






 <p>NISOC</p>	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>																														
شماره پیمان: 053-073-9184	<table border="1"> <tr> <th colspan="8">MECHANICAL DATA SHEETS FOR FIRE WATER PUMPS-DIESEL ENGINE DRIVEN</th> </tr> <tr> <th>نسخه</th> <th>سریال</th> <th>نوع مدرک</th> <th>رشته</th> <th>تهیلات</th> <th>صادر کننده</th> <th>بسته کاری</th> <th>پروژه</th> </tr> <tr> <td>D03</td> <td>0030</td> <td>DT</td> <td>ME</td> <td>120</td> <td>PEDCO</td> <td>GCS</td> <td>BK</td> </tr> </table>						MECHANICAL DATA SHEETS FOR FIRE WATER PUMPS-DIESEL ENGINE DRIVEN								نسخه	سریال	نوع مدرک	رشته	تهیلات	صادر کننده	بسته کاری	پروژه	D03	0030	DT	ME	120	PEDCO	GCS	BK	شماره صفحه: 1 از 13
MECHANICAL DATA SHEETS FOR FIRE WATER PUMPS-DIESEL ENGINE DRIVEN																															
نسخه	سریال	نوع مدرک	رشته	تهیلات	صادر کننده	بسته کاری	پروژه																								
D03	0030	DT	ME	120	PEDCO	GCS	BK																								
<p>طرح نگهداشت و افزایش تولید 27 مخزن</p>																															
<p>MECHANICAL DATA SHEETS FOR FIRE WATER MAIN PUMPS-DIESEL ENGINE DRIVEN (P-2301 B) نگهداشت و افزایش تولید میدان نفتی بینک</p>																															
D03	OCT. 2022	IFA	H. Adineh	M. Fakharian	M. Mehrshad																										
D02	JUL. 2022	IFA	H. Adineh	M. Fakharian	M. Mehrshad																										
D01	APR. 2022	IFA	H. Adineh	M. Fakharian	M. Mehrshad																										
D00	FEB. 2022	IFC	H. Adineh	M. Fakharian	M. Mehrshad																										
Rev.	Date	Purpose of Issue / Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval																									
Class: 2 CLIENT Doc. Number: F0Z-708861																															
<table border="0"> <tr> <td style="vertical-align: top;">status:</td> <td> 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 </td> </tr> </table>								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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	<p>MECHANICAL DATA SHEETS FOR FIRE WATER PUMPS-DIESEL ENGINE DRIVEN</p>								
شماره پیمان: 053-073-9184	پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تسهیلات 120	رشته ME	نوع مدرک DT	سریال 0030	نسخه D03	شماره صفحه: 13 از 2

REVISION RECORD SHEET

page	D00	D01	D02	D03	D04	page	D00	D01	D02	D03	D04
1	x	x	x	x		65					
2	x	x	x	x		66					
3	x	x	x	x		67					
4	x					68					
5	x	x	x	x		69					
6	x	x	x	x		70					
7	x					71					
8	x					72					
9	x					73					
10	x	x	x			74					
11	x		x			75					
12	x		x			76					
13	x	x				77					
14						78					
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57						121					
58						122					
59						123					
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62						126					
63						127					
64						128					

 NISOC	<div>نگهداشت و افزایش تولید میدان نفتی بینک</div> <div>سطح الارض</div> <div>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</div>							 
شماره پیمان: 053-073-9184	MECHANICAL DATA SHEETS FOR FIRE WATER PUMPS-DIESEL ENGINE DRIVEN							شماره صفحه: 3 از 13
	نسخه	سریال	نوع مدرک	رشته	تجهیزات	صادر کننده	بسته کاری	
	D03	0030	DT ^	ME	120	PEDCO	GCS	
							BK	

