

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
	TBE FOR FIRE WATER PUMP							شماره صفحه: ۱ از ۸	
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تسهیلات 120	رشته ME	نوع مدرک TB	سریال 0011	نسخه D01	

طرح نگهداشت و افزایش تولید ۲۷ مخزن

TBE FOR FIRE WATER PUMP

نگهداشت و افزایش تولید میدان نفتی بینک

D01	NOV.2024	FI	V.Amjadi	M.Fakharian	M.Sadeghian	
D00	DEC.2022	IFI	H.Adineh	M.Fakharian	M.Mehrshad	
Rev.	Date	Purpose of Issue / Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval

Class: 3 CLIENT Doc. Number: F0Z-709236

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 TBE For Fire Water Pump								
	شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تسهیلات 120	رشته ME	نوع مدرک TB		سریال 0011
									شماره صفحه: ۸ از ۲

REVISION RECORD SHEET

Page	D00	D01	D02	D03	D04	Page	D00	D01	D02	D03	D04
1	X	X				59					
2	X	X				60					
3	X					61					
4	X					62					
5	X					63					
6	X					64					
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58						116					

		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
		TBE For Fire Water Pump								
شماره پیمان:		پروژه	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۸ از ۳
۰۵۳ - ۰۷۲ - ۹۱۸۴		BK	GCS	PEDCO	120	ME	TB	0011	D01	

REQ. NO.	BK-GCS-PEDCO-120-ME-MR-0011	BIDDER NAME:	Arya Sapehr Kayhan	Petro Rahan Co.	PETCO	Kalay e Pump
QUOTATION NO.:			ASK-HEN-TS-A0	PJ01-112011	401-1244	7-5093
QUOTATION DATE:			1401-08-22	1401-08-24	1401-08-11	19.11.2022

NO.	DESCRIPTION	REFERENCE / SPECIFIED	MEETS REQUISITION REQUIREMENTS							
			Status		Status		Status		Status	
GENERAL										
1	Origine of Manufacturer	VTS	IRAN	Y	PETRO RAHAN PUMP	Y	PETCO IRAN	Y	IRAN	Y
2	Delivery Time	VTS	8 Month	Y	150 WORKINGS DAYS	Y	8 MONTHS	Y	7-8 Mounths	Y
3	Design Life	25 years	Confirmed	Y	Confirmed	Y	Confirmed	Y	25 years	Y
Scope Of Supply										
1	Complete Pump Units	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
2	Motor Driver	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
3	Diesel Engine	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
4	Pump Controllers	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
5	Common Skid Under Pump, Motor/Engine, Controller & Batteries	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
6	Foundation Bolts and Nuts with Liners, Shims & Jack Screw	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
7	Local Control Panel, Cables & Glands	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
8	Piping, Valves & Fittings with its Support	Required	Confirmed	Y	Data is not available	N/A	At pump skid	Y	Confirmed	Y
9	Mating Flanges with Bolts, Nuts and Gasket (If Required)	Required	Confirmed	Y	Data is not available	N/A	Confirmed	Y	Confirmed	Y
10	Grounding Bosses & Wiring	Required	Confirmed	Y	Data is not available	N/A	Confirmed	Y	Confirmed	Y
11	Touch-up Paint	Required	Confirmed	Y	Confirmed	Y	Data is not available	N/A	Confirmed	Y
12	First Fill Lube Oil	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
13	Name plates	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
14	Commissioning Spare Parts	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
15	Two Years Spare Parts	Required (As Option)	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
16	Special Tools for erection, commissioning, test and maintenance	If Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
17	Acoustic Enclosure (If Required)	Required	Confirmed	Y	Not required	Y	Not required	Y	Not required	Y
Scope of Work										
1	Engineering & Documentation	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
2	Manufacturing & Assembling	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
3	Mounting and Alignment	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
4	PIM (pre-inspection meeting)	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
5	Procurement	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
6	Inspection & Testing at shop	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
7	Performance Guarantee	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
8	Mechanical Guarantee	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
9	Wiring & Tubing to JB	Required	Confirmed	Y	Data is not available	N/A	Confirmed	Y	Confirmed	Y
10	Interconnecting piping inside unit assembly, including lubrication and cooling circuits.	Required	Confirmed	Y	Confirmed	Y	At pump skid	Y	Confirmed	Y
11	Painting	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
12	Packing & Preservation	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
13	Shipping & Transportation	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
14	Export customs clearance	Required	Confirmed	Y	Confirmed	Y	If any	Y	Confirmed	Y
15	Obtain any export license or other official authorization	Required	Confirmed	Y	Confirmed	Y	Not required	Y	Confirmed	Y
16	Supervision for Installation	Required (As Option)	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed(As Option)	Y
17	Supervision for Pre-commissioning, commissioning & Start up	Required (As Option)	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed(As Option)	Y
18	Vendor Shop Training for Owner's Personnel	Required (As Option)	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed(As Option)	Y
Inspection & Test										
1	Quality Control Plan (QCP)/ Inspection and Test Plan	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
2	Copy of Quality Management System Certificate (According to ISO 9001)	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
3	Certification (Material, IP, EX, etc.)	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
4	Surface & Subsurface Examinations	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
5	NDE (RT, UT, MT, PT)	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
6	Hydrostatic Test (1.5 x MAWP)	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
7	Mechanical Running Test	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
8	Complete Unit Test	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
9	Over speed test of diesel engine @ 110% of rated speed	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
10	Performance Test	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
11	NPSH Test	If Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y

