



احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

MECHANICAL DATA SHEETS FOR SLUG PUMPS

.04-.14-1145

پروژه	بسته کاری	صادر کننده	تسهيلات	رشته	نوع مدر ک	سريال	نسخه							
BK	GCS	PEDCO	120	ME	DT	0019	D03							

شماره صفحه: ۱ از ۱۰

طرح نگهداشت و افزایش تولید ۲۷ مخزن

MECHANICAL DATA SHEETS FOR SLUG PUMPS (P-2101 A/B)

نگهداشت و افزایش تولید میدان نفتی بینک

Re	v. Date	Purpose of Issue / Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval
DC	0 DEC. 202	IFC	H. Adineh	M. Fakharian	M. Mehrshad	
DC	1 JAN. 202	IFA	H. Adineh	M. Fakharian	M. Mehrshad	
DC	2 DEC. 202	2 IFA	H. Adineh	M. Fakharian	M. Mehrshad	
DC	3 MAY. 202	AFC AFC	H. Adineh	M. Fakharian	A.M.Mohseni	

Class: 1 CLIENT Doc. Number: F0Z-708850

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



Plysique Sir

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

باره پیمان:	ش	MECHANICAL DATA SHEETS FOR SLUG PUMPS											
·07-·Y7-91A£	پروژه	بسته کاری	صادر کننده	تسهيلات	رشته	نوع مدر ک	سريال	نسخه					
101-111-1172	BK	GCS	PEDCO	120	ME	DT	0019	D03					

شماره صفحه: ۲ از ۱۰

REVISION RECORD SHEET

					IL VISION I
page	D00	D01	D02	D03	D04
1	Х	Х	Х	Х	
2	Х	Х	х	х	
3	Х	Х	Х		
4	Х				
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6	Х	Х	X		
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Pingan Energy

شماره صفحه: ۳ از ۱۰

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

٤٨١٩-٩٢٨٠

شماره پیمان:

	MECHANICAL DATA SHEETS FOR SLUG PUMPS												
پروژه	بسته کاری	صادر کننده	تسهيلات	رشته	نوع مدرک	سر يال	نسخه						
BK	GCS	PEDCO	120	ME	DT	0019	D03						

طرح نگهداشت و افزایش تولید 27 مخزن

General Notes

- 1. Mass Density [kg/m3] at Min. / Norm / Max. Temp: 1023 / 716 / 649 and Viscosity [cP] At Min. / Normal / Max. Temp: 1.37 / 0.58 / 0.449
- 2 Design Conditions:

Min./Max. Design Temperature(°C)

Max. Design Presure(barg)