GENERAL NOTES

D03

- Vendor shall fill in the blanks and return the completed data sheet along with Diesel data sheet with his proposal.
- Vendor shall submit ITP (Inspection & Testing Plan) with his proposal.
- Vendor is requested to confirm the material, or propose appropriate alternative.
- For Instrumentation, Project specification 'Specification For Instrument and Control of package Unit System (PU)' Doc. No. BK-GNRL-PEDCO-000-IN-SP-0004. shall be followed.
- Instead of mechanical seal, vendor shall advise the suitable Packing specification.
- 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-16.1.
- Pump drain shall be terminated at skid edge with flange connection and valved.
- Supplier to indicate which minimum flow pumps can achieve.
- Nozzle loads shall be 2 times the loads shown in API 610 11th Edition.
- The Suction line size is 12" and discharge line is 10" .
- Air release valve shall be considered by vendor .
- As the pump jobsite environmental condition is fummy and dusty, any required protection for pumps, panels and electrical parts (in accordance with IPS-E-EL-100) in this regard shall be considered by pump manufacturer.
- Ultrasonic Test shall be performed for forged shaft.
- Couplings shall be dry, flexible and spacer type.
- A local control panel shall be considered by vendor to be located next to the pumps as per "Specification For Fire Water Pumps", Doc. No. BK-GCS-PEDCO-120-ME-SP-0005'. Alarm and trip shall be specified for diesel control based on NFPA 20.
- Pump LCP shall be designed to manage all required monitoring and control signals , as minimum in accordance with "P&ID For Fire Water Network", Doc.No.BK-GCS-PEDCO-120-SA-PI-0001.
- The electrical characteristics of panels shall be specified by vendor such as: - The power demand of control panel. - The number of control panel.
- Fuel daily tank shall be sized for 8 hours and all instruments such as level transmitter with HH/LL Alarm and etc. are in vendor's scope of supply.
- Diesel engine shall be tested at 110% rated speed in mechanical running test also the maximum speed of diesel engines shall be 2300 RPM.
- pressure sensing lines are in the vendor's scope of supply.
- The sparate power & control panels for main pump diesel engine shall be considered by vendor. Therefore required single line, wiring diagram and etc. shall be specified by vendor.
- Design pressure is 15.4 barg also as per NFPA 20 standard the hydrotest pressure shall not be less than 17.24 barg.
- Estimated BHP at rated capacity is 199.2 kW by considering 65% efficiency.
- The pumps shall furnish not less than 150% of rated capacity at not less than 65% of rated head.



احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



053-073-9184

MECHANICAL DATA SHEETS FOR FIRE WATER PUMPS-DIESEL ENGINE DRIVEN

شماره صفحه: 4 از 13

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
D03	0030	DT	ME	120	PEDCO	GCS	BK

CENTRIFUGAL PUMP DATA SHEET (SI UNIT) - P-2301 B (Sheet 1 of 6)

CLIENT: National Iranian South Oil Company (NISOC)

PROJECT TITLE: BINAK Gas Compressor Station

JOB NUMBER:

EQUIPMENT NUMBER: P-2301 B

EQUIPMENT SERVICE: Fire Water Pumps - Diesel Engine Driven

SERIAL NUMBER:

REQ. / SPEC NO. : BK-GCS-PEDCO-120-ME-SP-0005

PURCH ORDER NO.

Cells coloured thus

contain drop-down options

contain calculated values based on input data; do not change.



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
PUMP	P-2301 B	YES				
MOTOR						
GEAR						
TURBINE						

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک																	
شماره پیمان: 053-073-9184	MECHANICAL DATA SHEETS FOR FIRE WATER PUMPS-DIESEL ENGINE DRIVEN <table><tr><td>نسخه</td><td>سریال</td><td>نوع مدرک</td><td>رشته</td><td>تجهیزات</td><td>صادر کننده</td><td>بسته کاری</td><td>پروژه</td></tr><tr><td>D03</td><td>0030</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	تجهیزات	صادر کننده	بسته کاری	پروژه	D03	0030	DT	ME	120	PEDCO	GCS	BK	شماره صفحه: 5 از 13
نسخه	سریال	نوع مدرک	رشته	تجهیزات	صادر کننده	بسته کاری	پروژه											
D03	0030	DT	ME	120	PEDCO	GCS	BK											



CENTRIFUGAL PUMP DATA SHEET (SI UNIT) - P-2301 B (Sheet 2 of 6)

APPLICABLE TO: PROPOSAL	APPLICABLE NTL/INTNTL STANDARD: NFPA20 (2019) & IPS-M-PM-125
FOR NISOC	UNIT
SITE BINAK Gas Compressor Station	SERVICE Fire Water Pumps - Diesel Engine Driven
NO. REQ 1	TYPE
PUMP SIZE	No. STAGES
MANUFACTURER	MODEL BB1 (V.T.C)
	SERIAL NO.

