

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 	
	DATA SHEETS FOR CORROSION COUPON/ PROBE								
شماره پیمان: 053 - 073 - 9184	پروژه BK	بسته کاری GCS	صادرکننده PEDCO	تسهیلات 120	رشته IN	نوع مدرک DT	سریال 0014	نسخه D02	شماره صفحه: 1 از 11

طرح نگهداشت و افزایش تولید 27 مخزن

DATA SHEETS FOR CORROSION COUPON/ PROBE

نگهداشت و افزایش تولید میدان نفتی بینک

D02	MAR.2023	IFA	P.Hajisadeghi	M.Fakharian	M.Mehrshad	
D01	NOV.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-708935

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



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نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR CORROSION COUPON/ PROBE

شماره پیمان:

053 - 073 - 9184

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه
D02	0014	DT	IN	120	PEDCO	GCS	BK

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6	X	X	X		
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سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR CORROSION COUPON/ PROBE

شماره پیمان:

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پروژه

BK

بسته کاری

GCS

صادر کننده

PEDCO

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نگهداشت و افزایش تولید میدان نفتی بینک
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DATA SHEETS FOR CORROSION COUPON/ PROBE

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پروژه

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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 (Golkhari)	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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GENERAL NOTES:

- Licensed software for probes and training Courses for End User engineering department shall be considered by vendor.
- One set of retriever tool kit and service valve and also other part necessary for mounting of all corrosion coupon and probes shall be provided by vendor. This set of retriever and service valve is common to all CC/CP's fittings. Also any calibration set or special tools for test and installation shall be provided by vendor, as minimum on set portable corrosion meter for local monitoring of probes to be considered.

- Environmental Condition For Field Instrumentation of BINAK Complex Shall Be Considered As Per The Following:

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

- Training Courses for Installation, Calibration, ... of corrosion transmitters shall be considered by vendor.
- Considering the fluid corrosibility, the Element material shall be in accordance with pipe material.
- All recommendations of IPS-I-TP-802 and NACE RP0775 for corrosion monitoring devices and accessories installation shall be followed by vendor.
- Service valve & retriever system to be have below specification:
 - Suitable connection for 2" Access fitting
 - Isolating Valve
 - Drain Plug
 - Pressure Gauge
 - Retriever/Service Valve Seal Kit
 - Retriever/Service valve Repair Kit
 - Diverter Hose Assembly, Retainer Clamp, Safety Hammer, Head Bar, Back Pressure Pump
 - To be suitable for 40 barg design pressure B38 (suitable for high pressure) and 85° C design temperature.
- Mounting Position for Gas services should be at 12 O'clock Position for easy maintenance.
- Wetted part material shall be according to NACE MR 01-175 where required as per piping material standard.
- Regarding protection of pipeline transportation system, ISO 15589 standards to be followed.
- Electrical Resistance (ER) or Linear Polarization Resistance (LPR) methods shall be used in corrosion probes. Ultrasonic Examination, Acoustic Emission and other methods may be used individually or in combination with other methods if the Vendor advises. No local electrical signal exists for these probes.

One Portable Corrosion Transmitter (shall be provided by vendor (To measure the Resistance of the probe periodically). This transmitter is common to all CP's fittings. Also any calibration set or special tools for test and installation shall be provided by vendor, as minimum on set portable corrosion meter for local monitoring of probes to be considered.

