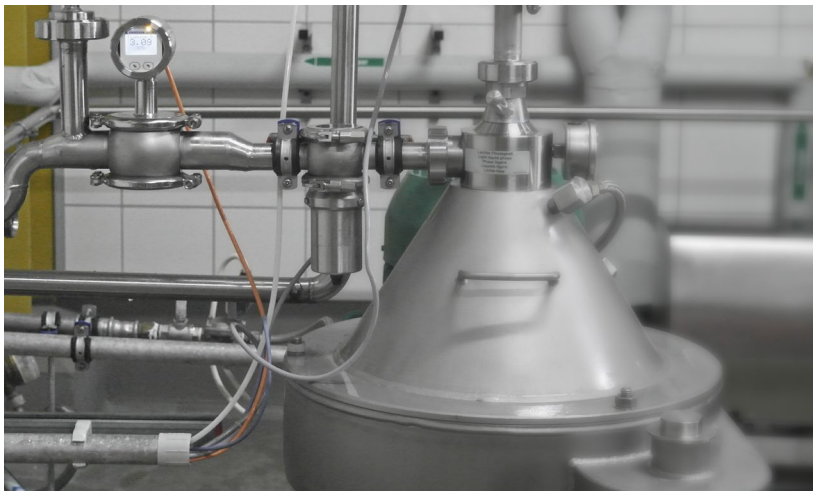
Application report Marlow Brewery **FOOD**



Efficient separator control thanks to ITM-51 turbidity sensor

The Marlower Brewery proudly describes itself as a "manufactory of brews". The art of craft brewing and the reliably high quality of its beer specialities are both a claim and a commitment. Thus, for example, the beer is deliberately not filtered. Ensuring constant natural turbidity through the separator alone proved to be a major challenge. Reliable results were finally achieved with the ITM-51 turbidity sensor.

The application

As a small brewery, the Marlower site primarily supplies its own inn and hotel. High demands are placed on the promise of a taste experience that is, among others, expressed through natural turbidity. For this reason, it was all the more important to precisely control the separator in order to achieve consistently high quality for direct filling into kegs.

Application advantages

- Maintaining a superior quality level through precise ejection of the separator
- Simple, visual-manual programming of the ITM-51 to the desired turbidity value
- No monitoring required
- More efficient control of the separator than purely over time

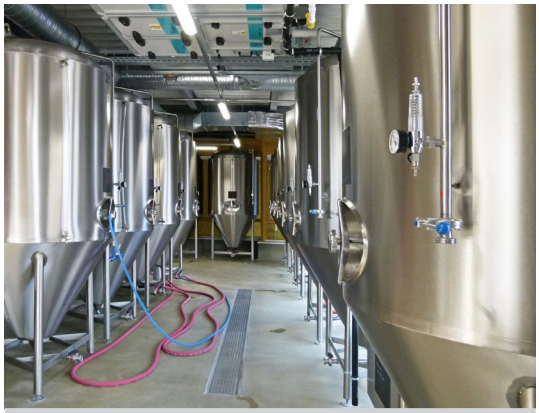
The Anderson-Negele solution

Despite several experiments, other measurement techniques could not reliably ensure the desired results. Only with the ITM-51 a satisfying solution was found. Using inline analysis, the front-flush turbidity sensor continuously monitors the proportion of undissolved substances at the outlet of the separator using its backscattered light method. The desired degree of turbidity was programmed using an individual learning curve for the installed sensor (visual-manual programming via the sight glass).

Now, as soon as the pre-defined target values are reached, the yeast harvest is carried out automatically, precisely and reproducibly.

Wort kettle and lauter tun with TFP and FMQ

FMQ after the Whirlpool



The filling of the storage tanks is monitored by FMQ

> We have already made several attempts to precisely control the separator automatically. With the ITM-51 we have not only found a very reliable and finely tuned sensor, but with Anderson-Negele we have also encountered a real partner with comprehensive, expert advice and support.

— Daniel Engler, Master brewer

The Marlower Brewery has also had positive experience with Anderson-Negele sensors in other application areas. For example, FMQ electromagnetic flowmeters are used in the area between the wort kettle and lauter tun and between the whirlpool and storage tanks for precise quantity measurement. Temperature sensors of type TFP-06 with ESH welded sleeves are used for temperature measurement.

Project

» Photos: Marlower Brauerei / Anderson-Negele

Sensors used in the application

Turbidity ITM-51	Flow FMQ	Temperature TFP-06	Process connection ESH
			
Advantages	**Advantages**	**Advantages**	**Advantages**
· Front-flush turbidity sensor with backscatter-light technology · High reproducibility: ≤ 1 % of the final value · Measured value selectable (%TU, NTU, EBC) · Remote version (cable length 30 m) available	· Superior measurement accuracy even in case of low flow rate · For flow volumes from 30 to 640.000 l/h · All parts in contact with the product are conform to FDA	· Temperature measurement without thread in pipes and vessels · Installation in build-in system or compression fittings · Without connecting head, with fixed cable	· Weld-in thermowell for temperature sensors · De- and re-assembly without opening the process · Short response times

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