LIQUID CHARACTERISTICS					
	Units	Maximum	Minimum	Note	INTERMITTENT
LIQUID TYPE OR NAME :		Water		Max & min values refer only to the property listed	• 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)
VAPOR PRESSURE :	bara	0.0087	0.1219		
DENSITY :	kg/m³	997			
SPECIFIC HEAT :	kJ/kgC	4.186			
VISCOSITY :	cP	1			
OPERATING CONDITIONS (6.1.2)					
	Units	Maximum	Rated	Normal	Min
NPSH _a Datum:		C.L. Impeller			
PUMPING TEMPERATURE :	°C	50			5
FLOW :	m³/hr		454.20		
DISCHARGE PRESSURE : (6.3.2)	barg		10.4		
SUCTION PRESSURE :	barg	0.83	0.81		0.08
DIFFERENTIAL PRESSURE :	bar		10.3		
DIFFERENTIAL HEAD :	m		105.0		
NPSH _a :	m		8.8		
HYDRAULIC POWER:	KW		129.50		



SITE AND UTILITY DATA			
LOCATION: OUTDOOR UNHEATED UNDER ROOF		COOLING WATER :	
MOUNTED AT : TROPICALISATION REQ'D		RETURN DESIGN	
ELECTRIC AREA CLASSIFICATION: (6.1.22) ZONE SAFE		TEMP	
GROUP TEMP CLASS		PRESS.	
SITE DATA :		SOURCE	
ELEVATION (MSL) : 12.5 m		COOLING WATER CHLORIDE CONCENTRATION:	
BAROMETER : 990.77 mBar		INSTRUMENT AIR :	
RANGE OF DESIGN TEMPS: MIN / MAX 5 85 °C		STEAM	
RELATIVE HUMIDITY: MIN / MAX 0 100 % (@ 25.6 °C)		DRIVERS HEATING	
UNUSUAL CONDITIONS: NA		TEMP	
UTILITY CONDITIONS :		PRESS.	
ELECTRICITY :			
AUXILIARY			
HEATING			
CONTROL			
SHUTDOWN			
VOLTAGE 400			
PHASE 3			
HERTZ 50			

PERFORMANCE				DRIVER (7.1.5) (NOTE 22)	
PROPOSAL CURVE NO. RPM				Driver Type DIESEL ENGINE	
As Tested Curve No.				GEAR NO	
IMPELLER DIA.: RATED MAX. MIN. mm				VARIABLE SPEED REQUIRED NO	
RATED POWER Kw EFFICIENCY (%)				SOURCE OF VARIABLE SPEED	
RATED CURVE BEP FLOW (at rated impeller dia) m³/hr				OTHER	
MIN FLOW : kJ/Nm³ m³/hr				MANUFACTURER	
PREFERRED OPERATING REGION (6.1.11) to m³/hr				NAMEPLATE POWER @ Site Condition KW	
ALLOWABLE OPERATING REGION to m³/hr				Nominal RPM	
MAX HEAD @ RATED IMPELLER m				RATED LOAD RPM	
MAX POWER @ RATED IMPELLER kW				FRAME OR MODEL	
NPSH ₃ AT RATED FLOW : m				ORIENTATION HORIZONTAL	
CL PUMP TO U/S BASEPLATE m				LUBE	
NPSH MARGIN AT RATED FLOW : m				RADIAL	
SPECIFIC SPEED (6.1.9)				THRUST	
SUCTION SPECIFIC SPEED LIMIT				STARTING METHOD	
SUCTION SPECIFIC SPEED				SEE DRIVER DATA SHEET	
MAX. ALLOW. SOUND PRESS. LEVEL REQD (6.1.14) 110 (dBA) @ 1 m				Max Voltage Variation	
EST MAX SOUND PRESS. LEVEL (dBA)				Max Frequency Variation	
MAX. SOUND POWER LEVEL REQD (6.1.14)				Max Voltage and Frequency Variation together	
EST MAX SOUND POWER LEVEL					

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پروژه	بسته کاری	صادر کننده	تجهیزات	رشته	نوع مدرک	سریال	نسخه											
BK	GCS	PEDCO	120	ME	DT	0030	D03											

CENTRIFUGAL PUMP DATA SHEET (SI UNIT) - P-2301 B (Sheet 3 of 6)

