

	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض							
	احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	MECHANICAL DATA SHEETS FOR CLOSED DRAIN PUMP (API 610)						شماره صفحه: ۱ از ۱۰	
	پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تسهیلات 120	رشته ME	نوع مدرک DT		سریال 0022

طرح نگهداشت و افزایش تولید ۲۷ مخزن

MECHANICAL DATA SHEETS FOR CLOSED DRAIN PUMP

نگهداشت و افزایش تولید میدان نفتی بینک

D06	SEP. 2022	IFA	H.Ghadyani	M.Fakharian	A.M.Mohseni	
D05	MAY. 2023	IFA	H. Adineh	M.Fakharian	A.M.Mohseni	
D04	SEP. 2022	IFA	H. Adineh	M.Fakharian	M. Mehrshad	
D03	APR. 2022	IFA	H. Adineh	M.Fakharian	M. Mehrshad	
D02	MAR. 2022	IFA	H. Adineh	M.Fakharian	M. Mehrshad	
D01	JAN. 2022	IFA	H. Adineh	M.Fakharian	M. Mehrshad	
D00	NOV.2021	IFC	H. Adineh	M.Fakharian	M. Mehrshad	
REV.	Date	Purpose of Issue/Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval

Class:1	CLIENT Doc. Number: F0Z-708853
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

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض							
	احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک						شماره صفحه: ۲ از ۱۰	
	MECHANICAL DATA SHEETS FOR CLOSED DRAIN PUMP (API 610)							
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تسهیلات 120	رشته ME	نوع مدرک DT	سریال 0022	نسخه D06

REVISION RECORD SHEET

page	D00	D01	D02	D03	D04	page	D05	D06	D07	D08	D09
1	x	x	x	x	x	1	x	x			
2	x	x	x	x	x	2	x	x			
3	x	x		x	x	3	x	x			
4	x					4					
5	x	x	x	x	x	5	x				
6	x	x	x	x	x	6	x				
7	x					7					
8	x	x			x	8	x				
9	x	x			x	9	x				
10						10					
11						11					
12						12					
13						13					
14						14					
15						15					
16						16					
17						17					
18						18					
19						19					
20						20					
21						21					
22						22					
23						23					
24						24					
25						25					
26						26					
27						27					
28						28					
29						29					
30						30					
31						31					
32						32					
33						33					
34						34					
35						35					
36						36					
37						37					
38						38					
39						39					
40						40					
41						41					
42						42					
43						43					
44						44					
45						45					
46						46					
47						47					
48						48					
49						49					
50						50					
51						51					
52						52					
53						53					
54						54					
55						55					
56						56					
57						57					
58						58					
59						59					
60						60					
61						61					
62						62					
63						63					
64						64					

