



NISOC

نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR LEVEL GAUGES

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

BK

بسته کاری

GCS

صادرکننده

PEDCO

تسهیلات

120

رشته

IN

نوع مدرک

DT

سریال

0003

نسخه

D03

شماره صفحه: ۱ از ۷

طرح نگهداشت و افزایش تولید ۲۷ مخزن

DATA SHEETS FOR LEVEL GAUGES

نگهداشت و افزایش تولید میدان نفتی بینک

D03	SEP.2023	AFC	P.Hajisadeghi	M.Fakharian	A.M.Mohseni	
D02	MAY.2023	IFA	P.Hajisadeghi	M.Fakharian	A.M.Mohseni	
D01	DEC.2022	IFA	P.Hajisadeghi	M.Fakharian	M.Mehrshad	
D00	APR.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-708924

status:

IDC: Inter-Discipline Check

IFC: Issued For Comment

IFA: Issued For Approval

AFD: Approved For Design

AFC: Approved For Construction

AFP: Approved For Purchase

AFQ: Approved For Quotation

IFI: Issued For Information

AB-R: As-Built for CLIENT Review

AB-A: As-Built -Approved



NISOC

نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

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DATA SHEETS FOR LEVEL GAUGES

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

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شماره صفحه: ۲ از ۷

REVISION RECORD SHEET

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3	X	X			
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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 LEVEL GAUGES								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
	BK	GCS	PEDCO	120	IN	DT	0003	D03
شماره صفحه: ۳ از ۷								

REFERENCE DOCUMENTS :

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



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DATA SHEETS FOR LEVEL GAUGES

شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۴ از ۷
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	GCS	PEDCO	120	IN	DT	0003	D03	

GENERAL NOTES:

1 - Materials indicated in the data sheets have to be intended as a guide. Vendor is responsible for the selection of materials suitable for the specified working conditions.

2 - Material Test Certificate and calibration Certificate for all gauges to be submitted by Vendor.

3 - 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

4 - 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: 50 (°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

5- Gauge cock valve shall be quick closing and lever operated.

6- Each section of Level gauges shall have a visible length of approximately 300mm.

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	DATA SHEETS FOR LEVEL GAUGES								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۵ از ۷
	BK	GCS	PEDCO	120	IN	DT	0003	D03	

LEVEL GAUGE				
GENERAL DATA	1	Tag No.		SEE PAGE 6
	2	P& ID		SEE PAGE 6
	3	Equipment No.		SEE PAGE 6
	4	Area Clacification		Zone 2, IIA T3 (Note 2)
	5			
PROCESS CONDITION	6	Upper Fluid	Lower Fluid	SEE PAGE 6
	7	Ope. Temp.	Des. Temp. (°C)	SEE PAGE 6
	8	Ope. Press.	Des. Press. (barg)	SEE PAGE 6
	9	Upper Density	Lower Density (kg/m ³)	SEE PAGE 6
	10	Visible Length	(mm)	SEE PAGE 6
GAUGE	11	Type	Gauge Glass Type	SEE PAGE 6
				Heat resistant borosilicate glass
	12	Centre - Centre		SEE PAGE 6
	13	Size/Section		SEE PAGE 6
	14	Rating (lbs)/Finish Flange		SEE PAGE 6
	15	Vessel Connection		SEE PAGE 6
	16	Process Connection (Note 1)		2" Flanged
	17	Body Material		CS-A216 GR WCB
	18	Connection Arrangement		Side-Side
	19	Float Type		N/A
	20	Float Material		N/A
	21	Illuminator		N/A
	22	Power Supply		N/A
	23	Electrical Connection		N/A
	24	Electrical Certification		N/A
	25	Cable Type		N/A
	26	Ingress Protection		IP-65as minimum
GAUGE COCK	27	Type		Ball valve
	28	Body Material	Trim Material	Forged Carbon Steel
	29	Seat	Safety Ball	Double Seat
	30	Gauge Conn.		1"
	31	Bonnet		Screwed
	32	Ball Check		Required
	33	Renewable Seat		No
	34	Construction		VTA
OPTIONS	35	Drain Valve	Drain Conn.	Required
	36	Vent Valve	Vent Conn.	Required
	37	X Ray Inspection		No
	38	NACE Requirements		SEE PAGE 6
PURCHASING DATA	39	Model		Will be finalized later
	40	Supplier		Will be finalized later

NOTES:

VTA : Vendor To Advise

1- Refer to Typical Hookup Drawing for Detail of Installation Doc No. "BK-GCS-PEDCO-120-IN-DG-0002"

2- All Level Gauges to be considered for not transparent fluid.



