Questionnaire for

block (modular) well pad pump station (BWPS)

**Firm:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Place:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Manager:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| **№** | **Figures** | **Data** |
| **1** | **2** | **3** |
| 1 | **Planning date** |  |
| 2 | **Climat modification and category of placement according to GOST 15150-69** |  |
| 3 | **Air temperature, °C** | *- min* |  |
| *- max* |  |
| 4 | **Hazardous Class for the room by PUE** |  |
| 5 | **Composition, indicate requirement (capacity, m3 / d):** |  |
| *pumping units (specify the number)* |  |
| *block of oil facilities* |  |
| *- The unit of drainage pumps* |  |
| *- the unit of breast pumps* |  |
| *- Water distribution block:* |  |
| *- The number of outputs, pc* |  |
| *- Instrumental block (room for controllers)* |  |
| *- Instrumental block (room for )* |  |
| *- Instrumental block (room for activators of electric synchro motors)* |  |
| *- Unit KTP (EN 60.4)* |  |
| *- Block RU6* |  |
| *- Block the main motor’ soft starters* |  |
| *- Control station (room for automated workplace)* |  |
| *- engineers workshop* |  |
| *- Drainage collector tank capacity 25 m3 (indicate taken submersible pump HBM 50/50 or block drainage pumps see. P.18)* |  |
| *- oil reserve tank, capacity 8 m3* |  |
|  |  *- Waste oil tank, capacity 8 m3* |  |
| 6 | **Location and accommodation of the units** |  |
| *- If it necessary - combine blocks into one room (what type)* |  |
| *- If it necessary - erect them separately (what type)*  |  |
| **The method of the pump unit installation** |  |
| *- on a common frame, on the separate foundation from the block-box (y / no)* |  |
| *- on a common frame on the foundation of a block- box (yes / no)* |  |
| 7 | **Marking the main pump:** |  |
| *- Capacity, m3 / h* |  |
| *- Pressure for example, MPa* |  |
| *- Top hole pressure, MPa* |  |
| *- A maximum developed pressure, m* |  |
| 8 | **Pumping liquid data:** |  |
| *- working liquid* |  |
| *- chemical composition of the liquid* |  |
| *- Process Temperature, ° C, not more* |  |
| *- рН*  |  |
| *-mass concentration of mechanical impurities,%* |  |
| *- maximum size of the solid particles in mm* |  |
| 9 | **Number of main pumps, pc .** |  |
| 10 | **Main pump shaft sealing’ type (please specify):** | *- omental consolidation* |  |
| *- face consolidation* |  |
| 11 | **Electric motor of the main pump:** | *- type* |  |
| *- power* |  |
| 12 | **Bearing lubrication system for pumps and motors (specify):** |  |
| *- Separate for each pump and each motor* |  |
| *- Separate for each pump and general for all motors* |  |
| *- General for all pumps and motors* |  |
| 13 | Location of the oil pumps for bearing lubrication system for pump motors: | *- In the pump block* |  |
| *- In a separate block* |  |
| 14 | **Configuration of the bearing lubrication system for pumps and motors (specify):** |  |
| *- Availability of reserve oil pump* |  |
| *- Availability of reserve oil tank with oil pump* |  |
| *- of emergency oil tank (self-contained)* |  |
| *- Availability of inspection windows on the line before or after* |  |
| *- Availability of the oil flow sensor* |  |
| 15 | **Additional requirements to the bearing lubrication system for pumps and motors:** |  |
| *- Availability of oil tanks heating system* |  |
| *- Availability of oil tanks cooling system*  |  |
| *- The principle of cooling oil* | *- air* |  |
| *- water* |  |
| *- Availability of system for cleaning oil* |  |
| *- Necessity to measure the oil level into the oil tank* |  |
| 16 | **Necessity in vibrocompensating complex for main pumps (please specify): Yes, No** |  |
| 17 | **Block of breasting pumps (if available)** |  |
| *- desired control’ algorithm (please specify)* |  |
| *- Indicate the pressure and required capacity of the pumps* |  |
| 18 | **Block of drainage pumps (if available)** |  |