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک																	
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	MECHANICAL DATA SHEETS FOR CLOSED DRAIN PUMP (API 610) <table border="1"> <tr> <td>پروژه</td> <td>بسته کاری</td> <td>صادر کننده</td> <td>تسهیلات</td> <td>رشته</td> <td>نوع مدرک</td> <td>سریال</td> <td>نسخه</td> </tr> <tr> <td>BK</td> <td>GCS</td> <td>PEDCO</td> <td>120</td> <td>ME</td> <td>DT</td> <td>0022</td> <td>D06</td> </tr> </table>	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	BK	GCS	PEDCO	120	ME	DT	0022	D06	شماره صفحه: ۳ از ۱۰
پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه											
BK	GCS	PEDCO	120	ME	DT	0022	D06											
GENERAL NOTES																		
1 Pumping fluid might be hydrocarbon, water or a mixture of both and also is corrosive / erosive / hazardous agents / flammable and its contamination is allowed.																		
2 Mass Density [kg/m3] at Min. / Norm / Max. Temp: 829/980/1023																		
3 Viscosity [cP] At Min. / Normal / Max. Temp: 0.443/0.46/1.37																		
4 Mechanical seal shall be as per API 682, 4th edition Data Sheet.																		
5 PMI Testing For Alloy Steel Shall be Done.																		
6 If NPSH margine be less than 1m, NPSH Test Shall be Done.																		
7 Pump drain shall be terminated at skid edge with flange connection and valved. Valves in the piping system shall be Welded Flanged type.																		
8 Design Condition: Min./Max. Design Temperature: 5 / 85 °C Max. Design Pressure: 14.5 barg																		
9 API Seal Plan 31-53B shall be considred.(vendor to confirm)																		
10 Vendor shall submit ITP (Inspection & Testing Plan) with his proposal.																		
11 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.																		
12 Vendor is requested to confirm the material, or propose appropriate alternative.																		
13 The Tie-in flanges shall conform to ASME B-16.5																		
14 Ultrasonic Test shall be performed for forged shaft.																		
15 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.																		
16 Spare parts shall be supplied by vendor according to 'MR's appendix for Centrifugal Pumps; Doc. No.; BK-GCS-PEDCO-120-ME-MR-0009"																		
17 Bearing temperature shall be measured during mechanical run test.																		
18 For electrical motor descriptions, refer to 'Specification For LV induction Motors' Doc. No.BK-GNRAL-PEDCO-000-EL-SP-0010. and Specification for MV induction motors' Doc.No. BK-GNRAL-PEDCO-000-EL-SP-0017.																		
19 Electrical motor shall be rated for the end of curve.																		
20 For site conditions refer to Process Basis of Design Document. Doc.No. BK-GNRAL-PEDCO-000-PR-DB-0001.																		
21 Suction & Discharge line Size is 2".																		
22 Power Factor, efficiency, frequent, voltage, frequent variation and voltage variation of motor shall be specified by vendor in data sheet.																		
23 Allowable external forces and moments on nozzle equal to two times of table 5 of API 610-11th edition.																		
24 The material shall be in compliance with NACE MR0175/ISO15156 and Specification For Material Requirements in Sour service Document No. BK-GNRAL-PEDCO-000-PI-SP-0008																		
25 Range of ambient design temperature: Min. ambient design temperature: 5 °C , Max. ambient design temperature: 50 °C																		
26 Coupling shall be flexible with spacer and coupling guard shall be of Non-Spark type.																		
27 The elevation of pump centerline from ground is 76 cm.																		
28 Max allowable pressure at shut-off: 14.5 barg																		
29 Barometric pressure in Binak new GCS; winter: 14.37 psia summer: 13.26 psia																		
30 Barrel and pump shall have the same MAWP and to be hydrotest in same value with pump.																		
31 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.																		
32 vendor shall fill in the blanks and return the complete data sheet along with motor data sheet, Doc.No:BK-GCS-PEDCO-120-EL-DT-0008, With his proposal																		



احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



MECHANICAL DATA SHEETS FOR CLOSED DRAIN PUMP (API 610)

شماره صفحه: ۴ از ۱۰

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
D06	0022	DT	ME	120	PEDCO	GCS	BK

طرح نگهداشت و افزایش تولید 27 مخزن

PURCH ORDER NO.

identify a cross referenced paragraph in the document note, and may also contain a drop down list

When you have completed the DS, highlight the whole page format cells pattern none
Delete these notes on completion

COMMENTS:

