

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک فعالیت های رو زمینی در بسته های کاری تحت الارض							 	
	ساخت موقعیت چاه، تأسیسات سرچاهی، خطوط جریانی، تسهیلات بقی رسانی مربوط به موقعیت W007S و توسعه چندراهه کلاستر بینک								
	DATA SHEETS FOR ON OFF / SHUTDOWN VALVES - EXTENSION OF BINAK B/C MANIFOLD								
شماره پیمان: 053 - 073 - 9184	پروژه BK	بسته کاری W007S	صادر کننده PEDCO	تسهیلات 110	رشته IN	نوع مدرک DT	سریال 0005	نسخه D03	شماره صفحه: 1 از 10

طرح نگهداشت و افزایش تولید 27 مخزن

DATA SHEETS FOR ON OFF / SHUTDOWN VALVES - EXTENSION OF BINAK B/C MANIFOLD

نگهداشت و افزایش تولید میدان نفتی بینک

D03	MAY.2023	AFC	P.Hajisadeghi	M.Fakharian	A.M.Mohseni	
D02	AUG.2022	IFA	P.Hajisadeghi	M.Fakharian	M.Mehrshad	
D01	MAY.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-707975

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
فعالیت های رو زمینی در بسته های کاری تحت الارض

ساخت موقعیت چاه، تأسیسات سرچاهی، خطوط جریانی، تسهیلات
برق رسانی مربوط به موقعیت W007S و توسعه چندراهه کلاستر بینک

DATA SHEETS FOR ON OFF / SHUTDOWN VALVES - EXTENSION OF BINAK B/C
MANIFOLD



شماره پیمان:

053 - 073 - 9184

پروژه

بسته کاری

صادر کننده

تسهیلات

رشته

نوع مدرک

سریال

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3	X	X			
4	X		X	X	
5	X	X	X	X	
6	X	X	X	X	
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نگهداشت و افزایش تولید میدان نفتی بینک
فعالیت های رو زمینی در بسته های کاری تحت الارض

ساخت موقعیت چاه، تأسیسات سرچاهی، خطوط جریانی، تسهیلات
برق رسانی مربوط به موقعیت W007S و توسعه چندراهه کلاستر بینک

DATA SHEETS FOR ON OFF / SHUTDOWN VALVES - EXTENSION OF BINAK B/C
MANIFOLD



شماره پیمان:

053 - 073 - 9184

پروژه

BK

بسته کاری

W007S

صادر کننده

PEDCO

تسهیلات

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شماره صفحه: 3 از 10

REFERENCE DOCUMENTS :

- | | |
|---|-------------------------------|
| 1. Specification for Instrumentation | BK-GNRAL-PEDCO-000-IN-SP-0001 |
| 2. Process Basis Of Design | BK-GNRAL-PEDCO-000-PR-DB-0001 |
| 3. P&ID - Extension of Binak B/C Manifold | BK-W007S-PEDCO-110-PR-PI-0001 |
| 4. Piping Material Specification | BK-SSGRL-PEDCO-110-PI-SP-0001 |
| 5. Instrument & Control System Design Criteria | BK-SSGRL-PEDCO-110-IN-DC-0002 |
| 6. Process Flow Diagram - Extension of Binak B/C Manifold | BK-W007S-PEDCO-110-PR-PF-0001 |
| 7. Specification for ON OFF / Shutdown Valves | BK-GNRAL-PEDCO-000-IN-SP-0006 |
| 8. Instrument Hook-up Diagram - Extension of Binak B/C Manifold | BK-W007S-PEDCO-110-IN-DG-0003 |

