quadbeam
NEXT LEVEL EFFICIENCY

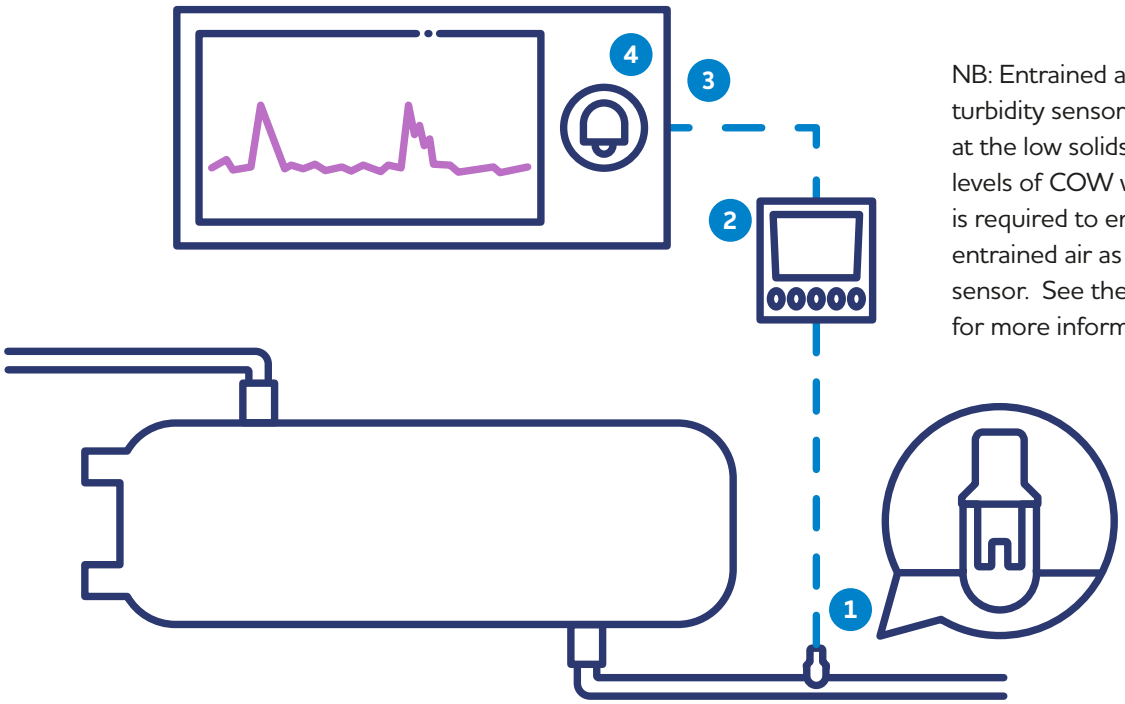
Application: COW water

Whether you're going to re-purpose COW water or simply send it to waste, solids carry-over can create challenges. Quadbeam's multi-beam suspended solids sensors can help in both scenarios.

As well as highlighting process issues around the evaporator, monitoring suspended solids can also protect filtration systems from being overburdened with excess solids when COW water is going to re-purposed applications. Or if COW water is going directly to waste, monitoring solids can ensure that what's released stays within the required limits.

How to use the Quadbeam sensor

1. Install the sensor directly into COW water line using a 3-inch tri-clamp fitting.
2. Connect the sensor to the MXD73 or MXD75 transmitter and simply calibrate against the solids to be measured.
3. The transmitter provides a 4-20mA output for each sensor for connection into the plant control system.
4. Alarms can be set on transmitter relays or within the plant system to detect suspended solids in the COW water.



NB: Entrained air can affect turbidity sensor readings, especially at the low solids concentration levels of COW water. Extra caution is required to ensure that as little entrained air as possible gets to the sensor. See the installation guide for more information.

A sensor to suit you

The range of Quadbeam sensors suits different applications, conditions, concentrations, and products.
For COW water, the T30-3HY is often used.

T30-3HY Sensor

NTU

0 to 50 - 0 to 1000

(the measuring range will vary according to media and particle characteristics)

Key features

SELF-COMPENSATING
Quadbeam sensors are incredibly accurate because they're multi-beam, so they can eliminate measurement error that single-beam sensors can't cope with. Two LEDs fire near-infrared (NIR) light at two detectors to generate multiple light intensity measurements that represent the suspended solids concentration. These measurements are combined into a ratio-metric algorithm that self-compensates for common sources of measurement error like contamination or component ageing.

RUGGED
Quadbeam sensors are also tough because they're made from rugged polymer, with no glass lenses that could leak or break. S-series sensors are made from a one-piece polymer body.

SIMPLE TO USE
Quadbeam sensors are simple to calibrate on-site, so they give results that are directly relevant and meaningful to the site. There are easy calibration instructions on our website, or contact us for assistance.

SPEED
Quadbeam's T30 sensor has a T90 of 8 seconds, which tends to be faster than many other COW water monitoring solutions.

Results

Monitoring COW water with a Quadbeam sensor offers multiple advantages and savings:

1. Control of evaporation or concentration:

A sensor will detect any milk solids in the COW water as a result of process issues.
This offers an opportunity to identify process improvements.

2. Protecting filtration systems:

When COW water is re-used, monitoring and controlling suspended solids provides a level of safety preventing filtration / RO systems from becoming blocked by excess solids.

3. Checking COW water is clean before discharge:

Contaminated COW water may exceed compliance requirements.
A sensor inline can identify this so you can take action.

For help or to find out more

If you want to discuss your installation or have another question, or just want to find out more, contact us. You can also see our full product range online, and visit our website for data sheets, manuals, and technical information.

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