

 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 D03	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

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

تکده‌اشت 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	D03	

REVISION RECORD SHEET

Page	D00	D01	D02	D03	D04	Page	D00	D01	D02	D03	D04
1	X	X	X	X		65					
2	X	X	X	X		66					
3	X	X		X		67					
4	X	X				68					
5	X	X	X	X		69					
6	X	X	X	X		70					
7	X	X	X	X		71					
8	X	X	X	X		72					
9	X	X	X	X		73					
10	X	X	X	X		74					
11	X	X	X	X		75					
12	X	X	X	X		76					
13	X	X	X	X		77					
14	X	X	X	X		78					
15	X	X	X	X		79					
16	X	X	X	X		80					
17	X	X	X	X		81					
18	X	X	X	X		82					
19	X	X	X	X		83					
20	X	X	X	X		84					
21	X	X	X	X		85					
22	X	X	X	X		86					
23	X	X	X	X		87					
24	X	X	X	X		88					
25	X	X	X	X		89					
26	X	X	X	X		90					
27	X	X	X	X		91					
28	X	X		X		92					
29	X	X				93					
30	X	X				94					
31	X	X				95					
32	X	X				96					
33	X	X				97					
34	X	X				98					
35	X	X				99					
36	X	X				100					
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64						128					

 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	صادرکننده	تجهیزات	رشته	نوع مدرک	سریال	نسخه
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D03	

REFERENCE DOCUMENTS :

D03

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	D05
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	D07
P&ID - Gas Compression Inlet Gas Pipeline (Golkhari)	BK-GCS-PEDCO-120-PR-PI-0003	D07
P&ID - Slug Catcher System	BK-GCS-PEDCO-120-PR-PI-0004	D07
P&ID - Gas Compression Inlet Knock Out Drum	BK-GCS-PEDCO-120-PR-PI-0005	D07
P&ID - 1st Stage Gas Compression Suction Drums	BK-GCS-PEDCO-120-PR-PI-0006	D07
P&ID - 1st Stage Gas Compression Compressors	BK-GCS-PEDCO-120-PR-PI-0007	D07
P&ID - 1st Stage Gas Compression Air Coolers	BK-GCS-PEDCO-120-PR-PI-0008	D07
P&ID - 2nd Stage Gas Compression Suction Drums	BK-GCS-PEDCO-120-PR-PI-0009	D07
P&ID - 2nd Stage Gas Compression Compressors	BK-GCS-PEDCO-120-PR-PI-0010	D06
P&ID - 2nd Stage Gas Compression Air Coolers	BK-GCS-PEDCO-120-PR-PI-0011	D07
P&ID - 2nd Stage Gas Compression Discharge Drum	BK-GCS-PEDCO-120-PR-PI-0012	D07
P&ID - Gas Compression Dehydration Package	BK-GCS-PEDCO-120-PR-PI-0013	D07
P&ID - Lean Glycol Storage Tank	BK-GCS-PEDCO-120-PR-PI-0014	D07
P&ID - Instrument & Plant Air System	BK-GCS-PEDCO-120-PR-PI-0015	D07
P&ID - Nitrogen Generation System	BK-GCS-PEDCO-120-PR-PI-0016	D07
P&ID - Close Drain System	BK-GCS-PEDCO-120-PR-PI-0017	D07
P&ID - Corrosion Inhibitor Package	BK-GCS-PEDCO-120-PR-PI-0018	D07
P&ID - Methanol Injection Package	BK-GCS-PEDCO-120-PR-PI-0019	D06
P&ID - LP Flare System	BK-GCS-PEDCO-120-PR-PI-0020	D07
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	D07
P&ID - Diesel Oil System	BK-GCS-PEDCO-120-PR-PI-0023	D07
P&ID - Potable Water System	BK-GCS-PEDCO-120-PR-PI-0024	D06
P&ID - Glycol Sump Drum	BK-GCS-PEDCO-120-PR-PI-0025	D07
P&ID - Fire Water Network	BK-GCS-PEDCO-120-SA-PI-0001	D04
P&ID - Total Flooding System For Extension of Existing Elect. Building	BK-GCS-PEDCO-120-SA-PI-0002	D02

 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	تجهیزات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 4 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D03	

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

 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	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 5 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D03	

