



NISOC

نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR CONTROL/REGULATOR VALVES

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

BK

بسته کاری

GCS

صادرکننده

PEDCO

تسهیلات

120

رشته

IN

نوع مدرک

DT

سریال

0011

نسخه

D00

شماره صفحه: ۱ از ۱۸

طرح نگهداشت و افزایش تولید ۲۷ مخزن

DATA SHEETS FOR CONTROL/REGULATOR VALVES

نگهداشت و افزایش تولید میدان نفتی بینک

D00	JUN.2022	IFC	P.Hajisadeghi	M.Fakharian	M.Mehrshad	
Rev.	Date	Purpose of Issue / Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval

Class: 2

CLIENT Doc. Number: F9Z-708932

status:

IDC: Inter-Discipline Check

IFC: Issued For Comment

IFA: Issued For Approval

AFD: Approved For Design

AFC: Approved For Construction

AFP: Approved For Purchase

AFQ: Approved For Quotation

IFI: Issued For Information

AB-R: As-Built for CLIENT Review

AB-A: As-Built -Approved



NISOC

نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR CONTROL/REGULATOR VALVES

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

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شماره صفحه: ۲ از ۱۸

REVISION RECORD SHEET

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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 CONTROL/REGULATOR VALVES								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۳ از ۱۸
	BK	GCS	PEDCO	120	IN	DT	0011	D00	

REFERENCE DOCUMENTS :

Specification For Instrumentation	BK-GNRAL-PEDCO-000-IN-SP-0001_D00
Process Basis Of Design	BK-GNRAL-PEDCO-000-PR-DB-0001_D05
Piping Material Specification	BK-GCS-PEDCO-120-PI-SP-0001_D01
Symbol & Legend For PFD and P&ID	BK-GCS-PEDCO-120-PR-PI-0001_D02
P&ID - Gas Compression Inlet Gas Pipeline (Binak)	BK-GCS-PEDCO-120-PR-PI-0002_D03
P&ID - Gas Compression Inlet Gas Pipeline (Golkhari)	BK-GCS-PEDCO-120-PR-PI-0003_D03
P&ID - Slug Catcher System	BK-GCS-PEDCO-120-PR-PI-0004_D03
P&ID - Gas Compression Inlet Knock Out Drum	BK-GCS-PEDCO-120-PR-PI-0005_D03
P&ID - 1st Stage Gas Compression Suction Drums	BK-GCS-PEDCO-120-PR-PI-0006_D03
P&ID - 1st Stage Gas Compression Compressors	BK-GCS-PEDCO-120-PR-PI-0007_D03
P&ID - 1st Stage Gas Compression Air Coolers	BK-GCS-PEDCO-120-PR-PI-0008_D03
P&ID - 2nd Stage Gas Compression Suction Drums	BK-GCS-PEDCO-120-PR-PI-0009_D03
P&ID - 2nd Stage Gas Compression Compressors	BK-GCS-PEDCO-120-PR-PI-0010_D03
P&ID - 2nd Stage Gas Compression Air Coolers	BK-GCS-PEDCO-120-PR-PI-0011_D03
P&ID - 2nd Stage Gas Compression Discharge Drum	BK-GCS-PEDCO-120-PR-PI-0012_D03
P&ID - Gas Compression Dehydration Package	BK-GCS-PEDCO-120-PR-PI-0013_D03
P&ID - Lean Glycol Storage Tank	BK-GCS-PEDCO-120-PR-PI-0014_D03
P&ID - Instrument & Plant Air System	BK-GCS-PEDCO-120-PR-PI-0015_D03
P&ID - Nitrogen Generation System	BK-GCS-PEDCO-120-PR-PI-0016_D03
P&ID - Close Drain System	BK-GCS-PEDCO-120-PR-PI-0017_D03
P&ID - Corrosion Inhibitor Package	BK-GCS-PEDCO-120-PR-PI-0018_D03
P&ID - Methanol Injection Package	BK-GCS-PEDCO-120-PR-PI-0019_D03
P&ID - LP Flare System	BK-GCS-PEDCO-120-PR-PI-0020_D03
P&ID - Oily Water Sewer	BK-GCS-PEDCO-120-PR-PI-0021_D03
P&ID - Fuel Gas System	BK-GCS-PEDCO-120-PR-PI-0022_D03
P&ID - Diesel Oil System	BK-GCS-PEDCO-120-PR-PI-0023_D03
P&ID - Potable Water System	BK-GCS-PEDCO-120-PR-PI-0024_D03
P&ID - Glycol Sump Drum	BK-GCS-PEDCO-120-PR-PI-0025_D03
P&ID - Fire Water Network	BK-GCS-PEDCO-120-SA-PI-0001_D00
P&ID - Total Flooding System For Extension of Existing Elect. Building	BK-GCS-PEDCO-120-SA-PI-0002_D01

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 شماره صفحه: ۴ از ۱۸
	DATA SHEETS FOR CONTROL/REGULATOR VALVES							
	نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	
D00	0011	DT	IN	120	PEDCO	GCS	BK	شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴

GENERAL NOTES:

- 1-The electrical equipment shall be suitable for hazardous area gas group IIB, temperature class T4.
- 2-Flow direction shall be specified on the valve body.
- 3- All flanges shall be in accordance with ASME B16.5.
- 4- Each valve shall be furnished with name plate as per "specification for control valves" with No. "BK-GNRAL-PEDCO-000-IN-SP-0002 ".
- 5- The following items shall be considered:

- Design standard for globe valves: ips-m-in-160, bs1873

- Design standard for plug valves: ips-m-in-160 api 599

- Valve bonnet and bottom flanges shall be of botled construction with fully retained gaskets

- Trim and seat shall be easily replaceable. seat should be damped or backed up by a seat retainer

- Packing material / packing construction: teflon/chevron type

- Material test certificate

- Dimentional check

- Hydrostatic test

- Performance and mechanical operation test

- Testy certificate including pressure test, visual, dimentional and nude

- Seal leakage test

- Casting examination for valves 6 inches and larger in class 600 and higher as per ansi b 16.34

- Casting quality valves shall ndt(rt tested)

- Mill test certificate for all metallic parts
- 6- Screwed bolt-type limit stops, e.g. on the control valve stem, adjustable over the full length of the stroke shall be applied. the vendor shall set
- 7- 2 Nos. Eye-Bolt and 2 Nos. Jack Bolt for each valve to be supplied by vendor.
- 8 - Environmental condition for field instrumentation of Binak Oilfield shall be considered as per the followings:

• Minimum winter dry bulb: 0.0 °C

• Maximum winter relative humidity: 100

• Buildings heating, design dry bulb: 6.0 °C

• Design winter dry bulb: -1.0 °C

• Design winter relative humidity: 100%

• Maximum summer dry bulb: 50.26°C

• Maximum summer relative humidity: 100%

• Buildings cooling, design dry bulb: 41.0 °C

• Design summer dry bulb: 77.0 °C

• Maximum sun temperature: 85.0 °C

• Maximum Shade Temperature: 52.0 °C

• Minimum Design relative humidity: 0

• Min. average ambient temperature (°C): 8.35 °C

• Max. Average ambient temperature (°C): 35 °C

• Min .Absolut air temperature(°C): 0 °C

• Max .Absolut air temperature(°C): 47.09 °C

Relative Humidity:

• Maximum Range: 92.27%

• Average Relative Humidity 54.7%

• Minimum Relative Humidity: 34.94%

		تنگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 				
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۰۳۸		پرورژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه : 5 از 18			
BK		GCS	PEDCO	120	IN	DT	0011	D00					
DATA SHEETS FOR CONTROL/REGULATOR VALVES													
GENERAL	1	Tag No.				FCV-2101							
	2	Service				Gas Compression Inlet Gas Pipeline (Binak)							
	3	Line No.		P&ID No.		GAS-111-0001-AN07-6"-PT			BK-GCS-PEDCO-120-PR-PI-0002				
	4	Area Classification				Zone2, IIB T4							
	5	Ambient Temperature °C		Min.	Max.	5			50				
	6	Available Air Supply Pressure barg		Min.	Max.	3			8				
	7	Nace Requirement:				Required							
PIPE & LINE	8	Pipe Class		Pipe Sch.		AN07			SCH.80				
	9	Pipe Line Insulation Line Size		Pipe Material		PT / 6"			ASTM A106 Gr.B , B36.10M				
PROCESS CONDITIONS	10	Fluid				Gas							
	11	State				Gas							
	12	Shut Off Pressure delta P (BARG)				9							
	13					Units	Max		Norm.		Min.		
	14	Flow Rate(vapor/water/oil)				kg/h		7220.492		6564.084		1521.413	
	15	Inlet Pressure				bar-g		6.5		6.5		6.5	
	16	Pressure Drop				bar		1		1		1	
	17	Inlet Temperature(max)				°C		46.11		46.11		46.11	
	18	Liquid/ GAS Specific Gravity (GI)				0.230							
	19	Compressibility Factor(Z)(vapour/water/oil)				0.9704							
	20	Viscosity (vapour/water/oil)				cP							
	21	Specific Heats Ratio(Cp/Cv) (vapour/liquid)				1.225							
	22	Vapour Pressure				bar-g							
23	Critical Pressure (liquid)				bar-g								
CALCULATED RESULTS	24	Flow Coefficient Cv				-		109.24		99.28		22.97	
	25	Travel				%		61.1		55.3			
	26	Sound Pressure Level				dBA		MAX 85 dBA(VTC)		MAX 85 dBA(VTC)		MAX 85 dBA(VTC)	
BODY AND TRIM	27	Body size		6" (VTC)		POSITIONER	50	Type		Electrical-Pneumatic(SMART)			
	28	Rated Cv		(NOTE 4 in Below Table)			51	Input Signal		4-20 mA-Hart			
	29	End conn. & Rating		6" # 150			52	Power Supply		24 VDC loop powered			
	30	Body/Bonnet Material		ASTM A216 GR. WCB			53	Electrical Connection		ISO M20 x 1.5			
	31	Body/Bonnet Type		GLOBE / Bolted Flange Bonnet			54	Direct/Reverse Act.		(NOTE 4 in Below Table)			
	32	Flow Direction		(NOTE 4 in Below Table)			55	Lock Last Position		(NOTE 4 in Below Table)			
	33	Packing Material		P.T.F.E.			56	Output Signal		3-15 Psi			
	34	Trim Type		SINGLE SEATED/CAGE		57	I.P./Ex.Protec.	Gauge	IP65 / EExia	Yes			
	35	Characteristic		EQUAL PERCENTAGE (VTC)		58	MFR	Model	(NOTE 4 in Below Table)				
	36	Guiding		(NOTE 4 in Below Table)		SOLENOID VALVE	59	Type	Qty.	N/A	N/A		
	37	Rated Travel		(NOTE 4 in Below Table)			60	MFR	Model	N/A	N/A		
	38	Plug/Disk Material		SS316			61	I.P.	Ex.Protec.	N/A	N/A		
	39	Seat Material		SS316			62	MFR	Model	N/A	N/A		
	40	Cage/Guid Material		SS316		SWITCHES	63	Type	Qty.	N/A	N/A		
	41	Stem Material		SS316			64	Power Supply		N/A			
42	Trim Material		SS316		65		Contacts / Rating		N/A				
43	MFR	Model	(NOTE 4 in Below Table)		66		Switching Position		N/A				
ACTUTOR	44	Size	Eff.Area	(NOTE 4 in Below Table)		AIR SET	67	I.P.	Ex.Protec.	N/A	N/A		
	45	Air Failure	Handwheel	FAIL CLOSE	SIDE MOUNTED		68	MFR	Model	N/A	N/A		
	46	Air Action	Orientation	AIR TO OPEN	VERT. UP		69	Set Pressure		Yes			
	47	Actuator Type		Pneumatic Diaphragm Actuators			70	Filter	Gauge	Yes	Yes		
	48	AIR Press. Min/ Max/ Des. (Barg)		4 (Note 3 in Below Table)		71	Pnumatic Conn.		1/4 " NPTF				
	49	MFR	Model	(NOTE 4 in Below Table)		72	MFR	Model	(NOTE 4 in Below Table)				
PURCHASE					TESTS	73	Hydro. Pressure		API 598				
						74	Leakage Class		ANSI IV				
						75	Performance Test		Required				
						OPTIONS	76	Internal Tubing		Required(with Double Ferrule Compression conn.)			
							77	Tube Material		316 S.S			
					78	Cable Gland		M20, Nickel plated brass					
					79	Cable Entry		M20 X 1.5					
NOTES: 1- All materials shall be in accordance with 'Piping Material Specification' ,Document No.: .BK-GCS-PEDCO-120-PI-SP-0001 2- VTA: Vendor To Advise VTC: Vendor To Confirm 3- Minimum of instrument air pressure supply is 4 barg but 3 barg as minimum working pressure, shall be considered for actuator sizing . 4- Shall be stated by vendor at quotaion stage.													

