

	نگهداشت و افزایش تولید میدان نفتی بینک بسته‌های کاری تحت‌الارض احداث خطوط انتقال گاز/مابعات گازی از ایستگاه تقویت فشار گاز بینک تا ایستگاه تزریق گاز سیاه‌مکان/واحد بهره برداری بینک								
	DATA SHEETS FOR ON/OFF & SHUTDOWN VALVES								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری PPL	صادرکننده PEDCO	تمهيلات 320	رشته IN	نوع مدرک DT	سریال 0006	نسخه D01	شماره صفحه: ۱ از ۶

طرح نگهداشت و افزایش تولید ۲۷ مخزن

DATA SHEETS FOR ON/OFF & SHUTDOWN VALVES

نگهداشت و افزایش تولید میدان نفتی بینک

D01	OCT.2022	IFA	P.Hajisadeghi	M.Fakharian	M.Mehrshad	
D00	MAY.2022	IFC	P.Hajisadeghi	M.Fakharian	M.Mehrshad	
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Class: 2

CLIENT Doc. Number: F9Z-708585

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



نگهداشت و افزایش تولید میدان نفتی بینک
 بسته‌های کاری تحت‌الارض
 احداث خطوط انتقال گاز/مابعات گازی از ایستگاه تقویت فشار گاز بینک تا
 ایستگاه تزریق گاز سیاه‌مکان/واحد بهره‌برداری بینک



DATA SHEETS FOR ON/OFF & SHUTDOWN VALVES

شماره پیمان:	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۶ از ۲
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	PPL	PEDCO	320	IN	DT	0006	D01	

REVISION RECORD SHEET

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 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک بسته‌های کاری تحت‌الارض احداث خطوط انتقال گاز/مایعات گازی از ایستگاه تقویت فشار گاز بینک تا ایستگاه تزریق گاز سیاهمکان/واحد بهره برداری بینک								
	DATA SHEETS FOR ON/OFF & SHUTDOWN VALVES								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری PPL	صادرکننده PEDCO	تسهیلات 320	رشته IN	نوع مدرک DT	سریال 0006	نسخه D01	شماره صفحه: ۶ از ۳



REFERENCE DOCUMENTS :

1. Instrument & Control System Design Criteria	BK-PPL-PEDCO-320-IN-DC-0001
2. P&ID - Gas Pipeline (to Siahmakan G.I. Station)	BK-PPL-PEDCO-320-PR-PI-0001
3. P&ID - Condensate Pipeline (to Binak PU)	BK-PPL-PEDCO-320-PR-PI-0002
4. Piping Material Specification	BK-PPL-PEDCO-320-PI-SP-0001
5. Specification for Instrumentation	BK-GNRAL-PEDCO-000-IN-SP-0001
6. Specification For On-off Shut Down Valves(ESDVMOV)	BK-GNRAL-PEDCO-000-IN-SP-0006
7. Instrument Hook-Up Diagram	BK-PPL-PEDCO-320-IN-DG-0002
8. Process Basic of Design	BK-GNRAL-PEDCO-000-PR-DB-0001
9. Specification For Hazardous Area Classification	BK-GNRAL-PEDCO-000-SA-SP-0002

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	DATA SHEETS FOR ON/OFF & SHUTDOWN VALVES								
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۴ از ۶
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	PPL	PEDCO	320	IN	DT	0006	D01	

GENERAL NOTES:



