**Questionnaire for FRQ**

**the modular compressor unit (MCU)**

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

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

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

**Phone\fax:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Email:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Compressor’ purpose: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Organization filling a questionnaire (name, address, phone, fax, contact person): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

2. MCU main purpose (boosting on oil trade, re-injection, fuel gas boosting, gas lift, etc.): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. MCU Mode: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Planned annual operating time \_\_\_\_\_\_\_.

4. Stage of the Project \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

5. The planned redline of the project \_\_\_\_\_\_\_\_\_\_ town, city

The maximum summer temperature \_\_\_\_\_\_.

The minimum winter temperature \_\_\_\_\_\_.

6. Gas’ estimated parameters and possible range of their changes:

Absolute pressure or excessive pressure (on the manometer).

Suction Pressure \_\_\_\_\_\_\_; Range of changes (min - max) \_\_\_\_\_\_.

Discharge Pressure \_\_\_\_\_\_\_; Range of changes (min - max) \_\_\_\_\_\_.

Suction temperature \_\_\_\_; Range of changes (min - max) \_\_\_\_\_\_\_\_\_\_.

Pressure temperature \_\_\_\_\_\_\_\_\_\_\_.

The volume of pumping gas on \_\_\_\_\_\_\_\_\_\_\_ mode: Psuc = \_\_\_ / Ppress = \_\_\_\_ \_\_\_\_ ° C temperature.

7. Composition and Characteristics of the Gas (molar fractions):

|  |  |  |
| --- | --- | --- |
| Compose | % in molar | |
|  |  |
| Methane CH4 |  |  |
| Ethan C2H6 |  |  |
| Propane C3H8 |  |  |
| isobutane S4N10 |  |  |
| n-Butane C4H10 |  |  |
| iso-pentane S5N12 |  |  |
| n-Pentane S5N12 |  |  |
| neo-Pentane S5N12 |  |  |
| n-Hexane S6N14 |  |  |
| heptane S7N16 |  |  |
| octane S8N18 |  |  |
| СО2  CARBONE DIOXID |  |  |
| NITROGEN N2 |  |  |
| Water H2O |  |  |
| He Helium |  |  |
| Hydrogen H2 |  |  |
| Oxygen O2 |  |  |
| Density, kg / Nm3 |  |  |

Is the gas a water-saturated? \_\_\_\_

Specify the relative humidity of the gas in % \_\_\_\_.

Mechanical impurities level in the gas entering the MCS mg / Nm3 \_\_\_\_.

8. Cooling \_\_\_\_\_\_\_\_

9. Type of compressor drive \_\_\_\_\_\_\_\_\_\_\_.

10. The AC frequency \_\_\_\_\_\_\_\_\_\_

11. Additional requirements to the engine \_\_\_\_\_\_\_\_\_\_\_\_\_.

12. Compressor’ modification \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

13. Specify the number of the compressor units for compressing said gas volume \_\_\_\_\_\_\_.

14. External execution: \_\_\_\_\_\_\_\_\_\_\_\_\_

15. The requirements to the control system (automation)\_\_\_\_\_\_\_\_\_\_.

16. Protection degree for the electric equipment \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

17. Drive of valves and shutoff valves: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

18. Special ecological requirements \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

19. Requirements for a vibration: \_\_\_\_\_\_\_\_\_

20. At the inlet and between the stages of MCS compression \_\_\_\_.

21. Avoid oil contact with the gas (to prevent the dilution of the oil by hydrocarbons and water).

22. Taken additional services:

Assistance & Supervising after installation \_\_\_

Complete Adjusting of the units, blocks and all installation \_\_\_\_\_\_\_\_

23. Additional requirements \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

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

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