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APPLICATION CASE STUDY



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GUIDED WAVE RADAR



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Guided Wave Radar for Liquid Level Measurement of Anti-Foam Vessels

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Application:

Continuous liquid-level measurement of fermenter anti-foam vessels at a biotech company in southern Germany.

Instruments quoted: 705-510A-131 & X7MF-E4PN-130 (Where X = probe bent at 90-degree, DN25 DIN 2633 flange assembly).

Problem:

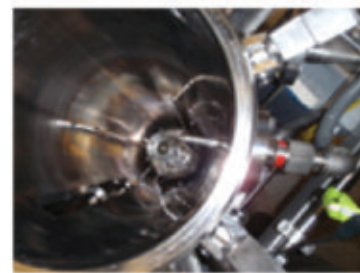
The customer required continuous, reliable/repeatable level measurement in two anti-foam vessels to ensure that the anti-foam level was maintained correctly to support the upstream fermentation process. Each vessel is only 11³/₄" (300mm) in diameter and 47¹/₄" (1200mm) in height, with a bottom, centrally-mounted, agitator 23⁵/₈" (600mm) in height. The required vessel entry is a (fairly unusual—even by European standards) side-mounted DN25 DIN 2633 connection. All of our major competitors declined to quote for this application!

Solution:

Magnetrol manufactured probes with the required DIN 2633 flanges, bent at 90 degrees (see pictures). The probes were also manufactured with a double PEEK™ key in the PTFE seal to provide a more robust keying mechanism to prevent probe rotation. As with all our hygienic Eclipse GWR, the process connection could be separated from the flange assembly, allowing the probe to be installed through the man way and reassembled once the probe was inserted into the vessel through the flange connection.

Result:

After the simple installation procedure, the Magnetrol probes were quickly commissioned using PACTware™ configuration software. Simple configuration changes allowed us to reliably and repeatedly measure the anti-foam level while completely ignoring the 90-degree bend in our probe and the influence of the agitator and vessel wall—both less than 1" (25mm) from the probes. Both probes have worked faultlessly for over 6 months. This success has led to further inquiries, with orders expected very soon—all from a site that is a 99.9% E+H account!



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BULLETIN: 57-221.0
EFFECTIVE: April 2011