		تگه‌داشت و افزایش تولید میدان نفتی بینک سطح الارض							 		
		احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک									
		DATA SHEETS FOR CONTROL/REGULATOR VALVES									
شماره پیمان:		پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه : 6 از 18	
۰۵۳ - ۰۷۳ - ۹۰۳۸		BK	GCS	PEDCO	120	IN	DT	0011	D00		
DATA SHEETS FOR CONTROL/REGULATOR VALVES											
GENERAL	1	Tag No.				FCV-2102					
	2	Service				Gas Compression Inlet Gas Pipeline (Golkhari)					
	3	Line No.		P&ID No.		GAS-111-0012-AN07-8"-PT			BK-GCS-PEDCO-120-PR-PI-0003		
	4	Area Classification				Zone2, IIB T4					
	5	Ambient Temperature °C		Min.	Max.	5			50		
	6	Available Air Supply Pressure barg		Min.	Max.	3			8		
	7	Nace Requirement:				Required					
PIPE & LINE	8	Pipe Class		Pipe Sch.		AN07			SCH.60		
	9	Pipe Line Insulation Line Size		Pipe Material		PT / 8"			ASTM A106 Gr.B , B36.10M		
PROCESS CONDITIONS	10	Fluid				Gas					
	11	State				Gas					
	12	Shut Off Pressure delta P (BARG)				9					
	13					Units	Max	Norm.	Min.		
	14	Flow Rate(vapor/water/oil)				kg/h	12395.931	11269.028	3181.682		
	15	Inlet Pressure				bar-g	6.5	6.5	6.5		
	16	Pressure Drop				bar	1	1	1		
	17	Inlet Temperature(max)				°C	32	32	32		
	18	Liquid/ GAS Specific Gravity (GI)				0.214					
	19	Compressibility Factor(Z)(vapour/water/oil)				0.973					
	20	Viscosity (vapour/water/oil)				cP					
	21	Specific Heats Ratio(Cp/Cv) (vapour/liquid)				1.261					
	22	Vapour Pressure				bar-g					
23	Critical Pressure (liquid)				bar-g						
CALCULATED RESULTS	24	Flow Coefficient Cv				-	194.79	176.97	49.77		
	25	Travel				%	63.5	57.4			
	26	Sound Pressure Level				dBA	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)		
BODY AND TRIM	27	Body size		6" (VTC)		POSITIONER	50	Type		Electrical-Pneumatic(SMART)	
	28	Rated Cv		(NOTE 4 in Below Table)			51	Input Signal		4-20 mA-Hart	
	29	End conn. & Rating		6" # 300			52	Power Supply		24 VDC loop powered	
	30	Body/Bonnet Material		ASTM A216 GR. WCB			53	Electrical Connection		ISO M20 x 1.5	
	31	Body/Bonnet Type		GLOBE / Bolted Flange Bonnet			54	Direct/Reverse Act.		(NOTE 4 in Below Table)	
	32	Flow Direction		(NOTE 4 in Below Table)			55	Lock Last Position		(NOTE 4 in Below Table)	
	33	Packing Material		P.T.F.E.			56	Output Signal		3-15 Psi	
	34	Trim Type		SINGLE SEATED/CAGE			57	I.P./Ex.Protec.	Gauge	IP65 / EExia	Yes
	35	Characteristic		EQUAL PERCENTAGE (VTC)		58	MFR	Model	(NOTE 4 in Below Table)		
	36	Guiding		(NOTE 4 in Below Table)		SOLENOID VALVE	59	Type	Qty.	N/A	N/A
	37	Rated Travel		(NOTE 4 in Below Table)			60	MFR	Model	N/A	N/A
	38	Plug/Disk Material		SS316			61	I.P.	Ex.Protec.	N/A	N/A
	39	Seat Material		SS316			62	MFR	Model	N/A	N/A
	40	Cage/Guid Material		SS316		SWITCHES	63	Type	Qty.	N/A	N/A
	41	Stem Material		SS316			64	Power Supply		N/A	
	42	Trim Material		SS316			65	Contacts / Rating		N/A	
43	MFR	Model	(NOTE 4 in Below Table)		66		Switching Position		N/A		
ACTUTOR	44	Size	Eff.Area	(NOTE 4 in Below Table)		AIR SET	67	I.P.	Ex.Protec.	N/A	N/A
	45	Air Failure	Handwheel	FAIL CLOSE	SIDE MOUNTED		68	MFR	Model	N/A	N/A
	46	Air Action	Orientation	AIR TO OPEN	VERT. UP		69	Set Pressure		Yes	
	47	Actuator Type		Pneumatic Diaphragm Actuators			70	Filter	Gauge	Yes	Yes
	48	AIR Press. Min/ Max/ Des. (Barg)		4 (Note 3 in Below Table)	7.5	8.5	71	Pnumatic Conn.		1/4 " NPTF	
	49	MFR	Model	(NOTE 4 in Below Table)		72	MFR	Model	(NOTE 4 in Below Table)		
						TESTS	73	Hydro. Pressure		API 598	
							74	Leakage Class		ANSI IV	
							75	Performance Test		Required	
						OPTIONS	76	Internal Tubing		Required(with Double Ferrule Compression conn.)	
							77	Tube Material		316 S.S	
PURCHASE	Manufacturer		(NOTE 4 in Below Table)		78	Cable Gland		M20, Nickel plated brass			
	Model		(NOTE 4 in Below Table)		79	Cable Entry		M20 X 1.5			
NOTES:											
1- All materials shall be in accordance with 'Piping Material Specification' ,Document No.: .BK-GCS-PEDCO-120-PI-SP-0001											
2- VTA: Vendor To Advise VTC: Vendor To Confirm											
3- Minimum of instrument air pressure supply is 4 barg but 3 barg as minimum working pressure, shall be considered for actuator sizing .											
4- Shall be stated by vendor at quotaion stage.											

		تگه‌داشت و افزایش تولید میدان نفتی بینک سطح الارض							 			
		احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک										
DATA SHEETS FOR CONTROL/REGULATOR VALVES												
شماره صفحه : 7 از 18		نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه	شماره پیمان:		
		D00	0011	DT	IN	120	PEDCO	GCS	BK	۰۵۳ - ۰۷۳ - ۹۰۳۸		
DATA SHEETS FOR CONTROL/REGULATOR VALVES												
GENERAL	1	Tag No.				FCV-2111						
	2	Service				Slug Catcher System						
	3	Line No.		P&ID No.		CDH-112-0014-CN05-3"-PT		BK-GCS-PEDCO-120-PR-PI-0004 (2 of 2)				
	4	Area Classification				Zone1, IIB T4						
	5	Ambient Temperature °C		Min.	Max.	5		50				
	6	Available Air Supply Pressure barg		Min.	Max.	3		8				
	7	Nace Requirement:				Required						
PIPE & LINE	8	Pipe Class		Pipe Sch.		CN05		SCH.40				
	9	Pipe Line Insulation Line Size		Pipe Material		PT / 3"		ASTM A106 Gr.B , B36.10M				
PROCESS CONDITIONS	10	Fluid				Gas						
	11	State				Gas						
	12	Shut Off Pressure delta P (BARG)				5.5						
	13					Units	Max	Norm.	Min.			
	14	Flow Rate(vapor/water/oil)				kg/h	7854.443	7140.403	2142.121			
	15	Inlet Pressure				bar-g	19	19	19			
	16	Pressure Drop				bar	1	1	1			
	17	Inlet Temperature(max)				°C	24.22	24.22	24.22			
	18	Liquid Specific Gravity (GI)				0.716						
	19	Compressibility Factor(Z)(vapour/water/oil)				-						
	20	Viscosity (vapour/water/oil)				cP	0.63					
	21	Specific Heats Ratio(Cp/Cv) (vapour/liquid)				1.224						
	22	Vapour Pressure				bar-g	1.788					
	23	Critical Pressure (liquid)				bar-g	75.73					
CALCULATED RESULTS	24	Flow Coefficient Cv				-	10.75	9.77	2.93			
	25	Travel				%	55.7	50.3				
	26	Sound Pressure Level				dBA	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)			
BODY AND TRIM	27	Body size		1.5" (VTC)		POSITIONER	50	Type		Electrical-Pneumatic(SMART)		
	28	Rated Cv		(NOTE 4 in Below Table)			51	Input Signal		4-20 mA-Hart		
	29	End conn. & Rating		1.5" # 300			52	Power Supply		24 VDC loop powered		
	30	Body/Bonnet Material		ASTM A216 GR. WCB			53	Electrical Connection		ISO M20 x 1.5		
	31	Body/Bonnet Type		GLOBE / Bolted Flange Bonnet			54	Direct/Reverse Act.		(NOTE 4 in Below Table)		
	32	Flow Direction		(NOTE 4 in Below Table)			55	Lock Last Position		(NOTE 4 in Below Table)		
	33	Packing Material		P.T.F.E.			56	Output Signal		3-15 Psi		
	34	Trim Type		SINGLE SEATED/CAGE		57	I.P./Ex.Protec.	Gauge	IP65 / EExia	Yes		
	35	Characteristic		EQUAL PERCENTAGE (VTC)		58	MFR	Model	(NOTE 4 in Below Table)			
	36	Guiding		(NOTE 4 in Below Table)		SOLENOID VALVE	59	Type	Qty.	N/A	N/A	
	37	Rated Travel		(NOTE 4 in Below Table)			60	MFR	Model	N/A	N/A	
	38	Plug/Disk Material		SS316			61	I.P.	Ex.Protec.	N/A	N/A	
	39	Seat Material		SS316			62	MFR	Model	N/A	N/A	
	40	Cage/Guid Material		SS316		SWITCHES	63	Type	Qty.	N/A	N/A	
	41	Stem Material		SS316			64	Power Supply		N/A		
42	Trim Material		SS316		65		Contacts / Rating		N/A			
43	MFR	Model	(NOTE 4 in Below Table)		66		Switching Position		N/A			
ACTUTOR	44	Size	Eff.Area	(NOTE 4 in Below Table)		67	I.P.	Ex.Protec.	N/A	N/A		
	45	Air Failure	Handwheel	FAIL CLOSE	SIDE MOUNTED	68	MFR	Model	N/A	N/A		
	46	Air Action	Orientation	AIR TO OPEN	VERT. UP	AIR SET	69	Set Pressure		Yes		
	47	Actuator Type		Pneumatic Diaphragm Actuators			70	Filter	Gauge	Yes	Yes	
	48	AIR Press. Min/ Max/ Des. (Barg)		4 (Note 3 in Below Table)	7.5		8.5	71	Pnumatic Conn.		1/4 " NPTF	
	49	MFR	Model	(NOTE 4 in Below Table)			72	MFR	Model	(NOTE 4 in Below Table)		
						TESTS	73	Hydro. Pressure		API 598		
							74	Leakage Class		ANSI IV		
							75	Performance Test		Required		
							OPTIONS	76	Internal Tubing		Required(with Double Ferrule Compression conn.)	
						77		Tube Material		316 S.S		
78	Cable Gland		M20, Nickel plated brass									
PURCHASE	Manufacturer		(NOTE 4 in Below Table)		79	Cable Entry		M20 X 1.5				
	Model		(NOTE 4 in Below Table)									
NOTES:												
1- All materials shall be in accordance with 'Piping Material Specification' ,Document No.: .BK-GCS-PEDCO-120-PI-SP-0001												
2- VTA: Vendor To Advise VTC: Vendor To Confirm												
3- Minimum of instrument air pressure supply is 4 barg but 3 barg as minimum working pressure, shall be considered for actuator sizing .												
4- Shall be stated by vendor at quotaion stage.												

		تنگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک										
		DATA SHEETS FOR CONTROL/REGULATOR VALVES										
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۰۳۸		پرورژه BK	بسته کاری GCS	صادرکننده PEDCO	تسهیلات 120	رشته IN	نوع مدرک DT	سریال 0011	نسخه D00	شماره صفحه : 8 از 18		
DATA SHEETS FOR CONTROL/REGULATOR VALVES												
GENERAL	1	Tag No.				LCV-2114						
	2	Service				Gas Compression Inlet Knock Out Drum to Closed Drain						
	3	Line No.		P&ID No.		CDH-111-0019-AS00-2"-NP			BK-GCS-PEDCO-120-PR-PI-0005			
	4	Area Classification				Zone2, IIB T4						
	5	Ambient Temperature °C		Min.	Max.	5			50			
	6	Available Air Supply Pressure barg		Min.	Max.	3			8			
	7	Nace Requirement:				NOT Required						
PIPE & LINE	8	Pipe Class		Pipe Sch.		AS00			SCH.10S			
	9	Pipe Line Insulation Line Size		Pipe Material		NP / 2"			ASTM A312 TP 316L , B36.19M			
PROCESS CONDITIONS	10	Fluid				Gas						
	11	State				Gas						
	12	Shut Off Pressure delta P				14.5						
	13					Units	Max	Norm.	Min.			
	14	Flow Rate(vapor/water/oil)				kg/h	XXX	XXX	XXX			
	15	Inlet Pressure				bar-g	XXX	XXX	XXX			
	16	Pressure Drop				bar	XXX	XXX	4.58			
	17	Inlet Temperature(max)				°C	XXX	XXX	XXX			
	18	Liquid Specific Gravity (G)				XXX						
	19	Compressibility Factor(Z)(vapour/water/oil)				-						
	20	Viscosity (vapour/water/oil)				cP						
	21	Specific Heats Ratio(Cp/Cv) (vapour/liquid)				-						
	22	Vapour Pressure				bar-a						
23	Critical Pressure (liquid)				bar-a							
CALCULATED RESULTS	24	Flow Coefficient Cv				-	XXX	XXX	XXX			
	25	Travel				%	85.9	XXX	XXX			
	26	Sound Pressure Level				dBA	MAX 85 dBA(VTC)		MAX 85 dBA(VTC)		MAX 85 dBA(VTC)	
BODY AND TRIM	27	Body size		X" (VTC)		POSITIONER	50	Type		Electrical-Pneumatic(SMART)		
	28	Rated Cv		(NOTE 4 in Below Table)			51	Input Signal		4-20 mA-Hart		
	29	End conn. & Rating		X" # 300			52	Power Supply		24 VDC loop powered		
	30	Body/Bonnet Material		A351 GR. CF3M			53	Electrical Connection		ISO M20 x 1.5		
	31	Body/Bonnet Type		GLOBE / Bolted Flange Bonnet			54	Direct/Reverse Act.		(NOTE 4 in Below Table)		
	32	Flow Direction		(NOTE 4 in Below Table)			55	Lock Last Position		(NOTE 4 in Below Table)		
	33	Packing Material		P.T.F.E.			56	Output Signal		3-15 Psi		
	34	Trim Type		SINGLE SEATED/CAGE		57	I.P./Ex.Protec.	Gauge	IP65 / EExia	Yes		
	35	Characteristic		EQUAL PERCENTAGE (VTC)		58	MFR	Model	(NOTE 4 in Below Table)			
	36	Guiding		(NOTE 4 in Below Table)		SOLENOID VALVE	59	Type	Qty.	N/A	N/A	
	37	Rated Travel		(NOTE 4 in Below Table)			60	MFR	Model	N/A	N/A	
	38	Plug/Disk Material		SS316			61	I.P.	Ex.Protec.	N/A	N/A	
	39	Seat Material		SS316			62	MFR	Model	N/A	N/A	
	40	Cage/Guid Material		SS316		SWITCHES	63	Type	Qty.	N/A	N/A	
	41	Stem Material		SS316			64	Power Supply		N/A		
	42	Trim Material		SS316			65	Contacts / Rating		N/A		
	43	MFR	Model	(NOTE 4 in Below Table)			66	Switching Position		N/A		
ACTUTOR	44	Size	Eff.Area	(NOTE 4 in Below Table)		AIR SET	67	I.P.	Ex.Protec.	N/A	N/A	
	45	Air Failure	Handwheel	FAIL CLOSE	SIDE MOUNTED		68	MFR	Model	N/A	N/A	
	46	Air Action	Orientation	AIR TO OPEN	VERT. UP		69	Set Pressure		Yes		
	47	Actuator Type		Pneumatic Diaphragm Actuators			70	Filter	Gauge	Yes	Yes	
	48	AIR Press. Min/ Max/ Des. (Barg)		4 (Note 3 in Below Table) 7.5 8.5		71	Pnumatic Conn.		1/4 " NPTF			
	49	MFR	Model	(NOTE 4 in Below Table)		72	MFR	Model	(NOTE 4 in Below Table)			
PURCHASE	Manufacturer		(NOTE 4 in Below Table)		TESTS	73	Hydro. Pressure		API 598			
	Model		(NOTE 4 in Below Table)			74	Leakage Class		ANSI IV			
						75	Performance Test		Required			
						OPTIONS	76	Internal Tubing		Required(with Double Ferrule Compression conn.)		
					77		Tube Material		316 S.S			
				78	Cable Gland		M20, Nickel plated brass					
						79	Cable Entry		M20 X 1.5			
NOTES:												
1- All materials shall be in accordance with 'Piping Material Specification' ,Document No.: .BK-GCS-PEDCO-120-PI-SP-0001												
2- VTA: Vendor To Advise VTC: Vendor To Confirm												
3- Minimum of instrument air pressure supply is 4 barg but 3 barg as minimum working pressure, shall be considered for actuator sizing .												
4- Shall be stated by vendor at quotaion stage.												

