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QUESTIONNAIRE LIST

**MOISTURE CONTENT AND WATER**

**DEW POINT ANALYZER**

**HYGROSCAN**







To get a technical and commercial proposal fill in this questionnaire and send it to NTF BACS LLC, e-mail: **kom@bacs.ru** or via fax: (846) 932-05-71

|  |
| --- |
| **General Information** |
| Company |  | Date |  |
| Customer’s full name |  | Phone, e-mail |  |
| Questionnaire No. |  | Quantity |  |

1. **Required analyzer version:**

select version

1. **Required amount of analyzers**: \_\_\_
2. **Facility:** \_\_\_\_\_\_\_
3. **Purpose of analysis:** gas quality control, process control, etc.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Measured parameters, ranges and measurement units**

|  |  |  |  |
| --- | --- | --- | --- |
| Measurement / calculation required | Parameter | Measurement range | Measurement unit |
| Min | Norm | Max |
| [ ]  | Water dew point temperature |  |  |  | °С |
| [ ]  | Water concentration in gas |  |  |  | mg/m3 |
| [ ]  | Relative humidity |  |  |  | %RH |
| [ ]  | Other: \_\_\_\_\_\_\_ |  |  |  | specify |

1. **Measurement result conversion to preset pressure:** [ ]  YES [ ]  NO

If yes, specify the required pressure, MPa: \_\_\_

1. **Analyzed gas type**: main pipeline gas, impulse gas, gas prepared for liquefaction, etc.
2. **Analyzed gas composition**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Component** | **Concentration** | **Measurement unit** | **Component** | **Concentration** | **Measurement unit** |
| Min | Max | Min | Max |
| H2 |  |  | % mol. | N2 |  |  | % mol. |
| СН4 |  |  | % mol. | O2 |  |  | % mol. |
| С2Н6 |  |  | % mol. | CO2 |  |  | % mol. |
| С3Н8 |  |  | % mol. | H2S |  |  | mg/m3 |
| i-С4Н10 |  |  | % mol. | Mercaptans |  |  | mg/m3 |
| n-С4Н10 |  |  | % mol. |  |  |  | select |
| i-С5Н12 |  |  | % mol. |  |  |  | select |
| n-С5Н12 |  |  | % mol. |  |  |  | select |
| С6+ |  |  | % mol. |  |  |  | select |
|  |  |  | select |  |  |  | select |

***If other components are present in the gas, please specify them in the empty table cells.***

1. **Solids** in the gas [ ]  YES fraction, composition [ ]  NO, concentration: \_\_\_\_\_ мг/м3
2. **Liquid drops** in the gas [ ]  YES specify, which [ ]  NO
3. **Methanol** in the gas [ ]  YES [ ]  NO, concentration: \_\_\_\_\_ % мол.
4. **DEG** or other glycol in gas [ ]  YES specify, which [ ]  NO, concentration: \_\_\_\_\_ % мол.
5. **Analyzed gas and ambient parameters**

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Min** | **Norm** | **Max** |
| Analyzed gas pressure at sampling point, MPa |  |  |  |
| Analyzed gas pressure at analyzer feed1), MPa |  |  |  |
| Water dew point, °С (at \_\_\_ MPa) |  |  |  |
| Hydrocarbon dew point, °С (at \_\_\_ MPa) |  |  |  |
| Analyzed gas temperature, °С |  |  |  |
| Ambient temperature at sampling point, °С |  |  |  |
| Ambient temperature at installation site, °C |  |  |  |

1. To be filled in if measurements are performed at pressure different from operating gas pressure

***Note:*** *items 14-21 should be left empty for portable analyzer version, HygroScan-P.*

1. **Analyzer operation mode**: select mode

***Note:*** *with continuous operation mode analyzed gas continuously runs through analyzer at 0.5 – 2 nl/min flow rate.*

* 1. **Measurements frequency (for intermittent mode):** 1 time per \_\_\_ Min

***Note:*** *with intermittent operation mode, the analyzer is equipped with an integrated or an external (for transmitters) electromagnetic valve to shut off the sample supply.*

1. **Number of sampling points** (for one analyzer): \_\_\_

***Note:*** *Stationary process analyzer HygroScan-S can perform alternate analysis on 2 streams of analyzed has with one device. HygroScan-T (transmitter) can analyze 1 stream of analyzed gas.*

1. **Analyzer installation point**: select from the list or enter manually
	1. Cabinet or box to install analyzer needed:

[ ]  YES Description: specify main parameters if supply is needed [ ]  NO

* 1. Ambient temperature at installation site:

from \_\_\_ °С to \_\_\_ °С.

1. **Sampler needed:** [ ]  YES [ ]  NO

If a sampler is needed, please specify:

* 1. Pipeline material: \_\_\_\_\_\_\_
	2. Pipeline diameter, mm: \_\_\_; wall thickness, mm \_\_\_
1. **Sampling line needed:** [ ]  YES [ ]  NO
	1. **Heated sampling line:** [ ]  YES [ ]  NO
	2. **Length of the sample feed lines from sampling point to analyzer**, m: \_\_\_
	3. **Sample discharge line length, from analyzer to discharge point,** м: \_\_\_
2. **Sample conditioning package needed (SCP):** [ ]  YES [ ]  NO
3. **Cables and communication lines needed:** [ ]  YES [ ]  NO
	1. **Distance from analyzer to electric switchboard** (along the cabling line), m: \_\_\_
	2. **Distance from analyzer to communication line connection point**, m: \_\_\_
4. **Data transmission method:**

[ ]  RS232; [ ]  RS485; [ ]  Ethernet; [ ]  4-20 mA; [ ]  Modbus; [ ]  GSM; [ ]  Other \_\_\_\_\_\_\_

1. **Additional equipment supplied with analyzer:**

[ ]  Computer for remote control: select type

[ ]  Uninterrupted power supply

[ ]  Rack for analyzer

[ ]  Other \_\_\_\_\_\_\_

1. **Additional requirements:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ 20\_\_\_ Signature \_\_\_\_\_\_\_\_\_\_\_\_/\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/