we create solutions

aquasant

INTERFACE DETECTION

mipromex®

for the automatic, dynamic **batch separation**

Interface detection at its highest level

The interface measurement device MIQ combined with the pipe probe TSS80 monitors the batch separation of the interface layer in the pipe at the bottom of the separation tank. With high resolution the fully automated, dynamic monitoring of the interface layer separation is guaranteed. The plug & process measuring system does not require any special commissioning during installation. The impedance measuring principle ensures a reliable measurement of all products.

- You have a batch separation in a single- or multi purpose facility
- You don't want be bothered during product switches with complex, time consuming parametrization and measurement assessment
- The measurement values of both phases are rather similar
- The organic phase is conductive
- The emulsion layer should not be separated with the lower phase
- The separation process should be controlled and automatically started via PCS

liquid/liquid phase separation

- Application for the universal mipromex® type: MIQ 8130
- Interface separation as batch in stirred vessels, decanters and reactors
- Interface layer monitoring resulting in time and quantity optimized separation (incorporating momentary intermixing of the two phases)

Even today interface layer detection ...

... of two not mixable liquids, for example in an extraction or in a chemical process, can be challenging. Heavy contamination, small differences in the density or interface layers with emulsions can lead to interruption of the automated process and need to be completed with a time consuming manual separation.

Install the interface layer measuring system mipromex® MIQ of the 8xxx-series with the new dynamic separation function and the high resolution impedance measurement – a normed measurement signal.

In a multi purpose plant due to the dynamic data processing no further product specific measurements have to be done.

With a F3 probe measurement electronics MTI ./., the separation process of electric conductive organic products can be improved immensely!

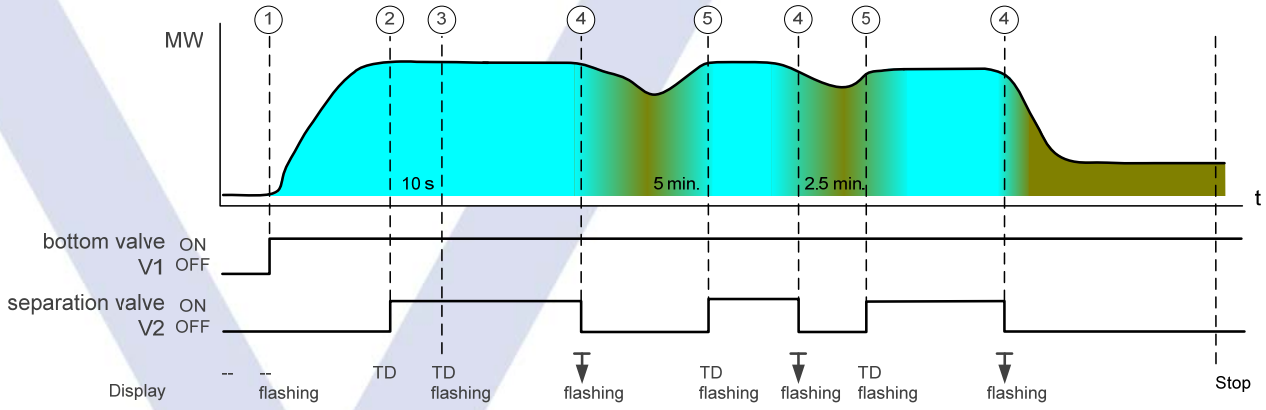
The self-monitoring measurement and control unit MIQ ensures a safe and fully automated separation.

The following graph shows the possible development of the measurement reading including the coupling with the valves.

Description

The interface layer measuring unit type MIQ 8130 processes the digital measurement signal supplied from the measurement electronic MTI. The intrinsically safe power supply of the measurement electronic in the connecting head is transmitted via the two wires line.

The impulse value, percentage value or the mA-signal can be selectively displayed. As an output signal, the measuring value is transferred into a corresponding analog signal (4..20 mA) plus two relay outputs.



