

	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک (قرارداد ۰۸-۰۱۰-CO-GCS-BK)							 	
	INSTRUMENT D.S. FOR ON/OFF VALVES								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری GCS	صادر کننده MF	تسهیلات 120	رشته IN	نوع مدرک DS	سریال 0002	نسخه V00	شماره صفحه: ۱ از ۱۲

طرح نگهداشت و افزایش تولید ۲۷ مخزن

INSTRUMENT D.S. FOR ON/OFF VALVES

نگهداشت و افزایش تولید میدان نفتی بینک

V00	Apr.2025	IFA	MFS	M.Fakharian	S.Faramarzpour	
Rev.	Date	Purpose of Issue / Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval
		CLIENT Doc. Number: -				

status:

IFA: Issued For Approval

IFI: Issued For Information

AFC: Approved For Construction

	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک (قرارداد ۰۸-۰۰۱۰-BK-HD-GCS-CO)								
	INSTRUMENT D.S. FOR ONO/FF VALVES								
	شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	GCS	MF	120	IN	DS	0002	V00	

REVISION RECORD SHEET

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1	X					61					
2	X					62					
3	X					63					
4	X					64					
5	X					65					
6	X					66					
7	X					67					
8	X					68					
9	X					69					
10	X					70					
11	X					71					
12	X					72					
13						73					
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59						119					
60						120					



شماره پیمان:		پروژه		بسته کاری		صادرکننده		تجهیزات		رشته		نوع مدرک		سریال		نسخه		شماره صفحه: ۳ از ۱۲	
۰۵۳ - ۰۷۳ - ۹۱۸۴		BK		GCS		MF		120		IN		DS		0002		V00			
GENERAL	1	Item Number		Tag Number		Quantity		1		D-ESDV-2101				1					
	2	Service								C100 TO E100									
	3	P & ID No.		Page No.				BK-GCS-MF-120-PR-PI-0003				1/7							
	4	Line No.		Piping Class				TEG-111-0001-FN07-1"-HI				FN07							
PROCESS CONDITIONS	5	Fluid		Phase				TEG				V / L							
	6	Toxic Service		Cold Service				YES				NO							
	7	Corrosive Service		Eroressive Service				YES				-							
	8	Max. Flow Rate				Unit		1020						kg/h					
	9	Operating Pressure		Min.	Normal	Max	Unit	52		54.9		58		barg					
	10	Max. Diff. Pressure for Actuator Size				Unit		-											
	11	Design Pressure				Unit		F.V. / 62						barg					
	12	Operating Temperature				Unit		62.96						°C					
	13	Design Temperature				Unit		5 / 100						°C					
	14	Viscosity				Unit		0.01229 (vapor) and 7.17 (Liquid)						cp					
	15	Spec. Heat Ratio(K=Cp/Cv)						1.002											
	16	Spec. Wt./Spec.Grav./Mol Wt						1.082 (liquid phase) and 1.22 (vapor phase)											
	17																		
LINE	18	Pipe Line Siz	In/Out		1"	1"			61	Type	single acting, spring return pneumatic actuators								
	19	Schedule	In/Out		SCH.XXS	SCH.XXS				62	Mfr. & Model	VTA							
	20	Pipe Line Insulation				-				63	Size	Eff Area	VTA	VTA					
VALVE BODY / BONNET	21	Type			Ball (top entry)				64	Action on Air Failure	FC								
	22	Size			1"				65	Max Allowable Pressure	VTA								
	23	Mfr. & Model			VTA				66	Min Required Pressure	VTA								
	24	Seal Material			RPTFE				67	Available Air Supply Pressure	4 - 8.5 barg (NOTE7)								
	25	Body / Bonnet Material			ASTM A105				68	Nor. Air Supply Pres.(barg)	7.5 barg (NOTE7)								
	26	Flow Direction			Bi-directional				69	Bench Range	0.2-1 barg(VTC)								
	27	Liner Material / ID			VTA				70	Actuator Orientation	Top, Horizontal, Parallel(VTC)								
	28	End	In			1"#600				71	Hand Wheel	No							
	29	Connection	Out			1"#600				72	Air Failure Valve	Set At	N/A	N/A					
	30	Flange Face Finish			RF SW				73	Limit Stop	NO								
	31	Type Of Bonnet			Standard (Bolted)				74	Air Consumption	VTA								
	32	Lube & ISO Valve			VTA				75	Travel Indicator	YES								
	33	Packing Material/TYPE			Teflon-chevron/VTA				76	Pneumatic Connection	1/4" NPTF(VTC)								
	34	GASKET			AISI316,Graphite filled				77	Fire Proof	NO								
	35	Bolt/Nut			Stud bolt: ASTM A 193-B7M nut: ASTM A 194 -2HM ASME B18.2				78	Stroke Time (s)	Time (s) to Open	Sec <5							

- 1- VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable
- 2- The actuator shall be sized using a thrust/torque safety factor at least of 1.3 times.
- 3- All pneumatic operated ON-OFF valves assembly shall be provided with a permanently fastened tag plate of SS316.
- 4- The final external pneumatic connection shall be 1/2"NPTF, internal connections are 1/4", accessories shall be supplied by vendor.
- 5-All valves test shall be in accordance with API 6D & API 598
- 6- The material of all valves will be in accordance with the project PMS(BK-GCS-PEDCO-120-PI-SP-0001_D02).
- 7-Actuators shall be sized for a minimum air pressure of 3 barg. The normal operating pressure is 4 barg, and the maximum operating pressure is 10 barg and shall be tested at 1.5 times of the maximum air supply.