DATA SHEETS					
ITEM No.	ATT	ITEM No.	ATT	ITEM No.	ATT
P-2202 A		P-2202 B			

PUMP
MOTOR
GEAR
TURBINE

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک																															
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	MECHANICAL DATA SHEETS FOR CLOSED DRAIN PUMP (API 610) <table><tr><td>نسخه</td><td>سریال</td><td>نوع مدرک</td><td>رشته</td><td>تهیه‌یلات</td><td>صادرکننده</td><td>بسته کاری</td><td>پروژه</td></tr><tr><td>D06</td><td>0022</td><td>DT</td><td>ME</td><td>120</td><td>PEDCO</td><td>GCS</td><td>BK</td></tr></table>	نسخه	سریال	نوع مدرک	رشته	تهیه‌یلات	صادرکننده	بسته کاری	پروژه	D06	0022	DT	ME	120	PEDCO	GCS	BK	شماره صفحه: ۱۰ از ۵۰														
نسخه	سریال	نوع مدرک	رشته	تهیه‌یلات	صادرکننده	بسته کاری	پروژه																									
D06	0022	DT	ME	120	PEDCO	GCS	BK																									
طرح نگهداشت و افزایش تولید 27 مخزن																																
APPLICABLE TO: PROPOSAL FOR NISOC SITE BINAK Gas Compressor Station NO. REQ 2(1+1) PUMP SIZE MANUFACTURER																																
APPLICABLE NTL/INTNTL STANDARD: API 610 - 11th Edition, IPS-G-PM-105 UNIT SERVICE Closed Drain Pump TYPE Centrifugal No. STAGES MODEL VS6 (VTA) SERIAL NO.																																
LIQUID CHARACTERISTICS																																
<table><tr><td></td><td>Units</td><td>Maximum</td><td>Minimum</td><td>Note</td></tr><tr><td>LIQUID TYPE OR NAME</td><td></td><td colspan="2">Hydrocarbon Drain(HC)(NOTE 1)</td><td>Max & min values refer</td></tr><tr><td>VAPOR PRESSURE</td><td>bara</td><td>1</td><td></td><td>only to the property</td></tr><tr><td>DENSITY (NOTE 2)</td><td>kg/m³</td><td>1023</td><td>829</td><td>listed</td></tr><tr><td>SPECIFIC HEAT</td><td>kJ/kgC</td><td></td><td></td><td></td></tr><tr><td>VISCOSITY (NOTE 3)</td><td>cP</td><td>1.37</td><td>0.443</td><td></td></tr></table>		Units	Maximum	Minimum	Note	LIQUID TYPE OR NAME		Hydrocarbon Drain(HC)(NOTE 1)		Max & min values refer	VAPOR PRESSURE	bara	1		only to the property	DENSITY (NOTE 2)	kg/m³	1023	829	listed	SPECIFIC HEAT	kJ/kgC				VISCOSITY (NOTE 3)	cP	1.37	0.443		INTERMITTENT SERVICE : • IF INTERMITTENT NO. OF STARTS : PUMPS OPERATE IN: CORROSION DUE TO : (6.12.1.9) EROSION DUE TO : (6.12.1.9) H2S CONCENTRATION (ppm) : (6.12.1.12) CHLORIDE CONCENTRATION (ppm) : PARTICULATE SIZE (DIA IN MICRONS) PARTICULATE CONCENTRATION (PPM)	
	Units	Maximum	Minimum	Note																												
LIQUID TYPE OR NAME		Hydrocarbon Drain(HC)(NOTE 1)		Max & min values refer																												
VAPOR PRESSURE	bara	1		only to the property																												
DENSITY (NOTE 2)	kg/m³	1023	829	listed																												
SPECIFIC HEAT	kJ/kgC																															
VISCOSITY (NOTE 3)	cP	1.37	0.443																													
OPERATING CONDITIONS (6.1.2)																																
