


 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						  		
	DATASHEETS FOR LBV								
شماره پیمان: 053 - 073 - 9184	پروژه BK	بسته کاری PPL	صادرکننده PEDCO	تسهیلات 320	رشته IN	نوع مدرک DT	سریال 0012	نسخه D02	شماره صفحه: 1 از 6

طرح نگهداشت و افزایش تولید 27 مخزن

DATASHEETS FOR LBV

نگهداشت و افزایش تولید میدان نفتی بینک

D02	OCT.2023	AFC	P.Hajisadeghi	M.Fakharian	S.Faramarzpour	
D01	JUN.2022	IFA	P.Hajisadeghi	M.Fakharian	M.Mehrshad	
D00	MAR.2022	IFC	P.Hajisadeghi	M.Fakharian	M.Mehrshad	
Rev.	Date	Purpose of Issue / Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval

Class: 1 CLIENT Doc. Number: F9Z-708589

status:

- IDC: Inter-Discipline Check
- IFC: Issued For Comment
- IFA: Issued For Approval
- AFD: Approved For Design
- AFC: Approved For Construction
- AFP: Approved For Purchase
- AFQ: Approved For Quotation
- IFI: Issued For Information
- AB-R: As-Built for CLIENT Review
- AB-A: As-Built –Approved



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نگهداشت و افزایش تولید میدان نفتی بینک
بسته‌های کاری تحت‌الارض

احداث خطوط انتقال گاز/مایعات گازی از ایستگاه تقویت فشار گاز بینک تا
ایستگاه تزریق گاز سیاه‌مکان/واحد بهره برداری بینک



DATASHEETS FOR LBV

شماره پیمان:

053 - 073 - 9184

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه
D02	0012	DT	IN	320	PEDCO	PPL	BK

شماره صفحه: 2 از 6

REVISION RECORD SHEET

Page	D00	D01	D02	D03	D04	Page	D00	D01	D02	D03	D04
1	X	X	X			65					
2	X	X	X			66					
3	X	X	X			67					
4	X	X	X			68					
5	X	X	X			69					
6	X	X	X			70					
7						71					
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DATASHEETS FOR LBV

شماره پیمان:

053 - 073 - 9184

پروژه

BK

بسته کاری

PPL

صادرکننده

PEDCO

تسهیلات

320

رشته

IN

نوع مدرک

DT

سریال

0012

نسخه

D02

شماره صفحه: 3 از 6

REFERENCE DOCUMENTS :

D02

Instrument & Control System Design Criteria

BK-PPL-PEDCO-320-IN-DC-0001_D01

P&ID - Gas Pipeline (to Siahmakan G.I. Station)

BK-PPL-PEDCO-320-PR-PI-0001_D04

P&ID - Condensate Pipeline (to Binak PU)

BK-PPL-PEDCO-320-PR-PI-0002_D05

Piping Material Specification

BK-PPL-PEDCO-320-PI-SP-0001_D03

Pipeline Material Specification

BK-PPL-PEDCO-320-PL-SP-0001_D05

Specification For LBV

BK-GNRAL-PEDCO-000-IN-SP-0013_D02

Instrument Hook-Up Diagram

BK-PPL-PEDCO-320-IN-DG-0002_D01

Process Basis Of Design

BK-GNRAL-PEDCO-000-PR-DB-0001_D08



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DATASHEETS FOR LBV

شماره پیمان:

053 - 073 - 9184

پروژه

بسته کاری

صادرکننده

تجهیزات

رشته

نوع مدرک

سریال

نسخه

0012

D02

شماره صفحه: 4 از 6

GENERAL NOTES:

- Calculations shall be provided for each completely piped actuated valve assembly 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. 4 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.
- NACE consideration shall be regarded according to MR 01 75.
- Hydro-test duration shall be in accordance with API 6D.

7. Valves excluding check valves shall be capable of sealing at these pressures in either direction. Valves shall be designed to withstand a sustained internal vacuum of 1 (one) barg (i.e. full vacuum) in both open and closed positions.

8. Vendor shall guarantee and demonstrate the required stroking speed, during the Functional Test (FAT).

9. The gas-over-oil actuator shall basically comprise of the following components:

- Actuating control box
- Actuator cylinders
- Gas-over-oil tank
- Hand pump with pertinent change-over valve
- Metering valve
- Sensing tank and double check valves.
- Double check valves to be considered.

10. All accessories shall be mounted on a 316SS sub-plate. Tubing shall be suitably sized TP 316L stainless steel with stainless steel double ferrule compression fittings.

11. The actuator design shall be of cylinder type suitable for direct mounting on the valve as specified in Requisition. The actuator shall be capable of withstanding all envisaged line vibrations and movements.

12. All accessory equipment, shall be mounted, fully piped, connected and supplied with the actuator.

13. The actuator shall be equipped with suitable mechanical valve position indicator.



14. Two gas-over-oil pressure tanks which have different hydraulic oil levels are required. The difference between two oil level surfaces must be at least equal to the amount of oil required for a complete valve travel. Two gas-over-oil accumulator tanks (one for open and one for close actuation) complying with relevant accessories and circuit shall be considered. One N2 capacity tank for start up/back up shall be considered by vendor.

