

Measuring point	Installation	Measuring task
1	Pipeline	Monitoring of the Incoming Goods Concentration

Incoming Goods

Introduction

The control of incoming goods ensures the consistent quality of acids, caustics and other organic or inorganic liquids. During the delivery of several products, each product has to be identified correctly and the quality and concentration has to be checked.

Furthermore the safety risk because of wrong filling is minimized. For example when an acid is filled in a caustic tank they would be reacting under strong heat development and would cause a big risk for operators and environment.

Because of the robust LiquiSonic® sensor construction the incoming goods can be monitored inline and the media dependent sonic velocity can be measured precisely.

Only a consistent quality of educts guarantees a consistent quality of products.

Application

At the incoming goods department the raw material is pumped in the appropriate tanks. Normally liquids are delivered in IBC tanks or directly from a tank truck.

On the one hand it is important to avoid the mixing of different liquids, which eventually can be highly reactive, and on the other hand it is necessary to control the educts concentration in narrow ranges.

The concentration of the liquids is measured in an adapter piece directly at the raw material inlet before the liquid is pumped in the pipeline.

With the LiquiSonic® immersion sensor the fluid concentration can be measured and simultaneously the product valves can be driven via digital outputs or a BUS-connection to the process control system.

Customer value

The inline measuring with LiquiSonic® enables an exact analysis of raw materials by measuring the sonic velocity of incoming liquids. This ensures a stable product quality and increases the plant safety. A expensive and time-consuming analysis of samples in the lab is not necessary anymore.

The robust construction of the LiquiSonic® sensor without moving parts or gaskets guarantees a long-term reliable analysis and monitoring of incoming liquids. If required the medium contact materials can be made of special material like Hastelloy C2000 for example.

Other advantages for users are:

- Raw material analysis within seconds
- Monitoring of raw material delivery
- Also for explosion hazardous areas available
- No contaminations in raw material tanks because of incorrect filling
- Prevention of plant corrosion
- Increased plant safety and minimizing the error potential and the risk for the operators

Installation

The LiquiSonic® immersion sensor can be installed directly on the pipe of the raw material delivery. The place of installation has to be selected in a part of the pipe where the sensor is fully in contact with the measuring liquid. Recommended is the installation in a rising pipe or in the bottom of partially filled pipes. The tight sensor construction enables a long lifetime of the system.

The LiquiSonic® controller 30 can be connected to 4 sensors. So it is possible to monitor several measuring points at the same time.

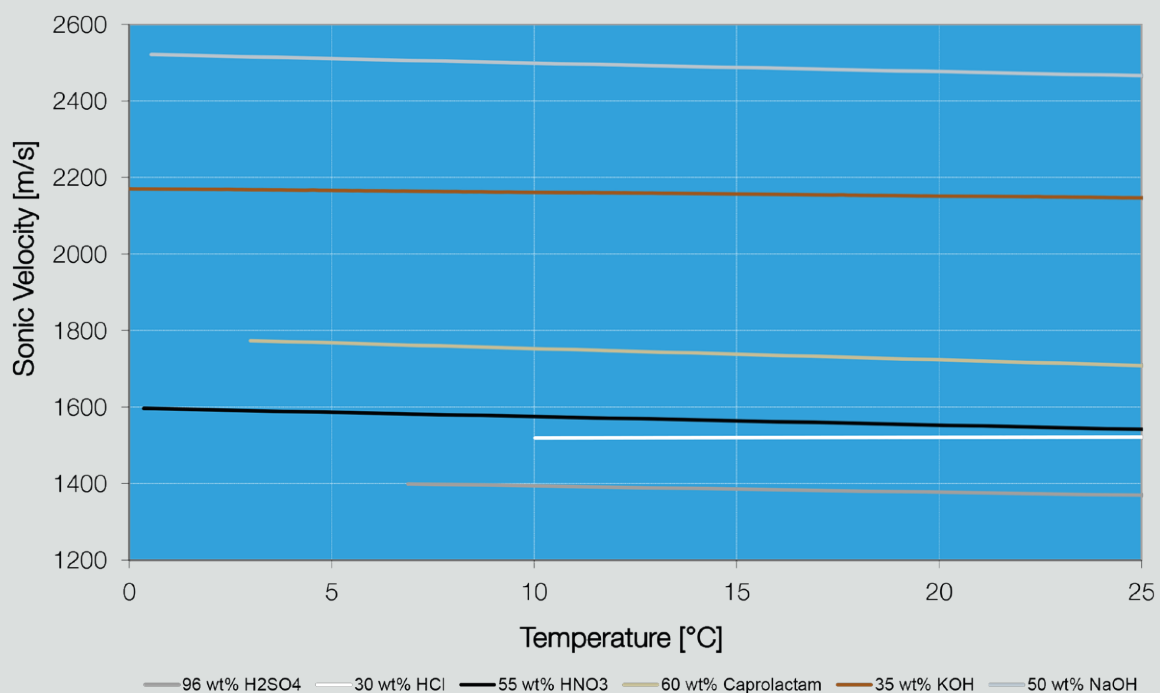
Alternatively measurements of samples with the LiquiSonic® Lab System are possible within minutes.

Possible measuring range (depending on the liquid):

Concentration range: 0 to 100 wt%

Temperature range: -20 to 140 °C / 68 to 284 °F

LiquiSonic® sonic velocity measurement in Incoming Goods



LiquiSonic® 30



21001311
LiquiSonic® Controller 30 V10



21010112
Immersion sensor V10 40-14, DIN DN50, L092



21004352
T-adapter for immersion sensor DN80-50-80 PN16

BUS

21004431
BUS connection: Profibus DP



21004449
Network integration



21004110
High power sensor electronic



21004230
Bus cable indoor / outdoor



21007846
Factory acceptance test (FAT) certificate



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