

DATASHEET

PUMP TYPE: CENTRIFUGAL PUMP
Usage Key- data provided by - Purchaser

Position number: 33-PS-2402
Issued for purchase

Operating conditions (5.1.3)	Pumped Fluid (5.1.3)
<ul style="list-style-type: none"> - Pumped fluid: condensate / water - Rated performance: 5,75 m³/hour - Rated suction pressure: 1,50 (bar a) - Discharge pressure: 4,60 (bar a) - Differential pressure: 3,10 (bar) - Head 29,7+3,5 (m) - NPSHA: plunged - Service (5 1 4): intermittent (starts/day) 	<ul style="list-style-type: none"> - Pumped fluid: produced water - Pumping temperature: max +50 °C - Vapor pressure: normal 66,7KPa - Density (kg/m³): min: 720, max 1066 - Total sulfur content: no more than 0,10% - H₂S content: no more than: 0,05%. NACE MR 0175 applicable - Mass fraction of mechanical impurities no more than 3,5%, size of solid particles up to 10mm
Site conditions and utilities (5.1.3)	Materials
<ul style="list-style-type: none"> - Location: Outdoor - Electrical area classification (5 1 24 / 6 1 4): Area 2, IIA. T3/T4 - Altitude (5.1.30): 918 (m) - Barometer: ATM (bar) - Range of ambient temperatures min/max: -27 / 44 (°C) - Relative humidity: 63% max 	<ul style="list-style-type: none"> - N class (5.12.11): S8 - Metal temperature (min) (5.12.1.11): -27 °C - Cylinder: A-216 LCB or analogue - Impeller: A-351 CF3M or analogue - Compensator ring casing / impeller – A 479 t 316 L or analogue - Shaft: A276 T 420 or analogue
Engine drive (6.1.1./6.1.4)	Power supply
<ul style="list-style-type: none"> - Manufacturer: ABB - 380V, 3 phases, 50Hz - 5,5 Kw, 3000 rpm - Casing: IP 65 - Position: Vertical - Frame: M3KP 132 SMB 2 - Type: Ex de IIB T4 GB <p>- Minimum starting voltage (6.1.5) Isolation: F Temperature rise: B</p> <ul style="list-style-type: none"> - Engine type: Induction engine, 	<ul style="list-style-type: none"> - Actuators: 380V, 3 phases, 50Hz - Heat: 220V, 1 phase, 50Hz
Spare parts	
<ul style="list-style-type: none"> - launch - routine maintenance 	
Operating characteristics	Bearings and Lubricants
<ul style="list-style-type: none"> - Performance curve number - 2900 rpm - Impeller type: closed - Sound pressure: <85 (dB) 	<ul style="list-style-type: none"> - Bearing: radial SKF bearing, thrust: SKF bearing - Lubricants (5.11.3/5.11.4): lubricant, fill, constant lubrication lubricator
Construction	Vertical in-line pump
<ul style="list-style-type: none"> - Pump type (1.3): VS4 - Body mounting: tank lid - Casing connector: radial - Casing connector single-stranded - Casing design pressure: max 8,00 barg @ 100 °C - Hydrostatic testing pressure: 12,00 barg <p>- Tube parameters (5.4.2): filter DN - 2” flange rated pressure - #150 surface - RF position – Top</p> <p>- Couplings: Manufacturer - TREM engineering Coefficient - 1,3 rpm</p> <ul style="list-style-type: none"> - Balanced coupling according to: ISO 1940-1 G6 3 (6.2.3) - Intrinsically safe coupling shell 	<ul style="list-style-type: none"> - Requirement for support/base plate: separate support plate, support plate thickness 24” ANSI B16.5 150#RF - Column pipe: with flange, DN 4”, length 3,75m - Intermediate shaft: Opened - Intermediate shaft coupling: sleeve and spline
Tests and inspections	
<ul style="list-style-type: none"> - hydrostat (7.3.2) (witnessed) - Performance (7.3.3) (witnessed) - NPSHR (witnessed) - Cleaning before assembly (7.2.2.2) (unwitnessed) - 4-hour mechanical test (7.3.4.7.2) (witnessed) - Charpy impact testing - as per ASME VIII - Material certification required (5.12.1.8): casing, impeller, shaft, mechanical seal - Welded joint testing (5.12.3.4) (5.12.1.5): magnetic pore defect, radiographic analysis (discharge pipe), liquid penetrant inspection (pipes and columns), ultrasonic testing. - Casting check (7.2.1.3) (5.12.1.5): magnetic pore defect, radiographic analysis, liquid penetrant inspection, ultrasonic testing. - Firmness test (7.2.2.3) (welded joint) 	

Additional technical requirements

1. The pump unit must be supplied with an explosion-proof electric motor and 24" ANSI B support plate ANSI B 16.5 150 # RF (outer diameter 812.8 mm, hole quantity 20pcs, hole diameter 35mm).
2. The pump unit must include: coupling on the side of the pump and electric motor and counter flanges at the pump outlet.
3. The pump type: submersible with double mechanical seal. Plain bearings should not be used in the construction of the submersible pump.
4. Paint: Pump supplier's standard

Semi-submerged device

1. Installation level
2. Low level of fluid
3. Central axis of discharge line

l_1 - tank depth

l_2 - pump length

l_3 - height of discharge line axis relatively to installation level

l_4 - Installation height relatively to low level of the fluid

l_5 - First stage impeller, estimated

l_6 - Required depth for pump set

Pd - Tank diameter

l_1 _____ m	l_2 - 3,75 m
$\varnothing d$ _____ m	l_6 - 0,6m
l_4 _____ m	l_3 - 0,25m
	l_5 - 3,57m

