



MOPU OFFSHORE UNIT-INDIA

DOCUMENT: PUMP PROCESS DATASHEET

EPTI DOCUMENT No.: EP-35260-P-DAT-0011

CLIENT: -

PROJECT TITLE: MOPU OFFSHORE INDIA


EXPRO PROJECT No.: EP-35260

EQUIPMENT: CONDENSATE BOOSTER PUMPS

EQUIPMENT TAG No.: 20-P-0001-A/B

DUTY: 2 x 50%

AA	Issued For Review	11/Apr/19	SKA		
REV.		DATE	BY	CHK'D	APPR.

	Project No.:	EP-35260					
	Project Name :	MOPU OFFSHORE INDIA					
	Tag. No.:	20-P-0001-A/B					
	Data Sheet No.:	EP-35260-P-DAT-0011					
	Reference Specification No.:	N/A					
	Rev. No.:	AA Page 2 of 2					
EQUIPMENT DATASHEET - PUMP PROCESS DATASHEET							
P&ID No.							1
Service Description : CONDENSATE BOOSTER PUMPS							2
GENERAL DATA							3
Fluid		CONDENSATE (HYDROCARBON)+ WATER (5 vol%)					4
Corrosive/Erosive		-					5
Hazardous Service		Yes					6
Flow Rate (each pump) Min/Norm/Max	BPD	(Note 1)/ 5000 / (Note 7)					7
							8
PROCESS CONDITIONS		CASE 1	CASE 2	CASE 3	CASE 4	REMARKS	9
Flow Rate (each pump)	BPD	5,000	5,000	1,000	-		10
Design Margin	%	0	0	0	-		11
Design Flowrate (each pump)	BPD	5,000	5,000	1,000	-		12
FLUID PROPERTIES							13
Viscosity	cP	2.33	5.23	2.33	-		14
Temperature	°C	65	45	65	-		15
Vapour Pressure	bara	2.6	2.6	2.5	-		16
Specific Gravity		0.817	0.832	0.817	-		17
SUCTION CONDITIONS							18
Source Pressure	barg	1.6	1.6	1.5	-		19
Total Suction Pressure	bara	2.58	2.57	2.51	-		20
Total Suction Head	m	32.2	31.5	31.4	-		21
Min NPSH Available	m	0.75	0.8	0.4	-		22
Min NPSH Required	m	Note 2	Note 2	Note 2	-		23
DISCHARGE CONDITIONS							24
End of Line Pressure	barg	7.5	7.5	7.5	-		25
Total Discharge Pressure	barg	7.9	8.0	8.1	-		26
	bara	8.95	8.96	9.11	-		27
Total Discharge Head	m	111.7	109.9	113.8	-		28
DIFFERENTIAL PRESSURE AND POWER							29
Design Differential Pressure	bar	6.4	6.4	6.6	-		30
Design Differential Head	m	79.5	78.3	82.4	-		31
Hydraulic Power	kW	5.87	5.88	2.20	-		32
Estimated Efficiency	%	(VTC)	(VTC)	(VTC)	-		33
Estimated Absorbed Power	kW	(VTC)	(VTC)	(VTC)	-		34
					-		35
DESIGN CONDITIONS							36
Pump Casing Pressure	barg	16	(Vendor to offer standard)				37
Pump Casing Temperature (Max/Min)	°C	85 / -5					38
Pump Centreline (from grade)	m	0.40	(TBC)				39
Hydrostatic Test Pressure	barg	24	(VTC, 1.5 x Pump Casing Pressure)				40
CONNECTION							41
Suction (Size / Rating)	in / #	VTA / ANSI 150# RF					42
Discharge (Size / Rating)	in / #	VTA / ANSI 150# RF					43
SITE DATA							44
Hazardous Area	Zone 2, Group IIA, and Temp. class T3						45
NOTES:							46
1. Vendor to advise minimum pump flowrate. Flowrate should includes continuous min. flow of as required by pump.						47	
2. Vendor to advise NPSHr (NPSH required). NPSHr to be as low as possible.						48	
3. Materials of Construction shall be suitable for handle fluid. Pump material shall be NACE compliant, MTC shall be provided.						49	
4. Power supply : 480 V or 600V / 60 Hz / 3 phase						50	
5. Vendor to highlight the requirement of Space Heater and other accessories if any.						51	
6. Unit shall be suitable for Offshore application. Minimum Ambient Temperature is 15°C and maximum is 40°C.						52	
7. Centrifugal Pump with all the required accessories shall be required.						53	
8. A 2 x 50% pump arrangement is to be used for this application. Flowrate for each pump shall be 33 m3/hr.						54	
9. Each pump assembly will be skid mounted as a single-lift unit complete with base frame with lifting pads, driver, coupling, mechanical seal system (as applicable) and drip tray.						55	
10. Pump motor controls are to be provided with on/off control through local control panel with emergency stop.						56	
11. Vendor to advise pump dry and operating weight. Vendor to provide pump performance curves.						57	
12. Maximum noise level during normal operation shall not exceed 85 dB(A) at any location, 1 meter from pump.						58	
13. Vendor to inform the starting power requirement of the pump.						59	
						60	