- 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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GENERAL	1	TAG NO	CC-2112	CC-2141	CC-2271
	2	P&ID NO.	BK-GCS-PEDCO-120-PR-PI-0005-D05	BK-GCS-PEDCO-120-PR-PI-0012-D05	BK-GCS-PEDCO-120-PR-PI-0022-D05
	3	SERVICE	AFTER INLET KNOCK OUT DRUM (V-2105)	ABOVE THE GAS COMPRESSION DISCHARGE DRUM (V-2103)	ABOVE THE FUEL GAS K.O. DRUM (V-2205)
	4	LINE NO.	GAS-111-0025-AN07-10"-PT	GAS-111-0066-FN05-6"-PT	FLG-112-0110-AN07-2"-PT
	5	LINE SIZE / SCHEDULE	10" , SCH.40 (Note 4)	6" , SCH.80 (Note 4)	2" , SCH.160 (Note 4)
	6	LINE/EQUIPMENT MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	7	PIPING CLASS	AN07 (Note 4)	FN05 (Note 4)	AN07 (Note 4)
	8	AREA CLASSIFICATION	N/A	N/A	N/A
	9	NACE COMPLIANCE (as per NACE MR0175/ISO 15156)	Required	Required	Required
PROCESS DATA (NOTE 1)	10	FLUID	GAS	GAS	FUEL GAS
	11	PHASE	1 phase (Vapour)	1 phase (Vapour)	1 phase (Vapour)
	12	DESIGN PRESSURE (barg)	F.V/9	F.V/62	F.V/9
	13	OPERATING. PRESSURE (barg)	5.1	53.9	4.9
	14	DESIGN TEMPERATURE (°C)	85	85	85
	15	MIN DESIGN METAL TEMPERATURE (°C)	5	5	5
	16	OPERATING TEMPERATURE (°C)	36.92/19.02	59.89/59.90	36.7
	17	MAX FLOW (Kg/hr)	19616.421	18977.739	556.38
	18	NORMAL FLOW (Kg/hr)	17833.11	17252.49	505.8
	19	MEAN VELOCITY (m/s)	16.31	4.34	10.87
	20	VISCOSITY (cP)	0.011	0.01	0.01
	21	DENSITY (kg/m3)	5.96	59.17	5.96
	22	PIPING CORROSION ALLOWANCE (mm)	6	3	6
	23	WATER CUT	-	-	-
	24	RATE OF CO2 CONTENT (SUM/WIN)	0.0316/0.0252 mole fraction in gas phase	0.0318/0.0252 mole fraction in gas phase	0.0316/0.0252 mole fraction in gas phase
	25	RATE OF CHLORIDE CONTENT	-	-	-
	26	VELOCITY	17.94	4.76	11.24
PROBE & TRANSMITTER	27	PROBE TYPE	N/A	N/A	N/A
	28	PROBE INSERTION LENGTH	N/A	N/A	N/A
	29	PROBE HOLDER	N/A	N/A	N/A
	30	MATERIAL	N/A	N/A	N/A
	31	MOUNTING POSITION	N/A	N/A	N/A
	32	ENCLOSURE MATERIAL	N/A	N/A	N/A
	33	MEASURING RANGE	N/A	N/A	N/A
	34	OUTPUT SIGNAL	N/A	N/A	N/A
	35	COMMUNICATION PROTOCOL	N/A	N/A	N/A
	36	POWER SUPPLY	N/A	N/A	N/A
	37	ACCURACY	N/A	N/A	N/A
	38	INTEGRAL INDICATOR	N/A	N/A	N/A
	39	Ex PROTECTION	N/A	N/A	N/A
	40	INGRESS PROTECTION	N/A	N/A	N/A
	41	CABLE ENTRY	N/A	N/A	N/A
	42	-			
COUPON	43	COUPON TYPE	Ladder Strip(VTA)	Ladder Strip(VTA)	Ladder Strip(VTA)
	44	COUPON MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	45	COUPON HOLDER (Note 6)	Yes	Yes	Yes
	46	HOLDER MATERIAL	316 S.S as minimum	316 S.S as minimum	316 S.S as minimum
	47	HOLDER LENGTH	VTA	VTA	VTA
	48	COUPON INSERTION LENGTH	VTA	VTA	VTA
	49	WETTED PART MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	50	STYLE	Retrievable (VTC)	Retrievable (VTC)	Retrievable (VTC)
	51	PROCESS CONNECTION	2", Flare Weld Type	2", Flare Weld Type	2", Flare Weld Type(Note7)
ACCESS FITTING (Note 5 & Note 6)	52	MOUNTING POSITION	at 12'O Clock (Note 8 in General Note)	at 12'O Clock (Note 8 in General Note)	at 12'O Clock (Note 8 in General Note)
	53	BRANCH STANDOUT LENGTH	(Note 2)	(Note 2)	(Note 2)
	54	FITTING PLUG	Solid Plug	Solid Plug	Solid Plug
	55	MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	56	PROTECTIVE COVER	Required	Required	Required
	57	RETRACTABLE TOOL	Required (Note 3)	Required (Note 3)	Required (Note 3)
	58	SERVICE VALVE	Required (Note 3)	Required (Note 3)	Required (Note 3)
	59	MANUFACTURE	will be finalized later	will be finalized later	will be finalized later
OTHER	60	MODEL NO.	will be finalized later	will be finalized later	will be finalized later
	61	TAG PLATE (General Note 12)	Required	Required	Required
	62	WAKE FREQUENCY STANDARD (NOTE 2)	Required as per ASME PTC	Required as per ASME PTC	Required as per ASME PTC

