	APPLICABLE TO:	PROPOSAL	DESIGN	0	PURCHASE	○ AS BUILT	Rev.
2	1	U	NIT		FIRE WATER		
3	1	N	O. REQUIRED	2 0	F MAIN DIESEL FIRE WATER	PUMPS	
4	SERVICE Fire water	PI	UMP SIZE, TYP	E & NO. OF	STAGES	Horizontal (BY VENDOR)	
5	VENDOR			endor		SERIAL NO. By vendor	
6	Note: O Represents data to be completed	by CONTRACTOR	☐ by VENDOR	[○ 參 by	VENDOR if not by CONTRACTO	DR .	
7				GENERA	L		
8	PUMPS TO OPERATE IN (PARALLEL)	YES					
_	NO. MOTOR DRIVEN -						
	PUMP ITEM NO. P-202 A/B						
	MOTOR ITEM NO. M-202 A/B	_					
_	MOTOR PROVIDED BY BY VENDO						
	MOTOR MOUNTED BY BY VENDO						
15	APPLICABLE OVERLAY STANDARD NE	NG CONDITIONS				LIQUID	
16		341	Note 1	m³/hr	TYPE OR NAME OF LIQUID		
17	• ,	341	Note 1	111 /111	LIQUIDS O TOXIC		
18		RATED) 1.40 /	-0.10	Barg	 PUMPING TEMPERATURE 	-	
19	-	*	8.50	Barg	MAXIMUM 47 (4)	°C MINIMUM 13 °C	
20	4 ~	8.60	0.00	Bar	SPECIFIC GRAVITY	1 @ PT	
21	4 ~	87.8		m	MAXIMUM SPECIFIC GRAV	•	
22	~	10.2		m	SPECIFIC HEAT	4.18 (KJ/KG.°C)	
23	~	81.5		KW	VAPOUR PRESSURE @ PI	` ,	
24		INTERMITTENT			VISCOSITY	0.60 cP @ 50	
25	PROCESS VARIATION	-			O MAX VISCOSITY @ MIN TE	EMP cP @ COLD START	
26	STARTING CONDITION				○ CORROSIVE/EROSIVE AG	ENT	
27	 PARALLEL OPERATION CONDITION 	N REQ'D			○ CHLORIDE CONCENTRAT	TION	
28	SITE AN	ID UTILITY DATA			○ H2S CONCENTRATION		
-	LOCATION					CONVENTIONS	
30	○ INDOOR ○ OUTDOOR ● UN		ARTIAL SIDES		NPSH REFERENCE DATUM		
31	· · · · · · · · · · · · · · · · · · ·	_	IEZZANINE		O PUMP CENTRELINE	O UNDERSIDE OF BASEPLATE	
32	O ELECTRICAL AREA CLASSIFICATION	DN			O SUCTION NOZZLE CENTR	ELINE O OTHER	
32 33	O ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP	ON ZONE	SAFE ARE	A	O SUCTION NOZZLE CENTR	ELINE O OTHER TIMATED POWER	
32 33 34	O ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP O WINTERISATION REQ'D	DN	SAFE ARE	A	O SUCTION NOZZLE CENTR O EST ESTIMATED PUMP EFFICIENC	TIMATED POWER Y	
32 33 34 35	O ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP O WINTERISATION REQ'D SITE DATA:	ZONE TROPICALISATIO	SAFE ARE ON REQ'D		O SUCTION NOZZLE CENTR CONTROL CONTRO	TIMATED POWER Y SORBED POWER KW	
32 33 34 35 36	 ○ ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP ○ WINTERISATION REQ'D SITE DATA: ● ELEVATION 	ZONE TROPICALISATIO BAROMETER, Ba	SAFE ARE DN REQ'D ara	A 1.028	O SUCTION NOZZLE CENTR C ESTIMATED PUMP EFFICIENC' ESTIMATED RATED PUMP ABS ESTIMATED PUMP ABSORBED	TIMATED POWER Y SORBED POWER KW POWER AT MAX. SG KW	
32 33 34 35 36 37	 ◯ ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP ○ WINTERISATION REQ'D SITE DATA: ● ELEVATION ■ RANGE OF AMBIENT TEMPS: MIN/N 	ZONE TROPICALISATIO BAROMETER, Ba MAX 13,2/46,2	SAFE AREADN REQ'D ara 'C		O SUCTION NOZZLE CENTR O ESTIMATED PUMP EFFICIENCE ESTIMATED RATED PUMP ABSORBED DRIVER RATING FACTOR PER	TIMATED POWER Y SORBED POWER KW D POWER AT MAX. SG KW API 610	