 NISOC		تک‌دانشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک						 شرکت توسعه و پارسا		
		TBE For Fire Water Pump								
شماره پیمان: ۰۴ - ۰۲ - ۹۱۸۵		پروژه	بسته کاری	صادر کننده	تهیهات	رشته	نوع عملکرد	سریال	نسخه	شماره صفحه: ۴ از ۸
		BK	GCS	PEDCO	120	ME	TB	0011	D01	

REQ. NO.	BK-GCS-PEDCO-120-ME-MR-0011	BIDDER NAME:	Arya Sepehr Kayhan	Petro Rahan Co.	PETCO	Kalay e Pump
QUOTATION NO.:		ASK-HEN-TS-A0	PJ01-112011	401-1244	7-5093	
QUOTATION DATE:		1401-08-22	1401-08-24	1401-08-11	19.11.2022	

NO.	DESCRIPTION	REFERENCE / SPECIFIED	MEETS REQUISITION REQUIREMENTS									
			Status		Status		Status		Status			
5	Guarantees											
1	The guarantee period shall be eighteen (18) months from the date of delivery or twelve (12) months from the installation date of each equipment/packages at site.	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
2	Exhaust Emissions Less Than specified limits in "Specification For Environmental Job; BK-GNRAL-PEDCO-000-SA-SP-0004"	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
6	Exeption & Deviation											
1	Submitted Deviation List	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
7	JOCKEY PUMPS (P-2302 A/B)											
7-1	Operating Conditions											
1	Item No.	P-2302 A/B	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
2	Service Name	Jockey Fire Water Pump	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
3	Number required	1+1	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	1+1	Y
4	Proposed Model No.	VTs	OH2 40-315	Y	OH2 40-315	Y	CP-25.315	Y	KP2532	Y		Y
5	Applicable of Code & Standards/ Edition	NFPA 20 -2019 & IPS-M-PM-125	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
6	Pump Type	Vendor to specify	Centrifugal/OH2	Y	Centrifugal/OH2	Y	Centrifugal/OH2	Y	Centrifugal/OH2	Y	Centrifugal/OH2	Y
7	Driver Type	Electrical Motor	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
8	Vapor Pressure (bara)	As per Purchaser's Data Sheet	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
9	Viscosity (cP)	As per Purchaser's Data Sheet	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
10	Density (kg/m3)	As per Purchaser's Data Sheet	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
11	Pumping Temperature (°C)	As per Purchaser's Data Sheet	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
12	Capacity (Rated) (m3/hr)	As per Purchaser's Data Sheet	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
13	Discharge Pressure (barg)	As per Purchaser's Data Sheet	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
14	Suction Pressure (Max./Min.) (barg)	As per Purchaser's Data Sheet	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
15	Diff. Pressure (bar)	As per Purchaser's Data Sheet	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
16	Diff. Head (m)	As per Purchaser's Data Sheet	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
17	NPSH Available (m)	As per Purchaser's Data Sheet	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
18	Hydraulic Power (kw)	As per Purchaser's Data Sheet	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
7-2	Site Condition											
1	Location	Outdoor/Under Shelter	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
2	Area Classification.	Safe	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
7-3	Design (Performance Features)											
1	Pump Speed (rpm)	VTs	2950	Y	2950	Y	3000	Y	2950	Y		Y
2	NPSH Required (m)	VTs	1.4	Y	2	Y	2	Y	1.5	Y		Y
3	NPSH Margin (m)	More Than 1 Meter	7.4	Y	6.8	Y	6.8	Y	7.3	Y		Y
4	Efficiency (%)	VTs	28	Y	31.5	Y	31	Y	29	Y		Y
5	Rated Power (KW)	VTs	15.28	Y	14	Y	13.79	Y	14.8	Y		Y
6	BEP Capacity (m³/h)	VTs	17.6	Y	22.5	Y	25	Y	19	Y		Y
7	Min. Continuous Flow (m³/h)	VTs	5.3	Y	6	Y	7.5	Y	5.7	Y		Y
8	Max. Head @ Rated Impeller (m)	VTs	115.5	Y	107	Y	118.1	Y	119	Y		Y
9	Percentage of Head Rise (Rated to Shut-off) (%)	less than 115%	110%	Y	102%	Y	112%	Y	113%	Y		Y
10	Impeller Diameter (min / rated / max) (mm)	VTs	260/278/320	Y	260/278/315	Y	250/277/314	Y	250/286/324	Y		Y
11	Impeller Mounted	VTs	Overhoung	Y	Overhoung	Y	Overhoung	Y	Overhoung	Y		Y