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک فعالیت های رو زمینی در بسته های کاری تحت الارض ساخت موقعیت چاه، تأسیسات سرچاهی، خطوط جریانی، تسهیلات برق رسانی مربوط به موقعیت W007S و توسعه چندراهه کلاستر بینک								
	DATA SHEETS FOR ON OFF / SHUTDOWN VALVES - EXTENSION OF BINAK B/C MANIFOLD								
شماره پیمان:	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 4 از 10
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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 maximum valve stroking time to achieve the safety position shall be defined according to size of the body (5 seconds for body until 4", 1 second per inch for body greater than 4").
- The piping indicates corrosion allowance selected as per document "PIPELINE MATERIAL SPECIFICATION, No. " BK-SSGRL-PEDCO-110-PL-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).
- A manual hand valve shall be provided in pneumatic control system in order to bypass the solenoid valves. So, the valves could be open and closed using this manual valve by pressurizing and depressurizing the pneumatic line. The facilities shall be provided in order to lock and unlock this manual valve using a special key.
- 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.
- 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 1.25 and a minimum air pressure of 4 Barg. The valve actuator torque shall be in excess of the required valve torque under all operating conditions.~~
- The actuators shall be powered by instrument air supply. The actuators shall be sized in accordance with the maximum pressure drop specified in the data sheets and the minimum header pressure of 3 bar (g). The actuators shall be able to operate at the maximum air pressure 10 (barg) and shall be tested at 1.5 times of the maximum air supply.
- 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.
- Partial Stroking test or pilot valve to be considered for 15% of valve closing stroke.
- Disc/seat material shall be resilient to give a tight shut off feature.
- Environmental Condition For Field Instrumentation of BINAK Complex Shall Be Considered As Per The Following:

Temperature:

- Maximum ambient temperature: 50 (°C)
- Minimum ambient temperature: -5 (°C)
- Maximum steel surface exposed to sun: 85 (°C)
- Maximum summer dry bulb: - (°C)
- DB/RH for Summer HVAC Design: 41 °C / 61 %
- DB FOR Winter HVAC Design: 6 °C

Relative Humidity:

- Maximum Design relative humidity (%): 100
- Minimum Design relative humidity (%): 0

20. In services where the differential pressure over the valve results in a temperature drop which Will cause freezing of the stuffing box and ice formation on the stem, extended bonnet shall be provided. Valve stem extension shall be detachable for easy replacements.

21. 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.

22. Valves in safety related services should have been fire tested and certification to be provided.

23. Flow direction shall be permanently and clearly indicated on the valve body.

24. External grounding shall be provided for each solenoid valve

25. Short stroke single acting pneumatic piston actuators shall preferably be used on emergency shutdown service.

26. Valve color shall be Gray as per Project Specification For Painting, Doc.No.BK-GNRL-PEDCO-000-PI-SP-0006. Actuator color shall be Red for ESD application.