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-D07			
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED	
PROCESS CONDITIONS	8	Upper Liquid				Process Gas			
	9	Lower Liquid				Hydrocarbon			
	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 2) D03			
	15	Body/Cage Rating				300#			
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side			
	17	-				-			
	18	Flange Material				C.S.			
	19	Length of Center To Center				813 mm (32"), (Note1)			
	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 D03			
35		Set Range		Min.		0		100%	
36		Calibration Range				0-700 mm D03			
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				VTA Low Copper Die-Cast Aluminum D03			
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				-			
	51	Custom Tag				S.S. permanent attached			
PURCHASE	52	Manufacturer				VTA Will be finalized later			
	53	Model				VTA Will be finalized later D03			
Notes: VTA: Vendor to advice 1- 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. D03 2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. 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	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 6 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D03	

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-D07			
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED	
PROCESS CONDITIONS	8	Upper Liquid				Process Gas			
	9	Lower Liquid				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 2)			
	15	Body/Cage Rating				300#			
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side			
	17	-				-			
	18	Flange Material				C.S.			
	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	
	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				VTA 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	-				-			
	51	Custom Tag				S.S. permanent attached			
PURCHASE	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			
Notes: VTA: Vendor to advice 1- 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. 2- 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	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 7 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D03	

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-D07 (1 of 3)				
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED		
PROCESS CONDITIONS	8	Upper Liquid				Process Gas				
	9	Lower Liquid				Hydrocarbon				
	10	Density Lower		Density Upper		842.7 Kg/m3		5.97 Kg/m3		
	11	Design Pressure		Normal Pressure		F.V/20 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 2)				
	15	Body/Cage Rating				300#				
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side				
	17	-				-				
	18	Flange Material				C.S.				
	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				VTA 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	-				-				
	51	Custom Tag				S.S. permanent attached				
PURCHASE	52	Manufacturer				Will be finalized later				
	53	Model				Will be finalized later				

Notes:

VTA: Vendor to advice

1- 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.

2- 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	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 8 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D03	

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-D07 (1 of 3)			
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED	
PROCESS CONDITIONS	8	Upper Liquid				Process Gas			
	9	Lower Liquid				Hydrocarbon Drain			
	10	Density Lower		Density Upper		842.7 Kg/m ³		5.97 Kg/m ³	
	11	Design Pressure		Normal Pressure		F.V/20 bar		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 2)			
	15	Body/Cage Rating				300#			
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side			
	17	-				-			
	18	Flange Material				C.S.			
	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	
	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				VTA 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	-				-			
	51	Custom Tag				S.S. permanent attached			
PURCHASE	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			
Notes: VTA: Vendor to advice 1- 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. 2- 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	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 10 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D03	

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-D07 (2 of 3)			
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED	
PROCESS CONDITIONS	8	Upper Liquid				Process Gas			
	9	Lower Liquid				Hydrocarbon Drain			
	10	Density Lower		Density Upper		842.7 Kg/m3		5.97 Kg/m3	
	11	Design Pressure		Normal Pressure		F.V/20 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 2) D03			
	15	Body/Cage Rating				300#			
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side			
	17	-				-			
	18	Flange Material				C.S.			
	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 D03			
	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				VTA Low Copper Die-Cast Aluminum			
	47	SIL Rating				SIL 2 D03			
OPTIONS	48	Cable Gland				M20x1.5 , EExd			
	49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50	-				-			
	51	Custom Tag				S.S. permanent attached			
PURCHASE	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			
Notes: VTA: Vendor to advice 1- 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. D03 2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. D03									



احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER

نمبره پیمان:

053 - 073-9184

شماره صفحه: 11 از 28

D03

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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-D07 (3 of 3)	
	7 RFI Protection	Tropicalisation	NEEDED	NEEDED
PROCESS CONDITIONS	8 Upper Liquid		Process Gas	
	9 Lower Liquid		Hydrocarbon Drain	
	10 Density Lower	Density Upper	842.7 Kg/m3	5.97 Kg/m3
	11 Design Pressure	Normal Pressure	F.V/20 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 2) D03	
	15 Body/Cage Rating		300#	
	16 Connection Size & Location		2" , ANSI Flange, 300#RF side	
	17 -		-	
	18 Flange Material		C.S.	
	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 D03		
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		VTA Low Copper Die-Cast Aluminum D03		
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 -		-	
	51 Custom Tag		S.S. permanent attached	
PURCHASE	52 Manufacturer		Will be finalized later	
	53 Model		Will be finalized later	

Notes:

VTA: Vendor to advice

1- 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.