32 33 34 35 36 37 38	 ◯ ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP ◯ WINTERISATION REQ'D SITE DATA: ● ELEVATION ■ RANGE OF AMBIENT TEMPS: MIN/N ● RELATIVE HUMIDITY: MAX/MIN 	ZONE TROPICALISATIO BAROMETER, Ba	SAFE AREADN REQ'D ara 'C		O SUCTION NOZZLE CENTR O ESTIMATED PUMP EFFICIENCE ESTIMATED RATED PUMP ABSORBED DRIVER RATING FACTOR PER ESTIMATED DRIVER RATING	TIMATED POWER Y SORBED POWER KW POWER AT MAX. SG KW	
32 33 34 35 36 37 38	O ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP O WINTERISATION REQ'D SITE DATA: ■ ELEVATION 29 m ■ RANGE OF AMBIENT TEMPS: MIN/N ■ RELATIVE HUMIDITY: MAX/MIN UNUSUAL CONDITIONS	ZONE TROPICALISATIO BAROMETER, Ba MAX 13,2/46,2	SAFE AREADN REQ'D ara C		O SUCTION NOZZLE CENTR	TIMATED POWER Y SORBED POWER KW D POWER AT MAX. SG KW A API 610 KW	
32 33 34 35 36 37 38 39 40	O ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP O WINTERISATION REQ'D SITE DATA: ■ ELEVATION 29 m ■ RANGE OF AMBIENT TEMPS: MIN/N ■ RELATIVE HUMIDITY: MAX/MIN UNUSUAL CONDITIONS	ZONE TROPICALISATIO BAROMETER, Ba MAX 13,2 /46,2 87 / 48 %	SAFE AREADN REQ'D ara C	1.028	O SUCTION NOZZLE CENTR O ESTIMATED PUMP EFFICIENCE ESTIMATED RATED PUMP ABSORBED DRIVER RATING FACTOR PER ESTIMATED DRIVER RATING	TIMATED POWER Y SORBED POWER KW D POWER AT MAX. SG KW A API 610 KW	
32 33 34 35 36 37 38 39 40 41	O ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP O WINTERISATION REQ'D SITE DATA: ■ ELEVATION 29 m ■ RANGE OF AMBIENT TEMPS: MIN/N ■ RELATIVE HUMIDITY: MAX/MIN UNUSUAL CONDITIONS ■ DUST ○ FUMES ○	ZONE TROPICALISATIO BAROMETER, Ba MAX 13,2 /46,2 87 / 48 % OTHER	SAFE AREADN REQ'D ara C	1.028	SUCTION NOZZLE CENTR ESTIMATED PUMP EFFICIENC' ESTIMATED PUMP ABS ESTIMATED PUMP ABSORBED DRIVER RATING FACTOR PER ESTIMATED DRIVER RATING RAT	TIMATED POWER Y SORBED POWER KW D POWER AT MAX. SG KW A API 610 KW	
32 33 34 35 36 37 38 39 40 41 42 43	O ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP O WINTERISATION REQ'D SITE DATA: ■ ELEVATION 29 m ■ RANGE OF AMBIENT TEMPS: MIN/N ■ RELATIVE HUMIDITY: MAX/MIN UNUSUAL CONDITIONS ■ DUST ○ FUMES ○ UTILITIES STEAM: Press. (Max// Min.)	ZONE TROPICALISATIO BAROMETER, Ba MAX 13,2 /46,2 87 / 48 % OTHER Temp. (M	SAFE AREADN REQ'D ara 'C SEA	1.028	SUCTION NOZZLE CENTR	TIMATED POWER Y SORBED POWER KW D POWER AT MAX. SG KW L API 610 KW TED PERFORMANCE	
32 33 34 35 36 37 38 39 40 41 42 43	O ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP O WINTERISATION REQ'D SITE DATA: ■ ELEVATION 29 m ■ RANGE OF AMBIENT TEMPS: MIN/N ■ RELATIVE HUMIDITY: MAX/MIN UNUSUAL CONDITIONS ■ DUST ○ FUMES ○ UTILITIES STEAM: Press. (Max/./ Min.) ELECTRICITY DRIVERS HEATIN	ZONE TROPICALISATIO BAROMETER, Ba MAX 13,2 /46,2 87 / 48 % OTHER Temp. (M	SAFE AREADN REQ'D ara 'C SEA	1.028 BREEZE	SUCTION NOZZLE CENTR	RELINE OTHER TIMATED POWER Y SORBED POWER KW D POWER AT MAX. SG KW API 610 KW TED PERFORMANCE RATED MIN. EFFICIENCY %	