		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک (۰۸ _ ۰۱ - ۰۰۱ BK-HD-GCS-CO قرارداد)									
		INSTRUMENT D.S. FOR ON/OFF VALVES									
شماره صفحه: ۱۲ از ۴		نسخه	سریال	نوع مدرک	رشته	تهیهات	صادرکننده	بسته کاری	پروژه	شماره پیمان:	
V00		0002	DS	IN	120	MF	GCS	BK	۹۱۸۴ - ۰۷۳ - ۰۵۳		
GENERAL	1	Item Number	Tag Number	Quantity	2	D-ESDV-2102		1			
	2	Service	C100 TO HYDROCARBON DRAIN LINE								
	3	P & ID No.	Page No.	BK-GCS-MF-120-PR-PI-0003				1/7			
	4	Line No.	Piping Class	TEG-111-0027-AN07-1"-HI				AN07			
PROCESS CONDITIONS	5	Fluid	Phase	HCB		Liquid					
	6	Toxic Service	Cold Service	YES		NO					
	7	Corrosive Service	Errosive Service	YES		-					
	8	Max. Flow Rate	Unit	7		kg/h					
	9	Operating Pressure	Min. Normal Max	Unit	52	53.9	58	barg			
	10	Max. Diff. Pressure for Actuator Size	Unit	-							
	11	Design Pressure	Unit	F.V. / 62		barg					
	12	Operating Temperature	Unit	59.89		°C					
	13	Design Temperature	Unit	5 / 100		°C					
	14	Viscosity	Unit	1		cp					
	15	Spec. Heat Ratio(K=Cp/Cv)	1.165								
	16	Spec. Wt./Spec.Grav./Mol Wt	1								
	17										
	LINE	18	Pipe Line Size	In/Out	1"	1"					
19		Schedule	In/Out	SCH.XXS	SCH.XXS						
20		Pipe Line Insulation	-								
VALVE BODY / BONNET	21	Type	Ball (top entry)								
	22	Size	1"								
	23	Mfr. & Model	VTA								
	24	Seal Material	RPTFE								
	25	Body / Bonnet Material	ASTM A105								
	26	Flow Direction	Bi-directional								
	27	Liner Material / ID	VTA								
	28	End	In	1" #600							
	29	Connection	Out	1" #600							
	30	Flange Face Finish	RF, SW								
	31	Type Of Bonnet	Standard (Bolted)								
	32	Lube & ISO Valve	VTA								
	33	Packing Material/TYPE	Teflon-chevron/VTA								
	34	GASKET	AISI316, Graphite filled								
	35	Bolt/Nut	Stud bolt: ASTM A 193-B7M nut: ASTM A 194 -2HM ASME B18.2								
	37	Fire Safe / Antistatic	Yes / Yes								
	38	Hand wheel	No								
	TRIM	39	Type	FB/RB	Trunnion	FB					
40		Plug / Ball / Disk Material	SS316								
41		Seat Material	HARDENED SS/STELLITED								
42		Seal Material	RPTFE								
43		Stem Material	SS316								
44		Leakage Class	Tight Shut-off/VI (ANSI B 16.104)								
45		Stem Type	anti-blow out (VTA)								
SOLENOID VALVE	46	DCS Operated SOV	N/A								
	47	ESD Operated SOV	ESD/BMS								
	48	Body Material	SS316								
	49	Operating Voltage	24VDC								
	50	Elec. Connection	M20x1.5								
	51	Pneumatic Connection	VTA								
	52	Ex Certificate	EX d IIB T4								
	53	Ingress Protection	IP65								
	54	Manual Reset	NO								
	55	Mfr. & Model	VTA								
	56	Type	Three -way								
AIR SET	57	Mfr. & Model	VTA								
	58	Set Press.	7.5barg								
	59	Filter	Gauge	YES	YES						
	60	Material	Aluminum Die-Cast								
ACTUATOR	61	Type	single acting, spring return pneumatic actuators								
	62	Mfr. & Model	VTA								
	63	Size	Eff Area	VTA	VTA						
	64	Action on Air Failure	FC								
	65	Max Allowable Pressure	VTA								
	66	Min Required Pressure	VTA								
	67	Available Air Supply Pressure	4 - 8.5 barg (NOTE7)								
	68	Nor. Air Supply Pres.(barg)	7.5 barg (NOTE7)								
	69	Bench Range	0.2-1 barg(VTC)								
	70	Actuator Orientation	Top, Horizontal, Parallel(VTC)								
	71	Hand Wheel	No								
72	Air Failure Valve	Set At	N/A	N/A							
73	Limit Stop	NO									
74	Air Consumption	VTA									
75	Travel Indicator	YES									
76	Pneumatic Connection	1/4" NPTF(VTC)									
77	Fire Proof	NO									
78	Stroke Time	Time (s) to Open	Sec <5								
79	(s)	Time (s) to Close	Sec <3								
80	Ingress Protection	65									
81	Air set Prss. (Min)	4 barg(VTC)									
LIMIT SWITCH	82	Type	Proximity type								
	83	Mfr. & Model	VTA								
	84	Contacts / Rating	24VDC								
	85	Electrical Connection	M20x1.5								
	86	Ex Certificate	EX d IIB T4								
	87	Weather Protection	65								
	88	Material	Aluminum Die-Cast								
	89										
SPECIAL / ACCESSORIES	90	Local Partial Stroke	YES								
	91	Volume Tank	NO								
	92	NACE MR 0175	YES								
	93	Material Certificate	YES								
	94	Quick Exhaust	VTA								
	95	SIL Requiment	To be specified by the client								
	96	Valve Typical No.	NO								
	97	Positioner	NO								
	98	Other	NO								
	99	Hydro Pressure	YES								
TESTS	100	ANSI / FCI Leakage Class	YES								
	101	Other	VTA								
	102										
PURCHASE	103										

Notes

- 1- VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable
- 2- The actuator shall be sized using a thrust/torque safety factor at least of 1.3 times.
- 3- All pneumatic operated ON-OFF valves assembly shall be provided with a permanently fastened tag plate of SS316.
- 4- The final external pneumatic connection shall be 1/2"NPTF, internal connections are 1/4", accessories shall be supplied by vendor.
- 5-All valves test shall be in accordance with API 6D & API 598
- 6- The material of all valves will be in accordance with the project PMS(BK-GCS-PEDCO-120-PI-SP-0001_D02).
- 7-Actuators shall be sized for a minimum air pressure of 3 barg. The normal operating pressure is 4 barg, and the maximum operating pressure is 10 barg and shall be tested at 1.5 times of the maximum air supply.

		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و اینیه تحت الارض خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک (۰۸-۰۰۱۰-۰۰۰۰۰۰۰۰ BK-HD-GCS-CO قرارداد)											
		INSTRUMENT D.S. FOR ON/OFF VALVES											
		شماره پیمان:		پروژه	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه		
۰۵۳ - ۰۷۳ - ۹۱۸۴		BK	GCS	MF	120	IN	DS	0002	V00	شماره صفحه: ۵ از ۱۲			
GENERAL	1	Item Number		Tag Number		Quantity		3		D-ESDV-2103		1	
	2	Service								FROM E200 TO C200			
	3	P & ID No.		Page No.				BK-GCS-MF-120-PR-PI-0003				4/7	
	4	Line No.		Piping Class				TEG-111-0027-AN07-1"-HI				AN07	
PROCESS CONDITIONS	5	Fluid		Phase		TEG				V / L			
	6	Toxic Service		Cold Service		YES				NO			
	7	Corrosive Service		Eroasive Service		YES				-			
	8	Max. Flow Rate		Unit		1000				kg/h			
	9	Operating Pressure	Min.	Normal	Max	Unit	2.5	3.1	3.8	barg			
	10	Max. Diff. Pressure for Actuator Size		Unit		-							
	11	Design Pressure		Unit		F.V. / 7.5				barg			
	12	Operating Temperature		Unit		140				°C			
	13	Design Temperature		Unit		5 / 165				°C			
	14	Viscosity		Unit		0.01 (vapor) and 1.3908 (liquid)				cp			
	15	Spec. Heat Ratio(K=Cp/Cv)				1.006							
	16	Spec. Wt./Spec.Grav./Mol Wt				1.085 (liquid phase) and 1.34 (vapor phase)							
	17												
LINE	18	Pipe Line Siz	In/Out		1"	1"							
	19	Schedule	In/Out		SCH.XXS	SCH.XXS							
	20	Pipe Line Insulation				-							
VALVE BODY / BONNET	21	Type		Ball (top entry)									
	22	Size		1"									
	23	Mfr. & Model		VTA									
	24	Seal Material		RPTFE									
	25	Body / Bonnet Material		ASTM A105									
	26	Flow Direction		Bi-directional									
	27	Liner Material / ID		VTA									
	28	End	In	1"#300									
	29	Connection	Out	1"#300									
	30	Flange Face Finish		RF. SW									
	31	Type Of Bonnet		Standard (Bolted)									
	32	Lube & ISO Valve		VTA									
	33	Packing Material/TYPE		Teflon-chevron/VTA									
	34	GASKET		AISI316,Graphite filled									
	35	Bolt/Nut		Stud bolt: ASTM A 193-B7M nut: ASTM A 194 -2HM ASME B18.2									
36													
37	Fire Safe / Antistatic		Yes / Yes										
38	Hand wheel		No										
TRIM	39	Type	FB/RB	Trunnion	FB								
	40	Plug / Ball / Disk Material		SS316									
	41	Seat Material		HARDENED SS/STELLITED									
	42	Seal Material		RPTFE									
	43	Stem Material		SS316									
	44	Leakage Class		Tight Shut-off/VI (ANSI B 16.104)									
	45	Stem Type		anti-blow out (VTA)									
SOLENOID VALVE	46	DCS Operated SOV		N/A									
	47	ESD Operated SOV		ESD/BMS									
	48	Body Material		SS316									
	49	Operating Voltage		24VDC									
	50	Elec. Connection		M20x1.5									
	51	Pneumatic Connection		VTA									
	52	Ex Certificate		EX d IIB T4									
	53	Ingress Protection		IP65									
	54	Manual Reset		NO									
	55	Mfr. & Model		VTA									
56	Type		Three -way										
AIR SET	57	Mfr. & Model		VTA									
	58	Set Press.		7.5barg									
	59	Filter	Gauge	YES	YES								
	60	Material		Aluminum Die-Cast									
ACTUATOR	61	Type		single acting, spring return pneumatic actuators									
	62	Mfr. & Model		VTA									
	63	Size	Eff Area	VTA	VTA								
	64	Action on Air Failure		FC									
	65	Max Allowable Pressure		VTA									
	66	Min Required Pressure		VTA									
	67	Available Air Supply Pressure		4 - 8.5 barg (NOTE7)									
	68	Nor. Air Supply Pres.(barg)		7.5 barg (NOTE7)									
	69	Bench Range		0.2-1 barg(VTC)									
	70	Actuator Orientation		Top, Horizontal, Parallel(VTC)									
	71	Hand Wheel		No									
	72	Air Failure Valve	Set At	N/A	N/A								
	73	Limit Stop		NO									
	74	Air Consumption		VTA									
	75	Travel Indicator		YES									
76	Pneumatic Connection		1/4" NPTF(VTC)										
77	Fire Proof		NO										
78	Stroke Time (s)	Time (s) to Open	Sec <5										
79		Time (s) to Close	Sec <3										
80	Ingress Protection		65										
81	Air set Prss. (Min)		4 barg(VTC)										
LIMIT SWITCH	82	Type		Proximity type									
	83	Mfr. & Model		VTA									
	84	Contacts / Rating		24VDC									
	85	Electrical Connection		M20x1.5									
	86	Ex Certificate		EX d IIB T4									
	87	Weather Protection		65									
	88	Material		Aluminum Die-Cast									
89													
SPECIAL / ACCESSORIES	90	Local Partial Stroke		YES									
	91	Volume Tank		NO									
	92	NACE MR 0175		YES									
	93	Material Certificate		YES									
	94	Quick Exhaust		VTA									
	95	SIL Requirment		To be specified by the client									
	96	Valve Typical No.		NO									
	97	Positioner		NO									
98	Other		NO										
TESTS	99	Hydro Pressure		YES									
	100	ANSI / FCI Leakage Class		YES									
	101	Other		VTA									
	102												
PURCHASE	103												

