

شماره پیمان:

DATA SHEETS (W/PERFORMANCE CURVE) FOR FIRE WATER MAIN DIESEL PUMP

• 03-07-91AE

شماره صفحه: ۱ از ۱۴

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
V02	0001	DS	ME	120	KP	GCS	BK

طرح نگهداشت و افزایش تولید ۲۷ مخزن

DATA SHEETS (W/PERFORMANCE CURVE) FOR FIRE WATER MAIN DIESEL PUMP

نگهداشت و افزایش تولید میدان نفتی بینک

V02	APR-2025	AFC	Kalaye Pump	M.Fakharian	S.Faramarzpour	
V01	JAN-2025	IFA	Kalaye Pump	M.Fakharian	S.Faramarzpour	
V00	Nov-2024	IFA	Kalaye Pump	M.Fakharian	M.Sadeghian	
Rev.	Date	Purpose of Issue / Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval

status:

IFI: Issued For Information

IFA: Issued For Approval

AFC: Approved For Construction



شماره صفحه: ۲ از ۱۴

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
V02	0001	DS	ME	120	KP	GCS	BK

page	V00	V01	V02	V03	V04	V05	V06	page	V00	V01	V02	V03	V04	V05
1	x	x	x					65						
2	x	x	x					66						
3	x							67						
4	x							68						
5	x	x						69						
6	x	x						70						
7	x							71						
8	x	x						72						
9	x							73						
10	x	x						74						
11	x	x						75						
12	x							76						
13	x							77						
14	x							78						
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تجهداشت و افزایش تولید میدان نفتی بینک
سطح الارض و ابنیه تحت الارض
خرید پکیج پمپ های آب آتشنشانی ایستگاه تقویت فشار گاز بینک
(ق. ا. ر. د. ا. ۰۰۰۲۳۰۰ BK-HD-GCS-CO)



• 03-• 73-9184

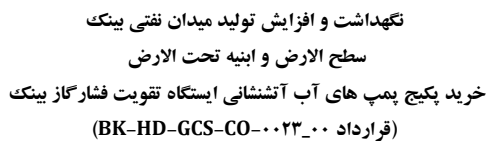
DATA SHEETS (W/PERFORMANCE CURVE) FOR FIRE WATER MAIN DIESEL PUMP

شماره صفحه: ۳ از ۱۴

نسخه	سرپال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
V02	0001	DS	ME	120	KP	GCS	BK

GENERAL NOTES

- | | | |
|----|--|----------------------------|
| 1 | Vendor shall fill in the blanks and return the completed data sheet along with Diesel data sheet with his proposal. | KPC : Confirmed |
| 2 | Vendor shall submit ITP (Inspection & Testing Plan) with his proposal. | KPC : Confirmed |
| 3 | Vendor is requested to confirm the material, or propose appropriate alternative. | KPC : Confirmed |
| 4 | For Instrumentation, Project specification 'Specification For Instrument and Control of package Unit System (PU)' Doc. No. BK-GNRAL-PEDCO-000-IN-SP-0004. shall be followed. | KPC : Confirmed |
| 5 | Instead of mechanical seal, vendor shall advise the suitable Packing specification. | KPC : Packing is confirmed |
| 6 | NPSH test shall be done & witnessed if the margin of NPSHr & NPSHa is less than 1. | KPC : Confirmed |
| 7 | The Tie-in flanges shall conform to ASME B-16.1. | KPC : Confirmed |
| 8 | Pump drain shall be terminated at skid edge with flange connection and valved. | KPC : Confirmed |
| 9 | Supplier to indicate which minimum flow pumps can achieve. | KPC : Confirmed |
| 10 | Nozzle loads shall be 2 times the loads shown in API 610 11th Edition. | KPC : Confirmed |
| 11 | The Suction line size is 12" and discharge line is 10" . | KPC : Confirmed |
| 12 | Air release valve shall be considered by vendor . | KPC : Pump is self vent |
| 13 | As the pump jobsite environmental condition is fume 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. | KPC : Confirmed |
| 14 | Ultrasonic Test shall be performed for forged shaft. | KPC : Confirmed |
| 15 | Couplings shall be dry, flexible and spacer type. | KPC : Confirmed |
| 16 | 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. | KPC : Confirmed |
| 17 | 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. | KPC : Confirmed |
| 18 | The electrical characteristics of panels shall be specified by vendor such as: - The power demand of control panel. - The number of control panel. | KPC : Confirmed |
| 19 | 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. | KPC : Confirmed |
| 20 | Diesel engine shall be tested at 110% rated speed in mechanical running test also the maximum speed of diesel engines shall be 2300 RPM. | KPC : Confirmed |
| 21 | pressure sensing lines are in the vendor's scope of supply. | KPC : Confirmed |
| 22 | 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. | KPC : Confirmed |
| 23 | Design pressure is 15.4 barg also as per NFPA 20 standard the hydrotest pressure shall not be less than 17.24 barg. | KPC : Confirmed |
| 24 | Estimated BHP at rated capacity is 199.2 kW by considering 65% efficiency. | KPC : Confirmed |
| 25 | The pumps shall furnish not less than 150% of rated capacity at not less than 65% of rated head. | KPC : Confirmed |