CONSTRUCTION																																													
API PUMP TYPE: <u>BB1</u> [Based on API 610 definitions]																																													
NOZZLE CONNECTIONS: (6.5.5) NOTES 7,11																																													
<div><div>SUCTION</div><div>DISCHARGE</div><div>SIZE</div><div>FACING</div><div>RATING</div><div>POSITION</div></div> <table><tr><td></td><td>FF</td><td>125</td><td>SIDE</td></tr><tr><td></td><td>FF</td><td>125</td><td>SIDE</td></tr></table>					FF	125	SIDE		FF	125	SIDE																																		
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	FF	125	SIDE																																										
PRESSURE CASING AUX. CONNECTIONS: (6.4.3.2)																																													
<table><tr><td>No.</td><td>Size</td><td>Type</td><td>Facing</td><td>Rating</td><td>Posn.</td></tr><tr><td>BAL/LEAK OFF</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>DRAIN</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>VENT</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>PRESSURE GAGE</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>TEMP GAGE</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>WARM-UP LINE</td><td></td><td></td><td></td><td></td><td></td></tr></table>				No.	Size	Type	Facing	Rating	Posn.	BAL/LEAK OFF						DRAIN						VENT						PRESSURE GAGE						TEMP GAGE						WARM-UP LINE					
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<div>Drain Valve Supplied By <u>SUPPLIER</u></div> <div>DRAINS MANIFOLDED <u>YES</u></div> <div>VENT Valve Supplied By <u>SUPPLIER</u></div> <div>VENTS MANIFOLDED <u>YES</u></div> <div>THREAD, CONS FOR PIPELINE SERVICE & < 50°C (6.4.3.2) <u>NO</u></div> <div>SPECIAL FITTINGS FOR TRANSITIONING (6.4.3.3) <u>NO</u></div> <div>CYLINDRICAL THREADS REQUIRED (6.4.3.8) <u>NO</u></div> <div>GUSSET SUPPORT REQUIRED <u>YES</u> If Needed</div> <div>MACHINED AND STUDDED CONNECTIONS (6.4.3.12) <u>NO</u></div> <div>VS 6 DRAIN <u>N/A</u></div> <div>DRAIN TO SKID EDGE <u>YES</u></div>																																													
MATERIAL (6.12.1.1)																																													
APPENDIX H CLASS <u>I-2</u> NOTES 3																																													
MIN DESIGN METAL TEMP (6.12.4.1) <u>5</u> °C																																													
REDUCED-HARDNESS MATERIALS REQ'D (6.12.1.12.1) _____																																													
Applicable Hardness Standard (6.12.1.12.3) _____																																													
BARREL : _____																																													
CASE : _____																																													
DIFFUSERS _____																																													
IMPELLER : _____																																													
IMPELLER WEAR RING : _____																																													
CASE WEAR RING : _____																																													
SHAFT: _____																																													
Bowl (if VS-type) _____																																													
Inspection Class Note 2																																													
BEARINGS AND LUBRICATION (6.10.1.1)																																													
BEARING (TYPE / NUMBER): (6.11.4) _____																																													
RADIAL _____ / _____																																													
THRUST _____ / _____																																													
REVIEW AND APPROVE THRUST BEARING SIZE : (9.2.5.2.4) _____																																													
LUBRICATION : (6.10.2.2) (6.11.3) (9.2.6) _____																																													
PRESSURE LUBE SYSTEM TO ISO 10438- _____ (9.2.6.5) _____																																													
ISO 10438 DATA SHEETS ATTACHED																																													
Pressurized Lube Oil System mtd on pump baseplate _____																																													
Location of Pressurized Lube Oil System mounted on baseplate : _____																																													