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض							 شماره سند: ۵ از ۸		
		احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک									
		TBE For Fire Water Pump									
شماره پیمان:		پروژه	بسته کاری	صادرکننده	تهیهات	رشته	نوع مدرک	سریال	نسخه		
۰۲ - ۰۳ - ۹۱۴۱		BK	GCS	PEDCO	120	ME	TB	0011	D01		
REQ. NO.	BK-GCS-PEDCO-120-ME-MR-0011			BIDDER NAME:		Arya Sepehr Kayhan		Petro Rahan Co.		PETCO	Kalay e Pump
QUOTATION NO.:						ASK-HEN-TS-A0		PJ01-112011		401-1244	7-5093
QUOTATION DATE:						1401-08-22		1401-08-24		1401-08-11	19.11.2022
NO.	DESCRIPTION	REFERENCE / SPECIFIED	MEETS REQUISITION REQUIREMENTS								
			Status		Status		Status		Status		
7-4	Design (Construction Features)										
1	MAWP / Design Temperature (Barg / °c)	VTS/ 85	40 @ 38 °c	Y	40 @ 38 °c	Y	17.5 @ 50°c	Y	17 @ 50°c	Y	
2	Hydrotest Pressure (Barg)	1.5x MAWP	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	
3	Casing , Split / Type	Radially	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	
4	Suc. / Disch. Nozzle Arrangement	VTS	End / Top	Y	End / Top	Y	End / Top	Y	End / Top	Y	
5	Suc. Nozzle Size / Rating / Facing	VTS / 300# / RF	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	
6	Disch. Nozzle Size / Rating / Facing	VTS / 300# / RF	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	
7	First Stage Suction (Single / Double)	Single	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	
8	Vent , Size / Type	VTS	Self Vent	Y	Self Vent	Y	Self Vent	Y	Self Vent	Y	
9	Drain, Size / Type	VTS	1/2" / Flanged	Y	1/2" / Flanged	Y	1/2" / N/A	Y	1/2" / Flanged	Y	
10	Seal Type	Mechanical Seal	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	
11	Interconnecting Piping	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Loose items will be supplied	Y	
7-5	MATERIAL										
1	API Class	I-2	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	
2	Casing / Barrel	VTS	ASTM A396	Y	ASTM A396	Y	ASTM A396	Y	ASTM A536 60-40-16	Y	
3	Impeller	VTS	C92200	Y	C95500	Y	C95200	Y	C95200	Y	
4	Shaft	VTS	AISI 416	Y	A276 Type 420	Y	AISI 416 (S.S Alloy)	Y	A276 Type 420	Y	
5	Wear Rings: Casing , Impeller	VTS	C92200	Y	C95500	Y	C95200	Y	C95200	Y	
6	Sleeve	VTS	Data is not available	N/A	Data is not available	N/A	Data is not available	N/A	Data is not available	N/A	