		تگداشت و افزایش تولید میدان نفتی بینک سطح الارض							 		
		احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک									
DATA SHEETS FOR CONTROL/REGULATOR VALVES											
شماره صفحه : 9 از 18		نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه	شماره پیمان:	
		D00	0011	DT	IN	120	PEDCO	GCS	BK	۰۵۳ - ۰۷۳ - ۹۰۳۸	
DATA SHEETS FOR CONTROL/REGULATOR VALVES											
GENERAL	1	Tag No.				PCV-2123A					
	2	Service				1st Stage Gas Compression Suction Drums (C-2101A)					
	3	Line No.			P&ID No.		GAS-111-0045A-FS00-6"-NP			BK-GCS-PEDCO-120-PR-PI-0006 (1 of 3)	
	4	Area Classification				Zone 2, IIB T4					
	5	Ambient Temperature °C		Min.	Max.	5			50		
	6	Available Air Supply Pressure barg		Min.	Max.	3			8		
	7	Nace Requirement:				Not Required					
PIPE & LINE	8	Pipe Class			Pipe Sch.		FS00			SCH.40S	
	9	Pipe Line Insulation Line Size			Pipe Material		NP / 6"			ASTM A312 TP 316L , B36.19M	
PROCESS CONDITIONS	10	Fluid				Gas					
	11	State				Gas					
	12	Shut Off Pressure delta P				14.5					
	13					Units	Max	Norm.	Min.		
	14	Flow Rate(vapor/water/oil)				kg/h	XXX	XXX	XXX		
	15	Inlet Pressure				bar-g	XXX	XXX	XXX		
	16	Pressure Drop				bar	XXX	XXX	4.58		
	17	Inlet Temperature(max)				°C	XXX	XXX	XXX		
	18	Liquid Specific Gravity (G)				XXX					
	19	Compressibility Factor(Z)(vapour/water/oil)				XXX					
	20	Viscosity (vapour/water/oil)				cP					
	21	Specific Heats Ratio(Cp/Cv) (vapour/liquid)				XXX					
	22	Vapour Pressure				bar-a					
23	Critical Pressure (liquid)				bar-a						
CALCULATED RESULTS	24	Flow Coefficient Cv				-	XXX	XXX	XXX		
	25	Travel				%	85.9	XXX	XXX		
	26	Sound Pressure Level				dBA	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)		
BODY AND TRIM	27	Body size		X" (VTC)		POSITIONER	50	Type		Electrical-Pneumatic(SMART)	
	28	Rated Cv		(NOTE 4 in Below Table)			51	Input Signal		4-20 mA-Hart	
	29	End conn. & Rating		X" # 600			52	Power Supply		24 VDC loop powered	
	30	Body/Bonnet Material		A351 GR. CF3M			53	Electrical Connection		ISO M20 x 1.5	
	31	Body/Bonnet Type		GLOBE / Bolted Flange Bonnet			54	Direct/Reverse Act.		(NOTE 4 in Below Table)	
	32	Flow Direction		(NOTE 4 in Below Table)			55	Lock Last Position		(NOTE 4 in Below Table)	
	33	Packing Material		P.T.F.E.			56	Output Signal		3-15 Psi	
	34	Trim Type		SINGLE SEATED/CAGE		57	I.P./Ex.Protec.	Gauge	IP65 / EExia	Yes	
	35	Characteristic		EQUAL PERCENTAGE (VTC)		58	MFR	Model	(NOTE 4 in Below Table)		
	36	Guiding		(NOTE 4 in Below Table)		SOLENOID VALVE	59	Type	Qty.	N/A	N/A
	37	Rated Travel		(NOTE 4 in Below Table)			60	MFR	Model	N/A	N/A
	38	Plug/Disk Material		SS316			61	I.P.	Ex.Protec.	N/A	N/A
	39	Seat Material		SS316			62	MFR	Model	N/A	N/A
	40	Cage/Guid Material		SS316		SWITCHES	63	Type	Qty.	N/A	N/A
	41	Stem Material		SS316			64	Power Supply		N/A	
	42	Trim Material		SS316			65	Contacts / Rating		N/A	
	43	MFR	Model	(NOTE 4 in Below Table)			66	Switching Position		N/A	
ACTUTOR	44	Size	Eff.Area	(NOTE 4 in Below Table)		AIR SET	67	I.P.	Ex.Protec.	N/A	N/A
	45	Air Failure	Handwheel	FAIL CLOSE	SIDE MOUNTED		68	MFR	Model	N/A	N/A
	46	Air Action	Orientation	AIR TO OPEN	VERT. UP		69	Set Pressure		Yes	
	47	Actuator Type		Pneumatic Diaphragm Actuators			70	Filter	Gauge	Yes	Yes
	48	AIR Press. Min/ Max/ Des. (Barg)		4 (Note 3 in Below Table) 7.5 8.5		TESTS	71	Pnumatic Conn.		1/4 " NPTF	
49	MFR	Model	(NOTE 4 in Below Table)		72		MFR	Model	(NOTE 4 in Below Table)		
					73		Hydro. Pressure		API 598		
					OPTIONS	74	Leakage Class		ANSI IV		
						75	Performance Test		Required		
						76	Internal Tubing		Required(with Double Ferrule Compression conn.)		
						77	Tube Material		316 S.S		
						78	Cable Gland		M20, Nickel plated brass		
PURCHASE	Manufacturer		(NOTE 4 in Below Table)			79	Cable Entry		M20 X 1.5		
	Model		(NOTE 4 in Below Table)								
NOTES:											
1- All materials shall be in accordance with 'Piping Material Specification' ,Document No.: .BK-GCS-PEDCO-120-PI-SP-0001											
2- VTA: Vendor To Advise VTC: Vendor To Confirm											
3- Minimum of instrument air pressure supply is 4 barg but 3 barg as minimum working pressure, shall be considered for actuator sizing .											
4- Shall be stated by vendor at quotaion stage.											

		تنگهداشت و افزایش تولید میدان نفتی بینک سطح الارض								 		
		احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک										
DATA SHEETS FOR CONTROL/REGULATOR VALVES												
شماره صفحه : 10 از 18		نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه	شماره پیمان:		
		D00	0011	DT	IN	120	PEDCO	GCS	BK	۰۵۳ - ۰۷۳ - ۹۰۳۸		
DATA SHEETS FOR CONTROL/REGULATOR VALVES												
GENERAL	1	Tag No.				PCV-2123B						
	2	Service				1st Stage Gas Compression Suction Drums (C-2101B)						
	3	Line No.			P&ID No.		GAS-111-0045B-FS00-6"-NP			BK-GCS-PEDCO-120-PR-PI-0006 (2 of 3)		
	4	Area Classification				Zone2, IIB T4						
	5	Ambient Temperature °C		Min.	Max.	5		50				
	6	Available Air Supply Pressure barg		Min.	Max.	3		8				
	7	Nace Requirement:				Not Required						
PIPE & LINE	8	Pipe Class			Pipe Sch.		FS00		SCH.40S			
	9	Pipe Line Insulation Line Size			Pipe Material		NP / 6"		ASTM A312 TP 316L , B36.19M			
PROCESS CONDITIONS	10	Fluid				Gas						
	11	State				Gas						
	12	Shut Off Pressure delta P				14.5						
	13					Units	Max	Norm.	Min.			
	14	Flow Rate(vapor/water/oil)				kg/h	XXX	XXX	XXX			
	15	Inlet Pressure				bar-g	XXX	XXX	XXX			
	16	Pressure Drop				bar	XXX	XXX	4.58			
	17	Inlet Temperature(max)				°C	XXX	XXX	XXX			
	18	Liquid Specific Gravity (G)				XXX						
	19	Compressibility Factor(Z)(vapour/water/oil)				XXX						
	20	Viscosity (vapour/water/oil)				cP						
	21	Specific Heats Ratio(Cp/Cv) (vapour/liquid)				XXX						
	22	Vapour Pressure				bar-a						
23	Critical Pressure (liquid)				bar-a							
CALCULATED RESULTS	24	Flow Coefficient Cv				-	XXX	XXX	XXX			
	25	Travel				%	85.9	XXX	XXX			
	26	Sound Pressure Level				dBA	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)			
BODY AND TRIM	27	Body size		X" (VTC)		POSITIONER	50	Type		Electrical-Pneumatic(SMART)		
	28	Rated Cv		(NOTE 4 in Below Table)			51	Input Signal		4-20 mA-Hart		
	29	End conn. & Rating		X" # 600			52	Power Supply		24 VDC loop powered		
	30	Body/Bonnet Material		A351 GR. CF3M			53	Electrical Connection		ISO M20 x 1.5		
	31	Body/Bonnet Type		GLOBE / Bolted Flange Bonnet			54	Direct/Reverse Act.		(NOTE 4 in Below Table)		
	32	Flow Direction		(NOTE 4 in Below Table)			55	Lock Last Position		(NOTE 4 in Below Table)		
	33	Packing Material		P.T.F.E.			56	Output Signal		3-15 Psi		
	34	Trim Type		SINGLE SEATED/CAGE		57	I.P./Ex.Protec.	Gauge	IP65 / EExia	Yes		
	35	Characteristic		EQUAL PERCENTAGE (VTC)		58	MFR	Model	(NOTE 4 in Below Table)			
	36	Guiding		(NOTE 4 in Below Table)		SOLENOID VALVE	59	Type	Qty.	N/A	N/A	
	37	Rated Travel		(NOTE 4 in Below Table)			60	MFR	Model	N/A	N/A	
	38	Plug/Disk Material		SS316			61	I.P.	Ex.Protec.	N/A	N/A	
	39	Seat Material		SS316			62	MFR	Model	N/A	N/A	
	40	Cage/Guid Material		SS316		SWITCHES	63	Type	Qty.	N/A	N/A	
	41	Stem Material		SS316			64	Power Supply		N/A		
	42	Trim Material		SS316			65	Contacts / Rating		N/A		
43	MFR	Model	(NOTE 4 in Below Table)		66		Switching Position		N/A			
ACTUTOR	44	Size	Eff.Area	(NOTE 4 in Below Table)		AIR SET	67	I.P.	Ex.Protec.	N/A	N/A	
	45	Air Failure	Handwheel	FAIL CLOSE	SIDE MOUNTED		68	MFR	Model	N/A	N/A	
	46	Air Action	Orientation	AIR TO OPEN	VERT. UP		69	Set Pressure		Yes		
	47	Actuator Type		Pneumatic Diaphragm Actuators			70	Filter	Gauge	Yes	Yes	
	48	AIR Press. Min/ Max/ Des. (Barg)		4 (Note 3 in Below Table) 7.5 8.5		71	Pnumatic Conn.		1/4 " NPTF			
	49	MFR	Model	(NOTE 4 in Below Table)		72	MFR	Model	(NOTE 4 in Below Table)			
						TESTS	73	Hydro. Pressure		API 598		
							74	Leakage Class		ANSI IV		
							75	Performance Test		Required		
							OPTIONS	76	Internal Tubing		Required(with Double Ferrule Compression conn.)	
77	Tube Material		316 S.S									
78	Cable Gland		M20, Nickel plated brass									
PURCHASE	Manufacturer		(NOTE 4 in Below Table)					79	Cable Entry		M20 X 1.5	
	Model		(NOTE 4 in Below Table)									
NOTES:												
1- All materials shall be in accordance with 'Piping Material Specification' ,Document No.: .BK-GCS-PEDCO-120-PI-SP-0001												
2- VTA: Vendor To Advise VTC: Vendor To Confirm												
3- Minimum of instrument air pressure supply is 4 barg but 3 barg as minimum working pressure, shall be considered for actuator sizing .												
4- Shall be stated by vendor at quotaion stage.												