| *-basic option CNS 60-99 pump unit(one pump is reserved)* |  |
| *- Indicate pressure and capacity if required (your personal request)* |  |
| *- Indicate your need in a vacuum tank or self-priming pumps* |  |
| 19 | **Cargo Lifting Device (manual hoist Capacity = 1 tonn): Yes, No** |  |
| 20 | **Device for rolling out the unit: yes, no** |  |
| 21 | **Collector (pipes’ boxes) location in the engine room:** |  |
| *- Pressure (yes, no)* |  |
| *- Suction (yes, no)* |  |
| 22 | **Accounting for water BWPS:** |  |
| *- On pipe brunch* |  |
| *- counters system* |  |
| *-Customer’s proposals (specify)* |  |
| 23 | **Application of Electric Latches:** |  |
| *- On the inlet line (yes, no)* |  |
| *- On the outlet line (yes, no)* |  |
| *- Application of a duplicate latches on the outlet line**after the electric latch (yes\no)* |  |
| *- Customer’s proposals (specify)* |  |
| 24 | **Pressure’ pipe-line boxes output & suction drainage:** |  |
| *- Through the floor at the block’s bottom (when blocks are on piles above the ground more than 1.5 m);* |  |
| *- Through the end wall (when the blocks are on the ground);* |  |
| *- Through the frame unit, between the floor and the bottom from the end face (when the blocks are on the ground);* |  |
| 25 | **The presence of an automatic control system****- Your needs in Automated Working Place (yes, no)** |  |
| 26 | **Technical requirements for automatic control, testing and security should be under the taken standards (yes, no)** |  |
| 27 | **Power:** |  |
| *Supply Cables 6 kV RU6 into the room or pumping units (when conductor on 6 kV is out of order)* | *- Bottom Cable* |  |
| *- Top Cable* |  |
| *- Upper Air* |  |
| *Supply Cables 0,4 KW into the room**(when KTP & conductor on 6 kV are out of order)* | *Bottom Cable* |  |
| *Top Cable* |  |
| *Branches of Cables 0,4KW from BWPS**(when additional consumers)* | *Bottom Cable* |  |
| *Top Cable* |  |
| *- Proposals (specify)* |  |
| 28 | **Requirements for 6 kV conductor** |  |
| *- Aadditional consumers (specify the number of KRU(Conductor)’cells and their purposes)* |  |
| *- Conductor Type*  |  |
| *- Protection’ Type* |  |
| *- Availability of section switcher or ATS on the input* |  |
| *- Type of vacuum switchers* |  |
| *Places electricity metering and meter type**- Proposals (specify) charger type*  |  |
| 29 | **Requirements of a 6 \ 0.4. Provide a questionnaire with the following information:** |  |
| ***- Availability of additional consumers*** |  |
| ***- Availability of the sectional ABP (in two-transformer KTP)*** |  |
| **Metering and meter type** |  |
| *transformers type*  | ***- oil-filled*** |  |
| *- dry* |  |
| *Scheme*  | ***- Star Star*** |  |
| ***- Triangle-Star*** |  |
| 30 | **Requirements:** |  |
| ***- Availability of additional consumers*** |  |
| **Construction:** |  |
| ***- With the bars in the upper side*** |  |
| ***- Two-pieces with***  |  |
| 31 | **Requirements to heating:** |  |
| ***- Electrical heating (splash-proof Electro-Heating devices): Yes, No*** |  |
| ***- Electrical heating (oil-filled Electro-Heating devices): Yes, No*** |  |
| ***- Central heating system (water, steam): Yes, No*** |  |
| 32 | **Light Control Post’ Location:** |  |
| ***- Outside in front of the entrance door*** |  |
| ***- internal*** |  |
| 33 | **Outdoor lighting control post’ Location:** |  |
| ***- Outside in front of the entrance door***  |  |
| *- internal* |  |
| 34 | **Control Post’ Location (for emergency shutdown of the unit):** |  |
| ***- Outside in front of the entrance door*** |  |
| *- internal* |  |
| 35 | **Additional requirements:** |  |
| 36 | **Requirements for control equipment** |  |
| 37 | **Additional services (if you need)** | supervision |  |
| commissioning works |  |
| Delivery to the place of destination |  |

***Stamp \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Signature of the head of the enterprise (division)***

 ***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Signature***