

DrX Application Note

DrX	DrHiss, DrKnock, DrSonic, DrFlow
Subject	Leak Detection techniques for suspended and lagged pipes
Note Ref.	AN270.07

Detecting high pressure leaks on suspended pipework

DrHiss provides a rapid identification of leaking fluid at high pressure; for example compressed air or steam. Satisfactory application of any of the DrX range to pipework does depend on various aspects such as the bore of the pipe, accessibility of the pipes, working temperature, presence of lagging and pipe material.

For bores larger than 45mm the easiest method is to use cable ties around the pipe. For smaller bores the same method may be used but the integrity of the seal may be compromised due to the curvature of the pipe. An alternative to strapping the DrX directly on is to make use of the 'conducted acoustic path'.

Conducted acoustic path

When a leak occurs the noise generated travels through the supporting pipework as well as the air. This is a great advantage to leak detection since the noise will travel through metallic paths and can be detected remotely.

Obviously if the pipe is carrying process steam, or similar, the remote measurement will also be cooler than at the surface of the pipe.

Care must be taken when using this method to ensure that other noise sources are not being monitored due to similar conduction.

This method works extremely well for monitoring leaks in steam pipes which have lagging on the outside. Obviously direct connection to the pipe is difficult due to the insulation materials, but access to the support brackets is relatively simple.

This principle of remotely monitoring the conducted acoustic path can be applied to other units in the DrX range which use ultrasonic or acoustic sensors. (DrKnock, DrRumble, DrSonic, DrFlow)