Notes

- 1- VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable
- 2- The actuator shall be sized using a thrust/torque safety factor at least of 1.3 times.
- 3- All pneumatic operated ON-OFF valves assembly shall be provided with a permanently fastened tag plate of SS316.
- 4- The final external pneumatic connection shall be 1/2"NPTF, internal connections are 1/4", accessories shall be supplied by vendor.
- 5-All valves test shall be in accordance with API 6D & API 598
- 6- The material of all valves will be in accordance with the project PMS(BK-GCS-PEDCO-120-PI-SP-0001_D02).
- 7-Actuators shall be sized for a minimum air pressure of 3 barg. The normal operating pressure is 4 barg, and the maximum operating pressure is 10 barg and shall be tested at 1.5 times of the maximum air supply.

		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک (۰۸ - ۰۰۱ - CO-GCS-BK-HD قرارداد)																			
		INSTRUMENT D.S. FOR ON/OFF VALVES																			
		شماره صفحه: ۱۲		نسخه		سریال				نوع مدرک		رشته		تهیهات		صادر کننده		بسته کاری		پروژه	
		۰۵۳ - ۰۷۳ - ۹۱۸۴		BK		GCS		MF		120		IN		DS		0002		V00			
GENERAL		1 Item Number		Tag Number		Quantity		4		D-ESDV-2104A		1									
		2 Service								FROM HEADER GAS TO REBOILER											
		3 P & ID No.		Page No.						BK-GCS-MF-120-PR-PI-0003		4/7									
		4 Line No.		Piping Class						FLG-111-0024-AN07-1"-PT		AN07									
PROCESS CONDITIONS		5 Fluid		Phase				FUEL GAS		GAS											
		6 Toxic Service		Cold Service				NO		NO											
		7 Corrosive Service		Erosive Service				YES		-											
		8 Max. Flow Rate				Unit		9.3				kg/h									
		9 Operating Pressure		Min. Normal Max		Unit		4.5		4.9		5.2		barg							
		10 Max. Diff. Pressure for Actuator Size				Unit		-													
		11 Design Pressure				Unit		9				barg									
		12 Operating Temperature				Unit		19/36.78				°C									
		13 Design Temperature				Unit		85				°C									
		14 Viscosity				Unit		0.01147				cp									
		15 Spec. Heat Ratio(K=Cp/Cv)						1.228													
		16 Spec. Wt./Spec.Grav./Mol Wt						0.8487													
17																					
LINE		18 Pipe Line Size		In/Out		1" 1"															
		19 Schedule		In/Out		SCH.XXS SCH.XXS															
VALVE BODY / BONNET		20 Pipe Line Insulation				-															
		21 Type				Ball (top entry)															
		22 Size				1"															
		23 Mfr. & Model				VTA															
		24 Seal Material				RPTFE															
		25 Body / Bonnet Material				ASTM A105															
		26 Flow Direction				Bi-directional															
		27 Liner Material / ID				VTA															
		28 End		In		1" #300															
		29 Connection		Out		1" #300															
		30 Flange Face Finish				RF. SW															
		31 Type Of Bonnet				Standard (Bolted)															
		32 Lube & ISO Valve				VTA															
		33 Packing Material/TYPE				Teflon-chevron/VTA															
		34 GASKET				AISI316, Graphite filled															
		35 Bolt/Nut				Stud bolt: ASTM A 193-B7M nut: ASTM A 194 -2HM ASME B18.2															
		36																			
		37 Fire Safe / Antistatic				Yes / Yes															
38 Hand wheel				No																	
TRIM		39 Type		FB/RB		Trunnion FB															
		40 Plug / Ball / Disk Material				SS316															
		41 Seat Material				HARDENED SS/STELLITED															
		42 Seal Material				RPTFE															
		43 Stem Material				SS316															
		44 Leakage Class				Tight Shut-off/VI (ANSI B 16.104)															
45 Stem Type				anti-blow out (VTA)																	
SOLENOID VALVE		46 DCS Operated SOV				N/A															
		47 ESD Operated SOV				ESD/BMS															
		48 Body Material				SS316															
		49 Operating Voltage				24VDC															
		50 Elec. Connection				M20x1.5															
		51 Pneumatic Connection				VTA															
		52 Ex Certificate				EX d IIB T4															
		53 Ingress Protection				IP65															
		54 Manual Reset				NO															
		55 Mfr. & Model				VTA															
56 Type				Three -way																	
AIR SET		57 Mfr. & Model				VTA															
		58 Set Press.				7.5barg															
		59 Filter		Gauge		YES YES															
		60 Material				Aluminum Die-Cast															
ACTUATOR		61 Type				single acting, spring return pneumatic actuators															
		62 Mfr. & Model				VTA															
		63 Size		Eff Area		VTA VTA															
		64 Action on Air Failure				FC															
		65 Max Allowable Pressure				VTA															
		66 Min Required Pressure				VTA															
		67 Available Air Supply Pressure				4 - 8.5 barg (NOTE7)															
		68 Nor. Air Supply Pres.(barg)				7.5 barg (NOTE7)															
		69 Bench Range				0.2-1 barg(VTC)															
		70 Actuator Orientation				Top, Horizontal, Parallel(VTC)															
71 Hand Wheel				No																	
72 Air Failure Valve		Set At		N/A N/A																	
73 Limit Stop				NO																	
74 Air Consumption				VTA																	
75 Travel Indicator				YES																	
76 Pneumatic Connection				1/4" NPTF(VTC)																	
77 Fire Proof				NO																	
78 Stroke Time (s)		Time (s) to Open		Sec <5																	
79		Time (s) to Close		Sec <3																	
80 Ingress Protection				65																	
81 Air set Prss. (Min)				4 barg(VTC)																	
LIMIT SWITCH		82 Type				Proximity type															
		83 Mfr. & Model				VTA															
		84 Contacts / Rating				24VDC															
		85 Electrical Connection				M20x1.5															
		86 Ex Certificate				EX d IIB T4															
		87 Weather Protection				65															
		88 Material				Aluminum Die-Cast															
		89																			
SPECIAL / ACCESSORIES		90 Local Partial Stroke				YES															
		91 Volume Tank				NO															
		92 NACE MR 0175				YES															
		93 Material Certificate				YES															
		94 Quick Exhaust				VTA															
		95 SIL Requirement				To be specified by the client															
		96 Valve Typical No.				NO															
		97 Positioner				NO															
		98 Other				NO															
		99 Hydro Pressure				YES															
TESTS		100 ANSI / FCI Leakage Class				YES															
		101 Other				VTA															
		102																			
PURCHASE		103																			

Notes

1- VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable

2- The actuator shall be sized using a thrust/torque safety factor at least of 1.3 times.