		تنگهداشت و افزایش تولید میدان نفتی بینک سطح الارض							 		
		احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک									
		DATA SHEETS FOR CONTROL/REGULATOR VALVES									
شماره صفحه : 11 از 18		نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه	شماره پیمان:	
		D00	0011	DT	IN	120	PEDCO	GCS	BK	۰۵۳ - ۰۷۳ - ۹۰۳۸	
DATA SHEETS FOR CONTROL/REGULATOR VALVES											
GENERAL	1	Tag No.				PCV-2123C					
	2	Service				1st Stage Gas Compression Suction Drums (C-2101C)					
	3	Line No.			P&ID No.		GAS-111-0045C-FS00-6"-NP			BK-GCS-PEDCO-120-PR-PI-0006 (3 of 3)	
	4	Area Classification				Zone 2, IIB T4					
	5	Ambient Temperature °C			Min.	Max.	5			50	
	6	Available Air Supply Pressure barg			Min.	Max.	3			8	
	7	Nace Requirement:				Not Required					
PIPE & LINE	8	Pipe Class			Pipe Sch.		FS00			SCH.40S	
	9	Pipe Line Insulation Line Size			Pipe Material		NP / 6"			ASTM A312 TP 316L , B36.19M	
PROCESS CONDITIONS	10	Fluid				Gas					
	11	State				Gas					
	12	Shut Off Pressure delta P				14.5					
	13					Units	Max	Norm.	Min.		
	14	Flow Rate(vapor/water/oil)				kg/h	XXX	XXX	XXX		
	15	Inlet Pressure				bar-g	XXX	XXX	XXX		
	16	Pressure Drop				bar	XXX	XXX	4.58		
	17	Inlet Temperature(max)				°C	XXX	XXX	XXX		
	18	Liquid Specific Gravity (G)				XXX					
	19	Compressibility Factor(Z)(vapour/water/oil)				-					
	20	Viscosity (vapour/water/oil)				cP					
	21	Specific Heats Ratio(Cp/Cv) (vapour/liquid)				-					
	22	Vapour Pressure				bar-a					
23	Critical Pressure (liquid)				bar-a						
CALCULATED RESULTS	24	Flow Coefficient Cv				-	XXX	XXX	XXX		
	25	Travel				%	85.9	XXX	XXX		
	26	Sound Pressure Level				dBA	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)		
BODY AND TRIM	27	Body size		X" (VTC)		POSITIONER	50	Type		Electrical-Pneumatic(SMART)	
	28	Rated Cv		(NOTE 4 in Below Table)			51	Input Signal		4-20 mA-Hart	
	29	End conn. & Rating		X" # 600			52	Power Supply		24 VDC loop powered	
	30	Body/Bonnet Material		A351 GR. CF3M			53	Electrical Connection		ISO M20 x 1.5	
	31	Body/Bonnet Type		GLOBE / Bolted Flange Bonnet			54	Direct/Reverse Act.		(NOTE 4 in Below Table)	
	32	Flow Direction		(NOTE 4 in Below Table)			55	Lock Last Position		(NOTE 4 in Below Table)	
	33	Packing Material		P.T.F.E.			56	Output Signal		3-15 Psi	
	34	Trim Type		SINGLE SEATED/CAGE			57	I.P./Ex.Protec.	Gauge	IP65 / EExia	Yes
	35	Characteristic		EQUAL PERCENTAGE (VTC)		58	MFR	Model	(NOTE 4 in Below Table)		
	36	Guiding		(NOTE 4 in Below Table)		SOLENOID VALVE	59	Type	Qty.	N/A	N/A
	37	Rated Travel		(NOTE 4 in Below Table)			60	MFR	Model	N/A	N/A
	38	Plug/Disk Material		SS316			61	I.P.	Ex.Protec.	N/A	N/A
	39	Seat Material		SS316			62	MFR	Model	N/A	N/A
	40	Cage/Guid Material		SS316		SWITCHES	63	Type	Qty.	N/A	N/A
	41	Stem Material		SS316			64	Power Supply		N/A	
	42	Trim Material		SS316			65	Contacts / Rating		N/A	
43	MFR	Model	(NOTE 4 in Below Table)		66		Switching Position		N/A		
ACTUTOR	44	Size	Eff.Area	(NOTE 4 in Below Table)		AIR SET	67	I.P.	Ex.Protec.	N/A	N/A
	45	Air Failure	Handwheel	FAIL CLOSE	SIDE MOUNTED		68	MFR	Model	N/A	N/A
	46	Air Action	Orientation	AIR TO OPEN	VERT. UP		69	Set Pressure		Yes	
	47	Actuator Type		Pneumatic Diaphragm Actuators			70	Filter	Gauge	Yes	Yes
	48	AIR Press. Min/ Max/ Des. (Barg)		4 (Note 3 in Below Table)	7.5	8.5	71	Pnumatic Conn.		1/4 " NPTF	
	49	MFR	Model	(NOTE 4 in Below Table)		72	MFR	Model	(NOTE 4 in Below Table)		
						TESTS	73	Hydro. Pressure		API 598	
							74	Leakage Class		ANSI IV	
							75	Performance Test		Required	
							OPTIONS	76	Internal Tubing		Required(with Double Ferrule Compression conn.)
77	Tube Material		316 S.S								
78	Cable Gland		M20, Nickel plated brass								
79	Cable Entry		M20 X 1.5								
PURCHASE	Manufacturer		(NOTE 4 in Below Table)								
	Model		(NOTE 4 in Below Table)								
NOTES:											
1- All materials shall be in accordance with 'Piping Material Specification' ,Document No.: .BK-GCS-PEDCO-120-PI-SP-0001											
2- VTA: Vendor To Advise VTC: Vendor To Confirm											
3- Minimum of instrument air pressure supply is 4 barg but 3 barg as minimum working pressure, shall be considered for actuator sizing .											
4- Shall be stated by vendor at quotaion stage.											

		تکهداشت و افزایش تولید میدان نفتی بینک سطح الارض													
		احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک													
		DATA SHEETS FOR CONTROL/REGULATOR VALVES													
شماره پیمان:		پرورژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه : 12 از 18					
۰۵۳ - ۰۷۳ - ۹۰۳۸		BK	GCS	PEDCO	120	IN	DT	0011	D00						
DATA SHEETS FOR CONTROL/REGULATOR VALVES															
GENERAL	1	Tag No.					PCV-2135A								
	2	Service					2nd Stage Gas Compression Air Coolers (C-2102A)								
	3	Line No.			P&ID No.		GAS-111-0057A-FS00-4"-NP				BK-GCS-PEDCO-120-PR-PI-0011 (1 of 3)				
	4	Area Classification					Zone2, IIB T4								
	5	Ambient Temperature °C			Min.	Max.	5				50				
	6	Available Air Supply Pressure barg			Min.	Max.	3				8				
	7	Nace Requirement:					Not Required								
PIPE & LINE	8	Pipe Class			Pipe Sch.		FS00				SCH.40S				
	9	Pipe Line Insulation Line Size			Pipe Material		NP / 4"				ASTM A312 TP 316L , B36.19M				
PROCESS CONDITIONS	10	Fluid					Gas								
	11	State					Gas								
	12	Shut Off Pressure delta P (BARG)					62								
	13						Units	Max	Norm.	Min.					
	14	Flow Rate(vapor/water/oil)					kg/h	9530.038	8663.671	2275.632					
	15	Inlet Pressure					bar-g	54.1	54.1	54.1					
	16	Pressure Drop					bar	52.6	52.6	52.6					
	17	Inlet Temperature(max)					°C	60	60	60					
	18	Liquid Specific Gravity (GI)					0.059								
	19	Compressibility Factor(Z)(vapour/water/oil)					-	0.82/0.036							
	20	Viscosity (vapour/water/oil)					cP	0.014							
	21	Specific Heats Ratio(Cp/Cv) (vapour/liquid)					-	1.457							
	22	Vapour Pressure					bar-g	168.1							
23	Critical Pressure (liquid)					bar-g	93.65								
CALCULATED RESULTS	24	Flow Coefficient Cv					-	10.12	9.17	2.36					
	25	Travel					%	60.5	54.5						
	26	Sound Pressure Level					dBA	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)					
BODY AND TRIM	27	Body size		2" (VTC)			POSITIONER	50	Type		Electrical-Pneumatic(SMART)				
	28	Rated Cv		(NOTE 4 in Below Table)				51	Input Signal		4-20 mA-Hart				
	29	End conn. & Rating		2" # 600				52	Power Supply		24 VDC loop powered				
	30	Body/Bonnet Material		A351 GR. CF3M				53	Electrical Connection		ISO M20 x 1.5				
	31	Body/Bonnet Type		GLOBE / Bolted Flange Bonnet				54	Direct/Reverse Act.		(NOTE 4 in Below Table)				
	32	Flow Direction		(NOTE 4 in Below Table)				55	Lock Last Position		(NOTE 4 in Below Table)				
	33	Packing Material		P.T.F.E.				56	Output Signal		3-15 Psi				
	34	Trim Type		SINGLE SEATED/CAGE			57	I.P./Ex.Protec.	Gauge	IP65 / EExia	Yes				
	35	Characteristic		EQUAL PERCENTAGE (VTC)			58	MFR	Model	(NOTE 4 in Below Table)					
	36	Guiding		(NOTE 4 in Below Table)			SOLENOID VALVE	59	Type	Qty.	N/A	N/A			
	37	Rated Travel		(NOTE 4 in Below Table)				60	MFR	Model	N/A	N/A			
	38	Plug/Disk Material		SS316				61	I.P.	Ex.Protec.	N/A	N/A			
	39	Seat Material		SS316				62	MFR	Model	N/A	N/A			
	40	Cage/Guid Material		SS316			SWITCHES	63	Type	Qty.	N/A	N/A			
	41	Stem Material		SS316				64	Power Supply		N/A				
	42	Trim Material		SS316				65	Contacts / Rating		N/A				
	43	MFR	Model	(NOTE 4 in Below Table)				66	Switching Position		N/A				
ACTUTOR	44	Size	Eff.Area	(NOTE 4 in Below Table)			AIR SET	67	I.P.	Ex.Protec.	N/A	N/A			
	45	Air Failure	Handwheel	FAIL CLOSE	SIDE MOUNTED			68	MFR	Model	N/A	N/A			
	46	Air Action	Orientation	AIR TO OPEN	VERT. UP			69	Set Pressure		Yes				
	47	Actuator Type		Pneumatic Diaphragm Actuators				70	Filter	Gauge	Yes	Yes			
	48	AIR Press. Min/ Max/ Des. (Barg)		4 (Note 3 in Below Table) 7.5 8.5			71	Pnumatic Conn.		1/4 " NPTF					
	49	MFR	Model	(NOTE 4 in Below Table)			72	MFR	Model	(NOTE 4 in Below Table)					
							TESTS	73	Hydro. Pressure		API 598				
								74	Leakage Class		ANSI IV				
								75	Performance Test		Required				
								OPTIONS	76	Internal Tubing		Required(with Double Ferrule Compression conn.)			
									77	Tube Material		316 S.S			
78	Cable Gland		M20, Nickel plated brass												
PURCHASE	Manufacturer		(NOTE 4 in Below Table)					79	Cable Entry		M20 X 1.5				
	Model		(NOTE 4 in Below Table)												
NOTES:															
1- All materials shall be in accordance with 'Piping Material Specification' ,Document No.: .BK-GCS-PEDCO-120-PI-SP-0001															
2- VTA: Vendor To Advise VTC: Vendor To Confirm															
3- Minimum of instrument air pressure supply is 4 barg but 3 barg as minimum working pressure, shall be considered for actuator sizing .															
4- Shall be stated by vendor at quotaion stage.															