NOTES : VTA : VENDOR TO ADVISE VTC : VENDOR TO CONFIRM N/A : NOT APPLICABLE

- (1) All process data will be finalized later
- (2) Wake frequency analysis (stress calculation) according to ASME Power Test Code 19.3 shall be done & submitted by vendor.
- (3) One set of retriever and service valve is common to all CC's fittings.
- (4) Piping class, pipe schedule and materials related to Piping Material Specification, will be finalized after confirmation of this document.
- (5) High pressure access fitting to be supplied by vendor.
- (6) Length of stem holder for installation in 12O'clock due to liquid service, to be the way that measure the corrosion at the bottom of line.
- (7) Pipe shall be expanded to 4" for CC installation (expansion size shall be confirmed by vendor).

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	DATA SHEETS FOR CORROSION COUPON/ PROBE								
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GENERAL	1	TAG NO	CC-2151	CC-2162	
	2	P&ID NO.	BK-GCS-PEDCO-120-PR-PI-0013-D05	BK-GCS-PEDCO-120-PR-PI-0014-D05	
	3	SERVICE	AFTER DEHYDRATION PACKAGE (PK-2101)	LEAN GLYCOL STORAGE TANK (TK-2102)	
	4	LINE NO.	GAS-111-0179-FN05-6"-PT	-	
	5	LINE SIZE / SCHEDULE	6" , SCH.80 (Note 4)	-	
	6	LINE/EQUIPMENT MATERIAL	ASTM A106 Gr.B (Note 4)	A-283 GR.C	
	7	PIPING CLASS	FN05 (Note 4)	AN04 (Note 4)	
	8	AREA CLASSIFICATION	N/A	N/A	
	9	NACE COMPLIANCE (as per NACE MR0175/ISO 15156)	Required	-	
PROCESS DATA (NOTE 1)	10	FLUID	GAS	LIQUID	
	11	PHASE	1 phase (Vapour)	1 phase (Liquid)	
	12	DESIGN PRESSURE (barg)	F.V/62	full of liquid +160 mbarg/-7 mbarg	
	13	OPERATING. PRESSURE (barg)	52.9	0.1	
	14	DESIGN TEMPERATURE (°C)	130	85	
	15	MIN DESIGN METAL TEMPERATURE (°C)	5	5	
	16	OPERATING TEMPERATURE (°C)	59.40/59.36	AMB	
	17	MAX FLOW (Kg/hr)	18887.88603	5500	
	18	NORMAL FLOW (Kg/hr)	17170.80548	5000	
	19	MEAN VELOCITY (m/s)	4.408	0.65	
	20	VISCOSITY (cP)	0.011	0.54	
	21	DENSITY (kg/m3)	58.06	988.2	
	22	PIPING CORROSION ALLOWANCE (mm)	3	3	
	23	WATER CUT	-	-	
	24	RATE OF CO2 CONTENT (SUM/WIN)	0.0319/0.0253 mole fraction in gas phase	0.0319/0.0253 mole fraction in gas phase	
PROBE & TRANSMITTER	25	RATE OF CHLORIDE CONTENT	-	-	
	26	VELOCITY	4.85	0.56	
	27	PROBE TYPE	N/A	N/A	
	28	PROBE INSERTION LENGTH	N/A	N/A	
	29	PROBE HOLDER	N/A	N/A	
	30	MATERIAL	N/A	N/A	
	31	MOUNTING POSITION	N/A	N/A	
	32	ENCLOSURE MATERIAL	N/A	N/A	
	33	MEASURING RANGE	N/A	N/A	
	34	OUTPUT SIGNAL	N/A	N/A	
	35	COMMUNICATION PROTOCOL	N/A	N/A	
	36	POWER SUPPLY	N/A	N/A	
	37	ACCURACY	N/A	N/A	
	38	INTEGRAL INDICATOR	N/A	N/A	
	39	Ex PROTECTION	N/A	N/A	
COUPON	40	INGRESS PROTECTION	N/A	N/A	
	41	CABLE ENTRY	N/A	N/A	
	42	-			
	43	COUPON TYPE	Ladder Strip(VTA)	Strip	
	44	COUPON MATRIAL	ASTM A106 Gr.B (Note 4)	A-283 GR.C	
	45	COUPON HOLDER (Note 6)	Yes	Yes	
	46	HOLDER MATERIAL	316 S.S as minimum	316 S.S as minimum	
	47	HOLDER LENGTH	VTA	VTA	
	48	COUPON INSERTION LENGTH	VTA	VTA	
	49	WETTED PART MATERIAL	ASTM A106 Gr.B (Note 4)	A-283 GR.C	
ACCESS FITTING (Note 5)	50	STYLE	Retrievable (VTC)	Retrievable (VTC)	
	51	PROCESS CONNECTION	2", Flare Weld Type	2", Flange 300RF	
	52	MOUNTING POSITION	at 12'O Clock (Note 8 in General Note)	Vessel Side Mounted	
	53	BRANCH STANDOUT LENGTH	(Note 2)	(Note 2)	
	54	FITTING PLUG	Solid Plug	Solid Plug	
	55	MATERIAL	ASTM A106 Gr.B (Note 4)	A-283 GR.C	
	56	PROTECTIVE COVER	Required	Required	
	57	RETRACTABLE TOOL	Required (Note 3)	Required (Note 3)	
	58	SERVICE VALVE	Required (Note 3)	Required (Note 3)	
OTHER	59	MANUFACTURE	will be finalized later	will be finalized later	
	60	MODEL NO.	will be finalized later	will be finalized later	
	61	TAG PLATE (General Note 12)	Required	Required	
	62	WAKE FREQUENCY STANDARD (NOTE 2)	Required as per ASME PTC	Required as per ASME PTC 19.3	