3- All pneumatic operated ON-OFF valves assembly shall be provided with a permanently fastened tag plate of SS316.

4- The final external pneumatic connection shall be 1/2"NPTF, internal connections are 1/4", accessories shall be supplied by vendor.

5- All valves test shall be in accordance with API 6D & API 598

6- The material of all valves will be in accordance with the project PMS(BK-GCS-PEDCO-120-PI-SP-0001_D02).

7- Actuators shall be sized for a minimum air pressure of 3 barg. The normal operating pressure is 4 barg, and the maximum operating pressure is 10 barg and shall be tested at 1.5 times of the maximum air supply.

		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک (۰۸-۰۰۱-BK-HD-GCS-CO قرارداد)									
		INSTRUMENT D.S. FOR ON/OFF VALVES									
شماره پیمان:		پروژه	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۱۷ از ۱۲	
۰۵۳ - ۰۷۳ - ۹۱۸۴		BK	GCS	MF	120	IN	DS	0002	V00		
GENERAL	1	Item Number		Tag Number		Quantity		5		D-ESDV-2104B	1
	2	Service						FROM HEADER GAS TO REBOILER			
	3	P & ID No.		Page No.		BK-GCS-MF-120-PR-PI-0003				4/7	
	4	Line No.		Piping Class		FLG-111-0024-AN07-1"-PT				AN07	
PROCESS CONDITIONS	5	Fluid		Phase		FUEL GAS		GAS			
	6	Toxic Service		Cold Service		NO		NO			
	7	Corrosive Service		Errosive Service		YES		-			
	8	Max. Flow Rate		Unit		9.3				kg/h	
	9	Operating Pressure	Min.	Normal	Max	Unit	4.5	4.9	5.2	barg	
	10	Max. Diff. Pressure for Actuator Size		Unit		-					
	11	Design Pressure		Unit		9				barg	
	12	Operating Temperature		Unit		19/36.78				°C	
	13	Design Temperature		Unit		85				°C	
	14	Viscosity		Unit		0.01147				cp	
	15	Spec. Heat Ratio(K=Cp/Cv)				1.228					
	16	Spec. Wt./Spec.Grav./Mol Wt				0.8487					
17											
LINE	18	Pipe Line Siz	In/Out	1"	1"			single acting, spring return pneumatic actuators			
	19	Schedule	In/Out	SCH.XXS	SCH.XXS			VTA		VTA	
	20	Pipe Line Insulation				-					
VALVE BODY / BONNET	21	Type		Ball (top entry)							
	22	Size		1"							
	23	Mfr. & Model		VTA							
	24	Seal Material		PTFE							
	25	Body / Bonnet Material		ASTM A105							
	26	Flow Direction		Bi-directional							
	27	Liner Material / ID		VTA							
	28	End	In	1"#300							
	29	Connection	Out	1"#300							
	30	Flange Face Finish		RF. SW							
	31	Type Of Bonnet		Standard (Bolted)							
	32	Lube & ISO Valve		VTA							
	33	Packing Material/TYPE		Teflon-chevron/VTA							
	34	GASKET		AISI316, Graphite filled							
	35	Bolt/Nut		Stud bolt: ASTM A 193-B7M nut: ASTM A 194 -2HM ASME B18.2							
	36										
	37	Fire Safe / Antistatic		Yes / Yes							
	38	Hand wheel		No							
TRIM	39	Type	FB/RB	Trunnion	FB						
	40	Plug / Ball / Disk Material		SS316							
	41	Seat Material		HARDENED SS/STELLITED							
	42	Seal Material		PTFE							
	43	Stem Material		SS316							
	44	Leakage Class		Tight Shut-off/VI (ANSI B 16.104)							
SOLENOID VALVE	45	Stem Type		anti-blow out (VTA)							
	46	DCS Operated SOV		N/A							
	47	ESD Operated SOV		ESD/BMS							
	48	Body Material		SS316							
	49	Operating Voltage		24VDC							
	50	Elec. Connection		M20x1.5							
	51	Pneumatic Connection		VTA							
	52	Ex Certificate		EX d IIB T4							
	53	Ingress Protection		IP65							
	54	Manual Reset		NO							
AIR SET	55	Mfr. & Model		VTA							
	56	Type		Three -way							
	57	Mfr. & Model		VTA							
	58	Set Press.		7.5barg							
	59	Filter	Gauge	YES	YES						
	60	Material		Aluminum Die-Cast							
ACTUATOR	61	Type		single acting, spring return pneumatic actuators							
	62	Mfr. & Model		VTA							
	63	Size	Eff Area	VTA	VTA						
	64	Action on Air Failure		FC							
	65	Max Allowable Pressure		VTA							
	66	Min Required Pressure		VTA							
	67	Available Air Supply Pressure		4 - 8.5 barg (NOTE7)							
	68	Nor. Air Supply Pres.(barg)		7.5 barg (NOTE7)							
	69	Bench Range		0.2-1 barg(VTC)							
	70	Actuator Orientation		Top, Horizontal, Parallel(VTC)							
	71	Hand Wheel		No							
	72	Air Failure Valve	Set At	N/A	N/A						
73	Limit Stop		NO								
74	Air Consumption		VTA								
75	Travel Indicator		YES								
76	Pneumatic Connection		1/4" NPTF(VTC)								
77	Fire Proof		NO								
78	Stroke Time (s)	Time (s) to Open	Sec <5								
79		Time (s) to Close	Sec <3								
80	Ingress Protection		65								
81	Air set Prss. (Min)		4 barg(VTC)								
LIMIT SWITCH	82	Type		Proximity type							
	83	Mfr. & Model		VTA							
	84	Contacts / Rating		24VDC							
	85	Electrical Connection		M20x1.5							
	86	Ex Certificate		EX d IIB T4							
	87	Weather Protection		65							
88	Material		Aluminum Die-Cast								
89											
SPECIAL / ACCESSORIES	90	Local Partial Stroke		YES							
	91	Volume Tank		NO							
	92	NACE MR 0175		YES							
	93	Material Certificate		YES							
	94	Quick Exhaust		VTA							
	95	SIL Requirement		To be specified by the client							
	96	Valve Typical No.		NO							
	97	Positioner		NO							
	98	Other		NO							
TESTS	99	Hydro Pressure		YES							
	100	ANSI / FCI Leakage Class		YES							
	101	Other		VTA							
PURCHASE	102										
	103										

Notes

- 1- VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable
- 2- The actuator shall be sized using a thrust/torque safety factor at least of 1.3 times.
- 3- All pneumatic operated ON-OFF valves assembly shall be provided with a permanently fastened tag plate of SS316.
- 4- The final external pneumatic connection shall be 1/2"NPTF, internal connections are 1/4", accessories shall be supplied by vendor.
- 5-All valves test shall be in accordance with API 6D & API 598
- 6- The material of all valves will be in accordance with the project PMS(BK-GCS-PEDCO-120-PI-SP-0001_D02).
- 7-Actuators shall be sized for a minimum air pressure of 3 barg. The normal operating pressure is 4 barg, and the maximum operating pressure is 10 barg and shall be tested at 1.5 times of the maximum air supply.

