***Request for delivery of Leak Detection System (LDS)***

1. ***Contact information***

|  |  |  |  |
| --- | --- | --- | --- |
| Company: |  | Name: |  |
| Address: |  | Job title: |  |
| Fax: |  | E-mail: |  |
| Tel: |  | Mob: |  |

1. ***General information of the facility***

|  |  |
| --- | --- |
| Name of the pipeline: |  |
| Area for installation of the LDS: |  |
| Operating Company: |  |
| Location of the pipeline: |  |
| Control center location: |  |

1. ***Pipeline parameters***

|  |  |
| --- | --- |
| Length of the pipeline section for installation of the LDS, km |  |
| Inner diameter of the pipeline, mm |  |
| Pipeline material |  |
| Wall thickness\*, mm |  |
| Presence of gravity flow pipelines sections\*\* |  |
|  | (yes/no) |
| Pipeline route profile (in a file) |  |

*\*- in the case if the wall thickness is variable, enclose pipeline layout in electronic format (with the values of pipeline length and wall thickness)*

*\*\* - enclose pipeline route profile in electronic format (a chart with elevation marks of the pipeline)*

1. ***Parameters of the transported product (pumpage)***

|  |  |
| --- | --- |
| Pumpage type |  |
| Density, kg/cm3 |  |
| Viscosity, cSt |  |
| Temperature range, ˚С |  |
| Multiphase characteristics (specify the number of phases) |  |
| Mechanical admixtures amount\*, % |  |
| Assist gas amount\*, % |  |
| Water amount\*, % |  |

*\*- the information should be specified only for multiphase pumpages*

***Pumping parameters***

|  |  |
| --- | --- |
| Maximal pump flow, m3/h |  |
| Minimal pump flow, m3/h |  |
| Pressure at the beginning of the section\*, Kgf/cm2 |  |
| Pressure at the end of the section\*, Kgf/cm2 |  |

*\*- if there are several pipeline sections, it is necessary to provide a detailed chart of min. and max. operation modes*

1. ***Layout and characteristics of the equipment***

***Fill the table with the information about available measuring instruments \*
(flow meters, pressure transducers):***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Item #*** | ***Pump station, pig launcher, valve*** | ***Coordinates at the pipeline route (km)*** | ***Manufacturer and type of the transducer*** | ***Precision class (measurement error)*** | ***Measurement range*** |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| *n* |  |  |  |  |  |

*\*- for greater clarity, please, enclose a flow-chart of the pipeline route*

|  |  |
| --- | --- |
| Total number of pressure transducers, pcs |  |
| Total number of flow meters, pcs |  |
| Possibility of installation of additional measurement points  |  |
|  | (yes/no) |
| Manufacturer and type of tele-mechanical controllers  |  |
| Synchronization source for medium-level equipment  |  |
| Special power supply conditions at medium level \* |  |
|  | (yes/no) |
| *\*- if the answer is «yes», please, provide additional information*  |  |

1. ***Communication and interaction with DMCS***

|  |  |
| --- | --- |
| Communication of medium and upper level  |  |
|  | (yes/no) |
| Data transfer protocol |  |
| Throughput capacity of the communication channel, Mbps  |  |
| DMCS: name and manufacturer  |  |
|  | (yes/no) |
| Operation of DMCS via OPC-protocol  |  |
|  | (yes/no) |
| Polling rate of pressure transducers, sec  |  |
| Polling rate of flow meters, sec |  |
| DMCS: presence of trigger threshold |  |
|  |  (yes/no) |

|  |  |  |  |
| --- | --- | --- | --- |
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|  **Name** |  | **signature** | **date** |