MSE Meili AG
Multiphase Systems Engineering

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Concentration and velocity measurements in multiphase systems with 'Labasys® 100'

Please complete this form as precise as possible. If you don't know quantitative values for certain sizes, do give a *qualitative description* (high/low etc.) - thank you!

Process:

1. Process / Application

- Vessel/ tubing type: - Diameter/Height: m
- Purpose: ☐ automation / control ☐ R & D (non steady-state operation)
- Temperature: °C - Pressure: bar
- Solids concentration: min: g/m^3 max: g/m^3
- Solids velocity: min: m/s max: m/s
- Flow field: ☐ 1-dim ☐ 2-dim ☐ 3-dim - Directed flow: ☐ yes ☐ no
- Explosion protection: ☐ not required ☐ required

  zone: group: temperature class:
- Safety concerns (toxicity, flammability etc., if critical):
- Remarks:

2. Multiphase System

- **Solid Phase** - Material:

  - Particle color: - Solids density: kg/m^3

  - Mean vol. diameter $d_{50,3}$: µm - Size Distribution: ☐ narrow ☐ wide

- **Suspending Media** - Substance:

- Aggregate state: ☐ gas ☐ liquid - Dyn. viscosity: kg/(m·s)

- Opaqueness: ☐ low ☐ medium ☐ high - Density: kg/m^3

- **if 3-phase system, 3rd phase:** - Vol. concentration: vol.-%

  - Density: kg/m^3 - Dyn. viscosity: kg/(m·s)

  - Opaqueness: ☐ low ☐ medium ☐ high

- Corrosiveness (if critical):

- Remarks:

3. Specifications Probe Tip

- Required length of probe tip for insertion: mm

- Standard probe tips: ☐ **without cleaning unit: O.D. 16.0 mm**

  ☐ **with cleaning unit: O.D. 40.0 mm**

- ☐ we need a special probe tip with an O.D. of mm

- Probe tip material: ☐ stainless steel is ok ☐ we need:

- No. of channels (2 chs. allow a velocity determination in 1, 3 chs. in 2 directions):

  ☐ 2 channels only ☐ 2 channels with option for 3rd ☐ 3 channels

- Remarks:

4. Data Acquisition & Analysis

- we are interested in the following quantities:

☐ concentration ☐ velocity 1-dim. ☐ velocity 2-dim.

☐ phase detection /flow structure ☐ other:

- Type of data acquisition hardware: ☐ mobile ☐ stationary

☐ we have already the following components, which we like to use:

- Distance between PC and probe (cable length): m

- we like do the data analysis (velocity determination):

☐ off-line

☐ on-line with a frequency of ☐ 0.1 Hz ☐ 1 Hz ☐ 10 Hz ☐ Hz

- Remarks:

5. Address

Person in charge: Company:

Address:

Tel: FAX E-Mail:

<u>Important</u>: All your information will be treated strictly confidential and helps us to build the best instrument possible for your application!

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Please mail or fax to:

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