		تجهیزات و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک (۰۸_۰۰۱-GCS-BK-HD قرارداد)								
		INSTRUMENT D.S. FOR ON/OFF VALVES								
شماره پیمان:		پروژه	بسته کاری	صادر کننده	تجهیزات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۱۲ از ۸
۰۵۳ - ۰۷۳ - ۹۱۸۴		BK	GCS	MF	120	IN	DS	0002	V00	
GENERAL	1	Item Number		Tag Number	Quantity	6		D-ESDV-2104C		1
	2	Service		FROM HEADER GAS TO REBOILER						
	3	P & ID No.		Page No.	BK-GCS-MF-120-PR-PI-0003					4/7
	4	Line No.		Piping Class	FLG-111-0024-AN07-1"-PT					AN07
PROCESS CONDITIONS	5	Fluid		Phase	FUEL GAS		GAS			
	6	Toxic Service		Cold Service	NO		NO			
	7	Corrosive Service		Errosive Service	YES		-			
	8	Max. Flow Rate		Unit	9.3					kg/h
	9	Operating Pressure	Min.	Normal	Max	Unit	4.5	4.9	5.2	barg
	10	Max. Diff. Pressure for Actuator Size		Unit	-					
	11	Design Pressure		Unit	9					barg
	12	Operating Temperature		Unit	19/36.78					°C
	13	Design Temperature		Unit	85					°C
	14	Viscosity		Unit	0.01147					cp
	15	Spec. Heat Ratio(K=Cp/Cv)		1.228						
	16	Spec. Wt./Spec.Grav./Mol Wt		0.8487						
LINE	18	Pipe Line Siz	In/Out	1"	1"					
	19	Schedule	In/Out	SCH.XXS	SCH.XXS					
	20	Pipe Line Insulation		-						
VALVE BODY / BONNET	21	Type		Ball (top entry)						
	22	Size		1"						
	23	Mfr. & Model		VTA						
	24	Seal Material		PTFE						
	25	Body / Bonnet Material		ASTM A105						
	26	Flow Direction		Bi-directional						
	27	Liner Material / ID		VTA						
	28	End	In	1"#300						
	29	Connection	Out	1"#300						
	30	Flange Face Finish		RF. SW						
	31	Type Of Bonnet		Standard (Bolted)						
	32	Lube & ISO Valve		VTA						
	33	Packing Material/TYPE		Teflon-chevron/VTA						
	34	GASKET		AISI316, Graphite filled						
	35	Bolt/Nut		Stud bolt: ASTM A 193-B7M nut: ASTM A 194 -2HM ASME B18.2						
	36	Fire Safe / Antistatic		Yes / Yes						
	37	Hand wheel		No						
	TRIM	39	Type	FB/RB	Trunnion	FB				
40		Plug / Ball / Disk Material		SS316						
41		Seat Material		HARDENED SS/STELLITED						
42		Seal Material		PTFE						
43		Stem Material		SS316						
44		Leakage Class		Tight Shut-off/VI (ANSI B 16.104)						
SOLENOID VALVE	46	DCS Operated SOV		N/A						
	47	ESD Operated SOV		ESD/BMS						
	48	Body Material		SS316						
	49	Operating Voltage		24VDC						
	50	Elec. Connection		M20x1.5						
	51	Pneumatic Connection		VTA						
	52	Ex Certificate		EX d IIB T4						
	53	Ingress Protection		IP65						
	54	Manual Reset		NO						
	55	Mfr. & Model		VTA						
AIR SET	56	Type		Three-way						
	57	Mfr. & Model		VTA						
	58	Set Press.		7.5barg						
	59	Filter	Gauge	YES	YES					
60	Material		Aluminum Die-Cast							
ACTUATOR	61	Type		single acting, spring return pneumatic actuators						
	62	Mfr. & Model		VTA						
	63	Size	Eff Area	VTA	VTA					
	64	Action on Air Failure		FO						
	65	Max Allowable Pressure		VTA						
	66	Min Required Pressure		VTA						
	67	Available Air Supply Pressure		4 - 8.5 barg (NOTE7)						
	68	Nor. Air Supply Pres.(barg)		7.5 barg (NOTE7)						
	69	Bench Range		0.2-1 barg(VTC)						
	70	Actuator Orientation		Top, Horizontal, Parallel(VTC)						
	71	Hand Wheel		No						
	72	Air Failure Valve	Set At	N/A	N/A					
73	Limit Stop		NO							
74	Air Consumption		VTA							
75	Travel Indicator		YES							
76	Pneumatic Connection		1/4" NPTF(VTC)							
77	Fire Proof		NO							
78	Stroke Time (s)	time (s) to Open	Sec <5							
79	Stroke Time (s)	time (s) to Close	Sec <3							
80	Ingress Protection		65							
81	Air set Prss. (Min)		4 barg(VTC)							
LIMIT SWITCH	82	Type		Proximity type						
	83	Mfr. & Model		VTA						
	84	Contacts / Rating		24VDC						
	85	Electrical Connection		M20x1.5						
	86	Ex Certificate		EX d IIB T4						
	87	Weather Protection		65						
	88	Material		Aluminum Die-Cast						
	89									
SPECIAL / ACCESSORIES	90	Local Partial Stroke		YES						
	91	Volume Tank		NO						
	92	NACE MR 0175		YES						
	93	Material Certificate		YES						
	94	Quick Exhaust		VTA						
	95	SIL Requirement		To be specified by the client						
	96	Valve Typical No.		NO						
	97	Positioner		NO						
	98	Other		NO						
TESTS	99	Hydro Pressure		YES						
	100	ANSI / FCI Leakage Class		YES						
	101	Other		VTA						
	102									
PURCHASE	103									

Notes

- 1- VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable
- 2- The actuator shall be sized using a thrust/torque safety factor at least of 1.3 times.
- 3- All pneumatic operated ON-OFF valves assembly shall be provided with a permanently fastened tag plate of SS316.
- 4- The final external pneumatic connection shall be 1/2"NPTF, internal connections are 1/4", accessories shall be supplied by vendor.
- 5-All valves test shall be in accordance with API 6D & API 598
- 6- The material of all valves will be in accordance with the project PMS(BK-GCS-PEDCO-120-PI-SP-0001_D02).
- 7-Actuators shall be sized for a minimum air pressure of 3 barg. The normal operating pressure is 4 barg, and the maximum operating pressure is 10 barg and shall be tested at 1.5 times of the maximum air supply.

