


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

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
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DATASHEETS FOR LBV

شماره پیمان:

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

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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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احداث خطوط انتقال گاز/مایعات گازی از ایستگاه تقویت فشار گاز بینک تا
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DATASHEETS FOR LBV

شماره پیمان:

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

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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

تهیه‌ات

رشته

نوع مدرک

سریال

نسخه

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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, shall be 10 seconds.
- NACE consideration shall be regarded according to ~~MR-01-75~~ **NACE MR-0175/ISO15156 H.R: Modified**
- Hydro-test duration shall be in accordance with API 6D.
- Valves excluding check valves shall be capable of sealing at these pressures shall be designed to withstand a sustained internal vacuum of 1 (one) barg (i.e. full vacuum) in both open and closed positions.
- Vendor shall guarantee and demonstrate the required stroking speed, during the Functional Test (FAT).
- 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.
- 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.
- 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.
- All accessory equipment, shall be mounted, fully piped, connected and supplied with the actuator.
- The actuator shall be equipped with suitable mechanical valve position indicator.
- 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.
- 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.
- All actuator parts shall have suitable surface treatment to protect them against corrosion.
- The actuator should be provided with a suitable hand-operated control valve for local operation of the valve.
- 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).
- Self-control circuits shall be equipped with suitable control device for operating speed adjustment.
- 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

D02



احداث خطوط انتقال گاز/مبيعات گازى از ايستگاه تقويت فشار گاز بينک تا ايستگاه تزريق گاز سياهمکان/واحد بهره
بردارى بينک



شماره صفحه: 5 از 6

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شماره پیمان:

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بسته کاری:

صادر کنند

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or 13% Chromium
Steel (VTA)
H.R: Modified

*) : 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 OPEN/SHUT 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. ACCORDING TO TOPPING MATERIAL SPECIFICATION AS MINIMUM
9. ACCORDING TO ISO 85 IN 17292
10. VALVE SHALL BE SUPPLIED WITH INSIDE CONCRETE PIT. EXTENDED STEM 1.5 m IS REQUIRED TO BE CONSIDERED BY VENDOR.

THE ABOVE SUPPLIER SHALL NOTIFY ARS DESIGN AND SHALL EMPLOY SUCH YORK MECHANISM PREFERABLY WITH 90° ROTATION



نگهداشت و افزایش تولید میدان نفتی بینک بسته‌های کاری تحت‌الارض

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نسخه	سریال	نوع مدرک
D02	0012	DT

شماره صفحه: 6 از 6

Item	Data Category	Technical Features		Project Data & Requirements	
1	General Data	Tag No. <div>D02</div>		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		Hydrocarbone 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	IC (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 PREESSURE 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		PROCESS CONECTION		3/4" NPTF ON VALVE BODY	
61		MOUNTING		LOCAL	
62		FLUID		GAS	
63		SUPLY PRESSURE DES/ MINIMUM-NOR.		VTA	
64		TEMPERATURE NORM. / DESIGN		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			
72		SWITCH TYPE			
73		VOLTAGE SUPPLY			
74		CONTACT RATING		Not Applicable	
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 VAL. PANEL		YES	
82		HAND PUMP		Hand pump with pertinent change-over valve	
83		TUBING / FITTING		SS316	
84	GAS FILTER REGULATOR		YES / VTA		

(*): TO BE ADVISED & FILLED BY VENDOR

2.: ACCORDING TO PIPING MATERIAL SPECIFICATION

3: BORE TO MATCH PIPELINE ID

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4: ACTUATOR TESTED AT 1.5 TIMES THE MA

5 - CONTROL PANEL SHALL BE CAPABLE TO METER THE PIPE LINE

5 : CONTROL PANEL SHALL BE CA

6: SET POINT SHALL BE ADJUSTABLE \pm %20 AS MINIMUM.

6 : SET POINT SHALL BE ADJUSTA

7: NO ELECTRICAL SIGNAL THE VALVE HAS

8 : In ACCORDING TO PIPING MATERIAL

8 : In ACCORDING TO PIPING MATERIAL SPECIFICATION AS MINIMUM

9: ACCORDING TO ISO BS EN 1729.

10. VALVE SHALL BE INSTALLED.

10 :VALVE SHALL BE INSTALLED

11. THE ACTUATOR SHALL HAVE

11. THE ACTUATOR SHALL HAVE

11. THE ACTUATOR SHALL HAVE