- Calculations shall be provided for each completely piped actuated valve assembly (including solenoid valve), the stroking times i.e. to close and to open.
- The duty, failure action and stroke time shall all be approved by the Purchaser.
- The actuator shall be designed to operate the valve through its full stroke.
- The full stroke time for on-off valve which is less or equal than 4" size, shall be max. 5 second and for valves greater than 4" , 1 second shall be added to the 4 sec for each increment of 1" in valve size. The maximum fully stroke time shall be 10 seconds.
- The piping indicates corrosion allowance selected as per document "Piping & Pipeline Material Specification, No. " BK-PPL-PEDCO-320-PI-SP-0001 "
- Hydro-test duration shall be in accordance with API 6D.
- All ball valves shall be fitted with suitable 'end of travel' stops at the fully open and fully closed positions and a local position indicator. The design shall prevent the ingress of foreign material and corrosion products which would impair the operation of the stops. Devices capable of locking the valves in their safe position (ESDV in open or closed position) shall be provided for maintenance and shall be vendor's standard proven design.
- Vendor shall guarantee and demonstrate the required stroking speed, during the Functional Test (FAT).
- All accessories shall be mounted, together with solenoid valve, etc., on a 316SS sub-plate. Tubing shall be suitably sized TP 316L stainless steel with stainless steel double ferrule compression fittings.
- Solenoid valve shall be selected in accordance with low power type.
- All on/off valves shall be preferably fitted with single acting, spring return pneumatic actuators, completed with mounting kit. Also Partial Stroking test or pilot valve to be considered.
- The actuator shall be fail-safe in operation (as specified in data sheets) in loss of electrical signal or loss of air supply.
- The spring return actuator shall be "pre stressed".
- Pneumatic actuators will be sized on the basis of a minimum safety factor of 1.5 and a minimum air pressure of 3 Barg.
The valve actuator torque shall be in excess of the required valve torque under all operating conditions.
- All actuators and accessories shall be clearly and permanently identified by nameplate. The nameplate shall be in stainless steel and affixed to the VALVE, actuator and accessories.
- For application in sour gas services, as indicated in individual data sheets, material of body, trim and all other wetted metal parts in contact with the sour gas shall meet the requirements of NACE, MR-01-75, latest edition.
- Material Test Certificate and calibration Certificate for all transmitters to be submitted by Vendor.
- Manual Reset to be consider for all Emergency Shut off solenoids as per P&ID.
- Disc/seat material shall be resilient to give a tight shut off feature.
- According to "Process Basic of Design" Document, Environmental Condition For Field Instrumentation of BINAK Complex Shall Be Considered As Per The Following:
Maximum ambient temperature: 50 (°C)
Minimum ambient temperature: -5 (°C)
Maximum steel surface exposed to sun: 85 (°C)
Maximum summer dry bulb: -
Maximum Design relative humidity (%): 100
Minimum Design relative humidity (%): 0
- Flow direction shall be permanently and clearly indicated on the valve body.
- External grounding shall be provided for each solenoid valve.
- Valves in safety related services should have been fire tested and certification to be provided by Vendor.
- Seat rings shall be spring loaded and so designed that line pressure will assist in sealing round the ball.
- Valve stem extension shall be detachable for easy replacements.
- At least two stem seals shall be provided with facility for injection of secondary sealant and with stainless steel fittings.
- Stem seal shall be replaceable while the valve is in closed operation position.
- Short stroke single acting pneumatic piston actuators shall preferably be used on emergency shutdown service.

 NISOC	تجهیزات و افزایش تولید میدان نفتی بینک بندهای کاری تحت الارض احداث خطوط انتقال گاز/ایمپات گازی از ایستگاه تقویت فشار گاز بینک تا ایستگاه تزریق گاز سیاهمکان واحد بهره برداری بینک							 HIRGAN ENERGY 	
	DATA SHEETS FOR ON/OFF & SHUTDOWN VALVES								
شماره پیمان:	پروژه	بنده کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سرپال	نسخه	شماره صفحه: ۶ از ۶
۰۳۸ - ۰۷۳ - ۰۵۳	BK	PPL	PEDCO	320	IN	DT	0006	D01	

