screw terminal			
	46	Case Material				Low Copper Die-Cast Aluminum			
	47	SIL Rating				SIL 1			
OPTIONS	48	Cable Gland				M20x1.5 , EExd			
	49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50								
PURCHASE	51	Custom Tag				S.S. permanent attached			
	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			

Notes:

VTA: Vendor to advice

1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک						 		
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER								
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 23 از 28
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DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)									
GENERAL	1	Tag Number				LIT-2252B			
	2	Service				LP Flare K.O. Drum			
	3	Location				V-2201			
	4	Mounting Type				External			
	5	Application				Level Control			
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0020-D08 (2 of 3)			
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED	
PROCESS CONDITIONS	8	Upper Fluid		Process Gas					
	9	Lower Fluid		Hydrocarbon Drain					
	10	Density Lower		Density Upper		844.4 Kg/m3		1.46 Kg/m3	
	11	Design Pressure		Normal Pressure		F.V/7.5 barg		0.5 barg	
	12	Design Temp.		Normal Temp.		85 °C		32 °C	
	13	Viscosity Low.		Viscosity Up		0.46 cp		0.01 cp	
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)			
	15	Body/Cage Rating				300#			
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side			
	17								
	18	Flange Material				C.S. A105 NACE			
	19	Length of Center To Center				356 mm (14")			
	20	Case Mounting				VTA			
	21	Rotatable Head				Yes			
	22	Orientation				Side, Side with vent/drain connection			
DISPLACER	23	Torque Tube Type				Yes			
	24	Sensor Type				Displacer			
	25	Sensor Quantity				1			
	26	Sensor Dimention				VTA			
	27	Selected Standard Span				VTA			
	28	Insertion Depth				N/A			
	29	Displacer Extension Material				N/A			
	30	Displacer or Float Material				S.S. 316L			
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel	
	32	Trim Material				S.S. 316L			
TRANSMITTER	33	Function				Level Transmitter			
	34	Output				4~20 mA, SMART, HART			
	35	Set Range	Min.	Max.	0		100%		
	36	Calibration Range				0-250 mm			
	37	Ingress Protection				IP65			
	38	Mounting Location				Side Mounted			
	39	Connection Size & Location				VTA			
	40	Ex Protection				Zone 2, EEx ia IIB T4			
	41	Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5	
	42	Accuracy				±0.1% of calibrated span			
	43	Integral Indicator		Write Protection		Digital LCD		Yes	
	44	Zero/Span Adjustment				Required			
	45	Termination Type				Screw terminal			
	46	Case Material				Low Copper Die-Cast Aluminum			
	OPTIONS	47	SIL Rating				SIL 1		
48		Cable Gland				M20x1.5 , EExd			
49		Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
PURCHASE	50								
	51	Custom Tag				S.S. permanent attached			
	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			
Notes: VTA: Vendor to advice 1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.									

