

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک						 شرکت توسعه و بهره‌برداری HIRGAN ENERGY 	
شماره پیمان: ۰۵۳-۰۷۳-۹۱۸۴	MECHANICAL DATA SHEETS FOR GLYCOL DRAIN PUMP						شماره صفحه: ۱ از ۵	
	نسخه	سریال	نوع مدرک	رشته	تهیات	صادرکننده	بسته کاری	پروژه
	D04	0035	DT	ME	120	PEDCO	GCS	BK
طرح نگهداشت و افزایش تولید ۲۷ مخزن								
MECHANICAL DATA SHEETS FOR GLYCOL DRAIN PUMP (P-2104 ) نگهداشت و افزایش تولید میدان نفتی بینک								
D04	AUG. 2023	AFC	H. Adineh	M. Fakharian	A.M.Mohseni			
D03	SEP. 2022	AFC	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	DEC. 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-708863						
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						



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 GLYCOL DRAIN PUMP

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه
D04	0035	DT	ME	120	PEDCO	GCS	BK

شماره صفحه: ۲ از ۵

REVISION RECORD SHEET

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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 GLYCOL DRAIN PUMP

نسخه	سریال	نوع مدرک	رشته	تجهیزات	صادرکننده	بسته کاری	پروژه
D04	0035	DT	ME	120	PEDCO	GCS	BK

شماره صفحه: ۳ از ۵

GENERAL NOTES

- Min. / Max. Design temperature (°C): 5 / 85
- For electrical motor descriptions, refer to 'Specification For LV and MV induction Motors' Doc. No. BK-GNRL-PEDCO-000-EL-SP-0010 & 0017 .
- 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 & 0009 with his proposal.
- Vendor shall submit ITP (Inspection & Testing Plan) with his proposal.
- The motors, pump coupling and pump accessories shall be supplied from the project's approved vendor list (A.V.L.).
- Vendor is requested to confirm the material, or propose appropriate alternative.
- 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.
- NPSH test shall be done & witnessed if the margin of NPSHr & NPSHa is less than 1.
- The Tie-in flanges shall conform to ASME B-16.5.
- Supplier to indicate which minimum flow pumps can achieve.
- Pumps shall be designed, fabricated, tested, and inspected in accordance with the requirements of ISO 5199 latest edition.
- Pump starts automatically with open delivery valve.
- The discharge line size is 2".
- Material class of 'I-1', 'I-2', 'S-1', 'S-2', 'S-3', 'S-4', 'S-5', 'S-6', 'C-6', 'A-7' and 'A-8', which is defined in API 610 table H.1, shall be provided with full chemical analysis and mechanical test certification to BS EN 10204:2004 "3.1".  
Material class of 'D-1' and 'D-2', which is defined in API 610 table H.1 and also titanium materials shall be provided with full chemical analysis and mechanical test certification to BS EN 10204:2004 "3.2".
- Based on project instrumentation specification, these equipments are classified as Type B (Connected to DCS/ESD):  
Centrifugal Pump Package
- Pump material shall be selected based on Annex H API 610 11th Edition. (Vendor to confirm)
- 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.
- Couplings shall be dry, flexible and spacer type.
- Bearing temperature shall be measured during mechanical run test.
- Vendor to provide the pump with mentioned flow rate or minimum available flow rate at market.
- Vapour pressure at max. pumping temperature is 0 bara.
- Max Allowable Pressure at Shut-Off at rated impeller (barg): 5.7
- For site conditions refer to process basis of design document; Doc.No: BK-GNRL-PEDCO-000-PR-DB-0001.
- Minimum Design Metal Tem (MDMT)= 5 (°C)
- MAX. allow. sound press. level shall be 85 dBA.
- Allowable external forces and moments on nozzle should be conformed to Spec. No.: BK-GCS-PEDCO-120-ME-SP-0004.
- All drain and vents (If any) to be manifolded, valved and routed to the skid edge.
- Min./Max. pumping temperature (°C): 5 / 50
- Viscosity At Min. / Max. Temp.(cP): 85.86 / 25.06
- Suction Pressure (Min. / Max.) (barg): 0.11 / 0.2
- Hydraulic Power (kw): 0.18
- Glycol drain pump is installed on Glycol sump drum. for further data refer to related P&ID; BK-GCS-PEDCO-120-PR-PI-0025 and Calculation Note For Pumps ; BK-GCS-PEDCO-120-PR-CN-0001.
- Minimum flow shall be specified by vendor.