		تنگهداشت و افزایش تولید میدان نفتی بینک سطح الارض							 			
		احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک										
DATA SHEETS FOR CONTROL/REGULATOR VALVES												
شماره صفحه : 13 از 18		نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه	شماره پیمان:	۰۵۳ - ۰۷۳ - ۹۰۳۸	
		D00	0011	DT	IN	120	PEDCO	GCS	BK			
DATA SHEETS FOR CONTROL/REGULATOR VALVES												
GENERAL	1	Tag No.				PCV-2135B						
	2	Service				2nd Stage Gas Compression Air Coolers (C-2102B)						
	3	Line No.			P&ID No.			GAS-111-0057B-FS00-4"-NP			BK-GCS-PEDCO-120-PR-PI-0011 (2 of 3)	
	4	Area Classification				Zone2, IIB T4						
	5	Ambient Temperature °C			Min.	Max.	5			50		
	6	Available Air Supply Pressure barg			Min.	Max.	3			8		
	7	Nace Requirement:				Not Required						
PIPE & LINE	8	Pipe Class			Pipe Sch.			FS00			SCH.40S	
	9	Pipe Line Insulation Line Size			Pipe Material			NP / 4"			ASTM A312 TP 316L , B36.19M	
PROCESS CONDITIONS	10	Fluid				Gas						
	11	State				Gas						
	12	Shut Off Pressure delta P (BARG)				62						
	13					Units	Max	Norm.	Min.			
	14	Flow Rate(vapor/water/oil)				kg/h	9530.038	8663.671	2275.632			
	15	Inlet Pressure				bar-g	54.1	54.1	54.1			
	16	Pressure Drop				bar	52.6	52.6	52.6			
	17	Inlet Temperature(max)				°C	60	60	60			
	18	Liquid Specific Gravity (G)				0.059						
	19	Compressibility Factor(Z)(vapour/water/oil)				0.82/0.036						
	20	Viscosity (vapour/water/oil)				cP	0.014					
	21	Specific Heats Ratio(Cp/Cv) (vapour/liquid)				1.457						
	22	Vapour Pressure				bar-g	168.1					
23	Critical Pressure (liquid)				bar-g	93.65						
CALCULATED RESULTS	24	Flow Coefficient Cv				-	10.12	9.17	2.36			
	25	Travel				%	60.5	54.5				
	26	Sound Pressure Level				dBA	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)			
BODY AND TRIM	27	Body size		2" (VTC)		POSITIONER	50	Type		Electrical-Pneumatic(SMART)		
	28	Rated Cv		(NOTE 4 in Below Table)			51	Input Signal		4-20 mA-Hart		
	29	End conn. & Rating		2" # 600			52	Power Supply		24 VDC loop powered		
	30	Body/Bonnet Material		A351 GR. CF3M			53	Electrical Connection		ISO M20 x 1.5		
	31	Body/Bonnet Type		GLOBE / Bolted Flange Bonnet			54	Direct/Reverse Act.		(NOTE 4 in Below Table)		
	32	Flow Direction		(NOTE 4 in Below Table)			55	Lock Last Position		(NOTE 4 in Below Table)		
	33	Packing Material		P.T.F.E.			56	Output Signal		3-15 Psi		
	34	Trim Type		SINGLE SEATED/CAGE		57	I.P./Ex.Protec.	Gauge	IP65 / EExia	Yes		
	35	Characteristic		EQUAL PERCENTAGE (VTC)		58	MFR	Model	(NOTE 4 in Below Table)			
	36	Guiding		(NOTE 4 in Below Table)		SOLENOID VALVE	59	Type	Qty.	N/A	N/A	
	37	Rated Travel		(NOTE 4 in Below Table)			60	MFR	Model	N/A	N/A	
	38	Plug/Disk Material		SS316			61	I.P.	Ex.Protec.	N/A	N/A	
	39	Seat Material		SS316			62	MFR	Model	N/A	N/A	
	40	Cage/Guid Material		SS316		SWITCHES	63	Type	Qty.	N/A	N/A	
	41	Stem Material		SS316			64	Power Supply		N/A		
42	Trim Material		SS316		65		Contacts / Rating		N/A			
43	MFR	Model	(NOTE 4 in Below Table)		66		Switching Position		N/A			
ACTUTOR	44	Size	Eff.Area	(NOTE 4 in Below Table)		AIR SET	67	I.P.	Ex.Protec.	N/A	N/A	
	45	Air Failure	Handwheel	FAIL CLOSE	SIDE MOUNTED		68	MFR	Model	N/A	N/A	
	46	Air Action	Orientation	AIR TO OPEN	VERT. UP		69	Set Pressure		Yes		
	47	Actuator Type		Pneumatic Diaphragm Actuators			70	Filter	Gauge	Yes	Yes	
	48	AIR Press. Min/ Max/ Des. (Barg)		4 (Note 3 in Below Table)		71	Pnumatic Conn.		1/4 " NPTF			
	49	MFR	Model	(NOTE 4 in Below Table)		72	MFR	Model	(NOTE 4 in Below Table)			
PURCHASE	Manufacturer		(NOTE 4 in Below Table)		TESTS	73	Hydro. Pressure		API 598			
	Model		(NOTE 4 in Below Table)			74	Leakage Class		ANSI IV			
						75	Performance Test		Required			
						OPTIONS	76	Internal Tubing		Required(with Double Ferrule Compression conn.)		
					77		Tube Material		316 S.S			
					78	Cable Gland		M20, Nickel plated brass				
					79	Cable Entry		M20 X 1.5				
NOTES:												
1- All materials shall be in accordance with 'Piping Material Specification' ,Document No.: .BK-GCS-PEDCO-120-PI-SP-0001												
2- VTA: Vendor To Advise VTC: Vendor To Confirm												
3- Minimum of instrument air pressure supply is 4 barg but 3 barg as minimum working pressure, shall be considered for actuator sizing .												
4- Shall be stated by vendor at quotaion stage.												

		تکهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 				
		DATA SHEETS FOR CONTROL/REGULATOR VALVES											
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۰۳۸		پرورژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه : 14 از 18			
		BK	GCS	PEDCO	120	IN	DT	0011	D00				
DATA SHEETS FOR CONTROL/REGULATOR VALVES													
GENERAL	1	Tag No.				PCV-2135C							
	2	Service				2nd Stage Gas Compression Air Coolers (C-2102C)							
	3	Line No.		P&ID No.		GAS-111-0057C-FS00-4"-NP				BK-GCS-PEDCO-120-PR-PI-0011 (3 of 3)			
	4	Area Classification				Zone2, IIB T4							
	5	Ambient Temperature °C		Min.	Max.	5				50			
	6	Available Air Supply Pressure barg		Min.	Max.	3				8			
	7	Nace Requirement:				Not Required							
PIPE & LINE	8	Pipe Class		Pipe Sch.		FS00				SCH.40S			
	9	Pipe Line Insulation Line Size		Pipe Material		NP / 4"				ASTM A312 TP 316L , B36.19M			
PROCESS CONDITIONS	10	Fluid				Gas							
	11	State				Gas							
	12	Shut Off Pressure delta P (BARG)				62							
	13					Units	Max	Norm.	Min.				
	14	Flow Rate(vapor/water/oil)				kg/h	9530.038	8663.671	2275.632				
	15	Inlet Pressure				bar-g	54.1	54.1	54.1				
	16	Pressure Drop				bar	52.6	52.6	52.6				
	17	Inlet Temperature(max)				°C	60	60	60				
	18	Liquid Specific Gravity (GI)				0.059							
	19	Compressibility Factor(Z)(vapour/water/oil)				0.82/0.036							
	20	Viscosity (vapour/water/oil)				cP	0.014						
	21	Specific Heats Ratio(Cp/Cv) (vapour/liquid)				1.457							
	22	Vapour Pressure				bar-g	168.1						
23	Critical Pressure (liquid)				bar-g	93.65							
CALCULATED RESULTS	24	Flow Coefficient Cv				-	10.12	9.17	2.36				
	25	Travel				%	60.5	54.5					
	26	Sound Pressure Level				dBA	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)				
BODY AND TRIM	27	Body size		2" (VTC)		POSITIONER	50	Type		Electrical-Pneumatic(SMART)			
	28	Rated Cv		(NOTE 4 in Below Table)			51	Input Signal		4-20 mA-Hart			
	29	End conn. & Rating		2" # 600			52	Power Supply		24 VDC loop powered			
	30	Body/Bonnet Material		A351 GR. CF3M			53	Electrical Connection		ISO M20 x 1.5			
	31	Body/Bonnet Type		GLOBE / Bolted Flange Bonnet			54	Direct/Reverse Act.		(NOTE 4 in Below Table)			
	32	Flow Direction		(NOTE 4 in Below Table)			55	Lock Last Position		(NOTE 4 in Below Table)			
	33	Packing Material		P.T.F.E.			56	Output Signal		3-15 Psi			
	34	Trim Type		SINGLE SEATED/CAGE		57	I.P./Ex.Protec.	Gauge	IP65 / EExia	Yes			
	35	Characteristic		EQUAL PERCENTAGE (VTC)		58	MFR	Model	(NOTE 4 in Below Table)				
	36	Guiding		(NOTE 4 in Below Table)		SOLENOID VALVE	59	Type	Qty.	N/A	N/A		
	37	Rated Travel		(NOTE 4 in Below Table)			60	MFR	Model	N/A	N/A		
	38	Plug/Disk Material		SS316			61	I.P.	Ex.Protec.	N/A	N/A		
	39	Seat Material		SS316			62	MFR	Model	N/A	N/A		
	40	Cage/Guid Material		SS316		SWITCHES	63	Type	Qty.	N/A	N/A		
	41	Stem Material		SS316			64	Power Supply		N/A			
	42	Trim Material		SS316			65	Contacts / Rating		N/A			
	43	MFR	Model	(NOTE 4 in Below Table)			66	Switching Position		N/A			
ACTUTOR	44	Size	Eff.Area	(NOTE 4 in Below Table)		AIR SET	67	I.P.	Ex.Protec.	N/A	N/A		
	45	Air Failure	Handwheel	FAIL CLOSE	SIDE MOUNTED		68	MFR	Model	N/A	N/A		
	46	Air Action	Orientation	AIR TO OPEN	VERT. UP		69	Set Pressure		Yes			
	47	Actuator Type		Pneumatic Diaphragm Actuators			70	Filter	Gauge	Yes	Yes		
	48	AIR Press. Min/ Max/ Des. (Barg)		4 (Note 3 in Below Table)	7.5	8.5	71	Pnumatic Conn.		1/4 " NPTF			
	49	MFR	Model	(NOTE 4 in Below Table)		72	MFR	Model	(NOTE 4 in Below Table)				
PURCHASE					TESTS	73	Hydro. Pressure		API 598				
						74	Leakage Class		ANSI IV				
						75	Performance Test		Required				
						OPTIONS	76	Internal Tubing		Required(with Double Ferrule Compression conn.)			
							77	Tube Material		316 S.S			
					78	Cable Gland		M20, Nickel plated brass					
					79	Cable Entry		M20 X 1.5					
NOTES:													
1- All materials shall be in accordance with 'Piping Material Specification' ,Document No.: .BK-GCS-PEDCO-120-PI-SP-0001													
2- VTA: Vendor To Advise VTC: Vendor To Confirm													
3- Minimum of instrument air pressure supply is 4 barg but 3 barg as minimum working pressure, shall be considered for actuator sizing .													
4- Shall be stated by vendor at quotaion stage.													

