



سطح الارض

احداث ردیف تو اکھ گاز در ایستگاه جمع آوری سنک



شماره صفحه: ۱ از ۵

شماره پیمان:

• 03-073-9188

MECHANICAL DATA SHEETS FOR GLYCOL DRAIN PUMP

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۵۵ صفحه

طرح نگهداشت و افزایش تولید ۲۷ مخزن

MECHANICAL DATA SHEETS FOR GLYCOL DRAIN PUMP

نگهداشت و افزایش تولید میدان نفتی پینی

D04	JUN. 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
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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.
- Class 21 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 Temp (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.

		<p align="center">نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض</p> <p align="center">احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>							
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 1	Vertical	VS4 (VTC)			Motor		LV Induction Electric Motor		P-2104
Standby									
Drawings	Installation dimension				Pump weight		Pump Content		
	Assembly pump				Customer		Enquiry No.		Date
	Assembly shaft seal				Supplier		Order No.		Date
	Auxiliary system				Contract No.		Proposal No.		Date
Piping	Shaft seal								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	
MECHANICAL DATA SHEETS FOR GLYCOL DRAIN PUMP									
Liquid	TEG		rated		3.30	m³/h	NPSH at rated flow	Plant- NPSHA	10.4
Solids	Type	Flow (Note 33)		normal	3.00	m³/h	Pump speed rated	Pump- NPSH3	m
%of mass				min.		m³/h	Pump efficiency rated		rpm
Corrosion by			Minimum flow required			m³/h	Pump power input rated (2)		%
Op. Temp. (Min./Max.)	5 / 50	°C	Inlet gauge pressure (30)	rated		barg	Pump power input	rated impeller dia.	kW
pH-value at T _{op}			max.		0.20	barg	max. impeller dia.		kW
Density at T _{op}	1115	kg/m³	Outlet gage pressure rated		2.10	barg	Electric. Driver power output rated		kW
Vapour press. at T _{op}	(21)	bara	Differential pressure rated		2.00	bar	Steam turbine power output rated		kW
Kinematic vis. at T _{op}	(29)	cP	Total head rated		18.30	m	Performance curve No.		
Specific heat at T _{op}		J/Kg.K	Shut-off head		(22)	m			
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
Impeller diameter	max	mm	Outlet Flange	Rating/facing			Bearing	S	P
	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
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)

