DATASHEET

PUMP TYPE: CENTRIFUGAL PUMP **Position number: 33-PS-2701**
Usage Key- data provided by – Purchaser **Issued for purchase**

Operating conditions (5.1.3)	**Pumped Fluid (5.1.3)**
- Pumped fluid: condensate / water - Rated performance: 11,5 m3/hour - Rated suction pressure: 1,8 (bar a) - Discharge pressure: 4,00 (bar a) - Differential pressure: 2,20 (bar) - Head 21,1+3,85 (m) - NPSHA: plunged - Service (5 1 4): intermittent (starts/day)	- Pumped fluid: produced water, acidic water, hydrocarbon mixture condensate - Pumping temperature: min +5, normal +15, max +40 - Vapor pressure: normal 66,7KPa - Density (kg/m^3): min: 720, max 1066 - Liquid: hazardous - Total sulfur content: no more than 0,10% (PPM) - H_2S 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**
- Location: Outdoor - Electrical area classification (5 1 24 / 6 1 4): Area 2, IIB. T3 - Altitude (5.1.30): 1080 (m) - Barometer: ATM (bar) - Range of ambient temperatures min/max: -27 / 44 (^{0}C) - Relative humidity: 63% max	- N class (5.12.11): S8 (LTCS) - Metal temperature (min) (5.12.1.11): +29 (^{0}C) - Cylinder: A-352 LCB or analogue - Impeller: A-351 CF3M or 12X18H9TL - Shaft: A276T420 or analogue 20x13
Engine drive (6.1.1. / 6.1.4)	**Power supply**
- 380V, 3 phases, 50Hz - 7,5 Kw, 3000 rpm - Casing: IP 65 - Position: Vertical - Frame: M3KP 132 SMD 2 - Type: Ex de IIB T4 GB - **Minimum starting voltage (6.1.5)** Isolation: F Temperature rise: B - Engine type: Induction engine,	- Actuators: 380V, 3 phases, 50Hz - Heat: 220V, 1 phase, 50Hz
	Spare parts
	- launch - routine maintenance
Operating characteristics	**Bearings and Lubricants**
- Performance curve number- 2900 rpm - Impeller type: closed - Sound pressure: <85 (dB)	- Bearing: radial SKF bearing, thrust: SKF bearing - Lubricants (5.11.3/5.11.4): lubricant, fill, constant lubrication lubricator
Construction	**Vertical in-line pump**
- Pump type (1.3): VS4 - Body mounting: separate support plate, tank lid - Casing connector: radial - Casing connector: single-stranded - Casing design pressure: max 8,00 barg @ 65 ^{0}C - Hydrostatic testing pressure: 12,00 barg - **Tube parameters (5.4.2):** <u>filter</u> DN - 2” flange rated pressure - #150 surface - RF position – Top - **Couplings:** Manufacturer - TREM engineering Coefficient - 1,3 rpm - Balanced coupling according to: ISO 1940-1 G6 3 (6.2.3) - Intrinsically safe coupling shell	- Requirement for support/base plate: separate support plate, support plate thickness 24” ANSI B16.5 150#RF - Column pipe: With flange, DN 4”, length 3,85m - Intermediate shaft: Opened - Intermediate shaft coupling: sleeve and spline
	Tests and inspections
	- Hydrostat (7.3.2) (unwitnessed) - Performance (7.3.3) (unwitnessed) - NPSHR (unwitnessed) - Cleaning before assembly (7.2.2.2) (unwitnessed) - 4-hour mechanical test (7.3.4.7.2) - 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)

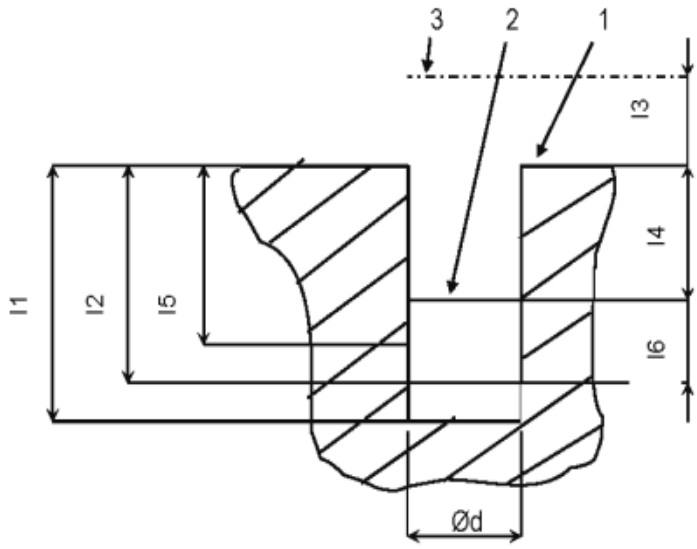
Additional technical requirements

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 - 3,85 m
Ø d ____ m	l_6 - 0,6m
l_4 ____ m	l_3 - 0,25m
	l_5 - 3,67m