5 / 85

23.3

- 3 For technical requirements of electrical Iv motors refer to "Data sheets for Iv induction motors; DOC NO.:BK-GCS-PEDCO-120-EL-DT-0008", Vendor shall fill in the blanks and return the completed data sheet along with Motor data sheet, "DOC NO.:BK-GCS-PEDCO-120-EL-DT-0008" with his proposal.
- 4 Vendor shall submit ITP (Inspection & Testing Plan) with his proposal.
- 5 The motors, pump mechanical seal, pump coupling and pump accessories shall be supplied from the project's approved vendor list (A.V.L.). Chinese & Indian vendors are not acceptable for Mechanical seal, Electro motor and coupling subvendors.
- 6 Vendor is requested to confirm the material, or propose appropriate alternative.
- 7 For Instrumentation, Project specification 'Specification For Instrument and Control of package Unit System (PU)' Doc. No. BK-GNRAL-PEDCO-000-IN-SP-0004 and other instrument specification which to be attached to MR shall be followed.
- 8 Mechanical seal data sheet shall fill in by vendor as per API 682. Pump Manufacturer shall supply all instrumentation for mechanical seals as per API 682 4th Edition and project requirements.
- 9 NPSH test shall be done & witnessed if the margin of NPSHr & NPSHa is less than 1.
- 10 The Tie-in flanges shall conform to ASME B-16.5
- 11 Valves in the piping system shall be Welded Flanged type.
- 12 Supplier to indicate which minimum flow pumps can achieve.
- 13 Pumps shall be designed, fabricated, tested, and inspected in accordance with the requirements of API 610 11th & IPS-G-PM-105(3).
- 14 Nozzle loads shall be 2 times the loads shown in API 610 11th Edition.
- 15 Pump starts Automatically with open delivery valve.
- 16 Electrical motor shall be rated for the end of curve.
- 17 The Suction line size is 4" and discharge line size is 3".
- 18 The Material shall be followed in accordance with NACE MR0175/ISO15156 and Technical Specification for Material Requirements in sour service. Doc.No: BK-GNRAL-PEDCO-000-PI-SP-0008.
- 19 H2S content is 6707.6 ppmw.
- 20 Pump Manufacturer shall supply all instrumentation for mechanical seals as per API 682 4th Edition and project requirements.
- 21 Based on project instrumentation specification, these equipments are classified as Type B (Connected to DCS/ESD): Centrifugal Pump Package.
- 22 Welding repair procedures shall be submitted for approval.
- 23 Refer to hazardous area classification layout Doc. No.: BK-GCS-PEDCO-120-SA-PY-0002, all instrumentation and electrical devices shall be suitable for: ZONE 2 & Gas group IIA, Temperature class T3.
- 24 Ultrasonic Test shall be performed for forged shaft.
- 25 For pumps with vacuum suction pressure the minimum NPSH margin shall be 2 m. for other pumps the minimum NPSH margin shall be 1 m.
- 26 Spare parts shall be supplied by vendor according to 'MR's appendix for Centrifugal Pumps ' Doc. No. BK-GCS-PEDCO-120-ME-MR-0009.
- 27 Couplings shall be dry, flexible and spacer type and coupling guards shall be of Non-Spark type.
- 28 Bearing temperature shall be measured during mechanical run test.
- 29 For electrical motor descriptions, refer to 'Specification For LV & MV Induction Motors' Doc. No.BK-GNRAL-PEDCO-000-EL-SP-0010 & 0017 .
- 30 Minimum Design Metal Tem (MDMT)= 5 $^{\circ}\mathrm{C}$
- 31 Turn down and design (rated) flow rates are 30% and 110 % of normal flow rate respectively.
- 32 API Plan 31+53B shall be considered
- 33 PMI Testing For Alloy Steel Shall be Done.
- 34 Power Factor, efficiency, frequent, voltage, frequent variation and voltage variation of motor shall be specified by vendor in data sheet.
- 35 All drain and vents (If any) to be manifolded, valved and routed to the skid edge. a drain line to be considered in barrel and to be pipe up to mounted skid.
- 36 Range of ambient temperature: Min. ambient temperature: 5 $^{\circ}$ C , Max. ambient temperature: 50 $^{\circ}$ C
- 37 Pump is not installed directly on the ground and at least 20~30 cm height for pedestal is considered.
- 38 Max Allowable Pressure at Shut-Off (barg): 23.3
- 39 Barrel and pump shall have the same MAWP and to be hydrotest in same value with pump.



3118-74-70.

نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض



احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

شماره پیمان:

 MECHANICAL DATA SHEETS FOR SLUG PUMPS

 نسخه سریال نوع مدر که رشته تسهیلات صادر کننده بسته کاری پروژه

 BK
 GCS
 PEDCO
 120
 ME
 DT
 0019
 D03

شماره صفحه: ٤ از ١٠

		طرح نگهداشت و افزایش تولید 27 مخزن
	CLIENT:	National Iranian South Oil Company (NISOC)
	PROJECT TITLE:	BINAK Gas Compressor Station
	JOB NUMBER:	Divine our compressor summer
EO	UIPMENT NUMBER:	P-2101 A/B
	UIPMENT SERVICE:	SLUG PUMP
	SERIAL NUMBER:	
	REQ. / SPEC NO. :	BK-GCS-PEDCO-120-ME-SP-0003
	PURCH ORDER NO.	
ells coloured thus	contain drop-down opt	options
	contain calculated valu	alues based on input data; do not change.
	identify a cross referer	enced paragraph in the document note, and may also contain a drop down list
- - -		
ITEM No.		DATA SHEETS

PUMP MOTOR GEAR TURBINE

		DATA SHEETS			
ITEM No.	ATT	ITEM No.	ATT	ITEM No.	ATT
P-2101 A		P-2101 B			





احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

شماره بیمان:

| MECHANICAL DATA SHEETS FOR SLUG PUMPS | شماره بیمان:
| معاره صفحه: ۱۵ از ۱۰ | نسخه سریال نوع مدرک رشته تسهیلات صادرکننده بسته کاری پروژه | BK GCS PEDCO 120 ME DT 0019 D03