شماره پیمان:

• 03-073-9184

DATA SHEETS (W/PERFORMANCE CURVE) FOR FIRE WATER MAIN DIESEL PUMP

شماره صفحه: ۴ از ۱۴

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

[illegible]

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 و ابنیه تحت الارض خرید پکیج پمپ های آب آتشنشانی ایستگاه تقویت فشار گاز بینک (قرارداد ۰۰۲۳-۰۰ BK-HD-GCS-CO)							 Kalaye Pump Co.
شماره پیمان: ۰۵۳-۰۷۳-۹۱۸۴	DATA SHEETS (W/PERFORMANCE CURVE) FOR FIRE WATER MAIN DIESEL PUMP							شماره صفحه: ۵ از ۱۴
	پروژه	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	
	BK	GCS	KP	120	ME	DS	0001	V02
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 PUMP SIZE 8"x6"				TYPE BB1 No. STAGES 1				
MANUFACTURER KALAYE PUMP CO.				MODEL BB1 (V.T.C) KPSPF 150-570 SERIAL NO.				
LIQUID CHARACTERISTICS								
	Units	Maximum	Minimum	Note	SERVICE :			
LIQUID TYPE OR NAME :	Water			Max & min	INTERMITTENT			
VAPOR PRESSURE :	bara	0.0087	0.1219	values refer	• IF INTERMITTENT NO. OF STARTS :			
DENSITY :	kg/m³	997		only to the	PUMPS OPERATE IN:			
SPECIFIC HEAT :	kJ/kgC	4.186		property	CORROSION DUE TO : (6.12.1.9)			
VISCOSITY :	cP	1		listed	EROSION DUE TO : (6.12.1.9)			
OPERATING CONDITIONS (6.1.2)					H2S CONCENTRATION (ppm) : (6.12.1.12)			
	Units	Maximum	Rated	Normal	Min	CHLORIDE CONCENTRATION (ppm) :		
NPSH _A Datum:	C.L. Impeller					PARTICULATE SIZE (DIA IN MICRONS)		
PUMPING TEMPERATURE :	°C	50			5	PARTICULATE CONCENTRATION (PPM)		
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:					COOLING WATER :			
OUTDOOR UNHEATED UNDER ROOF					RETURN DESIGN			
MOUNTED AT : ● TROPICALISATION REQ'D					TEMP			
ELECTRIC AREA CLASSIFICATION: (6.1.2.2) ZONE SAFE					PRESS.			
GROUP TEMP CLASS					SOURCE			