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		نگهداشت و افزایش تولید میدان نفتی بینک فعالیت های رو زمینی در بسته های کاری تحت الارض ساخت موقعیت چاه، تأسیسات سرچاهی، خطوط جریانی، تسهیلات برق رسانی مربوط به موقعیت W007S و توسعه چندراهه کلاستر بینک DATA SHEETS FOR ON OFF / SHUTDOWN VALVES - EXTENSION OF BINAK B/C MANIFOLD					  		
شماره پیمان:	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 5 از 10
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On-Off Valve													
TAG NO:		ESDV-1701A		P&ID NO :		D03			BK-W007S-PEDCO-110-PR-PI-0001 (3/6)		SERVICE: FROM W018S		
FLUID STATE:		CRUDE OIL		PHASE:		LIQUID				AREA CLASSIFICATION: Zone 2, IIB T4			
SERVICE CONDITION								UNITS	Max.	Norm.	Min.	Shut-Off	
	1	FLOW RATE						kg/h	11347.0	-	3782.3447	-	
	2	INLET PRESSURE						bar(g)	-	12.78	-	-	
	3	OUTLET PRESSURE						bar(g)	-	12.78	-	-	
	4	DIFFERENTIAL PRESSURE						bar	-	-	-	93	
	5	INLET TEMPERATURE						°C	36.3	-	22.62	-	
	6	DENSITY(Mix./Gas/Liquid)						kg/m3	-	473.9/12.97/917.7	-	-	
	7	VISCOSITY (GAS/LIQ.)						CP	-	0.011/18.99	-	-	
	8	VAPOR PRESSURE Pv						bar(a)	-	-	-	-	
	CRITICAL PRESSURE						bar(g)	-	291.2	-	-		
LINE	10	PIPE LINE SIZE		IN		4"		ACTUATOR (Note 25 in Previous Page)	52	TYPE		Single Acting , Spring Return	
		PIPE LINE SIZE		OUT		4"			53	SIZE		VTA VTA	
	11	PIPNG CLASS/PIPE LINE INSULATION				LN15/ PAINTED			54	SPRING FAIL ACTION		Fail to Close	
VALVE BODY & BONNET	12	TYPE				Full Bore Ball Valve/Trunnion Mounted			55	MAX ALLOWABLE PRESSURE		VTA	
	13	SIZE				4"			56	MIN REQUIRES PRESSURE		VTA	
	14	MAX PRESS./TEMP				As per Piping Material Specification			57	AVAILABLE AIR SUPPLY PRESS.		MAX/NOR/MIN: 8/7/4.5 barg (Acc. to Reference 2 & Note15 in Previous Page)	
	15	MFR. & MODEL				VTA			58	BENCH RANGE		VTA	
	16	BODY / BONNET MATL				API 60K (Note 3 in Below Table)			59	TRAVELING TIME		5 Sec. (Note 4 in Previous Page)	
	17	LINER MATERIAL / ID				VTA			60	FUNCTION		On/Off	
	18	END CONNECTION				4"/ API 3000			61	LOCAL POSITION INDICATOR		Required	
						4"/ API 3000			62	ACT. ORIENTATION		VTA	
	19	FLG FACE FINISH				RTJ			63	HAND WHEEL TYPE		Dec clutchable side mounted	
	20	END EXT./MATL.				N/A			64	ADJUSTABLE LIMIT STOP		Yes	
	21	FLOW DIRECTION				(Note 23 in Previous Page)			65	INPUT SIGNAL		24VDC	
	22	TYPE OF BONNET				Standard			66	MFR. & MODEL		VTA	
	23	LUBE & ISO VALVE				No		POSITIONER	67	TYPE		N/A	
	24	PACKING MATERIAL		PACKING TYPE		PTFE Standard			68	MFR. & MODEL		N/A	
	25	ENTRY DESIGN				Top Entry			69	ON INCR SIGNAL OUTPUT INCR / DECR		N/A	
	26	NACE REQUIREMENTNACE (MR-0175/ISO 15156)				Yes			70	GAUGES		N/A	
	TRIM	27	TRIM TYPE				VTA		71	CAM CHARACTERISTIC		N/A	
28		SIZE		RATED TRAVEL		VTA VTA			72	AIR CONNECTION		N/A	
29		CHARACTERISTICS				On/Off		LIMIT SWITCHES	75	TAG NO. :		EZSC-1701A /EZSO-01701A	
30		BALANCED / UNBALANCED				BALLANCED			76	TYPE	QUANTITY	Magnetically operated "REED" contacts 2	
31		RATED Cv		FL	XT	VTA VTA VTA	77		CONTACTS / RATING		110V DC , 10A		
32		PLUG / BALL / DISK MATERIAL				API 75K (Note 3 in Below Table)			78	ACTUATION POINT		Fully Open/Close	
33		SEAT MATERIAL				PTFE			79	ENCLOSURE MATERIAL		Die Cast Aluminum	
34		SEAT TYPE				Soft Seat			80	WEATHER PROTECTION		IP-65	
35		CAGE / GUIDE MATERIAL				VTA			81	ELEC. CERTIFICATE	ELEC. CONNECTION	EEx "d", IIB T4	ISO M20 × 1.5
36		STEM / MATERIAL				forged, 13% chromium steel (Acc. to Reference 7 & Notes 20,21 in Previous Page)			82	MFR. & MODEL		VTA	
37		LEAKAGE CLASS				ANSI Class VI		AIR SET	83	SET PRESSURE		VTA	
38	TAG NO				ESOV-1701A ((Note 24 in Previous Page)		84		PNEUMATIC CONNECTION		1/4" NPT		
39	TYPE				3 Way		85		GAUGES	FILTER	Required	Required	
SOLENOID VALVE	40	BODY MATERIAL		WEATHER IP.		AISI 316 S.S IP-65			86	MFR. & MODEL		Will Be Fimilized Later	
	41	ELE. CERTIFICATE		ELE. CONNECTION		EEx "d", IIB T4 ISO M20 x 1.5		TEST	87	ANSI/FCI LEAKAGE CLASS		Required	
	42	MANUAL RESET				Yes			88	HYDRO PRESSURE		Required	
	43	POWER SUPPLY				24 VDC			89	FUNCTIONAL TEST		Required	
	44	PNEU. CONNECTION				1/4" NPT			90				
	45	FUSIBLE LEAKAGE				No			91				
	46	BLOCK RELAY				No			92				
SPECIAL / ACCESS.	47	QUICK EXHUST				Yes		OPTION	93	PASSIVE FIRE PROTECTION		No	
	48	FILTER REGULATOR				Yes			94	API 6FA REQUIREMENTS		Yes (Note 22 in Previous Page)	
	49	VOLUME TANK				No			95	SIL 3 REQUIREMENTS		Yes	
	50	MECHANICAL POSITION INDICATOR				Required			96	PARTIAL STROKING VALVE TEST		Yes	
	51	MANUAL PNE. BYPASS VALVE FOR SOLENOID VALVE				Yes							