				ن	ر افزایش تولید 27 مخزر	طرح نگهداشت و				
APPLICABLE TO: PROPO	Sp	ecify the D	ensity =		ADDI IC	ABLE NTL/INTNTL STAN	JDAPD:		A DI 610 1145 I	Ed.& IPS-G-PM-105(3)
FOR NISOC	Va	lues in max	and		UNIT	ABLE NILININIE STAN	NDAKD.		AFT 010-11til 1	2d.& 1F5-G-FW-105(5)
SITE BINAK Gas Compre	Gr.		t and		SERVIO	CE SILIC	PUMP			
NO. REQ 2 (1+1)	mi	n	-		TYPE	VS6 (V		No. STAGES		
MANUFACTURER	/ ˈlHii	rgan Reply			MODE			SERIAL NO.	V.T.A.	
/ / / / / / / / / / / / / / / / / / /			_	_			1	DERINE TO	******	
 	Units PI	ease see n	ote 1	spe	ecify the	viscosity			INTERMIT	TENT
LIQUID TYPE OR NAME :		water+hydrocar	bon		ues in m		OF STARTS :			
VAPOR PRESSURE :	bara	6.50				ax and			-	
DENSITY : (NOTE 1)	kg/m³			- mir	1		5.12.1.9)		-	CO ₂ , H ₂ S
SPECIFIC HEAT :	kj/kgC			Hire	gan Ren	ly: Please	.1.9)	_		
VISCOSITY : (NOTE 1)	-n			· `	•	17.110000	ppm): (6.12.1.12)		-	6707.6
ti	nıs itei	m shall be		see	e note 1		TION (ppm):			
)ischa	rge pressu	Rated	Normal	Min	PARTICULATE SIZE (DL				
NPSH _A Datum:		•	C.L. Impeller	IIN	ACCOR	DING TO	PROCESS		_	
1/4	_	Reply:		- $ $ C $ $		TION NPS	HA SHALL	RF 0.6 m	80	
FLOW:	Noted a	and Done	11						, 30	
WECHANICAL L	b	5.75	19.5	on	wnat b	asis is this	value calcu	ieted?		
SUCTION PRESSURE : DIFFERENTIAL PRESSURE :	barg	5.75	14.0	-Hi	rgan Rej	olv:				
DIFFERENTIAL HEAD :	m		199.5		•	•	ala a 4 al a a			
NPSH _A :	m		0.9				sheet docu		ows	
HYDRAULIC POWER:	KW		4.30	the	e data sh	neet proces	ss(Doc No:	BK-GCS-		
			1				0020). acco			
LOCATION:	t l	his item sha	all he							
OUTDOOR	UNHEATE		all DC	—Pr	ocess di	scipline's c	pinion for c	an type p	ump	
MOUNTED AT:	/ s	pecified		WE	can no	tuse lower	NPSH Alth	ough for t	hie	
ELECTRIC AREA CLASSIFICATION	√: ⊢	lirgan Repl	٧٠.					ough for t	.1113	
GROUP II A		•		typ	be, NHP	SH is not ir	mportant.		Ī	
SITE DATA:	II.	Noted and D	one	lt s	should b	e noted tha	at the data s	heet proc	ess —	
ELEVATION (MSL):	_m	DANOMETER.								kg
RANGE OF DESIGN TEMPS:MIN / MA	λX		°(_		ss calculati	on docume	its nave t	been	
RELATIVE HUMIDITY: MIN / MAX		0	100 %	fin	alized					
UNUSUAL CONDITIONS: UTILITY CONDITIONS:		-				PRESS.			_	
ELECTRICITY: DRIVERS	HEATING	CONTROL	SHUTDOWN			PRESS.				
VOLTAGE 400	HEATING	CONTROL	SHOTDOWN							
PHASE 3										
HERTZ 50										
	1	PERFORMANCE					DRIVER (*	7.1.5) (NOTES 3,16,2	9,34)	
PROPOSAL CURVE NO.		RPM				Driver Type		, (MOTOR	
As Tested Curve No.						GEAR			N	0
IMPELLER DIA.: RATED	MAX.	MIN.		mm		VARIABLE SPEED REQU	UIRED		N	0
RATED POWER Kw	EFI	FICIENCY		(%)		SOURCE OF VARIABLE	SPEED			
RATED CURVE BEP FLOW (at rated in	npeller dia)			m³/hr		OTHER				<u> </u>
MIN FLOW :	kJ/Nm³			m³/hr		MANUFACTURER				_
PREFERRED OPERATING REGION (6	.1.11)	to		m³/hr		NAMEPLATE POWER A	AND POWER FACTOR	@Site Condition		KW
ALLOWABLE OPERATING REGION		to		m³/hr		Nominal RPM				<u></u>
MAX HEAD @ RATED IMPELLER				m		RATED LOAD RPM				
MAX POWER @ RATED IMPELLER				kW		FRAME OR MODEL				
NPSH3 AT RATED FLOW:				m		ORIENTATION			VERTICAL	
CL PUMP TO U/S BASEPLATE				m		LUBE				
NPSH MARGIN AT RATED FLOW:				m		BEARING TYPE:				
SPECIFIC SPEED (6.1.9)						RADIAL				
SUCTION SPECIFIC SPEED LIMIT						THRUST		DOL OPEN	DISCHARGE Y	VALVE)
SUCTION SPECIFIC SPEED MAX. ALLOW. SOUND PRESS. LEVEI	I REOD (6 1 14		95	(dDA)	@ 1 m	STARTING METHOD	ZE.	D.O.L (OPEN	DISCHARGE V	
EST MAX SOUND PRESS. LEVEL	L KEQD (6.1.14	7	85	(dBA) (dBA)	@ 1 m	INSULATION/TEMP. RIS	SE.		±10%	F/B
MAX. SOUND POWER LEVEL REQ'D	(6.1.14)			(uBA)		Max Voltage Variation Max Frequency Variation			±10% ±5%	
EST MAX SOUND POWER LEVEL	(0.1.17)					Max Voltage and Frequency	v Variation together		±5% ±10	1%
							,		-10	