On-Off Valve																				
TAG NO:		ESDV-3202		P&ID NO : BK-PPL-PEDCO-320-PR-PI-0001_D01 (page 3 of 3)				SERVICE:			FROM PIG LAUNCHER (PL-3201)C									
FLUID STATE:		GAS		PHASE: GAS				AREA CLASSIFICATION:			Zone 2, IIB T4									
SERVICE CONDITION					UNITS		Max Flow		Norm. Flow		Min. Flow		Shut-Off							
	1 FLOW RATE				kg/h		-				-		-							
	2 INLET PRESSURE				bar(g)		40				-		-							
	3 OUTLET PRESSURE				bar(g)		40				-		-							
	4 DIFFERENTIAL PRESSURE				bar(g)		-				-		63							
	5 INLET TEMPERATURE				°C		31.3				-		-							
	6 DENSITY(Mix./Gas/Liquid)				kg/m3		49.09				-		-							
	7 VISCOSITY (GAS/LIQ.)				CP		0.012				-		-							
	8 VAPOR PRESSURE Pv				bar(a)		-				-		-							
9 CRITICAL PRESSURE				bar(g)		104.9				-		-								
LINE	10 PIPE LINE SIZE & SCHEDULE		IN		8"		52 TYPE			Single Acting , Spring Return										
			OUT		8"			53 SIZE			VTA		VTA							
	11 PIPING CLASS/PIPE LINE INSULATION				FN05 / PAINTED				54 SPRING FAIL ACTION		Fail to Close									
VALVE BODY & BONNET	12 TYPE				Full Bore Ball Valve/Trunion Mounted				55 MAX ALLOWABLE PRESSURE		VTA									
	13 SIZE				8"				56 MIN REQUIRES PRESSURE		VTA									
	14 MAX PRESS./TEMP				As per Specification For Pipeline Material (Note 5)				57 AVAILABLE AIR SUPPLY PRESS.		MAX/NOR/MIN: 8/7/4.5 barg (Note 14)									
	15 MFR. & MODEL				Will be finalized later				58 BENCH RANGE		VTA									
	16 BODY / BONNET MATL				A216 Gr. WCB (Note 5)				59 TRAVELING TIME		8 Sec.									
	17 LINER MATERIAL / ID				VTA				60 FUNCTION		On/Off									
	18 END CONNECTION		ANSI Class		8"		600#		61 LOCAL POSITION INDICATOR		Required									
	19 FLG FACE FINISH				RF				62 ACT. ORIENTATION		VTA									
	20 END EXT./MATL.				N/A				63 HAND WHEEL TYPE		Decatchable side mounted									
	21 FLOW DIRECTION				N/A				64 ADJUSTABLE LIMIT STOP		Yes									
	22 TYPE OF BONNET				Standard				65 INPUT SIGNAL		24VDC									
	23 LUBE & ISO VALVE				No				66 MFR. & MODEL		Will be finalized later									
	24 PACKING MATERIAL		PACKING TYPE		PTFE		Standard		67 TYPE		N/A									
	25 ENTRY DESIGN				Top Entry				68 MFR. & MODEL		N/A									
	26 NACE REQUIREMENTNACE (MR-0175/ISO 15156)				Yes				69 ON INCR SIGNAL OUTPUT INCR / DECR		N/A									
	TRIM	27 TRIM TYPE		TRIM MATERIAL		VTA		316-RPTFE		70 GAUGES		N/A								
28 SIZE		RATED TRAVEL		VTA		VTA		71 CAM CHARACTERISTIC		N/A										
29 CHARACTERISTICS				On/Off				72 AIR CONNECTION		N/A										
30 BALANCED / UNBALANCED				VTA				75 TAG NO. :		EZSC-3202 /EZSO-3202										
31 RATED Cv		FL		XT		VTA		VTA		VTA		76 TYPE		QUANTITY		Magnetically operated 'REED' contacts		2		
32 PLUG / BALL MATERIAL				SS316 (Note 5)				77 CONTACTS / RATING		110V DC , 10A										
33 DISK/ SEAT MATERIAL		SEAT TYPE		PTFE (Note 19)		Soft seat (VTC)		78 ACTUATION POINT		Fully Open/Close										
34 CAGE / GUIDE MATERIAL				VTA				79 ENCLOSURE MATERIAL		Die Cast Aluminum										
35 STEM TYPE		STEM MATERIAL		Anti-Blow Out (As per reference 6)		forged, 13% chromium steel (As per reference 6)		80 WEATHER PROTECTION		IP-65										
36 LEAKAGE CLASS				ANSI Class VI				81 ELEC. CERTIFICATE		ELEC. CONNECTION		EEx "d", IIB T4		ISO M20 x 1.5						
37 VALVE STEM EXTENSION REQUIREMENT				YES				82 MFR. & MODEL		Will be finalized later										
SOLENOID VALVE	38 TAG NO				ESOV-3202, PSOV-3202				83 SET PRESSURE		VTA									
	39 TYPE				3 Way				84 PNEUMATIC CONNECTION		1/4" NPT									
	40 BODY MATERIAL		WEATHER IP.		AISI 316 S.S		IP-65		85 GAUGES		FILTER		Required		Required					
	41 ELE. CERTIFICATE		ELE. CONNECTION		EEx "d", IIB T4		ISO M20 x 1.5		86 MFR. & MODEL		Will be finalized later									
	42 MANUAL RESET				Yes (Note 18)				87 ANSI/FCI LEAKAGE CLASS		Required									
	43 POWER SUPPLY				24 VDC				88 HYDRO PRESSURE		Required									
	44 PNEU. CONNECTION				1/4" NPT				89 FUNCTIONAL TEST		Required									
SPECIAL / ACCESS.	45 FUSIBLE LEAKAGE				No				90											
	46 BLOCK RELAY				No				91											
	47 QUICK EXHUST				Yes				92											
	48 FILTER REGULATOR				Yes				93 PASSIVE FIRE PROTECTION		No									
	49 VOLUME TANK				Yes				94 API 6FA REQUIREMENTS		Yes									
	50 MECHANICAL POSITION INDICATOR				Required				95 SIL 3 REQUIREMENTS		Yes									
	51 MANUAL PNE. BYPASS VALVE FOR SOLENOID VALVE				Yes				96 PARTIAL STROKING VALVE TEST		Yes									
NOTE: VTA : VENDOR TO ADVISE ** PMS: Piping Material Specification																				