NOTE: VTA : VENDOR TO ADVISE

(1) PMS: Piping Material Specification (2) All material shall be suitable for minimum design metal temperature.

(3) As per Piping Material Specification , Doc No. "BK-SSGRL-PEDCO-110-PI-SP-0001"

(4) Manual Reset to be considered for all Emergency Shut off solenoids as per P&ID.

	نگهداشت و افزایش تولید میدان نفتی بینک فعالیت های روزمینی در بسته های کاری تحت الارض ساخت موقعیت چاه، تأسیسات سرچاهی، خطوط جراینی، تمهیلات برق رسانی مربوط به موقعیت W007S و توسعه چندراهه کلاستر بینک							 	
	DATA SHEETS FOR ON OFF / SHUTDOWN VALVES - EXTENSION OF BINAK B/C MANIFOLD								
	شماره پیمان:	پروژه	بسته کاری	صادر کننده	تمهیلات	رشته	نوع مدرک		سریال
053 - 073 - 9038	BK	W007S	PEDCO	110	IN	DT	0005	D03	شماره صفحه: 9 از 10

On-Off Valve																						
TAG NO:		ESDV-1701E			P&ID NO :			D03			BK-W0075-PEDCO-110-PR-PI-0001 (5/6)			SERVICE:		FROM W035						
FLUID STATE:		CRUDE OIL			PHASE:			LIQUID			AREA CLASSIFICATION:			Zone 2, IIB, T4								
SERVICE CONDITION									UNITS		Max Flow		Norm. Flow		Min. Flow		Shut-Off					
	1	FLOW RATE							kg/h		29036.5				18147.82225		-					
	2	INLET PRESSURE							bar(g)		-		12.78		-		-					
	3	OUTLET PRESSURE							bar(g)		-		12.78		-		-					
	4	DIFFERENTIAL PRESSURE							bar		-		-		-		93					
	5	INLET TEMPERATURE							°C		40.71		-		27.31		-					
	6	DENSITY(Mix./Gas/Liquid)							kg/m3		-		253.2/13.61/962.3		-		-					
	7	VISCOSITY (GAS/LIQ.)							CP		-		0.01/25.33		-		-					
	8	VAPOR PRESSURE Pv							bar(a)		-		-		-		-					
	9	CRITICAL PRESSURE							bar(g)		-		1140		-		-					
LINE	10	PIPE LINE SIZE		IN		4"		ACTUATOR (Note 25 in Previous Page)		52	TYPE		Single Acting , Spring Return									
		PIPE LINE SIZE		OUT		4"				53	SIZE				VTA		VTA					
	11	PIPNG CLASS/PIPE LINE INSULATION				LN15/ PAINTED				54	SPRING FAIL ACTION		Fail to Close									
VALVE BODY & BONNET	12	TYPE		Full Bore Ball Valve/Trunnion Mounted								55	MAX ALLOWABLE PRESSURE		VTA							
	13	SIZE		4"								56	MIN REQUIRES PRESSURE		VTA							
	14	MAX PRESS./TEMP		As per Piping Material Specification								57	AVAILABLE AIR SUPPLY PRESS.		MAX/NORM/MIN: 8/7/4.5 barg (Acc. to Reference 2 & Note15 in Previous Page)							
	15	MFR. & MODEL		VTA								58	BENCH RANGE		VTA							
	16	BODY / BONNET MATL		API 60K (Note 3 in Below Table)								59	TRAVELING TIME		5 Sec. (Note 4 in Previous Page)							
	17	LINER MATERIAL / ID		VTA								60	FUNCTION		On/Off							
	18	END CONNECTION				4"/ API 3000				61	LOCAL POSITION INDICATOR		Required									
						4"/ API 3000				62	ACT. ORIENTATION		VTA									
	19	FLG FACE FINISH		RTJ								63	HAND WHEEL TYPE		Declutchable side mounted							