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 	
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER								
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 24 از 28
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DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)									
GENERAL	1	Tag Number				LIT-2252C			
	2	Service				LP Flare K.O. Drum			
	3	Location				V-2201			
	4	Mounting Type				External			
	5	Application				Level Control			
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0020-D08 (2 of 3)			
	7	RFI Protection				Tropicalisation		NEEDED	
PROCESS CONDITIONS	8	Upper Fluid				Process Gas			
	9	Lower Fluid				Hydrocarbon Drain			
	10	Density Lower		Density Upper		844.4 Kg/m3		1.46 Kg/m3	
	11	Design Pressure		Normal Pressure		F.V/7.5 barg		0.5 barg	
	12	Design Temp.		Normal Temp.		85 °C		32 °C	
	13	Viscosity Low.		Viscosity Up		0.46 cp		0.01 cp	
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)			
	15	Body/Cage Rating				300#			
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side			
	17	-				-			
	18	Flange Material				C.S. A105 NACE			
	19	Length of Center To Center				356 mm (14")			
	20	Case Mounting				VTA			
	21	Rotatable Head				Yes			
	22	Orientation				Side, Side with vent/drain connection			
DISPLACER	23	Torque Tube Type				Yes			
	24	Sensor Type				Displacer			
	25	Sensor Quantity				1			
	26	Sensor Dimention				VTA			
	27	Selected Standard Span				VTA			
	28	Insertion Depth				N/A			
	29	Displacer Extension Material				N/A			
	30	Displacer or Float Material				S.S. 316L			
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel	
	32	Trim Material				S.S. 316L			
TRANSMITTER	33	Function				Level Transmitter			
	34	Output				4~20 mA, SMART, HART			
	35	Set Range	Min.	Max.	0		100%		
	36	Calibration Range				0-250 mm			
	37	Ingress Protection				IP65			
	38	Mounting Location				Side Mounted			
	39	Connection Size & Location				VTA			
	40	Ex Protection				Zone 2, EEx ia IIB T4			
	41	Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5	
	42	Accuracy				±0.1% of calibrated span			
	43	Integral Indicator		Write Protection		Digital LCD		Yes	
	44	Zero/Span Adjustment				Required			
	45	Termination Type				Screw terminal			
	46	Case Material				Low Copper Die-Cast Aluminum			
	47	SIL Rating				SIL 1			
OPTIONS	48	Cable Gland				M20x1.5 , EExd			
	49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50	-				-			
PURCHASE	51	Custom Tag				S.S. permanent attached			
	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			

Notes:

VTA: Vendor to advice

1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER							
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
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								شماره صفحه: 25 از 28

DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)									
GENERAL	1	Tag Number				LIT-2253			
	2	Service				LP Flare K.O. Drum			
	3	Location				V-2201			
	4	Mounting Type				External			
	5	Application				Level Control			
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0020-D08 (2 of 3)			
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED	
PROCESS CONDITIONS	8	Upper Fluid		Process Gas					
	9	Lower Fluid		Hydrocarbon Drain					
	10	Density Lower		Density Upper		844.4 Kg/m3		1.46 Kg/m3	
	11	Design Pressure		Normal Pressure		F.V/7.5 barg		0.5 barg	
	12	Design Temp.		Normal Temp.		85 °C		32 °C	
	13	Viscosity Low.		Viscosity Up		0.73 cp		0.01 cp	
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)			
	15	Body/Cage Rating				300#			
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side			
	17								
	18	Flange Material				C.S. A105 NACE			
	19	Length of Center To Center				356 mm (14")			
	20	Case Mounting				VTA			
	21	Rotatable Head				Yes			
	22	Orientation				Side, Side with vent/drain connection			
DISPLACER	23	Torque Tube Type				Yes			
	24	Sensor Type				Displacer			
	25	Sensor Quantity				1			
	26	Sensor Dimention				VTA			
	27	Selected Standard Span				VTA			
	28	Insertion Depth				N/A			
	29	Displacer Extension Material				N/A			
	30	Displacer or Float Material				S.S. 316L			
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel	
	32	Trim Material				S.S. 316L			
TRANSMITTER	33	Function				Level Transmitter			
	34	Output				4~20 mA, SMART, HART			
	35	Set Range		Min.		Max.		0 100%	
	36	Calibration Range				0-250 mm			
	37	Ingress Protection				IP65			
	38	Mounting Location				Side Mounted			
	39	Connection Size & Location				VTA			
	40	Ex Protection				Zone 2, EEx ia IIB T4			
	41	Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5	
	42	Accuracy				±0.1% of calibrated span			
	43	Integral Indicator		Write Protection		Digital LCD		Yes	
	44	Zero/Span Adjustment				Required			
	45	Termination Type				Screw terminal			
	46	Case Material				Low Copper Die-Cast Aluminum			
	OPTIONS	47	SIL Rating				SIL a		
48		Cable Gland				M20x1.5 , EExd			
49		Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
50									
PURCHASE	51	Custom Tag				S.S. permanent attached			
	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			

Notes:

VTA: Vendor to advice

1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 	
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER								
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 26 از 28
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DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)										
GENERAL	1	Tag Number				LIT-2271				
	2	Service				Fuel Gas K.O. Drum				
	3	Location				V-2205				
	4	Mounting Type				External				
	5	Application				Level Control				
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0022-D08				
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED		D04
PROCESS CONDITIONS	8	Upper Fluid		D04		Process Gas				
	9	Lower Fluid				Hydrocarbon Drain				
	10	Density Lower		Density Upper		842.7 Kg/m3		505.8 Kg/m3		
	11	Design Pressure		Normal Pressure		F.V/9 barg		4.9 barg		
	12	Design Temp.		Normal Temp.		85 °C		36.8 °C		
	13	Viscosity Low.		Viscosity Up		0.69 cp		0.01 cp		
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)				
	15	Body/Cage Rating				300#				
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side				
	17									
	18	Flange Material				C.S. A105 NACE				D04
	19	Length of Center To Center				813 mm (32")				
	20	Case Mounting				VTA				
	21	Rotatable Head				Yes				
	22	Orientation				Side, Side with vent/drain connection				
DISPLACER	23	Torque Tube Type				Yes				
	24	Sensor Type				Displacer				
	25	Sensor Quantity				1				
	26	Sensor Dimention				VTA				
	27	Selected Standard Span				VTA				
	28	Insertion Depth				N/A				
	29	Displacer Extension Material				N/A				
	30	Displacer or Float Material				S.S. 316L				
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel		
	32	Trim Material				S.S. 316L				
TRANSMITTER	33	Function				Level Transmitter				
	34	Output				4~20 mA, SMART, HART				
	35	Set Range		Min.		Max.		0		100%
	36	Calibration Range				0-700 mm				
	37	Ingress Protection				IP65				
	38	Mounting Location				Side Mounted				
	39	Connection Size & Location				VTA				
	40	Ex Protection				Zone 2, EEx ia IIB T4				
	41	Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5		
	42	Accuracy				±0.1% of calibrated span				
	43	Integral Indicator		Write Protection		Digital LCD		No		
	44	Zero/Span Adjustment				Required				
	45	Termination Type				Screw terminal				
	46	Case Material				Low Copper Die-Cast Aluminum				
	47	SIL Rating				N/A				
OPTIONS	48	Cable Gland				M20x1.5 , EExd				
	49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve				
	50									
PURCHASE	51	Custom Tag				S.S. permanent attached				
	52	Manufacturer				Will be finalized later				
	53	Model				Will be finalized later				

Notes:
 VTA: Vendor to advice
 1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 	
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER								
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 27 از 28
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DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)										
GENERAL	1	Tag Number				LIT-2272				
	2	Service				Fuel Gas K.O. Drum				
	3	Location				V-2205				
	4	Mounting Type				External				
	5	Application				Level Control				
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0022-D08				
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED		D04
PROCESS CONDITIONS	8	Upper Fluid		Fuel Gas						
	9	Lower Fluid		Hydrocarbon Drain						D04
	10	Density Lower		Density Upper		842.7 Kg/m3		5.37 Kg/m3		D04
	11	Design Pressure		Normal Pressure		F.V/9 barg		4.9 barg		
	12	Design Temp.		Normal Temp.		85 °C		36.8 °C		
	13	Viscosity Low.		Viscosity Up		0.69 cp		0.01 cp		
BODY / GAGE	14	Body/Cage Material				C.S. (Note 1)				
	15	Body/Cage Rating				300#				
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side				
	17									
	18	Flange Material				C.S. A105 NACE				D04
	19	Length of Center To Center				1219 mm (48")				
	20	Case Mounting				VTA				
	21	Rotatable Head				Yes				
	22	Orientation				Side, Side with vent/drain connection				
DISPLACER	23	Torque Tube Type				Yes				
	24	Sensor Type				Displacer				
	25	Sensor Quantity				1				
	26	Sensor Dimention				VTA				
	27	Selected Standard Span				VTA				
	28	Insertion Depth				N/A				
	29	Displacer Extension Material				N/A				
	30	Displacer or Float Material				S.S. 316L				
	31	Spring Material		Torque Tube Mtrl.		VTA		Inconel		
	32	Trim Material				S.S. 316L				
TRANSMITTER	33	Function				Level Transmitter				
	34	Output				4~20 mA, SMART, HART				
	35	Set Range		Min.	Max.	0		100%		
	36	Calibration Range				0-1100 mm				
	37	Ingress Protection				IP65				
	38	Mounting Location				Side Mounted				
	39	Connection Size & Location				VTA				
	40	Ex Protection				Zone 2, EEx ia IIB T4				
	41	Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5		
	42	Accuracy				±0.1% of calibrated span				
	43	Integral Indicator		Write Protection		Digital LCD		No		
	44	Zero/Span Adjustment				Required				
	45	Termination Type				Screw terminal				
	46	Case Material				Low Copper Die-Cast Aluminum				
	47	SIL Rating				SIL a				
	OPTIONS	48	Cable Gland				M20x1.5 , EExd			
		49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
50										
PURCHASE	51	Custom Tag				S.S. permanent attached				
	52	Manufacturer				Will be finalized later				
	53	Model				Will be finalized later				