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

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 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	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 12 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D03	

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-D07 (3 of 3)			
	7	RFI Protection				NEEDED			
PROCESS CONDITIONS	8	Upper Liquid				Process Gas			
	9	Lower Liquid				Hydrocarbon Drain			
	10	Density Lower		Density Upper		842.7 Kg/m3		5.97 Kg/m3	
	11	Design Pressure		Normal Pressure		F.V/20 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 2)			
	15	Body/Cage Rating				300#			
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side			
	17	-				-			
	18	Flange Material				C.S.			
	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	
	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				VTA 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	-				-			
	51	Custom Tag				S.S. permanent attached			
PURCHASE	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			

Notes:

VTA: Vendor to advice

1- 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.

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



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER

نماره پیمان:

053 - 073 - 9184

پروژہ

پیوسته کاری

صادر کنندہ

تسهيلات

رشته

نوع مدرک

سریال	
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4	4
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نسخ	
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شماره صفحه: 13 از 28

DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)

GEN	1	Tag Number		LIT-2131A	
	2	Service		2nd Stage Gas Compression Suction Drums	
	H.R. SAME AS PREVIOUS PAGES.			V-2102-A	
				External	
				Level Control	
	6	P&ID No.		BK-GCS-PEDCO-120-PR-PI-0009-D07 (1 of 3)	
	7	RFI Protection	Tropicalisation	NEEDED	NEEDED
PROCESS CONDITIONS	8	Upper Liquid		Process Gas	
	9	Lower Liquid		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 2) D03	
	15	Body/Cage Rating		300#	
	16	Connection Size & Location		2" , ANSI Flange, 300#RF side	
	17	-		-	
	18	Flange Material		C.S.	
	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 D03	
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		VTA Low Copper Die-Cast Aluminum D03	
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	-		-	
	51	Custom Tag		S.S. permanent attached	
PURCHASE	52	Manufacturer		Will be finalized later	
	53	Model		Will be finalized later	

Notes:

VTA: Vendor to advice

1- 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.

2- 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	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 14 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D03	

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-D07 (1 of 3)			
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED	
PROCESS CONDITIONS	8	Upper Liquid				Process Gas			
	9	Lower Liquid				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 2) D03			
	15	Body/Cage Rating				300#			
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side			
	17	-				-			
	18	Flange Material				C.S.			
	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 D03			
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				VTA Low Copper Die-Cast Aluminum D03			
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	-				-			
	51	Custom Tag				S.S. permanent attached			
PURCHASE	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			
Notes: VTA: Vendor to advice 1- 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. D03 2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. D03									



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER

نماره پیمان:

053 - 073 - 9184

شماره صفحه: 15 از 28

D03

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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-D07 (2 of 3)	
	7	RFI Protection	Tropicalisation	NEEDED	NEEDED
PROCESS CONDITIONS	8	Upper Liquid		Process Gas	
	9	Lower Liquid		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 2) 	
	15	Body/Cage Rating		300#	
	16	Connection Size & Location		2" , ANSI Flange, 300#RF side	
	17	-		-	
	18	Flange Material		C.S.	
	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		VTA 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	-		-	
	51	Custom Tag		S.S. permanent attached	
PURCHASE	52	Manufacturer		Will be finalized later	
	53	Model		Will be finalized later	

Notes:

VTA: Vendor to advice

1- 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.

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



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER

نماره پیمان:

053 - 073-9184

شماره صفحه: 16 از 28

نسخه

D03

نسخه

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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-D07 (2 of 3)	
	7	RFI Protection	Tropicalisation	NEEDED	NEEDED
PROCESS CONDITIONS	8	Upper Liquid		Process Gas	
	9	Lower Liquid		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 2)	
	15	Body/Cage Rating		300#	
	16	Connection Size & Location		2" , ANSI Flange, 300#RF side	
	17	-		-	
	18	Flange Material		C.S.	
	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	
	33	Function		Level Transmitter	
TRANSMITTER	34	Output		4-20 mA, SMART, HART	
	35	Set Range	Min.	Max.	
	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		VTA Low Copper Die-Cast Aluminum	
	47	SIL Rating		SIL 2	
	48	Cable Gland		M20x1.5 , EExd	
OPTIONS	49	Vent/Drain Connection		3/4" NPT -with 3/4" isolation valve	
	50	-		-	
	51	Custom Tag		S.S. permanent attached	
	52	Manufacturer		Will be finalized later	
PURCHASE	53	Model		Will be finalized later	

Notes:

VTA: Vendor to advice

1- 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.