	20	END EXT.MATL.		N/A								64	ADJUSTABLE LIMIT STOP		Yes							
	21	FLOW DIRECTION		(Note 23 in Previous Page)								65	INPUT SIGNAL		24VDC							
	22	TYPE OF BONNET		Standard								66	MFR. & MODEL		VTA							
	23	LUBE & ISO VALVE		No								POSITIONER		67	TYPE		N/A					
	24	PACKING MATERIAL		PACKING TYPE		PTFE		Standard		68	MFR. & MODEL			N/A								
	25	ENTRY DESIGN		Top Entry										69	ON INCR SIGNAL OUTPUT INCR / DECR		N/A					
	26	NACE REQUIREMENTNACE (MR-0175/ISO 15156)		Yes										70	GAUGES		N/A					
	TRIM	27	TRIM TYPE		VTA								71	CAM CHARACTERISTIC		N/A						
		28	SIZE		RATED TRAVEL		VTA		VTA		72	AIR CONNECTION		N/A								
		29	CHARACTERISTICS		On/Off								LIMIT SWITCHES		75	TAG NO. :		EZSC-1701E /EZSO-01701E				
30		BALANCED / UNBALANCED		BALLANCED						76	TYPE				QUANTITY		Magnetically operated "REED" contacts		2			
31		RATED Cv		FL		XT		VTA		VTA		VTA			77	CONTACTS / RATING		110V DC , 10A				
32		PLUG / BALL / DISK MATERIAL		API 75K (Note 3 in Below Table)								78			ACTUATION POINT		Fully Open/Close					
33		SEAT MATERIAL		PTFE								79	ENCLOSURE MATERIAL		Die Cast Aluminum							
34		SEAT TYPE		Soft Seat								80	WEATHER PROTECTION		IP-65							
35		CAGE / GUIDE MATERIAL		VTA								81	ELEC. CERTIFICATE		ELEC. CONNECTION		Eex "d", IIB T4		ISO M20 x 1.5			
36		STEM / MATERIAL		forged, 13% chromium steel (Acc. to Reference 7 & Notes 20,21 in Previous Page)								82	MFR. & MODEL		VTA							
37	LEAKAGE CLASS		ANSI Class VI								AIR SET		83	SET PRESSURE		VTA						
SOLENOID VALVE	38	TAG NO		ESOV-1701E ((Note 24 in Previous Page)									84	PNEUMATIC CONNECTION		1/4" NPT						
	39	TYPE		3 Way									85	GAUGES		FILTER		Required		Required		
	40	BODY MATERIAL		WEATHER IP.		AISI 316 S.S		IP-65		86			MFR. & MODEL		Will Be Finalized Later							
	41	ELE. CERTIFICATE		ELE. CONNECTION		EEx "d", IIB T4		ISO M20 x 1.5		TEST		87	ANSI/FCI LEAKAGE CLASS		Required							
	42	MANUAL RESET		Yes								88	HYDRO PRESSURE		Required							
43	POWER SUPPLY		24 VDC									89	FUNCTIONAL TEST		Required							
44	PNEU. CONNECTION		1/4" NPT									90										
SPECIAL / ACCESS.	45	FUSIBLE LEAKAGE		No								91										
	46	BLOCK RELAY		No								92										
	47	QUICK EXHUST		Yes								OPTION		93	PASSIVE FIRE PROTECTION		No					
	48	FILTER REGULATOR		Yes										94	API 6FA REQUIREMENTS		Yes (Note 22 in Previous Page)					
	49	VOLUME TANK		No										95	SIL 3 REQUIREMENTS		Yes					
	50	MECHANICAL POSITION INDICATOR		Required										96	PARTIAL STROKING VALVE TEST		Yes					
	51	MANUAL PNE. BYPASS VALVE FOR SOLENOID VALVE		Yes																		