32 33 34 35 36 37 38 39 40 41 42 43	O ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP O WINTERISATION REQ'D SITE DATA: ■ ELEVATION 29 m ■ RANGE OF AMBIENT TEMPS: MIN/N ■ RELATIVE HUMIDITY: MAX/MIN UNUSUAL CONDITIONS ■ DUST ○ FUMES ○ UTILITIES STEAM: Press. (Max/./ Min.) ELECTRICITY DRIVERS HEATIN	ZONE TROPICALISATIO BAROMETER, Ba MAX 13,2 /46,2 87 / 48 % OTHER Temp. (M	SAFE ARE. DN REQ'D ara C C SEA Max./ r Min.)	1.028 BREEZE	SUCTION NOZZLE CENTR	RELINE OTHER TIMATED POWER Y SORBED POWER KW D POWER AT MAX. SG KW API 610 KW TED PERFORMANCE RATED MIN. EFFICIENCY %	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46	O ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP O WINTERISATION REQ'D SITE DATA: ■ ELEVATION 29 m ■ RANGE OF AMBIENT TEMPS: MIN/N ■ RELATIVE HUMIDITY: MAX/MIN UNUSUAL CONDITIONS ■ DUST ○ FUMES ○ UTILITIES STEAM: Press. (Max/./ Min.) ELECTRICITY DRIVERS HEATIN MAIN AUX VOLTAGE	ZONE TROPICALISATIO BAROMETER, Ba MAX 13,2 /46,2 87 / 48 % OTHER Temp. (M	SAFE ARE. DN REQ'D ara C C SEA Max./ r Min.)	1.028 BREEZE	SUCTION NOZZLE CENTR	RELINE OTHER TIMATED POWER Y SORBED POWER KW D POWER AT MAX. SG KW RAPI 610 KW TED PERFORMANCE RATED MIN. FEFFICIENCY % LOW m³/H STABLE m³/H	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46	O ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP O WINTERISATION REQ'D SITE DATA: ■ ELEVATION 29 m ■ RANGE OF AMBIENT TEMPS: MIN/N ■ RELATIVE HUMIDITY: MAX/MIN UNUSUAL CONDITIONS ■ DUST ○ FUMES ○ UTILITIES STEAM: Press. (Max/./ Min.) ELECTRICITY DRIVERS HEATIN MAIN AUX VOLTAGE HERTZ	ZONE TROPICALISATIO BAROMETER, Ba MAX 13,2 /46,2 87 / 48 % OTHER Temp. (M	SAFE ARE. DN REQ'D ara C C SEA Max./ r Min.)	1.028 BREEZE	SUCTION NOZZLE CENTR	RELINE OTHER TIMATED POWER Y SORBED POWER KW D POWER AT MAX. SG KW RAPI 610 KW TED PERFORMANCE RATED MIN. MIN. MIN. MIN. MIN. MIN. MIN. MIN.	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	O ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP O WINTERISATION REQ'D SITE DATA: ■ ELEVATION 29 m ■ RANGE OF AMBIENT TEMPS: MIN/N ■ RELATIVE HUMIDITY: MAX/MIN UNUSUAL CONDITIONS ■ DUST ○ FUMES ○ UTILITIES STEAM: Press. (Max/./ Min.) ELECTRICITY DRIVERS HEATIN MAIN AUX VOLTAGE HERTZ PHASE	ZONE TROPICALISATIO BAROMETER, Ba MAX 13,2 /46,2 87 / 48 % OTHER Temp. (M	SAFE ARE. DN REQ'D ara C C SEA Max./ r Min.)	1.028 BREEZE	SUCTION NOZZLE CENTR	RELINE OTHER TIMATED POWER Y SORBED POWER KW D POWER AT MAX. SG KW RAPI 610 KW TED PERFORMANCE RATED MIN. MIN. MIN. MIN. MIN. MIN. MIN. MIN.	