

ECLIPSE[®]

APPLICATION CASE STUDY

Magnetrol[®]
HYGIENIC MEASUREMENT
SOLUTIONS

ECLIPSE[®]
GUIDED WAVE RADAR



HART[®]
COMMUNICATION PROTOCOL



Guided Wave Radar for Spirit Storage Level Measurement and Agitator Control

Submitted by Magnetrol UK

Instrumentation Quoted:

Item 1: 5 × 705-51AA-A11

Item 2: 5 × X7MR-NFA0-999 (where X = 10m total length made up from 2 × 5m segmented sections—(please see attached photograph) Final insertion length, calibration requirements, and flange details to be confirmed by our customer before order placement.

Technical Advantages Of Using Segmented Coaxial Eclipse GWR Over Free Space Radar:

- The Eclipse GWR can be installed in the existing spare DN 100 (to be confirmed) nozzle without the need to modify the man way, or vessel, which will offer installation cost savings to our customer
- The Eclipse GWR can be pre-calibrated (to our customer requirements) to provide extremely accurate and reliable volumetric output for the entire vessel (including below the agitator level if required) which offers significantly reduced commissioning time and hence costs to our customer
- The Eclipse GWR does not require the vessel to be emptied, or empty at any time, during calibration/commissioning (unlike free space radar which will require either emptying of the vessel or at least the level lowered to its lowest required measurement point, to allow for false echo profiles to be run). This offers another potential cost savings to our customer as the vessel can remain in production and there is no need to remove/store any product during commissioning/calibration.

- The Eclipse GWR level measurement will not be affected by any internal vessel obstruction or any influence created by agitation or interference during filling from the slots in the vertical filling line. This can be a problem for free space radar, particularly during the fill as the streams of liquid generated during filling can be “variable” which can make it difficult to ignore via false echo rejection software (which all free space radar manufacturers use).
- The Eclipse GWR is fully suited to SIL 2 applications and this is supported by an independently certified, full FMEDA report—a copy of which can be supplied to our customer free of charge on request

Notes:

- For the outside vessels we would use 2 sections as there is enough headroom to easily install. For any future, inside vessels, we would use exactly the same probe but with shorter segments (approx 1m) as there is limited overhead clearance.
- A single unit can be made available on a sale or return basis for evaluation by our customer
- 1 day's commissioning support/customer training for a single evaluation unit will be provided free of charge which represents a savings to our customer of £400.00 (\$632)
- 2 day's commissioning support/customer training for remaining installations will be provided free of charge which represents a savings to our customer of £750.00 (\$1184)



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