NOTES : VTA : VENDOR TO ADVISE VTC : VENDOR TO CONFIRM N/A : NOT APPLICABLE

- (1) All process data will be finalized later
- (2) Wake frequency analysis (stress calculation) according to ASME Power Test Code 19.3 shall be done & submitted by vendor.
- (3) One set of retriever and service valve is common to all CC's fittings.
- (4) Piping class, pipe schedule and materials related to Piping Material Specification, will be finalized after confirmation of this document.
- (5) High pressure access fitting to be supplied by vendor.
- (6) Length of stem holder for installation in 12O'clock due to liquid service, to be the way that measure the corrosion at the bottom of line.

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 
	DATA SHEETS FOR CORROSION COUPON/ PROBE							
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تهیه کننده	رشته	نوع مدرک	سریال	نسخه
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0014	D02
شماره صفحه: 9 از 11								

GENERAL	1	TAG NO	CP-2101	CP-2102	CP-2111
	2	P&ID NO.	BK-GCS-PEDCO-120-PR-PI-0002-D05	BK-GCS-PEDCO-120-PR-PI-0003-D05	BK-GCS-PEDCO-120-PR-PI-0004-D05(1 of 2)
	3	SERVICE	TO INLET K.O. DRUM (V-2105)	TO SLUG CATCHER (V-2104)	AFTER SLUG CATCHER DRUM (V-2104) TO INLET K.O. DRUM (V-2105)
	4	LINE NO.	GAS-111-0001-AN07-6"-PT	GAS-111-0001-FN05-8"-PT	GAS-111-0019-AN07-8"-PT
	5	LINE SIZE / SCHEDULE	6", SCH.80 (Note 4)	8", SCH.80 (Note 4)	8", SCH.60 (Note 4)
	6	LINE/EQUIPMENT MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	7	PIPING CLASS	AN07 (Note 4)	FN05 (Note 4)	AN07 (Note 4)
	8	AREA CLASSIFICATION	Zone 2, IIB T4	Zone 2, IIB T4	Zone 2, IIB T4
	9	NACE COMPLIANCE (as per NACE MR0175/ISO 15156)	Required	Required	Required
PROCESS DATA (NOTE 1)	10	FLUID	GAS/Liquid	GAS/Liquid	GAS/Liquid
	11	PHASE	2 phase (Water/Vapour)	2 phase (Water/Vapour)	2 phase (Water/Vapour)
	12	DESIGN PRESSURE (barg)	9	9	F.V/9
	13	OPERATING PRESSURE (barg)	7.5	7.5	5.3
	14	DESIGN TEMPERATURE (°C)	85	85	85
	15	MIN DESIGN METAL TEMPERATURE (°C)	5	5	5
	16	OPERATING TEMPERATURE (°C)	46.11/26.67	32/15.5	31.86/15.35
	17	MAX FLOW (Kg/hr)	7220.4	12395.9308	12395.9308
	18	NORMAL FLOW (Kg/hr)	6564	11269.028	11269.028
	19	MEAN VELOCITY (m/s)	14.68	9.9	15.79
	20	VISCOSITY (cP)	0.01	0.01	-
	21	DENSITY (kg/m3)	6.66	6.21	6.16
	22	PIPING CORROSION ALLOWANCE (mm)	6	6	6
	23	WATER CUT	-	-	-