7	Baseplate	VTS	Data is not available	N/A	Data is not available	N/A	Data is not available	N/A	Data is not available	N/A	
7-6	Design (Driver Features)										
1	Type / Model	Induction Motor/VTS	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	
2	Manufacturer	VTS	VEM/HYOSUNG	Y	WEG/SIEMENS	N/A	WEG/VEM/NANYANG	Y	OME	Y	
3	Nameplate HP (KW)	VTS	30	Y	22	Y	22	Y	18.5	Y	
4	Rated Speed (rpm)	VTS	2950	Y	2950	Y	2950	Y	2950	Y	
5	Constant Speed	Yes	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	
6	Voltage / Phase / Hertz	400/3/50	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	
7	Area Classification	Safe Area	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	
8	IP Protection	IP55	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	
9	Insulation Class / Temp. Rise	F/B	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	
7-7	Design (Control & Instrumentation)										
1	Local Control Panel	Required as per NFPA20 & project specification	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	
2	Type of Control System	As per project requirement	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	
7-8	Design (Accessories Features)										
1	Bearing Type: Radial / Axial	VTS	ROLLER / BALL	Y	ROLLER / BALL	Y	ROLLER / BALL	Y	ROLLER / BALL	Y	
2	Bearing Manufacturer	VTS	SKF/FAG	Y	SKF/FAG	Y	SKF	Y	SKF/FAG	Y	
3	Seal Type	Single (Plane 11)	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	
4	Seal Manufacturer	VTS	Burgmann Pars turbo seal	Y	JOHN CRANE/BURGMANN PARS	Y	BURGMANN PARS	Y	Turbo Seal Tech	Y	
5	Coupling Type / Manufacturer	Metalic Disk Felexible Spacer Type Coupling	Metalic Disk Felexible Spacer Type/turbo seal	Y	Metalic Disk Felexible Spacer Type/PETRO RAHAN PUMP/ JOHN CRANE	Y	Metalic Disk Felexible Spacer Type/PETCO	Y	Metalic Disk Felexible Spacer Type/Turbo Seal Tech	Y	
6	Coupling Service Factor	min 1.5	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	
7	Coupling Guard	Non-Sparking	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y	
7-9	WEIGHT/ DIMENSION										
1	Pump (Kg)	VTS	190	Y	70	Y	128	Y	125	Y	
2	Baseplate (Kg)	VTS	320	Y	100	Y	275	Y	Data is not available	N/A	
3	Motor (Kg)	VTS	165	Y	100	Y	300	Y	115	Y	
4	Total (Electric Motor pump) (Kg)	VTS	675	Y	270	Y	720	Y	240	Y	
5	Length / Width / Height (m) (m * m * m)	VTS	1840*760*725	Y	1300*550*470	Y	Data is not available	N/A	0.3 x 0.3 x 1.5	Y	