SITE DATA :					COOLING WATER CHLORIDE CONCENTRATION:			
ELEVATION (MSL) : 12.5 m BAROMETER : 990.77 mBar					INSTRUMENT AIR : kg MIN kg			
RANGE OF DESIGN TEMPS:MIN / MAX 5 85 °C					STEAM			
RELATIVE HUMIDITY: MIN / MAX 0 100 % (@ 25.6 °C)					TEMP			
UNUSUAL CONDITIONS: NA					PRESS.			
UTILITY CONDITIONS :					DRIVERS HEATING			
ELECTRICITY : AUXILIARY HEATING CONTROL SHUTDOWN								
VOLTAGE 400								
PHASE 3								
HERTZ 50								
PERFORMANCE					DRIVER (7.1.5) (NOTE 22)			
PROPOSAL CURVE NO. KPSPF 150-570 RPM 1490					Driver Type DIESEL ENGINE			
As Tested Curve No. KPSPF 150-570					GEAR NO			
IMPELLER DIA.: 530 MAX. 585 MIN. 450 mm					VARIABLE SPEED REQUIRED NO			
RATED POWER 180.5 Kw EFFICIENCY 72 (%)					SOURCE OF VARIABLE SPEED			
RATED CURVE BEP FLOW (at rated impeller dia) 489 m³/hr					OTHER			
MIN FLOW : 15 m³/hr					MANUFACTURER VOLVO			
PREFERRED OPERATING REGION (6.1.11) 342 to 681 m³/hr					NAMEPLATE POWER @ Site Condition 308 KW			
ALLOWABLE OPERATING REGION 146 to 681 m³/hr					Nominal RPM 1490			
MAX HEAD @ RATED IMPELLER 120 m					RATED LOAD RPM			
MAX POWER @ RATED IMPELLER 241 kW					FRAME OR MODEL TAD134IGE			
NPSH3 AT RATED FLOW : 3.5 m					ORIENTATION HORIZONTAL			
CL PUMP TO U/S BASEPLATE 5.3 m					LUBE			
NPSH MARGIN AT RATED FLOW : 5.3 m								
SPECIFIC SPEED (6.1.9) 867					RADIAL /			
SUCTION SPECIFIC SPEED LIMIT 8498					THRUST /			
SUCTION SPECIFIC SPEED 8498					STARTING METHOD			
MAX. ALLOW. SOUND PRESS. LEVEL REQ'D (6.1.14) 110 (dBA) @ 1 m					SEE DRIVER DATA SHEET			
EST MAX SOUND PRESS. LEVEL (dBA)					Max Voltage Variation			
MAX. SOUND POWER LEVEL REQ'D (6.1.14)					Max Frequency Variation			
EST MAX SOUND POWER LEVEL					Max Voltage and Frequency Variation together			