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DATA SHEETS FOR LEVEL GAUGES

شماره پیمان:	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
	۹۱۸۴ - ۰۷۳ - ۰۵۳	BK	GCS	PEDCO	120	IN	DT	0003

شماره صفحه: ۶ از ۷

شماره صفحه: ۶ از ۷

D03

Rev.	Item No.	Tag No.	P&ID No.	Equipment No.	Service	Viscosity	Fluid		Phase		Design Pressure (barg)	Operating Pressure (barg)	Design Temp. (°C)	Operating Temp. (°C)	Density (kg/m³)		Visible Length (mm)	Type (Note 2)	C-C (mm)	Section × Size Type of glasses	Qty. of connection	Size	Flange Rating/ Finish	Illuminator	Nace	Remark
							Upper	Lower	Upper	Lower					Upper	Lower										
D03 Modified	1	LG-2111A	BK-GCS-PEDCO-120-PR-PI-0004 (1 of 2) (Rev.06)	V-2104	SLUG CATCHER DRUM	0.766	PROCESS GAS	HYDROCARBON DRAIN	G	L	F.V/9	5.5	85	32	6.21	845.55	2200	REFLEX	2500 (VTC)	7× 9	2	2"	300#RF	NO	YES	LG-2111 Part 1
D03 Modified	2	LG-2111B	BK-GCS-PEDCO-120-PR-PI-0004 (1 of 2) (Rev.06)	V-2104	SLUG CATCHER DRUM	0.766	PROCESS GAS	HYDROCARBON DRAIN	G	L	F.V/9	5.5	85	32	6.21	845.55	2200	REFLEX	2500 (VTC)	7× 9	2	2"	300#RF	NO	YES	LG-2111 Part 2
D03 Modified	6	LG-2116	BK-GCS-PEDCO-120-PR-PI-0005 (Rev.06)	V-2105	INLET KNOCK OUT DRUM	0.690	PROCESS GAS	HYDROCARBON DRAIN	G	L	F.V/9	5.3	85	37.170	6.16	842.58	1040	REFLEX	1300 (VTC)	3× 9	2	2"	300#RF	NO	YES	
D03 Modified	7	LG-2121A	BK-GCS-PEDCO-120-PR-PI-0006 (1 of 3) (Rev.06)	V-2101-A	1ST STAGE GAS COMPRESSION SUCTION DRUM TRAIN #A	0.690	PROCESS GAS	HYDROCARBON DRAIN	G	L	F.V/9	5.1	85	36.92	5.97	842.66	1040	REFLEX	1300 (VTC)	3× 9	2	2"	300#RF	NO	YES	
D03 Modified	8	LG-2121B	BK-GCS-PEDCO-120-PR-PI-0006 (2 of 3) (Rev.06)	V-2101-B	1ST STAGE GAS COMPRESSION SUCTION DRUM TRAIN #B	0.690	PROCESS GAS	HYDROCARBON DRAIN	G	L	F.V/9	5.1	85	36.92	5.97	842.66	1040	REFLEX	1300 (VTC)	3× 9	2	2"	300#RF	NO	YES	
D03 Modified	9	LG-2121C	BK-GCS-PEDCO-120-PR-PI-0006 (3 of 3) (Rev.06)	V-2101-C	1ST STAGE GAS COMPRESSION SUCTION DRUM TRAIN #C	0.690	PROCESS GAS	HYDROCARBON DRAIN	G	L	F.V/9	5.1	85	36.92	5.97	842.66	1040	REFLEX	1300 (VTC)	3× 9	2	2"	300#RF	NO	YES	
D03 Modified	10	LG-2131A	BK-GCS-PEDCO-120-PR-PI-0009 (1 of 3) (Rev.06)	V-2102-A	2ND STAGE GAS COMPRESSOR SUCTION DRUM TRAIN #A	0.440	PROCESS GAS	HYDROCARBON DRAIN	G	L	F.V/22	18.3	115.4	60	18.3	829.09	1040	REFLEX	1300 (VTC)	3× 9	2	2"	300#RF	NO	YES	
D03 Modified	11	LG-2131B	BK-GCS-PEDCO-120-PR-PI-0009 (2 of 3) (Rev.06)	V-2102-B	2ND STAGE GAS COMPRESSOR SUCTION DRUM TRAIN #B	0.440	PROCESS GAS	HYDROCARBON DRAIN	G	L	F.V/22	18.3	115.4	60	18.3	829.09	1040	REFLEX	1300 (VTC)	3× 9	2	2"	300#RF	NO	YES	