	Units	Maximum	Rated	Normal	Min																											
NPSH _A Datum:		C.L. Impeller																														
PUMPING TEMPERATURE :	°C			5 (worse case)																												
FLOW :	m³/hr		3.30	3.0																												
DISCHARGE PRESSURE:	barg		7.0																													
SUCTION PRESSURE :	barg	0.800			0.0																											
DIFFERENTIAL PRESSURE :	bar		7.0																													
DIFFERENTIAL HEAD :	m		72.80																													
NPSH _A :	m		0.3																													
HYDRAULIC POWER:	KW		0.60																													
SITE AND UTILITY DATA																																
LOCATION: OUTDOOR UNHEATED MOUNTED AT: ELECTRIC AREA CLASSIFICATION: (6.1.22) ZONE 1 GROUP II B TEMP CLASS T3 SITE DATA : ELEVATION (MSL) : 12.5 m BAROMETER : (NOTE 28) mBar RANGE OF DESIGN TEMPS:MIN / MAX 5 85 °C RELATIVE HUMIDITY: MIN / MAX 0 100 % (@ 25.6 °C) UNUSUAL CONDITIONS: UTILITY CONDITIONS : ELECTRICITY : DRIVERS HEATING CONTROL SHUTDOWN VOLTAGE 400 PHASE 3 HERTZ 50			COOLING WATER : <table><tr><td>TEMP</td><td>RETURN</td><td>DESIGN</td></tr><tr><td>PRESS.</td><td></td><td></td></tr><tr><td>SOURCE</td><td></td><td></td></tr></table> COOLING WATER CHLORIDE CONCENTRATION: INSTRUMENT AIR : kg MIN kg STEAM <table><tr><td>TEMP</td><td>DRIVERS</td><td>HEATING</td></tr><tr><td>PRESS.</td><td></td><td></td></tr></table>		TEMP	RETURN	DESIGN	PRESS.			SOURCE			TEMP	DRIVERS	HEATING	PRESS.															
TEMP	RETURN	DESIGN																														
PRESS.																																
SOURCE																																
TEMP	DRIVERS	HEATING																														
PRESS.																																
PERFORMANCE																																
PROPOSAL CURVE NO. RPM As Tested Curve No. IMPELLER DIA.: RATED MAX. MIN. mm RATED POWER Kw EFFICIENCY (%) RATED CURVE BEP FLOW (at rated impeller dia) m³/hr MIN. FLOW: kJ/Nm³ m³/hr PREFERRED OPERATING REGION (6.1.11) to m³/hr ALLOWABLE OPERATING REGION to m³/hr MAX HEAD @ RATED IMPELLER m MAX POWER @ RATED IMPELLER kW NPSH3 AT RATED FLOW : m CL PUMP TO U/S BASEPLATE m NPSH MARGIN AT RATED FLOW : m SPECIFIC SPEED (6.1.9) SUCTION SPECIFIC SPEED LIMIT SUCTION SPECIFIC SPEED MAX. ALLOW. SOUND PRESS. LEVEL REQD (6.1.14) 85.00 (dBA) EST MAX SOUND PRESS. LEVEL (dBA) MAX. SOUND POWER LEVEL REQD (6.1.14) EST MAX SOUND POWER LEVEL			DRIVER (7.1.5) (NOTE 22) Driver Type MOTOR GEAR NO VARIABLE SPEED REQUIRED NO SOURCE OF VARIABLE SPEED OTHER MANUFACTURER NAMEPLATE POWER AND POWER FACTOR @Site Condition KW Nominal RPM RATED LOAD RPM FRAME OR MODEL ORIENTATION Vertical LUBE BEARING TYPE: RADIAL THRUST STARTING METHOD OPEN DISCHARGE VALVE INSULATION/TEMP. RISE F/B Max Voltage Variation ±10% Max Frequency Variation ±5% Max Voltage and Frequency Variation together ±10%																													