<div> NISOC</div>	<div>تجهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج پمپ های آب آتشنشانی ایستگاه تقویت فشار گاز بینک (قرارداد ۰۰۲۳-۰۰-BK-HD-GCS-CO)</div>	<div></div>																																																															
شماره پیمان: ۰۵۳-۰۷۳-۹۱۸۴	<table><tr><th colspan="8">DATA SHEETS (W/PERFORMANCE CURVE) FOR FIRE WATER MAIN DIESEL PUMP</th></tr><tr><th>نسخه</th><th>سریال</th><th>نوع مدرک</th><th>رشته</th><th>تجهیزات</th><th>صادر کننده</th><th>بسته کاری</th><th>پروژه</th></tr><tr><td>V02</td><td>0001</td><td>DS</td><td>ME</td><td>120</td><td>KP</td><td>GCS</td><td>BK</td></tr></table>	DATA SHEETS (W/PERFORMANCE CURVE) FOR FIRE WATER MAIN DIESEL PUMP								نسخه	سریال	نوع مدرک	رشته	تجهیزات	صادر کننده	بسته کاری	پروژه	V02	0001	DS	ME	120	KP	GCS	BK	شماره صفحه: ۱۴ از ۱۶																																							
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CENTRIFUGAL PUMP DATA SHEET (SI UNIT) - P-2301 B (Sheet 3 of 6)																																																																	
CONSTRUCTION																																																																	
<div>API PUMP TYPE: BB1 [Based on API 610 definitions]</div> <div>NOZZLE CONNECTIONS: (6.5.5) NOTES 7,11</div> <table><tr><th></th><th>Size</th><th>Facing</th><th>Rating</th><th>Position</th></tr><tr><td>SUCTION</td><td>8"</td><td>RF</td><td>150</td><td>SIDE</td></tr><tr><td>DISCHARGE</td><td>6"</td><td>RF</td><td>150</td><td>SIDE</td></tr></table> <div>PRESSURE CASING AUX. CONNECTIONS: (6.4.3.2)</div> <table><tr><th></th><th>No.</th><th>Size</th><th>Type</th><th>Facing</th><th>Rating</th><th>Posn.</th></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>1</td><td>1/2"</td><td>SWF</td><td>RF</td><td>150</td><td>SIDE</td></tr><tr><td>VENT</td><td>1</td><td>1/2"</td><td>SWF</td><td>RF</td><td>150</td><td>SIDE</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> <div>Drain Valve Supplied By _____ SUPPLIER</div> <div>DRAINS MANIFOLDED _____ YES</div> <div>VENT Valve Supplied By _____ SUPPLIER</div> <div>VENTS MANIFOLDED _____ YES</div> <div>THREAD. CONS FOR PIPELINE SERVICE & < 50°C (6.4.3.2) _____ NO</div> <div>SPECIAL FITTINGS FOR TRANSITIONING (6.4.3.3) _____ NO</div> <div>CYLINDRICAL THREADS REQUIRED (6.4.3.8) _____ NO</div> <div>GUSSET SUPPORT REQUIRED _____ YES If Needed</div> <div>MACHINED AND STUDDED CONNECTIONS (6.4.3.12) _____ NO</div> <div>VS 6 DRAIN _____ N/A</div> <div>DRAIN TO SKID EDGE _____ YES</div>		Size	Facing	Rating	Position	SUCTION	8"	RF	150	SIDE	DISCHARGE	6"	RF	150	SIDE		No.	Size	Type	Facing	Rating	Posn.	BAL/LEAK OFF							DRAIN	1	1/2"	SWF	RF	150	SIDE	VENT	1	1/2"	SWF	RF	150	SIDE	PRESSURE GAGE							TEMP GAGE							WARM-UP LINE							<div>CASING MOUNTING:</div> <div>CASING TYPE: (6.3.10)</div> <div>OH3 BACKPULLOUT LIFTING DEVICE REQD. (9.1.2.6)</div> <div>CASE PRESSURE RATING:</div> <div>MAWP : (6.3.5) 15 By vendor barg @ Amb. °C</div> <div>HYDROTEST : 22.5 1.5*MAWP barg @ Amb. °C</div> <div>HYDROTEST OH PUMP AS ASSEMBLY _____ YES</div> <div>SUCTN PRESS. REGIONS DESIGNED FOR MAWP _____ YES</div> <div>ROTATION: (VIEWED FROM COUPLING END) CW</div> <div>IMPELLERS