OIL VISC. ISO GRADE

CONSTANT LEVEL OILER:

VG

REQUIRED

نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض



احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

MECHANICAL DATA SHEETS FOR SLUG PUMPS ماره پیمان: بسته کاری صادر کننده ۱ شته نوع مدرك شماره صفحه: ۱۱ز ۱۰ ٠٥٣-٠٧٣-٩١٨٤ GCS PEDCO 120 DT D03 طرح نگهداشت و افزایش تولید 27 مخزن CONSTRUCTION API PUMP TYPE: CASING MOUNTING: VERTICAL VS6 (VTC) [Based on API 610 definitions] SEE ALSO PAGE 6 CASING TYPE: DIFFUSER NOZZLE CONNECTIONS: (6.5.5) OH3 BACKPULLOUT LIFTING DEVICE REQD. (9.1.2.6) NOTES 10.14.17 Rating CASE PRESSURE RATING: Facing SUCTION RF 300 SIDE MAWP: By Supplier barg @ HYDROTEST: DISCHARGE 1.5 X MAWP barg @ RF SIDE PRESSURE CASING AUX. CONNECTIONS: (6.4.3.2) HYDROTEST OH PUMP AS ASSEMBLY Size Type Facing Posn. SUCT'N PRESS, REGIONS DESIGNED FOR MAWP (VIEWED FROM COUPLING END) IMPELLERS INDIVIDUALLY SECURED : RF Hirgan Reply: BOLT OH 3/4/5 PUMP TO PAD / FOUNDATION : Noted and Done • PROVIDE SOLEPLATE FOR OH 3/4/5 PUMPS ROTOR: SHAFT FLEXIBILITY INDEX (SFI) (9.1.1.3) Valve Supplied By SUPPLIER First Critical Speed Wet (Multi stage pumps only) DRAINS MANIFOLDED COMPONENT BALANCE TO ISO 1940 G1.0 VENT Valve Supplied By SUPPLIER SHRINK FIT -LIMITED MOVEMENT IMPELLERS (9.2.2.3) COUPLING:(7.2.3) NOTE 27 VENTS MANIFOLDED (7.2.13.f) THREAD, CONS FOR PIPELINE SERVICE & < 50°C (6.4.3.2) NO MANUFACTURER SPECIAL FITTINGS FOR TRANSITIONING (6.4.3.3) NO RATING (POWER/100 RPM) CYLINDRICAL THREADS REQUIRED (6.4.3.8) NO GUSSET SUPPORT REOUIRED YES SPACER LENGTH MACHINED AND STUDDED CONNECTIONS (6.4.3.12) NO Min 1.5 VS 6 DRAIN DRAIN TO SKID EDGE COUPLING WITH HYDRAULIC FIT (7.2.10) MATERIAL (6.12.1.1) COUPLING BALANCED TO ISO 1940-1 G6.3 (7.2.3) YES APPENDIX H CLASS NOTES 18.19 COUPLING WITH PROPRIETARY CLAMPING DEVICE (7.2.11) API 610 compliant REDUCED-HARDNESS MATERIALS REQ'D (6.12.1.12.1) YES COUPLING IN COMPLIANCE WITH (7.2.4) Applicable Hardness Standard (6.12.1.12.3) COUPLING GUARD STANDARD PER (7.2.13.a) ISO 14120 BARREL: Window on Coupling Guard CASE: DIFFUSERS BASEPLATE IMPELLER: API BASEPLATE NUMBER IMPELLER WEAR RING: BASEPLATE CONSTRUCTION (7.3.14) BASEPLATE DRAINAGE (7.3.1) CASE WEAR RING: SHAFT: MOUNTING: Bowl (if VS-type) NON-GROUT CONSTRUCTION: (7.3.13) VERTICAL LEVELING SCREWS : REQUIRED Level 2 BEARINGS AND LUBRICATION (6.10.1.1) LONGITUDINAL DRIVER POSITIONING SCREWS: REOUIRED BEARING (TYPE / NUMBER): GROUT AND VENT HOLES RADIAL O DRAIN CONNECTION YES THRUST MOUNTING PADS SIZED FOR BASEPLATE LEVELING (7.3.5) YES REVIEW AND APPROVE THRUST BEARING SIZE : (9.2.5.2.4) MOUNTING PADS TO BE MACHINED (7.3.6) YES PROVIDE SPACER PLATE UNDER ALL EOUIPMENT FEET YES LUBRICATION: (6.10.2.2) (6.11.3) (9.2.6) PRESSURE LUBE SYSTEM TO ISO 10438-ISO 10438 DATA SHEETS ATTACHED REMARKS: Pressurized Lube Oil System mtd on pump baseplate Location of Pressurized Lube Oil System mounted on baseplate : INTERCONNECTING PIPING PROVIDED BY SUPPLIER





احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

شماره پیمان: ۱۸۶۵-۹۱۸۶
 MECHANICAL DATA SHEETS FOR SLUG PUMPS

 نسخه سریال نوع مدر ک رشته تسهیلات صادر کننده بسته کاری پروژه

 BK
 GCS
 PEDCO
 120
 ME
 DT
 0019
 D03

شماره صفحه: ۷ از ۱۰

			BK	GCS	PEDCO	120	ME		DT	0019	D03		
						، توليد 27 مخزن	ت و افزایش	طرح نگهداش					
		INCTO	UMENTA	ATION						CEAL CUD	PODT CVCT	TEM MOUNTING	
	SEE ATTACHED API-670 DATA SHEET	INSTR	UNIENTA	ATION				SFAI	SUPPORTS	SYSTEM MOUNTED ON			
	ACCELEROMETER (7.4.2.1)				-							(7.5.1.4)	YES
	Number of Accelerometers							IDEN	TIFY LOCAT	TION ON BASEPLATE		,	
	Mounting Location of Accelerometers				-								
								INTE	RCONNECT	ING PIPING BY			SUPPLIER
	PROVISION FOR MTG ONLY	(6.10.2.10)											
	Number of Accelerometers									MECHANIC	CAL SEAL (6	5.8.1) NOTE 5,8 (VTS)	
	Mounting Location of Accelerometers							SEE A	ATTACHED I	ISO 21049/API 682 DATA	SHEET		NOTE 8
M 1	7									NTRAL FLUSH PORT		(6.8.9)	
		(6.10.2.11)			YES				TING JACKE	T REQ'D.		(6.8.11)	
	gan Reply:				-			FLUS	SH PLAN				31+53B
No	ted and Done												
	VIBRATION PROBES (7.4.2.2)						-			HEATING	AND COOL	ING (6.1.17) (VTS)	
	PROVISIONS FOR VIB. PROBES						-	COO	LING REQ'D		AND COOL	in (6.1.17) (* 15)	
	/ NUMBER PER RADIAL BEARING									R PIPING PLAN			
	NUMBER PER AXIAL BEARING							COO	LING WATE	R PIPING			
	1												
	MONITORS AND CABLES SUPPLIE	ED BY (7.4.2.4)						COO	LING WATE	R PIPING MATERIALS			
	<u> </u>							COO	LING WATE	R REQUIREMENTS:			
	TEMPERATURE (7.4.2.3)											shall be me	entioned
	PROVISIONS FOR TEMP PROBES											Yes	
	RADIAL BEARING TEMP.	210							AL COOLING		_	_	,
	NUMBER PER RADIAL BEARI THRUST BEARING TEMP.	NG						HEA	TING MEDIU OTH		/	Hirgan Rep	
	NUMBER PER THRUST BEARI	ING ACTIVE SIDE						HEAT	TING PIPING		/	Noted and	Done
	NUMBER PER THRUST BEARI		E		-			ILA	I II VOI II II VO	,	/	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
	TEMP. GAUGES (WITH THERMOW		-				-			PIPIN	G & APPUF	RTENANCES	1
	PRESSURE GAUGE TYPE						-	MAN	IIFOLD PIPIN	G FOR PURCHASER			4
	Remarks									VENT			
										DRAIN			
										VALVES		YES	(NOTE 11)
										COOLING WAT	ER		
	-									ORIFICES (7.5.2.4)			YES
									SOCKET	WELD CONN ON SEAL	GLAND (7.5.2	.8)	
	l 												
	-												
	<u> </u>												
	<u> </u>												
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ئىمارە سمان:

نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض



احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک MECHANICAL DATA SHEETS FOR SLUG PUMPS

بسته کاری تسهيلات نوع مدرك سريال شماره صفحه: ۱۸ز ۱۰ يروژه .0T-.VT-91A£ BK GCS PEDCO 120 MF DT 0019 D03 طرح نگهداشت و افزایش تولید 27 مخزن SURFACE PREPARATION AND PAINT TEST MANUFACTURER'S STANDARD SHOP INSPECTION (8.1.1) YES OTHER (SEE BELOW) SPECIFICATION NO. BK-GNRAL-PEDCO-000-PI-SP-0006, "Specification & DATA APPROVAL PRIOR TO SHIPMENT. YES NO for Painting" TEST WITH SUBSTITUTE SEAL (8.3.3.2.b) MATERIAL CERTIFICATION REQUIRED CASING YES PUMP: PUMP SURFACE PREPARATION VES (6.12.1.8) IMPELLER YES PRIMER AS PER PROJECT PAINTING SPEC. YES Casing and impeller Wear ring NOTE 18 FINISH COAT AS PER PROJECT PAINTING SPEC. CASTING REPAIR WELD PROCEDURE APPR REQD YES INSPECTION REQUIRED FOR CONNECTION WELDS (6.12.3.4.d) BASEPLATE: BASEPLATE SURFACE PREPARATION LIQUID PENETRANT YES YES PRIMER: AS PER PROJECT PAINTING SPEC. ULTRASONIC RADIOGRAPHY FINISH CO. AS PER PROJECT PAINTING SPEC. INSPECTION REQUIRED FOR CASTINGS NOTE 26 DETAILS O LIQUID PENETRANT YES YES SHIPMEN Hirgan Reply: EXPORT ULTRASONIC (NOTE 24) RADIOGRAPHY Noted and Done HARDNESS TEST REQUIRED (8.2.2.7) ADDNL SUBSURFACE EXAMINATION (6.12.1.5) (8.2.1.3) YES M FOR ROTOR STORAGE ORIENTATION (9.2.8.2) METHOD SHIPPING & STORAGE CONTAINER FOR VERT STORAGE (9.2.8.3) N₂ PURGE (9.2.8.4) PMI TESTING REQUIRED (8.2.2.8) (NOTE 33) YES COMPONENTS TO BE TESTED START-UP VES RESIDUAL UNBALANCE TEST (J.4.1.2) NORMAL MAINTENANCE YES NOTIFICATION OF SUCCESSFUL SHOP PERFORMANCE TEST (8.1.1.c) (8.3.3.5) (WIT) YES ITEM No. PUMP DRIVER GEAR BASE TOTAL BASEPLATE TEST (7.3.21) WIT HYDROSTATIC TEST OF BOWLS & COLUMN (9.3.13.2) WIT PERFORMANCE TEST WIT OTHER PURCHASER REQUIREMENTS TEST IN COMPLIANCE WITH (8.3.3.2) 8.3.3.2 COORDINATION MEETING REQUIRED (10.1.3) YES TEST DATA POINTS TO (8.3.3.3) 8.3.3.3 MAXIMUM DISCHARGE PRESSURE TO INCLUDE TEST TOLERANCES TO (8.3.3.4) YES NPSH (8.3.4.3.1) (8.3.4.3.4) (NOTE 