		تکهداشت و افزایش تولید میدان نفتی بینک سطح الارض								 				
		احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک												
DATA SHEETS FOR CONTROL/REGULATOR VALVES														
شماره صفحه : 15 از 18		نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه	شماره پیمان:	۰۵۳ - ۰۷۳ - ۹۰۳۸			
		D00	0011	DT	IN	120	PEDCO	GCS	BK					
DATA SHEETS FOR CONTROL/REGULATOR VALVES														
GENERAL	1	Tag No.					PCV-2151							
	2	Service					Gas Compression Dehydration Package							
	3	Line No.				P&ID No.		GAS-111-0072-FN05-6"-PT				BK-GCS-PEDCO-120-PR-PI-0013 (1 of 3)		
	4	Area Classification					Zone2, IIB T4							
	5	Ambient Temperature °C				Min.	Max.	5				50		
	6	Available Air Supply Pressure barg				Min.	Max.	3				8		
	7	Nace Requirement:					Required							
PIPE & LINE	8	Pipe Class				Pipe Sch.		FN05				SCH.80		
	9	Pipe Line Insulation Line Size				Pipe Material		PT / 6"				ASTM A106 Gr.B , ASME B36.10M		
PROCESS CONDITIONS	10	Fluid					Gas							
	11	State					Gas							
	12	Shut Off Pressure delta P (BARG)					5.5							
	13						Units	Max	Norm.	Min.				
	14	Flow Rate(vapor/water/oil)					kg/h	18887.886	17170.805	4531.569				
	15	Inlet Pressure					bar-g	51.9	51.9	51.9				
	16	Pressure Drop					bar	1	1	1				
	17	Inlet Temperature(max)					°C	59.42	59.42	59.42				
	18	Liquid Specific Gravity (GI)					0.552							
	19	Compressibility Factor(Z)(vapour/water/oil)					0.8292							
	20	Viscosity (vapour/water/oil)					cP	0.013						
	21	Specific Heats Ratio(Cp/Cv) (vapour/liquid)					1.448							
	22	Vapour Pressure					bar-g	-						
	23	Critical Pressure (liquid)					bar-g	104.9						
CALCULATED RESULTS	24	Flow Coefficient Cv					-	93.45	84.95	22.4				
	25	Travel					%	72.4	65.5					
	26	Sound Pressure Level					dBA	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)				
BODY AND TRIM	27	Body size		4" (VTC)			POSITIONER	50	Type		Electrical-Pneumatic(SMART)			
	28	Rated Cv		(NOTE 4 in Below Table)				51	Input Signal		4-20 mA-Hart			
	29	End conn. & Rating		4" # 600				52	Power Supply		24 VDC loop powered			
	30	Body/Bonnet Material		A216 GR. WCB				53	Electrical Connection		ISO M20 x 1.5			
	31	Body/Bonnet Type		GLOBE / Bolted Flange Bonnet				54	Direct/Reverse Act.		(NOTE 4 in Below Table)			
	32	Flow Direction		(NOTE 4 in Below Table)				55	Lock Last Position		(NOTE 4 in Below Table)			
	33	Packing Material		P.T.F.E.				56	Output Signal		3-15 Psi			
	34	Trim Type		SINGLE SEATED/CAGE				57	I.P./Ex.Protec.	Gauge	IP65 / EExia	Yes		
	35	Characteristic		EQUAL PERCENTAGE (VTC)			58	MFR	Model	(NOTE 4 in Below Table)				
	36	Guiding		(NOTE 4 in Below Table)			SOLENOID VALVE	59	Type	Qty.	N/A	N/A		
	37	Rated Travel		(NOTE 4 in Below Table)				60	MFR	Model	N/A	N/A		
	38	Plug/Disk Material		SS316				61	I.P.	Ex.Protec.	N/A	N/A		
	39	Seat Material		SS316				62	MFR	Model	N/A	N/A		
	40	Cage/Guid Material		SS316			SWITCHES	63	Type	Qty.	N/A	N/A		
	41	Stem Material		SS316				64	Power Supply		N/A			
	42	Trim Material		SS316				65	Contacts / Rating		N/A			
	43	MFR	Model	(NOTE 4 in Below Table)				66	Switching Position		N/A			
	ACTUTOR	44	Size	Eff.Area	(NOTE 4 in Below Table)			AIR SET	67	I.P.	Ex.Protec.	N/A	N/A	
45		Air Failure	Handwheel	FAIL CLOSE	SIDE MOUNTED		68		MFR	Model	N/A	N/A		
46		Air Action	Orientation	AIR TO OPEN	VERT. UP		69		Set Pressure		Yes			
47		Actuator Type		Pneumatic Diaphragm Actuators			70		Filter	Gauge	Yes	Yes		
48		AIR Press. Min/ Max/ Des. (Barg)		4 (Note 3 in Below Table) 7.5 8.5			71	Pnumatic Conn.		1/4 " NPTF				
49		MFR	Model	(NOTE 4 in Below Table)			72	MFR	Model	(NOTE 4 in Below Table)				
PURCHASE	Manufacturer		(NOTE 4 in Below Table)			TESTS	73	Hydro. Pressure		API 598				
	Model		(NOTE 4 in Below Table)				74	Leakage Class		ANSI IV				
							75	Performance Test		Required				
							OPTIONS	76	Internal Tubing		Required(with Double Ferrule Compression conn.)			
								77	Tube Material		316 S.S			
					78	Cable Gland		M20, Nickel plated brass						
					79	Cable Entry		M20 X 1.5						
NOTES:														
1- All materials shall be in accordance with 'Piping Material Specification' ,Document No.: .BK-GCS-PEDCO-120-PI-SP-0001														
2- VTA: Vendor To Advise VTC: Vendor To Confirm														
3- Minimum of instrument air pressure supply is 4 barg but 3 barg as minimum working pressure, shall be considered for actuator sizing .														
4- Shall be stated by vendor at quotaion stage.														

		تنگهداشت و افزایش تولید میدان نفتی بینک سطح الارض							 		
		احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک									
DATA SHEETS FOR CONTROL/REGULATOR VALVES											
شماره صفحه : 16 از 18		نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه	شماره پیمان:	
		D00	0011	DT	IN	120	PEDCO	GCS	BK	۰۵۳ - ۰۷۳ - ۹۰۳۸	
DATA SHEETS FOR CONTROL/REGULATOR VALVES											
GENERAL	1	Tag No.				PCV-2152					
	2	Service				Gas Compression Dehydration Package					
	3	Line No.			P&ID No.		FL-112-0029-AN07-4"-PT			BK-GCS-PEDCO-120-PR-PI-0013 (1 of 3)	
	4	Area Classification				Zone 2, IIB T4					
	5	Ambient Temperature °C		Min.	Max.	5			50		
	6	Available Air Supply Pressure barg		Min.	Max.	3			8		
	7	Nace Requirement:				Required					
PIPE & LINE	8	Pipe Class			Pipe Sch.		FN05			SCH.80	
	9	Pipe Line Insulation Line Size			Pipe Material		PT / 4"			ASTM A106 Gr.B , ASME B36.10M	
PROCESS CONDITIONS	10	Fluid				Gas					
	11	State				Gas					
	12	Shut Off Pressure delta P (BARG)				62					
	13					Units	Max	Norm.	Min.		
	14	Flow Rate(vapor/water/oil)				kg/h	18887.886	17170.805	4292.701		
	15	Inlet Pressure				bar-g	52.9	52.9	52.9		
	16	Pressure Drop				bar	50.9	50.9	50.9		
	17	Inlet Temperature(max)				°C	59.422	59.422	59.422		
	18	Liquid Specific Gravity (GI)				0.552					
	19	Compressibility Factor(Z)(vapour/water/oil)				0.8292					
	20	Viscosity (vapour/water/oil)				cP	0.013				
	21	Specific Heats Ratio(Cp/Cv) (vapour/liquid)				1.448					
	22	Vapour Pressure				bar-g	-				
	23	Critical Pressure (liquid)				bar-g	104.9				
CALCULATED RESULTS	24	Flow Coefficient Cv				-	21.36	19.37	4.75		
	25	Travel				%	63.4	57.2	12.1		
	26	Sound Pressure Level				dBA	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)		
BODY AND TRIM	27	Body size		3" (VTC)		POSITIONER	50	Type		Electrical-Pneumatic(SMART)	
	28	Rated Cv		(NOTE 4 in Below Table)			51	Input Signal		4-20 mA-Hart	
	29	End conn. & Rating		3" # 600			52	Power Supply		24 VDC loop powered	
	30	Body/Bonnet Material		A216 GR. WCB			53	Electrical Connection		ISO M20 x 1.5	
	31	Body/Bonnet Type		GLOBE / Bolted Flange Bonnet			54	Direct/Reverse Act.		(NOTE 4 in Below Table)	
	32	Flow Direction		(NOTE 4 in Below Table)			55	Lock Last Position		(NOTE 4 in Below Table)	
	33	Packing Material		P.T.F.E.			56	Output Signal		3-15 Psi	
	34	Trim Type		SINGLE SEATED/CAGE			57	I.P./Ex.Protec.	Gauge	IP65 / EExia	Yes
	35	Characteristic		EQUAL PERCENTAGE (VTC)		58	MFR	Model	(NOTE 4 in Below Table)		
	36	Guiding		(NOTE 4 in Below Table)		SOLENOID VALVE	59	Type	Qty.	N/A	N/A
	37	Rated Travel		(NOTE 4 in Below Table)			60	MFR	Model	N/A	N/A
	38	Plug/Disk Material		SS316			61	I.P.	Ex.Protec.	N/A	N/A
	39	Seat Material		SS316			62	MFR	Model	N/A	N/A
	40	Cage/Guid Material		SS316		SWITCHES	63	Type	Qty.	N/A	N/A
	41	Stem Material		SS316			64	Power Supply		N/A	
	42	Trim Material		SS316			65	Contacts / Rating		N/A	
	43	MFR	Model	(NOTE 4 in Below Table)			66	Switching Position		N/A	
	ACTUTOR	44	Size	Eff.Area	(NOTE 4 in Below Table)		AIR SET	67	I.P.	Ex.Protec.	N/A
45		Air Failure	Handwheel	FAIL CLOSE	SIDE MOUNTED	68		MFR	Model	N/A	N/A
46		Air Action	Orientation	AIR TO OPEN	VERT. UP	69		Set Pressure		Yes	
47		Actuator Type		Pneumatic Diaphragm Actuators		70		Filter	Gauge	Yes	Yes
48		AIR Press. Min/ Max/ Des. (Barg)		4 (Note 3 in Below Table) 7.5 8.5		71	Pnumatic Conn.		1/4 " NPTF		
49		MFR	Model	(NOTE 4 in Below Table)		72	MFR	Model	(NOTE 4 in Below Table)		
PURCHASE						TESTS	73	Hydro. Pressure		API 598	
							74	Leakage Class		ANSI IV	
							75	Performance Test		Required	
						OPTIONS	76	Internal Tubing		Required(with Double Ferrule Compression conn.)	
							77	Tube Material		316 S.S	
						78	Cable Gland		M20, Nickel plated brass		
						79	Cable Entry		M20 X 1.5		
NOTES:											
1- All materials shall be in accordance with 'Piping Material Specification' ,Document No.: .BK-GCS-PEDCO-120-PI-SP-0001											
2- VTA: Vendor To Advise VTC: Vendor To Confirm											
3- Minimum of instrument air pressure supply is 4 barg but 3 barg as minimum working pressure, shall be considered for actuator sizing .											
4- Shall be stated by vendor at quotaion stage.											