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		TBE For Fire Water Pump								
شماره پیمان: ۰۵۴ - - ۷۳ - ۱۱۸۴		پروژه	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۸ از ۸
BK		GCS	PEDCO	120	ME	TB	0011		D01	

REQ. NO.	BK-GCS-PEDCO-120-ME-MR-0011	BIDDER NAME:	Arya Sepehr Kayhan	Petro Rahan Co.	PETCO	Kalay e Pump
QUOTATION NO.:			ASK-HEN-TS-A0	PJ01-112011	401-1244	7-5093
QUOTATION DATE:			1401-08-22	1401-08-24	1401-08-11	19.11.2022

NO.	DESCRIPTION	REFERENCE / SPECIFIED	MEETS REQUISITION REQUIREMENTS							
			Status		Status		Status		Status	
8	MAIN PUMPS (P-2301 A/B)									
8-1	Operating Condition									
1	Item No.	P-2301 A/B	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
2	Service Name	Main Fire Water Pump	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
3	Number required	1 (Electrical) +1 (Diesel)	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
4	Proposed Model No.	VTS	BB1 200-600	Y	DSP200-500	Y	HGT1-200.510	Y	KPSPF 150-570	Y
5	Applicable of Code & Standards/ Edition	NFPA 20 -2019 & IPS-M-PM-125	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
6	Pump Type	Axially Split (Between Bearing)-BB1	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
7	Driver Type	Electrical Motor & Diesel Engine	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
8	Vapor Pressure (bara)	As per Purchaser's Data Sheet	0.1219	Y	0.1219	Y	0.1219	Y	0.1219	Y
9	Viscosity (Cp)	As per Purchaser's Data Sheet	1	Y	1	Y	1	Y	1	Y
10	Density (kg/m3)	As per Purchaser's Data Sheet	997	Y	997	Y	997	Y	997	Y
11	Pumping Temperature (°C)	As per Purchaser's Data Sheet	50	Y	50	Y	50	Y	50	Y
12	Capacity (Rated) (m3/hr)	As per Purchaser's Data Sheet	454.2	Y	454.2	Y	454.2	Y	454.2	Y
13	Discharge Pressure (barg)	As per Purchaser's Data Sheet	10.4	Y	10.4	Y	10.4	Y	10.4	Y
14	Suction Pressure (Max./Min.) (barg)	As per Purchaser's Data Sheet	0.83	Y	0.83	Y	0.83	Y	0.83	Y
15	Diff. Pressure (bar)	As per Purchaser's Data Sheet	10.3	Y	10.3	Y	10.3	Y	10.3	Y
16	Diff. Head (m)	As per Purchaser's Data Sheet	105	Y	105	Y	105	Y	105	Y
17	NPSH Available (m)	As per Purchaser's Data Sheet	8.8	Y	8.8	Y	8.8	Y	8.8	Y
18	Hydraulic Power (kW)	As per Purchaser's Data Sheet	129.5	Y	129.5	Y	129.5	Y	129.5	Y