15. 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.

16. All actuator parts shall have suitable surface treatment to protect them against corrosion.

17. The actuator should be provided with a suitable hand-operated control valve for local operation of the valve.

18. emergency hand pump, local push buttons or lever, local position indicator and emergency power gas storage tank for complete operations (one open & one close stroke).

19. Self-control circuits shall be equipped with suitable control device for operating speed adjustment.

20. 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: 50 (°C)

Maximum Design relative humidity (%): 100

Minimum Design relative humidity (%): 0

Maximum Design relative humidity (%): 100

Minimum Design relative humidity (%): 0



احداث خطوط انتقال گاز/هایعات گازی از ایستگاه تقویت فشار گاز بینک تا ایستگاه تزریق گاز سیاهمکان/واحد بهره برداری بینک



شماره صفحه: 5 از 6

053 - 073 - 9184

شماره پیمان:

پروژه

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(*) : TO BE ADVISED & FILLED BY VENDOR

1. VALVE TYPE SHALL BE IN ACCORDANCE WITH PROJECT P&ID
2. - ACCORDING TO PIPING MATERIAL SPECIFICATION AS MINIMUM.
3. BORE TO MATCH PIPELINE ID
4. ACTUATOR TESTED AT 1.5 TIMES THE MAX SUPPLY
5. CONTROL PANEL SHALL BE CAPABLE TO METER THE PIPE LINE PRESSURE AND BLOCK IT IN CASE OF R.O.D (RATE OF DROP)
6. SET POINT SHALL BE ADJUSTABLE ± 20 AS MINIMUM.
7. NO ELECTRICAL SIGNAL THE VALVE HAS
8. IN ACCORDING TOPPING MATERIAL SPECIFICATION AS MINIMUM
9. ACCORDING TO ISO 85 EN 17292
10. VALVE SHALL BE INSTALLED INSIDE CONCRETE PT. EXTENDED STEM(1.5 M) IS REQUIRED TO BE CONSIDERED BY VENDOR.
11. THE ACTUATOR SHALL HAVE MODULAR DESIGN AND SHALL EMPLOY SCOTCH YOKE MECHANISM PREFERABLY WITH 90° ROTATION.