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	O ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP O WINTERISATION REQ'D SITE DATA: ■ ELEVATION 29 m ■ RANGE OF AMBIENT TEMPS: MIN/N ■ RELATIVE HUMIDITY: MAX/MIN UNUSUAL CONDITIONS ■ DUST O FUMES O UTILITIES STEAM: Press. (Max/./ Min.) ELECTRICITY DRIVERS HEATIN MAIN AUX VOLTAGE HERTZ PHASE COOLING WATER	ZONE TROPICALISATIO BAROMETER, Ba MAX 13,2 /46,2 87 / 48 % OTHER Temp. (M	SAFE ARE. DN REQ'D ara C C SEA Max./ r Min.)	1.028 BREEZE 'C N	SUCTION NOZZLE CENTR	TIMATED POWER Y SORBED POWER API 610 KW TED PERFORMANCE RATED MIN. EFFICIENCY M³/H STABLE MELER KW KW KW KW KW KW KW KW KW K	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	O ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP O WINTERISATION REQ'D SITE DATA: ■ ELEVATION 29 m ■ RANGE OF AMBIENT TEMPS: MIN/M ■ RELATIVE HUMIDITY: MAX/MIN UNUSUAL CONDITIONS ■ DUST O FUMES O UTILITIES STEAM: Press. (Max/./ Min.) ELECTRICITY DRIVERS HEATIN MAIN AUX VOLTAGE HERTZ PHASE COOLING WATER TEMP INLET °C	ZONE TROPICALISATIO BAROMETER, Ba MAX 13,2 /46,2 87 / 48 % OTHER Temp. (M	SAFE ARE. DN REQ'D ara C C SEA Max./ r Min.)	1.028 BREEZE 'C N	SUCTION NOZZLE CENTR	TIMATED POWER Y SORBED POWER KW D POWER AT MAX. SG KW API 610 KW TED PERFORMANCE RATED MIN. C EFFICIENCY % LOW M³/H STABLE M³/H LER M ELLER KW ED CAPACITY M D (rpm,m³/H,m)	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	O ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP O WINTERISATION REQ'D SITE DATA: ■ ELEVATION 29 m ■ RANGE OF AMBIENT TEMPS: MIN/N ■ RELATIVE HUMIDITY: MAX/MIN UNUSUAL CONDITIONS ■ DUST O FUMES O UTILITIES STEAM: Press. (Max/./ Min.) ELECTRICITY DRIVERS HEATIN MAIN AUX VOLTAGE HERTZ PHASE COOLING WATER TEMP INLET °C PRESS NORMAL Barg	ZONE TROPICALISATIO BAROMETER, Ba MAX 13,2 /46,2 87 / 48 % OTHER Temp. (M IG CONTROL MAX RETURN DESIGN	SAFE ARE. DN REQ'D ara C C SEA Max./ r Min.)	1.028 BREEZE C N C Barg	SUCTION NOZZLE CENTR	TIMATED POWER Y SORBED POWER KW D POWER AT MAX. SG KW API 610 KW TED PERFORMANCE RATED MIN. C EFFICIENCY % LOW M³/H STABLE M³/H LER M ELLER KW ED CAPACITY M D (rpm,m³/H,m)	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52	O ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP O WINTERISATION REQ'D SITE DATA: ■ ELEVATION 29 m ■ RANGE OF AMBIENT TEMPS: MIN/N ■ RELATIVE HUMIDITY: MAX/MIN UNUSUAL CONDITIONS ■ DUST O FUMES O UTILITIES STEAM: Press. (Max/./ Min.) ELECTRICITY DRIVERS HEATIN MAIN AUX VOLTAGE HERTZ PHASE COOLING WATER TEMP INLET °C PRESS NORMAL BARG MIN RETURN BARG	ZONE TROPICALISATIO BAROMETER, Ba MAX 13,2 /46,2 87 / 48 % OTHER Temp. (M	SAFE ARE. DN REQ'D ara C C SEA Max./ r Min.)	1.028 BREEZE 'C N	SUCTION NOZZLE CENTR	TIMATED POWER Y SORBED POWER KW D POWER AT MAX. SG KW API 610 KW TED PERFORMANCE RATED MIN. C EFFICIENCY % LOW M³/H STABLE M³/H LER M ELLER KW ED CAPACITY M D (rpm,m³/H,m)	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53	O ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP O WINTERISATION REQ'D SITE DATA: ■ ELEVATION 29 m ■ RANGE OF AMBIENT TEMPS: MIN/N ■ RELATIVE HUMIDITY: MAX/MIN UNUSUAL CONDITIONS ■ DUST O FUMES O UTILITIES STEAM: Press. (Max/./ Min.) ELECTRICITY DRIVERS HEATIN MAIN AUX VOLTAGE HERTZ PHASE COOLING WATER TEMP INLET °C PRESS NORMAL Barg MIN RETURN Barg WATER SOURCE RAW Water	ZONE TROPICALISATIO BAROMETER, Ba MAX 13,2 /46,2 87 / 48 % OTHER Temp. (Max Control MAX RETURN DESIGN MAX ALLOW DP	SAFE ARE. DN REQ'D ara C C SEA Max./ r Min.)	1.028 BREEZE C N C Barg	SUCTION NOZZLE CENTR	TIMATED POWER Y SORBED POWER KW D POWER AT MAX. SG KW API 610 KW TED PERFORMANCE RATED MIN. C EFFICIENCY % LOW M³/H STABLE M³/H LER M ELLER KW ED CAPACITY M D (rpm,m³/H,m)	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54	O ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP O WINTERISATION REQ'D SITE DATA: ■ ELEVATION 29 m ■ RANGE OF AMBIENT TEMPS: MIN/N ■ RELATIVE HUMIDITY: MAX/MIN UNUSUAL CONDITIONS ■ DUST O FUMES O UTILITIES STEAM: Press. (Max/./ Min.) ELECTRICITY DRIVERS HEATIN MAIN AUX VOLTAGE HERTZ PHASE COOLING WATER TEMP INLET °C PRESS NORMAL Barg MIN RETURN Barg WATER SOURCE Raw Water INSTRUMENT AIR PRESSURE (Ba	ZONE TROPICALISATIO BAROMETER, Ba MAX 13,2 /46,2 87 / 48 % OTHER Temp. (M IG CONTROL MAX RETURN DESIGN MAX ALLOW DP ITg)	SAFE ARE. DN REQ'D ara C C SEA Max./ r Min.)	1.028 BREEZE C N C Barg	SUCTION NOZZLE CENTR	TIMATED POWER Y SORBED POWER KW D POWER AT MAX. SG KW API 610 KW TED PERFORMANCE RATED MIN. C EFFICIENCY % LOW M³/H STABLE M³/H LER M ELLER KW ED CAPACITY M D (rpm,m³/H,m)	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54	O ELECTRICAL AREA CLASSIFICATION TEMP CLASS GAS GROUP O WINTERISATION REQ'D SITE DATA: ■ ELEVATION 29 m ■ RANGE OF AMBIENT TEMPS: MIN/N ■ RELATIVE HUMIDITY: MAX/MIN UNUSUAL CONDITIONS ■ DUST O FUMES O UTILITIES STEAM: Press. (Max/./ Min.) ELECTRICITY DRIVERS HEATIN MAIN AUX VOLTAGE HERTZ PHASE COOLING WATER TEMP INLET °C PRESS NORMAL Barg MIN RETURN Barg WATER SOURCE Raw Water INSTRUMENT AIR PRESSURE (Ba	ZONE TROPICALISATIO BAROMETER, Ba MAX 13,2 /46,2 87 / 48 % OTHER Temp. (Max Control MAX RETURN DESIGN MAX ALLOW DP	SAFE ARE. DN REQ'D ara C C SEA Max./ r Min.)	1.028 BREEZE C N C Barg	SUCTION NOZZLE CENTR	TIMATED POWER Y SORBED POWER KW D POWER AT MAX. SG KW API 610 KW TED PERFORMANCE RATED MIN. C EFFICIENCY % LOW M³/H STABLE M³/H LER M ELLER KW ED CAPACITY M D (rpm,m³/H,m)	

1		NOTES	Rev.
	Note 1 :	Pump shall provide 150% of rated capacity at not less than 65% of total rated head	1164.
3	Note 2:	Pump design temperature 85 °C	
4	Note 3:	Max. allowable pressure at shut off shall be 16 bar	
5	Note 4:	Pumps shall comply with NFPA 20 and API 610 requirements.	
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23	Note 4:		\vdash
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