
 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							
	MECHANICAL DATA SHEETS FOR FLARE KO DRUM PUMPS						شماره صفحه: ۱ از ۹	
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تسهیلات 120	رشته ME	نوع مدرک DT	سریال 0024	نسخه D08

طرح نگهداشت و افزایش تولید ۲۷ مخزن

MECHANICAL DATA SHEETS FOR FLARE KO DRUM PUMPS

نگهداشت و افزایش تولید میدان نفتی بینک

D08	NOV. 2024	AFC	V.Amjadi	M.Fakharian	M.Sadeghian	
D07	JUN. 2024	AFC	V.Amjadi	M.Fakharian	M.Sadeghian	
D06	SEP. 2023	AFC	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-708855
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 پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

MECHANICAL DATA SHEETS FOR FLARE KO DRUM PUMPS



نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
D08	0024	DT	ME	120	PEDCO	GCS	BK



شماره صفحه: ۲ از ۹

REVISION RECORD SHEET

page	D00	D01	D02	D03	D04
1	x	x	x	x	x
2	x	x	x	x	x
3	x	x	x	x	x
4	x				
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page	D05	D06	D07	D08	D09
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3	x			x	
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5	x		x	x	
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 <p>NISOC</p>	<p align="center">نگهداشت و افزایش تولید میدان نفتی بینک</p> <p align="center">سطح الارض</p> <p align="center">احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>																							
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	<p align="center">MECHANICAL DATA SHEETS FOR FLARE KO DRUM PUMPS</p> <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>0024</td> <td>D08</td> </tr> </table>							پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	BK	GCS	PEDCO	120	ME	DT	0024	D08	شماره صفحه: ۳ از ۹
پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه																	
BK	GCS	PEDCO	120	ME	DT	0024	D08																	
<p align="center">GENERAL NOTES</p>																								
1	Mass Density [kg/m3] at Min. / Norm / Max. Temp: 852 / 980 / 1022																							
2	Viscosity [cP] At Min. / Normal / Max. Temp: 1.03 / 0.46 / 1.5																							
3	Suction & Discharge line diameters are 2".																							
4	Mechanical Seal data sheet shall be filled in by vendor as per API 682, 4th edition.																							
5	A drain line to be considered in barrel and to be pipe up to mounted skid.Pump drain shall be terminated at skid edge with flange connection and valved. Valves in the piping system shall be Welded Flanged type.																							
6	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".																							
7	PMI Testing for Alloy Steel Shall be Done.																							
8	If NPSH margin be less than 1m, NPSH test Shall be Done.																							
9	API Plan 31-53B shall be considered. (vendor to confirm)																							
10	Design Condition: (Min./Max.) Design Temperature(°C): 5 / 85 Design Pressure(barg): 9																							
11	Temperature finalize after depressurizing study.																							
12	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.																							
13	Vendor shall submit ITP (Inspection & Testing Plan) with his proposal.																							
14	Vendor is requested to confirm the material, or propose appropriate alternative.																							
15	The Tie-in flanges shall conform to ASME B-16.5.																							
16	Vendor to indicate which minimum flow pumps can achieve.																							
17	Pumps shall be designed, fabricated, tested, and inspected in accordance with the requirements of API 610 11th edition.																							
18	Welding repair procedures shall be submitted for approval.																							
19	If pump is self venting there is no need for vent.																							
20	Ultrasonic Test shall be performed for forged shaft.																							
21	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.																							
22	Spare parts shall be supplied by vendor according to 'MR's appendix for Centrifugal Pumps; Doc. No.; BK-GCS-PEDCO-120-ME-MR-0009"																							
23	Bearing temperature shall be measured during mechanical run test.																							
24	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.																							
25	Electrical motor shall be rated for the end of curve.																							
26	For site conditions refer to Process Basis of Design Document. Doc.No. BK-GNRAL-PEDCO-000-PR-DB-0001.																							
27	Power Factor, efficiency, frequent, voltage, frequent variation and voltage variation of motor shall be specified by vendor in data sheet.																							
28	Allowable external forces and moments on nozzle are equal to two times of table 5 of API 610-11th edition.																							
29	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																							
30	Range of Amb.Temp. : Min. ambient temperature: 5 °C , Max. ambient temperature: 50 °C.																							
31	Coupling shall be flexible with spacer and coupling guard shall be of Non-Spark type.																							
32	elevation of pump centerline from ground is 76 cm.																							
33	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.																							
34	Max Allowable Pressure at Shut-Off(barg) : 9																							
35	Barometric pressure in Binak new GCS; winter: 14.37 psia summer: 13.26 psia																							
36	According to API 610-11th edition for ' this type pump minimum MAWP shall be 40 bar @ 38 °C																							
37	All of required tests & inspection requirements will be finalized in Pre Inspection Meeting (PIM) with client.																							