		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک (۰۸_۰۰۱-CO-GCS-BK-HD قرارداد)								
		INSTRUMENT D.S. FOR ON/OFF VALVES								
شماره پیمان:		پروژه	بسته کاری	صادر کننده	تهیيات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۹ از ۱۲
۰۵۳ - ۰۷۳ - ۹۱۸۴		BK	GCS	MF	120	IN	DS	0002	V00	
GENERAL	1	Item Number		Tag Number	Quantity	7		D-ESDV-2105A		1
	2	Service								
	3	P & ID No.		Page No.		BK-GCS-MF-120-PR-PI-0003				4/7
	4	Line No.		Piping Class		FLG-111-0026-AN07-1/2"-PT				AN07
PROCESS CONDITIONS	5	Fluid		Phase		FUEL GAS		GAS		
	6	Toxic Service		Cold Service		NO		NO		
	7	Corrosive Service		Errorsive Service		YES		-		
	8	Max. Flow Rate		Unit		9.3		kg/h		
	9	Operating Pressure	Min.	Normal	Max	Unit	0.1	0.5	1	barg
	10	Max. Diff. Pressure for Actuator Size		Unit		-				
	11	Design Pressure		Unit		9		barg		
	12	Operating Temperature		Unit		19/36.78		°C		
	13	Design Temperature		Unit		85		°C		
	14	Viscosity		Unit		0.01147		cp		
	15	Spec. Heat Ratio(K=Cp/Cv)		Unit		1.228				
	16	Spec. Wt./Spec.Grav./Mol Wt		Unit		0.8487				
17										
LINE	18	Pipe Line Siz	In/Out	1/2"	1/2"					
	19	Schedule	In/Out	SCH.XXS	SCH.XXS					
	20	Pipe Line Insulation		-						
VALVE BODY / BONNET	21	Type		Ball (top entry)						
	22	Size		1/2"						
	23	Mfr. & Model		VTA						
	24	Seal Material		PTFE						
	25	Body / Bonnet Material		ASTM A105						
	26	Flow Direction		Bi-directional						
	27	Liner Material / ID		VTA						
	28	End	In	1/2"#300						
	29	Connection	Out	1/2"#300						
	30	Flange Face Finish		RF. SW						
	31	Type Of Bonnet		Standard (Bolted)						
	32	Lube & ISO Valve		VTA						
	33	Packing Material/TYPE		Teflon-chevron/VTA						
	34	GASKET		AISI316, Graphite filled						
	35	Bolt/Nut		Stud bolt: ASTM A 193-B7M nut: ASTM A 194 -2HM ASME B18.2						
36	Fire Safe / Antistatic		Yes / Yes							
37	Hand wheel		No							
TRIM	39	Type	FB/RB	Trunnion	FB					
	40	Plug / Ball / Disk Material		SS316						
	41	Seat Material		HARDENED SS/STELLITED						
	42	Seal Material		PTFE						
	43	Stem Material		SS316						
	44	Leakage Class		Tight Shut-off/VI (ANSI B 16.104)						
SOLENOID VALVE	45	Stem Type		anti-blow out (VTA)						
	46	DCS Operated SOV		N/A						
	47	ESD Operated SOV		ESD/BMS						
	48	Body Material		SS316						
	49	Operating Voltage		24VDC						
	50	Elec. Connection		M20x1.5						
	51	Pneumatic Connection		VTA						
	52	Ex Certificate		EX d IIB T4						
	53	Ingress Protection		IP65						
	54	Manual Reset		NO						
AIR SET	55	Mfr. & Model		VTA						
	56	Type		Three -way						
	57	Mfr. & Model		VTA						
	58	Set Press.		7.5barg						
	59	Filter	Gauge	YES	YES					
	60	Material		Aluminum Die-Cast						
ACTUATOR	61	Type		single acting, spring return pneumatic actuators						
	62	Mfr. & Model		VTA						
	63	Size	Eff Area	VTA	VTA					
	64	Action on Air Failure		FC						
	65	Max Allowable Pressure		VTA						
	66	Min Required Pressure		VTA						
	67	Available Air Supply Pressure		4 - 8.5 barg (NOTE7)						
	68	Nor. Air Supply Pres.(barg)		7.5 barg (NOTE7)						
	69	Bench Range		0.2-1 barg(VTC)						
	70	Actuator Orientation		Top, Horizontal, Parallel(VTC)						
	71	Hand Wheel		No						
	72	Air Failure Valve	Set At	N/A	N/A					
	73	Limit Stop		NO						
74	Air Consumption		VTA							
75	Travel Indicator		YES							
76	Pneumatic Connection		1/4" NPTF(VTC)							
77	Fire Proof		NO							
78	Stroke Time (s)	time (s) to Open	Sec <5							
79		time (s) to Close	Sec <3							
80	Ingress Protection		65							
81	Air set Prss. (Min)		4 barg(VTC)							
LIMIT SWITCH	82	Type		Proximity type						
	83	Mfr. & Model		VTA						
	84	Contacts / Rating		24VDC						
	85	Electrical Connection		M20x1.5						
	86	Ex Certificate		EX d IIB T4						
	87	Weather Protection		65						
	88	Material		Aluminum Die-Cast						
	89									
SPECIAL / ACCESSORIES	90	Local Partial Stroke		YES						
	91	Volume Tank		NO						
	92	NACE MR 0175		YES						
	93	Material Certificate		YES						
	94	Quick Exhaust		VTA						
	95	SIL Requirement		To be specified by the client						
	96	Valve Typical No.		NO						
	97	Positioner		NO						
	98	Other		NO						
TESTS	99	Hydro Pressure		YES						
	100	ANSI / FCI Leakage Class		YES						
	101	Other		VTA						
102										
PURCHASE	103									

Notes

- 1- VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable
- 2- The actuator shall be sized using a thrust/torque safety factor at least of 1.3 times.
- 3- All pneumatic operated ON-OFF valves assembly shall be provided with a permanently fastened tag plate of SS316.
- 4- The final external pneumatic connection shall be 1/2"NPTF, internal connections are 1/4", accessories shall be supplied by vendor.
- 5-All valves test shall be in accordance with API 6D & API 598
- 6- The material of all valves will be in accordance with the project PMS(BK-GCS-PEDCO-120-PI-SP-0001_D02).
- 7-Actuators shall be sized for a minimum air pressure of 3 barg. The normal operating pressure is 4 barg, and the maximum operating pressure is 10 barg and shall be tested at 1.5 times of the maximum air supply.

		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نیم زداى گاز ایستگاه تقویت فشار گاز بینک (۰۸ - ۰۰۱ - BK-HD-GCS-CO- قرارداد)								
		INSTRUMENT D.S. FOR ON/OFF VALVES								
شماره پیمان:		پروژه	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۱۰ از ۱۲
۰۵۳ - ۰۷۳ - ۹۱۸۴		BK	GCS	MF	120	IN	DS	0002	V00	
GENERAL	1	Item Number	Tag Number	Quantity	8	D-ESDV-2105B			1	
	2	Service								FROM HEADER GAS TO REBOILER
	3	P & ID No.	Page No.	BK-GCS-MF-120-PR-PI-0003			4/7			
	4	Line No.	Piping Class	FLG-111-0026-AN07-1/2"-PT			AN07			
PROCESS CONDITIONS	5	Fluid	Phase	FUEL GAS			GAS			
	6	Toxic Service	Cold Service	NO			NO			
	7	Corrosive Service	Errossive Service	YES			-			
	8	Max. Flow Rate	Unit	9.3			kg/h			
	9	Operating Pressure	Min. Normal Max	Unit	0.1	0.5	1	barg		
	10	Max. Diff. Pressure for Actuator Size	Unit	-						
	11	Design Pressure	Unit	9			barg			
	12	Operating Temperature	Unit	19/36.78			°C			
	13	Design Temperature	Unit	85			°C			
	14	Viscosity	Unit	0.01147			cp			
	15	Spec. Heat Ratio(K=Cp/Cv)				1.228				
	16	Spec. Wt./Spec.Grav./Mol Wt				0.8487				
	17									
	LINE	18	Pipe Line Siz	In/Out	1/2"	1/2"				
19		Schedule	In/Out	SCH.XXS	SCH.XXS					
20		Pipe Line Insulation	-							
VALVE BODY / BONNET	21	Type	Ball (top entry)							
	22	Size	1/2"							
	23	Mfr. & Model	VTA							
	24	Seal Material	PTFE							
	25	Body / Bonnet Material	ASTM A105							
	26	Flow Direction	Bi-directional							
	27	Liner Material / ID	VTA							
	28	End	In	1/2"#300						
	29	Connection	Out	1/2"#300						
	30	Flange Face Finish	RF. SW							
	31	Type Of Bonnet	Standard (Bolted)							
	32	Lube & ISO Valve	VTA							
	33	Packing Material/TYPE	Teflon-chevron/VTA							
	34	GASKET	AISI316, Graphite filled							
	35	Bolt/Nut	Stud bolt: ASTM A 193-B7M nut: ASTM A 194 -2HM ASME B18.2							
	36									
	37	Fire Safe / Antistatic	Yes / Yes							
	38	Hand wheel	No							
TRIM	39	Type	FB/RB	Trunnion	FB					
	40	Plug / Ball / Disk Material	SS316							
	41	Seat Material	HARDENED SS/STELLITED							
	42	Seal Material	PTFE							
	43	Stem Material	SS316							
	44	Leakage Class	Tight Shut-off/VI (ANSI B 16.104)							
	45	Stem Type	anti-blow out (VTA)							
SOLENOID VALVE	46	DCS Operated SOV	N/A							
	47	ESD Operated SOV	ESD/BMS							
	48	Body Material	SS316							
	49	Operating Voltage	24VDC							
	50	Elec. Connection	M20x1.5							
	51	Pneumatic Connection	VTA							
	52	Ex Certificate	EX d IIB T4							
	53	Ingress Protection	IP65							
	54	Manual Reset	NO							
	55	Mfr. & Model	VTA							
	56	Type	Three -way							
AIR SET	57	Mfr. & Model	VTA							
	58	Set Press.	7.5barg							
	59	Filter	Gauge	YES	YES					
	60	Material	Aluminum Die-Cast							
ACTUATOR	61	Type	single acting, spring return pneumatic actuators							
	62	Mfr. & Model	VTA							
	63	Size	Eff Area	VTA	VTA					
	64	Action on Air Failure	FC							
	65	Max Allowable Pressure	VTA							
	66	Min Required Pressure	VTA							
	67	Available Air Supply Pressure	4 - 8.5 barg (NOTE7)							
	68	Nor. Air Supply Pres.(barg)	7.5 barg (NOTE7)							
	69	Bench Range	0.2-1 barg(VTC)							
	70	Actuator Orientation	Top, Horizontal, Parallel(VTC)							
	71	Hand Wheel	No							
	72	Air Failure Valve	Set At	N/A	N/A					
	73	Limit Stop	NO							
74	Air Consumption	VTA								
75	Travel Indicator	YES								
76	Pneumatic Connection	1/4" NPTF(VTC)								
77	Fire Proof	NO								
78	Stroke Time (s)	Time (s) to Open	Sec <5						Time (s) to Close	Sec <3
79	Ingress Protection	65								
80	Air set Prss. (Min)	4 barg(VTC)								
LIMIT SWITCH	82	Type	Proximity type							
	83	Mfr. & Model	VTA							
	84	Contacts / Rating	24VDC							
	85	Electrical Connection	M20x1.5							
	86	Ex Certificate	EX d IIB T4							
	87	Weather Protection	65							
	88	Material	Aluminum Die-Cast							
SPECIAL / ACCESSORIES	89									
	90	Local Partial Stroke	YES							
	91	Volume Tank	NO							
	92	NACE MR 0175	YES							
	93	Material Certificate	YES							
	94	Quick Exhaust	VTA							
	95	SIL Requiment	To be specified by the client							
	96	Valve Typical No.	NO							
	97	Positioner	NO							
	98	Other	NO							
TESTS	99	Hydro Pressure	YES							
	100	ANSI / FCI Leakage Class	YES							
	101	Other	VTA							
	102									
PURCHASE	103									