2- 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	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 17 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D03	

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-D07 (3 of 3)				
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED		
PROCESS CONDITIONS	8	Upper Liquid				Process Gas				
	9	Lower Liquid				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 2) D03				
	15	Body/Cage Rating				300#				
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side				
	17	-				-				
	18	Flange Material				C.S.				
	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 D03				
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				VTA Low Copper Die-Cast Aluminum				
47		SIL Rating				N/A D03				
OPTIONS		48	Cable Gland				M20x1.5 , EExd			
		49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50	-				-				
	51	Custom Tag				S.S. permanent attached				
PURCHASE	52	Manufacturer				Will be finalized later				
	53	Model				Will be finalized later				
Notes: VTA: Vendor to advice 1- 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. D03 2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. 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	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 18 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D03	

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-D07 (3 of 3)			
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED	
PROCESS CONDITIONS	8	Upper Liquid				Process Gas			
	9	Lower Liquid				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 2) D03			
	15	Body/Cage Rating				300#			
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side			
	17	-				-			
	18	Flange Material				C.S.			
	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 D03			
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				VTA Low Copper Die-Cast Aluminum			
47		SIL Rating				SIL 2 D03			
OPTIONS	48	Cable Gland				M20x1.5 , EExd			
	49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50	-				-			
	51	Custom Tag				S.S. permanent attached			
PURCHASE	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			
Notes: VTA: Vendor to advice 1- 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. D03 2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. D03									



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

شماره صفحه: 19 از 28

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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-D07			
	7	RFI Protection	Tropicalization	NEEDED	NEEDED	
PROCESS CONDITIONS	8	Upper Liquid	Process Gas			
	9	Lower Liquid	Hydrocarbon Drain			
	10	Density Lower	982 Kg/m3	59.63 Kg/m3		
	11	Design Pressure	F.V/62 barg	53.90 barg		
	12	Design Temp.	Normal Temp.	130 °C		
	13	Viscosity Low.	Viscosity Up	0.49 cp	0.01 cp	
BODY / GAGE	14	Body/Cage Material	C.S. (Note 2)			
	15	Body/Cage Rating	600#			
	16	Connection Size & Location	2" , ANSI Flange, 600#RF side			
	17	-	-			
	18	Flange Material	C.S.			
	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	VTA 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	-	-			
	51	Custom Tag	S.S. permanent attached			
PURCHASE	52	Manufacturer	Will be finalized later			
	53	Model	Will be finalized later			

Notes:

VTA: Vendor to advice

1- 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.

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

D03

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	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 20 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D03	

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	App			Level Control				
	6	P&ID			BK-GCS-PEDCO-120-PR-PI-0012-D07				
	7	RF			NEEDED		NEEDED		
PROCESS CONDITIONS	8	Up			Process Gas				
	9	Lower Liquid			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 2)				
	15	Body/Cage Rating			600#				
	16	Connection Size & Location			2" , ANSI Flange, 600#RF side				
	17	-			-				
	18	Flange Material			C.S.				
	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			VTA 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	-			-				
	51	Custom Tag			S.S. permanent attached				
PURCHASE	52	Manufacturer			Will be finalized later				
	53	Model			Will be finalized later				
Notes: VTA: Vendor to advice 1- 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. 2- 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	بسته کاری	صادر کننده	تهیه کننده	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 21 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D03	

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-D07 (2 of 2)			
	7	RFI Protection				NEEDED		NEEDED	
PROCESS CONDITIONS	8	Upper Liquid				Air			
	9	Lower Liquid				H ₂ O			
	10	Density Lower				997 Kg/m ³		1.225	
	11	Design Pressure				3.5		ATM	
	12	Design Temp.				85		AMB	
BODY / GAGE	13	Viscosity Low.				Viscosity Up		0.89	
	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			
DISPLACER	23	Torque Tube Type				N/A			
	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				VTA 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	-				-			
	51	Custom Tag				S.S. permanent attached			
PURCHASE	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			

Notes:

VTA: Vendor to advice

1- 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.

2- 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.)

