



Valve Pit Insulation

Value Tracking Case Study



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Background

National Gas Transmission (NGT) insulates all the covered unit pipework in valve pits; this is to mitigate the noise from compressors which affects the nearby community. The insulation currently used is fiberglass. This material can have adverse effects to the pipework and valves and it does not mitigate the noise pollution as low frequency noises are continuing to be transmitted.

The innovation project was initiated to look at possibilities for alternative insulation materials to:

- Mitigate noise
- Increase confidence in CM4 inspections
- Reduce water damage
- Stops heat dissipation
- Eliminate corrosion

What's new?

Insulation tiles (Ecophon Hygiene panels) were installed around the valve pit rather than the pipe themselves. As a result, a significant reduction in noise was recorded. The decibel level taken as an average from 10 survey points reduced from 66.78dB to 54.28dB. Other benefits will be realised from this new product and installation on the pit rather than the pipes such as, longer lifespan as moisture resistant, visibility of pipework giving easier access for CM4 maintenance, reduction in noise levels by reducing reverberation and sound propagation.

The benefits

- Following the installation customer complaints regarding noise have reduced.
- The risk of damage to the pipes by removed/replacing lagging has been mitigated, as the lagging was removed; the panels were installed on the pit roof away

from pipework and have a longer life span due to their position in the pit and moisture resistance.

- CM4 maintenance is easier to carry out as the pipes are more accessible.
- The installation and cost of the panels were substantially less than the cost replacing the lagging like for like.

Financial savings

This technique has been installed at one Compressor Station to date with a recognised benefit of £550,979.

Implementation

Outputs of the project have been implemented within NGT and further installations planned over the RII02 period. Additional benefits to be tracked similar to first installation.