PROBE & TRANSMITTER	24	RATE OF CO2 CONTENT (SUM/WIN)	0.0345/0.0167 mole fraction in gas phase	0.0301/0.0296 mole fraction in gas phase	0.0562/0.0296 mole fraction in gas phase
	25	RATE OF CHLORIDE CONTENT	-	-	-
	26	VELOCITY	16.15	16.15	17.17
	27	PROBE TYPE	VTA	VTA	VTA
	28	PROBE INSERTION LENGTH	VTA	VTA	VTA
	29	PROBE HOLDER	Yes	Yes	Yes
	30	MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	31	MOUNTING POSITION	Top of line	Top of line	Top of line
	32	ENCLOSURE MATERIAL	VTA	VTA	VTA
	33	MEASURING RANGE	VTA	VTA	VTA
	34	OUTPUT SIGNAL	(Note 11 in General Note)	(Note 11 in General Note)	(Note 11 in General Note)
	35	COMMUNICATION PROTOCOL	(Note 11 in General Note)	(Note 11 in General Note)	(Note 11 in General Note)
	36	POWER SUPPLY	(Note 11 in General Note)	(Note 11 in General Note)	(Note 11 in General Note)
	37	ACCURACY	(Note 11 in General Note)	(Note 11 in General Note)	(Note 11 in General Note)
	38	INTEGRAL INDICATOR	No	No	No
	39	Ex PROTECTION	Eex "ia"	Eex "ia"	Eex "ia"
	40	INGRESS PROTECTION	IP 65	IP 65	IP 65
	41	CABLE ENTRY	ISO M20 x 1.5	ISO M20 x 1.5	ISO M20 x 1.5
COUPON	42	STYLE	Retrievable Type (VTC)	Retrievable Type (VTC)	Retrievable Type (VTC)
	43	COUPON TYPE	N/A	N/A	N/A
	44	COUPON MATERIAL	N/A	N/A	N/A
	45	COUPON HOLDER (Note 6)	N/A	N/A	N/A
	46	HOLDER MATERIAL	N/A	N/A	N/A
	47	HOLDER LENGTH	N/A	N/A	N/A
	48	COUPON INSERTION LENGTH	N/A	N/A	N/A
	49	-	N/A	N/A	N/A
ACCESS FITTING (Note 5 & Note 6)	50	STYLE	N/A	N/A	N/A
	51	PROCESS CONNECTION	2", Flare Weld Type	2", Flare Weld Type	2", Flare Weld Type
	52	MOUNTING POSITION	at 12'O Clock (Note 8 in General Note)	at 12'O Clock (Note 8 in General Note)	at 12'O Clock (Note 8 in General Note)
	53	BRANCH STANDOUT LENGTH	(Note 2)	(Note 2)	(Note 2)
	54	FITTING PLUG	Hollow Plug	Hollow Plug	Hollow Plug
	55	MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	56	PROTECTIVE COVER	Required	Required	Required
	57	RETRACTABLE TOOL	Required (Note 3)	Required (Note 3)	Required (Note 3)
OTHER	58	SERVICE VALVE	Required (Note 3)	Required (Note 3)	Required (Note 3)
	59	MANUFACTURE	will be finalized later	will be finalized later	will be finalized later
	60	MODEL NO.	will be finalized later	will be finalized later	will be finalized later
	61	TAG PLATE (General Note 12)	Required	Required	Required
	62	WAKE FREQUENCY STANDARD (NOTE 2)	Required as per ASME PTC	Required as per ASME PTC	Required as per ASME PTC