DOCUMENT: PUMP PROCESS DATASHEET

EPTI DOCUMENT No.: EP-35260-P-DAT-0012

CLIENT: -

PROJECT TITLE: MOPU OFFSHORE INDIA


EXPRO PROJECT No.: EP-35260

EQUIPMENT: CONDENSATE EXPOERT PUMPS

EQUIPMENT TAG No.: 20-P-0002-A/B

DUTY: 2 x 50%

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	Project No.:		EP-35260				
	Project Name :		MOPU OFFSHORE INDIA				
	Tag. No.:		20-P-0002-A/B				
	Data Sheet No.:		EP-35260-P-DAT-0012				
	Reference Specification No.:		N/A				
	Rev. No.:		AA Page 2 of 2				
EQUIPMENT DATASHEET - PUMP PROCESS DATASHEET							
P&ID No.						1	
Service Description : CONDENSATE EXPOERT PUMPS						2	
GENERAL DATA						3	
Fluid		CONDENSATE (HYDROCARBON)+ WATER (5 vol%)				4	
Corrosive/Erosive		-				5	
Hazardous Service		Yes				6	
Flow Rate (each pump)	Min/Norm/Max	BPD	(Note 1)/ 5000 / (Note 7)			7	
						8	
PROCESS CONDITIONS			CASE 1	CASE 2	CASE 3	REMARKS	9
Flow Rate (each pump)	BPD		5,000	1,000	-		10
Design Margin	%		0	0	-		11
Design Flowrate (each pump)	BPD		5,000	1,000	-		12
FLUID PROPERTIES						13	
Viscosity	cP		1.98	2.33	-		14
Temperature	°C		65	65	-		15
Vapour Pressure	bara		2.5	2.5	-		16
Specific Gravity			0.810	0.818	-		17
SUCTION CONDITIONS						18	
Source Pressure	barg		6.9	6.9	-		19
Total Suction Pressure	bara		7.86	7.91	-		20
Total Suction Head	m		99.0	98.7	-		21
Min NPSH Available	m		60.00	60.0	-		22
Min NPSH Required	m		Note 2	Note 2	-		23
DISCHARGE CONDITIONS						24	
End of Line Pressure	barg		112	112	-		25
Total Discharge Pressure	barg		115.0	115.0	-		26
	bara		116.03	116.01	-		27
Total Discharge Head	m		1461.1	1446.6	-		28
DIFFERENTIAL PRESSURE AND POWER						29	
Design Differential Pressure	bar		108.2	108.1	-		30
Design Differential Head	m		1362.1	1347.9	-		31
Hydraulic Power	kW		175.00	35.00	-		32
Estimated Efficiency	%		(VTC)	(VTC)	-		33
Estimated Absorbed Power	kW		(VTC)	(VTC)	-		34
						35	
DESIGN CONDITIONS						36	
Pump Casing Pressure	barg		140	(Vendor to offer standard)			37
Pump Casing Temperature (Max/Min)	°C		93 / -5				38
Pump Centreline (from grade)	m		0.40	(TBC)			39
Hydrostatic Test Pressure	barg		210	(VTC, 1.5 x Pump Casing Pressure)			40
CONNECTION						41	
Suction (Size / Rating)	in / #		VTA	/	ANSI 900# RF		42
Discharge (Size / Rating)	in / #		VTA	/	ANSI 900# RF		43
SITE DATA						44	
Hazardous Area		Zone 2, Group IIA, and Temp. class T3				45	
NOTES:						46	
1. Vendor to advise minimum pump flowrate. Flowrate should includes continuous min. flow of as required by pump.						47	
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3. Materials of Construction shall be suitable for handle fluid. Pump material shall be NACE compliant, MTC shall be provided.						49	
4. Power supply : 480 V or 600V / 60 Hz / 3 phase						50	
5. Vendor to highlight the requirement of Space Heater and other accensories if any.						51	
6. Unit shall be suitable for Offshore application. Minimum Ambient Temperature is 15°C and maximum is 40°C.						52	
7. Multistaage centrifugal pumpm with VFD is required.						53	
8. A 2 x 50% pump arrangement is to be used for this application. Flowrate for each pump shall be 33 m3/hr.						54	
9. Each pump assembly will be skid mounted as a single-lift unit complete with base frame with lifting pads, driver, coupling, mechanical seal system (as applicable) and drip tray.						55	
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