

 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

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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					
37	X	X				101					
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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	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
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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	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 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)				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				
DISPLACER	23	Cooling Extension				N.A.				
	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				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				
	OPTIONS	46	Case Material				VTA Low Copper Die-Cast Aluminum			
47		SIL Rating				SIL 1				
48		Cable Gland				M20x1.5 , EExd				
PURCHASE	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				D03
	53	Model				VTA 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: 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-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) 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.		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 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: 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-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/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		
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.



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: 8 از 28

نسخه

سریال

مدرک

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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-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/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		
	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		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.



احداث ردیف تراکم گاز در ایستگاه جمع آوری سنک



DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER

نماره یمان:

053 - 073 - 9184

پے وڑہ

سته کاری

صادر کنندہ

تسهيلات

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شماره صفحه: 9 از 28

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-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) 	
	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	
	33	Function		Level Transmitter	
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	
	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.



احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



شماره پیمان:

پروژہ

پیسته کاری

مادرکننده

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نسخه

شماره صفحه: 10 از 28

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) 		
	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 		
	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		
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		

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: 11 از 28

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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) 	
	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	
	33	Function		Level Transmitter	
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		VTA Low Copper Die-Cast Aluminum 	
	47	SIL Rating		N/A	
	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.



احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER

نماره پیمان:

053 - 073 - 9184

شماره صفحه: 12 از 28

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	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) 	
	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 	
	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 	
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: 13 از 28

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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-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)	
	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	
	33	Function		Level Transmitter	
TRANSMITTER	34	Output		4-20 mA, SMART, HART	
	35	Set Range	Min.	Max.	
	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: 14 از 28

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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)	
	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 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	
	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.



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

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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
BODY / GAGE	13	Viscosity Low.	Viscosity Up	0.44 cp	0.01 cp
	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	
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		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: 16 از 28
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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) 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				0-1100mm				
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 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

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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.

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: 18 از 28
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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	-				-			
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- 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: 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		Tropicalisation		NEEDED		NEEDED		
PROCESS CONDITIONS	8	Upper Liquid				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				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.										

 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
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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-D07				
	7	RFI Protection		Tropicalisation		NEEDED		NEEDED		
PROCESS CONDITIONS	8	Upper Liquid				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				
	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		
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	صادرکننده	تهیه کننده	رشته	نوع مدرک		سریال
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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		Tropicalisation	NEEDED		NEEDED
PROCESS CONDITIONS	8	Upper Liquid			Air		
	9	Lower Liquid			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		
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: 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-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.	
	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.



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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
BODY / GAGE	13	Viscosity Low.	Viscosity Up	0.46 cp	0.01 cp
	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
TRANSMITTER	32	Trim Material		S.S. 316L	
	33	Function		Level Transmitter	
	34	Output		4-20 mA, SMART, HART	
	35	Set Range	Min.	Max.	
	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	
OPTIONS	47	SIL Rating		SIL 1	
	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- 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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DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER

نماره پیمان:

053 - 073 - 9184

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-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.



احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER

نماره یمان:

053 - 073 - 9184

شماره صفحه: 25 از 28

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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	
	33	Function		Level Transmitter	
TRANSMITTER	34	Output		4-20 mA, SMART, HART	
	35	Set Range	Min.	Max.	
	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	
	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.



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DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER

نماره پیمان:

053 - 073 - 9184

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-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) 		
	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.

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DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER

شماره پیمان:

053 - 073 - 9184

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-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)	
	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		0-1100 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	
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

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2- 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:

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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	-		-	
	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- 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.