NOTES : VTA : VENDOR TO ADVISE VTC : VENDOR TO CONFIRM N/A : NOT APPLICABLE

(1) All process data will be finalized later
 (2) Wake frequency analysis (stress calculation) according to ASME Power Test Code 19.3 shall be done & submitted by vendor.
 (3) One set of retriever and service valve is common to all CC's fittings.
 (4) Piping class, pipe schedule and materials related to Piping Material Specification, will be finalized after confirmation of this document.
 (5) High pressure access fitting to be supplied by vendor.
 (6) Length of stem holder for installation in 12O'clock due to liquid service, to be the way that measure the corrosion at the bottom of line.

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 	
	DATA SHEETS FOR CORROSION COUPON/ PROBE								
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تهیه کننده	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 10 از 11 D02
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0014	D02	

GENERAL	1	TAG NO	CP-2112	CP-2141	CP-2271
	2	P&ID NO.	BK-GCS-PEDCO-120-PR-PI-0005-D05	BK-GCS-PEDCO-120-PR-PI-0012-D05	BK-GCS-PEDCO-120-PR-PI-0022-D05
	3	SERVICE	AFTER INLET KNOCK OUT DRUM (V-2105)	ABOVE THE GAS COMPRESSION DISCHARGE DRUM (V-2103)	ABOVE THE FUEL GAS K.O. DRUM (V-2205)
	4	LINE NO.	GAS-111-0025-AN07-10"-PT	GAS-111-0066-FN05-6"-PT	FLG-112-0110-AN07-2"-PT
	5	LINE SIZE / SCHEDULE	10" , SCH.40 (Note 4)	6" , SCH.80 (Note 4)	2" , SCH.160 (Note 4)
	6	LINE/EQUIPMENT MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	7	PIPING CLASS	AN07 (Note 4)	FN05 (Note 4)	AN07 (Note 4)
	8	AREA CLASSIFICATION	Zone 2,IIB T4	Zone 2,IIB T4	N/A
	9	NACE COMPLIANCE (as per NACE MR0175/ISO 15156)	Required	Required	Required
PROCESS DATA (NOTE 1)	10	FLUID	GAS	GAS	FUEL GAS
	11	PHASE	1 phase (Vapour)	1 phase (Vapour)	1 phase (Vapour)
	12	DESIGN PRESSURE (barg)	F.V/9	F.V/62	F.V/9
	13	OPERATING. PRESSURE (barg)	5.1	53.9	4.9
	14	DESIGN TEMPERATURE (°C)	85	85	85
	15	MIN DESIGN METAL TEMPERATURE (°C)	5	5	5
	16	OPERATING TEMPERATURE (°C)	36.92/19.02	59.89/59.90	36.7
	17	MAX FLOW (Kg/hr)	19616.421	18977.739	556.38
	18	NORMAL FLOW (Kg/hr)	17833.11	17252.49	505.8
	19	MEAN VELOCITY (m/s)	16.31	4.34	10.87
	20	VISCOSITY (cP)	0.011	0.01	0.01
	21	DENSITY (kg/m3)	5.96	59.17	5.96
	22	PIPING CORROSION ALLOWANCE (mm)	6	3	6
	23	WATER CUT	-	-	-
