

Separator monitoring with the ITM-4 turbidity meter

The Application

Before wine or cider is filled into bottles, it is separated to remove particles and suspended substances. Turbidity meter ITM-4 is mounted at the separator outlet.

The Requirements

During operation, the separator drum gradually fills with the solids removed from the wine or cider. It needs to be emptied in time to ensure that the unit can continue operating correctly and to maintain a high product quality.

The Negele Solution

At the separator outlet, the 4-beam turbidity meter, ITM-4, continuously monitors the purity of the product (Fig. 1). When the turbidity increases beyond a certain limit, the connected control is automatically switched to "Empty drum". If different limit values are required (wine approx. 30...40 NTU, cider approx. 200...400 NTU), the turbidity measurement range is switched externally.

The Advantages

Why GEA Westfalia Separator GmbH decided for NEGELE:

- Four-beam technology offers a high degree of accuracy at low turbidity levels, irrespective of the form and size of the particles.
- In addition to the standard signal of 4...20 mA, the device also has a programmable switch output.
- This compact device, made of high quality materials with powerful electronics, is the most economical device of its kind on the market.

Customer

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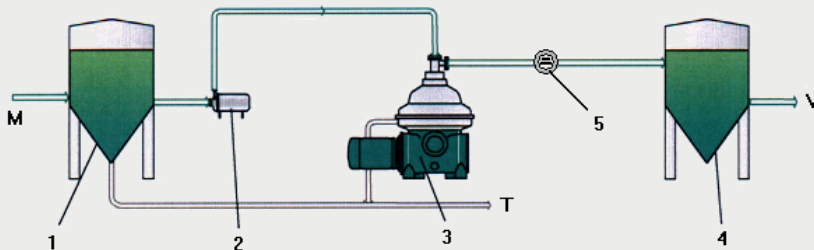


GEA Westfalia Separator

Turbidity Meter ITM-4



Fig. 1: Schematic Process Diagram



- | | |
|------------------|----------------------|
| 1. Settling tank | M: From fermentation |
| 2. Pump | T: Trub |
| 3. Separator | V: To bottling |
| 4. Storage tank | |
| 5. ITM-4 | |

Source: GEA Westfalia

In the settling tank (1), organic and mineral-based substances are added to the freshly fermented wine. This binds undesirable particles and they settle to the bottom.

After fining, the wine is drawn off of the trub and pumped to the separator (3). Here the remaining unwanted particles are removed.

At the outlet, the ITM-4 (5) reliably monitors the absolute purity of the wine before it is bottled.