NOTE: VTA : VENDOR TO ADVISE

(1) PMS: Piping Material Specification (2) All material shall be suitable for minimum design metal temperature.

(3) As per Piping Material Specification , Doc No. "BK-SSGRL-PEDCO-110-PI-SP-0001"

(4) Manual Reset to be considered for all Emergency Shut off solenoids as per P&ID.

	نگهداشت و افزایش تولید میدان نفتی بینک فعالیت های روزمینی در بسته های کاری تحت الارض ساخت موقعیت چاه، تأسیسات سرچاهی، خطوط جراینی، تمهیلات برق رسانی مربوط به موقعیت W007S و توسعه چندراهه کلاستر بینک							 	
	DATA SHEETS FOR ON OFF / SHUTDOWN VALVES - EXTENSION OF BINAK B/C MANIFOLD								
	شماره پیمان:	پروژه	بسته کاری	صادرکننده	تمهیلات	رشته	نوع مدرک	سریال	نسخه
053 - 073 - 9038	BK	W007S	PEDCO	110	IN	DT	0005	D03	شماره صفحه: 10 از 10

On-Off Valve														
TAG NO:		ESDV-1701F		P&ID NO :		D03BK-W007S-PEDCO-110-PR-PI-0001 (5/6)				SERVICE: FROM W007S				
FLUID STATE:		CRUDE OIL		PHASE:		LIQUID				AREA CLASSIFICATION: Zone 2, IIB T4				
SERVICE CONDITION							UNITS	Max Flow	Norm. Flow	Min. Flow	Shut-Off			
	1	FLOW RATE					kg/h	11614.6	-	5807.3031	-			
	2	INLET PRESSURE					bar(g)	-	12.78	-	-			
	3	OUTLET PRESSURE					bar(g)	-	12.78	-	-			
	4	DIFFERENTIAL PRESSURE					bar	-	-	-	93			
	5	INLET TEMPERATURE					°C	41.77	-	22.11	-			
	6	DENSITY(Mix./Gas/Liquid)					kg/m3	-	283.9/13.62/965.7	-	-			
	7	VISCOSITY (GAS/LIQ.)					CP	-	0.012/27.04	-	-			
	8	VAPOR PRESSURE Pv					bar(a)	-	96.59	-	-			
	9	CRITICAL PRESSURE					bar(g)	-	1140	-	-			
LINE	10	PIPE LINE SIZE	IN		4"	ACTUATOR (Note 25 in Previous Page)	52	TYPE	Single Acting , Spring Return					
		PIPE LINE SIZE	OUT		4"		53	SIZE	VTA		VTA			
	11	PIPNG CLASS/PIPE LINE INSULATION					LN15/ PAINTED	54	SPRING FAIL ACTION		Fail to Close			
VALVE BODY & BONNET	12	TYPE					POSITIONER	55	MAX ALLOWABLE PRESSURE		VTA			
	13	SIZE						56	MIN REQUIRES PRESSURE		VTA			
	14	MAX PRESS./TEMP						57	AVAILABLE AIR SUPPLY PRESS.		MAX/NOR/MIN: 8/7/4.5 barg (Acc. to Reference 2 & Note15 in Previous Page)			
	15	MFR. & MODEL						58	BENCH RANGE		VTA			
	16	BODY / BONNET MATL						59	TRAVELING TIME		5 Sec. (Note 4 in Previous Page)			
	17	LINER MATERIAL / ID						60	FUNCTION		On/Off			
	18	END	4"/ API 3000					61	LOCAL POSITION INDICATOR		Required			
		CONNECTION	4"/ API 3000					62	ACT. ORIENTATION		VTA			
	19	FLG FACE FINISH						63	HAND WHEEL TYPE		Declutchable side mounted			