INDIVIDUALLY SECURED : _____ YES</div> <div>BOLT OH 3/4/5 PUMP TO PAD / FOUNDATION : _____</div> <div>PROVIDE SOLEPLATE FOR OH 3/4/5 PUMPS _____</div> <div>ROTOR:</div> <div>SHAFT FLEXIBILITY INDEX (SFI) (9.1.1.3) _____</div> <div>First Critical Speed Wet (Multi stage pumps only) _____</div> <div>COMPONENT BALANCE TO ISO 1940 G1.0 _____ NO</div> <div>SHRINK FIT -LIMITED MOVEMENT IMPELLERS (9.2.2.3) _____</div> <div>COUPLING:(7.2.3) (7.2.13.f) NOTE 16</div> <div>MANUFACTURER Colossus</div> <div>MODEL FLEXIBLE SPACER TYPE</div> <div>RATING (POWER/100 RPM) _____</div> <div>SPACER LENGTH 180 mm</div> <div>SERVICE FACTOR Min 1.5</div> <div>RIGID NO</div> <div>COUPLING WITH HYDRAULIC FIT (7.2.10) _____</div> <div>COUPLING BALANCED TO ISO 1940-1 G6.3 (7.2.3) _____ YES</div> <div>COUPLING WITH PROPRIETARY CLAMPING DEVICE (7.2.11) _____</div> <div>COUPLING IN COMPLIANCE WITH (7.2.4) API 671</div> <div>COUPLING GUARD STANDARD PER (7.2.13.a) ISO 14120</div> <div>Window on Coupling Guard YES</div>
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<div>MATERIAL (6.12.1.1)</div> <div>APPENDIX H CLASS I-2 NOTES 3</div> <div>MIN DESIGN METAL TEMP (6.12.4.1) 5 °C</div> <div>REDUCED-HARDNESS MATERIALS REQ'D (6.12.1.12.1) _____</div> <div>Applicable Hardness Standard (6.12.1.12.3) _____</div> <div>BARREL : _____</div> <div>CASE : GGG40(A536 60-40-18)</div> <div>DIFFUSERS _____</div> <div>IMPELLER : C95200</div> <div>IMPELLER WEAR RING : C95200</div> <div>CASE WEAR RING : C95200</div> <div>SHAFT: A276 T420</div> <div>Bowl (if VS-type) _____</div> <div>Inspection Class Note 2</div>	<div>BASEPLATE</div> <div>API BASEPLATE NUMBER : _____</div> <div>BASEPLATE CONSTRUCTION (7.3.14) PARTIAL TOP DECKING</div> <div>BASEPLATE DRAINAGE (7.3.1) Entire Baseplate Drain Pan</div> <div>MOUNTING : _____</div> <div>NON-GROUT CONSTRUCTION : (7.3.13) _____</div> <div>VERTICAL LEVELING SCREWS : REQUIRED</div> <div>LONGITUDINAL DRIVER POSITIONING SCREWS : REQUIRED</div> <div>SUPPLIED WITH :<ul style="list-style-type: none">GROUT AND VENT HOLES YESDRAIN CONNECTION YES</div> <div>MOUNTING PADS SIZED FOR BASEPLATE LEVELING (7.3.5) YES</div> <div>MOUNTING PADS TO BE MACHINED (7.3.6) YES</div> <div>PROVIDE SPACER PLATE UNDER ALL EQUIPMENT FEET YES</div> <div>OTHER _____</div> <div>REMARKS : _____ _____ _____ _____ _____</div>																																																																
<div>BEARINGS AND LUBRICATION (6.10.1.1)</div> <div>BEARING (TYPE / NUMBER): (6.11.4)</div> <div>RADIAL ROLLER / 1</div> <div>THRUST BALL / 1</div> <div>REVIEW AND APPROVE THRUST BEARING SIZE : (9.2.5.2.4) _____</div> <div>LUBRICATION : (6.10.2.2) (6.11.3) (9.2.6) GREASE</div> <div>PRESSURE LUBE SYSTEM TO ISO 10438- (9.2.6.5) _____</div> <div>ISO 10438 DATA SHEETS ATTACHED</div> <div>Pressurized Lube Oil System mtd on pump baseplate</div> <div>Location of Pressurized Lube Oil System mounted on baseplate : _____</div> <div>INTERCONNECTING PIPING PROVIDED BY Supplier</div> <div>OIL VISC. ISO GRADE VG</div> <div>CONSTANT LEVEL OILER : _____</div>																																																																	