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		DATASHEETS FOR LBV								
شماره پیمان: 053 - 073 - 9184		پروژه	بسته کاری	صادرکننده	تهیه‌ات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 6 از 6
		BK	PPL	PEDCO	320	IN	DT	0012	D02	
Item	Data Category	Technical Features				Project Data & Requirements				
1	General Data	Tag No.	D02			LBV-3202				
2		P&ID No.				BK-PPL-PEDCO-320- PR-PI-0001_D04 (page 2 of 3)				
3		Service				From Pig Launcher (PL-3201) to Pig Receiver (PR-3201)				
4		Fluid Phase				Gas				
5		Fluid State				Hydrocarbhone Gas				
6		Area Classification				Zone 2, IIB T4				
7		Line No.				GAS-113-0009-FN27-8"-PT				
8		Ambient Temperature C°				Refer to Note 20 in General Note				
9	Service Process Data	FLOW RATE (Kg/hr.) Max. / Normal / Min.				18887.891 /17170.81/ -				
10		INLET/OUTLET PRESSURE Barg				43				
11		OPERATING FLUID TEMPERATURE °C				15~31.3				
12		DENSITY (kg/m3) Mix./Gas./Liq				47.16/47.11/578.4				
13		VISCOSITY (GAS/LIQ.) cP				0.013/0.13				
14		VAPOR PRESSURE Pv Bar (a)				-				
15		CRITICAL PRESSURE Barg				104.9 barg				
16		DESIGN TEMPERATURE / MAX. TEMPERATURE				85 / 31.3				
17		DESIGN PRESSURE / MAX.PRESSURE Barg				62 / 43 Barg				
18		SHUT-OFF PRESSURE (barg)				62				
19	Body and Valve Trim	VALVE TYPE				ball valve, Gear Type, Trunnion Mounted (see note 9 in below table)				
20		BODY MATERIAL				ASTM A216 WCB				
21		NACE TO MR - 01 75				YES				
22		BODY SIZE	RATED PRESSURE			8"		600		
23		MAX. PRES. & TEMP.				VTA		VTA		
24		END CONNECTIONS & RATINGS				8", Raised Face #600				
25		SEAT TYPE				Soft Seat (VTC)				
26		SEAT MATERIAL				AISI 316L + RPTFE				
27		TRIM MATERIAL				AISI 316L+STELLTE6				
28		PLUG / BALL MATERIAL				AISI 316L+STELLTE6				
29		STEM MATERIAL				AISI 316L+STELLTE6				
30		STEM GUIDE MATERIAL				AISI 316L+STELLTE6				
31		STUFFING BOX PACKING (GLAND)				AISI 316L+STELLTE6				
32		BOLTING				Based on PMS requirements				
33		VALVE SEALING MATERIAL	SEAT SEAL MATERIAL			ANTI STATIC (VTC)		ANTI STATIC (VTC)		
34		ANTI BLOW-OUT DEVICE OF THE STEM				YES				
35		LEAKAGE CLASS				ANSI B16.104 Class V (TSO) , With metal seat				
36		FIRE SAFE				YES (API 607)				
37		MFR.	MODEL			will be finalized later		will be finalized later		
38		Actuator	TYPE OF ACTUATOR				DOUBLE ACTING GAS - OVER OIL			
39	MOUNTING TYPE		SUPPLY			DIRECT		CRUDE OIL		
40	NACE TO MR - 01 75					YES				
41	OPENING TIME					8 Sec.(VENDOR TO CONFIRM)				
42	CLOSING TIME					8 Sec.(VENDOR TO CONFIRM)				
43	MAX. ALLOW. PRESSURE		MIN. REQ. PRESSURE			VTA		VTA		
44	MIN. REQ. TORQUE		MAX. REQ. TORQUE			VTA		VTA		
45	GAS / OIL CONSUMPTION					VTA				
46	HANDWHEEL					Note 17 in General Note				
47	CONNECTION SIZE					VTA				
48	VALVE ACTION ON FAILURE					FAIL TO CLOSE				
49	VALVE POSITION					Mechanical Position Indicator (see note 11 in below table)				
50	LINE PRESSURE LOSS DETECTION SYSTEM					Rate of pressure drop				
51	SPEED CONTROLLER					speed adjustment				
52	MFR.	TYPE			will be finalized later		will be finalized later			
53	Control Panel	ACTION				SHUT DOWN THE VALVE IN HIGH PREESURE AND RATE OF PRESSURE				
54		ENCLOSURE				SS316				
55		TUBING / FITTING MATERIAL				SS316				
56		REATING CLASS				#600				
57		LEAKAGE CLASS				ANSI B16.104 Class VI				
58		TUBING / FITTING MATERIAL NACE TO MR - 01 75				YES				
59		MANUALL OPEN / CLOSE				YES				
60		PROCCES CONECTION				3/4" NPTF ON VALVE BODY				
61		MOUNTING				LOCAL				
62		FLUID				GAS				
63		SUPLY PRESSURE DES/ MINIMUM-NOR.				VTA				
64		TEMPERATURE NORM. / DESIGN	°C			0 - +35 / (0 - +85)				
65		ELECTRICAL CONNECTION				N.A.				
66		CABLE GLAND				N.A.				
67	PROTECTION CLASS				IP 65					
68	R.O.D SET POINT (Psig / Min)				VTA					
69	HIGH/LOW SET POINT				See note 6 in below table					
70	MFR.	MODEL			will be finalized later		will be finalized later			
71	Limit Switch	TAG No				Not Applicable				
72		SWITCH TYPE								
73		VOLTAGE SUPPLY								
74		CONTACT RATING								
75		CABLE GLAND								
76		ELECTR. CONNECTION SIZE								
77		PROTECTION CLASS								
78	Accessories	VALVE TEST SYSTEM				NO				
79		VOLUME TANK , N2 START UP TANK , GAS-OVER-OIL PRESSURE TANKS & ACCUMULATOR				YES, Completed with all required accessories with 1 stroke capacity (Note 14)				
80		DRAIN VALVE				VTA				
81		CONTROL PANEL				YES				
82		HAND PUMP				Hand pump with pertinent change-over valve				
83		TUBING / FITTING				SS316				
84		GAS FILTER REGULATOR				YES / VTA				
<p>(*) : TO BE ADVISED & FILLED BY VENDOR 1. VALVE TYPE SHALL BE IN ACCORDANCE WITH PROJECT P&ID 2. ACCORDING TO PIPING MATERIAL SPECIFIACION AS MINIMUM. 3. BORE TO MATCH PIPELINE ID 4. ACTUATOR TESTED AT 1.5 TIMES THE MAX SUPPLY 5. CONTROL PANEL SHALL BE CAPABLE TO METER THE PIPE LINE PRESSURE AND BLOCK IT IN CASE OF R.O.D (RATE OF DROP) 6. SET POINT SHALL BE ADJUSTABLE ± %20 AS MINIMUM. 7. NO ELECTRICAL SIGNAL THE VALVE HAS 8. In ACCORDING TOPPING MATERIAL SPECIFIACION AS MINIMUM 9. ACCORDING TO ISO 85 EN 17292 10. VALVE SHALL BE INSTALLED INSIDE CONCRETE PIT. EXTENDED STEM(1.5 m) IS REQUIRED TO BE CONSIDERED BY VENDOR. 11. THE ACTUATOR SHALL HAVE MODULAR DESIGN AND SHALL EMPLOY SCOTCH YOKE MECHANISM PREFERABLY WITH 90° ROTATION.</p>										