INTERCONNECTING PIPING PROVIDED BY <u>Supplier</u>																																													
OIL VISC. ISO GRADE VG _____																																													
CONSTANT LEVEL OILER : _____																																													
CASING MOUNTING: _____																																													
CASING TYPE: (6.3.10) _____																																													
OH3 BACKLAYOUT LIFTING DEVICE REQD. (9.1.2.6) _____																																													
CASE PRESSURE RATING: _____																																													
MAWP : (6.3.5) <u>By vendor</u> barg @ _____ °C																																													
HYDROTEST : <u>1.5*MAWP</u> barg @ _____ °C																																													
HYDROTEST OH PUMP ASSEMBLY <u>YES</u>																																													
SUCTION PRESS. REGIONS DESIGNED FOR MAWP <u>YES</u>																																													
ROTATION: (VIEWED FROM COUPLING END) _____																																													
• IMPELLERS INDIVIDUALLY SECURED : _____																																													
• BOLT OH 3/4/5 PUMP TO PAD / FOUNDATION : _____																																													
• PROVIDE SOLEPLATE FOR OH 3/4/5 PUMPS _____																																													
ROTOR: _____																																													
SHAFT FLEXIBILITY INDEX (SFI) (9.1.1.3) _____																																													
First Critical Speed Wet (Multi stage pumps only) _____																																													
COMPONENT BALANCE TO ISO 1940 G1.0 <u>NO</u>																																													
SHRINK FIT -LIMITED MOVEMENT IMPELLERS (9.2.2.3) _____																																													
COUPLING:(7.2.3) (7.2.13.f) NOTE 16 _____																																													
MANUFACTURER _____																																													
MODEL _____																																													
RATING (POWER/100 RPM) _____																																													
SPACER LENGTH _____ mm																																													
SERVICE FACTOR <u>Min 1.5</u>																																													
RIGID <u>NO</u>																																													
COUPLING WITH HYDRAULIC FIT (7.2.10) _____																																													
COUPLING BALANCED TO ISO 1940-1 G6.3 (7.2.3) <u>YES</u>																																													
COUPLING WITH PROPRIETARY CLAMPING DEVICE (7.2.11) _____																																													
COUPLING IN COMPLIANCE WITH (7.2.4) <u>API 671</u>																																													
COUPLING GUARD STANDARD PER (7.2.13.a) <u>ISO 14120</u>																																													
Window on Coupling Guard _____																																													
BASEPLATE																																													
API BASEPLATE NUMBER : _____																																													
BASEPLATE CONSTRUCTION (7.3.14) _____																																													
BASEPLATE DRAINAGE (7.3.1) <u>Entire Baseplate Drain Pan</u>																																													
MOUNTING : _____																																													
NON-GROUT CONSTRUCTION : (7.3.13) _____																																													
VERTICAL LEVELING SCREWS : <u>REQUIRED</u>																																													
LONGITUDINAL DRIVER POSITIONING SCREWS : <u>REQUIRED</u>																																													
SUPPLIED WITH : <ul style="list-style-type: none">• GROUT AND VENT HOLES <u>YES</u>• DRAIN CONNECTION <u>YES</u>																																													
MOUNTING PADS SIZED FOR BASEPLATE LEVELING (7.3.5) <u>YES</u>																																													
MOUNTING PADS TO BE MACHINED (7.3.6) <u>YES</u>																																													
PROVIDE SPACER PLATE UNDER ALL EQUIPMENT FEET <u>YES</u>																																													
OTHER _____																																													
REMARKS : _____																																													