Notes

- 1- VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable
- 2- The actuator shall be sized using a thrust/torque safety factor at least of 1.3 times.
- 3- All pneumatic operated ON-OFF valves assembly shall be provided with a permanently fastened tag plate of SS316.
- 4- The final external pneumatic connection shall be 1/2"NPTF, internal connections are 1/4", accessories shall be supplied by vendor.
- 5-All valves test shall be in accordance with API 6D & API 598
- 6- The material of all valves will be in accordance with the project PMS(BK-GCS-PEDCO-120-PI-SP-0001_D02).
- 7-Actuators shall be sized for a minimum air pressure of 3 barg. The normal operating pressure is 4 barg, and the maximum operating pressure is 10 barg and shall be tested at 1.5 times of the maximum air supply.

		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نیم زدای گاز ایستگاه تقویت فشار گاز بینک (۰۸-۰۰۱-GCS-BK-HD قرارداد)									
		INSTRUMENT D.S. FOR ON/OFF VALVES									
شماره پیمان:		پروژه	بسته کاری	صادر کننده	تجهیزات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۱۱ از ۱۲	
۰۵۳ - ۰۷۳ - ۹۱۸۴		BK	GCS	MF	120	IN	DS	0002	V00		
GENERAL	1	Item Number	Tag Number	Quantity	9	D-ESDV-2105C			1		
	2	Service	FROM HEADER GAS TO REBOILER								
	3	P & ID No.	Page No.	BK-GCS-MF-120-PR-PI-0003			4/7				
	4	Line No.	Piping Class	FLG-111-0026-AN07-1/2"-PT			AN07				
PROCESS CONDITIONS	5	Fluid	Phase	FUEL GAS			GAS				
	6	Toxic Service	Cold Service	NO			NO				
	7	Corrosive Service	Errosive Service	YES			-				
	8	Max. Flow Rate	Unit	9.3			kg/h				
	9	Operating Pressure	Min. Normal Max	Unit	0.1	0.5	1	barg			
	10	Max. Diff. Pressure for Actuator Size	Unit	-							
	11	Design Pressure	Unit	9			barg				
	12	Operating Temperature	Unit	19/36.78			°C				
	13	Design Temperature	Unit	85			°C				
	14	Viscosity	Unit	0.01147			cp				
	15	Spec. Heat Ratio(K=Cp/Cv)	1.228								
	16	Spec. Wt./Spec.Grav./Mol Wt	0.8487								
	17										
	LINE	18	Pipe Line Siz	In/Out	1/2"	1/2"					
		19	Schedule	In/Out	SCH.XXS	SCH.XXS					
		20	Pipe Line Insulation	-							
VALVE BODY / BONNET	21	Type	Ball (top entry)								
	22	Size	1/2"								
	23	Mfr. & Model	VTA								
	24	Seal Material	PTFE								
	25	Body / Bonnet Material	ASTM A105								
	26	Flow Direction	Bi-directional								
	27	Liner Material / ID	VTA								
	28	End	In	1"#300							
	29	Connection	Out	1"#300							
	30	Flange Face Finish	RF. SW								
	31	Type Of Bonnet	Standard (Bolted)								
	32	Lube & ISO Valve	VTA								
	33	Packing Material/TYPE	Teflon-chevron/VTA								
	34	GASKET	AISI316, Graphite filled								
	35	Bolt/Nut	Stud bolt: ASTM A 193-B7M nut: ASTM A 194 -2HM ASME B18.2								
	36										
	37	Fire Safe / Antistatic	Yes / Yes								
	38	Hand wheel	No								
TRIM	39	Type	FB/RB	Trunnion	FB						
	40	Plug / Ball / Disk Material	SS316								
	41	Seat Material	HARDENED SS/STELLITED								
	42	Seal Material	PTFE								
	43	Stem Material	SS316								
	44	Leakage Class	Tight Shut-off/VI (ANSI B 16.104)								
	45	Stem Type	anti-blow out (VTA)								
SOLENOID VALVE	46	DCS Operated SOV	N/A								
	47	ESD Operated SOV	ESD/BMS								
	48	Body Material	SS316								
	49	Operating Voltage	24VDC								
	50	Elec. Connection	M20x1.5								
	51	Pneumatic Connection	VTA								
	52	Ex Certificate	EX d IIB T4								
	53	Ingress Protection	IP65								
	54	Manual Reset	NO								
	55	Mfr. & Model	VTA								
	56	Type	Three -way								
AIR SET	57	Mfr. & Model	VTA								
	58	Set Press.	7.5barg								
	59	Filter	Gauge	YES	YES						
	60	Material	Aluminum Die-Cast								
ACTUATOR	61	Type	single acting, spring return pneumatic actuators								
	62	Mfr. & Model	VTA								
	63	Size	Eff Area	VTA	VTA						
	64	Action on Air Failure	FO								
	65	Max Allowable Pressure	VTA								
	66	Min Required Pressure	VTA								
	67	Available Air Supply Pressure	4 - 8.5 barg (NOTE7)								
	68	Nor. Air Supply Pres.(barg)	7.5 barg (NOTE7)								
	69	Bench Range	0.2-1 barg(VTC)								
	70	Actuator Orientation	Top, Horizontal, Parallel(VTC)								
	71	Hand Wheel	No								
	72	Air Failure Valve	Set At	N/A	N/A						
	73	Limit Stop	NO								
74	Air Consumption	VTA									
75	Travel Indicator	YES									
76	Pneumatic Connection	1/4" NPTF(VTC)									
77	Fire Proof	NO									
78	Stroke Time (s)	Time (s) to Open	Sec <5								
79		Time (s) to Close	Sec <3								
80	Ingress Protection	65									
81	Air set Prss. (Min)	4 barg(VTC)									
LIMIT SWITCH	82	Type	Proximity type								
	83	Mfr. & Model	VTA								
	84	Contacts / Rating	24VDC								
	85	Electrical Connection	M20x1.5								
	86	Ex Certificate	EX d IIB T4								
	87	Weather Protection	65								
	88	Material	Aluminum Die-Cast								
	89										
SPECIAL / ACCESSORIES	90	Local Partial Stroke	YES								
	91	Volume Tank	NO								
	92	NACE MR 0175	YES								
	93	Material Certificate	YES								
	94	Quick Exhaust	VTA								
	95	SIL Requirement	To be specified by the client								
	96	Valve Typical No.	NO								
	97	Positioner	NO								
	98	Other	NO								
TESTS	99	Hydro Pressure	YES								
	100	ANSI / FCI Leakage Class	YES								
	101	Other	VTA								
PURCHASE	102										
	103										