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شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	MECHANICAL DATA SHEETS FOR FLARE KO DRUM PUMPS	شماره صفحه: ۹ از ۵
پروژه BK	بسته کاری GCS	صادر کننده PEDCO
تسهیلات 120	رشته ME	نوع مدرک DT
نسخه D08	سریال 0024	D08



API Std. 610 CENTRIFUGAL PUMP DATA SHEET (SI UNIT) - P-2201 A/B (Sheet 2 of 6)									
APPLICABLE TO: PROPOSAL					APPLICABLE NTL/INTNTL STANDARD: API 610 - 11th Edition, IPS-G-PM-105				
FOR: NISOC					UNIT:				
SITE: BINAK Gas Compressor Station					SERVICE:				
NO. REQ: 2(1+1)					TYPE: HORIZONTAL No. STAGES: V.T.A				
MANUFACTURER:					MODEL: OH2 (VTC) SERIAL NO.:				

LIQUID CHARACTERISTICS					
	Units	Maximum	Minimum	Note	
LIQUID TYPE OR NAME :		HC		Max & min values refer only to the property listed	SERVICE : INTERMITTENT • 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) 584.6 CHLORIDE CONCENTRATION (ppm) : PARTICULATE SIZE (DIA IN MICRONS) PARTICULATE CONCENTRATION (PPM) SOUR SERVICE: YES
VAPOR PRESSURE :	bara	1			
DENSITY : (Note 1)	kg/m³		852		
SPECIFIC HEAT :	kJ/kgC				
VISCOSITY : (Note 2)	cP	1.50	1.03		
OPERATING CONDITIONS (6.1.2)					
	Units	Maximum	Rated	Normal	Min
C.L. Impeller					
NPSH _A Datum:					
PUMPING TEMPERATURE :	°C		5(worse case)		
FLOW :	m³/hr		2.20	2.00	
DISCHARGE PRESSURE:	barg		1.8		
SUCTION PRESSURE :	barg	0.8			0.5
DIFFERENTIAL PRESSURE :	bar		1.5		
DIFFERENTIAL HEAD :	m		15.6		
NPSH _A :	m		3.2		
HYDRAULIC POWER:	KW		0.1		

SITE AND UTILITY DATA																																												
LOCATION: OUTDOOR UNHEATED MOUNTED AT : TROPICALISATION REQ'D ELECTRIC AREA CLASSIFICATION: (6.1.22) ZONE 1 GROUP II A TEMP CLASS T3 SITE DATA : ELEVATION (MSL) : 12.5 m BAROMETER : (Note 35) mBar RANGE OF DESIGN TEMPS: MIN / MAX 5 85 °C RELATIVE HUMIDITY: MIN / MAX 0 100 % (@ 25.6 °C) UNUSUAL CONDITIONS: UTILITY CONDITIONS : <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>ELECTRICITY :</th> <th>DRIVERS</th> <th>HEATING</th> <th>CONTROL</th> <th>SHUTDOWN</th> </tr> <tr> <td>VOLTAGE</td> <td style="text-align: center;">400</td> <td></td> <td></td> <td></td> </tr> <tr> <td>PHASE</td> <td style="text-align: center;">3</td> <td></td> <td></td> <td></td> </tr> <tr> <td>HERTZ</td> <td style="text-align: center;">50</td> <td></td> <td></td> <td></td> </tr> </table>		ELECTRICITY :	DRIVERS	HEATING	CONTROL	SHUTDOWN	VOLTAGE	400				PHASE	3				HERTZ	50				COOLING WATER : (Not Available) D08 <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th></th> <th>RETURN</th> <th>DESIGN</th> </tr> <tr> <td>TEMP</td> <td></td> <td></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 border="1" style="width:100%; border-collapse: collapse;"> <tr> <th></th> <th>DRIVERS</th> <th>HEATING</th> </tr> <tr> <td>TEMP</td> <td></td> <td></td> </tr> <tr> <td>PRESS.</td> <td></td> <td></td> </tr> </table>			RETURN	DESIGN	TEMP			PRESS.			SOURCE				DRIVERS	HEATING	TEMP			PRESS.		
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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 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 REQ'D (6.1.14) D08 85 @ 1 m (dBA) EST MAX SOUND PRESS. LEVEL _____ (dBA) MAX. SOUND POWER LEVEL REQ'D (6.1.14) _____ EST MAX SOUND POWER LEVEL _____			



DRIVER (7.1.5) (Note 27)	
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 HORIZONTAL LUBE _____ BEARING TYPE: _____ RADIAL _____ THRUST _____ STARTING METHOD D.O.L/ Open Discharge Valve INSULATION/TEMP. RISE F/B Max Voltage Variation ±10% Max Frequency Variation ±5% Max Voltage and Frequency Variation together ±10%	