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

D03



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER

نماره پیمان:

053 - 073 - 9184

شماره صفحه: 23 از 28

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-D07 (2 of 3)		
	7	RFI Protection	Tropicalisation	NEEDED	NEEDED	
PROCESS CONDITIONS	8	Upper Liquid		Process Gas		
	9	Lower Liquid		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 2) 		
	15	Body/Cage Rating		300#		
	16	Connection Size & Location		2" , ANSI Flange, 300#RF side		
	17	-		-		
	18	Flange Material		C.S.		
	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		VTA 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	-		-		
	51	Custom Tag		S.S. permanent attached		
PURCHASE	52	Manufacturer		Will be finalized later		
	53	Model		Will be finalized later		

Notes:

VTA: Vendor to advice

1- 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.

2- 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	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 28 از 24
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D03	

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-D07 (2 of 3)				
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED		
PROCESS CONDITIONS	8	Upper Liquid				Process Gas				
	9	Lower Liquid				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 2) D03				
	15	Body/Cage Rating				300#				
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side				
	17	-				-				
	18	Flange Material				C.S.				
	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 D03				
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				VTA Low Copper Die-Cast Aluminum				
47		SIL Rating				SIL 1 D03				
OPTIONS		48	Cable Gland				M20x1.5 , EExd			
		49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50	-				-				
	51	Custom Tag				S.S. permanent attached				
PURCHASE	52	Manufacturer				Will be finalized later				
	53	Model				Will be finalized later				
Notes: VTA: Vendor to advice 1- 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. D03 2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. D03										



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER

نماره پیمان:

053 - 073-9184

شماره صفحه: 25 از 28

نسخه

D03

نسخه

D03

نسخه

D03

نسخه

D03

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-D07 (2 of 3)		
	7	RFI Protection	Tropicalisation	NEEDED	NEEDED	
PROCESS CONDITIONS	8	Upper Liquid		Process Gas		
	9	Lower Liquid		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 2) 		
	15	Body/Cage Rating		300#		
	16	Connection Size & Location		2" , ANSI Flange, 300#RF side		
	17	-		-		
	18	Flange Material		C.S.		
	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		Digital LCD	Yes	
	44	Zero/Span Adjustment		Required		
	45	Termination Type		Screw terminal		
	46	Case Material		VTA 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	-		-		
	51	Custom Tag		S.S. permanent attached		
PURCHASE	52	Manufacturer		Will be finalized later		
	53	Model		Will be finalized later		

Notes:

VTA: Vendor to advice

1- 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.

2- 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	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 26 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D03	

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-D07					
	7	RFI Protection				Tropicalisation		NEEDED		NEEDED	
PROCESS CONDITIONS	8	Upper Liquid				Process Gas					
	9	Lower Liquid				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 2)				D03	
	15	Body/Cage Rating				300#					
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side					
	17	-				-					
	18	Flange Material				C.S.					
	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				D03	
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				VTA Low Copper Die-Cast Aluminum					
47		SIL Rating				N/A				D03	
OPTIONS		48	Cable Gland				M20x1.5 , EExd				
		49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve				
	50	-				-					
	51	Custom Tag				S.S. permanent attached					
PURCHASE	52	Manufacturer				Will be finalized later					
	53	Model				Will be finalized later					
Notes: VTA: Vendor to advice 1- 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.										D03	
2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.										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	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 27 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D03	

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-D07			
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED	
PROCESS CONDITIONS	8	Upper Liquid				Fuel Gas			
	9	Lower Liquid				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 2) D03			
	15	Body/Cage Rating				300#			
	16	Connection Size & Location				2" , ANSI Flange, 300#RF side			
	17	-				-			
	18	Flange Material				C.S.			
	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 D03			
35		Set Range		Min.		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				VTA Low Copper Die-Cast Aluminum			
47		SIL Rating				SIL a D03			
OPTIONS	48	Cable Gland				M20x1.5 , EExd			
	49	Vent/Drain Connection				3/4" NPT -with 3/4" isolation valve			
	50	-				-			
	51	Custom Tag				S.S. permanent attached			
PURCHASE	52	Manufacturer				Will be finalized later			
	53	Model				Will be finalized later			
Notes: VTA: Vendor to advice 1- 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. D03 2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. 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	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 28 از 28
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0006	D03	

DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)										D03
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 Liquid				Air				
	9	Lower Liquid				Water/HC/GLYCOL				
	10	Density Lower		Density Upper		1115Kg/m3		850Kg/m3		
	11	Design Pressure		Normal Pressure		ATM		ATM		
	12	Design Temp.		Normal Temp.		85		AMB		
	13	Viscosity Low.		Viscosity Up		85.86 cp		4.8 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.