D03 Modified	12	LG-2131C	BK-GCS-PEDCO-120-PR-PI-0009 (3 of 3) (Rev.06)	V-2102-C	2ND STAGE GAS COMPRESSOR SUCTION DRUM TRAIN #C	0.440	PROCESS GAS	HYDROCARBON DRAIN	G	L	F.V/22	18.3	115.4	60	18.3	829.09	1040	REFLEX	1300 (VTC)	3× 9	2	2"	300#RF	NO	YES	
D03 Modified	13	LG-2141	BK-GCS-PEDCO-120-PR-PI-0012 (Rev.06)	V-2103	GAS COMPRESSION DISCHARGE DRUM	0.490	PROCESS GAS	HYDROCARBON DRAIN	G	L	F.V/62	54.1	130	60	59.63	982.02	1040	REFLEX	1300 (VTC)	3× 9	2	2"	600#RF	NO	YES	
D03	14	LG-2162A	BK-GCS-PEDCO-120-PR-PI-0014 (Rev.06)	TK-2102	LEAN GLYCOL STORAGE TANK	6.630	NITROGEN GAS	TRIETHYLENE GLYCOL	G	L	FULL OF WATER+ 160MBARG/7MBARG	0.1	85	AMB	-	1100-1135	1400	REFLEX	1650 (VTC)	4× 9	2	2"	300#RF	NO	NO	LG-2162 Part 1
D03	15	LG-2162B	BK-GCS-PEDCO-120-PR-PI-0014 (Rev.06)	TK-2102	LEAN GLYCOL STORAGE TANK	6.630	NITROGEN GAS	TRIETHYLENE GLYCOL	G	L	FULL OF WATER+ 160MBARG/7MBARG	0.1	85	AMB	-	1100-1135	1400	REFLEX	1650 (VTC)	4× 9	2	2"	300#RF	NO	NO	LG-2162 Part 2
D03	16	LG-2162C	BK-GCS-PEDCO-120-PR-PI-0014 (Rev.06)	TK-2102	LEAN GLYCOL STORAGE TANK	6.630	NITROGEN GAS	TRIETHYLENE GLYCOL	G	L	FULL OF WATER+ 160MBARG/7MBARG	0.1	85	AMB	-	1100-1135	1400	REFLEX	1650 (VTC)	4× 9	2	2"	300#RF	NO	NO	LG-2162 Part 3
D03 Modified	17	LG-2201	BK-GCS-PEDCO-120-PR-PI-0015 (2 of 2) (Rev.06)	V-2203	INSTRUMENT AIR RECEIVER	0.490	INSTRUMENT AIR	WATER	G	L	12.5	8	85	65	9.28	976.76	680	REFLEX	1000 (VTC)	2× 9	2	2"	300#RF	NO	NO	
D03 Modified	18	LG-2211	BK-GCS-PEDCO-120-PR-PI-0016 (Rev.06)	V-2204	NITROGEN RECEIVER	0.490	NITROGEN GAS	WATER	G	L	12.5	8	85	60	9.13	976.76	680	REFLEX	1000 (VTC)	2× 9	2	2"	300#RF	NO	NO	
D03 Modified	19	LG-2221A	BK-GCS-PEDCO-120-PR-PI-0017 (2 of 2) (Rev.06)	V-2202	CLOSED DRAIN DRUM	0.890	FLARE GAS	HYDROCARBON DRAIN	G	L	F.V/6	ATM	85	AMB	-	978.63	1400	REFLEX	1650 (VTC)	4× 9	2	2"	300#RF	NO	YES	LG-2221 Part 1
D03 Modified	20	LG-2221B	BK-GCS-PEDCO-120-PR-PI-0017 (2 of 2) (Rev.06)	V-2202	CLOSED DRAIN DRUM	0.890	FLARE GAS	HYDROCARBON DRAIN	G	L	F.V/6	ATM	85	AMB	-	978.63	1400	REFLEX	1650 (VTC)	4× 9	2	2"	300#RF	NO	YES	LG-2221 Part 2
D03 Modified	21	LG-2251	BK-GCS-PEDCO-120-PR-PI-0020 (2 of 3) (Rev.06)	V-2201	LP FLARE K.O. DRUM	0.460	FLARE GAS	HYDROCARBON DRAIN	G	L	F.V/6	0.5	85	32	-	978.63	680	REFLEX	950 (VTC)	2× 9	2	2"	300#RF	NO	YES	
D03 Modified	22	LG-2271	BK-GCS-PEDCO-120-PR-PI-0022 (Rev.06)	V-2205	FUEL GAS K.O. DRUM	0.690	FLARE GAS	HYDROCARBON DRAIN	G	L	F.V/9	4.9	85	48	5.77	842.66	1040	REFLEX	1300 (VTC)	3× 9	2	2"	300#RF	NO	YES	
D03	23	LG-2281	BK-GCS-PEDCO-120-PR-PI-0023 (Rev.06)	V-2206A	FIRE WATER DIESEL OIL DRUM	N.A.	DIESEL OIL	DIESEL OIL	G	L	ATM=FULL OF WATER	ATM	85	AMB	-	850	2200	REFLEX	2500 (VTC)	7× 9	2	2"	300#RF	NO	NO	