8-2	Site Condition									
1	Location	Outdoor/Under Shelter	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
2	Area Classification	Safe	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
8-3	Design (Performance Features)									
1	Pump Speed (rpm)	VTS	1450	Y	1450	Y	1500	Y	1490	Y
2	NPSH Required (m)	VTS	3.8	Y	2	Y	3	Y	3.5	Y
3	NPSH Margin (m)	More Than 1 Meter	5	Y	6.8	Y	5.8	Y	5.3	Y
4	Efficiency (%)	VTS	65%	Y	73%	Y	70%	Y	72%	Y
5	Rated Power (kW)	VTS	199.34	Y	176.3	Y	183.7	Y	180.5	Y
6	BEP Capacity (m³/h)	VTS	522.3	Y	560	Y	592.3	Y	489	Y
7	Min. Continuous Flow (m³/h)	VTS	182.8	Y	150	Y	177.69	Y	146	Y
8	Max. Head @ Rated Impeller (m)	VTS	117.6	Y	116	Y	115.9	Y	120	Y
9	Percentage of Head Rise (Rated to Shut-off) (%)	more than 110% and less than 115%	112	Y	110	Y	110	Y	114	Y
10	Impeller Diameter (min / rated / max) (mm)	VTS	490/579/605	Y	490/558/590	Y	450 / 565 / 580	Y	450 / 530 / 585	Y
11	Impeller Mounted	Between Bearing	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
8-4	Design (Construction Features)									
1	MAWP / Design Temperature (Barg / °c)	VTS/ 85	20 @ 38°c	Y	20 @ 55°c	Y	25 @ 50°c	Y	17 @ 50°c	Y
2	Hydrotest Pressure (Barg)	1.5x MAWP	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
3	Casing , Split / Type	Axially	Confirmed	Y	Confirmed	A	Confirmed	Y	Confirmed	Y
4	Suc. / Disch. Nozzle Arrangement	VTS/VTS	Side/Side	Y	Side/Side	A	Side/Side	Y	Side/Side	Y
5	Suc. Nozzle Size / Rating / Facing	VTS / 300# / RF	10"/300# / RF	Y	10"/300# / RF	Y	10"/150# / RF	N	8"/150# / RF	N
6	Disch. Nozzle Size / Rating / Facing	VTS / 300# / RF	8"/300# / RF	Y	8"/300# / RF	Y	8"/150# / RF	N	6"/150# / RF	N
7	First Stage Suction (Single / Double)	VTS	Single	Y	Single	Y	Single	Y	Single	Y
8	Vent , Size / Type	VTS	Data is not available	N/A	3/4"/150#/RF	N	3/4"/150#/RF	N	1/2"/150#/RF	N
9	Drain, Size / Type	VTS	Data is not available	N/A	3/4"/150#/RF	Y	3/4"/150#/RF	N	1/2"/150#/RF	N
10	Seal Type	Packing	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
11	Interconnecting Piping	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Loose items will be supplied	Y
12	PSV on discharge line (Diesel engine driven pump)	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y