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 	
	MECHANICAL DATA SHEETS FOR CLOSED DRAIN PUMP (API 610)								شماره صفحه: ۷ از ۱۰
	شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تسهیلات 120	رشته ME	نوع مدرک DT		

طرح نگهداشت و افزایش تولید 27 مخزن

INSTRUMENTATION	SEAL SUPPORT SYSTEM MOUNTING
SEE ATTACHED API-670 DATA SHEET	SEAL SUPPORT SYSTEM MOUNTED ON PUMP BASEPLATE
ACCELEROMETER (7.4.2.1)	(7.5.1.4)
Number of Accelerometers	IDENTIFY LOCATION ON BASEPLATE
Mounting Location of Accelerometers	INTERCONNECTING PIPING BY Supplier
PROVISION FOR MTG ONLY (6.10.2.10)	MECHANICAL SEAL (6.8.1) (VTS)
Number of Accelerometers	SEE ATTACHED ISO 21049/API 682 DATA SHEET (NOTE 4)
Mounting Location of Accelerometers	ADDITIONAL CENTRAL FLUSH PORT (6.8.9)
FLAT SURFACE REQUIRED (6.10.2.11) YES	HEATING JACKET REQ'D. (6.8.11)
Number of Accelerometers	FLUSH PLAN 31+53B (NOTE 9.1)
Mounting Location of Accelerometers	
VIBRATION PROBES (7.4.2.2)	HEATING AND COOLING (6.1.17) (VTS)
PROVISIONS FOR VIB. PROBES	COOLING REQ'D
NUMBER PER RADIAL BEARING	COOLING WATER PIPING PLAN
NUMBER PER AXIAL BEARING	COOLING WATER PIPING
MONITORS AND CABLES SUPPLIED BY (7.4.2.4)	FITTINGS
TEMPERATURE (7.4.2.3)	COOLING WATER PIPING MATERIALS
PROVISIONS FOR TEMP PROBES	COOLING WATER REQUIREMENTS:
RADIAL BEARING TEMP.	TOTAL COOLING WATER
NUMBER PER RADIAL BEARING	HEATING MEDIUM
THRUST BEARING TEMP.	OTHER
NUMBER PER THRUST BEARING ACTIVE SIDE	HEATING PIPING
NUMBER PER THRUST BEARING INACTIVE SIDE	
TEMP. GAUGES (WITH THERMOWELLS) (9.1.3.6)	PIPING & APPURTENANCES
PRESSURE GAUGE TYPE	MANIFOLD PIPING FOR PURCHASER CONNECTION (7.5.1.6)
Remarks	VENT YES
	DRAIN YES
	VALVES YES (NOTE 7)
	COOLING WATER YES
	TAG ALL ORIFICES (7.5.2.4) YES
	SOCKET WELD CONN ON SEAL GLAND (7.5.2.8)

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک																	
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	MECHANICAL DATA SHEETS FOR CLOSED DRAIN PUMP (API 610) <table><tr><td>نسخه</td><td>سریال</td><td>نوع مدرک</td><td>رشته</td><td>تسهیلات</td><td>صادرکننده</td><td>بسته کاری</td><td>پروژه</td></tr><tr><td>D06</td><td>0022</td><td>DT</td><td>ME</td><td>120</td><td>PEDCO</td><td>GCS</td><td>BK</td></tr></table>	نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه	D06	0022	DT	ME	120	PEDCO	GCS	BK	شماره صفحه: ۱۰ از ۸
نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه											
D06	0022	DT	ME	120	PEDCO	GCS	BK											