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API Std. 610 CENTRIFUGAL PUMP DATA SHEET (SI UNIT) - P-2201 A/B (Sheet 3 of 6)																																																																		
CONSTRUCTION																																																																		
API PUMP TYPE: <u>OH2</u> [Based on API 610 definitions] NOZZLE CONNECTIONS: (6.5.5) (Notes 3,28) <table><tr><td></td><td>Size</td><td>Facing</td><td>Rating</td><td>Position</td></tr><tr><td>SUCTION</td><td></td><td>RF</td><td>300</td><td>END</td></tr><tr><td>DISCHARGE</td><td></td><td>RF</td><td>300</td><td>TOP</td></tr></table> PRESSURE CASING AUX. CONNECTIONS: (6.4.3.2) <table><tr><td></td><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><td></td></tr><tr><td>DRAIN</td><td></td><td></td><td></td><td>RF</td><td>300</td><td></td></tr><tr><td>VENT</td><td></td><td></td><td></td><td>RF</td><td>300</td><td></td></tr><tr><td>PRESSURE GAGE</td><td></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><td></td></tr><tr><td>WARM-UP LINE</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> Drain Valve Supplied By <u>VENDOR</u> DRAINS MANIFOLDED <u>VENDOR</u> VENT Valve Supplied By <u>VENDOR</u> VENTS MANIFOLDED <u>YES</u> THREAD. CONS FOR PIPELINE SERVICE & < 50°C (6.4.3.2) _____ SPECIAL FITTINGS FOR TRANSITIONING (6.4.3.3) _____ CYLINDRICAL THREADS REQUIRED (6.4.3.8) _____ GUSSET SUPPORT REQUIRED <u>YES</u> If Needed MACHINED AND STUDDED CONNECTIONS (6.4.3.12) _____ VS 6 DRAIN _____ DRAIN TO SKID EDGE <u>YES</u>			Size	Facing	Rating	Position	SUCTION		RF	300	END	DISCHARGE		RF	300	TOP		No.	Size	Type	Facing	Rating	Posn.	BAL./LEAK OFF							DRAIN				RF	300		VENT				RF	300		PRESSURE GAGE							TEMP GAGE							WARM-UP LINE							CASING MOUNTING: <u>CENTERLINE</u> CASING TYPE: (6.3.10) <u>SINGLE VOLUTE</u> OH3 BACKPULLOUT LIFTING DEVICE REQD. (9.1.2.6) _____ CASE PRESSURE RATING: (Note 36) MAWP : (6.3.5) <u>40</u> barg @ _____ °C HYDROTEST : <u>1.5*MAWP</u> barg @ _____ °C HYDROTEST OH PUMP ASSEMBLY <u>YES</u> SUCT'N PRESS. REGIONS DESIGNED FOR MAWP <u>YES</u> ROTATION: (VIEWED FROM COUPLING END) • IMPELLERS INDIVIDUALLY SECURED : <u>YES</u> • 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 _____ SHRINK FIT -LIMITED MOVEMENT IMPELLERS (9.2.2.3) _____ COUPLING:(7.2.3) <u>(7.2.13.f)</u> MANUFACTURER _____ MODEL _____ RATING (POWER/100 RPM) _____ SPACER LENGTH _____ mm SERVICE FACTOR <u>min 1.5</u> RIGID (Note 31) <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 610 compliant</u> COUPLING GUARD STANDARD PER (7.2.13.a) <u>ISO 14120</u> Window on Coupling Guard _____
	Size	Facing	Rating	Position																																																														
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MATERIAL (6.12.1.1) APPENDIX H CLASS <u>S-6</u> (VTC) MIN DESIGN METAL TEMP (6.12.4.1) <u>5</u> °C REDUCED-HARDNESS MATERIALS REQ'D (6.12.1.12.1) <u>YES</u> (Note 29) 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 <u>Level 2</u>		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 : GROUT AND VENT HOLES <u>YES</u> DRAIN CONNECTION <u>YES</u> MOUNTING PADS SIZED FOR BASEPLATE LEVELING (7.3.5) _____ MOUNTING PADS TO BE MACHINED (7.3.6) _____ PROVIDE SPACER PLATE UNDER ALL EQUIPMENT FEET _____ OTHER _____ REMARKS : _____ _____ _____ _____ _____																																																																
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) _____ (6.10.2.2) (6.11.3) (9.2.6) <u>RING OIL</u> 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>VENDOR</u> OIL VISC. ISO GRADE _____ VG _____ CONSTANT LEVEL OILER : <u>REQUIRED</u>																																																																		

 NISOC	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>							
شماره پیمان:	MECHANICAL DATA SHEETS FOR FLARE KO DRUM PUMPS				شماره صفحه: ۷ از ۹			
۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه	بسته کاری	صادر کننده	تسهیلات		رشته	نوع مدرک	سریال
	BK	GCS	PEDCO	120	ME	DT	0024	D08

API Std. 610 CENTRIFUGAL PUMP DATA SHEET (SI UNIT) - P-2201 A/B (Sheet 4 of 6)

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 VENDOR
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)	HEATING JACKET REQ'D. (6.8.11)
Number of Accelerometers	FLUSH PLAN 31+53B
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 5)
	COOLING WATER NO 
	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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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