		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
		TBE For Fire Water Pump								
شماره پیمان: ۰۵۳ - ۷۳ - ۹۱۸۴		پروژه	بسته کاری	صادر کننده	تهیه کننده	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۴ از ۸
		BK	GCS	PEDCO	120	ME	TB	0011	D01	

REQ. NO.	BK-GCS-PEDCO-120-ME-MR-0011	BIDDER NAME:	Arya Sepehr Kayhan	Petro Rahan Co.	PETCO	Kalay e Pump
QUOTATION NO.:			ASK-HEN-TS-A0	PJ01-112011	401-1244	7-5093
QUOTATION DATE:			1401-08-22	1401-08-24	1401-08-11	19.11.2022

NO.	DESCRIPTION	REFERENCE / SPECIFIED	MEETS REQUISITION REQUIREMENTS							
			Status		Status		Status		Status	
8-5 MATERIAL										
1	API Class	I-2	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
2	Casing / Barrel	Cast Iron	ASTM A396	Y	ASTM A396	Y	ASTM A396	Y	ASTM A536 60-40-16	Y
3	Impeller	Bronze	C92200	Y	C95500	Y	C95200	Y	C95200	Y
4	Shaft	VTs	AISI 416	Y	A276 Type 420	Y	AISI 416 (S.S Alloy)	Y	A276 Type 420	Y
5	Wear Rings: Casing , Impeller	VTs	C92200	Y	C95500	Y	C95200	Y	C95200	Y
6	Sleeve	VTs	Data is not available	N/A	Data is not available	N/A	Data is not available	N/A	Data is not available	N/A
7	Baseplate	VTs	Data is not available	N/A	Data is not available	N/A	Data is not available	N/A	Data is not available	N/A
8-6 Design (Electrical Driver Features)										
1	Type / Model	Induction Motor/VTs	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
2	Number Required	1	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
3	Manufacturer	VTs	WEG/HYOSUNG	Y	WEG/SIEMENS	N/A	WEG/VEMNANY ANG	Y	OME	Y
4	Nameplate HP (KW)	VTs	315	Y	300	Y	280	Y	250 after derating	Y
5	Rated Speed (rpm)	VTs	1450	Y	1450	Y	1500	Y	1490	Y
6	Constant Speed	Yes	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
7	Voltage / Phase / Hertz	3300/3/50	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
8	Area Classification	Safe Area	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
9	IP Protection	IP55	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
10	Insulation Class / Temp. Rise	F/B	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
8-7 Design (Diesel Engine Features)										
1	Type / Model	4 Stroke Turbocharger, Constant speed	VOLVO /TAD1342 GE	Y	VOLVO /TAD1341 GE	Y	VOLVO /TAD1342 GE	Y	VOLVO /TAD1341 GE	Y
2	Applicable Codes & Standards	ISO 3046 & NFPA 20	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
3	Number Required	1	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
4	Manufacturer	VTs	VOLVO	Y	VOLVO	Y	VOLVO	Y	VOLVO	Y
5	Site Condition	5°C / 50°C	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
6	Rated Speed/Max. Allowable Speed (rpm)	VTs / VTs	1450	Y	1500	Y	1500	Y	1490	Y
7	Diesel Power (Gross/ Net) @ ISO condition (Kw)	VTs	343	Y	308	Y	343	Y	308	Y
8	Engine Power @ site condition (Kw)	VTs	315	Y	275	Y	303	Y	250	Y
9	Power Requirement @ 150% of Rated Flow (Kw)	VTs	297.6	Y	210	Y	245.97	Y	241	Y
10	Power Transmission	Metalic Disk Felexible Spacer Type Coupling	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
11	Derating Factors	VTs	Data is not available	N/A	Data is not available	N/A	Data is not available	N/A	Data is not available	N/A
12	Governor Type	Electronic	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
8-8 Diesel Engine (Fuel System)										
1	Fuel Filter	Duplex	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
2	Fuel Tank Design	NFPA 20	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
3	Daily Fuel Tank Capacity (separated for each set of diesel pump)	As Per NFPA 20	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
4	Specific Fuel consumption at prime power (g/kWh)	VTs	191	Y	191	Y	191	Y	191	Y
8-9 Diesel Engine(Intake & Exhaust)										
1	Intake Filter	Single / Dry	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
2	Intake Silencer / Exhaust Silencer	VTs / Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Not applicable / Included	Y
3	Expansion Joint	Required	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
8-10 Diesel Engine(Starting System)										
1	Type	Remote/Local	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
2	Primary/Secondary Starting	Electric Starting/Electric Starting	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
3	Starting Capacity	As Per NFPA 20	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
4	No. of Battery	2 Set (Ni-Cd)	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
5	Battery Charger	VTs (two recharging means is required)	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y

		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
		TBE For Fire Water Pump								
شماره پیمان: ۰۵۳ - ۰۷۲ - ۹۱۸۱		پروژه: BK	بسته کاری: GCS	صادر کننده: PEDCO	تجهیزات: 120	رشته: ME	نوع مدرک: TB	سریال: 0011	نسخه: D01	شماره صفحه: ۸ از ۸

REQ. NO.	BK-GCS-PEDCO-120-ME-MR-0011	BIDDER NAME:	Arya Sepehr Kayhan	Petro Rahan Co.	PETCO	Kalay e Pump
QUOTATION NO.:			ASK-HEN-TS-A0	PJ01-112011	401-1244	7-5093
QUOTATION DATE:			1401-08-22	1401-08-24	1401-08-11	19.11.2022