Notes:

VTA: Vendor to advice

1- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
	DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER								
شماره پیمان:	پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 28 از 28
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DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)										
GENERAL	1	Tag Number				LIT-2273				
	2	Service				Oily Water Sump				
	3	Location				SU-2202				
	4	Mounting Type				External				
	5	Application				Level Control				
	6	P&ID No.				BK-GCS-PEDCO-120-PR-PI-0021-D05				
	7	RFI Protection				Tropicalisation		NEEDED		NEEDED
PROCESS CONDITIONS	8	Upper Fluid				AIR/ATM				
	9	Lower Fluid				Water/HC/GLYCOL				
	10	Density Lower		Density Upper		1115Kg/m3		1.1 Kg/m3		
	11	Design Pressure		Normal Pressure		ATM		ATM		
	12	Design Temp.		Normal Temp.		85		AMB		
	13	Viscosity Low.		Viscosity Up		85.86 cp		0.02 cp		
BODY / GAGE	14	Body/Cage Material				N/A				
	15	Body/Cage Rating				N/A				
	16	Connection Size & Location				TOP /PLATE MOUNTED				
	17	-				N/A				
	18	Flange Material				N/A				
	19	Length of Center To Center				N/A				
	20	Case Mounting				N/A				
	21	Rotatable Head				N/A				
	22	Orientation				N/A				
	23	Torque Tube Type				N/A				
DISPLACER	24	Sensor Type				Float Type				
	25	Sensor Quantity				1				
	26	Sensor Dimention				VTA				
	27	Selected Standard Span				VTA				
	28	Insertion Depth				0-2700 mm				
	29	Float Extension Material				N/A				
	30	Displacer or Float Material				S.S. 316L				
	31	Spring Material		Torque Tube Mtrl.		VTA		S.S. 316L(VTC)		
	32	Trim Material				S.S. 316L(VTC)				
	TRANSMITTER	33	Function				Level Transmitter			
34		Output				4~20 mA, SMART, HART				
35		Set Range	Min.	Max.	0		100%			
36		Calibration Range				0 - 2200 mm				
37		Ingress Protection				IP65				
38		Mounting Location				Side Mounted				
39		Connection Size & Location				VTA				
40		Ex Protection				Zone 2, EEx ia IIB T4				
41		Power Supply		Cable Entry		24 VDC, loop powered		M20x1.5		
42		Accuracy				±0.1% of calibrated span				
43		Integral Indicator		Write Protection		Digital LCD		No		
44		Zero/Span Adjustment				Required				
45		Termination Type				Screw terminal				
46		Case Material				Low Copper Die-Cast Aluminum				
47		SIL Rating				N/A				
OPTIONS		48	Cable Gland				M20x1.5 , EExd			
		49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50	-				-				
PURCHASE	51	Custom Tag				S.S. permanent attached				
	52	Manufacturer				Will be finalized later				
	53	Model				Will be finalized later				

Notes:

VTA: Vendor to advice

1- Mounted on a plate as per Project Hook- up diagram (Required plate and accessories for connect to concrete wall of sump to be supplied by Civil department.)

2- Insertion depth is the length related to the hanger extension.