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک																	
شماره پیمان: 053-073-9184	MECHANICAL DATA SHEETS FOR FIRE WATER PUMPS-DIESEL ENGINE DRIVEN <table><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>0030</td><td>D03</td></tr></table>	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	BK	GCS	PEDCO	120	ME	DT	0030	D03	شماره صفحه: 8 از 13
پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه											
BK	GCS	PEDCO	120	ME	DT	0030	D03											

CENTRIFUGAL PUMP DATA SHEET (SI UNIT) -P-2301 B (Sheet 5 of 6)

SURFACE PREPARATION AND PAINT						TEST	
MANUFACTURER'S STANDARD _____ OTHER (SEE BELOW) _____ SPECIFICATION NO. BK-GNRL-PEDCO-000-PI-SP-0006, "Specification for Painting"						SHOP INSPECTION (8.1.1) Yes PERFORMANCE CURVE _____ & DATA APPROVAL PRIOR TO SHIPMENT. YES TEST WITH SUBSTITUTE SEAL (8.3.3.2.b) _____ MATERIAL CERTIFICATION REQUIRED _____ SHAFT YES (6.12.1.8) CASING YES OTHER YES Casing and Impeller Wear ring YES CASTING REPAIR WELD PROCEDURE APPR REQD YES INSPECTION REQUIRED FOR CONNECTION WELDS (6.12.3.4.d) _____ LIQUID PENETRANT YES MAG PARTICLE _____ ULTRASONIC _____ RADIOGRAPHY YES INSPECTION REQUIRED FOR CASTINGS _____ LIQUID PENETRANT YES MAG PARTICLE YES ULTRASONIC YES RADIOGRAPHY _____ HARDNESS TEST REQUIRED (8.2.2.7) _____ ADDNL SUBSURFACE EXAMINATION (6.12.1.5) (8.2.1.3) _____ PMI TESTING REQUIRED (8.2.2.8) _____ 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) YES BASEPLATE TEST (7.3.21) _____ HYDROSTATIC _____ WIT HYDROSTATIC TEST OF BOWLS & COLUMN (9.3.13.2) _____ PERFORMANCE TEST _____ WIT TEST IN COMPLIANCE WITH (8.3.3.2) _____ NFPA 20 TEST DATA POINTS TO (8.3.3.3) _____ NFPA 20 TEST TOLERANCES TO (8.3.3.4) _____ TABLE 16 NPSH (8.3.4.3.1) (8.3.4.3.4) NOTE 6 WIT 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) _____ OBSERVE RETEST REQUIRED AFTER FINAL HEAD ADJ (8.3.3.7.b) _____ COMPLETE UNIT TEST (8.3.4.4.1) _____ WIT SOUND LEVEL TEST (8.3.4.5) _____ WIT CLEANLINESS PRIOR TO FINAL ASSEMBLY (8.2.2.6) _____ OBSERVE LOCATION OF CLEANLINESS INSPECTION _____ NOZZLE LOAD TEST _____ CHECK FOR CO-PLANAR MOUNTING PAD SURFACES _____ MECHANICAL RUN TEST UNTIL OIL TEMP STABLE _____ 4 HR. MECH RUN AFTER OIL TEMP STABLE (8.3.4.2.1) _____ WIT 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 REMOVE CASING AFTER TEST _____ PER ASME SECTION VIII	
BASEPLATE: BASEPLATE SURFACE PREPARATION _____ PRIMER: AS PER PROJECT PAINTING SPEC. FINISH COAT AS PER PROJECT PAINTING SPEC. DETAILS OF LIFTING DEVICES _____ SHIPMENT: (8.4.1) EXPORT EXPORT BOXING REQUIRED YES OUTDOOR STORAGE MORE THAN 6 MONTHS YES SPARE ROTOR ASSEMBLY PACKAGED FOR: 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 YES NORMAL MAINTENANCE YES							
ITEM No	PUMP	DRIVER	GEAR	BASE	TOTAL		
OTHER PURCHASER REQUIREMENTS							
COORDINATION MEETING REQUIRED (10.1.3) YES MAXIMUM DISCHARGE PRESSURE TO INCLUDE _____ OPERATION TO TRIP SPEED _____ MAX DIA. IMPELLERS AND/OR NO OF STAGES YES CONNECTION DESIGN APPROVAL (9.2.1.4) YES TORSIONAL ANALYSIS / REPORT (6.9.2.10) NO PROGRESS REPORTS YES 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) NO MODAL ANALYSIS REQUIRED (9.3.9.2) _____ DYNAMIC BALANCE ROTOR (6.9.4.4) YES INSTALLATION LIST IN PROPOSAL (10.2.3.1) YES VFD STEADY STATE DAMPED RESPONSE ANALYSIS (6.9.2.3) NO TRANSIENT TORSIONAL RESPONSE _____ BEARING LIFE CALCULATIONS REQUIRED (6.10.1.6) _____ 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) _____ INCLUDE PLOTTED VIBRATION SPECTRA (6.9.3.3) _____ CONNECTION BOLTING (7.5.1.7) _____ CADMIUM PLATED BOLTS PROHIBITED _____ VENDOR TO KEEP REPAIR AND HT RCDS (8.2.1.1.c) _____ VENDOR SUBMIT TEST PROCEDURES (8.3.1.1) YES SUBMIT INSPECTION CHECK LIST (8.1.5) NOTE 2 YES							



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری پینک



شماره پیمان:

053-073-9184

MECHANICAL DATA SHEETS FOR FIRE WATER PUMPS-DIESEL ENGINE DRIVEN

شماره صفحه: 9 از 13

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه
D03	0030	DT	ME	120	PEDCO	GCS	BK

CENTRIFUGAL PUMP DATA SHEET (SI UNIT) - P-2301 B (Sheet 6 of 6)