Notes

- 1- VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable
- 2- The actuator shall be sized using a thrust/torque safety factor at least of 1.3 times.
- 3- All pneumatic operated ON-OFF valves assembly shall be provided with a permanently fastened tag plate of SS316.
- 4- The final external pneumatic connection shall be 1/2"NPTF, internal connections are 1/4", accessories shall be supplied by vendor.
- 5-All valves test shall be in accordance with API 6D & API 598
- 6- The material of all valves will be in accordance with the project PMS(BK-GCS-PEDCO-120-PI-SP-0001_D02).
- 7-Actuators shall be sized for a minimum air pressure of 3 barg. The normal operating pressure is 4 barg, and the maximum operating pressure is 10 barg and shall be tested at 1.5 times of the maximum air supply.

		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک (۰۸_۰۰۱-BK-HD-GCS-CO قرارداد)								
		INSTRUMENT D.S. FOR ON/OFF VALVES								
		شماره پیمان:	پروژه	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه
۰۵۳ - ۰۷۳ - ۹۱۸۴		BK	GCS	MF	120	IN	DS	0002	V00	
GENERAL	1	Item Number	Tag Number	Quantity	10	D-ESDV-2106		1		
	2	Service FROM HEADER GAS TO REBOILER / SURGE FRUM								
	3	P & ID No.	Page No.	BK-GCS-MF-120-PR-PI-0003						5/7
	4	Line No.	Piping Class	FLG-111-0027-AN07-2"-PT						AN07
PROCESS CONDITIONS	5	Fluid	Phase		FUEL GAS		GAS			
	6	Toxic Service	Cold Service		NO		NO			
	7	Corrosive Service	Erosive Service		YES		-			
	8	Max. Flow Rate	Unit		69.3		kg/h			
	9	Operating Pressure	Min.	Normal	Max	Unit	4.5	4.9	5.2	barg
	10	Max. Diff. Pressure for Actuator Size	Unit		-					
	11	Design Pressure	Unit		9		barg			
	12	Operating Temperature	Unit		19/36.78		°C			
	13	Design Temperature	Unit		85		°C			
	14	Viscosity	Unit		0.01147		cp			
	15	Spec. Heat Ratio(K=Cp/Cv)	Unit		1.228					
	16	Spec. Wt./Spec.Grav./Mol Wt	Unit		0.8487					
	17									
	LINE	18	Pipe Line Siz	In/Out	2"	2"				
19		Schedule	In/Out	SCH160	SCH160					
20		Pipe Line Insulation	-							
VALVE BODY / BONNET	21	Type	Ball (top entry)							
	22	Size	2"							
	23	Mfr. & Model	VTA							
	24	Seal Material	PTFE							
	25	Body / Bonnet Material	A216 Gr.WCB							
	26	Flow Direction	Bi-directional							
	27	Liner Material / ID	VTA							
	28	End	In	2"#300						
	29	Connection	Out	2"#300						
	30	Flange Face Finish	RF. WN (125-250 AARH)							
	31	Type Of Bonnet	Standard (Bolted)							
	32	Lube & ISO Valve	VTA							
	33	Packing Material/TYPE	Teflon-chevron/VTA							
	34	GASKET	AISI316, Graphite filled							
	35	Bolt/Nut	Stud bolt: ASTM A 193-B7M nut: ASTM A 194 -2HM ASME B18.2							
	36	Fire Safe / Antistatic	Yes / Yes							
	37	Hand wheel	No							
	TRIM	39	Type	FB/RB	Trunnion	FB				
40		Plug / Ball / Disk Material	SS316							
41		Seat Material	HARDENED SS/STELLITED							
42		Seal Material	PTFE							
43		Stem Material	SS316							
44		Leakage Class	Tight Shut-off/VI (ANSI B 16.104)							
SOLENOID VALVE	45	Stem Type	VTA							
	46	DCS Operated SOV	N/A							
	47	ESD Operated SOV	ESD/BMS							
	48	Body Material	SS316							
	49	Operating Voltage	24VDC							
	50	Elec. Connection	M20x1.5							
	51	Pneumatic Connection	VTA							
	52	Ex Certificate	EX d IIB T4							
	53	Ingress Protection	IP65							
	54	Manual Reset	NO							
	55	Mfr. & Model	VTA							
	56	Type	Three -way							
AIR SET	57	Mfr. & Model	VTA							
	58	Set Press.	7.5barg							
	59	Filter	Gauge	YES	YES					
	60	Material	Aluminum Die-Cast							
ACTUATOR	61	Type	single acting, spring return pneumatic actuators							
	62	Mfr. & Model	VTA							
	63	Size	Eff Area	VTA	VTA					
	64	Action on Air Failure	FC							
	65	Max Allowable Pressure	VTA							
	66	Min Required Pressure	VTA							
	67	Available Air Supply Pressure	4 - 8.5 barg (NOTE7)							
	68	Nor. Air Supply Pres.(barg)	7.5 barg (NOTE7)							
	69	Bench Range	0.2-1 barg(VTC)							
	70	Actuator Orientation	Top, Horizontal, Parallel(VTC)							
	71	Hand Wheel	No							
	72	Air Failure Valve	Set At	N/A	N/A					
	73	Limit Stop	NO							
	74	Air Consumption	VTA							
	75	Travel Indicator	YES							
	76	Pneumatic Connection	1/4" NPTF(VTC)							
	77	Fire Proof	NO							
	78	Stroke Time (s)	Time (s) to Open	Sec <5						
79	Stroke Time (s)	Time (s) to Close	Sec <3							
LIMIT SWITCH	80	Ingress Protection	65							
	81	Air set Prss. (Min)	4 barg(VTC)							
	82	Type	Proximity type							
	83	Mfr. & Model	VTA							
	84	Contacts / Rating	24VDC							
	85	Electrical Connection	M20x1.5							
SPECIAL / ACCESSORIES	86	Ex Certificate	EX d IIB T4							
	87	Weather Protection	65							
	88	Material	Aluminum Die-Cast							
	89									
	90	Local Partial Stroke	YES							
	91	Volume Tank	NO							
	92	NACE MR 0175	YES							
	93	Material Certificate	YES							
	94	Quick Exhaust	VTA							
	95	SIL Requirement	To be specified by the client							
	96	Valve Typical No.	NO							
	97	Positioner	NO							
TESTS	98	Other	NO							
	99	Hydro Pressure	YES							
	100	ANSI / FCI Leakage Class	YES							
	101	Other	VTA							
PURCHASE	102									
	103									

Notes

- 1- VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable
- 2- The actuator shall be sized using a thrust/torque safety factor at least of 1.3 times.
- 3- All pneumatic operated ON-OFF valves assembly shall be provided with a permanently fastened tag plate of SS316.
- 4- The final external pneumatic connection shall be 1/2"NPTF, internal connections are 1/4", accessories shall be supplied by vendor.
- 5- All valves test shall be in accordance with API 6D & API 598
- 6- The material of all valves will be in accordance with the project PMS(BK-GCS-PEDCO-120-PI-SP-0001_D02).
- 7- Actuators shall be sized for a minimum air pressure of 3 barg. The normal operating pressure is 4 barg, and the maximum operating pressure is 10 barg and shall be tested at 1.5 times of the maximum air supply.