NO.	DESCRIPTION	REFERENCE / SPECIFIED	MEETS REQUISITION REQUIREMENTS							
			Status		Status		Status		Status	
8-11 Diesel Engine (Lubrication System)										
1	Lube Oil Filter	Duplex with change-over valves	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
2	Lube Oil Cooler Type	VTs	Water cooled, Shell & Tube	Y	Water cooled, Shell & Tube	Y	Water cooled, Shell & Tube	Y	Water cooled, Shell & Tube	Y
3	Lube Oil Pump	VTs	Gear type	Y	Gear type	Y	Gear type	Y	Gear type	Y
4	Lube Oil Capacity (l/h)	VTs	0.04	Y	0.04	Y	0.04	Y	0.04	Y
8-12 Design (Control & Instrumentation)										
1	Local Control Panel	Required as per NFPA20 & project specification	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
2	Type of Control System	As per project requirement	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
8-13 Design (Accessories Features)										
1	Bearing Type: Radial / Axial	VTs	Anti-Friction	Y	BALL/BALL	Y	Ball / Ball	Y	Roller / Ball	Y
2	Bearing Manufacturer	VTs	SKF/FAG	Y	SKF/FAG	Y	SKF	Y	SKF/FAG	Y
3	Seal Type	Packing	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
4	Seal Manufacturer	VTs	Burgmann Pars /turbo seal	Y	JOHN CRANE/BURGMAN PARS	Y	BURGMANN PARS	Y	Turbo Seal Tech	Y
5	Coupling Type / Manufacturer	Metallic Disk Felexible Spacer Type Coupling	Metallic Disk Felexible Spacer Type/turbo seal	Y	Metallic Disk Felexible Spacer Type/PETRO RAHAN PUMP	Y	Metallic Disk Felexible Spacer Type/PETCO	Y	Metallic Disk Felexible Spacer Type/Turbo Seal Tech	Y
6	Coupling Service Factor	min 1.5	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
7	Coupling Guard	Non-Spark type	Confirmed	Y	Confirmed	Y	Confirmed	Y	Confirmed	Y
8-14 Weight/Dimension										
1	Pump (Kg)	VTs	Data is not available	N/A	700	Y	as sample estimated 800 kg	Y	1025	Y
2	Baseplate (Kg)	VTs	Data is not available	N/A	550	Y	as sample estimated 1100 kg	Y	720	Y
3	Motor (Kg)	VTs	Data is not available	N/A	1900	Y	as sample estimated 1900 kg	Y	2600	Y
4	Engine Weight (kg)	VTs	1325	Y	1325	Y	1325	Y	1325	Y
5	Engine Dimension (mm)	VTs	1114*2206*1391	Y	1106*2204*1391	Y	1114*2206*1391	Y	1114*2206*1391	Y
6	Total (Electric Motor pump) (Kg)	VTs	Data is not available	N/A	2600	Y	3900	Y	5070	Y
7	Length / Width / Height (m) (m * m * m)	VTs	3000*1800*1500	Y	3800*1800*1500	Y	3100*1305*1835	Y	3200x1400x1540	Y
F	Manufacturer's Location	-	TABRIZ - IRAN		TEHRAN-IRAN		TABRIZ - IRAN		TEHRAN-IRAN	
G	General Technical acceptance of Quotation	-								
FINAL CONCLUSION			ACCEPTED		ACCEPTED		ACCEPTED		ACCEPTED	

Notes:

1) ABBREVIATIONS: Y: ACCEPTED By Bidder, N: NOT ACCEPTED By Bidder, N.A.: NOT APPLICABLE, VTF: Vendor to Follow, C:Clarification Required, C.A: Conditionally Accepted with Some Notes, N/A: Not Available