<div> NISOC</div>	<div>تجهداشت و افزایش تولید میدان نفتی بینک</div> <div>سطح الارض و ابنیه تحت الارض</div> <div>خرید پکیج پمپ های آب آتشنشانی ایستگاه تقویت فشار گاز بینک</div> <div>(قرارداد ۰۰۲۳-۰۰-BK-HD-GCS-CO)</div>							<div> HIRGAN ENERGY</div> <div> Kalaye Pump Co.</div>
شماره پیمان: ۰۵۳-۰۷۳-۹۱۸۴	DATA SHEETS (W/PERFORMANCE CURVE) FOR FIRE WATER MAIN DIESEL PUMP							شماره صفحه: ۱۴ از ۸
	نسخه	سریال	نوع مدرک	رشته	تجهیزات	صادر کننده	بسته کاری	
	V02	0001	DS	ME	120	KP	GCS	
CENTRIFUGAL PUMP DATA SHEET (SI UNIT) -P-2301 B (Sheet 5 of 6)								
SURFACE PREPARATION AND PAINT					TEST			
MANUFACTURER'S STANDARD					SHOP INSPECTION (8.1.1)			
OTHER (SEE BELOW)					PERFORMANCE CURVE			
SPECIFICATION NO. BK-GNRAI-PEDCO-000-PI-SP-0006, "Specification for Painting"					& DATA APPROVAL PRIOR TO SHIPMENT.			
PUMP:					TEST WITH SUBSTITUTE SEAL (8.3.3.2.b)			
PUMP SURFACE PREPARATION					MATERIAL CERTIFICATION REQUIRED			
PRIMER					SHAFT			
FINISH COAT					OTHER			
BASEPLATE:					CASTING REPAIR WELD PROCEDURE APPR REQD			
BASEPLATE SURFACE PREPARATION					INSPECTION REQUIRED FOR CONNECTION WELDS (6.12.3.4.d)			
PRIMER:					LIQUID PENETRANT			
FINISH COAT					ULTRASONIC			
DETAILS OF LIFTING DEVICES					INSPECTION REQUIRED FOR CASTINGS			
SHIPMENT: (8.4.1)					LIQUID PENETRANT			
EXPORT BOXING REQUIRED					ULTRASONIC			
OUTDOOR STORAGE MORE THAN 6 MONTHS					HARDNESS TEST REQUIRED (8.2.2.7)			
ROTOR STORAGE ORIENTATION (9.2.8.2)					ADDNL SUBSURFACE EXAMINATION (6.12.1.5) (8.2.1.3)			
SHIPPING & STORAGE CONTAINER FOR VERT STORAGE (9.2.8.3)					FOR			
N ₂ PURGE (9.2.8.4)					METHOD			
SPARE PARTS					PMI TESTING REQUIRED (8.2.2.8)			
START-UP					COMPONENTS TO BE TESTED			
NORMAL MAINTENANCE					RESIDUAL UNBALANCE TEST (J.4.1.2)			
					NOTIFICATION OF SUCCESSFUL SHOP			
					PERFORMANCE TEST (8.1.1.c) (8.3.3.5)			
					BASEPLATE TEST (7.3.21)			
					HYDROSTATIC			
					HYDROSTATIC TEST OF BOWLS & COLUMN (9.3.13.2)			
					PERFORMANCE TEST			
					TEST IN COMPLIANCE WITH (8.3.3.2)			
					TEST DATA POINTS TO (8.3.3.3)			
					TEST TOLERANCES TO (8.3.3.4)			
					NPSH (8.3.4.3.1) (8.3.4.3.4)			
					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)			
					CLEANLINESS PRIOR TO FINAL ASSEMBLY (8.2.2.6)			
					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)			
					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			