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 12)

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

DEFAULT PER TABLE 11

DEFAULT PER TABLE 11

DEFAULT PER TABLE 11

DEFAULT PER TABLE 11

DEFAULT PER TABLE 11

DEFAULT PER TABLE 11

DEFAULT PER TABLE 11

MATERIAL INSPECTION

THESE REFERENCES MUST BE LISTED BY THE PURCHASER

DEFAULT TO TABLE 14



YES

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

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

REMARKS :

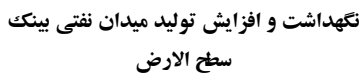
This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							
	MECHANICAL DATA SHEETS FOR FIRE WATER PUMPS-DIESEL ENGINE DRIVEN						شماره صفحه: 10 از 13	
شماره پیمان: 053-073-9184	پروژه BK	بسته کاری GCS	صادرکننده PEDCO	تسهیلات 120	رشته ME	نوع مدرک DT		

Diesel Engine Data Sheet For Fire Water Pump - P-2301 B (SI UNIT) (1 of 4)

SERVICE: Fire Water Pumps - Diesel Engine Driven		MANUFACTURER:	
FOR: NISOC		MODEL NO:	
SITE: BINAK Gas Compressor Station		TYPE:	
NO. REQUIRED: 1			

		(Note 1)	REMARKS
OPERATING CONDITIONS			
DIESEL ENGINE MANUFACTURER			
ISO POWER (ISO 3046)	kW		
ISO SPEED	rpm		
SITE CONTINUOUS RATED POWER	kW		
SITE CONTINUOUS RATED SPEED	rpm		
OVERLOAD SITE POWER	kW		
OVERLOAD SPEED	rpm		
OVERLOAD DURATION	h		
DIRECTION OF ROTATION (FROM CPLG)	CW/CCW		
SPEED RANGE	±% rpm		
IDLE SPEED	rpm		
LOADING TIME	s		
PERFORMANCE			
% OF MAX CONT SITE POWER			
FUEL SPECIFIC CONSUMPTION	g/kWh		
TOLERANCE	%		
SPEED	rpm (NOTE 20)		
LOAD ACCEPTANCE RATING	% 1 step		
ENGINE DATA			
CYCLE:- 2 STROKE/4 STROKE			4 STROKE REQUIRED
NUMBER OF CYLINDERS			
IN-LINE/V FORM			
BORE/STROKE	mm		
CAPACITY	liters		
BMEP (RATED)			
PISTON SPEED	m/s		
COOLING SYSTEM: AIR/WATER			CLOSED SYSTEM (Air fan & Radiator)
TURBOCHARGER:-			
SINGLE OR SERIES			
INTERCOOLER	CA or CW		
EMISSIONS			
No _x EMISSION	g/kWh		IPS-E-SF-860
CO EMISSION	g/kWh		
CO ₂ EMISSION	g/kWh		
STARTING SYSTEM			
AIR:-			
NUMBER OF TANKS			
PRESSURE	Barg / Kpag		
CAPACITY	m ³		
NO. OF STARTS W/OUT REFILLING			
STARTING SYSTEM			
ELECTRICAL:-			YES
NO. OF BATTERIES			2 Cell (VTC)
TYPE			Lead-Acid (VTC)
TOTAL CAPACITY	Ah		
STARTING CIRCUIT			
STARTING MOTOR			



احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

شماره پیمان:

053-073-9184

MECHANICAL DATA SHEETS FOR FIRE WATER PUMPS-DIESEL ENGINE DRIVEN

شماره صفحه: 13 از 13

یہ وژہ

نته کاری

صادرکننده

تسهيلات

رشته

نوع مدرک

سویا

4

--	--

BK

GCS

PEDCO

120

MF

DT

0030

4

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Diesel Engine Data Sheet For Fire Water Pump - P-2301 B (SI UNIT) (4 of 4)

ENGINE EXHAUST TURBOCHARGER

TE BEFORE/
AFTER COOLER

[illegible]

CIRCUIT OF:

RAW WATER

FRESH WATER

OIL

SUPERCARGING:

AIRSIDE

WATERSIDE

REMARKS:

For each pump set one 400V, 3PH/N auxiliary feeder is delivered by purchaser.

All required power for local control panel (230VAC/110VAC/24VDC) shall be convert by vendor as request.