		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض														
شماره پیمان:		MECHANICAL DATA SHEETS FOR GLYCOL DRAIN PUMP					شماره صفحه: ۴ از ۵									
۰۵۳-۰۷۳-۹۱۸۴		پروژه	بسته کاری	صادر کننده	تهیه کننده	رشته	نوع مدرک	سریال	نسخه							
		BK	GCS	PEDCO	120	ME	DT	0035	D04							
ISO Std. 5199 CENTRIFUGAL PUMP DATA SHEET (SI UNIT)																
Corporate name NISOC		Centrifugal pump Data sheet							Rev.:							
									Data:							
									Name:							
Plant: BINAK GCS						Service: GLYCOL DRAIN PUMP Ref. Standards: ISO 5199 Ref. Spec. No.: BK-GCS-PEDCO-120-ME-SP-0004										
No. req.		Pump type	Eq. API-610 Type		Mfr. serial No.	Kind of driver		Drive, type, size		Item No.						
Operation Standby		1	Vertical	VS4 (VTC)			Motor	LV Induction Electric Motor		P-2104						
Drawings		Installation dimension				Pump weight		Pump Content								
		Assembly pump				Customer		Enquiry No.		Date						
		Assembly shaft seal						Order No.		Date						
		Piping		Auxiliary system		Supplier		Proposal No.		Date						
		Shaft seal						Contract No.		Date						
Test (4)		Material (16)	Hydrostatic	Inspection	Perform.	NPSH (8)		Sound Level	Final inspection	Approved documents						
Refer.		ISO 5199	ISO 5199	ISO 5199	ISO 5199	ISO 5199		(26)	ISO 5199	ISO 5199						
Witn. by		Certified	Witnessed	Witnessed	Witnessed	Witnessed		Witnessed	Certified	Certified						
Operating Condition (12)																
Liquid		TEG		Flow (Note 33)	rated	3.30	m³/h	NPSH at rated flow	Plant- NPSHA	10.4	m					
Solids		Type			normal	3.00	m³/h		Pump- NPSH3			m				
%of mass					min.		m³/h		Pump speed rated			rpm				
Corrosion by				Minimum flow required			m³/h	Pump efficiency rated				%				
Op. Temp. (Min./Max.)		5 / 50	°C	Inlet gauge pressure (30)		rated		barg	Pump power input rated (2)			kW				
pH-value at T <sub>sp</sub>						max.	0.20	barg	Pump power	rated impeller dia.		kW				
Density at T <sub>sp</sub>		1115	kg/m³	Outlet gage pressure rated			2.10	barg	input	max. impeller dia.		kW				
Vapour press. at T <sub>sp</sub>		(21)	bara	Differential pressure rated			2.00	bar	Electric. Driver power output rated			kW				
Kinematic vis. at T <sub>sp</sub>		(29)	cP	Total head rated			18.30	m	Steam turbine power output rated			kW				
Specific heat at T <sub>sp</sub>		J/Kg.K		Shut-off head			(22)	m	Performance curve No.							
Construction Features																
Design		barg		Max. allowable work press		By vendor	barg	Cooling water condition		N.A.						
Number of Stages				Test pressure		1.5 x MAWP	barg	Cooling (C) Series (s)		N.A.						
Self priming				Inlet Flange		Size/Position		Heating (H), Parallel (p)		C	H	S	P	Quantity		
Impeller diameter		max	mm	Rating/facing				Bearing								
		rated	mm	Size/Position		2" / Up		Seal Chamber								
		min	mm	Rating/facing (13)		150# / RF		Cooler for seal flush								
Pump length vertical pumps		mm		Vent connection				Oil cooler								
Barrel dia. vertical pumps		mm		Drain connection				Flush		Liquid		Quantity				
Casing split				Shaft seal manufacture				Lantern ring								
Casing seal type				Type, size (7)		Mech. Seal		Mechanical ring								
Impeller type				Flush plan		11 (VTC)		Gland/Seal plate								
Casing support				Material code				Coupling (18)		Manufacture						
Rotation (looking from driver)				Soft packing ring dimension						Type, Size						
Axial thrust reduction by				Rad. Bearing		Type				Diameter max		mm				
Total clearance		Impeller		mm		Axial. Bearing		Size		Spacer length		mm				
		Bal. Drum		mm		Line shaft bearing				Baseplate						
		Shaft bushes		mm		Bearing bracket No.				Anchor bolts supplied by		Vendor				
Wear plate		mm		Lubrication				Driver		Supplied by		Vendor				
Wall thickness rot sheath / stat. cas				Lubrication device				Mounted by		Vendor						
Site and Utility Data (23)																
Location		Partial sides		Outdoor		Unheated		Site data:		Elevation		m		Barometer	mbar	
Winterization REQ'D		Tropicalization REQ'D						Range of ambient temps: MIN/MAX						°C		
Unusual condition		Dust		Fumes		Others		Relative humidity: MIN/MAX						%		
Driver		Volt.		400		Hertz		50		Phase		3		Max Voltage Variation		± 5%
Type of protection														Max Frequency Variation		± 2%
Temperature rise class / Insulation class														Max Volt. and Frequency Variation together		± 5%
Electric Area Classification		Zone 1 , IIB , T3								Starting Method				D.O.L.(Open Discharge Valve)		

