Application report: NSL-M **FOOD**

Level measurement with NSL-M in brew kettles of smaller breweries

The Requirements

To be able to display the wort volume in a brewing kettle in liters on the operating terminal, the wort level is measured. A hydrostatic level sensor cannot be installed in the brew kettle for this purpose because the kettle is equipped with an electric heater at its base. Thus, a sensor solution with a rod length of approx. 800...900 mm is required that can be installed into the brew kettle from above. In the past, float switches were used, whose output signal was switched via reed contacts. In addition to the switch's very low measurement resolution, the contacts were subject to wear, resulting in downtime and the associated costs for maintenance and service. Moreover, float switches are difficult and time-consuming to clean, requiring large quantities of cleaning agent.

Customer

LABU
ESTABLISHED 1896

The Anderson-Negele Solution

The NSL-M level sensor uses the universal potentiometric measuring principle to continuously measures filling levels, outputting an analog 4...20 mA signal. Compact in design and featuring internal electronics that are tolerant of high process temperatures, the level sensor can even be installed from above in hot applications.

Hygienic design for effortless cleaning

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Advantages

- The potentiometric measuring principle achieves highly accurate measurements, even in foamy media.
- The equipment can be used for process temperatures up to 140 °C.
- The sensor features a plain rod and hygienic design that is easy and effortless to clean.

Why Labu Buchrucker decided for Anderson-Negele

- The NSL-M provides a constant 4...20 mA output signal and operates without wear.
- The sensor easily withstands process temperatures up to 105 °C.
- The absence of a float on the sensor rod improves hygiene and cleanability.
- The slender sensor head of the NSL-M permits installation very close to the central agitator shaft, minimizing the thrust generated by the agitator blades.
- By avoiding wear and maintenance of the reed contacts and by shortening cleaning times, costs can be reduced.
- The system ensures that the mono pump does not run dry and that false messages do not result in production downtime.

The compact sensor can be installed from above

NSL-M continuous level sensor

Range of application

- Continuous level measurement in metallic containers up to 3 m in height
- Particularly suited for highly adhesive and pasty media
- Level measurement of foamy media
- Typical minimum product conductivity of 50 µS/cm (lower values on request)
- Hygienic substitute for float sensors

Authorizations

FDA · CERTIFIED EHEDG TYPE EL · 3-A 74-06

Application examples

- Level control in feed vessel
- Level measurement in storage tanks
- Volume measurement in pressurized tanks

Product information and CAD data

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Features

- Robust, compact sensor for small spaces
- Two-wire sensor with a 4...20 mA output signal
- Because to the potentiometric measuring principle, recalibration is not required for different media
- Customized settings and programming on a PC
- Orientation of the M12 plug connection can be changed by turning the sensor head
- Installation into the tank from the bottom or top
- Installation from the side using an angled sensor
- Adjustable current signal for measurement range, dry-run message and fault message

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