		تگه‌داشت و افزایش تولید میدان نفتی بینک سطح الارض							  				
		احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک											
		DATA SHEETS FOR CONTROL/REGULATOR VALVES											
شماره پیمان:		پرورژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه : 17 از 18			
۰۵۳ - ۰۷۳ - ۹۰۳۸		BK	GCS	PEDCO	120	IN	DT	0011	D00				
DATA SHEETS FOR CONTROL/REGULATOR VALVES													
GENERAL	1	Tag No.				PCV-2201							
	2	Service				Instrument & Plant Air System							
	3	Line No.		P&ID No.		PLA-112-0010-AN04-1 1/2"-PT				BK-GCS-PEDCO-120-PR-PI-0015 (1 of 2)			
	4	Area Classification				Zone2, IIB T4							
	5	Ambient Temperature °C		Min.	Max.	5				50			
	6	Available Air Supply Pressure barg		Min.	Max.	3				8			
	7	Nace Requirement:				NOT Required							
PIPE & LINE	8	Pipe Class		Pipe Sch.		AN04				SCH.80			
	9	Pipe Line Insulation Line Size		Pipe Material		PT / 1 1/2"				ASTM A106 Gr.B , ASME B36.10M			
PROCESS CONDITIONS	10	Fluid				Gas							
	11	State				Gas							
	12	Shut Off Pressure delta P (BARG)				12.5							
	13					Units	Max	Norm.	Min.				
	14	Flow Rate(vapor/water/oil)				kg/h	42.623	38.748	11.624				
	15	Inlet Pressure				bar-g	9	9	9				
	16	Pressure Drop				bar	4.5	4.5	4.5				
	17	Inlet Temperature(max)				°C	65	65	65				
	18	GAS Specific Gravity (GI)				0.196							
	19	Compressibility Factor(Z)(vapour/water/oil)				0.98							
	20	Viscosity (vapour/water/oil)				cP	0.012						
	21	Specific Heats Ratio(Cp/Cv) (vapour/liquid)				1.229							
	22	Vapour Pressure				bar-g	168.1						
	23	Critical Pressure (liquid)				bar-g	93.65						
CALCULATED RESULTS	24	Flow Coefficient Cv				-	0.3	0.27	0.08				
	25	Travel				%	72.8	67.9	25.6				
	26	Sound Pressure Level				dBA	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)				
BODY AND TRIM	27	Body size		1" (VTC)		POSITIONER	50	Type		Electrical-Pneumatic(SMART)			
	28	Rated Cv		(NOTE 4 in Below Table)			51	Input Signal		4-20 mA-Hart			
	29	End conn. & Rating		1" # 800			52	Power Supply		24 VDC loop powered			
	30	Body/Bonnet Material		ASTM A 105			53	Electrical Connection		ISO M20 x 1.5			
	31	Body/Bonnet Type		GLOBE / Bolted Flange Bonnet			54	Direct/Reverse Act.		(NOTE 4 in Below Table)			
	32	Flow Direction		(NOTE 4 in Below Table)			55	Lock Last Position		(NOTE 4 in Below Table)			
	33	Packing Material		P.T.F.E.			56	Output Signal		3-15 Psi			
	34	Trim Type		SINGLE SEATED/CAGE			57	I.P./Ex.Protec.	Gauge	IP65 / EExia	Yes		
	35	Characteristic		EQUAL PERCENTAGE (VTC)		58	MFR	Model	(NOTE 4 in Below Table)				
	36	Guiding		(NOTE 4 in Below Table)		SOLENOID VALVE	59	Type	Qty.	N/A	N/A		
	37	Rated Travel		(NOTE 4 in Below Table)			60	MFR	Model	N/A	N/A		
	38	Plug/Disk Material		SS316			61	I.P.	Ex.Protec.	N/A	N/A		
	39	Seat Material		SS316			62	MFR	Model	N/A	N/A		
	40	Cage/Guid Material		SS316		SWITCHES	63	Type	Qty.	N/A	N/A		
	41	Stem Material		SS316			64	Power Supply		N/A			
	42	Trim Material		SS316			65	Contacts / Rating		N/A			
	43	MFR	Model	(NOTE 4 in Below Table)			66	Switching Position		N/A			
	ACTUTOR	44	Size	Eff.Area	(NOTE 4 in Below Table)		AIR SET	67	I.P.	Ex.Protec.	N/A	N/A	
45		Air Failure	Handwheel	FAIL CLOSE	SIDE MOUNTED	68		MFR	Model	N/A	N/A		
46		Air Action	Orientation	AIR TO OPEN	VERT. UP	69		Set Pressure		Yes			
47		Actuator Type		Pneumatic Diaphragm Actuators		70		Filter	Gauge	Yes	Yes		
48		AIR Press. Min/ Max/ Des. (Barg)		4 (Note 3 in Below Table)	7.5	8.5	71	Pnumatic Conn.		1/4 " NPTF			
49		MFR	Model	(NOTE 4 in Below Table)		72	MFR	Model	(NOTE 4 in Below Table)				
PURCHASE					TESTS	73	Hydro. Pressure		API 598				
						74	Leakage Class		ANSI IV				
					OPTIONS	75	Performance Test		Required				
						76	Internal Tubing		Required(with Double Ferrule Compression conn.)				
						77	Tube Material		316 S.S				
					78	Cable Gland		M20, Nickel plated brass					
					79	Cable Entry		M20 X 1.5					
NOTES:													
1- All materials shall be in accordance with 'Piping Material Specification' ,Document No.: .BK-GCS-PEDCO-120-PI-SP-0001													
2- VTA: Vendor To Advise VTC: Vendor To Confirm													
3- Minimum of instrument air pressure supply is 4 barg but 3 barg as minimum working pressure, shall be considered for actuator sizing .													
4- Shall be stated by vendor at quotaion stage.													

		تکهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 				
		DATA SHEETS FOR CONTROL/REGULATOR VALVES											
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۰۳۸		پروژه BK	بسته کاری GCS	صادرکننده PEDCO	تسهیلات 120	رشته IN	نوع مدرک DT	سریال 0011	نسخه D00	شماره صفحه : 18 از 18			
DATA SHEETS FOR CONTROL/REGULATOR VALVES													
GENERAL	1	Tag No.				PCV-2272							
	2	Service				From Inlet K.O. Drum to V-2205							
	3	Line No.		P&ID No.		FLG-112-0040-AN07-2"-PT				BK-GCS-PEDCO-120-PR-PI-0022			
	4	Area Classification				Zone2, IIB T4							
	5	Ambient Temperature °C		Min.	Max.	5				50			
	6	Available Air Supply Pressure barg		Min.	Max.	3				8			
	7	Nace Requirement:				NOT Required							
PIPE & LINE	8	Pipe Class		Pipe Sch.		AN07				SCH.160			
	9	Pipe Line Insulation Line Size		Pipe Material		PT / 2"				ASTM A106 Gr.B , ASME B36.10M			
PROCESS CONDITIONS	10	Fluid				Gas							
	11	State				Gas							
	12	Shut Off Pressure delta P (BARG)				9							
	13					Units	Max	Norm.	Min.				
	14	Flow Rate(vapor/water/oil)				kg/h	556.347	505.77	151.731				
	15	Inlet Pressure				bar-g	5.1	5.1	5.1				
	16	Pressure Drop				bar	0.2	0.2	0.2				
	17	Inlet Temperature(max)				°C	36.921	36.921	36.921				
	18	GAS Specific Gravity (GI)				0.199							
	19	Compressibility Factor(Z)(vapour/water/oil)				0.975							
	20	Viscosity (vapour/water/oil)				cP	0.011						
	21	Specific Heats Ratio(Cp/Cv) (vapour/liquid)				1.245							
	22	Vapour Pressure				bar-g	168.1						
	23	Critical Pressure (liquid)				bar-g	93.65						
CALCULATED RESULTS	24	Flow Coefficient Cv				-	18.9	17.18	5.15				
	25	Travel				%	83.3	75.5					
	26	Sound Pressure Level				dBA	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)	MAX 85 dBA(VTC)				
BODY AND TRIM	27	Body size		1" (VTC)		POSITIONER	50	Type		Electrical-Pneumatic(SMART)			
	28	Rated Cv		(NOTE 4 in Below Table)			51	Input Signal		4-20 mA-Hart			
	29	End conn. & Rating		1" # 150			52	Power Supply		24 VDC loop powered			
	30	Body/Bonnet Material		A216 GR. WCB			53	Electrical Connection		ISO M20 x 1.5			
	31	Body/Bonnet Type		GLOBE / Bolted Flange Bonnet			54	Direct/Reverse Act.		(NOTE 4 in Below Table)			
	32	Flow Direction		(NOTE 4 in Below Table)			55	Lock Last Position		(NOTE 4 in Below Table)			
	33	Packing Material		P.T.F.E.			56	Output Signal		3-15 Psi			
	34	Trim Type		SINGLE SEATED/CAGE			57	I.P./Ex.Protec.	Gauge	IP65 / EExia	Yes		
	35	Characteristic		EQUAL PERCENTAGE (VTC)		58	MFR	Model	(NOTE 4 in Below Table)				
	36	Guiding		(NOTE 4 in Below Table)		SOLENOID VALVE	59	Type	Qty.	N/A	N/A		
	37	Rated Travel		(NOTE 4 in Below Table)			60	MFR	Model	N/A	N/A		
	38	Plug/Disk Material		SS316			61	I.P.	Ex.Protec.	N/A	N/A		
	39	Seat Material		SS316			62	MFR	Model	N/A	N/A		
	40	Cage/Guid Material		SS316		SWITCHES	63	Type	Qty.	N/A	N/A		
	41	Stem Material		SS316			64	Power Supply		N/A			
	42	Trim Material		SS316			65	Contacts / Rating		N/A			
	43	MFR	Model	(NOTE 4 in Below Table)			66	Switching Position		N/A			
	ACTUTOR	44	Size	Eff.Area	(NOTE 4 in Below Table)		AIR SET	67	I.P.	Ex.Protec.	N/A	N/A	
45		Air Failure	Handwheel	FAIL CLOSE	SIDE MOUNTED	68		MFR	Model	N/A	N/A		
46		Air Action	Orientation	AIR TO OPEN	VERT. UP	69		Set Pressure		Yes			
47		Actuator Type		Pneumatic Diaphragm Actuators		70		Filter	Gauge	Yes	Yes		
48		AIR Press. Min/ Max/ Des. (Barg)		4 (Note 3 in Below Table)	7.5	8.5	71	Pnumatic Conn.		1/4 " NPTF			
49		MFR	Model	(NOTE 4 in Below Table)		72	MFR	Model	(NOTE 4 in Below Table)				
PURCHASE	Manufacturer		(NOTE 4 in Below Table)		TESTS	73	Hydro. Pressure		API 598				
	Model		(NOTE 4 in Below Table)			74	Leakage Class		ANSI IV				
						75	Performance Test		Required				
						OPTIONS	76	Internal Tubing		Required(with Double Ferrule Compression conn.)			
							77	Tube Material		316 S.S			
					78	Cable Gland		M20, Nickel plated brass					
					79	Cable Entry		M20 X 1.5					
NOTES:													
1- All materials shall be in accordance with 'Piping Material Specification' ,Document No.: .BK-GCS-PEDCO-120-PI-SP-0001													
2- VTA: Vendor To Advise VTC: Vendor To Confirm													
3- Minimum of instrument air pressure supply is 4 barg but 3 barg as minimum working pressure, shall be considered for actuator sizing .													
4- Shall be stated by vendor at quotaion stage.													