PROBE & TRANSMITTER	24	RATE OF CO2 CONTENT (SUM/WIN)	0.0316/0.0252 mole fraction in gas phase	0.0318/0.0252 mole fraction in gas phase	0.0316/0.0252 mole fraction in gas phase
	25	RATE OF CHLORIDE CONTENT	-	-	-
	26	VELOCITY	17.94	4.76	11.24
	27	PROBE TYPE	VTA	VTA	VTA
	28	PROBE INSERTION LENGTH	VTA	VTA	VTA
	29	PROBE HOLDER	Yes	Yes	Yes
	30	MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	31	MOUNTING POSITION	Top of line	Top of line	Top of line
	32	ENCLOSURE MATERIAL	VTA	VTA	VTA
	33	MEASURING RANGE	VTA	VTA	VTA
	34	OUTPUT SIGNAL	(Note 11 in General Note)	(Note 11 in General Note)	(Note 11 in General Note)
	35	COMMUNICATION PROTOCOL	(Note 11 in General Note)	(Note 11 in General Note)	(Note 11 in General Note)
	36	POWER SUPPLY	(Note 11 in General Note)	(Note 11 in General Note)	(Note 11 in General Note)
	37	ACCURACY	(Note 11 in General Note)	(Note 11 in General Note)	(Note 11 in General Note)
COUPON	38	INTEGRAL INDICATOR	No	No	No
	39	Ex PROTECTION	Eex "ia"	Eex "ia"	Eex "ia"
	40	INGRESS PROTECTION	IP 65	IP 65	IP 65
	41	CABLE ENTRY	ISO M20 x 1.5	ISO M20 x 1.5	ISO M20 x 1.5
	42	STYLE	Retrievable Type (VTC)	Retrievable Type (VTC)	Retrievable Type (VTC)
	43	COUPON TYPE	N/A	N/A	N/A
	44	COUPON MATERIAL	N/A	N/A	N/A
	45	COUPON HOLDER (Note 6)	N/A	N/A	N/A
	46	HOLDER MATERIAL	N/A	N/A	N/A
	47	HOLDER LENGTH	N/A	N/A	N/A
ACCESS FITTING (Note 5 & Note 6)	48	COUPON INSERTION LENGTH	N/A	N/A	N/A
	49	-	N/A	N/A	N/A
	50	STYLE	N/A	N/A	N/A
	51	PROCESS CONNECTION	2", Flare Weld Type	2", Flare Weld Type	2", Flare Weld Type (Note 7)
	52	MOUNTING POSITION	at 12'O Clock (Note 8 in General Note)	at 12'O Clock (Note 8 in General Note)	at 12'O Clock (Note 8 in General Note)
	53	BRANCH STANDOUT LENGTH	(Note 2)	(Note 2)	(Note 2)
	54	FITTING PLUG	Hollow Plug	Hollow Plug	Hollow Plug
OTHER	55	MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	56	PROTECTIVE COVER	Required	Required	Required
	57	RETRACTABLE TOOL	Required (Note 3)	Required (Note 3)	Required (Note 3)
	58	SERVICE VALVE	Required (Note 3)	Required (Note 3)	Required (Note 3)
	59	MANUFACTURE	will be finalized later	will be finalized later	will be finalized later
	60	MODEL NO.	will be finalized later	will be finalized later	will be finalized later
	61	TAG PLATE (General Note 12)	Required	Required	Required
	62	WAKE FREQUENCY STANDARD (NOTE 2)	Required as per ASME PTC	Required as per ASME PTC	Required as per ASME PTC