9) WIT OPERATION TO TRIP SPEED NPSH-1ST STG ONLY (8.3.4.3.2) MAX DIA. IMPELLERS AND/OR NO OF STAGES NPSH TESTING TO HI 1.6 OR ISO 9906 (8.3.4.3.3) YES TEST NPSHA LIMITED TO 110% SITE NPSHA (8.3.3.6) CONNECTION DESIGN APPROVAL (9.2.1.4) TORSIONAL ANALYSIS / REPORT (6.9.2.10) RETEST ON SEAL LEAKAGE (8.3.3.2.d) RETEST REQUIRED AFTER FINAL HEAD ADJ (8.3.3.7.b) PROGRESS REPORTS YES OUTLINE OF PROC FOR OPTIONAL TESTS (10.2.5) COMPLETE UNIT TEST (8.3.4.4.1) WIT ADDITIONAL DATA REQUIRING 20 YEARS RETENTION (8.2.1.1) SOUND LEVEL TEST (8.3.4.5) WIT NON-WIT CLEANLINESS PRIOR TO FINAL ASSEMBLY (8.2.2.6) LATERAL ANALYSIS REQUIRED (9.1.3.4) (9.2.4.1.3) LOCATION OF CLEANLINESS INSPECTION MODAL ANALYSIS REQUIRED (9.3.9.2) NOZZLE LOAD TEST DYNAMIC BALANCE ROTOR (6.9.4.4) CHECK FOR CO-PLANAR MOUNTING PAD SURFACES INSTALLATION LIST IN PROPOSAL (10.2.3.1) MECHANICAL RUN TEST UNTIL OIL TEMP STABLE VFD STEADY STATE DAMPED RESPONSE ANALYSIS (6.9.2.3) 4 HR. MECH RUN AFTER OIL TEMP STABLE (8.3.4.2.1) WIT TRANSIENT TORSIONAL RESPONSE 4 HR, MECH RUN TEST (8.3.4.2.2) BEARING LIFE CALCULATIONS REQUIRED (6.10.1.6) BRG HSG RESONANCE TEST (8.3.4.7) IGNITION HAZARD ASSMT TO EN 13463-1 (7.2.13.e) STRUCTURAL RESONANCE TEST (9.3.9.2) CASING RETIREMENT THICKNESS DRAWING (10.3.2.3) REMOVE / INSPECT HYDRODYNAMIC BEARINGS AFTER TEST FLANGES RQD IN PLACE OF SKT WELD UNIONS (7.5.2.8) YES (9.2.7.5)INCLUDE PLOTTED VIBRATION SPECTRA (6.9.3.3) AUXILIARY EQUIPMENT TEST (8.3.4.6) CONNECTION BOLTING (7.5.1.7) EOUIPMENT TO BE INCLUDED IN AUXILIARY TESTS CADMIUM PLATED BOLTS PROHIBITED LOCATION OF AUXILIARY EQUIPMENT TEST VENDOR TO KEEP REPAIR AND HT RCDS (8.2.1.1.c) YES IMPACT TEST VENDOR SUBMIT TEST PROCEDURES (8.3.1.1) YES SUBMIT INSPECTION CHECK LIST (8.1.5) NOTE 4 REMOVE CASING AFTER TEST YES





احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

شماره پیمان:									
۹۱۸٤ - ۲۳۰۰	پروژه	بسته کاری	صادر کننده	تسهيلات	رشته	نوع مدرك	سريال	نسخه	شماره صفحه: ۹ از ۱۰
- The time	BK	GCS	PEDCO	120	ME	DT	0019	D03	