شماره پیمان:

DATA SHEETS (W/PERFORMANCE CURVE) FOR FIRE WATER MAIN DIESEL PUMP

• 03-073-9184

شماره صفحه: ۹ از ۱۴

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه
V02	0001	DS	ME	120	KP	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

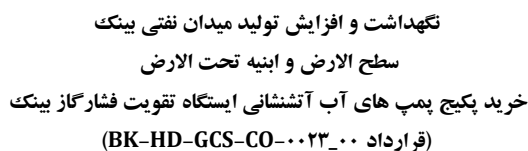
YES

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)			

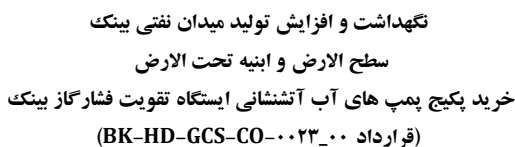
REMARKS :

This image shows a single sheet of white paper with horizontal 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.



شماره پیمان:	DATA SHEETS (W/PERFORMANCE CURVE) FOR FIRE WATER MAIN DIESEL PUMP							شماره صفحه: ۱۱ از ۱۴
	نسخه	سرئال	نوع مدرک	رشته	تجهیزات	صادرکننده	بسته کاری	
	V02	0001	DS	ME	120	KP	GCS	

HYDRAULIC:-			
ACCUMULATOR/MOTOR			
NO OF STARTS PER 5 SEC CRANKS			
NO OF ACCUMULATORS			
BARRING SYSTEM			
MANUAL/ELEC/HYDRAULIC IF REQ'D			MANUAL
LUBRICATION			
DRY SUMP			
SYSTEM;- PRESSURE	bar g / Kpa g		
OIL QUANTITY			
OIL CONSUMPTION	g/kwh		
PUMPS	Main/Aux		
OIL FILTER:-			
CHANGE OVER WHILE RUNNING	Reqd y/n		
FILTER:-			
TYPE	Wet or dry		TWO STAGE
NUMBER			
AIR CUT OFF SYSTEM ("RIG SAVER")			YES
EXHAUST SYSTEM			
ENGINE PIPE OUTLET			YES
SPARK ARRESTOR			YES
SILENCER	dBa @1m		YES - 85
EXPANSION JOINT			YES
EXHAUST MANIFOLD	Cooling		PERSONNEL PROTECTION
FUEL			
MAX STATIC HEAD ABOVE FUEL INLET			
FILTER CLEANABLE WHILE RUNNING	Y/N		YES
SELF CLEANING	Y/N		YES
CHANGE OVER WHILE RUNNING	Y/N		YES
HEAT EMISSIONS			
TO COOLING SYSTEM	kW		
TO AMBIENT	kW		
SITE AND INSTALLATION DATA			
ALTITUDE	m		
AMBIENT TEMPERATURE MIN/MAX	°C		5 / 50
DESIGN TEMPERATURE	°C		52
HUMIDITY	%		0 / 100
WIND SPEED	km/h		
ATMOSPHERIC AIR (DUST/FUMES)			
CORROSION BY			
LOCATION:- INDOOR/OUTDOOR			OUTDOOR



DATA SHEETS (W/PERFORMANCE CURVE) FOR FIRE WATER MAIN DIESEL PUMP

شماره صفحه: ۱۲ از ۱۴

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
V02	0001	DS	ME	120	KP	GCS	BK

Diesel Engine Data Sheet For Fire Water Pump - P-2301 B (SI UNIT) (3 of 4)

UNHEATED
UNDER ROOF

FROM FIRE WATER PUMP DISCHARGE

WATER PUMP DISCHARGE

YES
ENGINE SUPPLIER
AS PER NFPA 20
OFF-SKID

IPS-E-TP-100

IPS-M-PM-290

ALARM	SHUTDOWN
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IPS-M-PM-290 SECTION 6.8.

Remark: **P&ID For Fire Water Network**
(No.BK-GCS-PEDCO-120-SA-PI-0001.)

shall be followed.

IPS-M-PM-290 SECTION 6.8.



KALAYE PUMP CO.

Performance curve



Item No.	P-2301 B	Pump Model	KPSPF 150-570	Flow, Rated (m^3/h)	454.2
Liquid	Water	Speed (rpm)	1490	Head (m)	105
Temp. ($^{\circ}C$)	-3.5 / 53	Rated Imp.Dia. (mm)	530	Efficiency (%)	72
Density(kg/m^3)	997	Suction Size (Inch)	8	NPSHR (m)	3.5
Viscosity (cp)	1	Disch. Size (Inch)	6	Rated Power (kw)	180.5
NPSHA (m)	8.8	NSS ($m^3/h, m, rpm$)	8498	Diesel Power (kw)	308