1 | Open the bottom valve, via digital input send start command to MIQ, filling of the line
2 | Measured value of the lower phase reached
3 | Stored after 10 s measured value monitoring, interface detection active
4 | Change of the measured value in function of the set sensitivity = separation layer detected, valve closed, readjustment set as active
5 | If the stored measuring value of the lower phase is reached again within 5 min., the cut off valve opens

If not the measuring value does not return back to the same level within 5 min. the valve remains closed!

Application for the mipromex® MIQ 8130 on overview

The mipromex® MIQ 8130/8260 module contains outstanding innovation in the automatic, dynamic liquid/liquid interface layer detection for the batch production.

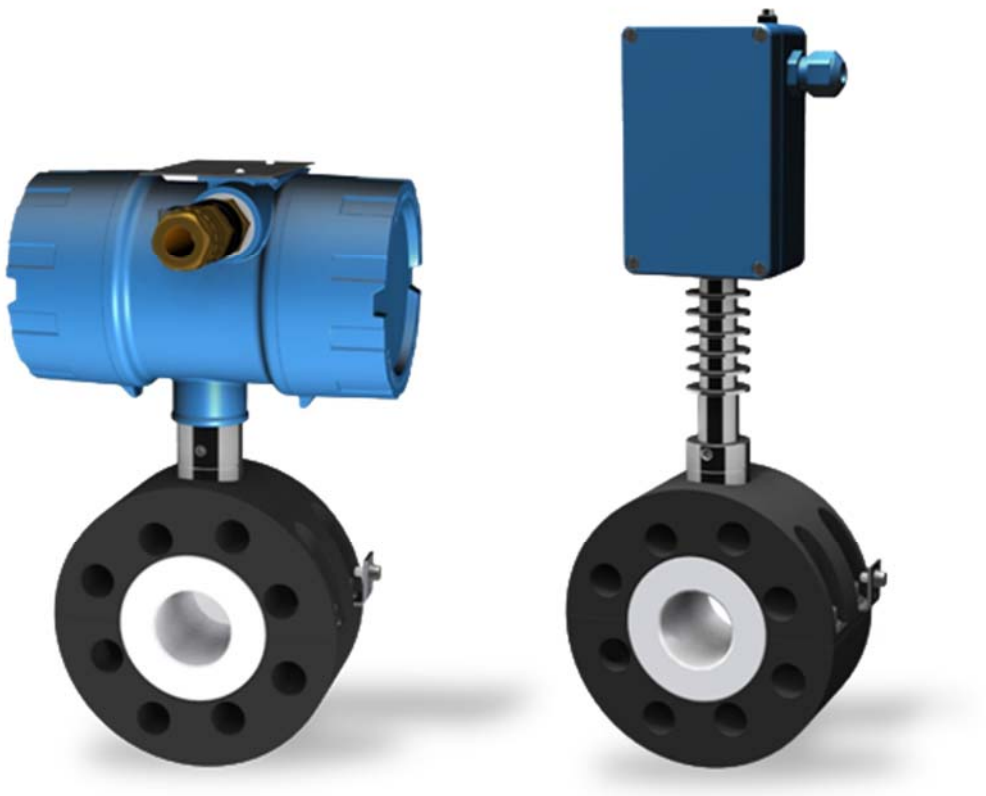
- Plug & process set up from in house factory
- High separation accuracy
- Independent from phase inversion, product and temperature
- High security
- Dynamic measurement data processing
- Self-monitoring function
- Fail Safe Management
- Time saving
- No wet commissioning of the installation necessary
- Cost savings
- No product loss
- Increased facility availability

With interface layer detection probes of different nominal sizes (DN32/40 up to new DN150 / ANSI 2-4") it is possible to detect the interface layer in a reactor or separation tank outlet. For outdoor installation the ExD-housing with IP68 is recommended. Models with a cooling rod can be used up to 170°C.

The automatic separation of two not mixable liquids in a batch process can be conducted with the new dynamic measurement signal, without any need of product specific measurement values, any commissioning, any settings nor any threshold values.

The new data processing provides high functional safety from the first separation. You can safe money and time.

You can benefit from our longstanding experience; feel free to ask for an offer.



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