طرح نگهداشت و افزایش تولید 27 مخزن

SURFACE PREPARATION AND PAINT						TEST				
MANUFACTURER'S STANDARD OTHER (SEE BELOW) <u>YES</u> SPECIFICATION NO. <u>As per Project Specification.</u> "Specification for Painting; BK-GNRL-PEDCO-000-PI-SP-0006" PUMP: PUMP SURFACE PREPARATION <u>BY VENDOR</u> PRIMER <u>BY VENDOR</u> FINISH COAT <u>BY VENDOR</u> BASEPLATE: BASEPLATE SURFACE PREPARATION <u>BY VENDOR</u> PRIMER: <u>BY VENDOR</u> FINISH COAT <u>BY VENDOR</u> DETAILS OF LIFTING DEVICES SHIPMENT: (8.4.1) <u>EXPORT</u> EXPORT BOXING REQUIRED <u>YES</u> OUTDOOR STORAGE MORE THAN 6 MONTHS <u>YES</u> ROTOR STORAGE ORIENTATION (9.2.8.2) _____ SHIPPING & STORAGE CONTAINER FOR VERT STORAGE (9.2.8.3) _____ N ₂ PURGE (9.2.8.4) _____ SPARE PARTS START-UP <u>YES</u> NORMAL MAINTENANCE <u>YES</u>						SHOP INSPECTION (8.1.1) _____ PERFORMANCE CURVE _____ & DATA APPROVAL PRIOR TO SHIPMENT. <u>YES</u> TEST WITH SUBSTITUTE SEAL (8.3.3.2.b) <u>NO</u> MATERIAL CERTIFICATION REQUIRED CASING <u>YES</u> SHAFT <u>YES</u> (6.12.1.8) IMPELLER <u>YES</u> OTHER <u>YES</u> CASTING REPAIR WELD PROCEDURE APPR REQD <u>YES</u> INSPECTION REQUIRED FOR CONNECTION WELDS (6.12.3.4.d) LIQUID PENETRANT <u>YES</u> MAG PARTICLE <u>YES</u> ULTRASONIC _____ RADIOGRAPHY _____ INSPECTION REQUIRED FOR CASTINGS LIQUID PENETRANT <u>YES</u> MAG PARTICLE <u>YES</u> ULTRASONIC (NOTE 14) _____ RADIOGRAPHY _____ HARDNESS TEST REQUIRED (8.2.2.7) _____ ADDNL SUBSURFACE EXAMINATION (6.12.1.5) (8.2.1.3) _____ FOR _____ METHOD _____ PMI TESTING REQUIRED (8.2.2.8) (NOTE 5) <u>YES</u> COMPONENTS TO BE TESTED RESIDUAL UNBALANCE TEST (J.4.1.2) _____ NOTIFICATION OF SUCCESSFUL SHOP PERFORMANCE TEST (8.1.1.c) (8.3.3.5) (WIT) <u>YES</u> BASEPLATE TEST (7.3.21) _____ HYDROSTATIC _____ <u>WIT</u> HYDROSTATIC TEST OF BOWLS & COLUMN (9.3.13.2) <u>WIT</u> PERFORMANCE TEST <u>WIT</u> TEST IN COMPLIANCE WITH (8.3.3.2) <u>8.3.3.2</u> TEST DATA POINTS TO (8.3.3.3) <u>8.3.3.3</u> TEST TOLERANCES TO (8.3.3.4) _____ NPSH (8.3.4.3.1) (8.3.4.3.4) (NOTE 6) <u>WIT</u> NPSH-1ST STG ONLY (8.3.4.3.2) _____ NPSH TESTING TO HI 1.6 OR ISO 9906 (8.3.4.3.3) _____ TEST NPSHA LIMITED TO 110% SITE NPSHA (8.3.3.6) _____ RETEST ON SEAL LEAKAGE (8.3.3.2.d) _____ RETEST REQUIRED AFTER FINAL HEAD ADJ (8.3.3.7.b) _____ COMPLETE UNIT TEST (8.3.4.4.1) _____ SOUND LEVEL TEST (8.3.4.5) <u>WIT</u> CLEANLINESS PRIOR TO FINAL ASSEMBLY (8.2.2.6) <u>NON-WIT</u> LOCATION OF CLEANLINESS INSPECTION _____ NOZZLE LOAD TEST _____ CHECK FOR CO-PLANAR MOUNTING PAD SURFACES _____ MECHANICAL RUN TEST UNTIL OIL TEMP STABLE <u>WIT</u> 4 HR. MECH RUN AFTER OIL TEMP STABLE (8.3.4.2.1) <u>WIT</u> 4 HR. MECH RUN TEST (8.3.4.2.2) _____ BRG HSG RESONANCE TEST (8.3.4.7) _____ STRUCTURAL RESONANCE TEST (9.3.9.2) _____ REMOVE / INSPECT HYDRODYNAMIC BEARINGS AFTER TEST (9.2.7.5) _____ AUXILIARY EQUIPMENT TEST (8.3.4.6) _____ EQUIPMENT TO BE INCLUDED IN AUXILIARY TESTS _____ LOCATION OF AUXILIARY EQUIPMENT TEST _____ IMPACT TEST PER EN 13445 _____ PER ASME SECTION VIII _____ REMOVE CASING AFTER TEST _____				
ITEM No						PUMP	DRIVER	GEAR	BASE	TOTAL
OTHER PURCHASER REQUIREMENTS										
COORDINATION MEETING REQUIRED (10.1.3) <u>YES</u>										
MAXIMUM DISCHARGE PRESSURE TO INCLUDE										
MAX RELATIVE DENSITY <u>YES</u>						1023 kg/m ³				
OPERATION TO TRIP SPEED										
MAX DIA. IMPELLERS AND/OR NO OF STAGES <u>YES</u>										
CONNECTION DESIGN APPROVAL (9.2.1.4) _____										
TORSIONAL ANALYSIS / REPORT (6.9.2.10) _____										
PROGRESS REPORTS _____										
OUTLINE OF PROC FOR OPTIONAL TESTS (10.2.5) _____										
ADDITIONAL DATA REQUIRING 20 YEARS RETENTION (8.2.1.1) _____										
LATERAL ANALYSIS REQUIRED (9.1.3.4) (9.2.4.1.3) _____										
MODAL ANALYSIS REQUIRED (9.3.9.2) _____										
DYNAMIC BALANCE ROTOR (6.9.4.4) _____										
INSTALLATION LIST IN PROPOSAL (10.2.3.1) <u>YES</u>										
VFD STEADY STATE DAMPED RESPONSE ANALYSIS (6.9.2.3) _____										
TRANSIENT TORSIONAL RESPONSE _____										
BEARING LIFE CALCULATIONS REQUIRED (6.10.1.6) <u>YES</u>										
IGNITION HAZARD ASSMT TO EN 13463-1 (7.2.13.e) _____										
CASING RETIREMENT THICKNESS DRAWING (10.3.2.3) _____										
FLANGES RQD IN PLACE OF SKT WELD UNIONS (7.5.2.8) <u>YES</u>										
INCLUDE PLOTTED VIBRATION SPECTRA (6.9.3.3) _____										
CONNECTION BOLTING (7.5.1.7) <u>SS</u>										
CADMIUM PLATED BOLTS PROHIBITED _____										
VENDOR TO KEEP REPAIR AND HT RCDS (8.2.1.1.c) <u>YES</u>										
VENDOR SUBMIT TEST PROCEDURES (8.3.1.1) <u>YES</u>										
SUBMIT INSPECTION CHECK LIST (8.1.5) <u>YES</u>										