طرح نگهداشت و افزایش تولید 27 مخزن VS6 Note VERTICAL TYPE (FIG 1.1) REMARKS 3 VERTICAL PUMPS VERTICAL PUMPS (CONT'D) 5 6 PUMP THRUST: (+) UP (-) DOWN LINE SHAFT: STATIC THRUST LINE SHAFT DIAMETER mm 8 AT MIN FLOW Ν TUBE DIAMETER AT RATED FLOW LINE SHAFT COUPLING: LINESHAFT CONNECTION 10 AT MAX FLOW Ν Ν MAX THRUST SUCTION STRAINER TYPE 12 SOLEPLATE REQUIRED 13 SOLEPLATE Length x Width LEVEL CONTROL IMPELLER COLLETS ACCEPTABLE 14 SOLEPLATE THICKNESS mm 15 MOUNTING FLANGE REQUIRED HARDENED SLEEVES UNDER BEARINGS (9.3.10.5) RESONANCE TEST STRUCTURAL ANALYSIS (9.3.5) 16 LENGTH NUMBER DRIVER ALIGNMENT SCREWS SPACING SUCTION CAN SUCTION CAN GUIDE BUSHINGS: THICKNESS NUMBER LENGTH LINE SHAFT BEARING SPACING DIAMETER GUIDE BUSHING LUBE: SEPARTATE MOUNTING PLATE (9.3.8.3.1) YES PROVIDE SEPARATE SOLEPLATE (9.3.8.3.3) DRAIN PIPED TO SURFACE (9.3.13.5) BOWL HEAD CALCULATION REQUIRED MATERIALS (additional) DISCHARGE HEAD : BEARING RETAINER: BOWL SHAFT: SHAFT ENCLOSING TUBE : LINESHAFT: DISCHARGE COLUMN : LINESHAFT HARDFACING: PRESSURE RATING: MAWP HYDRO BELLMOUTH: HEAD BOWL BEARING: COLUMN PIPE LINESHAFT BEARING: BOWL SUMP ARRANGEMENT SUMP DIMENSIONS : GRADE ELEVATION LOW LIQUID LEVEL C.L. OF DISCHARGE 3 SUMP DEPTH PUMP LENGTH 1, GRADE TO DISCH. GRADE TO LOW LIQUID LVL 14 GRADE TO 1ST STG IMPL'R. 15 SUBMERGENCE REQ'D SUMP DIAMETER Фф





احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

MECHANICAL DATA SHEETS FOR SLUG PUMPS پروژه بسته کاری صادر کننده نوع مدرك شماره صفحه: ۱۰ از ۱۰ سر یال ٠٥٣-٠٧٣-٩١٨٤ GCS PEDCO 120 DT 0019 D03 طرح نگهداشت و افزایش تولید 27 مخزن PRESSURE VESSEL DESIGN CODE REFERENCES THESE REFERENCES MUST BE LISTED BY THE MANUFACTURER CASTING FACTORS USED IN DESIGN (TABLE 3) SOURCE OF MATERIAL PROPERTIES WELDING AND REPAIRS (NOTE 22) THESE REFERENCES MUST BE LISTED BY THE PURCHASER. (DEFAULT TO TABLE 11 IF NO PURCHASER PREFERENCE IS STATED) WELDING REQUIREMENT (APPLICABLE CODE OR STANDARD) DEFAULT PER TABLE 11 WELDER/OPERATOR QUALIFICATION DEFAULT PER TABLE 11 WELDING PROCEDURE QUALIFICATION DEFAULT PER TABLE 11 NON-PRESSURE RETAINING STRUCTURAL WELDING SUCH AS BASEPLATES OR SUPPORTS DEFAULT PER TABLE 11 MAGNETIC PARTICLE OR LIQUID PENETRANT EXAMINATION OF PLATE EDGES DEFAULT PER TABLE 11 DEFAULT PER TABLE 11 POSTW M ? ON WELDS DEFAULT PER TABLE 11 Hirgan Reply: MATERIAL INSPECTION MTHESE Noted and Done DEFAULT TO TABLE 14 ASER YES ALTERNATIVE MATERIAL INSPECTIONS AND ACCEPTANCE CRITERIA (SEE TABLE 15) (8.2.2.5) FOR FABRICATIONS FOR CASTINGS TYPE OF INSPECTION METHOD RADIOGRAPHY ULTRASONIC INSPECTION MAGNETIC PARTICLE INSPECTION LIQUID PENETRANT INSPECTION VISUAL INSPECTION (all surfaces) REMARKS:

???? Hirgan Reply: Noted and Done ANICAL DATA SHEE HHLL 3900 mm HLL 3800 mm <u>V-2104</u> LLLL 250 mm LLLL 150 mm B.L. TO BINAK CLUSTER 1700 mm ~1.4 KM PIPELINE <u>P-2101A/B</u>

HANI CAL DATA

SHEE TS FOR SLUG \angle

Hirgan Reply: Noted and Done

PUMP

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(P-

2101

A/B)

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