NOTES : VTA : VENDOR TO ADVISE VTC : VENDOR TO CONFIRM N/A : NOT APPLICABLE

(1) All process data will be finalized later
 (2) Wake frequency analysis (stress calculation) according to ASME Power Test Code 19.3 shall be done & submitted by vendor.
 (3) One set of retriever and service valve is common to all CC's fittings.
 (4) Piping class, pipe schedule and materials related to Piping Material Specification, will be finalized after confirmation of this document.
 (5) High pressure access fitting to be supplied by vendor.
 (6) Length of stem holder for installation in 12O'clock due to liquid service, to be the way that measure the corrosion at the bottom of line.
 (7) Pipe shall be expanded to 4" for CC instalation (expansion size shall be confirmed by vendor).

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
	DATA SHEETS FOR CORROSION COUPON/ PROBE								
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 11 از 11
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0014	D02	

GENERAL	1	TAG NO	CP-2151	
	2	P&ID NO.	BK-GCS-PEDCO-120-PR-PI-0013-D05	
	3	SERVICE	AFTER DEHYDRATION PACKAGE (PK-2101)	
	4	LINE NO.	GAS-111-0179-FN05-6"-PT	
	5	LINE SIZE / SCHEDULE	6" , SCH.80 (Note 4)	
	6	LINE/EQUIPMENT MATERIAL	ASTM A106 Gr.B (Note 4)	
	7	PIPING CLASS	FN05 (Note 4)	
	8	AREA CLASSIFICATION	Zone 2,IIB T4	
	9	NACE COMPLIANCE (as per NACE MR0175/ISO 15156)	Required	
PROCESS DATA (NOTE 1)	10	FLUID	GAS	
	11	PHASE	1 phase (Vapour)	
	12	DESIGN PRESSURE (barg)	F.V/62	
	13	OPERATING PRESSURE (barg)	52.9	
	14	DESIGN TEMPERATURE (°C)	130	
	15	MIN DESIGN METAL TEMPERATURE (°C)	5	
	16	OPERATING TEMPERATURE (°C)	59.40/59.36	
	17	MAX FLOW (Kg/hr)	18887.88603	
	18	NORMAL FLOW (Kg/hr)	17170.80548	
	19	MEAN VELOCITY (m/s)	4.408	
	20	VISCOSITY (cP)	0.011	
	21	DENSITY (kg/m3)	58.06	
	22	PIPING CORROSION ALLOWANCE (mm)	6	
	23	WATER CUT	-	
PROBE & TRANSMITTER	24	RATE OF CO2 CONTENT (SUM/WIN)	0.0319/0.0253 mole fraction in gas phase	
	25	RATE OF CHLORIDE CONTENT	-	
	26	VELOCITY	4.85	
	27	PROBE TYPE	VTA	
	28	PROBE INSERTION LENGTH	VTA	
	29	PROBE HOLDER	Yes	
	30	MATERIAL	ASTM A106 Gr.B (Note 4)	
	31	MOUNTING POSITION	Top of line	
	32	ENCLOSURE MATERIAL	VTA	
	33	MEASURING RANGE	VTA	
	34	OUTPUT SIGNAL	(Note 11 in General Note)	
	35	COMMUNICATION PROTOCOL	(Note 11 in General Note)	
	36	POWER SUPPLY	(Note 11 in General Note)	
	37	ACCURACY	(Note 11 in General Note)	
COUPON	38	INTEGRAL INDICATOR	No	
	39	Ex PROTECTION	Eex "ia"	
	40	INGRESS PROTECTION	IP 65	
	41	CABLE ENTRY	ISO M20 x 1.5	
	42	STYLE	Retrievable Type (VTC)	
	43	COUPON TYPE	N/A	
	44	COUPON MATERIAL	N/A	
	45	COUPON HOLDER (Note 6)	N/A	
	46	HOLDER MATERIAL	N/A	
	47	HOLDER LENGTH	N/A	
ACCESS FITTING (Note 5 & Note 6)	48	COUPON INSERTION LENGTH	N/A	
	49	-	N/A	
	50	STYLE	N/A	
	51	PROCESS CONNECTION	2", Flare Weld Type	
	52	MOUNTING POSITION	at 12'O Clock (Note 8 in General Note)	
	53	BRANCH STANDOUT LENGTH	(Note 2)	
	54	FITTING PLUG	Hollow Plug	
OTHER	55	MATERIAL	ASTM A106 Gr.B (Note 4)	
	56	PROTECTIVE COVER	Required	
	57	RETRACTABLE TOOL	Required (Note 3)	
	58	SERVICE VALVE	Required (Note 3)	
	59	MANUFACTURE	will be finalized later	
	60	MODEL NO.	will be finalized later	
	61	TAG PLATE (General Note 12)	Required	
	62	WAKE FREQUENCY STANDARD (NOTE 2)	Required as per ASME PTC 19.3	

NOTES : VTA : VENDOR TO ADVISE VTC : VENDOR TO CONFIRM N/A : NOT APPLICABLE

- (1) All process data will be finalized later
- (2) Wake frequency analysis (stress calculation) according to ASME Power Test Code 19.3 shall be done & submitted by vendor.
- (3) One set of retriever and service valve is common to all CC's fittings.
- (4) Piping class, pipe schedule and materials related to Piping Material Specification, will be finalized after confirmation of this document.
- (5) High pressure access fitting to be supplied by vendor.
- (6) Length of stem holder for installation in 120 °clock due to liquid service, to be the way that measure the corrosion at the bottom of line.