NISOC

نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



شماره پیمان:

۰۵۳-۰۷۳-۹۱۸۴

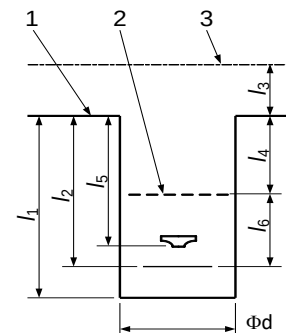
MECHANICAL DATA SHEETS FOR CLOSED DRAIN PUMP (API 610)

شماره صفحه: ۱۰ از ۹

نسخه	سریال	نوع مدرک	رشته	تهیهات	صادرکننده	بسته کاری	پروژه
D06	0022	DT	ME	120	PEDCO	GCS	BK

طرح نگهداشت و افزایش تولید 27 مخزن

1	Note	VERTICAL TYPE (FIG 1.1)	VS6	Rev
2		REMARKS	For P&ID refer to BK-GCS-PEDCO-120-PR-PI-0017	
3				
4				
5		VERTICAL PUMPS		
6		PUMP THRUST:	(+) UP (-) DOWN	
7		STATIC THRUST	N N	
8		AT MIN FLOW	N N	
9		AT RATED FLOW	N N	
10		AT MAX FLOW	N N	
11		MAX THRUST	N N	
12		SOLEPLATE REQUIRED		
13		SOLEPLATE Length x Width	m X m	
14		SOLEPLATE THICKNESS	mm	
15		MOUNTING FLANGE REQUIRED		
16		COLUMN PIPE:		
17		DIAMETER	mm	
18		LENGTH	m	
19		NUMBER		
20		SPACING	m	
21		GUIDE BUSHINGS:		
22		NUMBER		
23		LINE SHAFT BEARING SPACING	mm	
24		GUIDE BUSHING LUBE:		
25				
26				
27				
28		VERTICAL PUMPS (CONT'D)		
29		LINE SHAFT:		
30		LINE SHAFT DIAMETER	mm	
31		TUBE DIAMETER	mm	
32		LINE SHAFT COUPLING:		
33		LINESHAFT CONNECTION		
34		SUCTION STRAINER TYPE		
35		LEVEL CONTROL		
36		IMPELLER COLLETS ACCEPTABLE		
37		HARDENED SLEEVES UNDER BEARINGS (9.3.10.5)		
38		RESONANCE TEST		
39		STRUCTURAL ANALYSIS (9.3.5)		
40		DRIVER ALIGNMENT SCREWS		
41		SUCTION CAN		
42		SUCTION CAN	THICKNESS mm	
43			LENGTH m	
44			DIAMETER mm	
45		SEPARTATE MOUNTING PLATE (9.3.8.3.1)	YES	
46		PROVIDE SEPARATE SOLEPLATE (9.3.8.3.3)	YES	
47		DRAIN PIPED TO SURFACE (9.3.13.5)		
48		BOWL HEAD CALCULATION REQUIRED		
49		MATERIALS (additional)		
50		SUCTION CAN / BARREL:		
51		DISCHARGE HEAD :		
52		BOWL SHAFT :		
53		LINESHAFT :		
54		LINESHAFT HARDFACING :		
55		BELLMOUTH :		
56		BOWL BEARING :		
57		LINESHAFT BEARING :		
58		LINESHAFT SLEEVES :		
59		BEARING RETAINER :		
60		SHAFT ENCLOSING TUBE :		
61		DISCHARGE COLUMN :		
62		PRESSURE RATING:	MAWP HYDRO	
63		HEAD		
64		COLUMN PIPE		
65		BOWL		
66		SUMP ARRANGEMENT		
67		SUMP DIMENSIONS :		
68		GRADE ELEVATION	1 m	
69		LOW LIQUID LEVEL	2 m	
70		C.L. OF DISCHARGE	3 m	
71		SUMP DEPTH	l_1 m	
72		PUMP LENGTH	l_2 m	
73		GRADE TO DISCH.	l_3 m	
74		GRADE TO LOW LIQUID LVL	l_4 m	
75		GRADE TO 1ST STG IMPL'R.	l_5 m	
76		SUBMERGENCE REQ'D	l_6 m	
77		SUMP DIAMETER	Φd m	
78				
79				
80				
81				
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				





سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری پینک



شماره پیمان:

• 03 - • 73 - 9184

MECHANICAL DATA SHEETS FOR CLOSED DRAIN PUMP (API 610)

پروژه

نتیجه کاری

سازگار کننده

سهیلات

رشته

درک

نوع	
-----	--

سرپال

خه

[illegible]

10.

شماره صفحه: ۱۰ از ۱۰

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

THESE REFERENCES MUST BE LISTED BY THE PURCHASER. (DEFAULT TO TABLE 11 IF NO PURCHASER PREFERENCE IS STATED)

ALTERNATE WELDING CODES AND STANDARDS

WELDING REQUIREMENT (APPLICABLE CODE OR STANDARD)

WELDER/OPERATOR QUALIFICATION

WELDING PROCEDURE QUALIFICATION

NON-PRESSURE RETAINING STRUCTURAL WELDING SUCH AS BASEPLATES OR SUPPORTS

MAGNETIC PARTICLE OR LIQUID PENETRANT EXAMINATION OF PLATE EDGES

POSTWELD HEAT TREATMENT

POSTWELD HEAT TREATMENT OF CASING FABRICATION WELDS

REQUIRED

REQUIRED

MATERIAL INSPECTION

THESE REFERENCES MUST BE LISTED BY THE PURCHASER

ALTERNATIVE MATERIAL INSPECTIONS AND ACCEPTANCE CRITERIA (SEE TABLE 15) (8.2.2.5)

DEFAULT TO TABLE 14

YES

TYPE OF INSPECTION	METHOD	FOR FABRICATIONS	FOR CASTINGS
RADIOGRAPHY			
ULTRASONIC INSPECTION			
MAGNETIC PARTICLE INSPECTION			
LIQUID PENETRANT INSPECTION			
VISUAL INSPECTION (all surfaces)			

REMARKS :

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