	20	END EXT./MATL.						64	ADJUSTABLE LIMIT STOP		Yes			
	21	FLOW DIRECTION						65	INPUT SIGNAL		24VDC			
	22	TYPE OF BONNET						66	MFR. & MODEL		VTA			
	23	LUBE & ISO VALVE						LIMIT SWITCHES	67	TYPE		N/A		
	24	PACKING MATERIAL	PACKING TYPE			PTFE			Standard	68	MFR. & MODEL		N/A	
	25	ENTRY DESIGN							Top Entry	69	ON INCR SIGNAL OUTPUT INCR / DECR		N/A	
	26	NACE REQUIREMENTNACE (MR-0175/ISO 15156)							Yes	70	GAUGES		N/A	
TRIM	27	TRIM TYPE					VTA	71	CAM CHARACTERISTIC		N/A			
	28	SIZE	RATED TRAVEL			VTA	VTA	72	AIR CONNECTION		N/A			
	29	CHARACTERISTICS					On/Off	AIR SET	75	TAG NO. :		EZSC-1701F /EZSO-01701F		
	30	BALANCED / UNBALANCED					BALLANCED		76	TYPE	QUANTITY	Magnetically operated "REED" contacts	2	
	31	RATED Cv	FL	XT	VTA	VTA	VTA		77	CONTACTS / RATING		110V DC , 10A		
	32	PLUG / BALL / DISK MATERIAL					API 75K (Note 3 in Below Table)		78	ACTUATION POINT		Fully Open/Close		
	33	SEAT MATERIAL					PTFE		79	ENCLOSURE MATERIAL		Die Cast Aluminum		
	34	SEAT TYPE					Soft Seat		80	WEATHER PROTECTION		IP-65		
	35	CAGE / GUIDE MATERIAL					VTA		81	ELEC. CERTIFICATE	ELEC. CONNECTION	EEx "d", IIB T4	ISO M20 × 1.5	
	36	STEM / MATERIAL					forged, 13% chromium steel (Acc. to Reference 7 & Notes 20,21 in Previous Page)		82	MFR. & MODEL		VTA		
37	LEAKAGE CLASS					ANSI Class VI	83		SET PRESSURE		VTA			
SOLENOID VALVE	38	TAG NO					ESOV-1701F ((Note 24 in Previous Page)		TEST	84	PNEUMATIC CONNECTION		1/4" NPT	
	39	TYPE					3 Way	85		GAUGES	FILTER	Required	Required	
	40	BODY MATERIAL	WEATHER IP.			AISI 316 S.S	IP-65	86		MFR. & MODEL		Will Be Fimilized Later		
	41	ELE. CERTIFICATE	ELE. CONNECTION			EEx "d", IIB T4	ISO M20 x 1.5	87		ANSI/FCI LEAKAGE CLASS		Required		
	42	MANUAL RESET					Yes	88		HYDRO PRESSURE		Required		
SPECIAL / ACCESS.	43	POWER SUPPLY					24 VDC	89	FUNCTIONAL TEST		Required			
	44	PNEU. CONNECTION					1/4" NPT	90						
	45	FUSIBLE LEAKAGE					No	91						
	46	BLOCK RELAY					No	92						
	47	QUICK EXHUST					Yes	OPTION	93	PASSIVE FIRE PROTECTION		No		
	48	FILTER REGULATOR					Yes		94	API 6FA REQUIREMENTS		Yes (Note 22 in Previous Page)		
	49	VOLUME TANK					No		95	SIL 3 REQUIREMENTS		Yes		
50	MECHANICAL POSITION INDICATOR					Required	96		PARTIAL STROKING VALVE TEST		Yes			
	51	MANUAL PNE. BYPASS VALVE FOR SOLENOID VALVE					Yes							

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