(1) VTA: Vendor To Advise

VTC: Vendor To Confirm

Gr Gas

L: Liquid

(2) Armored type level Gauge to be used.

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	DATA SHEETS FOR LEVEL GAUGES								
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۷ از ۷
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	GCS	PEDCO	120	IN	DT	0003	D03	

Datashet for Float and Cable Level Gauge			
1	Tag number	LG-2301	LG-2302
2	Quantity	1	1
3	P&ID number	BK-GCS-PEDCO-120-SA-PI-0001 (1 of 2)	BK-GCS-PEDCO-120-SA-PI-0001 (1 of 2)
4	Tag vessel / Class	TK-2301-A	TK-2301-B
5	NACE MR 0175	No	No
6	Manufacturer	VTA	VTA
7	Series / Model no	VTA	VTA
8	PROCESS DATA		
9	Fluid	Fire Water	Fire Water
11	Design/Operating Pressure (Barg)	Full Of Water /ATM	3.5 /2.3
12	Design/Operating Temperature (°c)	85° C/ AMB	85° C/ AMB.
13	Viscosity (cP)	1.02	1.02
13	Density (Kg/m3)	1000	1000
14	GENERAL FEATURES		
15	Type :	Float and Cable Level Gauge	Float and Cable Level Gauge
16	Float Material	PVC	PVC
17	Float Dimention	VTA	VTA
18	Visible/Cable Length	9500 mm/VTA	9500 mm/VTA
19	Cable Material	VTA	VTA
23	Accuracy	2%of Full Scale	2%of Full Scale
24	ISOLATION VALVES		
25	Angle valve offset type (integrally mounted)	N/A	N/A
26	1/4 turn operating	N/A	N/A
27	Simple seat / Double seat	-	-
28	Safety check ball	No	No
29	Isolation Valve/ material	N/A	N/A
31	CONNECTION PROCESS		
32	Flanges / Stand pipe mounting	Flanged, 6"	Flanged, 6"
33	Rating / Flange finish	300#	300#
34	Flange material	A-105	A-105
35	Stamped tag number	N/A	N/A
36	Drain Connection/ Material	N/A	N/A
37	Vent Connection / Material	N/A	N/A
38	Connection orientation	Hanked type through cable and spool	Hanked type through cable and spool
39	Cock Valve	N/A	N/A
40	ACCESSORIES		
41	Access Plat Form	Yes	N/A
42	Ingress Protection	IP 65 min	IP 65 min
43	Cable and Spool	Yes	Yes
44	Cable entry	-	-
45	Cable gland	-	-
46	Electrical Protection	-	-
General Notes : 1- All wetted part material shall be SS 316. VTA : Vendor To Advise 2-Any Installation Accessories (Rod , Flange , Ruler ,....) To Be Provided By Vendor.			